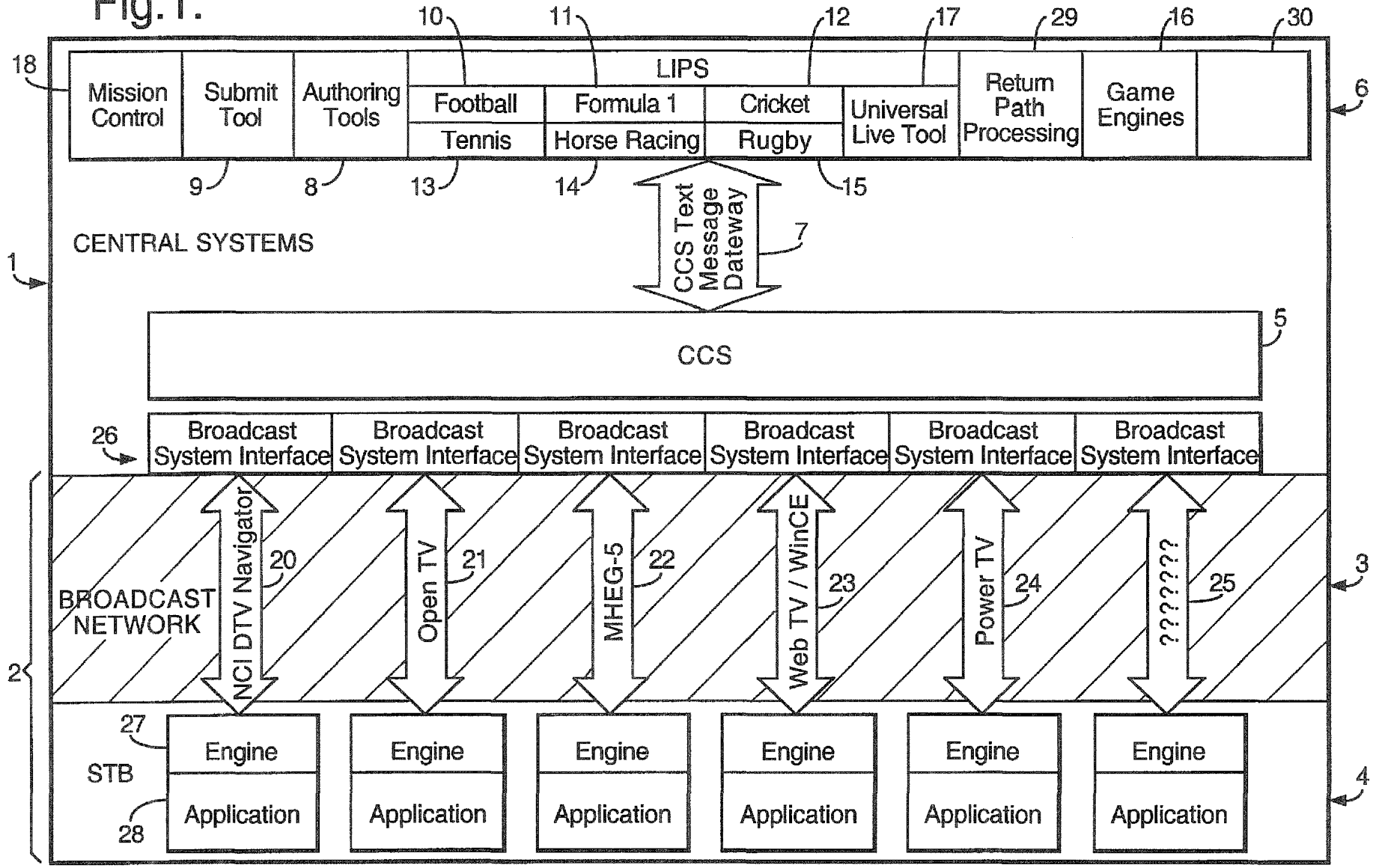
Fig.1.



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FanDuel Ex. 1002-0830
FanDuel Ex. 1002-0830

Fig.2.

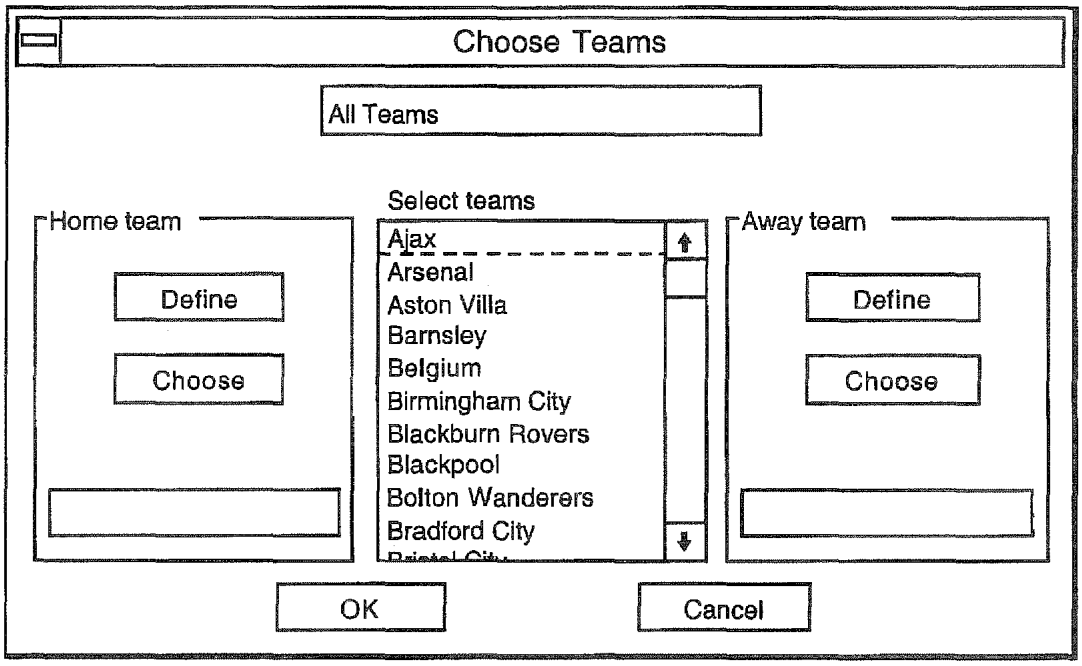
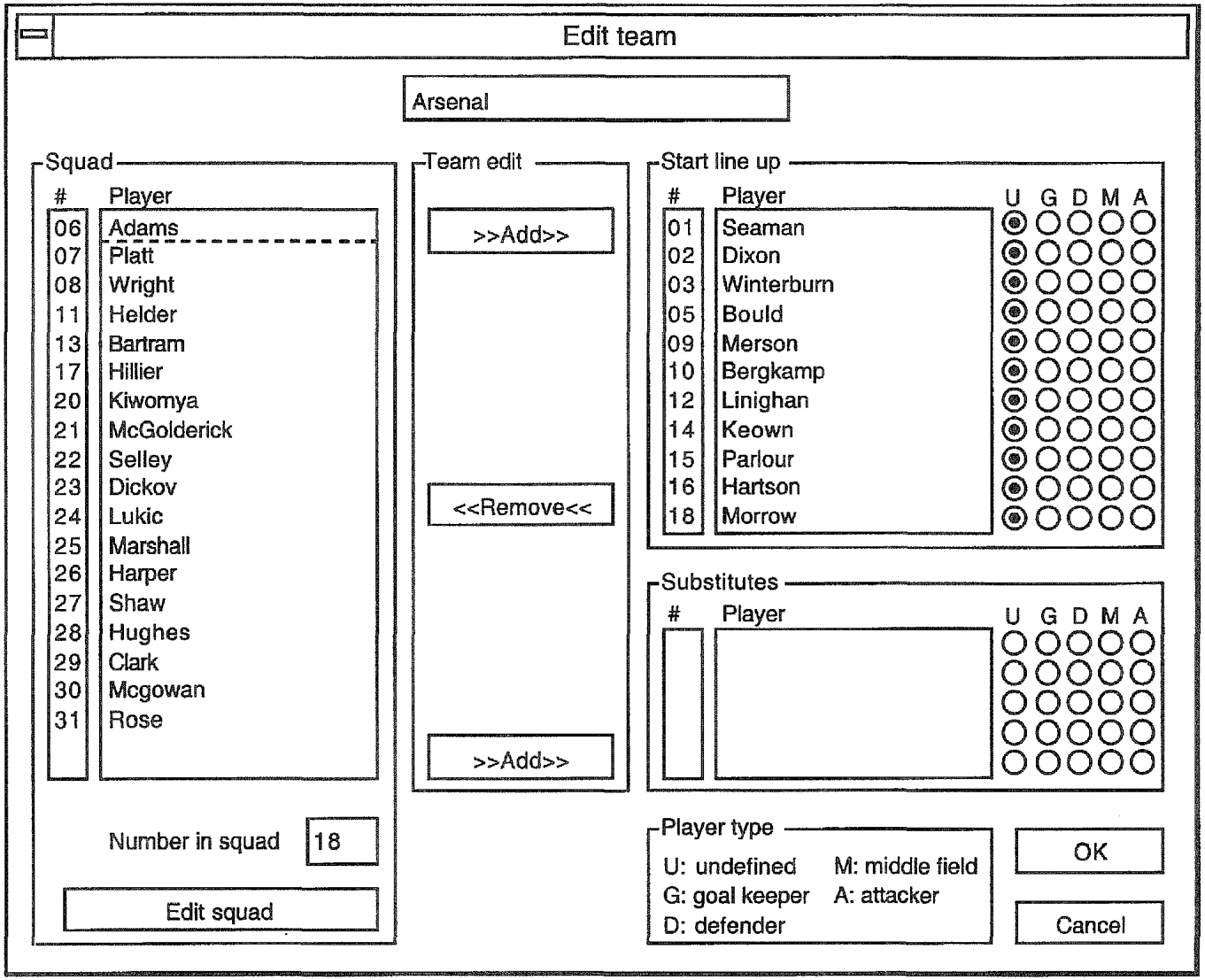

Choose Teams
All Teams
Select teams
Home team
Define
Choose
Ajax
Arsenal
Aston Villa
Barnsley
Belgium
Birmingham City
Blackburn Rovers
Blackpool
Bolton Wanderers
Bradford City
Away team
Define
Choose
OK
Cancel

Fig.3.

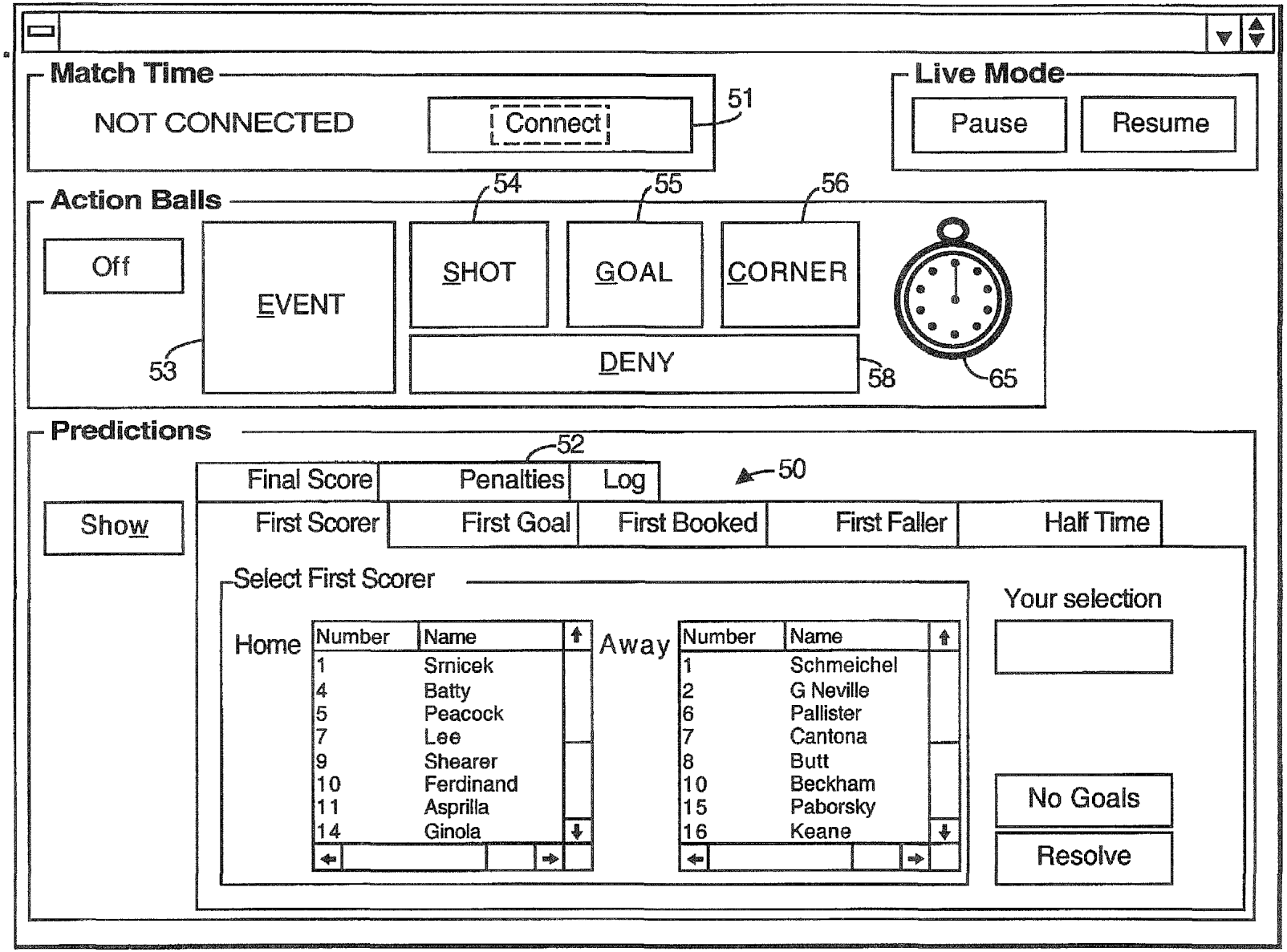


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CA 02279069 1999-07-28

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FanDuel Ex. 1002-0832

Fig.4.

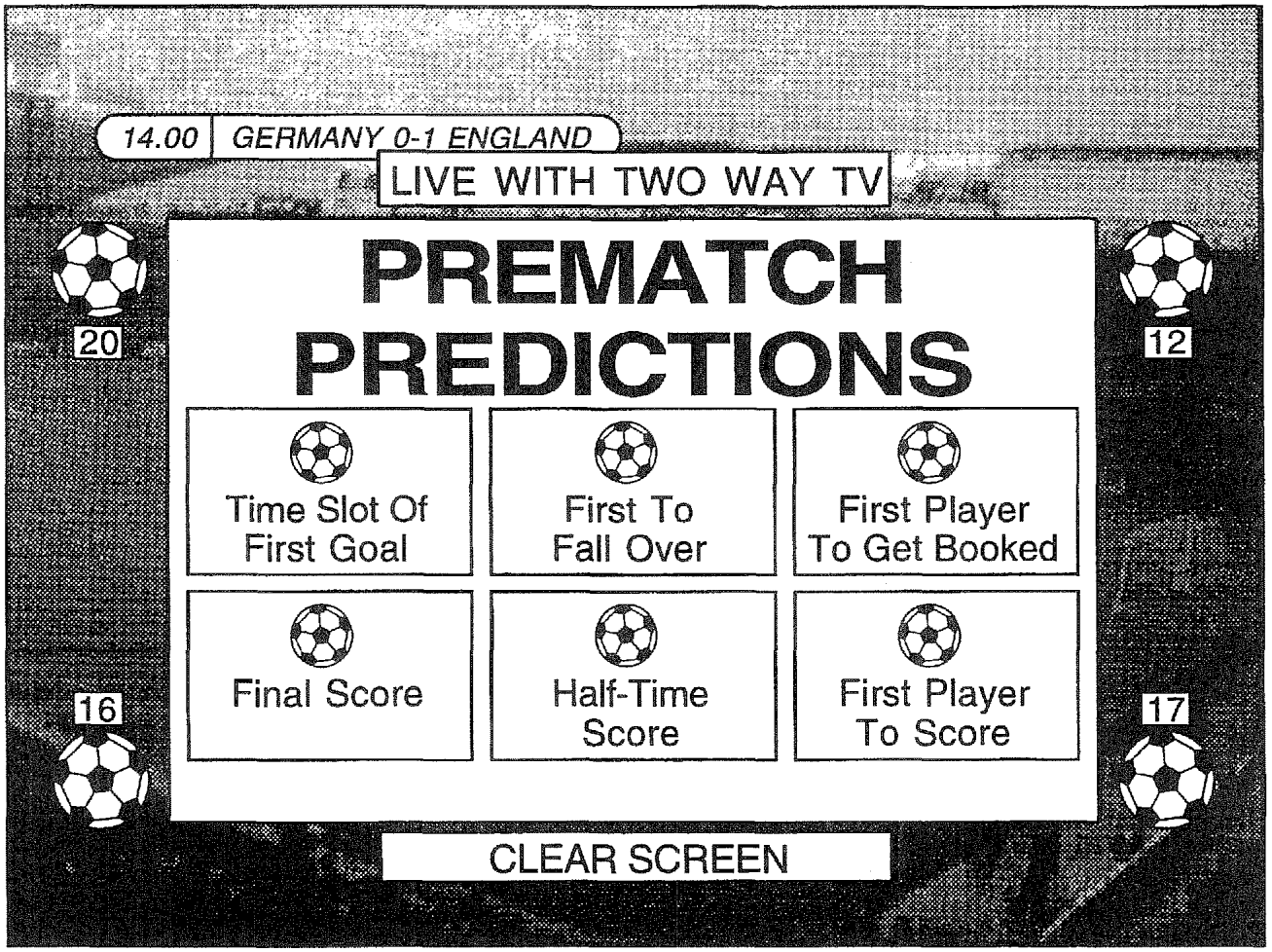


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FanDuel Ex. 1002-0833
FanDuel Ex. 1002-0833

Fig.5.

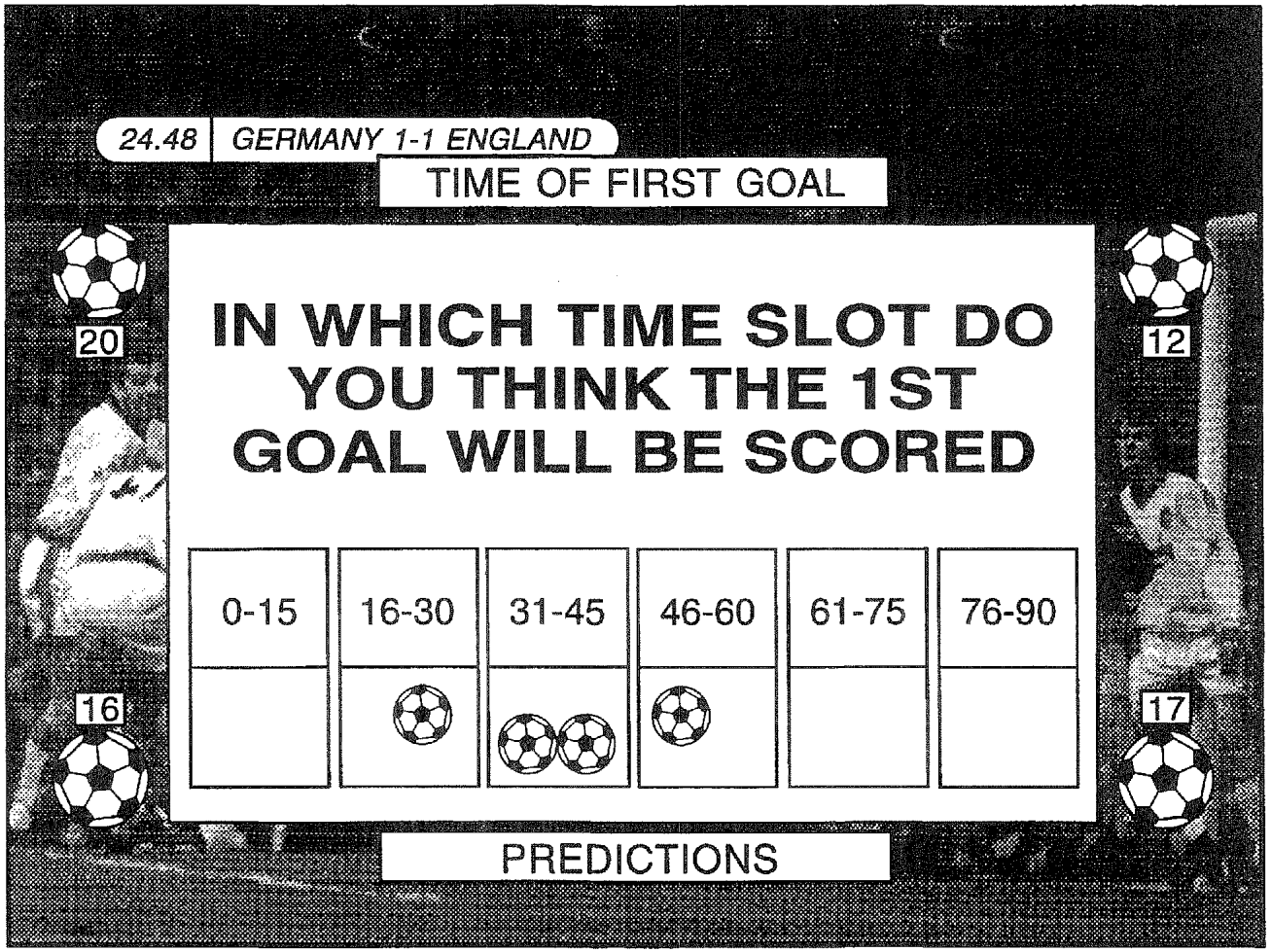


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CA 02279069 1999-07-28

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Fig.6.



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CA 02279069 1999-07-28

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FanDuel Ex. 1002-0835

Fig.7.

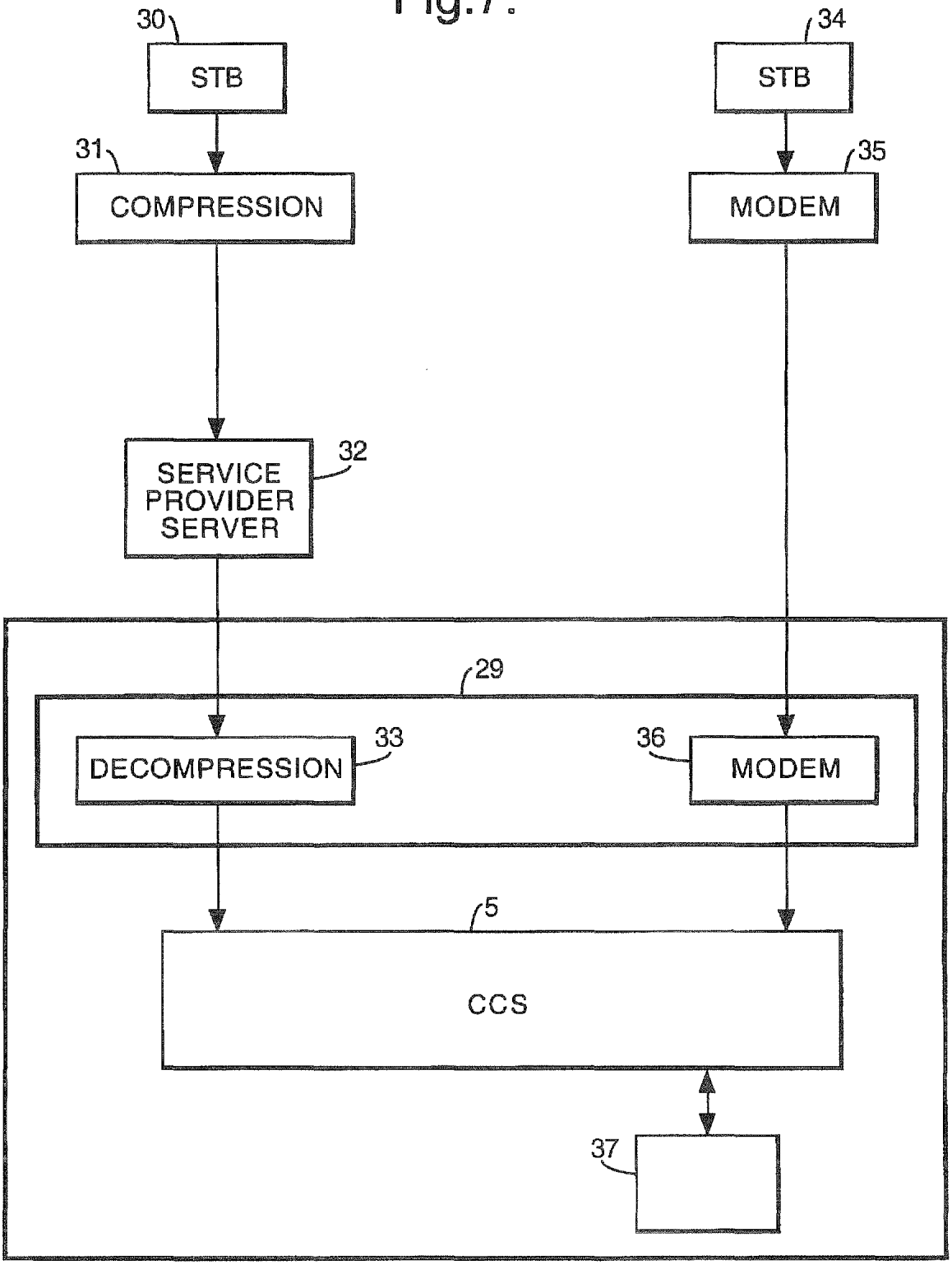
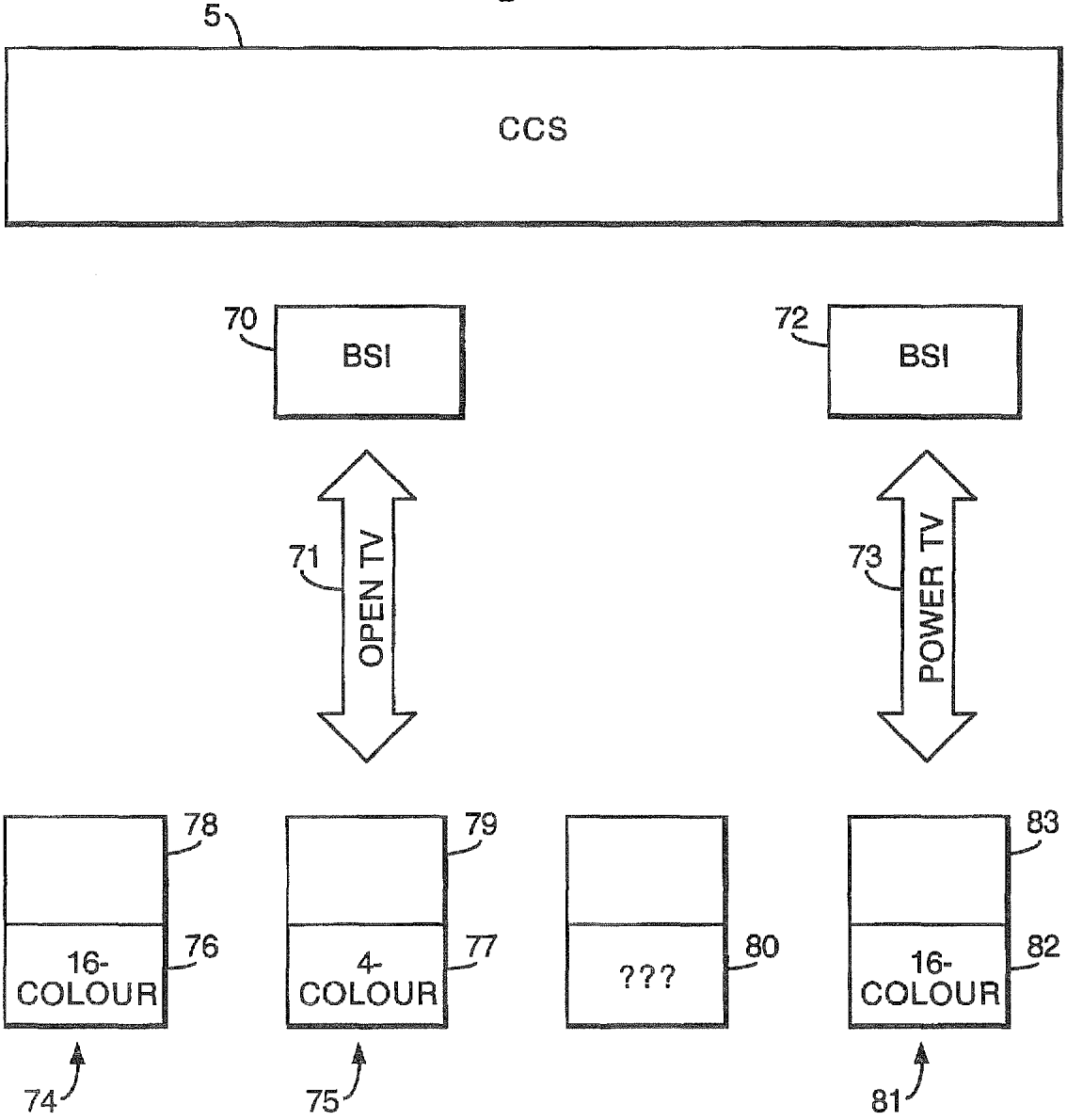

30
STB
31
COMPRESSION
34
STB
35
MODEM
SERVICE PROVIDER SERVER
32
29
DECOMPRESSION
33
36
MODEM
5
CCS
37

Fig.8.


5
CCS
70
BSI
72
BSI
71
OPEN TV
73
POWER TV
78
16-
COLOUR
76
79
4-
COLOUR
77
???
80
83
16-
COLOUR
82
74
75
81

OPIC
Office de la propriété intellectuelle du Canada

CIPO
Canadian Intellectual Property Office

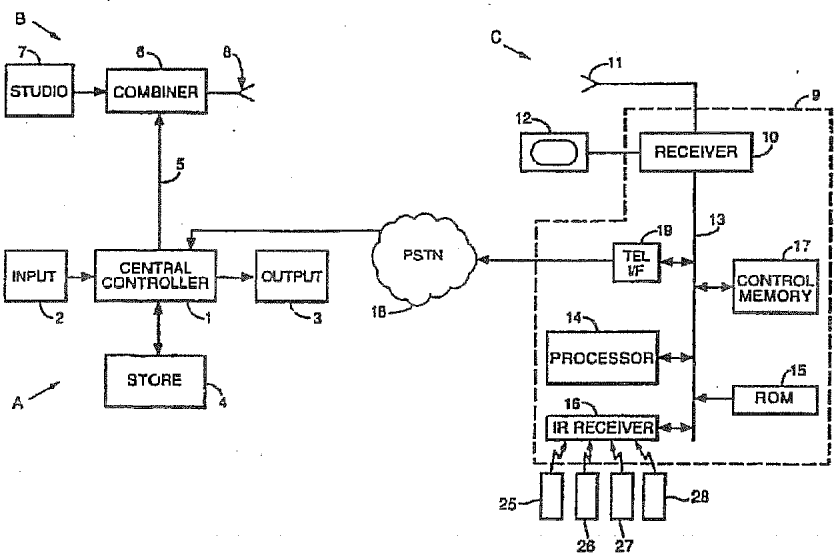
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(43) 1999/06/02

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(51) Int.Cl.[6] H04L 5/22, G06F 3/023
(30) 1997/12/02 (97309670.4) EP

(54) **METHODE ET APPAREIL DE TRANSMISSION DE DONNEES**
(54) **METHOD AND APPARATUS FOR TRANSMITTING DATA**



(57) A method of transmitting items of information from a plurality of data sources (25-28) to a data destination (9) over a common data channel. The method comprises: transmitting the items of information from each data source to the data destination as a series of data packets (70-73), each data packet being separated from successive data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N successive data packets is received at the data destination without overlapping with data packets from the other data sources, wherein Period n = 2*burst period*$[(N-1)^2+n]$ where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

FanDuel Ex. 1002-0838

ABSTRACT OF THE DISCLOSURE

A method of transmitting items of information from a plurality of data sources (25-28) to a data destination (9) over a common data channel. The method comprises:

transmitting the items of information from each data source to the data destination as a series of data packets (70-73), each data packet being separated from successive data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N successive data packets is received at the data destination without overlapping with data packets from the other data sources, wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

FanDuel Ex. 1002-0839

METHOD AND APPARATUS FOR TRANSMITTING DATA

FIELD OF THE INVENTION

The present invention relates to a method and apparatus for transmitting items of information from a plurality of data sources to a data destination over a common data channel.

DESCRIPTION OF THE PRIOR ART

An example of a system of this type is an interactive home entertainment games console. A number of players are each provided with a handset. Each player presses buttons on their respective handset, causing the handset to generate game-play data which is transmitted via an infra-red link to a central game controller.

Since all handsets are transmitting over a common infra-red data channel it is necessary to multiplex the data from the different handsets. Conventionally this is achieved by time division multiplexing in which each handset transmits data in a defined time slot. A problem with time division multiplexing is that the handsets must be synchronised under control of the central game controller to ensure that only one handset is transmitting at any one time. This requires a two-way link between the handsets and the central game controller, along with additional computing power to provide synchronisation control. As a result the system can be expensive.

US-A-4924216 describes joy stick controller apparatus in which a pair of joy stick controllers may send signal bursts on the same communication channel in the infra-red frequency range by means of an electromagnetic transmission. One joy stick transmits signals having a duration of T0 and a repetition period of T1 while the second joy stick transmits a signal having a duration equal to T0 and a repetition period of T2 where T2 is selected to be at least two T0 greater than T1, at least four times greater than T0 and less than 16.6 milliseconds. This approach is suitable where a simple video game apparatus is concerned but is not suitable more generally in the field

FanDuel Ex. 1002-0840

of broadcast media control and game playing which involve much more complex signalling arrangements and usually more than two data sources.

SUMMARY OF THE INVENTION

In accordance with a first aspect of the present invention there is provided a method of transmitting items of information from a plurality of data sources to a data destination over a common data channel, the method comprising:

transmitting the items of information from each data source to the data destination as a series of data packets, each data packet being separated from successive data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N adjacent data packets is received at the data destination without overlapping with data packets from the other data sources, wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

In accordance with a second aspect of the present invention there is provided communication apparatus comprising a data destination having a receiver for receiving data transmitted over a common data channel; and a plurality of data sources each comprising:

a) a transmitter for transmitting items of information to the data destination over the common data channel; and

b) a processor for controlling the transmitter such that the transmitter transmits the items of information as

FanDuel Ex. 1002-0841

a series of data packets, each data packet being separated from successive data packets transmitted by the same data source by a repetition period, and each item of information being transmitted in at least N adjacent data packets from the same data source, where N is the number of data sources,

wherein the repetition period of each data source is different from the repetition periods of the other data sources, and wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

The present invention provides a particularly convenient method of multiplexing without requiring any two-way communication or synchronisation between the data sources and the data destination. The system is also robust and can cope with drift in the repetition periods of the data sources without significantly affecting the reliability of transmission. As a result much cheaper components can be used than in previous systems.

The repetition period is typically defined by the time between the start of two successive data packets. Depending on the coding scheme the data packets may always have the same length or may have a length which varies in accordance with the amount of information being transmitted by the data packet. However in both cases each data source typically has a predetermined maximum data packet length, ie. a limited time slot in which the data source is permitted to transmit data.

Each data source may have different maximum data packet lengths. For instance the data source with the shortest repetition period may have a shorter maximum data packet length (and hence each data packet transmits less data) than the data source with the longest repetition

FanDuel Ex. 1002-0842

period. However preferably each data source has the same maximum data packet length.

Each item of information may be repeated over more than N data packets. However preferably each item of information is transmitted from the same data source in N data packets in order to optimise the data rate.

One or more of the data sources may have a repetition period which varies during the transmission of the N successive data packets. However preferably each data source has a repetition period which remains substantially constant (apart from the effect of drift) at least during the transmission of the N successive data packets, and preferably at all times.

The repetition periods of the data sources may be unequally spaced. For example four data sources may be provided with repetition periods of 20ms,22ms,26ms, and 28ms. However in a preferred example the repetition periods of the data sources are equally spaced.

In this invention, the difference in repetition period between any two data sources is great enough so that if overlap occurs between two data packets, it will not occur between the same two data sources on the next two data packets. Also, the difference in repetition period between any two data sources is small enough that if the data packets from two handsets overlap once they will not overlap again for at least another N repetition periods.

The method may be employed in any communication system which transmits data from a number of sources over a common data channel.

The invention can be implemented to transmit items of information to a variety of data destinations. However, the invention is particularly suited to a method of controlling a broadcast media receiving system, the method comprising transmitting control items of information to the broadcast media receiving system using a method according to the first aspect of the invention.

FanDuel Ex. 1002-0843

The invention also provides broadcast media receiving apparatus comprising a broadcast media receiving system; and communication apparatus according to the second aspect of the invention for controlling the broadcast media receiving system.

The broadcast media receiving system may comprise an analogue and/or digital broadcast media receiving system and will typically include a set top box (STB) or an integrated TV or video cassette recorder (VCR) which in one example is controlled by items of information supplied from the data sources. These data sources typically comprise remote control apparatus.

For example, each data source could comprise a remote control including a plurality of input buttons representing numbers, channels, TV operations, VCR operations, and/or STB operations with an optional direction device made up of two or more buttons representing up and down, and/or left and right etc. or a mouse/rollerball/strain gauge type XY pointer apparatus for providing signal information.

The broadcast media receiving system will usually include a receiver which can be tuned to one of a number of different broadcast channels and in one example the communication apparatus is adapted to control the channel to which the broadcast media receiver is tuned. Alternatively, channel selection may be achieved separately from the data sources.

Alternatively, or in addition, the broadcast media receiving system may include a broadcast media receiver adapted to receive game data, the data sources being adapted to generate game play data which is transmitted to a game controller of the broadcast media receiving system. The broadcast signals may relate solely to the game data but in a preferred arrangement, the game data is broadcast in association with TV programmes or the like to which the game data is related. An example of such a system is described in EP-A-0873772.

FanDuel Ex. 1002-0844

When used in conjunction with a game, the method may further comprise calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet; encoding the time stamp value in the data packet; decoding the data packet at the data destination to retrieve the time stamp value; and calculating the time delay associated with the data packet in accordance with the retrieved time stamp value. This is described in more detail in our copending Canadian patent application claiming priority from European Patent Application No. 97309664.7.

At the simplest level the item of information may be encoded in a single bit of binary data (ie. a "1" or a "0"). Alternatively the item of information may be encoded in a string of bits of binary data, the number of bits depending on the requirements of the system. Typically each data packet includes an identifier which identifies the originating data source, along with a data field which encodes the item of information. The data in the data field may also be encoded with a time stamp. The time stamp may be an absolute time stamp - in this case the time stamp will not change between the N adjacent data packets. However in a preferred embodiment each time stamp is a relative time stamp which is calculated in accordance with the time delay between generating the item of information and transmitting the data packet. In this preferred case the N successive data fields will carry different data (as a consequence of their different relative time stamps) but each data field encodes the same item of information.

BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the present invention will now be described with reference to the accompanying drawings, in which:

Figure 1 is a schematic block diagram of an interactive broadcast network;

Figure 2 shows the game controller and one handset in more detail;

FanDuel Ex. 1002-0845

Figure 3 illustrates the transmission of data packets from one of the handsets; and

Figure 4 illustrates the different time slot pulses generated by the four handsets.

DESCRIPTION OF THE EMBODIMENT

The interactive broadcast network shown in Figure 1 comprises a game control system A at a central site and including a central controller 1 which will include a computer such as a PC operating a Windows based system, connected to an input device 2 such as a keyboard and/or mouse and the like and to an output device 3 which may include a monitor and/or printer. A store 4 contains a database storing data relating to service functions and remote users, which can be accessed and amended by the central controller 1, and a Live File store storing data relating to the game being or to be broadcast. The central controller 1 generates data which can be converted to TV display signals and other control signals associated with various service functions, on a land line 5 connected to a combining unit 6 defining an insertion point of a TV broadcast system B. The combining unit 6 receives television broadcast signals from a studio 7 (or outside broadcast (OB) location, in the case of a live event), and combines these with the signals on the line 5 so that they are transmitted simultaneously by a transmitter 8 to remote users or players C. In other applications, the signals from the central controller 1 and the studio or OB 7 will be transmitted separately.

The signals applied to the combiner 6 may be transmitted to the remote units within a vertical blanking interval (VBI) of the normal TV signal or on a separate radio FM-SCA channel or other data format such as a cable modem, or the Internet. Typically, the transmitted signals will be in digital form but the invention is also applicable to analogue signals.

Each remote user C has a home or remote unit 9 formed by a Set Top Box (STB) having a tunable television receiver

FanDuel Ex. 1002-0846

10 connected to an aerial 11 and a monitor 12. The home unit 9 includes an address/databus 13 connected to the receiver 10, the bus 13 being connected to a microprocessor 14, a memory 15, such as a ROM, storing programme instructions for the processor 14, an infra-red receiver 16, and a control memory (RAM) 17. Signals transmitted by the processor 14 can be communicated to the central controller 1 via a public switched telephone network 18 which is selectively accessed by a telephone interface unit 19 connected to the bus 13.

Alternative media such as cable or the internet can be used for the return signals (as for the signals transmitted to the remote unit C). In general the return signals will be transmitted over a different medium to the incoming signals.

The game control system A can be used to control a variety of games including interactive, predictive games and two examples of such interactive, predictive games are described in EP-A-0873772 incorporated herein by reference. In the first example, play live football, the remote players are able to attempt to predict certain events prior to commencement of a live football match which is broadcast by the transmitter 8 and can also attempt to predict certain events during the live broadcast. In the second example, a predictive game for use with broadcast horse racing is described.

The invention is also concerned with games which can be played between participants at the same remote location C. These may be, for example, games based on quiz shows and the like where a question is presented with a set of multiple choice answers and the users at the remote location C must compete together to be the first to answer correctly from a multiple selection of answers. The questions may or may not be linked to a quiz show being broadcast simultaneously.

In order to enable the users to communicate with the STB 9, each user has his own handset 25-28 which is

FanDuel Ex. 1002-0847

physically separate from the STB 9 but can communicate with the IR receiver 16 of the STB 9 via signals generated in the infra-red waveband. The IR receiver 16 then converts those signals for supply to the processor 14 along the data bus 13.

As mentioned above, each remote handset 25-28 can have a variety of control buttons provided as is well known in the art. Each handset can be used to control the channel to which the receiver 10 is tuned, the tuning being effected via the processor 14. In addition, each remote handset 25-28 can be used to control the location of a respective cursor (not shown) displayed on the monitor 12, movement of a button or the like on the remote handset generating signals to which the processor 14 responds by causing equivalent movement of the cursor about the display screen of the monitor 12. A further button is provided to enable the user to "select" an item indicated by the cursor in those applications where this is necessary.

Each handset 25-28 has substantially the same construction and the construction of the handset 25 will be described in more detail with reference to Figure 2.

The remote handset comprises a central microprocessor 35 which controls an infra-red transmitter 36 as discussed below. A cursor control device 37 generates signals for controlling the position of the respective one of the cursors on the monitor 12, and an array of user actuable buttons 38 feed data to the microprocessor 35. An oscillator 39 (such as a quartz crystal or ceramic resonator) generates a 115200 Hz clock signal with an accuracy of approximately 1%. The clock signal is fed to the microprocessor 35, to a transmit time slot counter 41, and to a time stamp counter 42.

Referring to Figure 3, the transmit time slot counter 41 cyclically counts for a selected number of clock cycles and generates a time slot pulse 43 once every cycle, with a repetition period 44 between successive time slot pulses 43. In the case of handset 25 the repetition period 44 is

FanDuel Ex. 1002-0848

20ms. When one of the array of buttons 38 is pressed, an item of information 45 is generated which is stored in RAM 43 by the microprocessor 35. When the next time slot pulse 46 is received, the microprocessor 35 reads the stored information from RAM 43 and repeatedly transmits it in four successive data packets 70-73 via infra-red transmitter 36. The cursor control device 37 subsequently generates an item of information at 48 which is stored in RAM 43. When the next time slot pulse 49 is received, the microprocessor 35 reads the stored information from RAM 43 and repeatedly transmits it in four successive data packets 74-77 via infra-red transmitter 36.

The time stamp counter 42 starts counting every time at item of information is generated by the buttons 38 or cursor control device 37. The time stamp counter 42 increments twice every repetition period (ie. every 10ms in the case of handset 25) and the present value of the time stamp counter 42 is added to each data packet. For instance the button data 45 is generated 18ms before the time slot pulse 46. Therefore the four data packets 70-73 are time stamped with time stamp values 1,3,5 and 7 respectively. In contrast the cursor control data 48 is generated only 5ms before the time slot pulse 49. Therefore the four data packets 74-77 are time stamped with time stamp values 0,2,4 and 6 respectively.

Each data packet carries 80 bits which are transmitted at a bit rate of 115200 Hz over a data packet length of 0.69ms. Each data packet comprises an identifier to identify which handset 25-28 has generated the data packet, a data field and a check field. The data field is encoded to contain the information stored in RAM 23, along with a time stamp value from counter 42.

Referring to Figure 4, the transmit time slot counters 41 of the four handsets 25-28 are each programmed to generate time slot pulses at different repetition rates. The first handset 25 has a transmit time slot counter 41 which counts 2304 clock cycles and generates a time slot

FanDuel Ex. 1002-0849

pulse 60 every 20ms. In contrast, the transmit time slot counter in the second handset 26 counts 2534 clock cycles and generates a time slot pulse 61 every 22ms. The third and fourth handsets 27,28 generate time slot pulses 62,63 with repetition periods of 24ms and 26ms respectively.

Because the time slot pulses 60-63 are not synchronised, their timing relationship will drift. Rather than try to synchronise the handsets, their repetition periods are deliberately set to be slightly different so that their relative phases are constantly changing. This will occasionally cause overlap as two handsets send two data packets at once. For instance, in Figure 4 time slot pulse 64 from handset 25 overlaps with time slot pulse 65 from handset 27. When this happens, any data packets sent in response to the time slot pulses 64,65 will be corrupted. So as to avoid loss of data, each item of information is repeated four times by each handset.

The microprocessor 14 in the STB 9 decodes each data packet as it arrives, and sends display signals to the monitor 12 in response to the information carried by the data packet. The microprocessor 14 knows the repetition period of each handset. When it receives a data packet it checks the time stamp value and calculates the time delay. For example, referring to Figure 3, the first data packet 70 has a time stamp value of 1. Therefore the microprocessor 14 knows that the button data 45 was generated 10-20ms before the data packet 70 was transmitted. The microprocessor 14 also accounts for any delays in receiving and processing the data packets. If the first data packet 70 overlaps with another data packet, or is lost due to other interference, then the microprocessor can simply decode the next data packet 71 to retrieve the same information. In this case the time stamp value is 3, indicating that the button data 45 was generated 30-40ms before the data packet 71 was transmitted. By calculating the actual time that the buttons 38 were pressed, rather than the time that the data

FanDuel Ex. 1002-0850

packets are received, the microprocessor 33 can make correct decisions in time critical action games, and can also calculate the correct order that buttons were pressed across all four handsets.

By carefully selecting the data packet lengths and repetition periods as discussed below, clear reception of at least one copy of each item of information can be guaranteed whilst the data rate of each handset is maximised.

In this example the difference in repetition period between each handset is chosen to be equal. Therefore the repetition period of each handset is given as follows:

Period n = Period 1 + (n-1) Delta

where "Period n" is the repetition period of the nth handset, and "Delta" is the difference in repetition period.

Therefore Period 2 = Period 1 + Delta
Period 3 = Period 2 + Delta
Period 4 = Period 3 + Delta

Delta must be great enough so that if any overlap occurs it will not occur between the same two handsets on the next data packet. The infra-red receiver 16 will also have a characteristic recovery time. In addition the oscillator 39 may drift causing a change in bit rate. This results in the following constraint:

Delta ≥ 2*(burst length), where
burst length = data packet length + recovery time + bit rate accuracy.

In the example given above, the data packet length is determined by the bit rate (115200 Hz) and number of bits per data packet (80) as 80/115200=0.694ms. A typical value

FanDuel Ex. 1002-0851

of the recovery time is 0.3ms. Typically the bit rate is accurate to 1%. As a result the burst length is typically 1ms, giving Delta a minimum value of 2ms.

The difference in repetition period between any two transmitters must also be small enough such that if the data packets from two handsets collide once, they will not collide again until the data packet has changed. This results in the following constraint:

$$(N-1)*(\text{Period } N) + 2*(\text{burst length}) \leq N*\text{Period } 1$$

where N is the number of transmitters (in this case four).

To maximise data rate and minimise delay, the repetition periods should be as short as possible. Combining the above constraints gives the following optimum relationship between the burst length and the repetition period:

$$\text{Period } n = 2*(\text{burst length})*[(N-1)^2 + n].$$

So the optimum repetition periods for the four handset system of Figure 1 are:

Period 1 = 20 * burst length = 20ms
Period 2 = 22 * burst length = 22ms
Period 3 = 24 * burst length = 24ms
Period 4 = 26 * burst length = 26ms

As the repetition period is proportional to the data packet length, the data packet length can be chosen to suit the delay requirements of the system without affecting the overall data capacity.

The handset with the longest repetition period transmits data at a lower rate than the handset with the shortest repetition period. However the players will rarely press the buttons 38 quickly enough to generate a

FanDuel Ex. 1002-0852

continuous series of data packets. Therefore the difference in data rates is generally not a problem. However if the differing data rates become a problem, then the system can be adapted to transmit more bits in the less frequent data packets. For instance the four handsets 25-28 could transmit data packets containing 80,88,94 and 102 bits respectively.

In an alternative embodiment, the microprocessor 35, oscillator 39, transmit time slot counter 41 and time stamp counter 42 are replaced by a dedicated IC (not shown) which performs the same functions.

FanDuel Ex. 1002-0853

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of transmitting items of information from a plurality of data sources to a data destination over a common data channel, the method comprising:

transmitting the items of information from each data source to the data destination as a series of data packets, each data packet being separated from successive data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N successive data packets is received at the data destination without overlapping with data packets from the other data sources, wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

2. A method according to claim 1, wherein the data packets from each data source are transmitted over a wireless link.

3. A method according to claim 2, wherein the wireless link is an infra-red link.

4. A method according to claim 1, wherein each item of information is transmitted from the same data source in N data packets.

5. A method of controlling a broadcast media receiving system constituting a data destination, the method comprising transmitting control items of information to the broadcast media receiving system from a plurality of data

FanDuel Ex. 1002-0854

sources over a common data channel by transmitting the items of information from each data source to the data destination as a series of data packets, each data packet being separated from successive data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N successive data packets is received at the data destination without overlapping with data packets from the other data sources, wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

6. A method according to claim 5, wherein the items of information control a channel to which the broadcast media receiving system is tuned.

7. A method according to claim 5, wherein the broadcast media receiving system is adapted to receive broadcast game data, the data sources being adapted to generate game play data which is transmitted to a game controller forming part of the broadcast media receiving system.

8. Communication apparatus comprising a data destination having a receiver for receiving data transmitted over a common data channel; and a plurality of data sources each comprising:

a) a transmitter for transmitting items of information to the data destination over the common data channel; and

b) a processor for controlling the transmitter such that the transmitter transmits the items of information as a series of data packets, each data packet being separated

FanDuel Ex. 1002-0855

from successive data packets transmitted by the same data source by a repetition period, and each item of information being transmitted in at least N adjacent data packets from the same data source, where N is the number of data sources,

wherein the repetition period of each data source is different from the repetition periods of the other data sources, and wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

9. Apparatus according to claim 8, wherein the receiver and transmitters communicate over a wireless link.

10. Apparatus according to claim 9, wherein the wireless link is an infra-red link.

11. Apparatus according to claim 8, wherein each data source comprises an oscillator which controls the repetition period of the data source, wherein the oscillator has an accuracy equal to or worse than 1%.

12. Apparatus according to claim 8, wherein each data source comprises a counter which cyclically counts to generate a time slot clock signal, wherein each processor responds to a respective time slot clock signal to cause the transmitter to transmit a data packet.

13. Apparatus according to claim 8, wherein the data destination is unable to transmit data to the data sources, and the data sources are unable to receive data from the data destination.

14. Broadcast media receiving apparatus comprising a broadcast media receiving system; and communication apparatus for controlling the broadcast media receiving system, the communication apparatus comprising a data destination having a receiver for receiving data

FanDuel Ex. 1002-0856

transmitted over a common data channel; and a plurality of data sources each comprising:

a) a transmitter for transmitting items of information to the data destination over the common data channel; and

b) a processor for controlling the transmitter such that the transmitter transmits the items of information as a series of data packets, each data packet being separated from successive data packets transmitted by the same data source by a repetition period, and each item of information being transmitted in at least N adjacent data packets from the same data source, where N is the number of data sources,

wherein the repetition period of each data source is different from the repetition periods of the other data sources, and wherein

$$\text{Period } n = 2*\text{burst period}*[(N-1)^2 + n]$$

where Period n is the repetition period of the nth data source and burst period is a parameter related to the length of the data packets.

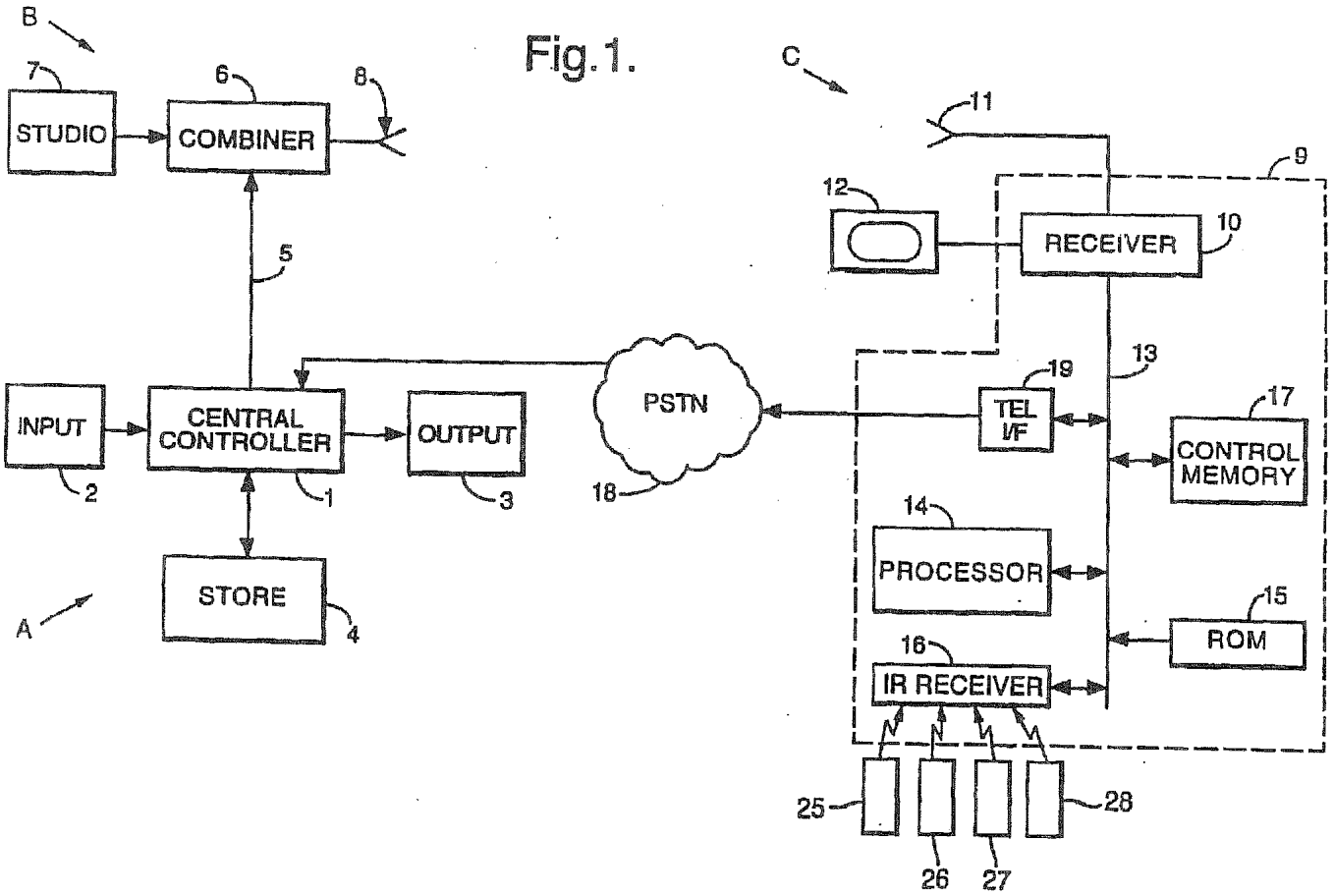
15. Apparatus according to claim 14, wherein the broadcast media receiving system includes a receiver which can be tuned to one of a number of different broadcast channels, the communication apparatus being adapted to control the channel to which the broadcast media receiver is tuned.

16. Apparatus according to claim 15, wherein the broadcast media receiver can be tuned to one of a number of broadcast TV channels.

17. Apparatus according to claim 14, wherein the broadcast media receiving system includes a broadcast media receiver adapted to receive game data, the data sources being adapted to generate game play data which is transmitted to a game controller of the broadcast media receiving system.

FanDuel Ex. 1002-0857

Fig.1.

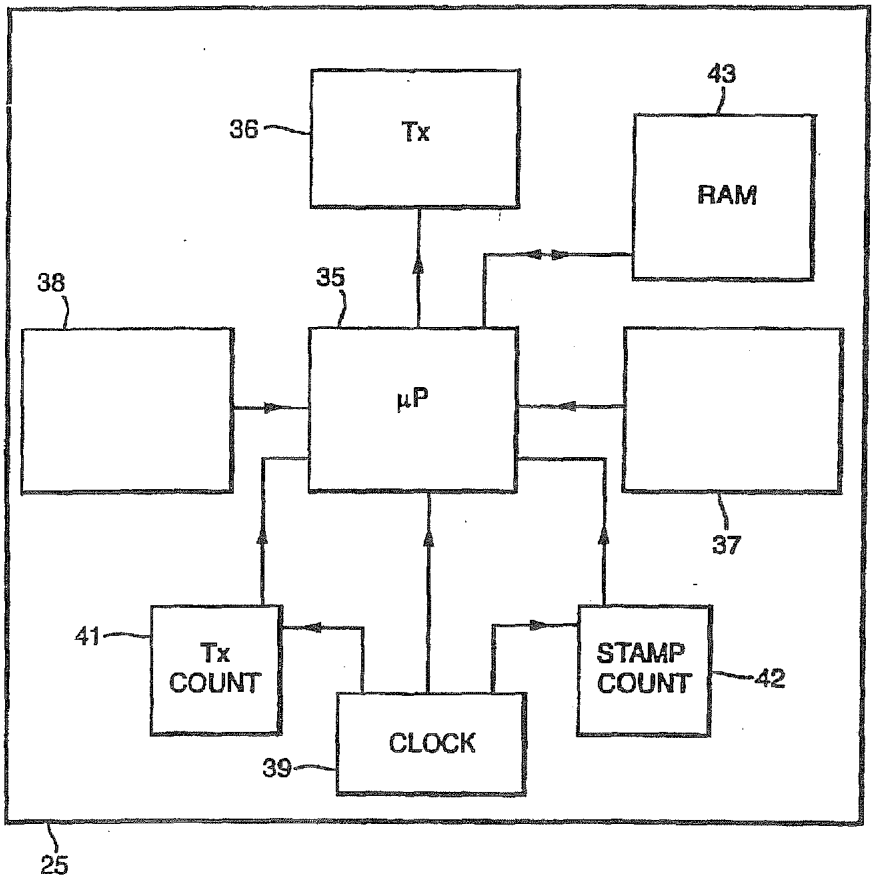


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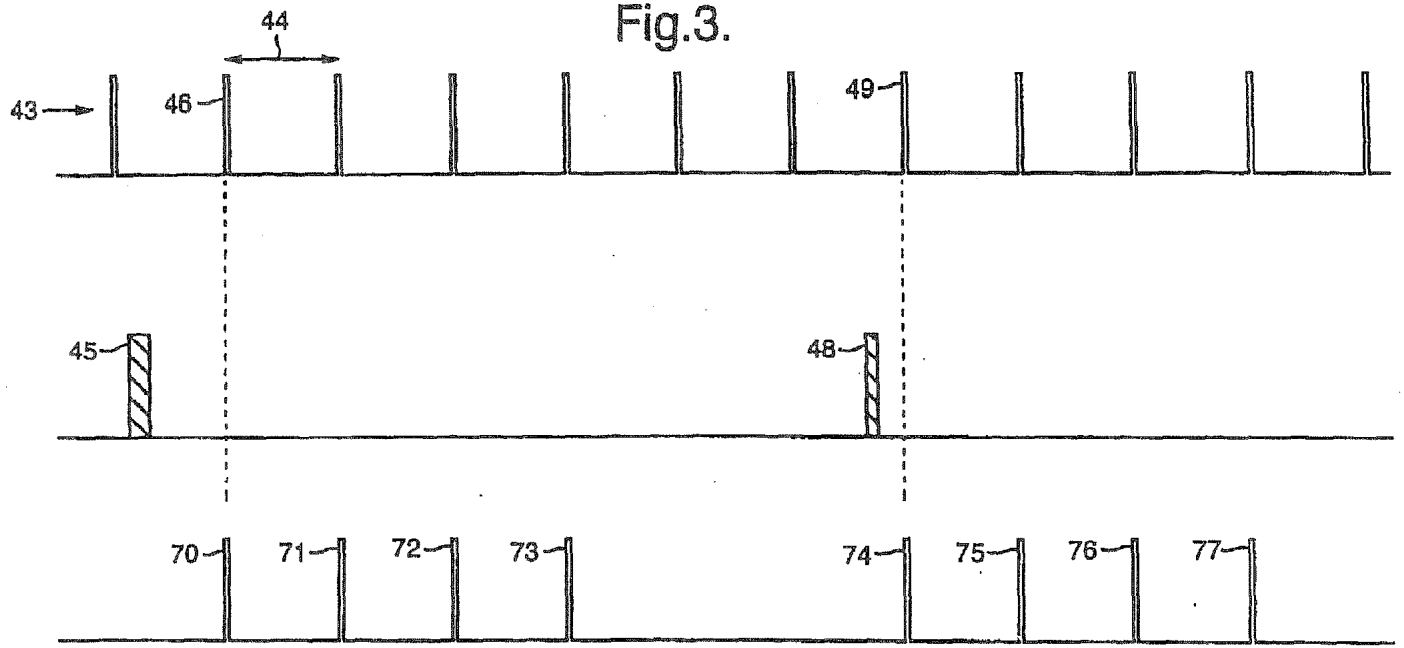
Fig.2.



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Fig.3.



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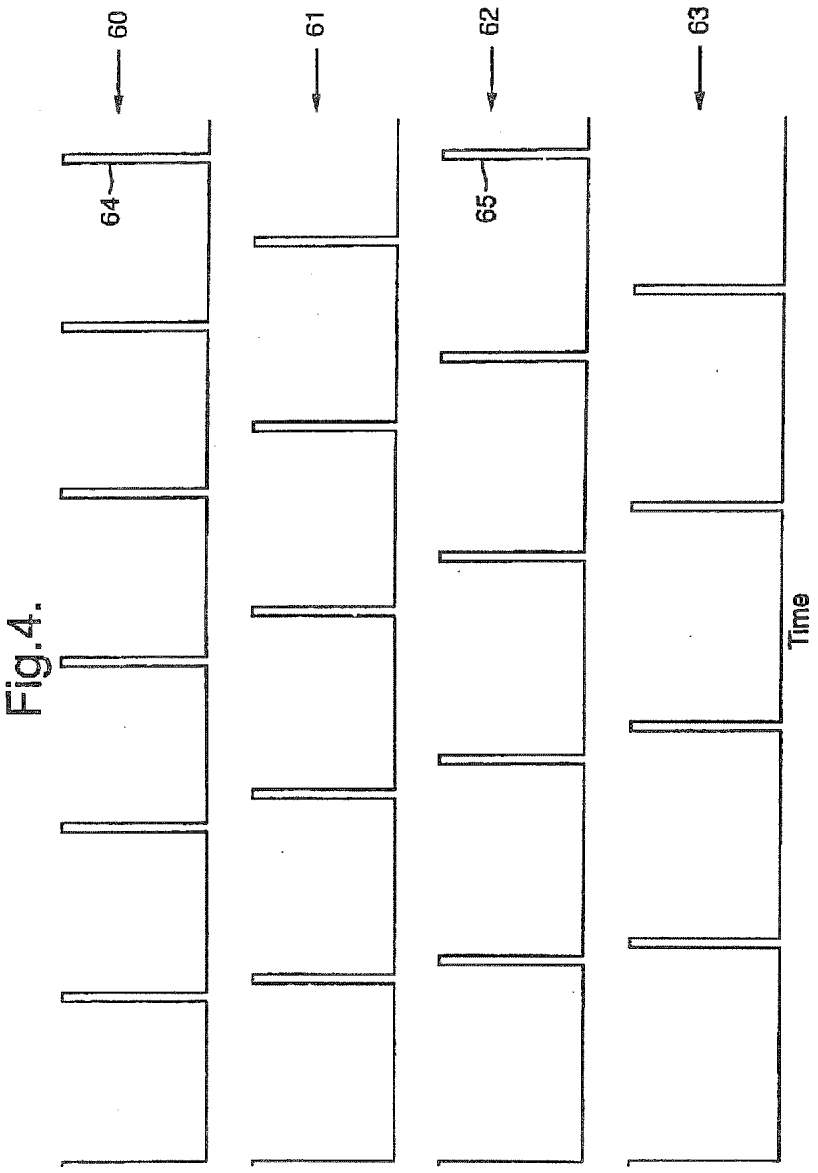


Fig.4.

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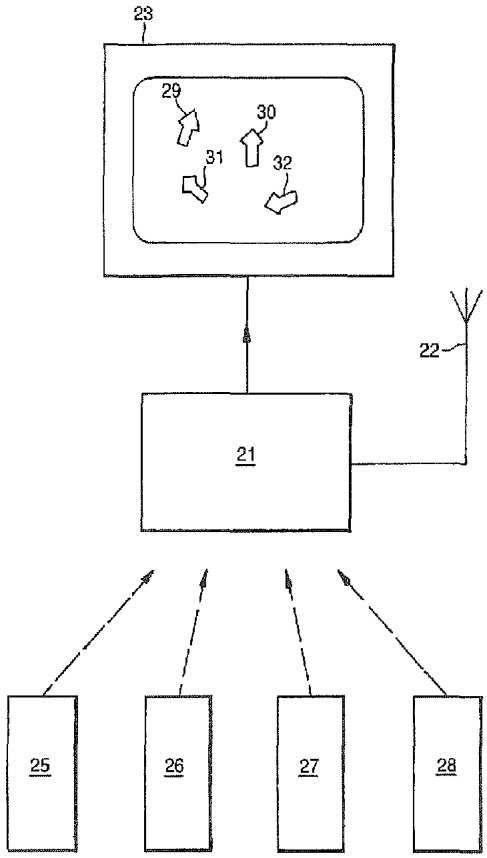
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(54) **METHODE ET APPAREIL D'ENTREE DE DONNEES**
(54) **METHOD AND APPARATUS FOR INPUT OF DATA**



(57) A method of inputting one or more items of information to a data destination (21). The method comprises generating the item(s) of information at one or more data sources (25-28); and for each item of information transmitting the item of information to the data destination in a data packet; calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet; encoding the time stamp value in the data packet; decoding the data packet at the data destination to retrieve the time stamp value; and calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

FanDuel Ex. 1002-0862

ABSTRACT OF THE DISCLOSURE

A method of inputting one or more items of information to a data destination (21). The method comprises generating the item(s) of information at one or more data sources (25-28); and for each item of information transmitting the item of information to the data destination in a data packet; calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet; encoding the time stamp value in the data packet; decoding the data packet at the data destination to retrieve the time stamp value; and calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

METHOD AND APPARATUS FOR INPUT OF DATA

FIELD OF THE INVENTION

The present invention relates to a method and apparatus for inputting data to a data destination. In particular the present invention relates to a system in which an item of information is generated at a data source and transmitted to the data destination in a data packet.

DESCRIPTION OF THE PRIOR ART

An example of a system of this type is an interactive home entertainment games console. A player presses buttons on a handset, causing the handset to generate game-play data which is transmitted to a central game controller. Some data transmission protocols make it impossible to transmit the data at the time the button is pressed, and as a result the central game controller is unable to determine exactly when a button has been pressed. For example, referring to Figure 5, a handset is configured to transmit data packets during a series of equally spaced time slots 10. A player presses a button at 11 and 12. However the game-play data is only transmitted to the game controller at 13 and 14 during the next time slots 15,16. The exact time when the button was pressed can be very important, for instance in a single player game to determine whether the player has hit a moving target.

One way to avoid the problems discussed above is to have a synchronised real-time clock in the handset, to register the exact time that a button was pressed and to include this information as an absolute time stamp in the data packet. A problem with this approach is that synchronisation of the real-time clock adds computational complexity and also requires a two-way link between the game controller and the handset. This adds to the cost of components.

SUMMARY OF THE INVENTION

In accordance with a first aspect of the present invention there is provided a method of inputting one or more items of information to a data destination, the method

FanDuel Ex. 1002-0864

comprising generating the item(s) of information at one or more data sources; and for each item of information transmitting the item of information to the data destination in a data packet; calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet; encoding the time stamp value in the data packet; decoding the data packet at the data destination to retrieve the time stamp value; and calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

In contrast with the conventional approach the present invention generates a relative time stamp value which indicates the time delay between generating and transmitting the item(s) of information. As a result no synchronisation is needed between the data source and the data destination.

The retrieved time stamp value can then be used to calculate the exact time when the item of information was generated. Where a plurality of items of information are generated, their order of generation can be calculated from the time stamp values.

The problem of calculating the order of generation of items of information is particularly acute in a system with a plurality of data sources. Referring to Figure 6, four synchronised handsets have time-division multiplexed transmission slots, ie. a first handset transmits during time slots 1; a second handset transmits during time slots 2; a third handset transmits during time slots 3; and a fourth handset transmits during time slots 4. Buttons on the first, second, third and fourth handsets are pressed at 1',2',3' and 4' respectively. However the message cannot be transmitted to the game controller until the time slot allocated to that handset occurs. Therefore the data packets from the first, second, third and fourth handsets are received at 1",2",3" and 4" respectively. It can be seen that the order of receipt (ie. 3",4",1",2") is

FanDuel Ex. 1002-0865

different from the order in which the buttons are pushed (ie. 4',3',2',1'). This leads the game controller to make the wrong decision as to who pressed a button first, for instance in a tie-break situation.

Now referring to Figure 7, in this case a button on the third handset is pressed at 3', and a button on the first handset is pressed later at 1'. However interference causes the first message 3" to be lost. The message is repeated at 3''' (ie. at the next available time slot) but is out of order with the message 1" from the first handset.

Therefore in a preferred embodiment a plurality of items of information are input to the data destination from a plurality of data sources. Typically the data packets from each data source are transmitted over a common data channel (e.g. a common infra-red link).

Typically each data packet is transmitted during a predetermined time slot. In one example, the data source is allocated a series of time slots, each successive time slot being spaced by a repetition period. If the repetition period is known and substantially constant, then this enables the resolution of the time stamp value to be chosen accordingly. In one example the resolution of the time stamp value is chosen to be half the repetition period.

The data packets may be transmitted in synchronised time slots (eg. of the type shown in Figure 5). However preferably the method further comprises:

transmitting each item of information from each data source as a series of data packets, each data packet being separated from adjacent data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N adjacent data packets is

received at the data destination without overlapping with data packets from the other data sources.

This enables multiple unsynchronised data sources to transmit over a common data channel, significantly reducing the complexity, and hence cost, of the system. In general each data packet has a different time stamp value to the other at least N-1 adjacent data packets.

The method may be employed in any communication system in which time stamping is required. However in a preferred example the item(s) of data comprise(s) game-play data, the data source(s) comprise(s) one or more game-play input devices which generate the game-play data, and the data destination comprises a game-play controller.

In accordance with a second aspect of the present invention there is provided a system comprising a data destination having a receiver for receiving data; and one or more data sources each comprising means for generating an item of information, a transmitter for transmitting the item of information to the data destination, a processor for controlling the transmitter such that the transmitter transmits the item of information to the data destination in a data packet, means for calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet, and an encoder for encoding the time stamp value in the data packet; wherein the data destination further comprises a decoder for decoding the data packet to retrieve the time stamp value; and means for calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

Typically the means for calculating a time stamp value comprises a time stamp counter which counts at a predetermined rate during the time delay to generate a count value. The predetermined rate can then be selected in accordance with the required resolution of the time stamp value.

The data source(s) may communicate with the data destination via a two-way link in order to provide synchronisation. However this creates additional expense. Therefore preferably the data destination is unable to transmit synchronisation information to the data source(s), and the data source(s) is/are unable to receive synchronisation information from the data destination. This enables much cheaper components to be used.

BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the present invention will now be described and contrasted with the prior art with reference to the accompanying drawings, in which:

Figure 1 is a schematic diagram of an interactive game playing system;

Figure 2 shows the game controller and one handset in more detail;

Figure 3 illustrates the transmission of data packets from one of the handsets;

Figure 4 illustrates the different time slot pulses generated by the four handsets;

Figure 5 illustrate the problem of loss of time information in a single player game;

Figure 6 illustrates the problem of loss of time information in a multiple player tie-break; and

Figure 7 illustrates the problem of loss of time information where a data packet is not received.

DETAILED DESCRIPTION OF THE EMBODIMENT

An example of the present invention when used in a game playing system is shown in Figure 1. The system of Figure 1 is part of an interactive game playing system of the type described in EP-A-0649102. The system comprises a game controller 21, a receiving aerial 22 for receiving broadcasts from a central TV transmitter (not shown) and a monitor 23, such as a conventional television set. Broadcast information and programmes from the central transmitter (not shown) are received by the aerial 22 and fed via the local controller 21 to the monitor 23 for

FanDuel Ex. 1002-0868

display. For example, the broadcast could include a game programme which is displayed in a conventional manner.

Four remote handsets 25-28 are provided, each of which is operated by an individual player. The game controller 21 causes four cursors 29-32 to be displayed on the monitor 23, the position of each cursor being controlled by a respective one of the handsets 25-28.

The construction of the game controller 21 and one of the handsets 25 is shown in more detail in Figure 2. The other handsets 26-28 are identical in construction. The aerial 22 is connected to a central 68000 microprocessor 33. The microprocessor 33 processes signals from the aerial 22 for display on the monitor 23. The game controller 21 also comprises an infra-red receiver 34, which receives infra-red signals from the four remote handsets 25-28.

The remote handsets 25-28 each comprise a central microprocessor 35 which controls an infra-red transmitter 36 as discussed below. The remote handsets each have a cursor control device 37 for controlling the position of a respective one of the cursors 29-32, and an array of buttons 38 which feed data to the microprocessor 35. An oscillator 39 (such as a quartz crystal or ceramic resonator) generates a 115200 Hz clock signal with an accuracy of approximately 1%. The clock signal is fed to the microprocessor 35, to a transmit time slot counter 41, and to a time stamp counter 42.

Referring to Figure 3, the transmit time slot counter 41 cyclically counts for a selected number of clock cycles and generates a time slot pulse 43 once every cycle, with a repetition period 44 between successive time slot pulses 43. In the case of handset 25 the repetition period 44 is 20ms. A button 38 is pressed and generates an item of information 45 which is stored in RAM 43. When the next time slot pulse 46 is received, the microprocessor 35 reads the stored information from RAM 43 and repeatedly transmits it in four successive data packets 70-73 via infra-red

FanDuel Ex. 1002-0869

transmitter 36. The cursor control 37 subsequently generates an item of information at 48 which is stored in RAM 43. When the next time slot pulse 49 is received, the microprocessor 35 reads the stored information from RAM 43 and repeatedly transmits it in four successive data packets 74-77 via infra-red transmitter 36.

The time stamp counter 42 starts counting every time at item of information is generated by the buttons 38 or cursor control 37. The time stamp counter 42 increments twice every repetition period (ie. every 10ms in the case of handset 25) and the present value of the time stamp counter 42 is added to each data packet. For instance in the example of Figure 3, the button data 45 is generated 18ms before the time slot pulse 46. Therefore the four data packets 70-73 are time stamped with time stamp values 1,3,5 and 7 respectively. In contrast the cursor control data 48 is generated only 5ms before the time slot pulse 49. Therefore the four data packets 74-77 are time stamped with time stamp values 0,2,4 and 6 respectively.

Each data packet carries 80 bits which are transmitted at a bit rate of 115200 Hz over a data packet length of 0.69ms. Each data packet comprises an identifier to identify which handset 25-28 has generated the data packet, a data field and a check field. The data field is encoded to contain the information stored in RAM 23, along with a time stamp value from counter 42.

Referring to Figure 4, the transmit time slot counters 41 of the four handsets 25-28 are each programmed to generate time slot pulses at different repetition rates. The first handset 5 has a transmit time slot counter 41 which counts 2304 clock cycles and generates a time slot pulse 60 every 20ms. In contrast, the transmit time slot counter in the second handset 6 counts 2534 clock cycles and generates a time slot pulse 61 every 22ms. The third and fourth handsets 7,8 generate time slot pulses 62,63 with repetition periods of 24ms and 26ms respectively.

FanDuel Ex. 1002-0870

Because the time slot pulses 60-63 are not synchronised, their timing relationship will drift. Rather than try to synchronise the handsets, their repetition periods are deliberately set to be slightly different so that their relative phases are constantly changing. This will occasionally cause overlap as two handsets send two data packets at once. For instance, in Figure 4 time slot pulse 64 from handset 5 overlaps with time slot pulse 65 from handset 7. When this happens, any data packets sent in response to the time slot pulses 64,65 will be corrupted. So as to avoid loss of data, each item of information is repeated four times by each handset.

The game controller microprocessor 33 decodes each data packet as it arrives, and sends display signals to the monitor 23 in response to the information carried by the data packet. The microprocessor 33 knows the repetition period of each handset. When it receives a data packet it checks the time stamp value and calculates the time delay. For example, referring to Figure 3, the first data packet 70 has a time stamp value of 1. Therefore the microprocessor 33 knows that the button data 45 was generated 10-20ms before the data packet 70 was transmitted. The microprocessor 33 also accounts for any delays in receiving and processing the data packets. If the first data packet 70 overlaps with another data packet, or is lost due to other interference, then the microprocessor can simply decode the next data packet 71 to retrieve the same information. In this case the time stamp value is 3, indicating that the button data 45 was generated 30-40ms before the data packet 71 was transmitted. By calculating the actual time that the buttons 38 were pressed, rather than the time that the data packets are received, the microprocessor 33 can make correct decisions in time critical action games, and can also calculate the correct order that buttons were pressed across all four handsets.

FanDuel Ex. 1002-0871

By carefully selecting the data packet lengths and repetition periods as discussed below, clear reception of at least one copy of each item of information can be guaranteed whilst the data rate of each handset is maximised.

In this example the difference in repetition period between each handset is chosen to be equal. Therefore the repetition period of each handset is given as follows:

Period n = Period 1 + (n-1) Delta

where "Period n" is the repetition period of the nth handset, and "Delta" is the difference in repetition period.

Therefore Period 2 = Period 1 + Delta
Period 3 = Period 2 + Delta
Period 4 = Period 3 + Delta

Delta must be great enough so that if any overlap occurs it will not occur between the same two handsets on the next data packet. The infra-red receiver 14 will also have a characteristic recovery time. In addition the oscillator 39 may drift causing a change in bit rate. This results in the following constraint:

Delta ≥ 2*(burst length), where

burst length = data packet length + recovery time + bit rate accuracy.

In the example given above, the data packet length is determined by the bit rate (115200 Hz) and number of bits per data packet (80) as 80/115200=0.694ms. A typical value of the recovery time is 0.3ms. Typically the bit rate is accurate to 1%. As a result the burst length is typically 1ms, giving Delta a minimum value of 2ms.

The difference in repetition period between any two transmitters must also be small enough such that if the

FanDuel Ex. 1002-0872

data packets from two handsets collide once, they will not collide again until the data packet has changed. This results in the following constraint:

$$(N-1)*(\text{Period } N) + 2*(\text{burst length}) \leq N*\text{Period } 1$$

where N is the number of transmitters (in this case four).

To maximise data rate and minimise delay, the repetition periods should be as short as possible. Combining the above constraints gives the following optimum relationship between the burst length and the repetition period:

$$\text{Period } n = 2*(\text{burst length})*[(N-1)^2 + n].$$

So the optimum repetition periods for the four transmitter system of Figure 1 are:

Period 1 = 20 * burst length = 20ms
Period 2 = 22 * burst length = 22ms
Period 3 = 24 * burst length = 24ms
Period 4 = 26 * burst length = 26ms

As the repetition period is proportional to the data packet length, the data packet length can be chosen to suit the delay requirements of the system without affecting the overall data capacity.

The handset with the longest repetition period transmits data at a lower rate than the handset with the shortest repetition period. However the players will rarely press the buttons 18 quickly enough to generate a continuous series of data packets. Therefore the difference in data rates is generally not a problem. However if the differing data rates become a problem, then the system can be adapted to transmit more bits in the less frequent data packets. For instance the four handsets 25-

FanDuel Ex. 1002-0873

28 could transmit data packets containing 80,88,94 and 102 bits respectively.

In an alternative embodiment, the microprocessor 35, oscillator 39, transmit time slot counter 41 and time stamp counter 42 are replaced by a dedicated IC (not shown) which performs the same functions.

FanDuel Ex. 1002-0874

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of inputting one or more items of information to a data destination, the method comprising generating the item(s) of information at one or more data sources; and for each item of information transmitting the item of information to the data destination in a data packet; calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet; encoding the time stamp value in the data packet; decoding the data packet at the data destination to retrieve the time stamp value; and calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

2. A method according to claim 1 wherein a plurality of items of information are input to the data destination from a plurality of data sources.

3. A method according to claim 1 further comprising calculating the order of generation of the items of information in accordance with the time stamp value associated with the retrieved time stamp values.

4. A method according to claim 2 wherein the data packets are transmitted over a common data channel, the method further comprising:

transmitting each item of information from each data source as a series of data packets, each data packet being separated from adjacent data packets transmitted by the same data source by a repetition period, the repetition period of each data source being different from the repetition periods of the other data sources; and

repeatedly transmitting each item of information from the same data source in at least N adjacent data packets, where N is the number of data sources, in order to ensure that at least one of the N adjacent data packets is received at the data destination without overlapping with data packets from the other data sources.

FanDuel Ex. 1002-0875

5. A method according to claim 1 wherein the item(s) of data comprise(s) game-play data, the data source(s) comprise(s) one or more game-play input devices which generate the game-play data, and the data destination comprises a game-play controller.

6. A system comprising a data destination having a receiver for receiving data; and one or more data sources each comprising means for generating an item of information, a transmitter for transmitting the item of information to the data destination, a processor for controlling the transmitter such that the transmitter transmits the item of information to the data destination in a data packet, means for calculating a time stamp value in accordance with the time delay between generating the item of information and transmitting the data packet, and an encoder for encoding the time stamp value in the data packet; wherein the data destination further comprises a decoder for decoding the data packet to retrieve the time stamp value; and means for calculating the time delay associated with the data packet in accordance with the retrieved time stamp value.

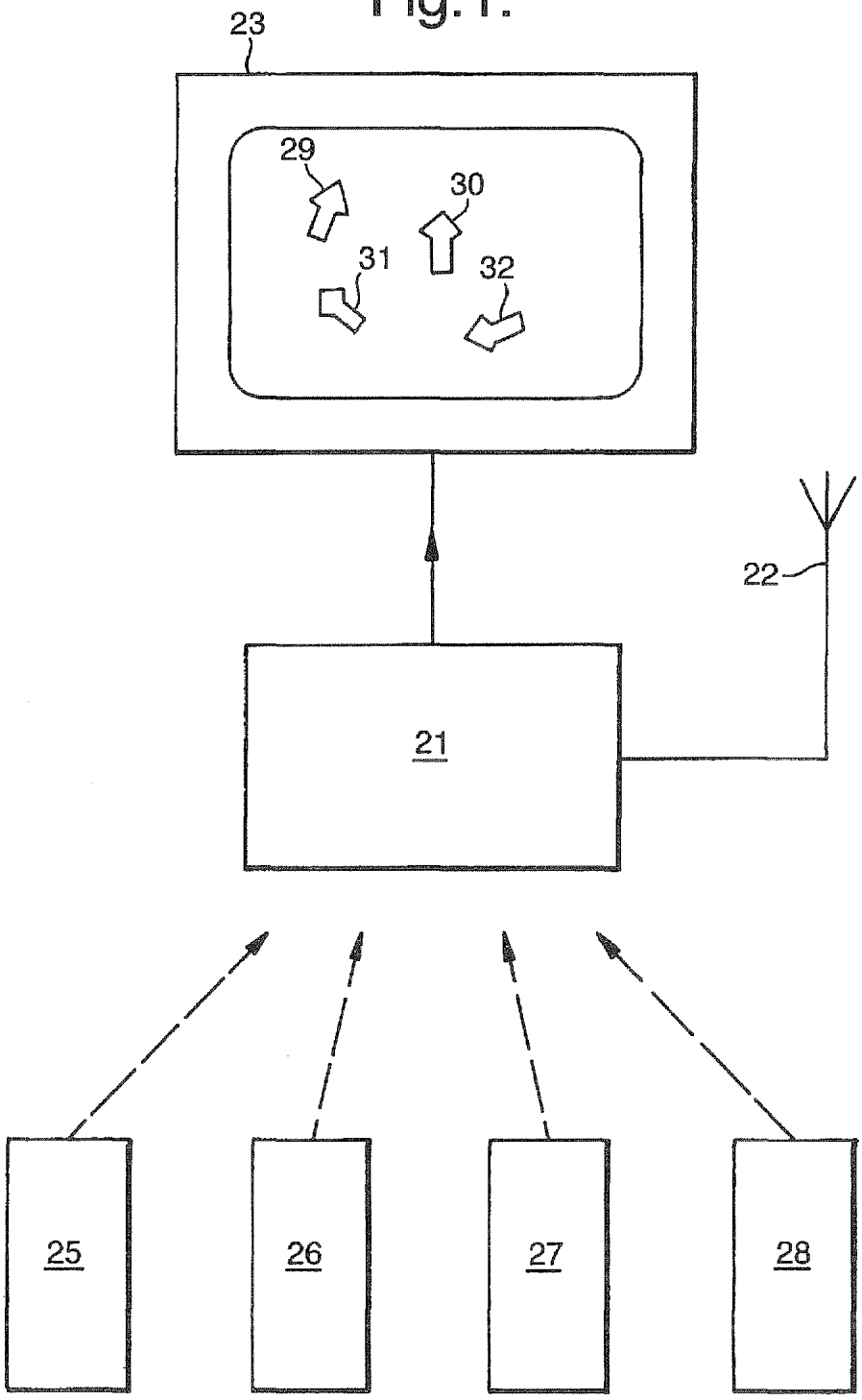
7. A system according to claim 6 wherein the means for calculating a time stamp value comprises a time stamp counter which counts at a predetermined rate during the time delay to generate a count value.

8. A system according to claim 6 wherein the data destination is unable to transmit synchronisation information to the data source(s), and the data source(s) is/are unable to receive synchronisation information from the data destination.

9. An interactive game-play system comprising a communication system according to claim 6, wherein the data destination comprises a game-play controller, the data source(s) comprise(s) one or more game-play input devices, and the item(s) of data comprise(s) one or more items of game-play data generated by the game-play input device(s).

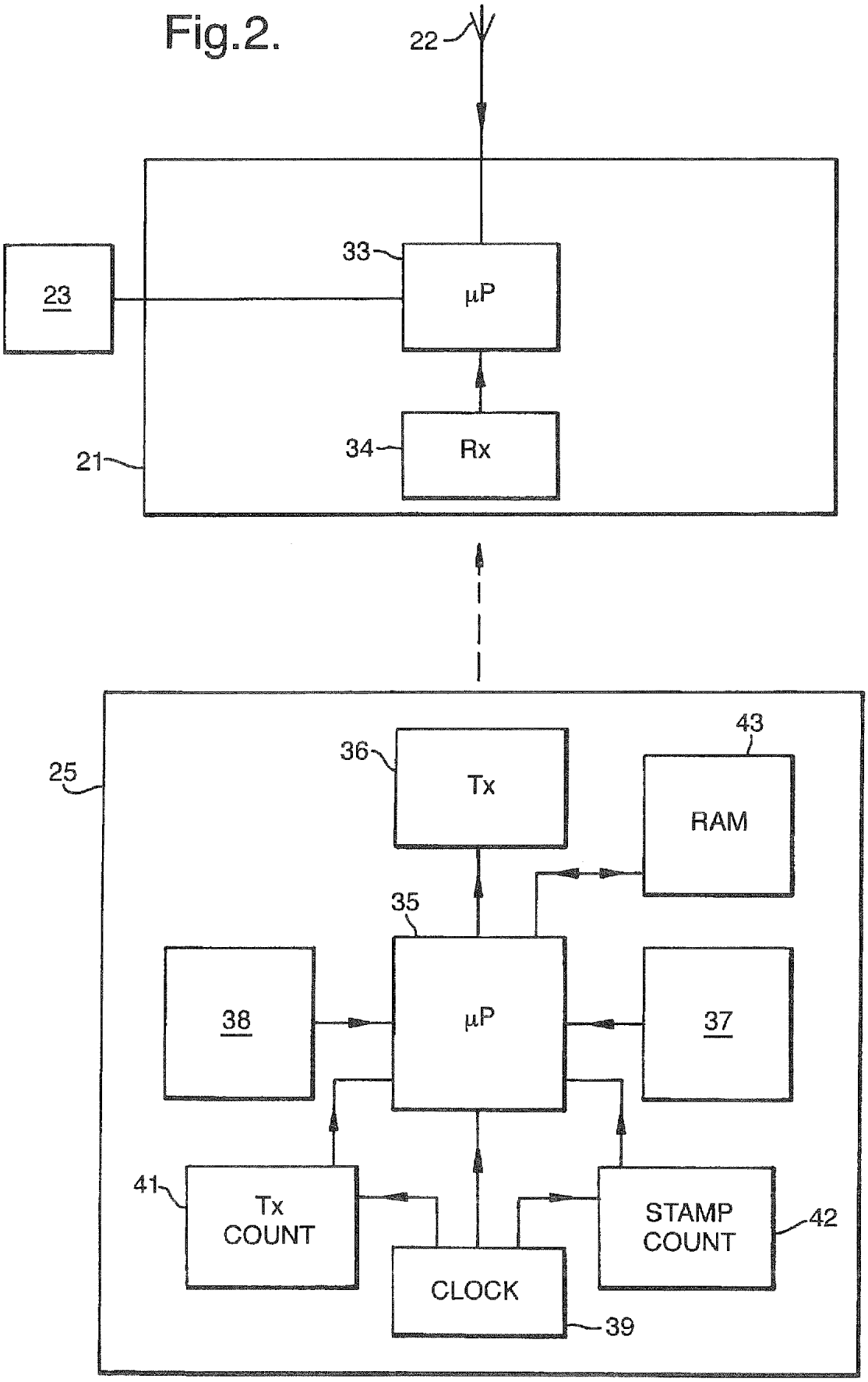
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Fig.1.



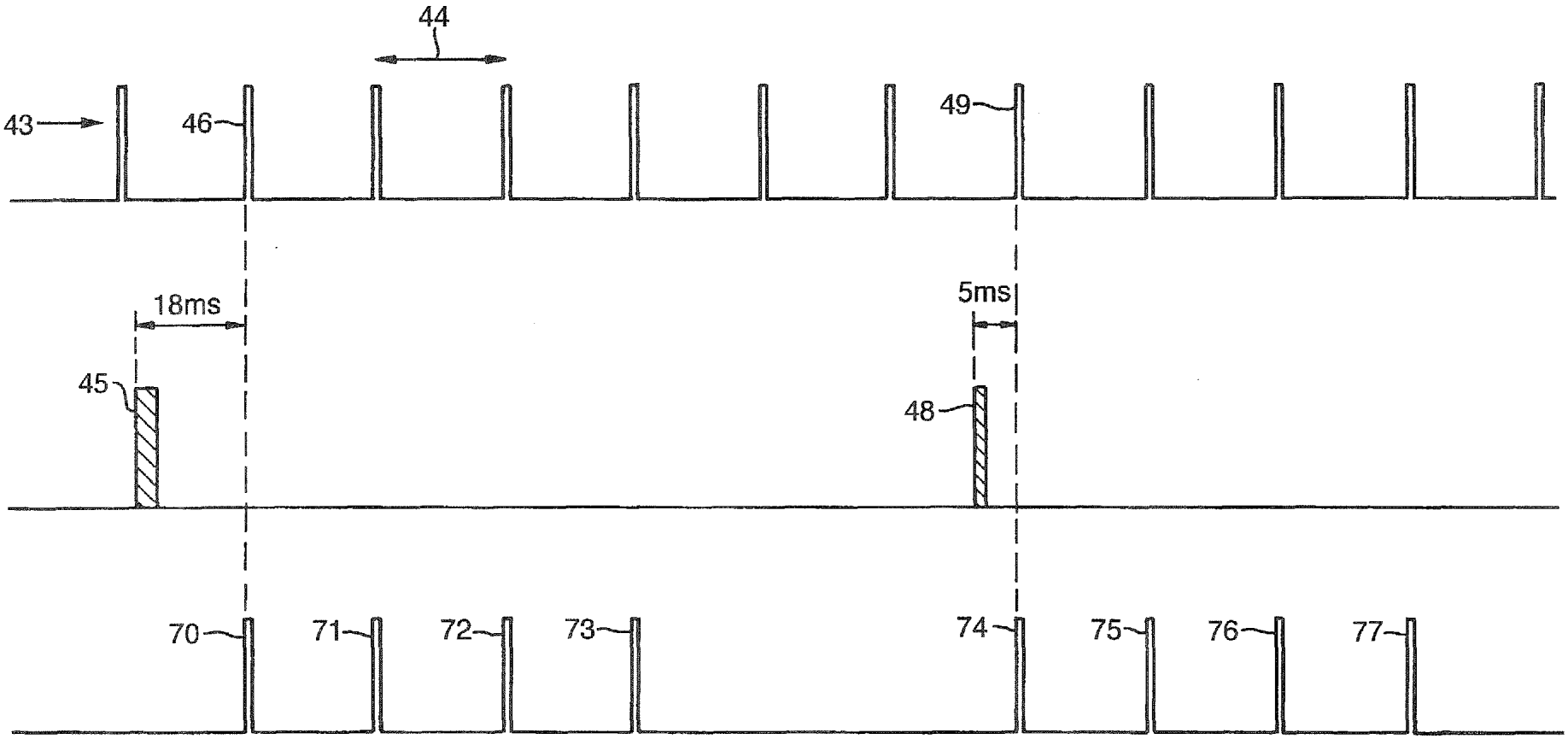
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Fig.2.



FanDuel Ex. 1002-0878

Fig.3.



CA 02252021 1998-11-18

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FanDuel Ex. 1002-0879

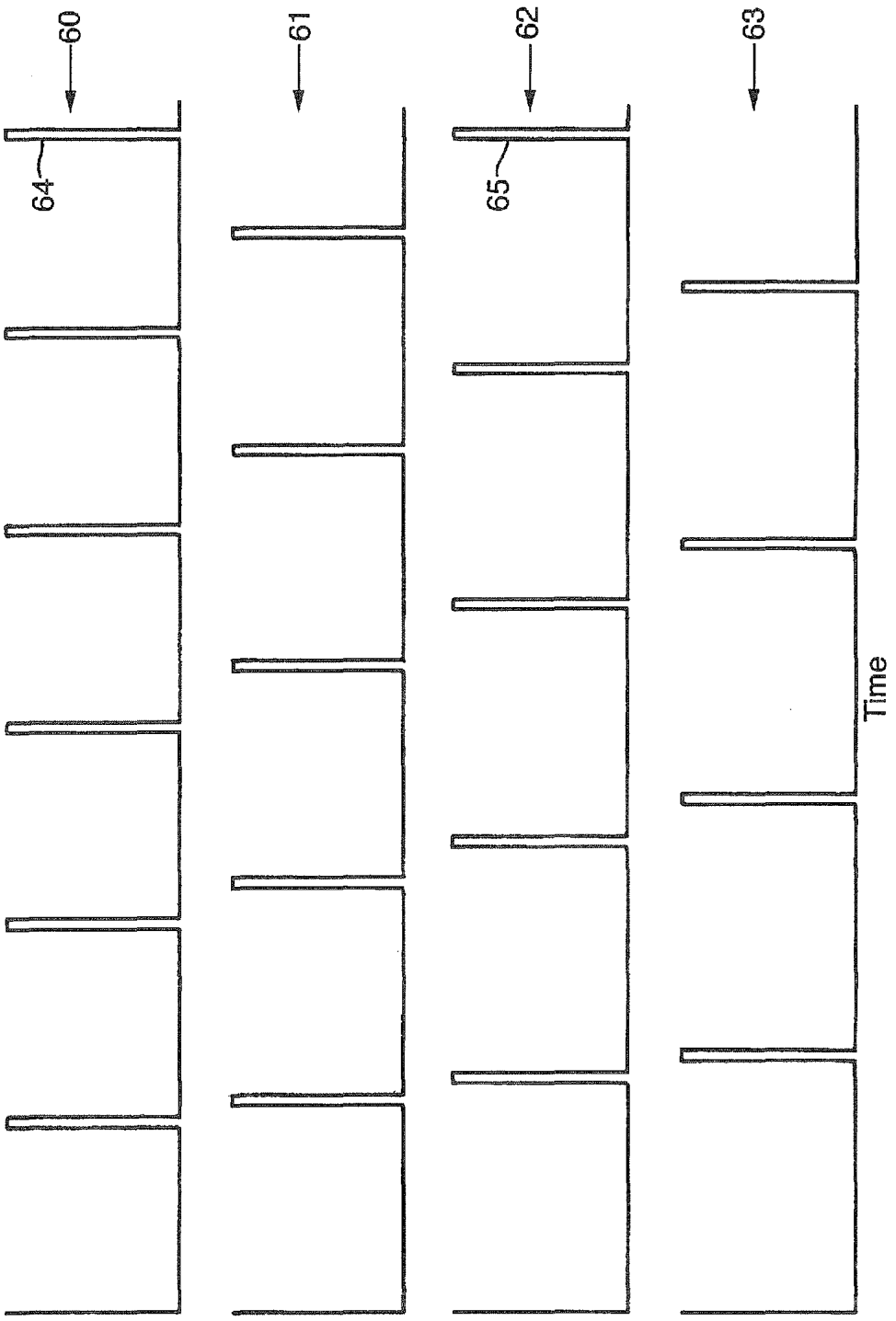


Fig.4.

Fig.5.

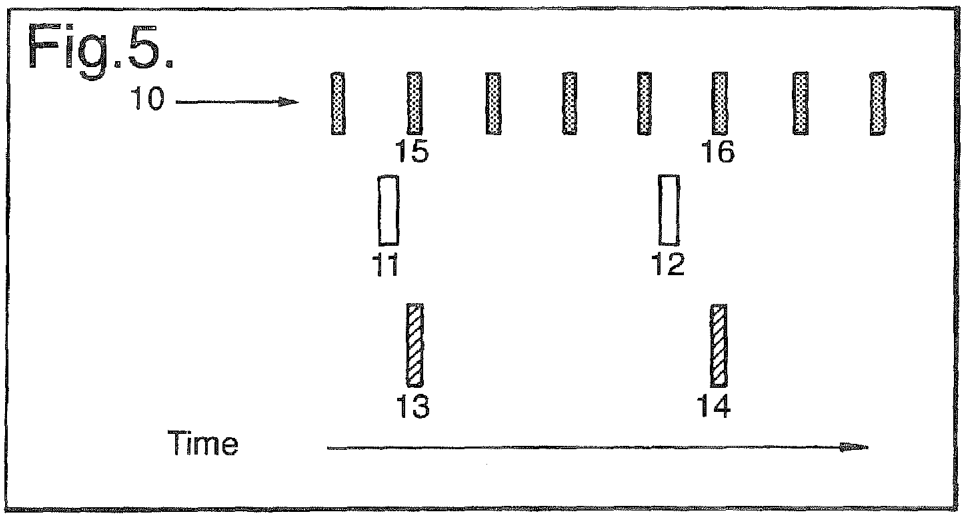


Fig.6.

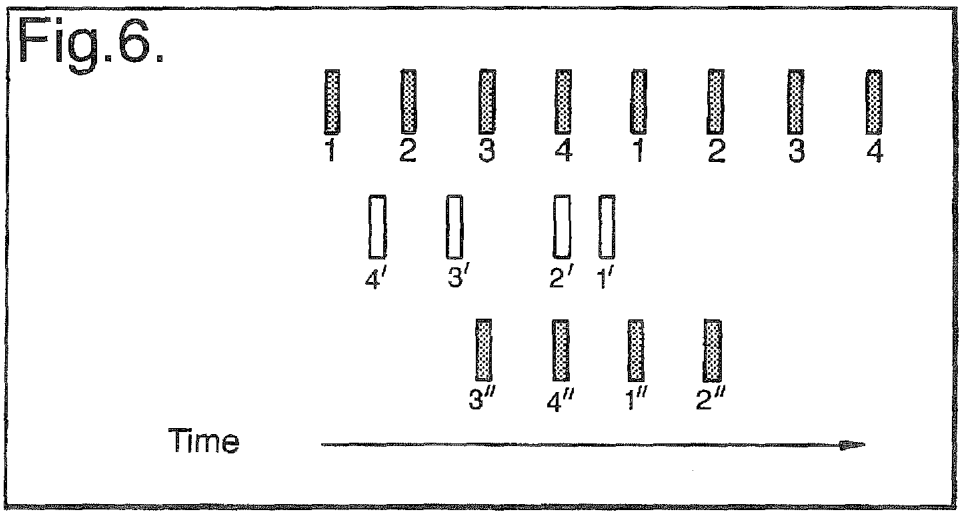
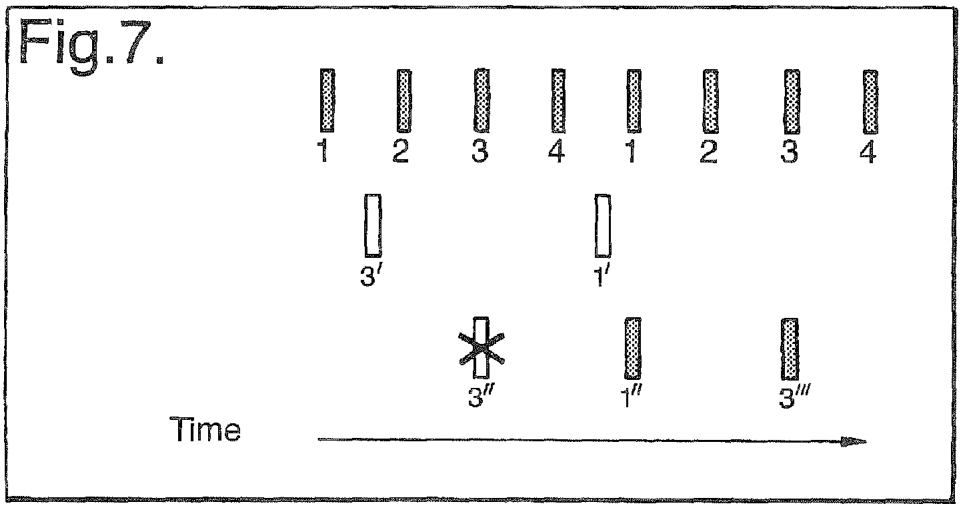


Fig.7.



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(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0882

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0883

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0884

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0885

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0886

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0887

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0888

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	76	5488659	A	1996-01-30	Pablo Millani	
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FanDuel Ex. 1002-0889

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0890

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0891

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	109	8219617	B2	2012-07-10	Ashida, Hiroyuki	
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FanDuel Ex. 1002-0892

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FanDuel Ex. 1002-0893

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0894

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0895

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0896

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0897

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0898

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0899

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0901

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	4	WINVIEW GAME PRODUCER, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season," In Winview Games. 21 December 2016, Retrieved on 21 January 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/	

FanDuel Ex. 1002-0902

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	5	A copy of the International Search Report and The Written Opinion for the PCT/US2019/054859 dated February 4, 2020.	
	6	A copy of the International Preliminary Report dated April 22, 2021 for the application PCT/US2019/054859.	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-0903

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-28
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-0904

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	44644502
Application Number:	17488674
International Application Number:	
Confirmation Number:	8881
Title of Invention:	SYNCHRONIZED GAMING AND PROGRAMMING
First Named Inventor/Applicant Name:	David B. Lockton
Customer Number:	28960
Filer:	Jonathan O Owens
Filer Authorized By:	
Attorney Docket Number:	AIRP-01054
Receipt Date:	30-DEC-2021
Filing Date:	29-SEP-2021
Time Stamp:	16:54:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_12_30_2021.pdf	1037519 4fc79dab4ae47ce7b4ac3c0fbace674e089e7d55	no	4

Warnings:

FanDuel Ex. 1002-0906

Information:					
2	Non Patent Literature	Other1.pdf	10490727 56b1f57c617143b989b739219b59a40aa3274d53	no	14
Warnings:					
Information:					
			Total Files Size (in bytes):	11528246	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10981070	B2	2021-04-20	Adam Paul Isgreen	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

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FanDuel Ex. 1002-0908

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	1	Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015)	

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-0909

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-30
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-0910

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/488,674	09/29/2021	David B. Lockton	AIRP-01054

CONFIRMATION NO. 8881

28960
Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

PUBLICATION NOTICE

OC000000131231234

Title:SYNCHRONIZED GAMING AND PROGRAMMING

Publication No.US-2022-0016524-A1
Publication Date:01/20/2022

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The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

FanDuel Ex. 1002-0912

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4141548		1979-02-27	Everton	
	2	4270755		1981-06-02	Willhide et al.	
	3	4496148		1985-01-29	Morstain et al.	
	4	4592546		1986-06-03	Fascenda et al.	
	5	4816904		1989-03-28	McKenna et al.	
	6	5013038		1991-05-07	Luvenberg	
	7	5035422		1991-07-30	Berman	
	8	5073931		1991-12-17	Audebert et al.	

FanDuel Ex. 1002-0913

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	9	5083271		1992-01-21	Thatcher et al.	
	10	5083800		1992-01-28	Lockton	
	11	5120076		1992-06-09	Luxenberg et al.	
	12	5213337		1993-05-25	Sherman	
	13	5227874		1993-07-13	Von Kohom	
	14	5263723		1993-11-23	Pearson et al.	
	15	5283734		1994-02-01	Von Kohom	
	16	5343236		1994-08-30	Koppe et al.	
	17	5343239		1994-08-30	Lappington et al.	
	18	5462275		1995-10-31	Lowe et al.	
	19	5479492		1995-12-26	Hofstee et al.	

FanDuel Ex. 1002-0914

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	20	5553120		1996-09-03	Katz	
	21	5566291		1996-10-15	Boulton et al.	
	22	5585975		1996-12-17	Bliss	
	23	5586257		1996-12-17	Perlman	
	24	5589765		1996-12-31	Ohmart et al.	
	25	5643088		1997-07-01	Vaughn et al.	
	26	5663757	A	1997-09-02	Morales, Fernando	
	27	5759101		1998-06-02	Won Kohom	
	28	5761606		1998-06-02	Wolzien	
	29	5762552		1998-06-09	Voung et al.	
	30	5764275		1998-06-09	Lappington et al.	

FanDuel Ex. 1002-0915

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	31	5813913		1998-09-29	Berner et al.	
	32	5818438		1998-10-06	Howe et al.	
	33	5838774		1998-11-17	Weiser, Jr.	
	34	5860862		1999-01-19	Junkin	
	35	5870683		1999-09-29	Wells et al.	
	36	5916024		1999-06-29	Von Kohom	
	37	5970143		1999-10-19	Schneier et al.	
	38	5971854		1999-10-26	Pearson et al.	
	39	5987440		1999-11-16	O'Neil et al.	
	40	6009458		1999-12-28	Hawkins et al.	
	41	6016337		2000-01-18	Pykalisto	

FanDuel Ex. 1002-0916

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	42	6117013		2000-09-12	Elba	
	43	6126543		2000-10-03	Friedman	
	44	6174237	B1	2001-01-16	Stephenson	
	45	6182084	B1	2001-01-30	Cockrell et al.	
	46	6193610	B1	2001-02-27	Junkin	
	47	6222642	B1	2001-04-24	Farrell et al.	
	48	6233736	B1	2001-05-15	Wolzien	
	49	6251017	B1	2001-06-26	Leason et al.	
	50	6293868		2001-09-25	Bernard	
	51	6312336	B1	2001-11-06	Handelman et al.	
	52	6411969		2002-06-25	Tam	

FanDuel Ex. 1002-0917

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	53	6416414		2002-07-09	Stadelmann	
	54	6425828	B2	2002-07-30	Walker et al.	
	55	6434398		2002-08-13	Inselberg	
	56	6470180	B1	2002-10-22	Kotzin et al.	
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FanDuel Ex. 1002-0918

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	75	6785561	B1	2004-08-31	Kim	
	76	6801380	B1	2004-10-05	Saturdja	
	77	6807675		2004-10-19	Millard et al.	
	78	6806889	B1	2004-10-19	Malaure et al.	
	79	6811482	B2	2004-11-02	Letovsky	
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FanDuel Ex. 1002-0920

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0921

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	103	7347781	B2	2008-03-25	Schultz	
	104	7351149		2008-04-01	Simon et al.	
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FanDuel Ex. 1002-0922

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0923

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	119	8109827	B2	2012-02-07	Cahill et al.	
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FanDuel Ex. 1002-0924

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0925

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	141	9076303	B1	2015-07-07	Park	
	142	5638113		1997-06-10	Lappington	
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	144	6816628		2004-11-09	Sarachik et al.	
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FanDuel Ex. 1002-0926

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0929

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0930

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0931

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0932

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0933

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0934

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0935

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0936

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-0937

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	125	20060135253	A1	2006-06-22	George et al.	
	126	20060183548	A1	2006-08-17	Morris et al.	
	127	20070147870	A1	2007-07-26	Nagashima et al.	
	128	20070265089	A1	2007-11-15	Robarts	
	129	20020037766	A1	2002-03-01	Mario V. Muniz	
	130	20020069265	A1	2002-03-01	Lazaros Bountour	
	131	20020165020	A1	2002-11-01	Takeshi Koyama	
	132	20020165025	A1	2002-11-01	Kazuhiro Kawahara	
	133	20020187825	A1	2002-12-01	Joseph J. Tracy	
	134	20020144273	A1	2002-10-03	Reto	
	135	20030023547	A1	2003-01-01	Donald France	

FanDuel Ex. 1002-0939

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	136	20060111168	A1	2006-05-01	Binh Nguyen	
	137	20070093296	A1	2007-04-01	Joseph M. Asher	
	138	20070219856	A1	2007-09-20	Ahmad -Taylor	
	139	20070129144	A1	2007-06-01	Randalll M. Katz	
	140	20080146337	A1	2008-06-01	Olli-Pekka Halonen	
	141	20080248865	A1	2008-10-01	Robert C. Tedesco	
	142	20090228351	A1	2009-09-01	Rob A.W. Rijsenbrij	
	143	20140378212	A1	2014-12-25	Sims	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2252021	CA		1998-11-18	Two Way TV Limited		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	2	2252074	CA		1997-11-25	Two Way TV Limited		
	3	2279069	CA		1999-07-28	Two Way TV Limited		
	4	2287617	CA		1999-10-25	Two Way TV Limited		
	5	0649102	EP	A3	1996-06-26	Two Way TV Limited		
	6	2364485	GB		2002-01-23	Muzaffar, Saj		
	7	11-46356	JP		1999-02-16	Two Way TV Limited		
	8	11-239183	JP		1999-08-31	Two Way TV Limited		
	9	2001-28743	JP		2001-01-30	Two Way TV Limited		
	10	2000-165840	JP		2000-06-16	Two Way TV Limited		
	11	2000-209563	JP		2008-07-28	Two Way TV Limited		
	12	2000-217094	JP		2000-08-04	Two Way TV Limited		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	13	2000-358255	JP		2000-12-26	Two Way TV Limited		
	14	330242	NZ		1989-10-28	Two Way TV Limited		
	15	01/65743	WO	A1	2001-09-07	Hookam-Miller, P.		
	16	02/03698	WO	A1	2002-10-01	Muzaffar, Saj		
	17	2005064506	WO	A1	2005-07-14	Oy Veikkaus		
	18	2008027811	WO	A2	2008-03-06	Walter et al.		
	19	2008115858	WO	A1	2008-09-25	POPLIO, INC.		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Two Way TV Patent and Filing Map "www.twowaytv.com/version4/technologies/tech_patents.asp	
	2	'Ark 4.0 Standard Edition, Technical Overview 'www.twowaytv.com/version4/technologies/tech_ark_professionals.asp	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	3	"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, COMMUNICATIONS OF THE ACM, July 2005, Vol. 48, No. 7, Pages 103-105	
	4	"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.	
	5	"IST and Sportal.com: Live on the Internet September 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.	
	6	"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.	
	7	"SMS BASED VOTING AND SURVEY SYSTEM FOR MEETINGS", www.abbit.be/technology/SMSSURVEY.html.	
	8	"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.	
	9	"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp.1490-1499, vol. 3, IEEE, New York, NY.	
	10	Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.	
	11	Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, November 2004, Vol. 6, Issue 4, pgs. 360-369.	
	12	http://help.yahoo.com/help/us/tourn/tourn-03.html	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

EXAMINER SIGNATURE			
Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-28
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-07-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7185355	B1	2007-02-27	Michael D. Ellis	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-07-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-07-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-10-13
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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	1	20060160597	A1	2006-07-20	Robert J. Wright	
	2	20190143225	A1	2019-05-16	Ofer Baazov	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-11-23
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Privacy Act Statement

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10981070	B2	2021-04-20	Adam Paul Isgreen	

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FanDuel Ex. 1002-0955

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	1	Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015)	

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EXAMINER SIGNATURE

Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-0956

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-30
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Privacy Act Statement

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6884166	B2	2005-04-26	Leen et al.	
	2	6899628	B2	2005-05-31	Leen et al.	
	3	7029394	B2	2006-04-18	Leen et al.	
	4	7035626	B2	2006-04-25	Luciano, Jr.	
	5	7144011	B2	2006-12-05	Asher et al.	
	6	7233922	B2	2007-06-19	Asher et al.	
	7	7341517	B2	2008-03-11	Asher et al.	
	8	7452273	B2	2008-11-18	Amaitis et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	9	7534169	B2	2009-05-19	Amaitis et al.	
	10	7693781	B2	2010-04-06	Asher et al.	
	11	7699707	B2	2010-04-20	Bahou	
	12	7711628	B2	2010-05-04	Davie et al.	
	13	7835961	B2	2010-11-16	Davie et al.	
	14	7926810	B2	2011-04-19	Fisher et al.	
	15	7937318	B2	2011-05-03	Davie et al.	
	16	8025565	B2	2011-09-27	Leen et al.	
	17	8028315	B2	2011-09-27	David Barber	
	18	8397257	B2	2013-03-12	David Barber	
	19	8538563	B2	2013-09-17	David Barber	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	20	9069651	B2	2015-06-30	David Barber	
	21	9289692	B2	2016-03-22	David Barber	
	22	8086510	B2	2011-12-27	Amaitis et al.	
	23	8092303	B2	2012-01-10	Amaitis et al.	
	24	8105141	B2	2012-01-31	Leen et al.	
	25	8128474	B2	2012-03-06	Amaitis et al.	
	26	8147373	B2	2012-04-03	Amaitis et al.	
	27	8186682	B2	2012-05-29	Amaitis et al.	
	28	8204808	B2	2012-06-19	Amaitis et al.	
	29	8240669	B2	2012-08-14	Asher et al.	
	30	8246048	B2	2012-08-21	Asher et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	31	8267403	B2	2012-09-18	Fisher et al.	
	32	8342924	B2	2013-01-01	Leen et al.	
	33	8342942	B2	2013-01-01	Amaitis et al.	
	34	8465021	B2	2013-06-18	Asher et al.	
	35	8473393	B2	2013-06-25	Davie et al.	
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	38	8543487	B2	2013-09-24	Asher et al.	
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	40	8585490	B2	2013-11-19	Amaitis et al.	
	41	8641511	B2	2014-02-04	Ginsberg et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	42	8672751	B2	2014-03-18	Leen et al.	
	43	8708789	B2	2014-04-29	Asher et al.	
	44	8727352	B2	2014-05-20	Amaitis et al.	
	45	8734227	B2	2014-05-27	Leen et al.	
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	51	9355518	B2	2016-05-31	Amaitis et al.	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	53	9536396	B2	2017-01-03	Amaitis et al.	
	54	9805549	B2	2017-10-31	Asher et al.	
	55	9881337	B2	2018-01-30	Jaycobs et al.	
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	58	5519433	A	1996-05-21	John P. Lappington	
	59	5828843	A	1998-10-27	Stephen M. Grimm	
	60	5894556	A	1999-04-13	Stephen M. Grimm	
	61	6042477	A	2000-03-28	Dale H. Addink	
	62	6128660	A	2000-10-03	Steven Michael Grimm	
	63	6345297	B1	2002-02-05	Steven Michael Grimm	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	64	6475090	B2	2002-11-05	Gregory Robert R.	
	65	6659861	B1	2009-12-09	Sadeg M. Faris	
	66	6811487	B2	2004-11-02	Toshio Sengoku	
	67	6845389	B1	2005-01-10	Sanjoy Sen	
	68	6903681	B1	2005-06-07	Sadeg M. Faris	
	69	4930010	A	1990-05-29	Lindsay W. MacDonald	
	70	5530483	A	1996-06-25	James C. Cooper	
	71	8849255	B2	2014-09-30	Choti, Joseph Francis	
	72	10248290	B2	2019-04-02	Phillip Galfond	
	73	2831105	A	1958-04-15	Louis W. Parker	
	74	4386377	A	1983-05-31	Richard E. Hunter Jr.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	75	4521803	A	1985-06-04	Norman C. Glittinger	
	76	5488659	A	1996-01-30	Pablo Millani	
	77	5594938	A	1997-01-14	Joel S. Engel	
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	79	6064449	A	2000-05-16	Christopher M. White	
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	81	7886003	B2	2011-02-08	Scott G. Newman	
	82	8555313	B2	2013-10-08	Scott G. Newman	
	83	8849225	B2	2014-09-30	Joseph Francis Choti	
	84	10653955	B2	2020-05-19	David B. Lockton	
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FanDuel Ex. 1002-0966

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	86	10709987	B2	2020-07-14	David B. Lockton et al.	
	87	10721543	B2	2020-07-21	Tim Huske et al.	
	88	5838909	A	1998-11-17	H. Scott Roy	
	89	6038599	A	2016-12-17	Black, Norman R.H.	
	90	6343320	B1	2002-01-29	Fairchild, Steven E.	
	91	6418298	B1	2002-07-09	Sonnenfeld	
	92	6446262	B1	2002-09-03	Malaure et al.	
	93	6697869	B1	2004-02-24	Mallart, Raoul	
	94	7124410	B2	2006-10-17	Berg, Thomas B.	
	95	7187658	B2	2007-03-06	Hisako Koyanagi	
	96	7510474	B2	2009-03-31	Carter, Sr.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	97	7543052	B1	2009-06-02	Cesa Klein, Anne	
	98	7602808	B2	2009-10-13	Ullmann, Lorin E.	
	99	7610330	B1	2009-10-27	Quinn, Michael J.	
	100	7702723	B2	2010-04-20	Dyl, Christopher J.	
	101	7729286	B2	2010-06-01	Mishra, Richard	
	102	7860993	B2	2010-12-28	Chintala, Ajay Kumar	
	103	7907598	B2	2011-03-15	Anisimov, Nikolay	
	104	7925756	B1	2011-04-12	Riddle, Guy	
	105	7941482	B2	2011-05-10	Bates, John P.	
	106	7941804	B1	2011-05-10	Herington, Daniel E.	
	107	8155637	B2	2012-04-10	Tomonori Fujisawa	

FanDuel Ex. 1002-0968

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	108	8162759	B2	2012-04-24	Tsuyoshi Yamaguchi	
	109	8219617	B2	2012-07-10	Ashida, Hiroyuki	
	110	8396001	B2	2013-03-12	Jung, Edward K.Y.	
	111	8632392	B2	2014-01-21	Shore et al.	
	112	9430901	B2	2016-08-30	Amaitis et al.	
	113	10279253	B2	2019-05-07	David B. Lockton	
	114	7185355	B1	2007-02-27	Michael D. Ellis	
	115	6154131	A	2000-11-28	Jones, II, Griffith	
	116	7909332	B2	2011-03-22	Root	
	117	8002618	B1	2011-08-23	Lockton	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	119	8634943	B2	2014-01-21	Root	
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	121	10360767	B2	2019-07-23	Russell et al.	
	122	10569175	B2	2020-02-25	Kosai et al.	

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	1	20020147049	B2	2002-10-10	Carter, Sr.	
	2	20020046099	A1	2002-04-18	Frengut et al.	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	11	20020119821	A1	2002-08-29	Sanjoy Sen	
	12	20020091833	A1	2002-07-11	Steven Michael Grimm	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	17	20020142843	A1	2002-10-03	Gregory Robert Roelofs	
	18	20020157005	A1	2002-10-24	Hugh L. Bunk	
	19	20040166873	A1	2004-08-26	Emilija Simic	
	20	20040152519	A1	2004-08-05	Andy Wang	
	21	20040201626	A1	2004-10-14	Martin Lavoie	
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	25	20020120930	A1	2002-08-29	Boaz Yona	
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	27	20020162117	A1	2002-10-31	Martin Pearson	

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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	28	20030066089	A1	2003-04-03	David Anderson	
	29	20030134678	A1	2003-07-17	Hiromichi Tanaka	
	30	20030165241	A1	2003-09-04	Fransdonk, Robert W.	
	31	20040025190	A1	2004-02-05	McCalla, John	
	32	20040185881	A1	2004-09-23	Chinmei Chen Lee	
	33	20040266513	A1	2004-12-30	James M. Odom	
	34	20050155083	A1	2005-07-14	Sang-Seok Oh	
	35	20050239551	A1	2005-10-27	Scott Griswold	
	36	20060236352	A1	2006-10-19	Samuel Thomas Scott III	
	37	20170098348	A1	2017-04-06	James M. Odom	
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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	39	20170249801	A1	2017-08-31	Sean Malek	
	40	20170345260	A1	2017-11-30	Jonathan Strause	
	41	20180071637	A1	2018-03-15	Baazov, Ofer	
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	50	20150238873	A1	2015-08-27	Arnone et al.	
	51	20160271501	A1	2016-09-22	Michael Brian Balsbaugh	
	52	20170103615	A1	2017-04-13	Theodospoulos	
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	58	20060205510	A1	2006-09-14	Eric Lauper	
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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	61	20010044339	A1	2001-11-22	Cordero, Angel	
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	63	20020018477	A1	2002-02-14	Katz, Abraham Yehuda	
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	66	20050077997	A1	2005-04-14	Frederick J. Landram	
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	71	20060205509	A1	2006-09-14	Hirota, Ryuhei	

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	72	20060248564	A1	2006-11-02	Victor M. Zinevitch	
	73	20070087832	A1	2007-04-19	Eric L. Abbott	
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	80	20110016224	A1	2011-01-20	Riley, Yusun Kim	
	81	20110116461	A1	2011-05-19	Holt, Scott Crandall	
	82	20150356831	A1	2015-12-10	Olagoke Osibodu	

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	93	20140309001	A1	2014-10-16	Root	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	94	20150024814	A1	2015-01-22	Root	
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	1	01/039506	WO	A2	2001-05-31	Spiderdance, Inc.		X

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	1	PINNACLE, " The basics of reverse line movement," 19 January 2018, Retrieved on 22 January 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	5	A copy of the International Search Report and The Written Opinion for the PCT/US2019/054859 dated February 4, 2020.	
	6	A copy of the International Preliminary Report dated April 22, 2021 for the application PCT/US2019/054859.	

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(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

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Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-28
Name/Print	Jonathan O. Owens	Registration Number	37902

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Doc code: IDS
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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
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Examiner Name	
Attorney Docket Number	AIRP-01054

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	1	7909332	B2	2011-03-22	Root	
	2	8002618	B1	2011-08-23	Lockton	
	3	8092306	B2	2012-01-10	Root	
	4	8634943	B2	2014-01-21	Root	
	5	9716918	B1	2017-07-25	Lockton et al.	
	6	10360767	B2	2019-07-23	Russell et al.	
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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
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Attorney Docket Number	AIRP-01054

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	1	20020094869	A1	2002-07-18	Harkham	
	2	20020184624	A1	2002-12-05	Spencer	
	3	20030003997	A1	2003-01-02	Vuong et al.	
	4	20030177504	A1	2003-09-18	Paulo et al.	
	5	20060101492	A1	2006-05-11	Lowcock	
	6	20060205483	A1	2006-09-14	Meyer et al.	
	7	20140309001	A1	2014-10-16	Root	
	8	20150024814	A1	2015-01-22	Root	

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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
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Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-11-18
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-0986

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	62	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2019/06/03 06:38 PM
L2	145	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2019/06/03 06:38 PM
L3	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:40 PM
L4	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:42 PM
L5	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:43 PM
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L7	5	("8028315"|"8397257"|"8538563"|"9069651"|"9	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:45 PM

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L10	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:47 PM
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L12	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"98782	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:49 PM

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L15	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/03 06:57 PM

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L16	41061	(A63F13/352 or H04L67/38 or H04L65/4015 or G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/03 07:03 PM
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L18	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628"	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:46 PM

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L19	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:46 PM

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		20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-					

		20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-					

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		6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US-				

		5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L20	35	L18 not L19	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L21	0	L20 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L22	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L23	36	L22 not L20	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L24	16	L23 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L25	6	L23 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04

		same delay					04:48 PM
L26	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:49 PM
L27	7	L26 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L28	7	L27 not L19	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L29	28	L26 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L30	18	L26 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L31	7	L30 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L32	9	L30 and stream$4	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L33	46	("20060014585" "8968093" "8840475" "20170232340" "20090124387" "9919210" "20170266550" "20100167809" "20100167816" "20180154255" "20160220901" "8834274" "8495678" "20170266548" "20090118018" "20110105226"	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 09:21 AM

		"20090118019" "20150165320" "20160271493" "20090119729" "20120142433" "20120149476" "9138644" "20160080739" "9032465" "20140297799" "20140213362" "9669307" "20090125961" "8661496" "8549574" "10071308" "10075750" "8832772" "10052556" "8366552" "8468575" "20090119730" "9352222" "9669306" "20150289028" "20100166058" "8387099" "20090119738" "8949922" "9770657").pn.					
L34	15	("20020147047" | "20020154691" | "20030005204" | "20060055706" | "5550982" | "5558339" | "5995150" | "6343086" | "7548272" | "7567293" | "7605861" | "7633521" | "7667767" | "8194093" | "8659668").PN. OR ("10075750").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 10:19 AM
L35	61	L33 L34	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L36	49	L35 and streaming	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L37	4	L35 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L38	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L39	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

L40	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L41	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L42	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L43	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L44	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.					
L45	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L46	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L47	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L48	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633					

		7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|" 6527641"|"6530082"|"6 536037"|"6578068"|"65 94098"|"6604997"|"661 0953"|"6648760"|"6659 860"|"6659872"|"66906 61"|"6718350"|"675239 6"|"6758754"|"6758755" |"6760595").PN.				
L49	61	("6763377"|"6766524"|" 6774926"|"6785561"|"6 801380"|"6806889"|"68 07675"|"6811482"|"681	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		7947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.				
L50	454	L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L51	0	L37 and L50	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L52	1	"7849491".pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:03 PM
L53	227	("20010024974" | "20010031092" | "20010034255" | "20010034743" | "20010039569" | "20010044339" | "20020019984" | "20020032056" | "20020034980" | "20020059637" | "20020069265" | "20020069405" | "20020073429" | "20020075382" | "20020078176" | "20020080267" | "20020087560" | "20020101442" | "20020114330" | "20020119821" | "20020142842" | "20020154691" | "20020165927" | "20020166119" | "20020166122" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM

		"20020170065" | "20020184303" | "20020184314" | "20030017846" | "20030037156" | "20030048808" | "20030078103" | "20030149988" | "20030158700" | "20030177187" | "20030226150" | "20030229902" | "20040022116" | "20040025190" | "20040045030" | "20040052371" | "20040064504" | "20040097288" | "20040102245" | "20040103120" | "20040111755" | "20040117831" | "20040153764" | "20040176168" | "20040179554" | "20040207724" | "20040229688" | "20040233274" | "20040263626" | "20050005308" | "20050028208" | "20050104889" | "20050122335" | "20050183120" | "20050188073" | "20050262542" | "20050273830" | "20050283800" | "20060010392" | "20060080702" | "20060112181" | "20060117344" | "20060156330" | "20060174021" | "20060174026" | "20060174266" | "20060190966" | "20060195884" | "20060224761" | "20060230428" | "20060242240" | "20060258463" | "20060277477" | "20060287106" | "20070005795" | "20070009029" | "20070010329" | "20070024706"				

		"20070047901" | "20070058937" | "20070060336" | "20070083899" | "20070094700" | "20070106952" | "20070117635" | "20070121629" | "20070124474" | "20070156815").PN. OR ("20070173325" | "20070202941" | "20070226364" | "20070243925" | "20070260677" | "20070265094" | "20070285578" | "20080005281" | "20080059645" | "20080065996" | "20080092168" | "20080092173" | "20080101466" | "20080140850" | "20080146342" | "20080207322" | "20080228865" | "20080267069" | "20080276269" | "20090052323" | "20090106662" | "20090132942" | "20090138922" | "20090144785" | "20090300701" | "20090307658" | "20100115559" | "20100262911" | "20110064381" | "20110126255" | "20130003826" | "4582324" | "5558339" | "5583561" | "5586247" | "5586257" | "5606359" | "5623308" | "5624316" | "5648824" | "5687257" | "5742289" | "5768382" | "5775996" | "5790176" | "5793410" | "5828370" | "5830068" | "5861920" | "5884101" | "5903735" | "5917962" | "5920692" | "5926208" | "5935006" | "5956485" | "5970143" | "5995518" | "6014706" | "6037983" | "6134590" | "6183367" | "6198850" | "6212681" | "6227974"				

		"6241612" | "6287199" | "6345297" | "6409602" | "6421706" | "6449070" | "6470378" | "6473902" | "6523126" | "6530082" | "6536041" | "6557041" | "6616533" | "6665872" | "6707487" | "6714200" | "6754241" | "6792615" | "6804825" | "6810528" | "6820218" | "6853385" | "6868439" | "6908390" | "6963353" | "6973667" | "6992981" | "6996742" | "7017173" | "7031473" | "7089319" | "7189161" | "7215660" | "7219153" | "7244181" | "7299487" | "7352952" | "7444662" | "7446772" | "7457878" | "7469381" | "7471665" | "7493078" | "7543326" | "7558525" | "7559834" | "7567527" | "7587520" | "7590084").PN. OR ("7593361" | "7634789" | "7684752" | "7715336" | "7725422" | "7757252" | "7789741" | "7837560" | "7849491" | "7936819" | "7953883" | "7984179" | "8118676" | "8284842" | "8468575" | "8495678" | "8526490" | "8661496").PN. OR ("8840475").URPN.					
L54	12	L53 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM
L55	2	("6527638" "7035626").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L56	648	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4799683" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		"5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("6527638" | "7035626").URPN.					
L57	147	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "4799683" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("7035626").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L58	545	("3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		| "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603").PN. OR ("6527638").URPN.					
L59	44	L57 and L58	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L60	0	L50 and L59	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L61	179	(US-20030104865-$ or US-20020147049-$ or US-20050176507-$).did. or (US-3810627-$ or US-3896266-$ or US-4157829-$ or US-4349695-$ or US-4339798-$ or US-4317957-$ or US-4467424-$ or US-4652998-$ or US-4494197-$ or US-4587379-$ or US-4720860-$ or US-4689742-$ or US-4760527-$ or US-4799683-$ or US-4996705-$ or US-4764666-$ or US-4982337-$ or US-4880237-$ or US-4856787-$ or US-4922522-$ or US-5083271-$ or US-4882473-$ or US-5096195-$ or US-5179517-$ or US-5083272-$ or US-5181238-$).did. or (US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:21 PM

		5038022-$ or US- 5218631-$ or US- 5197094-$ or US- 5315634-$ or US- 5177342-$ or US- 5042809-$ or US- 5276312-$ or US- 5235166-$ or US- 5119295-$ or US- 5289542-$ or US- 5214697-$ or US- 5223698-$ or US- 5239583-$ or US- 5178389-$ or US- 5317135-$ or US- 5241600-$ or US- 5283734-$ or US- 5429361-$ or US- 5177789-$ or US- 5259023-$ or US- 5313637-$ or US- 5216712-$ or US- 5210795-$ or US- 5265874-$ or US- 5326104-$ or US- 5277424-$ or US- 5351970-$).did. or (US- 5371345-$ or US- 5327485-$ or US- 5324035-$ or US- 5285200-$ or US- 5313520-$ or US- 5315624-$ or US- 5508731-$ or US- 5457306-$ or US- 5413357-$ or US- 5380007-$ or US- 5557086-$ or US- 5800268-$ or US- 5999808-$ or US- 5709603-$ or US- 6139431-$ or US- 6035189-$ or US- 6104815-$ or US- 6595855-$ or US- 7124426-$ or US- 8579705-$ or US- 6702672-$ or US- 6527641-$ or US- 6358151-$ or US- 7672892-$ or US- 6573824-$ or US- 6470180-$ or US- 7753772-$).did. or (US- 7988559-$ or US- 7203841-$ or US- 6837789-$ or US- 7340058-$ or US-				

		8313371-$ or US- 6628939-$ or US- 6585598-$ or US- 7716126-$ or US- 8932136-$ or US- 7116782-$ or US- 6846238-$ or US- 8317601-$ or US- 7140964-$ or US- 7931533-$ or US- 7506172-$ or US- 7976384-$ or US- 7460863-$ or US- 6988204-$ or US- 7099236-$ or US- 7370194-$ or US- 7169050-$ or US- 7320642-$ or US- 7618317-$ or US- 7306519-$ or US- 6935952-$ or US- 6988946-$ or US- 7329183-$).did. or (US- 7291069-$ or US- 8123616-$ or US- 7867083-$ or US- 7024375-$ or US- 7628703-$ or US- 7708189-$ or US- 7192348-$ or US- 7367889-$ or US- 7600108-$ or US- 7399227-$ or US- 7491122-$ or US- 7470186-$ or US- 7192351-$ or US- 7972213-$ or US- 7695363-$ or US- 6991538-$ or US- 7762888-$ or US- 7766744-$ or US- 7918728-$ or US- 7581256-$ or US- 8403755-$ or US- 7684432-$ or US- 7430187-$ or US- 7828652-$ or US- 7815503-$ or US- 8038527-$ or US- 7452270-$).did. or (US- 8113950-$ or US- 7832626-$ or US- 7526736-$ or US- 7470182-$ or US- 8174970-$ or US- 8568224-$ or US- 7387568-$ or US- 7470183-$ or US-				

		8087988-$ or US-7815507-$ or US-7520810-$ or US-7751804-$ or US-8529341-$ or US-7690043-$ or US-7545788-$ or US-8057292-$ or US-7837545-$ or US-7524243-$ or US-7699699-$ or US-7553230-$ or US-7740536-$ or US-8086519-$ or US-7955170-$ or US-7577847-$ or US-8133113-$ or US-7837547-$ or US-7695359-$).did. or (US-8123606-$ or US-7815500-$ or US-7871325-$ or US-7063618-$ or US-9105146-$ or US-7500107-$ or US-8725646-$ or US-7837556-$ or US-8172671-$ or US-8814652-$ or US-8282475-$ or US-7363001-$ or US-8608535-$ or US-7313361-$ or US-7837549-$).did.					
L62	0	L61 and (lockout lock adj out) and (synchronize synch synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L63	0	L61 and (lockout lock adj out) and (synchronize sync synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L64	1	L61 and (lockout lock adj out)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L65	17	(cell adj phone cellphone smart adj phone smartphone) and L61	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:23 PM
L66	1	(US-20040025190-$).did.	(US-PGPUB)	OR	ON	ON	2019/06/19 02:08 PM
L67	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 02:08 PM

		US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or					

		US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or						

		US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or						

		US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-9306952-$ or US-6884166-$ or US-8814664-$).did. or (US-7711628-$ or US-8771058-$ or US-					

		8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US-				

		5761606-$ or US-6222642-$ or US-6193610-$ or US-6182084-$ or US-6174237-$ or US-6126543-$ or US-6117013-$ or US-6009458-$ or US-6016337-$ or US-5987440-$ or US-5971854-$ or US-5970143-$ or US-5916024-$ or US-5870683-$ or US-5860862-$ or US-5838774-$ or US-5813913-$ or US-5764275-$ or US-5762552-$ or US-5759101-$ or US-5663757-$).did. or (US-5643088-$ or US-5628684-$ or US-5589765-$ or US-5586257-$ or US-5585975-$ or US-5566291-$ or US-5553120-$ or US-5479492-$ or US-5462275-$ or US-5417424-$ or US-5343239-$ or US-5343236-$ or US-5327485-$ or US-5283734-$ or US-5263723-$ or US-5256863-$ or US-5227874-$ or US-5213337-$ or US-5120076-$ or US-5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L68	0	L66 and L67	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/19 02:09 PM
L69	1	("20160217653").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:34 PM
L70	25	("20020026321"|"20020	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21

		069076"|"20020076084"|"20020083461"|"20020091833"|"20020119821"|"20020142843"|"20020157005"|"20040152519"|"20040166873"|"20040201626"|"20040215756"|"20050256895"|"20060058103"|"5519433"|"5828843"|"5894556"|"6042477"|"6128660"|"6345297"|"6475090"|"6659861"|"6811487"|"6845389"|"6903681").PN.					02:36 PM
L71	1	("4930010").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L72	1	("20020120930").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L73	6	("20020162117"|"20030066089"|"20050155083"|"20050239551"|"20060236352"|"5530483").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:38 PM
L74	34	L69 L70 L71 L72 L73	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/11/21 02:40 PM
L75	59	("2002/0142843").URPN.	(USPAT)	OR	ON	ON	2019/11/21 03:33 PM
L76	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L77	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L78	7	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/04 04:55 PM
L79	65	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L80	152	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2020/01/06 12:59 AM
L81	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

L82	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L83	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L84	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L85	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L86	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L87	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.					
L88	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L89	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L90	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L91	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"200201	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		08127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|"20030070174"|"20030078924"|"20030086691"|"20030087652"|"20030114224"|"20030144017"|"20030154242"|"20030177167"|"20030177504"|"20030195023"|"20030208579"|"20030211856"|"20030212691"|"20030216185"|"20030216857"|"20040014524"|"20040022366"|"20040060063"|"20040088729"|"20040093302"|"20040117831"|"20040117839"|"20040128319"|"20040148638"|"20040152454"|"20040158855"|"20040178923"|"20040183824"|"20040198495"|"20040203667"|"20040203898"|"20040224750"|"20040242321"|"20050021942"|"20050026699"|"20050043094"|"20050060219"|"20050076371"|"20050097599"|"20050101309"|"20050113164"|"20050131984"|"20050138668"|"20050210526"|"20050235043"|"20050255901"|"20050266869"|"20050273804"|"20050288101"|"20050288812"|"20060025070"|"20060046810"|"20060047772"|"20060059161"|"20060063590"|"20060087585"|"20060089199"|"20060111168"|"20060135253"|"20060148569"|"20060156371"|"20060174307"|"20060183548"|"20060205483"|"20060248553"|"20060269120"|"20070004516"|"200					

		70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|				

		6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"|"6760595").PN.					
L92	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L93	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L94	43677	(A63F13/352 or H04L67/38 or H04L65/4015 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM

		G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.					
L95	20	("20170232340" "9919210" "20170264961" "8705195" "20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L96	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628" "8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090" "20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L97	343	(US-20030088648-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06

		US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or					12:59 AM

		US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or					

		US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or					

		US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-					

		9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US-					

		6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US- 5119295-$ or US- 5083800-$ or US- 5083271-$ or US- 5073931-$ or US- 5035422-$ or US- 5013038-$ or US- 4816904-$ or US- 4592546-$).did. or (US- 4496148-$ or US- 4270755-$ or US- 4141548-$).did.					
L98	35	L96 not L97	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2020/01/06 12:59 AM

			JPO; IBM_TDB)				
L99	0	L98 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L100	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L101	36	L100 not L98	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L102	16	L101 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L103	6	L101 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L104	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008"	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		"20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.					
L105	7	L104 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L106	7	L105 not L97	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L107	28	L104 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L108	18	L104 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L109	8472	L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99 L100 L101 L102 L103 L104 L105 L106 L107 L108	(USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L110	17146	live adj event	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:43 AM
L111	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:44 AM
L112	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM
L113	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM
L114	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM

		A63F13/537).cpc.					
L115	20059	L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L116	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L117	263	L116	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L118	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L119	28661	L118	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L120	0	L119 and L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L121	0	L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L122	72980	propagation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L123	146	L122 and L114	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L124	25	L119 and L123	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L126	77	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2021/02/06 07:46 PM
L127	176	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/02/06 07:46 PM
L128	93	("20170232340" "20180154255" "10653955" "9919210" "20170264961" "8705195" "9672692" "20140155134" "20120295686" "20200330864" "20180117464" "20170304726" "10874942" "20190060750" "20130079150" "8737004" "20180169523" "20140335962" "20130079151" "20170296916" "20140256432" "20170259173" "20160361647" "20130079081" "20190118087"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:20 PM

		"20200155935" "20130072271" "20180264360" "20180243652" "20160375362" "20160121208" "20170282067" "20140287832" "20200171383" "20170225072" "20140106832" "20130079135" "20170225071" "9604140" "20200155936" "20140155130" "20120157178" "20180104582" "8780482" "20130079093" "9919211" "20140206446" "9901820" "20180318710" "9687738" "20140335961" "9993730" "20130079092" "20170252649" "9662577" "10150031" "9457272" "9258601" "8699168" "10695672" "8837072" "8149530" "20190255436" "9707482" "10052557" "10556177" "10279253" "9999834" "9724603" "9687739" "9878243" "8717701" "9744453" "10195526" "8659848" "8638517" "10576371" "9662576" "8817408" "10363483" "10137369" "20170036110" "9511287" "20190054375" "20070078009" "8932136" "7448063" "20020188943" "9462341" "7079176" "20040261127" "20140282735" "20130152139").pn.					
L129	61	("8932136" "7448063" "20020188943" "7079176" "20040261127" "20040139474"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:22 PM

		"20060253330" "20060129458" "7552193" "20040187148" "7984472" "20150087419" "9344670" "20060282319" "20040133919" "20140112637" "20160286271" "9591362" "20120210380" "9108107" "8539538" "20090118017" "20020034980" "20110107220" "9635066" "20170374112" "10052556" "20090119737" "20070028272" "20110137729" "20090119729" "20160271493" "9756349" "20170266548" "20150141145" "5638113" "20090125967" "20110040615" "20150165320" "9032465" "20040139469" "9669306" "20110138415" "20120149476" "20150100995" "5916024" "20190358539" "10071308" "7673316" "9573059" "9623326" "20130247125" "9003461" "20110105226" "20090118018" "20090124387" "20170266550" "9352222" "20100167809" "20110137728" "20130145412").pn.					
L130	40	("9258601" "10576371" "9993730" "9919210" "9672692" "9993730" "10653955" "10195526" "9687739" "9861125" "9861125" "9919210"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:40 PM

		"9919210" "9511287" "9457272" "9707482" "9861125" "9662577" "8699168" "8705195" "8638517" "8780482" "9662576" "8837072" "8659848" "8817408" "8737004" "10363483" "10874942" "9999834" "9919211" "10052557" "10279253" "10137369" "10150031" "8717701" "9901820" "9687738" "9744453" "10556177" "8149530" "9878243" "10695672" "9604140" "9724603").pn.					
L131	976	coffee.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L132	52	coffee near2 john.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L133	12	coffee near2 john.in.	(USPAT)	OR	ON	ON	2021/09/13 02:07 PM
L134	1	("7185355").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:46 PM
L135	4	("20030125109" OR "20040015442" OR "20090325716" OR "6154131").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM
L136	15	("10360767" OR "10569175" OR "20020094869" OR "20020184624" OR "20030003997" OR "20030177504" OR "20060101492" OR "20060205483" OR "20140309001" OR "20150024814" OR "7909332" OR "8002618" OR "8092306" OR "8634943" OR "9716918").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM
L137	2	("20060160597" OR "20190143225").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:48 PM
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PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

PE2E SEARCH - Search History (Similarity Search)

No Similarity Results available

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	2	7343617		2008-03-11	Kartcher et al.	
	3	7367042		2008-04-29	Dakss et al.	
	4	7389144	B1	2008-06-17	Ivan Osorio	
	5	7430718		2008-09-20	Gariepy-Viles	
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FanDuel Ex. 1002-1054

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	9	8538563		2013-09-17	David Barber	
	10	9069651	B2	2015-06-30	David Barber	
	11	9289692	B2	2016-03-22	David Barber	
	12	9556991	B2	2017-01-31	Masayoshi Furuya	
	13	9716918	B1	2017-07-25	Lockton et al.	
	14	9878243	B2	2018-01-30	Lockton et al.	
	15	9901820	B2	2018-02-27	Lockton et al.	
	16	RE39818	E	2007-09-04	Slifer	
	17	5618232		1997-04-08	Martin	
	18	6104815		2008-08-15	Alcorn et al.	
	19	6287199		2001-09-11	McKeown et al.	

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	Filing Date	2021-09-29
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	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	20	6884166	B1	2005-04-26	Leen et al.	
	21	6899628	B2	2005-05-31	Leen et al.	
	22	7029394	B2	2006-04-18	Leen et al.	
	23	7035626	B2	2006-04-25	Luciano, Jr.	
	24	7144011	B2	2006-12-05	Asher et al.	
	25	7233922	B2	2007-06-19	Asher et al.	
	26	7341517	B2	2008-03-11	Asher et al.	
	27	7452273	B2	2008-11-18	Amaitis et al.	
	28	7534169	B2	2009-05-19	Amaitis et al.	
	29	7693781	B2	2010-04-06	Asher et al.	
	30	7711628	B2	2010-05-04	Davie et al.	

FanDuel Ex. 1002-1056

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	31	7835961	B2	2010-11-16	Davie et al.	
	32	7926810	B2	2011-04-19	Fisher et al.	
	33	7937318	B2	2011-05-03	Davie et al.	
	34	8025565	B2	2011-09-27	Leen et al.	
	35	8086510	B2	2011-12-27	Amaitis et al.	
	36	8092303	B2	2012-01-10	Amaitis et al.	
	37	8105141	B2	2011-01-31	Leen et al.	
	38	8128474	B2	2012-03-06	Amaitis et al.	
	39	8147313	B2	2012-04-03	Amaitis et al.	
	40	8186682	B2	2012-05-29	Amaitis et al.	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	42	8240669	B2	2012-08-14	Asher et . al.	
	43	8246048	B2	2012-08-21	Amaitis et al.	
	44	8267403	B2	2012-09-18	Fisher et al.	
	45	8342924	B2	2013-01-01	Leen et al.	
	46	8342942	B2	2013-01-01	Amaitis et al.	
	47	8397257	B1	2013-03-12	David Barber	
	48	8465021	B2	2013-06-18	Asher et al.	
	49	8473393	B2	2013-06-25	Davie et al.	
	50	8474819	B2	2013-07-02	Asher et al.	
	51	8535138	B2	2013-09-17	Amaitis et al.	
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FanDuel Ex. 1002-1058

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	53	8543487	B2	2013-09-24	Asher et al.	
	54	8556691	B2	2013-10-15	Leen et al.	
	55	8585490	B2	2013-11-19	Amaitis et al.	
	56	8641511	B2	2014-02-04	Ginsberg et al.	
	57	8672751	B2	2014-03-18	Leen et al.	
	58	8708789	B2	2014-04-29	Asher et al.	
	59	8727352	B2	2014-05-20	Amaitis et al.	
	60	8734227	B2	2014-05-27	Leen et al.	
	61	8771058	B2	2014-07-08	Alderucci et al.	
	62	8805732	B2	2014-08-12	Davie et al.	
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FanDuel Ex. 1002-1059

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	64	9069651	B2	2015-06-30	David Barber	
	65	9111417	B2	2015-08-18	Leen et al.	
	66	9289692	B2	2016-03-22	David Barber	
	67	9306952	B2	2016-04-05	Burman et al.	
	68	9355518	B2	2016-05-31	Amaitis et al.	
	69	9406189	B2	2016-08-02	Scott et al.	
	70	9536396	B2	2017-01-03	Amaitis et al.	
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	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	75	4918603		1990-04-17	Hughes et al.	
	76	5018736		1991-05-28	Pearson et al.	
	77	5636920		1997-06-10	Shur et al.	
	78	5794210		1998-08-11	Goldhaber et al.	
	79	5846132		1998-12-08	Junkin	
	80	5848397		1998-12-08	Marsh et al.	
	81	6015344		2019-04-06	Kelly et al.	
	82	6110041		2000-08-29	Walker et al.	
	83	6135881		2000-10-24	Abbott et al.	
	84	6371855	B1	2002-04-16	Gavriloff	
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FanDuel Ex. 1002-1061

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	86	6837791	B1	2005-01-04	McNutt et al.	
	87	7001279	B1	2006-02-21	Barber et al.	
	88	7058592	B1	2006-06-06	Heckerman et al.	
	89	7136871	B2	2006-11-14	Ozer et al.	
	90	7614944	B1	2009-11-10	Hughes et al.	
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FanDuel Ex. 1002-1062

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	99	8738694	B2	2014-05-27	Huske et al.	
	100	8780482	B2	2014-07-15	Lockton et al.	
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FanDuel Ex. 1002-1063

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	108	9205339	B2	2015-12-08	Cibula et al.	
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FanDuel Ex. 1002-1064

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	119	9526991	B2	2016-12-27	Lockton et al.	
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FanDuel Ex. 1002-1065

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	130	9821233	B2	2017-11-21	Lockton et al.	
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FanDuel Ex. 1002-1066

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1067

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	152	5794210		1998-08-11	Goldhaber et al.	
	153	5846132		1998-12-08	Junkin	
	154	5848397		1998-12-08	Marsh et al.	
	155	6015344		2000-01-18	Kelly et al.	
	156	6104815		2001-09-11	Alcorn et al.	
	157	6110041		2000-08-29	Walker et al.	
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FanDuel Ex. 1002-1068

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1069

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	6	20020100063		2002-07-25	Herigstad et al.	
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FanDuel Ex. 1002-1070

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1071

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	Application Number	17488674
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	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1072

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1073

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1074

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1075

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1076

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1077

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1078

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1079

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1080

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1081

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	2	2006004856	WO		2006-01-12	Airplay Network, Inc.		
	3	2007002284	WO		2007-01-04	Airplay Network, Inc.		
	4	2007016575	WO		2007-02-08	Airplay Network, Inc.		
	5	2007041667	WO		2007-04-12	Airplay Network, Inc.		

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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EXAMINER SIGNATURE

Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-1082

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-28
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-1083

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Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

FanDuel Ex. 1002-1084

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6154131	A	2000-11-28	Jones, II; Griffith	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030125109	A1	2003-07-03	Green, MIchael John	
	2	20040015442	A1	2004-01-22	Hmlinen, Timo D.	
	3	20090325716	A1	2009-12-31	Harari, Sagi	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

FanDuel Ex. 1002-1085

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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NON-PATENT LITERATURE DOCUMENTS [Remove]

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

If you wish to add additional non-patent literature document citation information please click the Add button [Add]

EXAMINER SIGNATURE

Examiner Signature	/PETER J IANNUZZI/	Date Considered	04/08/2023

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-1086

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

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See attached certification statement.

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A certification statement is not submitted herewith.

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Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-10-21
Name/Print	Jonathan O. Owens	Registration Number	37902

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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FanDuel Ex. 1002-1088

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	Art Unit
	PETER J IANNUZZI	3715

CPC - Searched*		
Symbol	Date	Examiner
A63F13/352 G07F17/3227 H04L65/4015 H04L65/4076 H04L67/38 A63F13/537 A63F13/46 A63F13/355 (text search limited)	04/08/2023	PI

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
performed inventor name and assignee search	04/08/2023	PI
performed ip.com search	04/08/2023	PI
see attached text search notes	04/08/2023	PI

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/PETER J IANNUZZI/ Examiner, Art Unit 3715	

FanDuel Ex. 1002-1089

Notice of References Cited	Application/Control No. 17/488,674	Applicant(s)/Patent Under Reexamination Lockton, David B.	
	Examiner PETER J IANNUZZI	Art Unit 3715	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-11154775-B2	10-2021	Lockton; David B.	A63F13/537	1/1
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
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	O					
	P					
	Q					
	R					
	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

FanDuel Ex. 1002-1090

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

28960 7590 04/13/2023

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
04/13/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JOWENS@HOLLP.COM
us_docketing@hollp.com

FanDuel Ex. 1002-1091

Office Action Summary	Application No. 17/488,674	Applicant(s) Lockton, David B.	
	Examiner PETER J IANNUZZI	Art Unit 3715	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 29 September 2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 25-37 and 62-89 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 25-37 and 62-89 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 29 September 2021 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date attached.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

FanDuel Ex. 1002-1092

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A

web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 25-37, 62-89 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-41 respectively of **U.S. Patent No. 11,154,775**. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims of this application are broader in scope than the claims of patent 11,154,775.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25-37, 62-71, 73, 74 and 78 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

Claim 25, 27-30, 33 and 37 each recite the limitation "the streamed video data", these recitations lack a clear antecedent basis with the prior recited “streaming video data” in claim 25 at line 2. These new recitations may indicate a different video data, these new recitations may indicate a temporal distinction between the elements and these new recitations may refer to the same video data.

Claim 34 recites “displayed on the same device using **method** including crawling information, closed captioned information, a picture in picture or a graphical overlay.” (emphasis added) This

recitation does not clearly indicate the relationship between the singular "method" and the later recited elements. Examiner believes that methods was intended.

Claim 62 at line 1 recites "the delay", there is no clear antecedent basis for this element in the claims.

Claim 67 at line 2 recites "the one or more events", there is no clear antecedent basis for this element in the claims. Examiner believes that the one or more live events was intended.

Claim 73 recites "the amount of delay", there is no clear antecedent basis for this element in the claims.

Claim 74 recites "the streaming content are used **as synchronization points as start points**" (emphasis added). It is unclear how the content is used. Is it used exclusively as "synchronizations points", exclusively as "start points" or some combination of the two?

Claim 78 recites "the amount of delay", there is no clear antecedent basis for this element in the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J IANNUZZI whose telephone number is (571)272-5793. The examiner can normally be reached M-F 9:30AM-5:30PM EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kang Hu can be reached on 571-270-1344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PETER J IANNUZZI/
Examiner, Art Unit 3715

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/488,674	Filing Date 09/29/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/05/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 41	Minus	** 41	= 0		x $40 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $192 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	Examiner
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/TREDELLE D JACKSON/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

FanDuel Ex. 1002-1097

Electronic Acknowledgement Receipt

EFS ID:	48253714
Application Number:	17488674
International Application Number:	
Confirmation Number:	8881
Title of Invention:	SYNCHRONIZED GAMING AND PROGRAMMING
First Named Inventor/Applicant Name:	David B. Lockton
Customer Number:	28960
Filer:	Jonathan O Owens
Filer Authorized By:	
Attorney Docket Number:	AIRP-01054
Receipt Date:	05-JUL-2023
Filing Date:	29-SEP-2021
Time Stamp:	18:13:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$170
RAM confirmation Number	E202375I13536512
Deposit Account	081275
Authorized User	Jonathan Owens

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	41276 56af0bf73cffdc9894ebffbbc2093e96de8e5220	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37956 d0279388dd500841792c2220a0d6f8690682d329	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	79232		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 17488674

Filing Date: 29-Sep-2021

Applicant/Patent under Reexamination: Lockton

Electronic Terminal Disclaimer filed on July 5, 2023

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Patent Application Fee Transmittal

Application Number:	17488674
Filing Date:	29-Sep-2021
Title of Invention:	SYNCHRONIZED GAMING AND PROGRAMMING
First Named Inventor/Applicant Name:	David B. Lockton
Filer:	Jonathan O Owens
Attorney Docket Number:	AIRP-01054

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	17488674
Filing Date	29-Sep-2021
First Named Inventor	David Lockton
Attorney Docket Number	AIRP-01054
Title of Invention	SYNCHRONIZED GAMING AND PROGRAMMING

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Winview, Inc.	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

11154775

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○	I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

- ◉ Small Entity
- ○ Micro Entity
- ○ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- ◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

  Registration Number 37902

- ○ A sole inventor
- ○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ○ A joint inventor; all of whom are signing this request

Signature	/Jonathan O. Owens/
Name	Jonathan O. Owens

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-24 (canceled)

25. (currently amended) A method of playing a game, comprising:
    a. streaming video data and game data;
    b. operating a program to display the ~~streamed~~ video data and the game data, wherein the video data and the game data are synchronized when displayed; and
    c. preventing users from submitting a response to the game data based on the ~~streaming~~ video data and a lockout signal.

26. (original) The method of claim 25 further comprising receiving a game start signal and starting the game.

27. (currently amended) The method of claim 25 further comprising playing the game by selecting one or more choices related to the ~~streamed~~ video data.

28. (currently amended) The method of claim 25 wherein the ~~streamed~~ video data and the game data are displayed simultaneously.

29. (currently amended) The method of claim 25 wherein the ~~streamed~~ video data and the game data are displayed simultaneously on the same device.

30. (currently amended) The method of claim 25 wherein the ~~streamed~~ video data and the game data are displayed simultaneously on separate devices.

31. (previously presented) The method of claim 25 further comprising collecting scores and reporting performance to participants' devices.

FanDuel Ex. 1002-1105

32. (previously presented) The method of claim 25 further comprising prohibiting further game-related input with the lockout signal.

33. (currently amended) The method of claim 25 wherein the game data contains graphic information in addition to the ~~streamed~~ video data.

34. (currently amended) The method of claim 33 wherein the graphic information is displayed on the same device using methods including crawling information, closed captioned information, a picture in picture or a graphical overlay.

35. (currently amended) The method of claim 25 wherein the ~~streamed~~ video data or the game data is buffered in advance of a scheduled start.

36. (currently amended) The method of claim 25 further comprising transmitting the ~~streamed~~ video data and the game data on a transmission selected from a TCP, UDP, 3G, multicast or broadcast transmission.

37. (currently amended) The method of claim 25 wherein the ~~streamed~~ video data and the game data are synchronously displayed.

Claims 38-61 (canceled)

62. (currently amended) The method of claim 25 wherein the video data and the game data are synchronized based on a delay and further wherein the delay represents delay of the game data.

63. (previously presented) The method of claim 25 wherein the video data comprises one or more live events.

64. (previously presented) The method of claim 63 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

65. (previously presented) The method of claim 63 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

66. (previously presented) The method of claim 63 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

67. (currently amended) The method of claim 63 wherein the lockout signal occurs immediately before a scoring chance in the one or more live events.

68. (previously presented) The method of claim 63 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

69. (previously presented) The method of claim 63 wherein the lockout signal applies for a limited amount of time.

70. (previously presented) The method of claim 63 wherein the lockout signal applies for an action lasting a limited amount of time.

71. (previously presented) The method of claim 63 wherein the lockout signal involves presenting new odds on an unresolved proposition.

72. (previously presented) A server for synchronizing a game or contest with streaming content comprising:

a. a memory for storing an application, the application configured for:

i. transmitting game data for the game or contest to one or more devices on which the game or contest is to be played wherein the game data is to be synchronized with the streaming content at the one or more devices; and

ii. transmitting a lockout signal to the one or more devices to prevent users from submitting a response to the game or contest based on the streaming content; and

b. a processing component coupled to the memory, the processing component configured for processing the application.

73. (currently amended) The server of claim 72 ~~wherein~~ further comprising determining ~~the~~ an amount of delay in the streaming content ~~uses~~ using a method of automatic content recognition.

74. (currently amended) The server of claim 72 wherein existing events in the streaming content are used as synchronization points ~~as start points~~ for previously downloaded data files to a mobile client.

75. (previously presented) The server of claim 72 wherein a synchronization point is a visible or audible event located within the streaming content.

76. (previously presented) The server of claim 72 wherein a synchronization point for synchronizing the streaming content and game data is contained in audio or video within the streaming content.

77. (previously presented) The server of claim 72 wherein information is embedded in the streaming content and tracked online in real-time.

78. (currently amended) The server of claim 72 ~~wherein~~ further comprising determining ~~the~~ an amount of delay in the streaming content ~~includes~~ using a recognizable signal recognizable by a mobile device.

79. (previously presented) The server of claim 72 wherein a plurality of synchronization points are used by a client to continuously check to ensure game data is synchronized with the streaming content.

80. (previously presented) The server of claim 72 wherein inserted audio or video is used to continuously check to ensure game data is synchronized on a client with the streaming content.

81. (previously presented) The server of claim 72 wherein the game or contest comprises one or more live events.

82. (previously presented) The server of claim 81 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

83. (previously presented) The server of claim 81 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

84. (previously presented) The server of claim 81 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

85. (previously presented) The server of claim 81 wherein the lockout signal occurs immediately before a scoring chance in the one or more events.

86. (previously presented) The server of claim 81 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

87. (previously presented) The server of claim 81 wherein the lockout signal applies for a limited amount of time.

88. (previously presented) The server of claim 81 wherein the lockout signal applies for an action lasting a limited amount of time.

89. (previously presented) The server of claim 81 wherein the lockout signal involves presenting new odds on an unresolved proposition.

PATENT
Attorney Docket No.: AIRP-01054

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Group Art Unit: 3715
David B. Lockton et al.	Examiner: Iannuzzi, Peter J.
Serial No.: 17/488,674	**AMENDMENT AND RESPONSE TO OFFICE ACTION MAILED ON April 13, 2023**
Filed: September 29, 2021	
For: **SYNCHRONIZED GAMING AND PROGRAMMING**	162 N. Wolfe Rd. Sunnyvale, California 94086 (408) 530-9700
	Customer No. 28960

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

AMENDMENTS

Please amend the subject application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

FanDuel Ex. 1002-1110

Electronic Acknowledgement Receipt

EFS ID:	48253750
Application Number:	17488674
International Application Number:	
Confirmation Number:	8881
Title of Invention:	SYNCHRONIZED GAMING AND PROGRAMMING
First Named Inventor/Applicant Name:	David B. Lockton
Customer Number:	28960
Filer:	Jonathan O Owens
Filer Authorized By:	
Attorney Docket Number:	AIRP-01054
Receipt Date:	05-JUL-2023
Filing Date:	29-SEP-2021
Time Stamp:	18:17:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		AIRP_01054_Response_7_5_2023.pdf	54681 5771aa3f2ea63168c6a79803a4210c17a234a356	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	6
	Applicant Arguments/Remarks Made in an Amendment	7	7
Warnings:			
Information:			
	Total Files Size (in bytes):	54681	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. Claims 25-37 and 62-89 were pending. Within the Office Action, Claims 25-37 and 62-89 have been rejected. By the above amendments, Claims 25, 27-30, 33-37, 62, 67, 73, 74 and 78 have been amended. Accordingly, Claims 25-37 and 62-89 remain pending.

Double Patenting

Within the Office Action, Claims 25-37 and 62-89 have been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-41 of U.S. Patent No. 11,154,775. A terminal disclaimer has been filed herewith.

Rejections Under 35 U.S.C. § 112, second paragraph

Within the Office Action, Claims 25-37, 62-71, 73, 74 and 78 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

By the above amendments, Claims 25, 27-30, 33-37, 62, 67, 73, 74 and 78 have been amended as suggested within the Office Action. Therefore, the rejection should be withdrawn.

For the reasons given above, Applicants respectfully submit that all of the pending claims are now in condition for allowance, and allowance at an early date would be greatly appreciated. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS,
A Law Corporation

Dated: July 5, 2023

By: /Jonathan O. Owens/
Jonathan O. Owens
Reg No.: 37,902
Attorneys for Applicants

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	62	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2019/06/03 06:38 PM
L2	145	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2019/06/03 06:38 PM
L3	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:40 PM
L4	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:42 PM
L5	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:43 PM
L6	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:44 PM
L7	5	("8028315"|"8397257"|"8538563"|"9069651"|"9	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:45 PM

		289692").PN.					
L8	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:45 PM
L9	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:46 PM
L10	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:47 PM
L11	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:48 PM
L12	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"98782	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:49 PM

		43"|"9901820").PN.					
L13	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|"20030070174"|"20030078924"|"20030086691"|"20030087652"|"20030114224"|"20030144017"|"20030154242"|"20030177167"|"20030177504"|"20030195023"|"20030208579"|"20030211856"|"20030212691"|"20030216185"|"20030216857"|"20040014524"|"20040022366"|"20040060063"|"20040088729"|"20040093302"|"20040117831"|"20040117839"|"20040128319"|"20040148638"|"20040152454"|"20040158855"|"20040178923"|"20040183824"|"20040198495"|"20040203667"|"20040203898"|"20040224750"|"20040242321"|"20050021942"|"20050026699"|"20050043094"|"20050060219"|"20050076371"|"20050097599"|"20050101309"|"20050113164"|"20050131984"|"20050138668"|"20050210526"|"20050235043"|"20050255901"|"20050266869"|"20050273804"|"200	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:50 PM

		50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581					

		8438"|"5838774"|"5860862"|"5870683"|"5916024"|"5970143"|"5971854"|"5987440"|"6009458"|"6016337"|"6117013"|"6126543"|"6174237"|"6182084"|"6193610"|"6222642"|"6233736"|"6251017"|"6267670"|"6293868"|"6312336"|"6373462"|"6411969"|"6416414"|"6425828"|"6434398"|"6470180"|"6524189"|"6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"|"6760595").PN.					
L14	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:50 PM
L15	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/03 06:57 PM

		200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.					
L16	41061	(A63F13/352 or H04L67/38 or H04L65/4015 or G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/03 07:03 PM
L17	20	("20170232340" "9919210" "20170264961" "8705195" "20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:44 PM
L18	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628"	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:46 PM

		"8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090" "20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.					
L19	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:46 PM

		20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-					

		20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-					

		20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-					

		6015344-$ or US- 5848397-$ or US- 5846132-$ or US- 5794210-$ or US- 5636920-$ or US- 5018736-$ or US- 4918603-$ or US- 7452273-$ or US- 7144011-$ or US- 9881337-$ or US- 7341517-$ or US- 9406189-$ or US- 7534169-$ or US- 9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US-				

		6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US-				

		5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L20	35	L18 not L19	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L21	0	L20 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L22	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L23	36	L22 not L20	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L24	16	L23 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L25	6	L23 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04

		same delay					04:48 PM
L26	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:49 PM
L27	7	L26 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L28	7	L27 not L19	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L29	28	L26 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L30	18	L26 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L31	7	L30 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L32	9	L30 and stream$4	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L33	46	("20060014585" "8968093" "8840475" "20170232340" "20090124387" "9919210" "20170266550" "20100167809" "20100167816" "20180154255" "20160220901" "8834274" "8495678" "20170266548" "20090118018" "20110105226"	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 09:21 AM

		"20090118019" "20150165320" "20160271493" "20090119729" "20120142433" "20120149476" "9138644" "20160080739" "9032465" "20140297799" "20140213362" "9669307" "20090125961" "8661496" "8549574" "10071308" "10075750" "8832772" "10052556" "8366552" "8468575" "20090119730" "9352222" "9669306" "20150289028" "20100166058" "8387099" "20090119738" "8949922" "9770657").pn.					
L34	15	("20020147047" | "20020154691" | "20030005204" | "20060055706" | "5550982" | "5558339" | "5995150" | "6343086" | "7548272" | "7567293" | "7605861" | "7633521" | "7667767" | "8194093" | "8659668").PN. OR ("10075750").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 10:19 AM
L35	61	L33 L34	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L36	49	L35 and streaming	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L37	4	L35 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L38	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L39	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

L40	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L41	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L42	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L43	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L44	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.					
L45	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L46	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L47	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L48	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633					

		7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|" 6527641"|"6530082"|"6 536037"|"6578068"|"65 94098"|"6604997"|"661 0953"|"6648760"|"6659 860"|"6659872"|"66906 61"|"6718350"|"675239 6"|"6758754"|"6758755" |"6760595").PN.				
L49	61	("6763377"|"6766524"|" 6774926"|"6785561"|"6 801380"|"6806889"|"68 07675"|"6811482"|"681	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		7947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.					
L50	454	L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L51	0	L37 and L50	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L52	1	"7849491".pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:03 PM
L53	227	("20010024974" | "20010031092" | "20010034255" | "20010034743" | "20010039569" | "20010044339" | "20020019984" | "20020032056" | "20020034980" | "20020059637" | "20020069265" | "20020069405" | "20020073429" | "20020075382" | "20020078176" | "20020080267" | "20020087560" | "20020101442" | "20020114330" | "20020119821" | "20020142842" | "20020154691" | "20020165927" | "20020166119" | "20020166122" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM

		"20020170065" | "20020184303" | "20020184314" | "20030017846" | "20030037156" | "20030048808" | "20030078103" | "20030149988" | "20030158700" | "20030177187" | "20030226150" | "20030229902" | "20040022116" | "20040025190" | "20040045030" | "20040052371" | "20040064504" | "20040097288" | "20040102245" | "20040103120" | "20040111755" | "20040117831" | "20040153764" | "20040176168" | "20040179554" | "20040207724" | "20040229688" | "20040233274" | "20040263626" | "20050005308" | "20050028208" | "20050104889" | "20050122335" | "20050183120" | "20050188073" | "20050262542" | "20050273830" | "20050283800" | "20060010392" | "20060080702" | "20060112181" | "20060117344" | "20060156330" | "20060174021" | "20060174026" | "20060174266" | "20060190966" | "20060195884" | "20060224761" | "20060230428" | "20060242240" | "20060258463" | "20060277477" | "20060287106" | "20070005795" | "20070009029" | "20070010329" | "20070024706"				

		"20070047901" | "20070058937" | "20070060336" | "20070083899" | "20070094700" | "20070106952" | "20070117635" | "20070121629" | "20070124474" | "20070156815").PN. OR ("20070173325" | "20070202941" | "20070226364" | "20070243925" | "20070260677" | "20070265094" | "20070285578" | "20080005281" | "20080059645" | "20080065996" | "20080092168" | "20080092173" | "20080101466" | "20080140850" | "20080146342" | "20080207322" | "20080228865" | "20080267069" | "20080276269" | "20090052323" | "20090106662" | "20090132942" | "20090138922" | "20090144785" | "20090300701" | "20090307658" | "20100115559" | "20100262911" | "20110064381" | "20110126255" | "20130003826" | "4582324" | "5558339" | "5583561" | "5586247" | "5586257" | "5606359" | "5623308" | "5624316" | "5648824" | "5687257" | "5742289" | "5768382" | "5775996" | "5790176" | "5793410" | "5828370" | "5830068" | "5861920" | "5884101" | "5903735" | "5917962" | "5920692" | "5926208" | "5935006" | "5956485" | "5970143" | "5995518" | "6014706" | "6037983" | "6134590" | "6183367" | "6198850" | "6212681" | "6227974"				

		"6241612" | "6287199" | "6345297" | "6409602" | "6421706" | "6449070" | "6470378" | "6473902" | "6523126" | "6530082" | "6536041" | "6557041" | "6616533" | "6665872" | "6707487" | "6714200" | "6754241" | "6792615" | "6804825" | "6810528" | "6820218" | "6853385" | "6868439" | "6908390" | "6963353" | "6973667" | "6992981" | "6996742" | "7017173" | "7031473" | "7089319" | "7189161" | "7215660" | "7219153" | "7244181" | "7299487" | "7352952" | "7444662" | "7446772" | "7457878" | "7469381" | "7471665" | "7493078" | "7543326" | "7558525" | "7559834" | "7567527" | "7587520" | "7590084").PN. OR ("7593361" | "7634789" | "7684752" | "7715336" | "7725422" | "7757252" | "7789741" | "7837560" | "7849491" | "7936819" | "7953883" | "7984179" | "8118676" | "8284842" | "8468575" | "8495678" | "8526490" | "8661496").PN. OR ("8840475").URPN.					
L54	12	L53 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM
L55	2	("6527638" "7035626").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L56	648	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4799683" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		"5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("6527638" | "7035626").URPN.					
L57	147	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "4799683" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("7035626").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L58	545	("3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		| "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603").PN. OR ("6527638").URPN.					
L59	44	L57 and L58	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L60	0	L50 and L59	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L61	179	(US-20030104865-$ or US-20020147049-$ or US-20050176507-$).did. or (US-3810627-$ or US-3896266-$ or US-4157829-$ or US-4349695-$ or US-4339798-$ or US-4317957-$ or US-4467424-$ or US-4652998-$ or US-4494197-$ or US-4587379-$ or US-4720860-$ or US-4689742-$ or US-4760527-$ or US-4799683-$ or US-4996705-$ or US-4764666-$ or US-4982337-$ or US-4880237-$ or US-4856787-$ or US-4922522-$ or US-5083271-$ or US-4882473-$ or US-5096195-$ or US-5179517-$ or US-5083272-$ or US-5181238-$).did. or (US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:21 PM

		5038022-$ or US- 5218631-$ or US- 5197094-$ or US- 5315634-$ or US- 5177342-$ or US- 5042809-$ or US- 5276312-$ or US- 5235166-$ or US- 5119295-$ or US- 5289542-$ or US- 5214697-$ or US- 5223698-$ or US- 5239583-$ or US- 5178389-$ or US- 5317135-$ or US- 5241600-$ or US- 5283734-$ or US- 5429361-$ or US- 5177789-$ or US- 5259023-$ or US- 5313637-$ or US- 5216712-$ or US- 5210795-$ or US- 5265874-$ or US- 5326104-$ or US- 5277424-$ or US- 5351970-$).did. or (US- 5371345-$ or US- 5327485-$ or US- 5324035-$ or US- 5285200-$ or US- 5313520-$ or US- 5315624-$ or US- 5508731-$ or US- 5457306-$ or US- 5413357-$ or US- 5380007-$ or US- 5557086-$ or US- 5800268-$ or US- 5999808-$ or US- 5709603-$ or US- 6139431-$ or US- 6035189-$ or US- 6104815-$ or US- 6595855-$ or US- 7124426-$ or US- 8579705-$ or US- 6702672-$ or US- 6527641-$ or US- 6358151-$ or US- 7672892-$ or US- 6573824-$ or US- 6470180-$ or US- 7753772-$).did. or (US- 7988559-$ or US- 7203841-$ or US- 6837789-$ or US- 7340058-$ or US-				

		8313371-$ or US- 6628939-$ or US- 6585598-$ or US- 7716126-$ or US- 8932136-$ or US- 7116782-$ or US- 6846238-$ or US- 8317601-$ or US- 7140964-$ or US- 7931533-$ or US- 7506172-$ or US- 7976384-$ or US- 7460863-$ or US- 6988204-$ or US- 7099236-$ or US- 7370194-$ or US- 7169050-$ or US- 7320642-$ or US- 7618317-$ or US- 7306519-$ or US- 6935952-$ or US- 6988946-$ or US- 7329183-$).did. or (US- 7291069-$ or US- 8123616-$ or US- 7867083-$ or US- 7024375-$ or US- 7628703-$ or US- 7708189-$ or US- 7192348-$ or US- 7367889-$ or US- 7600108-$ or US- 7399227-$ or US- 7491122-$ or US- 7470186-$ or US- 7192351-$ or US- 7972213-$ or US- 7695363-$ or US- 6991538-$ or US- 7762888-$ or US- 7766744-$ or US- 7918728-$ or US- 7581256-$ or US- 8403755-$ or US- 7684432-$ or US- 7430187-$ or US- 7828652-$ or US- 7815503-$ or US- 8038527-$ or US- 7452270-$).did. or (US- 8113950-$ or US- 7832626-$ or US- 7526736-$ or US- 7470182-$ or US- 8174970-$ or US- 8568224-$ or US- 7387568-$ or US- 7470183-$ or US-				

		8087988-$ or US-7815507-$ or US-7520810-$ or US-7751804-$ or US-8529341-$ or US-7690043-$ or US-7545788-$ or US-8057292-$ or US-7837545-$ or US-7524243-$ or US-7699699-$ or US-7553230-$ or US-7740536-$ or US-8086519-$ or US-7955170-$ or US-7577847-$ or US-8133113-$ or US-7837547-$ or US-7695359-$).did. or (US-8123606-$ or US-7815500-$ or US-7871325-$ or US-7063618-$ or US-9105146-$ or US-7500107-$ or US-8725646-$ or US-7837556-$ or US-8172671-$ or US-8814652-$ or US-8282475-$ or US-7363001-$ or US-8608535-$ or US-7313361-$ or US-7837549-$).did.					
L62	0	L61 and (lockout lock adj out) and (synchronize synch synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L63	0	L61 and (lockout lock adj out) and (synchronize sync synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L64	1	L61 and (lockout lock adj out)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L65	17	(cell adj phone cellphone smart adj phone smartphone) and L61	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:23 PM
L66	1	(US-20040025190-$).did.	(US-PGPUB)	OR	ON	ON	2019/06/19 02:08 PM
L67	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 02:08 PM

		US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or						

		US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or						

		US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or						

		US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-9306952-$ or US-6884166-$ or US-8814664-$).did. or (US-7711628-$ or US-8771058-$ or US-					

		8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US-				

		5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US- 5119295-$ or US- 5083800-$ or US- 5083271-$ or US- 5073931-$ or US- 5035422-$ or US- 5013038-$ or US- 4816904-$ or US- 4592546-$).did. or (US- 4496148-$ or US- 4270755-$ or US- 4141548-$).did.					
L68	0	L66 and L67	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/19 02:09 PM
L69	1	("20160217653").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:34 PM
L70	25	("20020026321"|"20020	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21

		069076"|"20020076084"|"20020083461"|"20020091833"|"20020119821"|"20020142843"|"20020157005"|"20040152519"|"20040166873"|"20040201626"|"20040215756"|"20050256895"|"20060058103"|"5519433"|"5828843"|"5894556"|"6042477"|"6128660"|"6345297"|"6475090"|"6659861"|"6811487"|"6845389"|"6903681").PN.					02:36 PM
L71	1	("4930010").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L72	1	("20020120930").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L73	6	("20020162117"|"20030066089"|"20050155083"|"20050239551"|"20060236352"|"5530483").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:38 PM
L74	34	L69 L70 L71 L72 L73	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/11/21 02:40 PM
L75	59	("2002/0142843").URPN.	(USPAT)	OR	ON	ON	2019/11/21 03:33 PM
L76	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L77	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L78	7	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/04 04:55 PM
L79	65	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L80	152	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2020/01/06 12:59 AM
L81	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

L82	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L83	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L84	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L85	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L86	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L87	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.					
L88	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L89	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L90	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L91	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"200201	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		08127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|"20030070174"|"20030078924"|"20030086691"|"20030087652"|"20030114224"|"20030144017"|"20030154242"|"20030177167"|"20030177504"|"20030195023"|"20030208579"|"20030211856"|"20030212691"|"20030216185"|"20030216857"|"20040014524"|"20040022366"|"20040060063"|"20040088729"|"20040093302"|"20040117831"|"20040117839"|"20040128319"|"20040148638"|"20040152454"|"20040158855"|"20040178923"|"20040183824"|"20040198495"|"20040203667"|"20040203898"|"20040224750"|"20040242321"|"20050021942"|"20050026699"|"20050043094"|"20050060219"|"20050076371"|"20050097599"|"20050101309"|"20050113164"|"20050131984"|"20050138668"|"20050210526"|"20050235043"|"20050255901"|"20050266869"|"20050273804"|"20050288101"|"20050288812"|"20060025070"|"20060046810"|"20060047772"|"20060059161"|"20060063590"|"20060087585"|"20060089199"|"20060111168"|"20060135253"|"20060148569"|"20060156371"|"20060174307"|"20060183548"|"20060205483"|"20060248553"|"20060269120"|"20070004516"|"200					

		70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|				

		6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"|"6760595").PN.					
L92	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L93	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L94	43677	(A63F13/352 or H04L67/38 or H04L65/4015 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM

		G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.					
L95	20	("20170232340" "9919210" "20170264961" "8705195" "20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L96	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628" "8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090" "20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L97	343	(US-20030088648-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06

		US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or					12:59 AM

		US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or					

		US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or					

		US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-					

		9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US-				

		6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US- 5119295-$ or US- 5083800-$ or US- 5083271-$ or US- 5073931-$ or US- 5035422-$ or US- 5013038-$ or US- 4816904-$ or US- 4592546-$).did. or (US- 4496148-$ or US- 4270755-$ or US- 4141548-$).did.					
L98	35	L96 not L97	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2020/01/06 12:59 AM

			JPO; IBM_TDB)				
L99	0	L98 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L100	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L101	36	L100 not L98	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L102	16	L101 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L103	6	L101 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L104	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008"	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		"20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.					
L105	7	L104 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L106	7	L105 not L97	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L107	28	L104 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L108	18	L104 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L109	8472	L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99 L100 L101 L102 L103 L104 L105 L106 L107 L108	(USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L110	17146	live adj event	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:43 AM
L111	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:44 AM
L112	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM
L113	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM
L114	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM

		A63F13/537).cpc.					
L115	20059	L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L116	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L117	263	L116	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L118	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L119	28661	L118	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L120	0	L119 and L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L121	0	L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L122	72980	propagation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L123	146	L122 and L114	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L124	25	L119 and L123	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L126	77	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2021/02/06 07:46 PM
L127	176	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/02/06 07:46 PM
L128	93	("20170232340" "20180154255" "10653955" "9919210" "20170264961" "8705195" "9672692" "20140155134" "20120295686" "20200330864" "20180117464" "20170304726" "10874942" "20190060750" "20130079150" "8737004" "20180169523" "20140335962" "20130079151" "20170296916" "20140256432" "20170259173" "20160361647" "20130079081" "20190118087"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:20 PM

		"20200155935" "20130072271" "20180264360" "20180243652" "20160375362" "20160121208" "20170282067" "20140287832" "20200171383" "20170225072" "20140106832" "20130079135" "20170225071" "9604140" "20200155936" "20140155130" "20120157178" "20180104582" "8780482" "20130079093" "9919211" "20140206446" "9901820" "20180318710" "9687738" "20140335961" "9993730" "20130079092" "20170252649" "9662577" "10150031" "9457272" "9258601" "8699168" "10695672" "8837072" "8149530" "20190255436" "9707482" "10052557" "10556177" "10279253" "9999834" "9724603" "9687739" "9878243" "8717701" "9744453" "10195526" "8659848" "8638517" "10576371" "9662576" "8817408" "10363483" "10137369" "20170036110" "9511287" "20190054375" "20070078009" "8932136" "7448063" "20020188943" "9462341" "7079176" "20040261127" "20140282735" "20130152139").pn.					
L129	61	("8932136" "7448063" "20020188943" "7079176" "20040261127" "20040139474"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:22 PM

		"20060253330" "20060129458" "7552193" "20040187148" "7984472" "20150087419" "9344670" "20060282319" "20040133919" "20140112637" "20160286271" "9591362" "20120210380" "9108107" "8539538" "20090118017" "20020034980" "20110107220" "9635066" "20170374112" "10052556" "20090119737" "20070028272" "20110137729" "20090119729" "20160271493" "9756349" "20170266548" "20150141145" "5638113" "20090125967" "20110040615" "20150165320" "9032465" "20040139469" "9669306" "20110138415" "20120149476" "20150100995" "5916024" "20190358539" "10071308" "7673316" "9573059" "9623326" "20130247125" "9003461" "20110105226" "20090118018" "20090124387" "20170266550" "9352222" "20100167809" "20110137728" "20130145412").pn.					
L130	40	("9258601" "10576371" "9993730" "9919210" "9672692" "9993730" "10653955" "10195526" "9687739" "9861125" "9861125" "9919210"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:40 PM

		"9919210" "9511287" "9457272" "9707482" "9861125" "9662577" "8699168" "8705195" "8638517" "8780482" "9662576" "8837072" "8659848" "8817408" "8737004" "10363483" "10874942" "9999834" "9919211" "10052557" "10279253" "10137369" "10150031" "8717701" "9901820" "9687738" "9744453" "10556177" "8149530" "9878243" "10695672" "9604140" "9724603").pn.					
L131	976	coffee.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L132	52	coffee near2 john.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L133	12	coffee near2 john.in.	(USPAT)	OR	ON	ON	2021/09/13 02:07 PM
L134	1	("7185355").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:46 PM
L135	4	("20030125109" OR "20040015442" OR "20090325716" OR "6154131").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM
L136	15	("10360767" OR "10569175" OR "20020094869" OR "20020184624" OR "20030003997" OR "20030177504" OR "20060101492" OR "20060205483" OR "20140309001" OR "20150024814" OR "7909332" OR "8002618" OR "8092306" OR "8634943" OR "9716918").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM
L137	2	("20060160597" OR "20190143225").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:48 PM
L138	250	("10052557" OR "10089815" OR "10096210" OR "10137369" OR "10150031" OR "10165339" OR "10186116" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:49 PM

		"10195526" OR "10226698" OR "10226705" OR "10232270" OR "10248290" OR "10279253" OR "10360767" OR "10569175" OR "10653955" OR "10695672" OR "10709987" OR "10721543" OR "20010004609" OR "20010005670" OR "20010013067" OR "20010013125" OR "20010020298" OR "20010032333" OR "20010036272" OR "20010036853" OR "20010044339" OR "20010054019" OR "20020010789" OR "20020018477" OR "20020026321" OR "20020029381" OR "20020035609" OR "20020037766" OR "20020042293" OR "20020046099" OR "20020054088" OR "20020055385" OR "20020056089" OR "20020059094" OR "20020059623" OR "20020069076" OR "20020069265" OR "20020076084" OR "20020078176" OR "20020083461" OR "20020091833" OR "20020094869" OR "20020095333" OR "20020097983" OR "20020099709" OR "20020100063" OR "20020103696" OR "20020105535" OR "20020107073" OR "20020108112" OR "20020108125" OR "20020108127" OR "20020112249" OR "20020115488" OR "20020119821" OR "20020120930" OR "20020124247" OR "20020132614" OR					

		"20020133817" OR "20020133827" OR "20020142843" OR "20020144273" OR "20020147049" OR "20020157002" OR "20020157005" OR "20020159576" OR "20020162031" OR "20020162117" OR "20020165020" OR "20020165025" OR "20020177483" OR "20020184624" OR "20020187825" OR "20020198050" OR "20030002638" OR "20030003997" OR "20030013528" OR "20030023547" OR "20030040363" OR "20030054885" OR "20030060247" OR "20030066089" OR "20030069828" OR "20030070174" OR "20030078924" OR "20030086691" OR "20030087652" OR "20030088648" OR "20030114224" OR "20030115152" OR "20030125109" OR "20030134678" OR "20030144017" OR "20030154242" OR "20030165241" OR "20030177167" OR "20030177504" OR "20030189668" OR "20030195023" OR "20030195807" OR "20030208579" OR "20030211856" OR "20030212691" OR "20030216185" OR "20030216857" OR "20030228866" OR "20030233425" OR "20040005919" OR "20040014524" OR "20040015442" OR "20040022366" OR "20040025190" OR "20040056897" OR "20040060063" OR "20040073915" OR "20040088729" OR					

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PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

PE2E SEARCH - Search History (Similarity Search)

No Similarity Results available

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	Art Unit
	PETER J IANNUZZI	3715

CPC - Searched*		
Symbol	Date	Examiner
A63F13/352 G07F17/3227 H04L65/4015 H04L65/4076 H04L67/38 A63F13/537 A63F13/46 A63F13/355 (text search limited)	04/08/2023	PI

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
performed inventor name and assignee search	04/08/2023	PI
performed ip.com search	04/08/2023	PI
see attached text search notes	04/08/2023	PI
updated search	10/03/2023	PI

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/PETER J IANNUZZI/ Primary Examiner, Art Unit 3715	

FanDuel Ex. 1002-1180

Notice of References Cited	Application/Control No. 17/488,674	Applicant(s)/Patent Under Reexamination Lockton, David B.	
	Examiner PETER J IANNUZZI	Art Unit 3715	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10653955-B2	05-2020	Lockton; David B.	H04L65/4015	1/1
*	B	US-8705195-B2	04-2014	Lockton; David B.	H04L65/611	381/103
*	C	US-9672692-B2	06-2017	Lockton; David B.	G07F17/32	1/1
	D					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

FanDuel Ex. 1002-1181

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

28960 7590 10/10/2023

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
10/10/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JOWENS@HOLLP.COM
us_docketing@hollp.com

FanDuel Ex. 1002-1182

Office Action Summary	Application No. 17/488,674	Applicant(s) Lockton, David B.	
	Examiner PETER J IANNUZZI	Art Unit 3715	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 05 July 2023.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 25-37 and 62-89 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 25 and 72 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

FanDuel Ex. 1002-1183

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Response to Arguments

Applicant's arguments, see remarks, filed July 5, 2023, with respect to the newly amended claims have been fully considered and are persuasive. The rejection of the claims is not made due to the amended claims and this office action is NON-FINAL.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject

to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/apply/applying-online/eterminal-disclaimer.

Claim 25 and 72 are rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 10,653,955. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims in this application are broader in scope than the claims of the patent and are anticipated by said patent.

Claim 25 and 72 are rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 and 33 respectively of U.S. Patent No. 8,705,195. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims in this application are broader in scope than the claims of the patent and are anticipated by said patent.

Claim 25 and 72 is rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 and 8 respectively of U.S. Patent No. 9,672,692. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims in this application are broader in scope than the claims of the patent and are anticipated by said patent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J IANNUZZI whose telephone number is (571)272-5793. The examiner can normally be reached M-F 9:30AM-5:30PM EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kang Hu can be reached on 571-270-1344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PETER J IANNUZZI/
Primary Examiner, Art Unit 3715

Electronic Acknowledgement Receipt

EFS ID:	48742271
Application Number:	17488674
International Application Number:	
Confirmation Number:	8881
Title of Invention:	SYNCHRONIZED GAMING AND PROGRAMMING
First Named Inventor/Applicant Name:	David B. Lockton
Customer Number:	28960
Filer:	Jonathan O Owens
Filer Authorized By:	
Attorney Docket Number:	AIRP-01054
Receipt Date:	19-OCT-2023
Filing Date:	29-SEP-2021
Time Stamp:	18:39:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	AIRP_01054_IDS_10_19_2023.pdf	1264213 fd07dc0091cfd8e839010d0d5762d6b38ea56c5d	no	5

Warnings:

FanDuel Ex. 1002-1188

Information:	
Total Files Size (in bytes):	1264213

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	2010516	A	1935-08-06	Hoffmann, Edwin C.	
	2	2051615	A	1936-08-18	Miles, William C.	
	3	2193638	A	1940-03-12	Morton, Woolridge B.	
	4	2274933	A	1942-03-03	Peck, Clifford H.	
	5	3550944	A	1970-12-29	Chamberlin, frances W.	
	6	3689071	A	1972-09-05	George F. Kucera	
	7	5711715	A	1998-01-27	Ringo, Dock E.	
	8	5882260	A	1999-03-16	Marks, Howard M.	

FanDuel Ex. 1002-1190

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

	9	6264650	B1	2001-07-24	Goldberg; Sheldon F.	
	10	6537150	B1	2003-03-25	Luciano, Robert A.	
	11	8597117	B2	2013-12-03	Bruce, Robert	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030088878	A1	2003-05-08	Rogers, Karl	
	2	20050116416	A1	2005-06-02	Peterson, Randall S.E.	
	3	20080315521	A1	2008-12-25	Reabe, JR; Gordon F.	
	4	20100261533	A1	2010-10-14	Kryger, Kyle Walter	
	5	20110124397	A1	2011-05-26	Gingher, Robert G.	
	6	20160220908	A1	2016-08-04	Isgreen, Adam Paul	

FanDuel Ex. 1002-1191

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

	7	20180001213	A1	2018-01-04	Tsang; Mark	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-1192

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2023-10-19
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	01/05/2024 07:15:20 PM Z ET	AIRP-01054

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	63861623	AUTHORIZED BY	-
CUSTOMER #	28960	FILING DATE	09/29/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	David B. Lockton

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0538	E202415J15407365	Jonathan Owens

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
081275	37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
			TOTAL AMOUNT:	$170.00

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
17488674	09/29/2021	David Lockton	AIRP-01054

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

☑ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☑ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
Winview IP Holdings, LLC	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the

instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #
10653955
8705195
9672692

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

✔ Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:

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FanDuel Ex. 1002-1198

Small

I hereby declare that all statements made herein of my own knowledge are true and that all statemnts made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Jonathan O. Owens/	Jonathan Owens	37902

---

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**01/05/2024 07:15:20 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	63861623	FILING DATE	09/29/2021
CUSTOMER #	28960	FIRST NAMED INVENTOR	David B. Lockton
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	49 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic-Approved	19 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	7EF375499ADFE17EF7EFD6F1E3019BE30E4434FEE305B4AD8DE7D444F03B0A5D9D4917ECA253C5A1F0C225597E01906C20

FanDuel Ex. 1002-1201

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grantLetter.pdf	BE42B47D8D2A7EFA255D292082736B510BFBDCA6F2A772CE4E796DC28A4B2251C951B075012BD5D31C627FCF9A811DFBACB2A848DDCC79659075D85AEE780D88

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New International Application Filed with the USPTO as a Receiving Office

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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
17/488,674	09/29/2021	David Lockton

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Electronic terminal disclaimer filed on 01/05/2024

☑ Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. Claims 25-37 and 62-89 were pending. Within the Office Action, Claims 25 and 72 have been rejected. Accordingly, Claims 25-37 and 62-89 remain pending.

Double Patenting

Within the Office Action, Claims 25 and 62 have been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 of U.S. Patent No. 10,653,955. Claims 25 and 62 have been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1 and 33 of U.S. Patent No. 8,705,195. Claims 25 and 62 have been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1 and 8 of U.S. Patent No. 9,672,692. A terminal disclaimer has been filed herewith.

For the reasons given above, Applicants respectfully submit that all of the pending claims are now in condition for allowance, and allowance at an early date would be greatly appreciated. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS,
A Law Corporation

Dated: January 5, 2024

By: /Jonathan O. Owens/
Jonathan O. Owens
Reg No.: 37,902
Attorneys for Applicants

PATENT
Attorney Docket No.: AIRP-01054

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Group Art Unit: 3715
David B. Lockton et al.	Examiner: Iannuzzi, Peter J.
Serial No.: 17/488,674	**AMENDMENT AND RESPONSE TO OFFICE ACTION MAILED ON October 10, 2023**
Filed: September 29, 2021	
For: **SYNCHRONIZED GAMING AND PROGRAMMING**	162 N. Wolfe Rd. Sunnyvale, California 94086 (408) 530-9700
	Customer No. 28960

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

AMENDMENTS

Please amend the subject application as follows:

Remarks/Arguments begin on page 2 of this paper.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**01/05/2024 07:17:16 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	63861651	FILING DATE	09/29/2021
CUSTOMER #	28960	FIRST NAMED INVENTOR	David B. Lockton
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
AIRP_01054_Response_1_5_2024.pdf	2	Applicant Arguments/Remarks Made in an Amendment	41 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
AIRP_01054_Response_1_5_2024.pdf	17D18D095937EDF6F03045151B927E99604B49B64BF8D07004BAD0DBF807F03EE92EEBDCD3211B59299CB9C1AFC8F0B3277BDD73BD5CF2EAB96C6145AE18C623

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New Applications Under 35 U.S.C. 111

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	2010516	A	1935-08-06	Hoffmann, Edwin C.	
	2	2051615	A	1936-08-18	Miles, William C.	
	3	2193638	A	1940-03-12	Morton, Woolridge B.	
	4	2274933	A	1942-03-03	Peck, Clifford H.	
	5	3550944	A	1970-12-29	Chamberlin, frances W.	
	6	3689071	A	1972-09-05	George F. Kucera	
	7	5711715	A	1998-01-27	Ringo, Dock E.	
	8	5882260	A	1999-03-16	Marks, Howard M.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

	9	6264650	B1	2001-07-24	Goldberg; Sheldon F.	
	10	6537150	B1	2003-03-25	Luciano, Robert A.	
	11	8597117	B2	2013-12-03	Bruce, Robert	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030088878	A1	2003-05-08	Rogers, Karl	
	2	20050116416	A1	2005-06-02	Peterson, Randall S.E.	
	3	20080315521	A1	2008-12-25	Reabe, JR; Gordon F.	
	4	20100261533	A1	2010-10-14	Kryger, Kyle Walter	
	5	20110124397	A1	2011-05-26	Gingher, Robert G.	
	6	20160220908	A1	2016-08-04	Isgreen, Adam Paul	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

	7	20180001213	A1	2018-01-04	Tsang; Mark	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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EXAMINER SIGNATURE

Examiner Signature	/PETER J IANNUZZI/	Date Considered	01/27/2024

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2023-10-19
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	62	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2019/06/03 06:38 PM
L2	145	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2019/06/03 06:38 PM
L3	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:40 PM
L4	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/03 06:42 PM
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L19	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:46 PM

		20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-					

		20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-					

		20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-					

		6371855-$ or US- 6135881-$ or US- 6110041-$ or US- 6015344-$ or US- 5848397-$ or US- 5846132-$ or US- 5794210-$ or US- 5636920-$ or US- 5018736-$ or US- 4918603-$ or US- 7452273-$ or US- 7144011-$ or US- 9881337-$ or US- 7341517-$ or US- 9406189-$ or US- 7534169-$ or US- 9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US-				

		6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US-				

		5227874-$ or US-5213337-$ or US-5120076-$ or US-5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L20	35	L18 not L19	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L21	0	L20 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/04 04:46 PM
L22	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L23	36	L22 not L20	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM

L24	16	L23 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L25	6	L23 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:48 PM
L26	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:49 PM
L27	7	L26 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L28	7	L27 not L19	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L29	28	L26 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L30	18	L26 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 04:50 PM
L31	7	L30 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L32	9	L30 and stream$4	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/04 05:00 PM
L33	46	("20060014585" "8968093" "8840475" "20170232340" "20090124387" "9919210" "20170266550" "20100167809" "20100167816" "20180154255" "20160220901" "8834274" "8495678"	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 09:21 AM

		"20170266548" "20090118018" "20110105226" "20090118019" "20150165320" "20160271493" "20090119729" "20120142433" "20120149476" "9138644" "20160080739" "9032465" "20140297799" "20140213362" "9669307" "20090125961" "8661496" "8549574" "10071308" "10075750" "8832772" "10052556" "8366552" "8468575" "20090119730" "9352222" "9669306" "20150289028" "20100166058" "8387099" "20090119738" "8949922" "9770657").pn.					
L34	15	("20020147047" | "20020154691" | "20030005204" | "20060055706" | "5550982" | "5558339" | "5995150" | "6343086" | "7548272" | "7567293" | "7605861" | "7633521" | "7667767" | "8194093" | "8659668").PN. OR ("10075750").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 10:19 AM
L35	61	L33 L34	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L36	49	L35 and streaming	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L37	4	L35 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:01 PM
L38	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L39	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.					
L40	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L41	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L42	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L43	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L44	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"2006	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		0053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.				
L45	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L46	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L47	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L48	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM

		25"|"20020177483"|"20 020187825"|"20030013 528"|"20030023547"|"2 0030040363"|"2003006 0247"|"20030069828"|" 20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702					

		38525"|"20070243936"|"20070244570"|"20070244585"|"20070244749"|"20070265089"|"20080076497"|"20080146337"|"20080169605"|"20080248865"|"20080270288"|"20080288600"|"20090163271"|"20090228351"|"20090234674"|"20100099421"|"20100099471"|"20100120503"|"20100137057"|"20100279764"|"20110130197"|"20110227287"|"20110269548"|"20120264496"|"20120282995"|"20130005453"|"20140100011"|"20140128139"|"20140279439"|"20140378212"|"20150067732"|"4141548"|"4270755"|"4496148"|"4592546"|"4816904"|"5013038"|"5035422"|"5073931"|"5083271"|"5083800"|"5119295"|"5120076"|"5213337"|"5227874"|"5256863"|"5263723"|"5283734"|"5327485"|"5343236"|"5343239"|"5417424"|"5462275"|"5479492"|"5553120"|"5566291"|"5585975"|"5586257"|"5589765"|"5628684"|"5643088"|"5663757"|"5759101"|"5761606"|"5762552"|"5764275"|"5813913"|"5818438"|"5838774"|"5860862"|"5870683"|"5916024"|"5970143"|"5971854"|"5987440"|"6009458"|"6016337"|"6117013"|"6126543"|"6174237"|"6182084"|"6193610"|"6222642"|"6233736"|"6251017"|"6267670"|"6293868"|"6312336"|"6373462"|"6411969"|"6416414"|"6425828"|"6434398"|"6470180"|"6524189"|"6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"					

		|"6760595").PN.					
L49	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 12:02 PM
L50	454	L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L51	0	L37 and L50	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:02 PM
L52	1	"7849491".pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:03 PM
L53	227	("20010024974" | "20010031092" | "20010034255" | "20010034743" | "20010039569" | "20010044339" | "20020019984" | "20020032056" | "20020034980" | "20020059637" | "20020069265" | "20020069405" | "20020073429" | "20020075382" | "20020078176" | "20020080267" | "20020087560" | "20020101442" | "20020114330" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM

		"20020119821" | "20020142842" | "20020154691" | "20020165927" | "20020166119" | "20020166122" | "20020170065" | "20020184303" | "20020184314" | "20030017846" | "20030037156" | "20030048808" | "20030078103" | "20030149988" | "20030158700" | "20030177187" | "20030226150" | "20030229902" | "20040022116" | "20040025190" | "20040045030" | "20040052371" | "20040064504" | "20040097288" | "20040102245" | "20040103120" | "20040111755" | "20040117831" | "20040153764" | "20040176168" | "20040179554" | "20040207724" | "20040229688" | "20040233274" | "20040263626" | "20050005308" | "20050028208" | "20050104889" | "20050122335" | "20050183120" | "20050188073" | "20050262542" | "20050273830" | "20050283800" | "20060010392" | "20060080702" | "20060112181" | "20060117344" | "20060156330" | "20060174021" | "20060174026" | "20060174266" | "20060190966" | "20060195884" | "20060224761" | "20060230428" | "20060242240" | "20060258463"				

		"20060277477" | "20060287106" | "20070005795" | "20070009029" | "20070010329" | "20070024706" | "20070047901" | "20070058937" | "20070060336" | "20070083899" | "20070094700" | "20070106952" | "20070117635" | "20070121629" | "20070124474" | "20070156815").PN. OR ("20070173325" | "20070202941" | "20070226364" | "20070243925" | "20070260677" | "20070265094" | "20070285578" | "20080005281" | "20080059645" | "20080065996" | "20080092168" | "20080092173" | "20080101466" | "20080140850" | "20080146342" | "20080207322" | "20080228865" | "20080267069" | "20080276269" | "20090052323" | "20090106662" | "20090132942" | "20090138922" | "20090144785" | "20090300701" | "20090307658" | "20100115559" | "20100262911" | "20110064381" | "20110126255" | "20130003826" | "4582324" | "5558339" | "5583561" | "5586247" | "5586257" | "5606359" | "5623308" | "5624316" | "5648824" | "5687257" | "5742289" | "5768382" | "5775996" | "5790176" | "5793410" | "5828370" | "5830068" | "5861920" | "5884101" | "5903735" | "5917962" | "5920692"				

		"5926208" | "5935006" | "5956485" | "5970143" | "5995518" | "6014706" | "6037983" | "6134590" | "6183367" | "6198850" | "6212681" | "6227974" | "6241612" | "6287199" | "6345297" | "6409602" | "6421706" | "6449070" | "6470378" | "6473902" | "6523126" | "6530082" | "6536041" | "6557041" | "6616533" | "6665872" | "6707487" | "6714200" | "6754241" | "6792615" | "6804825" | "6810528" | "6820218" | "6853385" | "6868439" | "6908390" | "6963353" | "6973667" | "6992981" | "6996742" | "7017173" | "7031473" | "7089319" | "7189161" | "7215660" | "7219153" | "7244181" | "7299487" | "7352952" | "7444662" | "7446772" | "7457878" | "7469381" | "7471665" | "7493078" | "7543326" | "7558525" | "7559834" | "7567527" | "7587520" | "7590084").PN. OR ("7593361" | "7634789" | "7684752" | "7715336" | "7725422" | "7757252" | "7789741" | "7837560" | "7849491" | "7936819" | "7953883" | "7984179" | "8118676" | "8284842" | "8468575" | "8495678" | "8526490" | "8661496").PN. OR ("8840475").URPN.					
L54	12	L53 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 12:06 PM
L55	2	("6527638" "7035626").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L56	648	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		"4689742" | "4720860" | "4760527" | "4764666" | "4799683" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("6527638" | "7035626").URPN.					
L57	147	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "4799683" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("7035626").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM
L58	545	("3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:15 PM

		| "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603").PN. OR ("6527638").URPN.					
L59	44	L57 and L58	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L60	0	L50 and L59	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:20 PM
L61	179	(US-20030104865-$ or US-20020147049-$ or US-20050176507-$).did. or (US-3810627-$ or US-3896266-$ or US-4157829-$ or US-4349695-$ or US-4339798-$ or US-4317957-$ or US-4467424-$ or US-4652998-$ or US-4494197-$ or US-4587379-$ or US-4720860-$ or US-4689742-$ or US-4760527-$ or US-4799683-$ or US-4996705-$ or US-4764666-$ or US-4982337-$ or US-4880237-$ or US-4856787-$ or US-4922522-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:21 PM

		5083271-$ or US- 4882473-$ or US- 5096195-$ or US- 5179517-$ or US- 5083272-$ or US- 5181238-$).did. or (US- 5038022-$ or US- 5218631-$ or US- 5197094-$ or US- 5315634-$ or US- 5177342-$ or US- 5042809-$ or US- 5276312-$ or US- 5235166-$ or US- 5119295-$ or US- 5289542-$ or US- 5214697-$ or US- 5223698-$ or US- 5239583-$ or US- 5178389-$ or US- 5317135-$ or US- 5241600-$ or US- 5283734-$ or US- 5429361-$ or US- 5177789-$ or US- 5259023-$ or US- 5313637-$ or US- 5216712-$ or US- 5210795-$ or US- 5265874-$ or US- 5326104-$ or US- 5277424-$ or US- 5351970-$).did. or (US- 5371345-$ or US- 5327485-$ or US- 5324035-$ or US- 5285200-$ or US- 5313520-$ or US- 5315624-$ or US- 5508731-$ or US- 5457306-$ or US- 5413357-$ or US- 5380007-$ or US- 5557086-$ or US- 5800268-$ or US- 5999808-$ or US- 5709603-$ or US- 6139431-$ or US- 6035189-$ or US- 6104815-$ or US- 6595855-$ or US- 7124426-$ or US- 8579705-$ or US- 6702672-$ or US- 6527641-$ or US- 6358151-$ or US- 7672892-$ or US- 6573824-$ or US-				

		6470180-$ or US- 7753772-$).did. or (US- 7988559-$ or US- 7203841-$ or US- 6837789-$ or US- 7340058-$ or US- 8313371-$ or US- 6628939-$ or US- 6585598-$ or US- 7716126-$ or US- 8932136-$ or US- 7116782-$ or US- 6846238-$ or US- 8317601-$ or US- 7140964-$ or US- 7931533-$ or US- 7506172-$ or US- 7976384-$ or US- 7460863-$ or US- 6988204-$ or US- 7099236-$ or US- 7370194-$ or US- 7169050-$ or US- 7320642-$ or US- 7618317-$ or US- 7306519-$ or US- 6935952-$ or US- 6988946-$ or US- 7329183-$).did. or (US- 7291069-$ or US- 8123616-$ or US- 7867083-$ or US- 7024375-$ or US- 7628703-$ or US- 7708189-$ or US- 7192348-$ or US- 7367889-$ or US- 7600108-$ or US- 7399227-$ or US- 7491122-$ or US- 7470186-$ or US- 7192351-$ or US- 7972213-$ or US- 7695363-$ or US- 6991538-$ or US- 7762888-$ or US- 7766744-$ or US- 7918728-$ or US- 7581256-$ or US- 8403755-$ or US- 7684432-$ or US- 7430187-$ or US- 7828652-$ or US- 7815503-$ or US- 8038527-$ or US- 7452270-$).did. or (US- 8113950-$ or US- 7832626-$ or US-				

		7526736-$ or US-7470182-$ or US-8174970-$ or US-8568224-$ or US-7387568-$ or US-7470183-$ or US-8087988-$ or US-7815507-$ or US-7520810-$ or US-7751804-$ or US-8529341-$ or US-7690043-$ or US-7545788-$ or US-8057292-$ or US-7837545-$ or US-7524243-$ or US-7699699-$ or US-7553230-$ or US-7740536-$ or US-8086519-$ or US-7955170-$ or US-7577847-$ or US-8133113-$ or US-7837547-$ or US-7695359-$).did. or (US-8123606-$ or US-7815500-$ or US-7871325-$ or US-7063618-$ or US-9105146-$ or US-7500107-$ or US-8725646-$ or US-7837556-$ or US-8172671-$ or US-8814652-$ or US-8282475-$ or US-7363001-$ or US-8608535-$ or US-7313361-$ or US-7837549-$).did.					
L62	0	L61 and (lockout lock adj out) and (synchronize synch synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L63	0	L61 and (lockout lock adj out) and (synchronize sync synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L64	1	L61 and (lockout lock adj out)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/06/19 01:22 PM
L65	17	(cell adj phone cellphone smart adj phone smartphone) and L61	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 01:23 PM
L66	1	(US-20040025190-$).did.	(US-PGPUB)	OR	ON	ON	2019/06/19 02:08 PM

L67	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2019/06/19 02:08 PM

		US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or						

		US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or					

		US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-					

		7534169-$ or US- 9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US-				

		6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US- 5119295-$ or US- 5083800-$ or US- 5083271-$ or US- 5073931-$ or US- 5035422-$ or US- 5013038-$ or US- 4816904-$ or US- 4592546-$).did. or (US- 4496148-$ or US- 4270755-$ or US- 4141548-$).did.					

L68	0	L66 and L67	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/06/19 02:09 PM
L69	1	("20160217653").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:34 PM
L70	25	("20020026321"|"20020069076"|"20020076084"|"20020083461"|"20020091833"|"20020119821"|"20020142843"|"20020157005"|"20040152519"|"20040166873"|"20040201626"|"20040215756"|"20050256895"|"20060058103"|"5519433"|"5828843"|"5894556"|"6042477"|"6128660"|"6345297"|"6475090"|"6659861"|"6811487"|"6845389"|"6903681").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:36 PM
L71	1	("4930010").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L72	1	("20020120930").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:37 PM
L73	6	("20020162117"|"20030066089"|"20050155083"|"20050239551"|"20060236352"|"5530483").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2019/11/21 02:38 PM
L74	34	L69 L70 L71 L72 L73	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2019/11/21 02:40 PM
L75	59	("2002/0142843").URPN.	(USPAT)	OR	ON	ON	2019/11/21 03:33 PM
L76	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L77	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(USPAT)	OR	ON	ON	2019/12/04 04:54 PM
L78	7	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/04 04:55 PM
L79	65	((("WINVIEW") near3	(USPAT)	OR	ON	ON	2020/01/06

		("INC"))).AS,AANM.					12:59 AM
L80	152	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2020/01/06 12:59 AM
L81	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L82	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L83	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L84	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L85	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L86	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L87	62	("20010013125"|"20010	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06

		032333"|"20020095333"|"20020097983"|"20020099709"|"2002010006 3"|"20020105535"|"200 20108112"|"200201122 49"|"20020133817"|"20 020198050"|"20030115 152"|"20030189668"|"2 0030233425"|"2004007 3915"|"20040107138"|" 20040190779"|"200402 16161"|"20040216171"| "20050005303"|"20050 177861"|"20050283800 "|"20050288080"|"2006 0053390"|"2006008206 8"|"20060256865"|"200 60256868"|"200602691 20"|"20060285586"|"20 070028272"|"20070054 695"|"20070078009"|"2 0070086465"|"2007010 7010"|"20070210908"|" 20070222652"|"200800 13927"|"20080066129"| "20090011781"|"20090 094632"|"20100107194 "|"5638113"|"6816628"|" 6870720"|"6944228"|"6 978053"|"7076434"|"70 85552"|"7117517"|"712 0924"|"7191447"|"7228 349"|"7231630"|"72493 67"|"7260782"|"728383 0"|"7343617"|"7367042" |"7430718"|"7460037"| "7461067"|"9716918").PN.					12:59 AM
L88	4	("20030195807"|"20040 056897"|"20060217198 "|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L89	3	("20060183547"|"20090 264188"|"20160023116 ").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L90	13	("20040152517"|"20050 144102"|"20070013547 "|"20070183744"|"2008 0240681"|"2009010389 2"|"20110081958"|"661 1755"|"6908389"|"7389 144"|"9556991"|"98782 43"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L91	223	("20010004609"|"20010 005670"|"20010020298 "|"20010036272"|"2001 0036853"|"2002001078	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		9"|"20020029381"|"200 20037766"|"200200422 93"|"20020054088"|"20 020055385"|"20020056 089"|"20020059623"|"2 0020069265"|"2002007 8176"|"20020103696"|" 20020108125"|"200201 08127"|"20020115488"| "20020124247"|"20020 132614"|"20020133827 "|"20020144273"|"2002 0157002"|"2002015957 6"|"20020162031"|"200 20165020"|"200201650 25"|"20020177483"|"20 020187825"|"20030013 528"|"20030023547"|"2 0030040363"|"2003006 0247"|"20030069828"|" 20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008					

		7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|				

		6126543"|"6174237"|"6182084"|"6193610"|"6222642"|"6233736"|"6251017"|"6267670"|"6293868"|"6312336"|"6373462"|"6411969"|"6416414"|"6425828"|"6434398"|"6470180"|"6524189"|"6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"|"6760595").PN.					
L92	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L93	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM

		20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.					
L94	43677	(A63F13/352 or H04L67/38 or H04L65/4015 or G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L95	20	("20170232340" "9919210" "20170264961" "8705195" "20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L96	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628" "8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090"	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		"20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.					
L97	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-					

		20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or						

		US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-					

		5636920-$ or US- 5018736-$ or US- 4918603-$ or US- 7452273-$ or US- 7144011-$ or US- 9881337-$ or US- 7341517-$ or US- 9406189-$ or US- 7534169-$ or US- 9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US-				

		6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US- 5916024-$ or US- 5870683-$ or US- 5860862-$ or US- 5838774-$ or US- 5813913-$ or US- 5764275-$ or US- 5762552-$ or US- 5759101-$ or US- 5663757-$).did. or (US- 5643088-$ or US- 5628684-$ or US- 5589765-$ or US- 5586257-$ or US- 5585975-$ or US- 5566291-$ or US- 5553120-$ or US- 5479492-$ or US- 5462275-$ or US- 5417424-$ or US- 5343239-$ or US- 5343236-$ or US- 5327485-$ or US- 5283734-$ or US- 5263723-$ or US- 5256863-$ or US- 5227874-$ or US- 5213337-$ or US- 5120076-$ or US- 5119295-$ or US- 5083800-$ or US- 5083271-$ or US- 5073931-$ or US-				

		5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L98	35	L96 not L97	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L99	0	L98 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 12:59 AM
L100	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L101	36	L100 not L98	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L102	16	L101 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L103	6	L101 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L104	32	("5283734" "20070197247"	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM

		"7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.					
L105	7	L104 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L106	7	L105 not L97	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L107	28	L104 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L108	18	L104 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L109	8472	L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99 L100 L101 L102 L103 L104 L105 L106 L107 L108	(USPAT)	OR	ON	ON	2020/01/06 12:59 AM
L110	17146	live adj event	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:43 AM
L111	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:44 AM
L112	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM
L113	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:48 AM

		A63F13/355 or A63F13/46 or A63F13/537).cpc.					
L114	43677	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L115	20059	L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L116	283	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L117	263	L116	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L118	33602	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:49 AM
L119	28661	L118	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L120	0	L119 and L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L121	0	L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2020/01/06 01:49 AM
L122	72980	propagation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L123	146	L122 and L114	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L124	25	L119 and L123	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2020/01/06 01:50 AM
L126	77	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2021/02/06 07:46 PM
L127	176	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/02/06 07:46 PM
L128	93	("20170232340" "20180154255" "10653955" "9919210" "20170264961" "8705195" "9672692" "20140155134" "20120295686" "20200330864" "20180117464" "20170304726" "10874942" "20190060750"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:20 PM

		"20130079150" "8737004" "20180169523" "20140335962" "20130079151" "20170296916" "20140256432" "20170259173" "20160361647" "20130079081" "20190118087" "20200155935" "20130072271" "20180264360" "20180243652" "20160375362" "20160121208" "20170282067" "20140287832" "20200171383" "20170225072" "20140106832" "20130079135" "20170225071" "9604140" "20200155936" "20140155130" "20120157178" "20180104582" "8780482" "20130079093" "9919211" "20140206446" "9901820" "20180318710" "9687738" "20140335961" "9993730" "20130079092" "20170252649" "9662577" "10150031" "9457272" "9258601" "8699168" "10695672" "8837072" "8149530" "20190255436" "9707482" "10052557" "10556177" "10279253" "9999834" "9724603" "9687739" "9878243" "8717701" "9744453" "10195526" "8659848" "8638517" "10576371" "9662576" "8817408" "10363483" "10137369" "20170036110" "9511287" "20190054375" "20070078009"					

		"8932136" "7448063" "20020188943" "9462341" "7079176" "20040261127" "20140282735" "20130152139").pn.					
L129	61	("8932136" "7448063" "20020188943" "7079176" "20040261127" "20040139474" "20060253330" "20060129458" "7552193" "20040187148" "7984472" "20150087419" "9344670" "20060282319" "20040133919" "20140112637" "20160286271" "9591362" "20120210380" "9108107" "8539538" "20090118017" "20020034980" "20110107220" "9635066" "20170374112" "10052556" "20090119737" "20070028272" "20110137729" "20090119729" "20160271493" "9756349" "20170266548" "20150141145" "5638113" "20090125967" "20110040615" "20150165320" "9032465" "20040139469" "9669306" "20110138415" "20120149476" "20150100995" "5916024" "20190358539" "10071308" "7673316" "9573059" "9623326" "20130247125" "9003461" "20110105226" "20090118018"	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:22 PM

		"20090124387" "20170266550" "9352222" "20100167809" "20110137728" "20130145412").pn.					
L130	40	("9258601" "10576371" "9993730" "9919210" "9672692" "9993730" "10653955" "10195526" "9687739" "9861125" "9861125" "9919210" "9919210" "9511287" "9457272" "9707482" "9861125" "9662577" "8699168" "8705195" "8638517" "8780482" "9662576" "8837072" "8659848" "8817408" "8737004" "10363483" "10874942" "9999834" "9919211" "10052557" "10279253" "10137369" "10150031" "8717701" "9901820" "9687738" "9744453" "10556177" "8149530" "9878243" "10695672" "9604140" "9724603").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2021/02/11 03:40 PM
L131	976	coffee.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L132	52	coffee near2 john.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2021/09/13 02:05 PM
L133	12	coffee near2 john.in.	(USPAT)	OR	ON	ON	2021/09/13 02:07 PM
L134	1	("7185355").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:46 PM
L135	4	("20030125109" OR "20040015442" OR "20090325716" OR "6154131").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM
L136	15	("10360767" OR "10569175" OR "20020094869" OR "20020184624" OR "20030003997" OR "20030177504" OR "20060101492" OR "20060205483" OR "20140309001" OR "20150024814" OR "7909332" OR "8002618" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:47 PM

		"8092306" OR "8634943" OR "9716918").pn.					
L137	2	("20060160597" OR "20190143225").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:48 PM
L138	250	("10052557" OR "10089815" OR "10096210" OR "10137369" OR "10150031" OR "10165339" OR "10186116" OR "10195526" OR "10226698" OR "10226705" OR "10232270" OR "10248290" OR "10279253" OR "10360767" OR "10569175" OR "10653955" OR "10695672" OR "10709987" OR "10721543" OR "20010004609" OR "20010005670" OR "20010013067" OR "20010013125" OR "20010020298" OR "20010032333" OR "20010036272" OR "20010036853" OR "20010044339" OR "20010054019" OR "20020010789" OR "20020018477" OR "20020026321" OR "20020029381" OR "20020035609" OR "20020037766" OR "20020042293" OR "20020046099" OR "20020054088" OR "20020055385" OR "20020056089" OR "20020059094" OR "20020059623" OR "20020069076" OR "20020069265" OR "20020076084" OR "20020078176" OR "20020083461" OR "20020091833" OR "20020094869" OR "20020095333" OR "20020097983" OR "20020099709" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:49 PM

		"20020100063" OR "20020103696" OR "20020105535" OR "20020107073" OR "20020108112" OR "20020108125" OR "20020108127" OR "20020112249" OR "20020115488" OR "20020119821" OR "20020120930" OR "20020124247" OR "20020132614" OR "20020133817" OR "20020133827" OR "20020142843" OR "20020144273" OR "20020147049" OR "20020157002" OR "20020157005" OR "20020159576" OR "20020162031" OR "20020162117" OR "20020165020" OR "20020165025" OR "20020177483" OR "20020184624" OR "20020187825" OR "20020198050" OR "20030002638" OR "20030003997" OR "20030013528" OR "20030023547" OR "20030040363" OR "20030054885" OR "20030060247" OR "20030066089" OR "20030069828" OR "20030070174" OR "20030078924" OR "20030086691" OR "20030087652" OR "20030088648" OR "20030114224" OR "20030115152" OR "20030125109" OR "20030134678" OR "20030144017" OR "20030154242" OR "20030165241" OR "20030177167" OR "20030177504" OR "20030189668" OR "20030195023" OR "20030195807" OR "20030208579" OR "20030211856" OR "20030212691" OR					

		"20030216185" OR "20030216857" OR "20030228866" OR "20030233425" OR "20040005919" OR "20040014524" OR "20040015442" OR "20040022366" OR "20040025190" OR "20040056897" OR "20040060063" OR "20040073915" OR "20040088729" OR "20040093302" OR "20040107138" OR "20040117831" OR "20040117839" OR "20040128319" OR "20040139158" OR "20040139482" OR "20040148638" OR "20040152454" OR "20040152517" OR "20040152519" OR "20040158855" OR "20040162124" OR "20040166873" OR "20040176162" OR "20040178923" OR "20040183824" OR "20040185881" OR "20040190779" OR "20040198495" OR "20040201626" OR "20040203667" OR "20040203898" OR "20040210507" OR "20040215756" OR "20040216161" OR "20040216171" OR "20040224750" OR "20040242321" OR "20040266513" OR "20050003878" OR "20050005303" OR "20050021942" OR "20050026699" OR "20050028208" OR "20050043094" OR "20050060219" OR "20050076371" OR "20050077997" OR "20050097599" OR "20050101309" OR "20050113164" OR "20050131984" OR "20050138668" OR "20050144102" OR					

		"20050155083" OR "20050177861" OR "20050210526" OR "20050216838" OR "20050235043" OR "20050239551" OR "20050255901" OR "20050256895" OR "20050266869" OR "20050267969" OR "20050273804" OR "20050283800" OR "20050288080" OR "20050288101" OR "20050288812" OR "20060020700" OR "20060025070" OR "20060046810" OR "20060047772" OR "20060053390" OR "20060058103" OR "20060059161" OR "20060063590" OR "20060082068" OR "20060087585" OR "20060089199" OR "20060094409" OR "20060101492" OR "20060111168" OR "20060135253" OR "20060148569" OR "20060156371" OR "20060160597" OR "20060174307" OR "20060183547" OR "20060183548" OR "20060190654" OR "20060205483" OR "20060205509" OR "20060205510" OR "20060217198" OR "20060236352" OR "20060248553" OR "20060248564" OR "20060256865" OR "20060256868" OR "20060269120" OR "20060285586" OR "20070004516" OR "20070013547" OR "20070019826" OR "20070028272" OR "20070037623" OR "20070054695" OR "20070078009" OR "20070083920" OR "20070086465" OR "20070087832" OR					

		"20070093296" OR "20070106721" OR "20070107010" OR "20070129144" OR "20070147870" OR "20070162328" OR "20070183744" OR "20070197247" OR "20070210908" OR "20070219856" OR "20070222652" OR "20070226062" OR "20070238525" OR "20070243936" OR "20070244570" OR "20070244585" OR "20070244749" OR "20070265089" OR "20070294410" OR "20080005037" OR "20080013927" OR "20080051201" OR "20080066129" OR "20080076497").pn.					
L139	249	("20080104630" OR "20080146337" OR "20080169605" OR "20080222672" OR "20080240681" OR "20080248865" OR "20080270288" OR "20080288600" OR "20090011781" OR "20090094632" OR "20090103892" OR "20090163271" OR "20090186676" OR "20090228351" OR "20090234674" OR "20090264188" OR "20090271512" OR "20090325716" OR "20100099421" OR "20100099471" OR "20100107194" OR "20100120503" OR "20100137057" OR "20100203936" OR "20100279764" OR "20100296511" OR "20110016224" OR "20110053681" OR "20110065490" OR "20110081958" OR "20110116461" OR "20110130197" OR "20110227287" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:49 PM

		"20110269548" OR "20110306428" OR "20120058808" OR "20120115585" OR "20120157178" OR "20120264496" OR "20120282995" OR "20120295686" OR "20130005453" OR "20130072271" OR "20130079081" OR "20130079092" OR "20130079093" OR "20130079135" OR "20130079150" OR "20130079151" OR "20130196774" OR "20130225285" OR "20130225299" OR "20140031134" OR "20140100011" OR "20140106832" OR "20140128139" OR "20140155130" OR "20140155134" OR "20140206446" OR "20140237025" OR "20140248952" OR "20140256432" OR "20140279439" OR "20140287832" OR "20140309001" OR "20140335961" OR "20140335962" OR "20140378212" OR "20150011310" OR "20150024814" OR "20150067732" OR "20150148130" OR "20150238839" OR "20150238873" OR "20150258452" OR "20150356831" OR "20160023116" OR "20160045824" OR "20160049049" OR "20160054872" OR "20160082357" OR "20160121208" OR "20160134947" OR "20160217653" OR "20160271501" OR "20160361647" OR "20160375362" OR "20170036110" OR "20170036117" OR "20170043259" OR "20170053498" OR					

		"20170065891" OR "20170098348" OR "20170103615" OR "20170128840" OR "20170221314" OR "20170225071" OR "20170225072" OR "20170232340" OR "20170243438" OR "20170249801" OR "20170252649" OR "20170259173" OR "20170264961" OR "20170282067" OR "20170296916" OR "20170304726" OR "20170345260" OR "20180025586" OR "20180071637" OR "20180104582" OR "20180104596" OR "20180117464" OR "20180140955" OR "20180154255" OR "20180169523" OR "20180190077" OR "20180236359" OR "20180243652" OR "20180264360" OR "20180300988" OR "20180318710" OR "20190054375" OR "20190060750" OR "20190143225" OR "2831105" OR "3562650" OR "4141548" OR "4270755" OR "4386377" OR "4496148" OR "4521803" OR "4592546" OR "4816904" OR "4918603" OR "4930010" OR "5013038" OR "5018736" OR "5035422" OR "5073931" OR "5083271" OR "5083800" OR "5119295" OR "5120076" OR "5213337" OR "5227874" OR "5256863" OR "5263723" OR "5283734" OR					

		"5327485" OR "5343236" OR "5343239" OR "5417424" OR "5462275" OR "5479492" OR "5488659" OR "5519433" OR "5530483" OR "5553120" OR "5566291" OR "5585975" OR "5586257" OR "5589765" OR "5594938" OR "5618232" OR "5628684" OR "5636920" OR "5638113" OR "5643088" OR "5663757" OR "5759101" OR "5761606" OR "5762552" OR "5764275" OR "5794210" OR "5805230" OR "5813913" OR "5818438" OR "5828843" OR "5838774" OR "5838909" OR "5846132" OR "5848397" OR "5860862" OR "5870683" OR "5894556" OR "5916024" OR "5970143" OR "5971854" OR "5987440" OR "6009458" OR "6015344" OR "6016337" OR "6038599" OR "6042477" OR "6064449" OR "6104815" OR "6110041" OR "6117013" OR "6126543" OR "6128660" OR "6135881" OR "6154131" OR "6174237" OR "6182084" OR "6193610" OR "6222642" OR					

		"6233736" OR "6251017" OR "6267670" OR "6287199" OR "6293868" OR "6312336" OR "6343320" OR "6345297" OR "6371855" OR "6373462" OR "6411969" OR "6416414" OR "6418298" OR "6425828" OR "6434398" OR "6446262" OR "6470180" OR "6475090" OR "6524189" OR "6527641" OR "6530082" OR "6536037" OR "6578068" OR "6594098" OR "6604997" OR "6610953" OR "66117755" OR "6648760" OR "6659860" OR "6659861" OR "6659872" OR "6690661" OR "6697869" OR "6718350" OR "6752396" OR "6758754" OR "6758755" OR "6760595" OR "6763377" OR "6766524" OR "6774926" OR "6785561" OR "6801380").pn.					
L140	218	("6806889" OR "6807675" OR "6811482" OR "6811487" OR "6816628" OR "6817947" OR "6824469" OR "6837789" OR "6837791" OR "6840861" OR "6845389" OR "6846239" OR "6857122" OR "6863610" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:49 PM

		"6870720" OR "6871226" OR "6873610" OR "6884166" OR "6884172" OR "6887159" OR "6888929" OR "6893347" OR "6898762" OR "6899628" OR "6903681" OR "6908389" OR "6942574" OR "6944228" OR "6960088" OR "6978053" OR "7001279" OR "7029394" OR "7035626" OR "7035653" OR "7058592" OR "7076434" OR "7085552" OR "7116310" OR "7117517" OR "7120924" OR "7124410" OR "7125336" OR "7136871" OR "7144011" OR "7169050" OR "7185355" OR "7187658" OR "7191447" OR "7192352" OR "7194758" OR "7228349" OR "7231630" OR "7233922" OR "7240093" OR "7244181" OR "7249367" OR "7254605" OR "7260782" OR "7283830" OR "7288027" OR "7341517" OR "7343617" OR "7347781" OR "7351149" OR "7367042" OR "7379705" OR "7389144" OR "7430718" OR "7452273" OR "7460037" OR "7461067" OR "7502610" OR					

		"7510474" OR "7517282" OR "7534169" OR "7543052" OR "7562134" OR "7602808" OR "7610330" OR "7614944" OR "7630986" OR "7693781" OR "7699707" OR "7702723" OR "7711628" OR "7729286" OR "7753772" OR "7753789" OR "7780528" OR "7828661" OR "7835961" OR "7860993" OR "7886003" OR "7907211" OR "7907598" OR "7909332" OR "7925756" OR "7926810" OR "7937318" OR "7941482" OR "7941804" OR "7976389" OR "8002618" OR "8006314" OR "8025565" OR "8028315" OR "8082150" OR "8086445" OR "8086510" OR "8092303" OR "8092306" OR "8105141" OR "8107674" OR "8109827" OR "8128474" OR "8147313" OR "8147373" OR "8149530" OR "8155637" OR "8162759" OR "8176518" OR "8186682" OR "8204808" OR "8219617" OR "8240669" OR "8246048" OR "8267403" OR "8342924" OR "8342942" OR "8353763" OR					

		"8376855" OR "8396001" OR "8397257" OR "8465021" OR "8473393" OR "8474819" OR "8535138" OR "85368563" OR "8538563" OR "8543487" OR "8555313" OR "8556691" OR "8585490" OR "8622798" OR "8632392" OR "8634943" OR "8638517" OR "8641511" OR "8659848" OR "8672751" OR "8699168" OR "8705195" OR "8708789" OR "8717701" OR "8727352" OR "8734227" OR "8737004" OR "8738694" OR "8771058" OR "8780482" OR "8805732" OR "8813112" OR "8814664" OR "8817408" OR "8837072" OR "8849225" OR "8849255" OR "8858313" OR "8870639" OR "8935715" OR "9056251" OR "9067143" OR "9069651" OR "9076303" OR "9098883" OR "9111417" OR "9205339" OR "9233293" OR "9258601" OR "9270789" OR "9289692" OR "9306952" OR "9314686" OR "9314701" OR "9355518" OR "9406189" OR "9430901" OR "9457272" OR				

		"9498724" OR "9501904" OR "9504922" OR "9511287" OR "9526991" OR "9536396" OR "9556991" OR "9604140" OR "9652937" OR "9662576" OR "9662577" OR "9672692" OR "9687738" OR "9687739" OR "9707482" OR "9716918" OR "9724603" OR "9744453" OR "9805549" OR "9821233" OR "9878243" OR "9881337" OR "9901820" OR "9908053" OR "9919210" OR "9919211" OR "9919221" OR "9978217" OR "9993730" OR "9999834" OR "RE39818").pn.					
L141	1	("10981070").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 05:52 PM
L142	1	"11154775".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/08 07:07 PM
L143	3	("9672692" "8705195" "10653955").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/02 03:13 PM
L144	3	("9672692" "8705195" "10653955").pn. AND SERVER	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/03 03:19 PM
L145	3	("9672692" "8705195" "10653955").pn. AND SERVER.CLM.	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/03 03:19 PM
L146	104	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L147	229	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/01/27 08:16 PM
L148	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L149	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"584613	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		2"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.					
L150	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L151	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L152	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L153	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L154	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"20060269120"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.				
L155	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L156	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L157	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L158	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"2002	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		0157002"|"2002015957 6"|"20020162031"|"200 20165020"|"200201650 25"|"20020177483"|"20 020187825"|"20030013 528"|"20030023547"|"2 0030040363"|"2003006 0247"|"20030069828"|" 20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2					

		0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749 "|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|" 6527641"|"6530082"|"6 536037"|"6578068"|"65 94098"|"6604997"|"661 0953"|"6648760"|"6659					

		860"|"6659872"|"66906 61"|"6718350"|"675239 6"|"6758754"|"6758755" |"6760595").PN.					
L159	61	("6763377"|"6766524"|" 6774926"|"6785561"|"6 801380"|"6806889"|"68 07675"|"6811482"|"681 7947"|"6824469"|"6840 861"|"6846239"|"68571 22"|"6863610"|"687122 6"|"6873610"|"6884172" |"6887159"|"6888929"|" 6893347"|"6898762"|"6 942574"|"6960088"|"70 35653"|"7116310"|"712 5336"|"7169050"|"7192 352"|"7194758"|"72400 93"|"7244181"|"725460 5"|"7288027"|"7347781" |"7351149"|"7379705"|" 7502610"|"7517282"|"7 562134"|"7630986"|"77 53772"|"7753789"|"778 0528"|"7828661"|"7907 211"|"7976389"|"80063 14"|"8028315"|"808215 0"|"8086445"|"8107674" |"8109827"|"8149530"|" 8176518"|"8353763"|"8 638517"|"8659848"|"87 08789"|"8858313"|"907 6303"|"9098883").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L160	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L161	32347	(A63F13/352 or H04L67/38 or H04L65/4015 or G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM

		A63F13/537).cpc.					
L162	20	("20170232340" "9919210" "20170264961" "8705195" "20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L163	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628" "8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090" "20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L164	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or						

		US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or						

		US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or						

		US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-9306952-$ or US-6884166-$ or US-8814664-$).did. or (US-7711628-$ or US-					

		8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US-					

		6251017-$ or US-5761606-$ or US-6222642-$ or US-6193610-$ or US-6182084-$ or US-6174237-$ or US-6126543-$ or US-6117013-$ or US-6009458-$ or US-6016337-$ or US-5987440-$ or US-5971854-$ or US-5970143-$ or US-5916024-$ or US-5870683-$ or US-5860862-$ or US-5838774-$ or US-5813913-$ or US-5764275-$ or US-5762552-$ or US-5759101-$ or US-5663757-$).did. or (US-5643088-$ or US-5628684-$ or US-5589765-$ or US-5586257-$ or US-5585975-$ or US-5566291-$ or US-5553120-$ or US-5479492-$ or US-5462275-$ or US-5417424-$ or US-5343239-$ or US-5343236-$ or US-5327485-$ or US-5283734-$ or US-5263723-$ or US-5256863-$ or US-5227874-$ or US-5213337-$ or US-5120076-$ or US-5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L165	44	L18 not L19	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L166	0	L20 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2024/01/27 08:16 PM

			JPO; IBM_TDB)				
L167	36	("20180190077" "20110281620" "20190122500" "9905082" "20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L168	36	L22 not L20	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L169	16	L23 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L170	6	L23 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L171	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20060281522" "20060281523" "20080102952" "7285048" "20030109306" "5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.					
L172	7	L26 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L173	7	L27 not L19	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L174	28	L26 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L175	18	L26 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L176	7	L30 and streaming	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L177	9	L30 and stream$4	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L178	46	("20060014585" "8968093" "8840475" "20170232340" "20090124387" "9919210" "20170266550" "20100167809" "20100167816" "20180154255" "20160220901" "8834274" "8495678" "20170266548" "20090118018" "20110105226" "20090118019" "20150165320" "20160271493" "20090119729" "20120142433" "20120149476" "9138644" "20160080739" "9032465" "20140297799" "20140213362" "9669307" "20090125961" "8661496" "8549574" "10071308" "10075750" "8832772" "10052556"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"8366552" "8468575" "20090119730" "9352222" "9669306" "20150289028" "20100166058" "8387099" "20090119738" "8949922" "9770657").pn.					
L179	34	("20020147047" | "20020154691" | "20030005204" | "20060055706" | "5550982" | "5558339" | "5995150" | "6343086" | "7548272" | "7567293" | "7605861" | "7633521" | "7667767" | "8194093" | "8659668").PN. OR ("10075750").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L180	80	L33 L34	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L181	66	L35 and streaming	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L182	16	L35 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L183	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L184	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L185	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L186	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		303"|"8105141"|"81284 74"|"8147313"|"818668 2"|"8204808"|"8240669" |"8246048"|"8267403"|" 8342924"|"8342942"|"8 465021"|"8473393"|"84 74819"|"8535138"|"854 3487"|"8556691"|"8585 490"|"8641511"|"86727 51"|"8708789"|"872735 2"|"8734227"|"8771058" |"8805732"|"8814664"|" 9111417"|"9306952"|"9 355518"|"9406189"|"95 36396"|"9805549"|"988 1337"|"RE39818").PN.				
L187	5	("8028315"|"8397257"|" 8538563"|"9069651"|"9 289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L188	3	("20080051201"|"20110 053681"|"20120115585 ").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L189	62	("20010013125"|"20010 032333"|"20020095333 "|"20020097983"|"2002 0099709"|"2002010006 3"|"20020105535"|"200 20108112"|"200201122 49"|"20020133817"|"20 020198050"|"20030115 152"|"20030189668"|"2 0030233425"|"2004007 3915"|"20040107138"|" 20040190779"|"200402 16161"|"20040216171"| "20050005303"|"20050 177861"|"20050283800 "|"20050288080"|"2006 0053390"|"2006008206 8"|"20060256865"|"200 60256868"|"200602691 20"|"20060285586"|"20 070028272"|"20070054 695"|"20070078009"|"2 0070086465"|"2007010 7010"|"20070210908"|" 20070222652"|"200800 13927"|"20080066129"| "20090011781"|"20090 094632"|"20100107194 "|"5638113"|"6816628"|" 6870720"|"6944228"|"6 978053"|"7076434"|"70 85552"|"7117517"|"712 0924"|"7191447"|"7228 349"|"7231630"|"72493 67"|"7260782"|"728383	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		0"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.					
L190	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L191	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L192	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L193	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"20030040363"|"20030060247"|"20030069828"|"20030070174"|"20030078924"|"20030086691"|"20030087652"|"20030114224"|"20030144017"|"20030154242"|"20030177167"|"20030177504"|"20030195023"|"20030208579"|"20030211856"|"20030212691"|"20030216185"|"20030216857"|"20040014524"|"20040022366"|"20040060063"|"20040088729"|"20040093302"|"200401	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		17831"|"20040117839"|"20040128319"|"20040148638"|"20040152454"|"20040158855"|"20040178923"|"20040183824"|"20040198495"|"20040203667"|"20040203898"|"20040224750"|"20040242321"|"20050021942"|"20050026699"|"20050043094"|"20050060219"|"20050076371"|"20050097599"|"20050101309"|"20050113164"|"20050131984"|"20050138668"|"20050210526"|"20050235043"|"20050255901"|"20050266869"|"20050273804"|"20050288101"|"20050288812"|"20060025070"|"20060046810"|"20060047772"|"20060059161"|"20060063590"|"20060087585"|"20060089199"|"20060111168"|"20060135253"|"20060148569"|"20060156371"|"20060174307"|"20060183548"|"20060205483"|"20060248553"|"20060269120"|"20070004516"|"20070019826"|"20070037623"|"20070083920"|"20070093296"|"20070106721"|"20070129144"|"20070147870"|"20070162328"|"20070219856"|"20070226062"|"20070238525"|"20070243936"|"20070244570"|"20070244585"|"20070244749"|"20070265089"|"20080076497"|"20080146337"|"20080169605"|"20080248865"|"20080270288"|"20080288600"|"20090163271"|"20090228351"|"20090234674"|"20100099421"|"20100099471"|"20100120503"|"20100137057"|"20100279764"|"20110130197"|"20110227287"|"20110269548"|"20120264496"|"20120282995"|"20130005453"|"20140100011"|"20140128139"|"201					

		40279439"|"20140378212"|"20150067732"|"4141548"|"4270755"|"4496148"|"4592546"|"4816904"|"5013038"|"5035422"|"5073931"|"5083271"|"5083800"|"5119295"|"5120076"|"5213337"|"5227874"|"5256863"|"5263723"|"5283734"|"5327485"|"5343236"|"5343239"|"5417424"|"5462275"|"5479492"|"5553120"|"5566291"|"5585975"|"5586257"|"5589765"|"5628684"|"5643088"|"5663757"|"5759101"|"5761606"|"5762552"|"5764275"|"5813913"|"5818438"|"5838774"|"5860862"|"5870683"|"5916024"|"5970143"|"5971854"|"5987440"|"6009458"|"6016337"|"6117013"|"6126543"|"6174237"|"6182084"|"6193610"|"6222642"|"6233736"|"6251017"|"6267670"|"6293868"|"6312336"|"6373462"|"6411969"|"6416414"|"6425828"|"6434398"|"6470180"|"6524189"|"6527641"|"6530082"|"6536037"|"6578068"|"6594098"|"6604997"|"6610953"|"6648760"|"6659860"|"6659872"|"6690661"|"6718350"|"6752396"|"6758754"|"6758755"|"6760595").PN.					
L194	61	("6763377"|"6766524"|"6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.					
L195	454	L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L196	0	L37 and L50	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L197	1	"7849491".pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L198	229	("20010024974" | "20010031092" | "20010034255" | "20010034743" | "20010039569" | "20010044339" | "20020019984" | "20020032056" | "20020034980" | "20020059637" | "20020069265" | "20020069405" | "20020073429" | "20020075382" | "20020078176" | "20020080267" | "20020087560" | "20020101442" | "20020114330" | "20020119821" | "20020142842" | "20020154691" | "20020165927" | "20020166119" | "20020166122" | "20020170065" | "20020184303" | "20020184314" | "20030017846" | "20030037156" | "20030048808" | "20030078103" | "20030149988" | "20030158700" | "20030177187" | "20030226150" | "20030229902" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM

		"20040022116" | "20040025190" | "20040045030" | "20040052371" | "20040064504" | "20040097288" | "20040102245" | "20040103120" | "20040111755" | "20040117831" | "20040153764" | "20040176168" | "20040179554" | "20040207724" | "20040229688" | "20040233274" | "20040263626" | "20050005308" | "20050028208" | "20050104889" | "20050122335" | "20050183120" | "20050188073" | "20050262542" | "20050273830" | "20050283800" | "20060010392" | "20060080702" | "20060112181" | "20060117344" | "20060156330" | "20060174021" | "20060174026" | "20060174266" | "20060190966" | "20060195884" | "20060224761" | "20060230428" | "20060242240" | "20060258463" | "20060277477" | "20060287106" | "20070005795" | "20070009029" | "20070010329" | "20070024706" | "20070047901" | "20070058937" | "20070060336" | "20070083899" | "20070094700" | "20070106952" | "20070117635" | "20070121629" | "20070124474" | "20070156815").PN. OR ("20070173325" | "20070202941"					

		"20070226364" | "20070243925" | "20070260677" | "20070265094" | "20070285578" | "20080005281" | "20080059645" | "20080065996" | "20080092168" | "20080092173" | "20080101466" | "20080140850" | "20080146342" | "20080207322" | "20080228865" | "20080267069" | "20080276269" | "20090052323" | "20090106662" | "20090132942" | "20090138922" | "20090144785" | "20090300701" | "20090307658" | "20100115559" | "20100262911" | "20110064381" | "20110126255" | "20130003826"				
		"4582324" | "5558339" | "5583561" | "5586247" | "5586257" | "5606359" | "5623308" | "5624316" | "5648824" | "5687257" | "5742289" | "5768382" | "5775996" | "5790176" | "5793410" | "5828370" | "5830068" | "5861920" | "5884101" | "5903735" | "5917962" | "5920692" | "5926208" | "5935006" | "5956485" | "5970143" | "5995518" | "6014706" | "6037983" | "6134590" | "6183367" | "6198850" | "6212681" | "6227974" | "6241612" | "6287199" | "6345297" | "6409602" | "6421706" | "6449070" | "6470378" | "6473902" | "6523126" | "6530082" | "6536041" | "6557041" | "6616533" | "6665872" | "6707487" | "6714200" | "6754241" | "6792615" | "6804825" | "6810528" | "6820218" | "6853385" | "6868439" | "6908390"				

		"6963353" | "6973667" | "6992981" | "6996742" | "7017173" | "7031473" | "7089319" | "7189161" | "7215660" | "7219153" | "7244181" | "7299487" | "7352952" | "7444662" | "7446772" | "7457878" | "7469381" | "7471665" | "7493078" | "7543326" | "7558525" | "7559834" | "7567527" | "7587520" | "7590084").PN. OR ("7593361" | "7634789" | "7684752" | "7715336" | "7725422" | "7757252" | "7789741" | "7837560" | "7849491" | "7936819" | "7953883" | "7984179" | "8118676" | "8284842" | "8468575" | "8495678" | "8526490" | "8661496").PN. OR ("8840475").URPN.					
L199	12	L53 and streaming with (synchronization synchronized)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L200	2	("6527638" "7035626").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L201	792	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4799683" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424" | "5283734" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM

		"5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("6527638" | "7035626").URPN.					
L202	255	("20020147049" | "20030104865" | "20050070358" | "20050101383" | "20050176507" | "4799683" | "5800268" | "5999808" | "6035189" | "6104815" | "6139431" | "6358151" | "6470180" | "6527641" | "6573824" | "6585598" | "6595855" | "6628939" | "6702672" | "6837789" | "6846238").PN. OR ("7035626").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L203	583	("3810627" | "3896266" | "4157829" | "4317957" | "4339798" | "4349695" | "4467424" | "4494197" | "4587379" | "4652998" | "4689742" | "4720860" | "4760527" | "4764666" | "4856787" | "4880237" | "4882473" | "4922522" | "4982337" | "4996705" | "5038022" | "5042809" | "5083271" | "5083272" | "5096195" | "5119295" | "5177342" | "5177789" | "5178389" | "5179517" | "5181238" | "5197094" | "5210795" | "5214697" | "5216712" | "5218631" | "5223698" | "5235166" | "5239583" | "5241600" | "5259023" | "5265874" | "5276312" | "5277424"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM

		| "5283734" | "5285200" | "5289542" | "5313520" | "5313637" | "5315624" | "5315634" | "5317135" | "5324035" | "5326104" | "5327485" | "5351970" | "5371345" | "5380007" | "5413357" | "5429361" | "5457306" | "5508731" | "5557086" | "5709603").PN. OR ("6527638").URPN.					
L204	46	L57 and L58	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L205	0	L50 and L59	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L206	179	(US-20030104865-$ or US-20020147049-$ or US-20050176507-$).did. or (US-3810627-$ or US-3896266-$ or US-4157829-$ or US-4349695-$ or US-4339798-$ or US-4317957-$ or US-4467424-$ or US-4652998-$ or US-4494197-$ or US-4587379-$ or US-4720860-$ or US-4689742-$ or US-4760527-$ or US-4799683-$ or US-4996705-$ or US-4764666-$ or US-4982337-$ or US-4880237-$ or US-4856787-$ or US-4922522-$ or US-5083271-$ or US-4882473-$ or US-5096195-$ or US-5179517-$ or US-5083272-$ or US-5181238-$).did. or (US-5038022-$ or US-5218631-$ or US-5197094-$ or US-5315634-$ or US-5177342-$ or US-5042809-$ or US-5276312-$ or US-5235166-$ or US-5119295-$ or US-5289542-$ or US-5214697-$ or US-5223698-$ or US-	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		5239583-$ or US- 5178389-$ or US- 5317135-$ or US- 5241600-$ or US- 5283734-$ or US- 5429361-$ or US- 5177789-$ or US- 5259023-$ or US- 5313637-$ or US- 5216712-$ or US- 5210795-$ or US- 5265874-$ or US- 5326104-$ or US- 5277424-$ or US- 5351970-$).did. or (US- 5371345-$ or US- 5327485-$ or US- 5324035-$ or US- 5285200-$ or US- 5313520-$ or US- 5315624-$ or US- 5508731-$ or US- 5457306-$ or US- 5413357-$ or US- 5380007-$ or US- 5557086-$ or US- 5800268-$ or US- 5999808-$ or US- 5709603-$ or US- 6139431-$ or US- 6035189-$ or US- 6104815-$ or US- 6595855-$ or US- 7124426-$ or US- 8579705-$ or US- 6702672-$ or US- 6527641-$ or US- 6358151-$ or US- 7672892-$ or US- 6573824-$ or US- 6470180-$ or US- 7753772-$).did. or (US- 7988559-$ or US- 7203841-$ or US- 6837789-$ or US- 7340058-$ or US- 8313371-$ or US- 6628939-$ or US- 6585598-$ or US- 7716126-$ or US- 8932136-$ or US- 7116782-$ or US- 6846238-$ or US- 8317601-$ or US- 7140964-$ or US- 7931533-$ or US- 7506172-$ or US- 7976384-$ or US-				

		7460863-$ or US- 6988204-$ or US- 7099236-$ or US- 7370194-$ or US- 7169050-$ or US- 7320642-$ or US- 7618317-$ or US- 7306519-$ or US- 6935952-$ or US- 6988946-$ or US- 7329183-$).did. or (US- 7291069-$ or US- 8123616-$ or US- 7867083-$ or US- 7024375-$ or US- 7628703-$ or US- 7708189-$ or US- 7192348-$ or US- 7367889-$ or US- 7600108-$ or US- 7399227-$ or US- 7491122-$ or US- 7470186-$ or US- 7192351-$ or US- 7972213-$ or US- 7695363-$ or US- 6991538-$ or US- 7762888-$ or US- 7766744-$ or US- 7918728-$ or US- 7581256-$ or US- 8403755-$ or US- 7684432-$ or US- 7430187-$ or US- 7828652-$ or US- 7815503-$ or US- 8038527-$ or US- 7452270-$).did. or (US- 8113950-$ or US- 7832626-$ or US- 7526736-$ or US- 7470182-$ or US- 8174970-$ or US- 8568224-$ or US- 7387568-$ or US- 7470183-$ or US- 8087988-$ or US- 7815507-$ or US- 7520810-$ or US- 7751804-$ or US- 8529341-$ or US- 7690043-$ or US- 7545788-$ or US- 8057292-$ or US- 7837545-$ or US- 7524243-$ or US- 7699699-$ or US- 7553230-$ or US-				

		7740536-$ or US-8086519-$ or US-7955170-$ or US-7577847-$ or US-8133113-$ or US-7837547-$ or US-7695359-$).did. or (US-8123606-$ or US-7815500-$ or US-7871325-$ or US-7063618-$ or US-9105146-$ or US-7500107-$ or US-8725646-$ or US-7837556-$ or US-8172671-$ or US-8814652-$ or US-8282475-$ or US-7363001-$ or US-8608535-$ or US-7313361-$ or US-7837549-$).did.					
L207	0	L61 and (lockout lock adj out) and (synchronize synch synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L208	0	L61 and (lockout lock adj out) and (synchronize sync synchronization)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L209	1	L61 and (lockout lock adj out)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/27 08:16 PM
L210	17	(cell adj phone cellphone smart adj phone smartphone) and L61	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L211	1	(US-20040025190-$).did.	(US-PGPUB)	OR	ON	ON	2024/01/27 08:16 PM
L212	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or						

		US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or						

		US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-					

		20020108127-$ or US- 20020108125-$ or US- 20020103696-$ or US- 20020078176-$ or US- 20020069265-$ or US- 20020059623-$ or US- 20020056089-$ or US- 20020055385-$ or US- 20020054088-$ or US- 20020042293-$ or US- 20020037766-$ or US- 20020029381-$ or US- 20020010789-$ or US- 20010036853-$ or US- 20010036272-$ or US- 20010020298-$ or US- 20010005670-$ or US- 20010004609-$).did. or (US-7699707-$ or US- 7614944-$ or US- 7136871-$ or US- 7058592-$ or US- 7001279-$ or US- 6837791-$ or US- 6837789-$ or US- 6371855-$ or US- 6135881-$ or US- 6110041-$ or US- 6015344-$ or US- 5848397-$ or US- 5846132-$ or US- 5794210-$ or US- 5636920-$ or US- 5018736-$ or US- 4918603-$ or US- 7452273-$ or US- 7144011-$ or US- 9881337-$ or US- 7341517-$ or US- 9406189-$ or US- 7534169-$ or US- 9306952-$ or US- 6884166-$ or US- 8814664-$).did. or (US- 7711628-$ or US- 8771058-$ or US- 8708789-$ or US- 8641511-$ or US- 8086510-$ or US- 8105141-$ or US- 7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US-				

		6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US- 6174237-$ or US- 6126543-$ or US- 6117013-$ or US- 6009458-$ or US- 6016337-$ or US- 5987440-$ or US- 5971854-$ or US- 5970143-$ or US-				

		5916024-$ or US-5870683-$ or US-5860862-$ or US-5838774-$ or US-5813913-$ or US-5764275-$ or US-5762552-$ or US-5759101-$ or US-5663757-$).did. or (US-5643088-$ or US-5628684-$ or US-5589765-$ or US-5586257-$ or US-5585975-$ or US-5566291-$ or US-5553120-$ or US-5479492-$ or US-5462275-$ or US-5417424-$ or US-5343239-$ or US-5343236-$ or US-5327485-$ or US-5283734-$ or US-5263723-$ or US-5256863-$ or US-5227874-$ or US-5213337-$ or US-5120076-$ or US-5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L213	0	L66 and L67	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L214	1	("20160217653").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L215	25	("20020026321"|"20020069076"|"20020076084"|"20020083461"|"20020091833"|"20020119821"|"20020142843"|"20020157005"|"20040152519"|"20040166873"|"20040201626"|"20040215756"|"20050256895"|"20060058103"|"5519433"|"5828843"|"5894556"|"6042477"|"6128660"|"6345297"|"6475090"|"66	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		59861"|"6811487"|"6845389"|"6903681").PN.					
L216	1	("4930010").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L217	1	("20020120930").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L218	6	("20020162117"|"20030066089"|"20050155083"|"20050239551"|"20060236352"|"5530483").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L219	62	L69 L70 L71 L72 L73	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L220	101	("2002/0142843").URPN.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L221	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348").pn.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L222	0	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L223	7	("20030134678" "20040185881" "20040266513" "20110065490" "20170098348" "20170249801" "20170345260").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L224	104	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L225	229	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/01/27 08:16 PM
L226	1	("20030088648").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L227	21	("20020046099"|"20020059094"|"20020107073"|"20030054885"|"4918603"|"5018736"|"5636920"|"5794210"|"5846132"|"5848397"|"6015344"|"6110041"|"6135881"|"6371855"|"6837789"|"6837791"|"7001279"|"7058592"|"7136871"|"7614944"|"7699707").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

L228	2	("20050003878"|"20120157178").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L229	59	("10089815"|"10096210"|"20020147049"|"20040005919"|"20040162124"|"20040176162"|"5618232"|"6104815"|"6287199"|"6884166"|"6899628"|"7029394"|"7035626"|"7144011"|"7233922"|"7341517"|"7452273"|"7534169"|"7693781"|"7711628"|"7835961"|"7926810"|"7937318"|"8025565"|"8086510"|"8092303"|"8105141"|"8128474"|"8147313"|"8186682"|"8204808"|"8240669"|"8246048"|"8267403"|"8342924"|"8342942"|"8465021"|"8473393"|"8474819"|"8535138"|"8543487"|"8556691"|"8585490"|"8641511"|"8672751"|"8708789"|"8727352"|"8734227"|"8771058"|"8805732"|"8814664"|"9111417"|"9306952"|"9355518"|"9406189"|"9536396"|"9805549"|"9881337"|"RE39818").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L230	5	("8028315"|"8397257"|"8538563"|"9069651"|"9289692").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L231	3	("20080051201"|"20110053681"|"20120115585").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L232	62	("20010013125"|"20010032333"|"20020095333"|"20020097983"|"20020099709"|"20020100063"|"20020105535"|"20020108112"|"20020112249"|"20020133817"|"20020198050"|"20030115152"|"20030189668"|"20030233425"|"20040073915"|"20040107138"|"20040190779"|"20040216161"|"20040216171"|"20050005303"|"20050177861"|"20050283800"|"20050288080"|"20060053390"|"20060082068"|"20060256865"|"20060256868"|"200602691	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		20"|"20060285586"|"20070028272"|"20070054695"|"20070078009"|"20070086465"|"20070107010"|"20070210908"|"20070222652"|"20080013927"|"20080066129"|"20090011781"|"20090094632"|"20100107194"|"5638113"|"6816628"|"6870720"|"6944228"|"6978053"|"7076434"|"7085552"|"7117517"|"7120924"|"7191447"|"7228349"|"7231630"|"7249367"|"7260782"|"7283830"|"7343617"|"7367042"|"7430718"|"7460037"|"7461067"|"9716918").PN.				
L233	4	("20030195807"|"20040056897"|"20060217198"|"20080104630").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L234	3	("20060183547"|"20090264188"|"20160023116").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L235	13	("20040152517"|"20050144102"|"20070013547"|"20070183744"|"20080240681"|"20090103892"|"20110081958"|"6611755"|"6908389"|"7389144"|"9556991"|"9878243"|"9901820").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L236	223	("20010004609"|"20010005670"|"20010020298"|"20010036272"|"20010036853"|"20020010789"|"20020029381"|"20020037766"|"20020042293"|"20020054088"|"20020055385"|"20020056089"|"20020059623"|"20020069265"|"20020078176"|"20020103696"|"20020108125"|"20020108127"|"20020115488"|"20020124247"|"20020132614"|"20020133827"|"20020144273"|"20020157002"|"20020159576"|"20020162031"|"20020165020"|"20020165025"|"20020177483"|"20020187825"|"20030013528"|"20030023547"|"2	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		0030040363"|"2003006 0247"|"20030069828"|" 20030070174"|"200300 78924"|"20030086691"| "20030087652"|"20030 114224"|"20030144017 "|"20030154242"|"2003 0177167"|"2003017750 4"|"20030195023"|"200 30208579"|"200302118 56"|"20030212691"|"20 030216185"|"20030216 857"|"20040014524"|"2 0040022366"|"2004006 0063"|"20040088729"|" 20040093302"|"200401 17831"|"20040117839"| "20040128319"|"20040 148638"|"20040152454 "|"20040158855"|"2004 0178923"|"2004018382 4"|"20040198495"|"200 40203667"|"200402038 98"|"20040224750"|"20 040242321"|"20050021 942"|"20050026699"|"2 0050043094"|"2005006 0219"|"20050076371"|" 20050097599"|"200501 01309"|"20050113164"| "20050131984"|"20050 138668"|"20050210526 "|"20050235043"|"2005 0255901"|"2005026686 9"|"20050273804"|"200 50288101"|"200502888 12"|"20060025070"|"20 060046810"|"20060047 772"|"20060059161"|"2 0060063590"|"2006008 7585"|"20060089199"|" 20060111168"|"200601 35253"|"20060148569"| "20060156371"|"20060 174307"|"20060183548 "|"20060205483"|"2006 0248553"|"2006026912 0"|"20070004516"|"200 70019826"|"200700376 23"|"20070083920"|"20 070093296"|"20070106 721"|"20070129144"|"2 0070147870"|"2007016 2328"|"20070219856"|" 20070226062"|"200702 38525"|"20070243936"| "20070244570"|"20070 244585"|"20070244749					

		"|"20070265089"|"2008 0076497"|"2008014633 7"|"20080169605"|"200 80248865"|"200802702 88"|"20080288600"|"20 090163271"|"20090228 351"|"20090234674"|"2 0100099421"|"2010009 9471"|"20100120503"|" 20100137057"|"201002 79764"|"20110130197"| "20110227287"|"20110 269548"|"20120264496 "|"20120282995"|"2013 0005453"|"2014010001 1"|"20140128139"|"201 40279439"|"201403782 12"|"20150067732"|"41 41548"|"4270755"|"449 6148"|"4592546"|"4816 904"|"5013038"|"50354 22"|"5073931"|"508327 1"|"5083800"|"5119295" |"5120076"|"5213337"|" 5227874"|"5256863"|"5 263723"|"5283734"|"53 27485"|"5343236"|"534 3239"|"5417424"|"5462 275"|"5479492"|"55531 20"|"5566291"|"558597 5"|"5586257"|"5589765" |"5628684"|"5643088"|" 5663757"|"5759101"|"5 761606"|"5762552"|"57 64275"|"5813913"|"581 8438"|"5838774"|"5860 862"|"5870683"|"59160 24"|"5970143"|"597185 4"|"5987440"|"6009458" |"6016337"|"6117013"|" 6126543"|"6174237"|"6 182084"|"6193610"|"62 22642"|"6233736"|"625 1017"|"6267670"|"6293 868"|"6312336"|"63734 62"|"6411969"|"641641 4"|"6425828"|"6434398" |"6470180"|"6524189"|" 6527641"|"6530082"|"6 536037"|"6578068"|"65 94098"|"6604997"|"661 0953"|"6648760"|"6659 860"|"6659872"|"66906 61"|"6718350"|"675239 6"|"6758754"|"6758755" |"6760595").PN.				
L237	61	("6763377"|"6766524"|"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27

		6774926"|"6785561"|"6801380"|"6806889"|"6807675"|"6811482"|"6817947"|"6824469"|"6840861"|"6846239"|"6857122"|"6863610"|"6871226"|"6873610"|"6884172"|"6887159"|"6888929"|"6893347"|"6898762"|"6942574"|"6960088"|"7035653"|"7116310"|"7125336"|"7169050"|"7192352"|"7194758"|"7240093"|"7244181"|"7254605"|"7288027"|"7347781"|"7351149"|"7379705"|"7502610"|"7517282"|"7562134"|"7630986"|"7753772"|"7753789"|"7780528"|"7828661"|"7907211"|"7976389"|"8006314"|"8028315"|"8082150"|"8086445"|"8107674"|"8109827"|"8149530"|"8176518"|"8353763"|"8638517"|"8659848"|"8708789"|"8858313"|"9076303"|"9098883").PN.				08:16 PM
L238	5	(JP-11239183-$ | JP-1146356-$ | BY-142004-$ | JP-2000165840-$ | JP-2000209563-$ | JP-2000217094-$ | JP-2000358255-$ | JP-200128743-$ | NO-2005064506-$ | AI-20080248865-$ | NO-2008027811-$ | NO-2008115858-$ | AI-20090228351-$ | AI-20140378212-$ | NO-3165743-$ | NO-3203698-$ | MZ-330242-$).DID.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L239	32347	(A63F13/352 or H04L67/38 or H04L65/4015 or G07F17/3227 or H04L65/4076 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L240	20	("20170232340" "9919210" "20170264961" "8705195"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20140155134" "20120295686" "9672692" "20180117464" "20170304726" "20190060750" "20130079150" "20130079081" "20170296916" "20140335962" "20180169523" "20160361647" "20170259173" "20130079151" "20190118087" "20140256432").pn.					
L241	35	("20130222597" "9462341" "20140282735" "20130152139" "20130340003" "8516533" "20130167173" "20130339996" "20170332126" "20140373039" "20110281566" "9420328" "20140181859" "9955215" "20110283310" "9043845" "20110283305" "20110283329" "20100205628" "8739208" "20110283306" "20110283328" "8528036" "9094719" "20150245090" "20110283319" "20140059587" "20170134784" "9438949" "9554199" "9282357" "9237368" "9648373" "8490128" "20180361237").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L242	343	(US-20030088648-$ or US-20030054885-$ or US-20020107073-$ or US-20020059094-$ or US-20020046099-$ or US-20120157178-$ or US-20050003878-$ or US-20040176162-$ or US-20040162124-$ or US-20040005919-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		US-20020147049-$ or US-20120115585-$ or US-20110053681-$ or US-20080051201-$ or US-20100107194-$ or US-20090094632-$ or US-20090011781-$ or US-20080013927-$ or US-20070222652-$ or US-20070210908-$ or US-20070107010-$ or US-20070086465-$ or US-20070078009-$ or US-20070054695-$ or US-20070028272-$ or US-20060285586-$).did. or (US-20060269120-$ or US-20060256868-$ or US-20060256865-$ or US-20060082068-$ or US-20060053390-$ or US-20050288080-$ or US-20050283800-$ or US-20050177861-$ or US-20050005303-$ or US-20040216171-$ or US-20040190779-$ or US-20040107138-$ or US-20040073915-$ or US-20030233425-$ or US-20030189668-$ or US-20030115152-$ or US-20020198050-$ or US-20020133817-$ or US-20020112249-$ or US-20020108112-$ or US-20020105535-$ or US-20020100063-$ or US-20020099709-$ or US-20020097983-$ or US-20020095333-$ or US-20010032333-$ or US-20010013125-$).did. or (US-20080104630-$ or US-20060217198-$ or US-20040056897-$ or US-20030195807-$ or US-20160023116-$ or US-20090264188-$ or US-20060183547-$ or US-20110081958-$ or US-20090103892-$ or US-20080240681-$ or US-20070183744-$ or US-20070013547-$ or US-20050144102-$ or US-20040152517-$ or						

		US-20140378212-$ or US-20140279439-$ or US-20080169605-$ or US-20140100011-$ or US-20130005453-$ or US-20120282995-$ or US-20120264496-$ or US-20110269548-$ or US-20110227287-$ or US-20110130197-$ or US-20100279764-$ or US-20100137057-$ or US-20100120503-$).did. or (US-20100099471-$ or US-20100099421-$ or US-20090234674-$ or US-20090228351-$ or US-20060135253-$ or US-20080288600-$ or US-20080270288-$ or US-20080248865-$ or US-20080146337-$ or US-20080076497-$ or US-20070265089-$ or US-20070244749-$ or US-20070244585-$ or US-20070244570-$ or US-20070243936-$ or US-20070238525-$ or US-20070226062-$ or US-20070219856-$ or US-20070162328-$ or US-20070147870-$ or US-20070129144-$ or US-20070106721-$ or US-20070093296-$ or US-20070083920-$ or US-20070037623-$ or US-20070019826-$ or US-20070004516-$).did. or (US-20060248553-$ or US-20060205483-$ or US-20060183548-$ or US-20060174307-$ or US-20060156371-$ or US-20060148569-$ or US-20060111168-$ or US-20060089199-$ or US-20060087585-$ or US-20060063590-$ or US-20060059161-$ or US-20060047772-$ or US-20060046810-$ or US-20060025070-$ or US-20050288812-$ or US-20050288101-$ or US-20050273804-$ or						

		US-20050266869-$ or US-20050255901-$ or US-20050235043-$ or US-20050210526-$ or US-20050138668-$ or US-20050131984-$ or US-20050113164-$ or US-20050101309-$ or US-20050097599-$ or US-20050076371-$).did. or (US-20050060219-$ or US-20050043094-$ or US-20050026699-$ or US-20050021942-$ or US-20040242321-$ or US-20040224750-$ or US-20040203898-$ or US-20040203667-$ or US-20040198495-$ or US-20040183824-$ or US-20040178923-$ or US-20040158855-$ or US-20040152454-$ or US-20040148638-$ or US-20040128319-$ or US-20040117839-$ or US-20040117831-$ or US-20040093302-$ or US-20040088729-$ or US-20040060063-$ or US-20040022366-$ or US-20040014524-$ or US-20030216857-$ or US-20030216185-$ or US-20030212691-$ or US-20030211856-$ or US-20030208579-$).did. or (US-20030195023-$ or US-20030177504-$ or US-20030177167-$ or US-20030154242-$ or US-20030144017-$ or US-20030114224-$ or US-20030087652-$ or US-20030086691-$ or US-20030078924-$ or US-20030070174-$ or US-20030069828-$ or US-20030060247-$ or US-20030040363-$ or US-20030023547-$ or US-20030013528-$ or US-20020187825-$ or US-20020177483-$ or US-20020165025-$ or US-20020165020-$ or US-20020162031-$ or						

		US-20020159576-$ or US-20020157002-$ or US-20020144273-$ or US-20020133827-$ or US-20020132614-$ or US-20020124247-$ or US-20020115488-$).did. or (US-20020108127-$ or US-20020108125-$ or US-20020103696-$ or US-20020078176-$ or US-20020069265-$ or US-20020059623-$ or US-20020056089-$ or US-20020055385-$ or US-20020054088-$ or US-20020042293-$ or US-20020037766-$ or US-20020029381-$ or US-20020010789-$ or US-20010036853-$ or US-20010036272-$ or US-20010020298-$ or US-20010005670-$ or US-20010004609-$).did. or (US-7699707-$ or US-7614944-$ or US-7136871-$ or US-7058592-$ or US-7001279-$ or US-6837791-$ or US-6837789-$ or US-6371855-$ or US-6135881-$ or US-6110041-$ or US-6015344-$ or US-5848397-$ or US-5846132-$ or US-5794210-$ or US-5636920-$ or US-5018736-$ or US-4918603-$ or US-7452273-$ or US-7144011-$ or US-9881337-$ or US-7341517-$ or US-9406189-$ or US-7534169-$ or US-9306952-$ or US-6884166-$ or US-8814664-$).did. or (US-7711628-$ or US-8771058-$ or US-8708789-$ or US-8641511-$ or US-8086510-$ or US-8105141-$ or US-					

		7233922-$ or US- 8147313-$ or US- 7835961-$ or US- 7926810-$ or US- 8092303-$ or US- RE39818-$ or US- 7035626-$ or US- 6287199-$ or US- 6104815-$ or US- 5618232-$ or US- 8028315-$ or US- 8538563-$ or US- 7343617-$ or US- 9716918-$ or US- 7461067-$ or US- 7283830-$ or US- 7260782-$ or US- 7231630-$ or US- 7228349-$ or US- 7191447-$ or US- 7120924-$).did. or (US- 7085552-$ or US- 7076434-$ or US- 6870720-$ or US- 5638113-$ or US- 9556991-$ or US- 7389144-$ or US- 6908389-$ or US- 6611755-$ or US- 5818438-$ or US- 6758755-$ or US- 6758754-$ or US- 6752396-$ or US- 6718350-$ or US- 6690661-$ or US- 6659872-$ or US- 6659860-$ or US- 6648760-$ or US- 6610953-$ or US- 6604997-$ or US- 6594098-$ or US- 6578068-$ or US- 6536037-$ or US- 6530082-$ or US- 6527641-$ or US- 6524189-$ or US- 6470180-$ or US- 6416414-$).did. or (US- 6411969-$ or US- 6373462-$ or US- 6312336-$ or US- 6293868-$ or US- 6267670-$ or US- 6251017-$ or US- 5761606-$ or US- 6222642-$ or US- 6193610-$ or US- 6182084-$ or US-				

		6174237-$ or US-6126543-$ or US-6117013-$ or US-6009458-$ or US-6016337-$ or US-5987440-$ or US-5971854-$ or US-5970143-$ or US-5916024-$ or US-5870683-$ or US-5860862-$ or US-5838774-$ or US-5813913-$ or US-5764275-$ or US-5762552-$ or US-5759101-$ or US-5663757-$).did. or (US-5643088-$ or US-5628684-$ or US-5589765-$ or US-5586257-$ or US-5585975-$ or US-5566291-$ or US-5553120-$ or US-5479492-$ or US-5462275-$ or US-5417424-$ or US-5343239-$ or US-5343236-$ or US-5327485-$ or US-5283734-$ or US-5263723-$ or US-5256863-$ or US-5227874-$ or US-5213337-$ or US-5120076-$ or US-5119295-$ or US-5083800-$ or US-5083271-$ or US-5073931-$ or US-5035422-$ or US-5013038-$ or US-4816904-$ or US-4592546-$).did. or (US-4496148-$ or US-4270755-$ or US-4141548-$).did.					
L243	44	L96 not L97	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L244	0	L98 and wager	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L245	36	("20180190077" "20110281620" "20190122500" "9905082"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20160267747" "20180167656" "20090131141" "20190156622" "20150317882" "20170018145" "8740688" "20120264499" "7985134" "20080064490" "8197324" "20070293320" "10198899" "20160104347" "9761081" "20150287278" "9430909" "20150287285" "20150154823" "20120094737" "20150287265" "10102716" "20080020814" "8210931" "9659447" "20190051116" "20130116032" "20180165916" "8932124" "8758111" "20140370958" "10235834").pn.					
L246	36	L100 not L98	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L247	16	L101 and (streaming) and delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L248	6	L101 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L249	32	("5283734" "20070197247" "7587214" "5697844" "5713795" "5916024" "6443840" "20010003099" "20030003990" "5508731" "20040187148" "5759101" "8123618" "7850518" "8597101" "20090062008" "20070021185" "20040235542" "20060287056" "20060281522" "20060281523" "20080102952" "7285048" "20030109306"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"5227874" "20180232993" "20020177483" "20060287051" "6508709" "6786824" "20040259631" "20070060380").pn.					
L250	7	L104 and streaming same delay	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L251	7	L105 not L97	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L252	28	L104 and broadcast	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L253	18	L104 and broadcast same (delay latency buffering)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L254	7430	L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99 L100 L101 L102 L103 L104 L105 L106 L107 L108	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L255	28164	live adj event	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L256	58895	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L257	293	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L258	32347	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L259	32347	(A63F13/352 or H04L67/38 or H04L65/4076 or H04L65/4015 or G07F17/3227 or A63F13/355 or A63F13/46 or A63F13/537).cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L260	16723	L114	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L261	293	propogation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM

L262	268	L116	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L263	58895	live adj (event broadcast show)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L264	44568	L118	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L265	0	L119 and L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L266	0	L116 and L114	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L267	89719	propagation adj delay	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L268	78	L122 and L114	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L269	23	L119 and L123	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L270	104	((("WINVIEW") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L271	229	((("LOCKTON") near3 ("David"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/01/27 08:16 PM
L272	93	("20170232340" "20180154255" "10653955" "9919210" "20170264961" "8705195" "9672692" "20140155134" "20120295686" "20200330864" "20180117464" "20170304726" "10874942" "20190060750" "20130079150" "8737004" "20180169523" "20140335962" "20130079151" "20170296916" "20140256432" "20170259173" "20160361647" "20130079081" "20190118087" "20200155935" "20130072271" "20180264360" "20180243652" "20160375362" "20160121208"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20170282067" "20140287832" "20200171383" "20170225072" "20140106832" "20130079135" "20170225071" "9604140" "20200155936" "20140155130" "20120157178" "20180104582" "8780482" "20130079093" "9919211" "20140206446" "9901820" "20180318710" "9687738" "20140335961" "9993730" "20130079092" "20170252649" "9662577" "10150031" "9457272" "9258601" "8699168" "10695672" "8837072" "8149530" "20190255436" "9707482" "10052557" "10556177" "10279253" "9999834" "9724603" "9687739" "9878243" "8717701" "9744453" "10195526" "8659848" "8638517" "10576371" "9662576" "8817408" "10363483" "10137369" "20170036110" "9511287" "20190054375" "20070078009" "8932136" "7448063" "20020188943" "9462341" "7079176" "20040261127" "20140282735" "20130152139").pn.					
L273	61	("8932136" "7448063" "20020188943" "7079176" "20040261127" "20040139474" "20060253330" "20060129458" "7552193" "20040187148" "7984472"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"20150087419" "9344670" "20060282319" "20040133919" "20140112637" "20160286271" "9591362" "20120210380" "9108107" "8539538" "20090118017" "20020034980" "20110107220" "9635066" "20170374112" "10052556" "20090119737" "20070028272" "20110137729" "20090119729" "20160271493" "9756349" "20170266548" "20150141145" "5638113" "20090125967" "20110040615" "20150165320" "9032465" "20040139469" "9669306" "20110138415" "20120149476" "20150100995" "5916024" "20190358539" "10071308" "7673316" "9573059" "9623326" "20130247125" "9003461" "20110105226" "20090118018" "20090124387" "20170266550" "9352222" "20100167809" "20110137728" "20130145412").pn.					
L274	40	("9258601" "10576371" "9993730" "9919210" "9672692" "9993730" "10653955" "10195526" "9687739" "9861125" "9861125" "9919210" "9919210" "9511287" "9457272" "9707482" "9861125" "9662577" "8699168" "8705195"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"8638517" "8780482" "9662576" "8837072" "8659848" "8817408" "8737004" "10363483" "10874942" "9999834" "9919211" "10052557" "10279253" "10137369" "10150031" "8717701" "9901820" "9687738" "9744453" "10556177" "8149530" "9878243" "10695672" "9604140" "9724603").pn.					
L275	969	coffee.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L276	52	coffee near2 john.in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB)	OR	ON	ON	2024/01/27 08:16 PM
L277	12	coffee near2 john.in.	(USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L278	1	("7185355").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L279	4	("20030125109" OR "20040015442" OR "20090325716" OR "6154131").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L280	15	("10360767" OR "10569175" OR "20020094869" OR "20020184624" OR "20030003997" OR "20030177504" OR "20060101492" OR "20060205483" OR "20140309001" OR "20150024814" OR "7909332" OR "8002618" OR "8092306" OR "8634943" OR "9716918").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L281	2	("20060160597" OR "20190143225").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM
L282	250	("10052557" OR "10089815" OR "10096210" OR "10137369" OR "10150031" OR "10165339" OR "10186116" OR "10195526" OR "10226698" OR "10226705" OR "10232270" OR	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/27 08:16 PM

		"10248290" OR "10279253" OR "10360767" OR "10569175" OR "10653955" OR "10695672" OR "10709987" OR "10721543" OR "20010004609" OR "20010005670" OR "20010013067" OR "20010013125" OR "20010020298" OR "20010032333" OR "20010036272" OR "20010036853" OR "20010044339" OR "20010054019" OR "20020010789" OR "20020018477" OR "20020026321" OR "20020029381" OR "20020035609" OR "20020037766" OR "20020042293" OR "20020046099" OR "20020054088" OR "20020055385" OR "20020056089" OR "20020059094" OR "20020059623" OR "20020069076" OR "20020069265" OR "20020076084" OR "20020078176" OR "20020083461" OR "20020091833" OR "20020094869" OR "20020095333" OR "20020097983" OR "20020099709" OR "20020100063" OR "20020103696" OR "20020105535" OR "20020107073" OR "20020108112" OR "20020108125" OR "20020108127" OR "20020112249" OR "20020115488" OR "20020119821" OR "20020120930" OR "20020124247" OR "20020132614" OR "20020133817" OR "20020133827" OR "20020142843" OR "20020144273" OR					

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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N126	8	(game video data game data program display synchronized displayed preventing users submitting response lockout signal).clm.	(US-PGPUB; USPAT)	AND	ON	ON	2024/01/27 08:18 PM
N127	4	(game video data game data program display synchronized displayed preventing users submitting response lockout signal).clm.	(USPAT)	AND	ON	ON	2024/01/27 08:18 PM

PE2E SEARCH - Search History (Similarity Search)

No Similarity Results available

Bibliographic Data

Application No: 17/488,674

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /PETER J IANNUZZI/ Examiner's Signature | Initials

Title: SYNCHRONIZED GAMING AND PROGRAMMING

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/29/2021	463	3715	AIRP-01054
RULE			

APPLICANTS

Winview, Inc., Redwood City, CA, UNITED STATES

INVENTORS

David B. Lockton, Redwood City, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 16865000 05/01/2020 PAT 11154775

16865000 is a CON of 15886704 02/01/2018 PAT 10653955

15886704 is a CON of 15586198 05/03/2017 PAT 9919210

15586198 is a CIP of 15332625 10/24/2016 PAT 10137369

15586198 is a CIP of 14172539 02/04/2014 PAT 9672692

14172539 is a DIV of 13484129 05/30/2012 PAT 8705195

13484129 is a CIP of 13403845 02/23/2012 PAT 8717701

13403845 is a CON of 11786992 04/12/2007 PAT 8149530

15332625 is a CON of 11542335 10/02/2006 PAT 9511287

11786992 has PRO of 60791793 04/12/2006

11542335 has PRO of 60723301 10/03/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

10/12/2021

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

ADDRESS

Haverstock & Owens, A Law Corporation

162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086
UNITED STATES

FILING FEE RECEIVED

$1,880

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	Art Unit
	PETER J IANNUZZI	3715

CPC - Searched*		
Symbol	Date	Examiner
A63F13/352 G07F17/3227 H04L65/4015 H04L65/4076 H04L67/38 A63F13/537 A63F13/46 A63F13/355 (text search limited)	04/08/2023	PI

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
performed inventor name and assignee search	04/08/2023	PI
performed ip.com search	04/08/2023	PI
see attached text search notes	04/08/2023	PI
updated search	10/03/2023	PI
updated search	01/27/2024	PI

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	see attached interference search notes	01/27/2024	PI

/PETER J IANNUZZI/ Primary Examiner, Art Unit 3715	

FanDuel Ex. 1002-1346

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	**Art Unit**
	PETER J IANNUZZI	3715

CPC						
Symbol					**Type**	**Version**
A63F	/	13	/	352	F	2014-09-02
A63F	/	13	/	537	I	2014-09-02
A63F	/	13	/	46	I	2014-09-02
A63F	/	13	/	355	I	2014-09-02
G07F	/	17	/	3227	I	2013-01-01
H04L	/	65	/	4015	I	2013-01-01
H04L	/	65	/	611	I	2022-05-01
H04L	/	67	/	131	I	2022-05-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	41	
/PETER J IANNUZZI/ Primary Examiner, Art Unit 3715	27 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20240127

FanDuel Ex. 1002-1347

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	**Art Unit**
	PETER J IANNUZZI	3715

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A63F13/352	/	13	/	352
A63F13/537	/	13	/	537
A63F13/46	/	13	/	46
A63F13/355	/	13	/	355
G07F17/32	/	17	/	32
H04L65/401	/	65	/	401
H04L65/611	/	65	/	611
H04L67/131	/	67	/	131

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	41	
/PETER J IANNUZZI/ Primary Examiner, Art Unit 3715	27 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/488,674	Lockton, David B.
	Examiner	**Art Unit**
	PETER J IANNUZZI	3715

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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	2		14	2	26		38		50	14	62	26	74	38	86
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	10		22	10	34		46		58	22	70	34	82		
	11		23	11	35		47		59	23	71	35	83		
	12		24	12	36		48		60	24	72	36	84		

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	41	
/PETER J IANNUZZI/ Primary Examiner, Art Unit 3715	27 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

FanDuel Ex. 1002-1349

UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

28960 7590 02/09/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	
ART UNIT	PAPER NUMBER
3715	

DATE MAILED: 02/09/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

TITLE OF INVENTION: SYNCHRONIZED GAMING AND PROGRAMMING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	05/09/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

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FanDuel Ex. 1002-1350

PART B - FEE(S) TRANSMITTAL

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28960 7590 02/09/2024

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

TITLE OF INVENTION: SYNCHRONIZED GAMING AND PROGRAMMING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	05/09/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
IANNUZZI, PETER J	3715	463-042000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

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2. For printing on the patent front page, list
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2 _____
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

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4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

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5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

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❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

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FanDuel Ex. 1002-1351

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

28960 7590 02/09/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	
ART UNIT	PAPER NUMBER
3715	

DATE MAILED: 02/09/2024

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

FanDuel Ex. 1002-1352

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The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 17/488,674	Applicant(s) Lockton, David B.	
	Examiner PETER J IANNUZZI	Art Unit 3715	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to TD, amendments and remarks filed January 5, 2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 25-37 and 62-89 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date attached.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PETER J IANNUZZI/
Primary Examiner, Art Unit 3715

FanDuel Ex. 1002-1354

(19) Europäisches Patentamt
European Patent Office
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(21) Application number: **98302964.6**

(22) Date of filing: **16.04.1998**

(54) Interactive, predictive game control system

Interaktives, prädiktives Spielsteuerungssystem

Système de commande de jeu interactif et prévisionnel

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE

(30) Priority: **22.04.1997 GB 9708061**

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28.10.1998 Bulletin 1998/44

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(56) References cited:
US-A- 4 592 546

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EP 0 873 772 B1

FanDuel Ex. 1002-1355

Description

[0001] The invention relates to an interactive, predictive game control system for use in conjunction with a live TV broadcast.

[0002] In an interactive, predictive game played in conjunction with a live TV broadcast, remote players attempt to predict certain events which may or may not occur during the broadcast and will be awarded prizes, monetary or otherwise, if they are successful. Examples of interactive, predictive games include horse racing where the players can try to predict winners or place bets on particular horses to win or be placed in a race, and football matches where players may try to predict the final score or the time of occurrence of certain events such as the time of the first goal, first booking etc. Other examples are rugby, motor racing, tennis and cricket. An example of an interactive system is described in US-A-4592546. This document describes in detail how the remote units are organised and controlled but provides very little information on the central location.

[0003] In order to enhance the enjoyment of such games, it is desirable to be able to present players with information relating to the game in advance of, and on occasion during, the playing of the game so that they can make intelligent predictions. For example, in the case of a horse race, it would be desirable to give the players information regarding the horses, the jockeys, the course and the odds while for a football game, players would like to have details of the teams, past form and current position in a league table. Much of this information, in particular information on odds and the like, will change in the run-up to the game and consequently there is a continuing need for instantaneous updates.

[0004] In accordance with one aspect of the present invention, an interactive broadcast network comprises an interactive, predictive game control system including a central controller for generating game playing data for transmission with a live TV broadcast to remote player (s) and for receiving information from the remote player (s), an input device connected to the central controller, and a database connected to the central controller for storing data relating to the content of the live broadcast and known in advance of the live broadcast, the central controller being responsive to signals from the input device:

a) prior to the live broadcast, to select data from the database for transmission to the remote user(s) in advance of and/or during the live broadcast, and
b) during or after the live broadcast, to record the time of occurrence of one or more events relating to the live broadcast which are to be predicted by the remote player(s), as indicated by an operator to the central controller via the input device; and a number of remote units for receiving signals, transmitted in association with a TV broadcast, from the central controller, each remote unit including a microprocessor responsive to signals received from the central controller and connected to an input device for use by a remote player, and a store for storing the data transmitted by the central controller.

[0005] In accordance with a second aspect of the present invention, a method of handling an interactive, predictive game in conjunction with a live TV broadcast received by one or more remote players comprises:

a) prior to a live broadcast, selecting data from a database which stores data relating to the content of the live broadcast and known in advance of the live broadcast, transmitting the selected data with a TV broadcast to remote player(s) in advance of and/or during the live broadcast and storing the data locally to the remote player, and
b) during or after the live broadcast, recording the time at which one or more events occur within the live broadcast and which are to be predicted by the remote player(s).

[0006] We have devised a control system and method which allows an operator to achieve as much preparation as possible prior to the commencement of a live TV broadcast. Typically, the database will store information relevant to future predictions. The operator is able to select data appropriate to the live TV broadcast from the database and arrange for this to be assembled as appropriate into a display format which can then be transmitted in association with a TV broadcast, either in advance of and/or during the live TV broadcast, to the remote player(s). This then allows the operator to concentrate on monitoring the live broadcast for the occurrence of events which are to be predicted by the remote player (s) without having to enter large amounts of data through the input device.

[0007] The time at which the event(s) occur during the live broadcast may be entered by the operator later, for example after the live broadcast has ended but preferably the operator indicates the time of occurrence immediately. The time of occurrence can then be recorded as the actual time at which an operator provides an indication or as the actual time when amended to take account of the operator's and system's response time.

[0008] In the preferred control system, therefore, the central controller computes the actual time of occurrence of an event by monitoring the time of a signal generated by the input device in response to operator activation, and modifies that time to take account of the operator's and system's response time.

[0009] Typically, an operator will undergo a test procedure in which his response time and the system latency is determined by the central controller and this response time and latency is then stored for later use in computing the actual time of occurrence of events in the live broadcast.

[0010] In order to communicate times between the

FanDuel Ex. 1002-1356

control system and the remote player(s), it is necessary to encode those times into signals which are transmitted between the two locations. This is most conveniently achieved by a process known as "time stamping" in which data defining the times are attached to messages between the two. Time stamped signals supplied to the remote player(s) can be used in a variety of ways at the remote location. For example, the signal can be used as a lock-out command preventing further predictions being made by the remote player(s). It can also be used, of course, to enable the remote player(s) to determine whether or not he has made a successful prediction.

[0011] In some cases, players predictions are communicated back to the central controller for adjudication but in other systems the local unit is able to determine, following information received from the central controller, whether or not the associated player has won and can then communicate that information to the central controller only in the case of a winning player. This reduces the amount of time needed to communicate with the central controller and the number of remote units which have to communicate at the same time.

[0012] Typically, communication from the remote player(s) to the central controller will be via an existing communication network such as public switched telephone network and the like although a permanent connection is also possible.

[0013] In some cases, the action of updating the database can cause a time to be recorded by the central controller. This could be, for example, the case where fixed odds stored within the database are updated and the time of updating is then recorded by the central controller in response to signals from the database.

[0014] An example of a control system and method according to the invention will now be described with reference to the accompanying drawings, in which:-

Figure 1 is a schematic block diagram of the control system and an interactive broadcast network incorporating the control system;

Figures 2-5 illustrate examples of screen displays presented to an operator during preparation for a live football game referred to as PlayLive Football;

Figures 6 and 7 illustrate screen displays presented to a remote player of PlayLive Football;

Figures 8 to 10 illustrate screens presented to an operator during a PlayLive Football game;

Figures 11-14 illustrate screen displays presented to an operator during preparation for a live horse racing game referred to as PlayLive Racing; and,

Figures 15-17 illustrate screen displays presented to a player during a PlayLive Racing game.

[0015] The interactive broadcast network shown in Figure 1 comprises a game control system A including a central controller 1 which will include a computer such as a PC operating a Windows based system, connected to an input device 2 such as a keyboard and/or mouse and the like and to an output device 3 which may include a monitor and/or printer. A database 4A stores data relating to service functions and remote users, which can be accessed and amended by the central controller 1, while a Live File store 4B is provided for storing data relating to the game being or to be broadcast. The central controller 1 generates data which can be converted to TV display signals and other control signals associated with various service functions, on a land line 5 connected to a combining unit 6 defining an insertion point of a TV broadcast system B. The combining unit 6 receives television broadcast signals from a studio 7 (or outside broadcast (OB) location, in the case of a live event), and combines these with the signals on the line 5 so that they are transmitted simultaneously by a transmitter 8 to remote users or players C. In other applications, the signals from the central controller 1 and the studio or OB 7 will be transmitted separately.

[0016] The signals applied to the combiner 6 may be transmitted to the remote units within a vertical banking interval (VBI) of the normal TV signal or on a separate radio FM-SCA channel or other data format such as a cable modem.

[0017] Each remote user C has a home or remote unit 9 having a television receiver 10 connected to an aerial 11 and a monitor 12. The home unit 9 includes an address/databus 13 connected to the receiver 10, the bus 13 being connected to a microprocessor 14, a memory 15, such as a ROM, storing programme instructions for the processor 14, one or more input devices 16 such as a keyboard or mouse, and a control memory (RAM) 17. Signals transmitted by the processor 14 can be communicated to the central controller 1 via a public switched telephone network 18 which is selectively accessed by a telephone interface unit 19 connected to the bus 13.

[0018] Alternative media such as cable or the internet can be used for the return signals (as for the signals transmitted to the remote unit C). In general the return signals will be transmitted over a different medium to the incoming signals.

[0019] The game control system A can be used to control a variety of games including interactive, predictive games and two examples of such interactive, predictive games will be described below. In the first example, play live football, the remote players are able to attempt to predict certain events prior to commencement of a live football match which is broadcast by the transmitter 8 and can also attempt to predict certain events during the live broadcast.

[0020] Initially, prior to commencement of the live broadcast, an operator uses the input device 2 to set up certain predetermined information relating to the live broadcast for transmission to the remote players. In this example, the operator is first presented with a screen as shown in Figure 2 in which he can select a home team and an away team from a list of such teams which have been previously stored in the database 4A. Using the input device 2, such as a mouse, he can select the ap-

FanDuel Ex. 1002-1357

propriate home and away teams and then click the OK button. This information is then stored in the Live File store 4B. The database 4A stores information relating to each team squad which will typically include more players than those actually selected to play the match. Shortly before commencement of the match, the actual team will be announced and this information will be conveyed to the operator. He then causes the central controller 1 to display all members of the squad of each team (Figure 3) allowing the operator to indicate which members of the squad have been picked to play and at the same time, he can define the type of player, for example goalkeeper, attacker, midfield or defender. Once that information has been indicated, it is then stored in the Live File store 4B.

[0021] Also, before the game begins, the operator takes a calibration of his own reaction time and the system latency. This can be obtained during a test procedure in which the central controller 1 presents a particular display on a monitor of the output device 3 to which the operator must react as quickly as possible. The central controller 1 then determines the time between initiating the display and the time at which a response is sensed and this will be a latency value which is used to adjust future times of occurrence of events which are entered by the operator. This process can be repeated at intervals during the game either automatically or on operator request. This enables the latency to be updated to take account of variation in the operator's response times.

[0022] The operator also sets up the particular types of event which can be predicted during the live broadcast. In this example, these events include the time of the first goal, the time of the first booking etc. Examples of such events are indicated by the line of buttons at 50 in Figure 4.

[0023] Once all the information for the live broadcast has been set up by the operator, a screen such as that shown in Figure 4 is displayed which at this time is inactive since the interactive game has not commenced. It will be noted, however, that the operator has been able to set up a significant amount of information in advance of the live broadcast itself.

[0024] At the appropriate time, but before commencement of the football game, the operator will bring up the screen shown in Figure 5 and by clicking the button 51, the predefined information will then be transmitted to the combiner 6 and broadcast to all the remote players C where it will be stored in each memory 17.

[0025] If a remote player wishes to play the interactive game, he operates his input device 16 to indicate to the processor 14 that the game is to be initiated and the processor 14 will respond to the information supplied from the central controller 1 and stored in the memory 17 to display a screen similar to that shown in Figure 6. This indicates to the player the type of prediction which he can attempt. A comparison of Figures 4 and 6 will show that six of the events selected by the operator for prediction set out in the line 50 are displayed on the display of Figure 6.

[0026] The remote player can then select one or more of the predictions. For example, if he selects, using the input device 16, the "Time Slot of First Goal", the screen shown in Figure 7 will be displayed which defines six different 15 minute periods during the playing of a football game. The player can then indicate one of those periods using the input device 16, for example, the period 16-30 minutes, and this prediction is then stored in the memory 17. In a similar way, the player can predict any one or more of the other items set out in Figure 6.

[0027] Immediately the game commences, the operator clicks on the "Start First Half" button 59 (Figure 5) and this will cause the central controller 1 to display the screen of Figure 8 asking the operator to confirm. Following confirmation, the screen of Figure 9 is displayed allowing the operator to lock out further predictions at the start of the game. In response the central controller 1 will issue a lock-out signal which is broadcast to the remote units C and to which each processor 14 responds to prevent any further predictions from being entered. The lock-out signal will carry a time stamp which defines the instant at which the operator clicked on the button 60 but back stamped by an appropriate number of frames corresponding to the earlier determined calibration of the operator response time and system latency. Each microprocessor 14 responds to the received lock-out signal to lock-out any future predictions and also any previous predictions which occurred after the back adjusted time stamp.

[0028] In order to obtain accurate synchronisation between the central controller clock and each remote unit C, all parts of the interactive network work to a common universal system clock. Synchronisation is maintained by the central controller 1 repeatedly issuing synchronisation signals as part of the messages which are broadcast. Each microprocessor 14 monitors the time of arrival of a synchronisation signal and compares this with its own clock and if there is a discrepancy gradually adjusts its clock to agree with the synchronisation signal.

[0029] As the game develops, various events may or will occur. For example, when the first goal is scored, the operator clicks on the First Scorer button 61 to enable him to select the appropriate score and also clicks on the First Goal button 62 to indicate the time of the first goal. This information is then confirmed by the operator by clicking the Resolve button 63 and the information is then transmitted in the usual manner to the remote players.

[0030] The time of the first goal transmitted to the remote players will be the time at which the button 62 was pressed adjusted by the prestored latency. This is sent as a time stamp to the remote players.

[0031] Similarly, at half time, clicking the Half Time button 64 will allow the operator to enter the half time score which is then transmitted to the remote players where it can be compared with their predictions.

FanDuel Ex. 1002-1358

[0032] During and/or after a game, the respective microprocessors 14 compare the associated player's predictions with the actual events as time stamped and supplied from the central controller 1. If the local player was successful in his prediction then the microprocessor 14 will indicate this to the player and will also pass that information via the PSTN 18 to the central controller 1. This is particularly useful where players will be rewarded with a financial prize or token allowing them additional use of certain games which require payment. In other applications, however, where no financial or other prize is awarded, communication with the central controller 1 is not necessary.

[0033] If there are any penalties at the end of the football match, the remote players are given the opportunity to predict whether a penalty kick will be scored, missed or saved, the operator controlling these predictions via the button 65 on the screen of Figure 10.

[0034] The central controller 1 also allows a further game to be played by the remote players during the live broadcast of the football match. This is known as "Action Ball". During the football game, when the operator identifies a shot on target, a goal or a corner kick, he/she immediately registers this action by pressing the event button 53. A counter 65 begins countdown from 10 giving the operator 10 seconds to define the event as a shot on target, goal or corner kick by pressing one of the three buttons 54,55,56 or cancelling the indication by pressing the Deny button 58. Clicking one of the buttons 54-56 causes the central controller 1 to send an appropriate message to each of the remote players C in conjunction with a TV broadcast and each microprocessor 14 responds to receipt of that message by awarding points to those remote players who have correctly anticipated that one or the three events had occurred. Each remote player has 15 opportunities per half to anticipate that a shot on target, goal or corner kick will occur by operating his input device 16 which will initiate a 10 second period. The action by the remote player of pressing any blue button on his input device records a time stamp on the memory 17. The time that the event occurs as input by the operator, after suitable back stamping, will be broadcast as a time stamp to each remote player C. Each microprocessor 14 compares the time stamp supplied to it corresponding to the time at which the event button 53 was clicked and if the remote player pressed his blue button in less than ten seconds from the time stamp received by the microprocessor 14 then the player will have been successful and receive points.

[0035] In the second example, the PlayLive Racing game will be described. In this example, the central controller 1 will receive details about available races including declared riders and runners and this information will be stored in the database 4A and the operator will decide which races are to be included in the game. The database 4A will include details of all available races and in this example, the operator selects three using the screen shown in Figure 11 and the input device 2, the selected information being stored in the Live File store 4B.

[0036] The operator then selects each race in turn and, for the first race, the screen shown in Figure 12 is displayed to the operator. This will display certain fixed information already provided in the Live File store 4B such as the going of the course but allows the operator to add further information in the Course Details box as may be appropriate on the day.

[0037] For each race, the operator then displays the screen shown in Figure 13 allowing him to select the names of all runners and non-runners as this information is received. Alternatively, this can be carried out automatically via the database 4A as that portion is updated.

[0038] For each horse, the database 4A holds information relating to the horse and the operator can display this and modify it as necessary as shown in the screen shown in Figure 14.

[0039] Once the operator has set up this predefined information in the Line File 4B, he will cause it to be made available to the remote units by broadcasting the information in the usual way. Each remote unit will receive the information and the microprocessor 14 will store that information in the control memory 17.

[0040] The odds for each horse can be manually entered by the operator as they change or this could be carried out upon loading the odds into the store 4B. In either event, on a change of odds, this information will be broadcast to the remote units together with a time stamp defining the time of the change. Again, this information can then be displayed by the remote user.

[0041] Finally, in preparation for the horse race, the operator will take a calibration of his own reaction time and the system latency as described above in connection with the PlayLive Football application. This calibration is then used to compensate input times by back stamping by the appropriate number of frames per second by which the action is delayed. Updates can also be obtained as before.

[0042] Once the operator has made his preparations, the information is transmitted to each remote player and stored in the memories 17. Each remote player can display the details of races, horses, odds and the like as necessary. For example, as shown in Figure 15, the remote player can display a list of horses and jockeys for a particular race.

[0043] Just prior to the start of a race, the remote players are given the opportunity to predict the outcome of that race using one of the variety of bets on offer (i.e. win, place, each way). The remote player can choose to place a bet via an appropriate screen (Figure 17) and once he has selected a bet and confirmed the amount of money he wishes to wager, he will receive confirmation that the bet has been accepted and these details will be stored by the microprocessor 14 in the memory 17.

FanDuel Ex. 1002-1359

[0044] As soon as the race begins, the operator will indicate this via the input device 2 and an appropriately back stamped time stamp signal will be broadcast causing each microprocessor 14 to lock out all future predictions and to cancel any predictions made after the time defined by the back stamped time stamp. Once the race is finished, the operator sends out the results in two stages, first as unconfirmed results and then as confirmed results once these have been confirmed by the appropriate race authority. Each remote unit responds to the result information to determine whether the local player or players is successful and to determine the winning amount and displays this as appropriate, for example as shown in Figure 16. In this case, there are four local players.

Claims

1. An interactive broadcast network comprising an interactive, predictive game control system including a central controller (1) for generating game playing data for transmission with a live TV broadcast to remote player (s) and for receiving information from the remote player(s), an input device (2) connected to the central controller (1), and a database (4A) connected to the central controller (1) for storing data relating to the content of the live broadcast and known in advance of the live broadcast, the central controller being responsive to signals from the input device:

   a) prior to the live broadcast, to select data from the database (4A) for transmission to the remote user(s) in advance of and/or during the live broadcast, and
   b) during or after the live broadcast, to record the time of occurrence of one or more events relating to the live broadcast which are to be predicted by the remote player(s), as indicated by an operator to the central controller (1) via the input device (2); and a number of remote units for receiving signals, transmitted in association with a TV broadcast, from the central controller (1), each remote unit including a microprocessor (14) responsive to signals received from the central controller (1) and connected to an input device (16) for use by a remote player, and a store (14) for storing the data transmitted by the central controller (1).

2. A network according to claim 1, wherein the central controller computes the actual time of occurrence of an event by monitoring the time of a signal generated by the input device (2) connected to the central controller in response to operator activation, and modifies that time to take account of the operator's and system's response time.

3. A network according to claim 1 or claim 2, wherein the action of updating the database (4A) causes a time to be recorded by the central controller (1).

4. A method of handling an interactive, predictive game in conjunction with a live TV broadcast received by one or more remote players, the method comprising

   a) prior to a live broadcast, selecting data from a database (4A) which stores data relating to the content of the live broadcast and known in advance of the live broadcast, transmitting the selected data with a TV broadcast to remote player (s) in advance of and/or during the live broadcast and storing the data locally to the remote player, and
   b) during or after the live broadcast, recording the time at which one or more events occur within the live broadcast and which are to be predicted by the remote player(s).

Patentansprüche

1. Ein interaktives Sendenetzwerk mit einem interaktiven Vorhersagspiel-Steuersystem, umfassend eine zentrale Steuerung (1) zum Erzeugung von Spiele-Spieldaten zur Übertragung mit einer Live-Fernsehsendung an einen oder mehrere Fernspieler und zum Empfangen von Informationen vom/von den Fernspieler(n), eine Eingabeeinrichtung (2), die mit der zentralen Steuerung (1) verbunden ist, und eine Datenbank (4A), die mit der zentralen Steuerung (1) verbunden ist, zum Speichern von Daten, die den Inhalt der Livesendung betreffen und vor der Livesendung bekannt sind, wobei die zentrale Steuerung auf Signale von der Eingabeeinrichtung reagiert:

   a) vor der Livesendung, um Daten von der Datenbank (4A) zur Übertragung an den/die Fernbenutzer vor und/oder während der Livesendung auszuwählen, und
   b) während oder nach der Livesendung, um die Zeit des Auftretens eines oder mehrerer Ereignisse aufzuzeichnen, die die Livesendung betreffen und die von dem/den Fernspieler(n) vorhergesagt werden sollen, wie der zentralen Steuerung (1) über die Eingabeeinrichtung (2) von einer Bedienperson angezeigt wird;

   und eine Anzahl Femeinheiten zum Ernpfangen von Signalen, die im Zusammenhang mit einer Fernsehsendung übertragen werden, von der zentralen Steuerung (1), wobei jede Ferneinheit einen Mikroprozessor (14) umfaßt, der auf von der zentralen Steuerung (1) empfangene Signale reagiert

FanDuel Ex. 1002-1360

und mit einer Eingabeeinrichtung (16) zur Verwendung durch einen Fernspieler verbunden ist, und einen Speicher (15) zum Speichern der von der zentralen Steuerung (1) übertragenen Daten.

2. Ein Netzwerk gemäß Anspruch 1, wobei die zentrale Steuerung die tatsächliche Zeit des Auftretens eines Ereignisses berechnet, indem sie die Zeit eines von der Eingabeeinrichtung (2), die mit der zentralen Steuerung verbunden ist, als Reaktion auf Aktivierung durch den Bediener erzeugten Signals überwacht und diese Zeit modifiziert, um die Antwortzeit des Bedieners und des Systems zu berücksichtigen.

3. Ein Netzwerk gemäß Anspruch 1 oder Anspruch 2, wobei der Vorgang des Aktualisierens der Datenbank (4A) bewirkt, daß von der zentralen Steuerung (1) eine Zeit aufgezeichnet wird.

4. Ein Verfahren zur Handhabung eines interaktiven Vorhersagspiels in Verbindung mit einer Live-Fersehsendung, die von einem oder mehreren Fernspielern empfangen wird, wobei das Verfahren umfaßt

a) das Auswählen von Daten von einer Datenbank (4A), die Daten speichert, die den Inhalt der Livesendung betreffen und die vor der Livesendung bekannt sind, das Übertragen der ausgewählten Daten mit einer Fernsehsendung an einen/mehrere Fernspieler vor und/oder während der Livesendung und das lokale Speichern der Daten an den Fernspieler vor der Livesendung, und
b) das Aufzeichnen der Zeit, zu der ein oder mehrere Ereignisse in der Livesendung auftreten, die von dem/den Fernspieler(n) vorhergesagt werden sollen, während oder nach der Livesendung.

Revendications

1. Réseau de diffusion interactif comprenant un système de commande de jeu interactif et prévisionnel comprenant un contrôleur central (1) pour générer des données de cours de jeu pour transmission avec une télédiffusion en direct à un ou à des joueurs distants et pour recevoir des informations depuis le ou les joueurs distants, un dispositif d'entrée (2) connecté au contrôleur central (1), une base de données (4A) connectée au contrôleur central (1) pour mémoriser les données se rapportant au contenu de la diffusion en direct et connues à l'avance de la diffusion en direct, le contrôleur central étant sensible aux signaux provenant du dispositif d'entrée :

a) avant la diffusion en direct, pour sélectionner des données provenant de la base de données (4A) pour transmission à l'utilisateur ou aux utilisateurs distants à l'avance et/ou pendant la diffusion en direct ; et,
b) pendant ou après la diffusion en direct, pour enregistrer l'heure de l'occurrence d'un ou plusieurs événements se rapportant à la diffusion en direct qui doivent être prédits par le ou les joueurs distants, comme indiqué par un opérateur au contrôleur central (1) via le dispositif d'entrée (2) ; et un certain nombre d'unités distantes pour recevoir des signaux, transmis en association avec une télédiffusion, depuis le contrôleur central (1), chaque unité distante comprenant un microprocesseur (14) sensible aux signaux reçus depuis le contrôleur central (1) et connecté à un dispositif d'entrée (16) pour utilisation par un joueur distant, et une mémoire (17) pour mémoriser les données transmises par le contrôleur central (1).

2. Réseau selon la revendication 1, dans lequel le contrôleur central calcule l'heure réelle de l'occurrence d'un événement en surveillant l'heure d'un signal généré par le dispositif d'entrée (2) connecté au contrôleur central en réponse à une activation par l'opérateur, et modifie cette heure pour prendre en compte le temps de réponse de l'opérateur et du système.

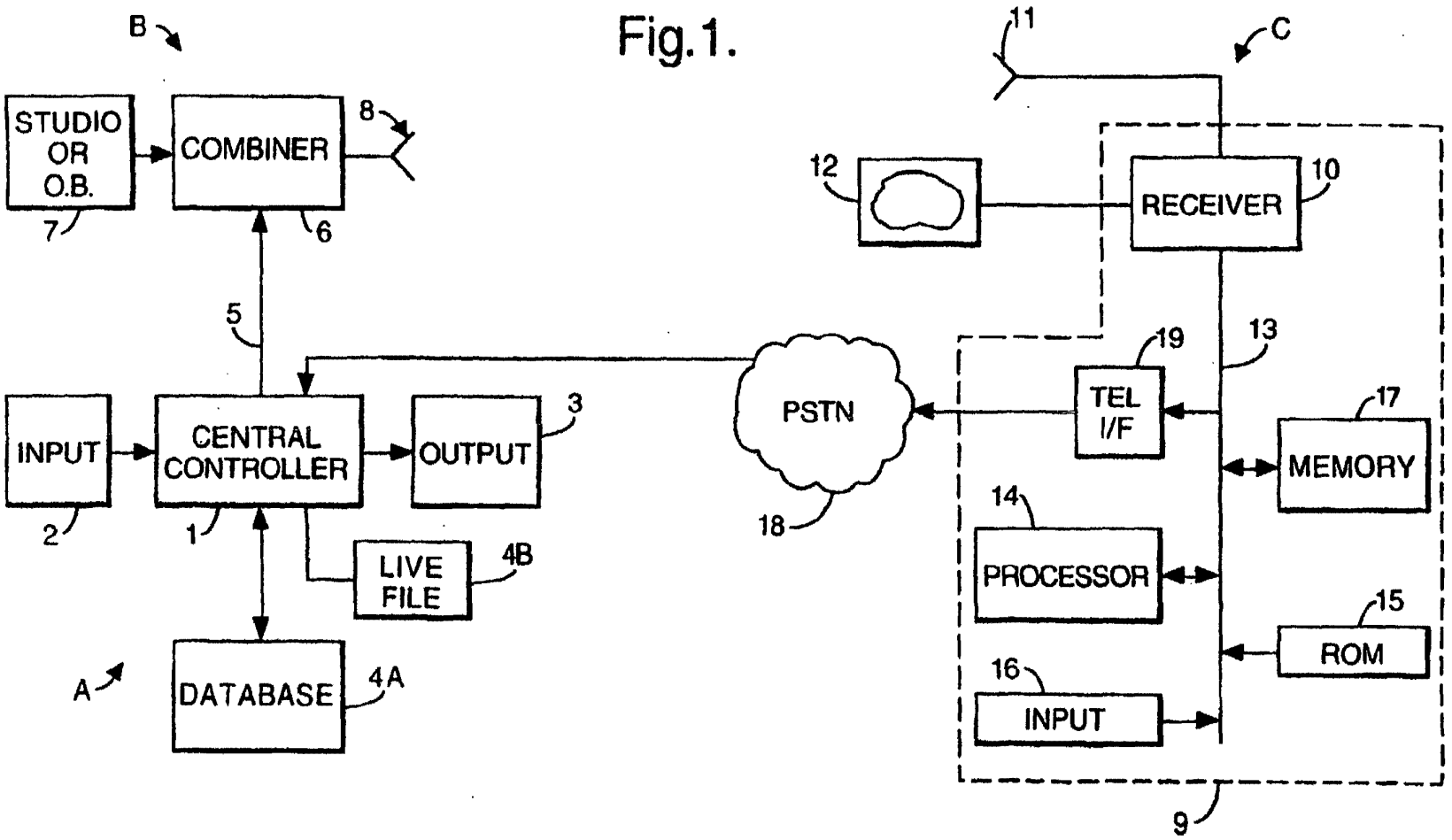
3. Réseau selon la revendication 1 ou 2, dans lequel l'action de mise à jour de la base de données (4A) amène le contrôleur central (1) à enregistrer une heure.

4. Procédé de traitement d'un jeu interactif et prévisionnel en liaison avec une télédiffusion en direct reçue par un ou plusieurs joueurs distants, le procédé comprenant

a) avant une diffusion en direct, sélectionner des données provenant d'une base de données (4A) qui mémorise les données se rapportant au contenu de la diffusion en direct et connues à l'avance de la diffusion en direct, transmettre les données sélectionnées à l'aide d'une télédiffusion à un ou à des joueurs distants à l'avance et/ou pendant la diffusion en direct et mémoriser les données localement par rapport au niveau du joueur distant, et
b) pendant ou après la diffusion en direct, enregistrer l'heure à laquelle un ou plusieurs événements se produisent à l'intérieur de la diffusion en direct et qui doivent être prédits par le ou les joueurs distants.

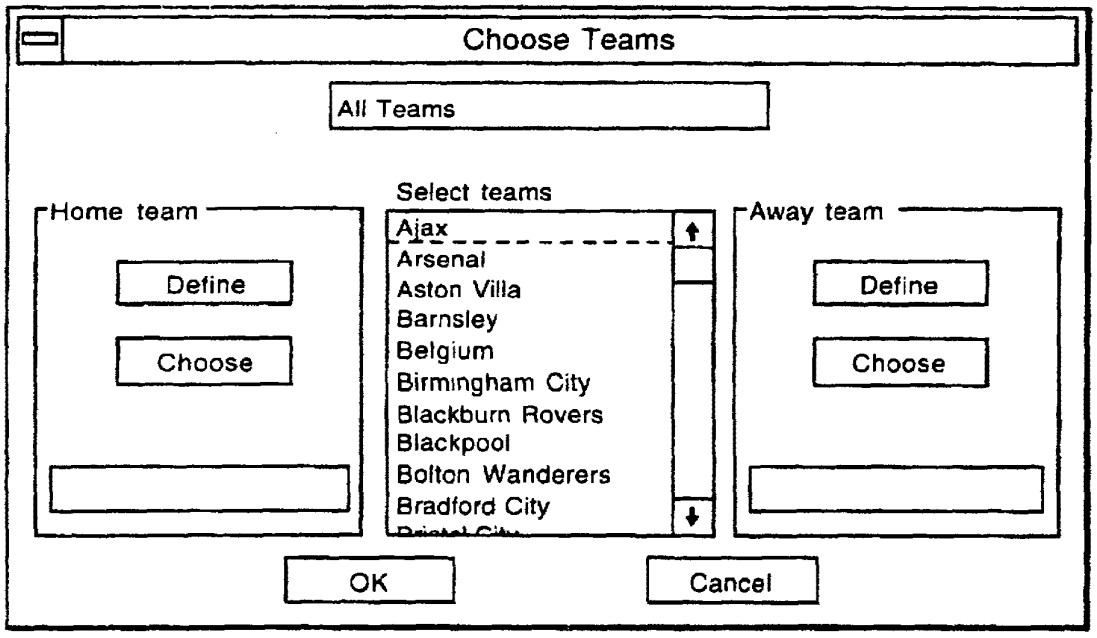
FanDuel Ex. 1002-1361

Fig.1.



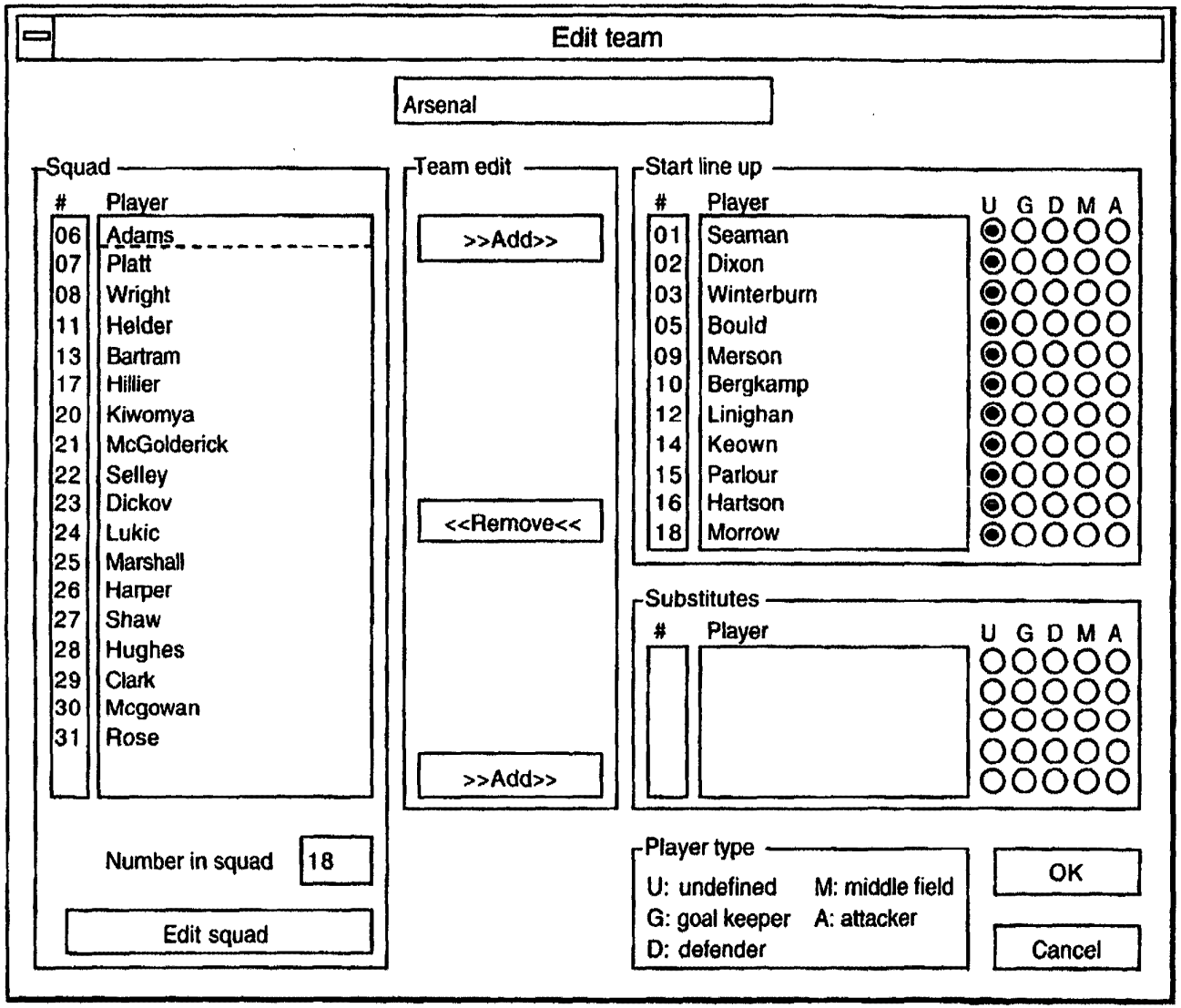
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FanDuel Ex. 1002-1362

Fig.2.



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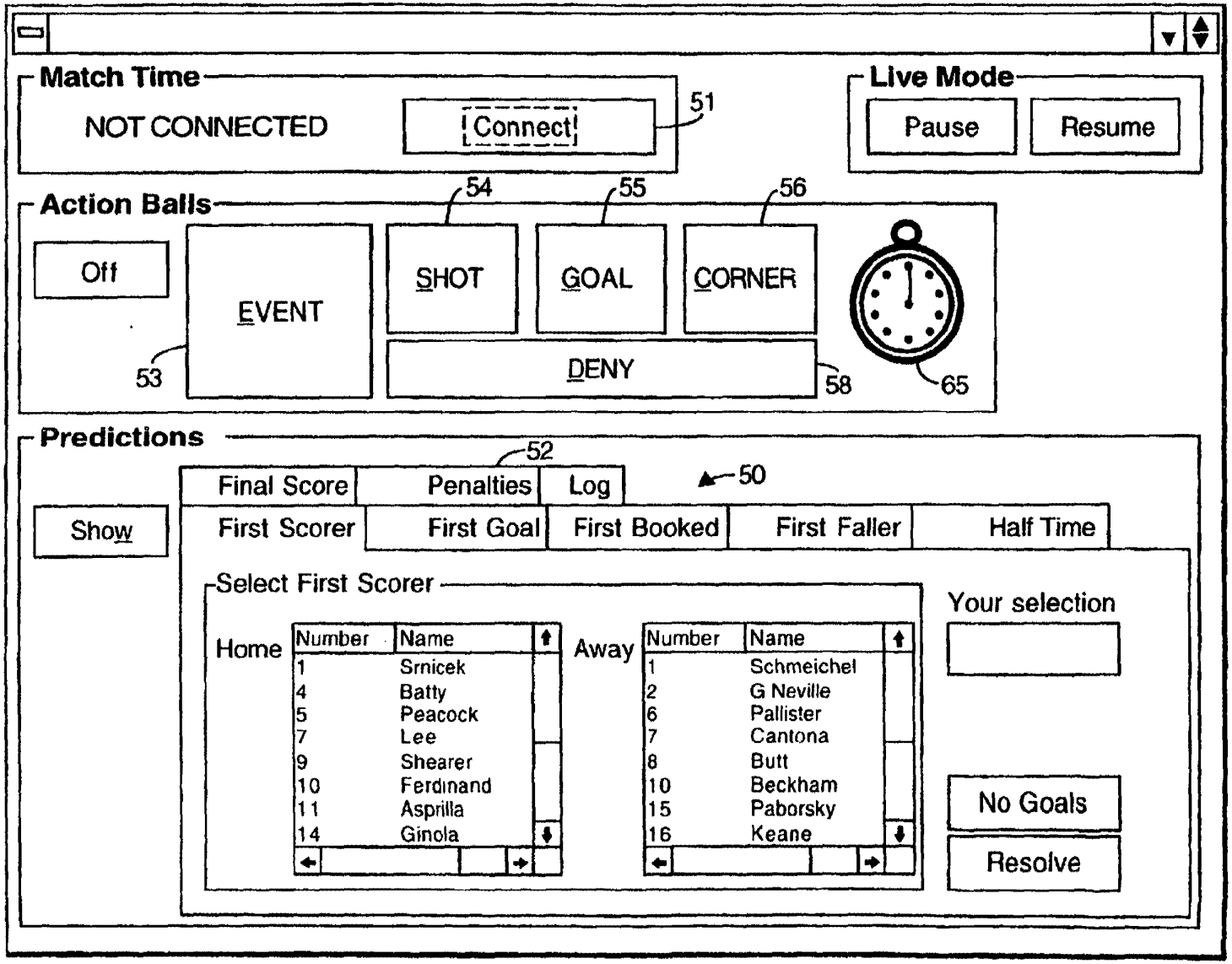
Fig.3.



EP 0 873 772 B1

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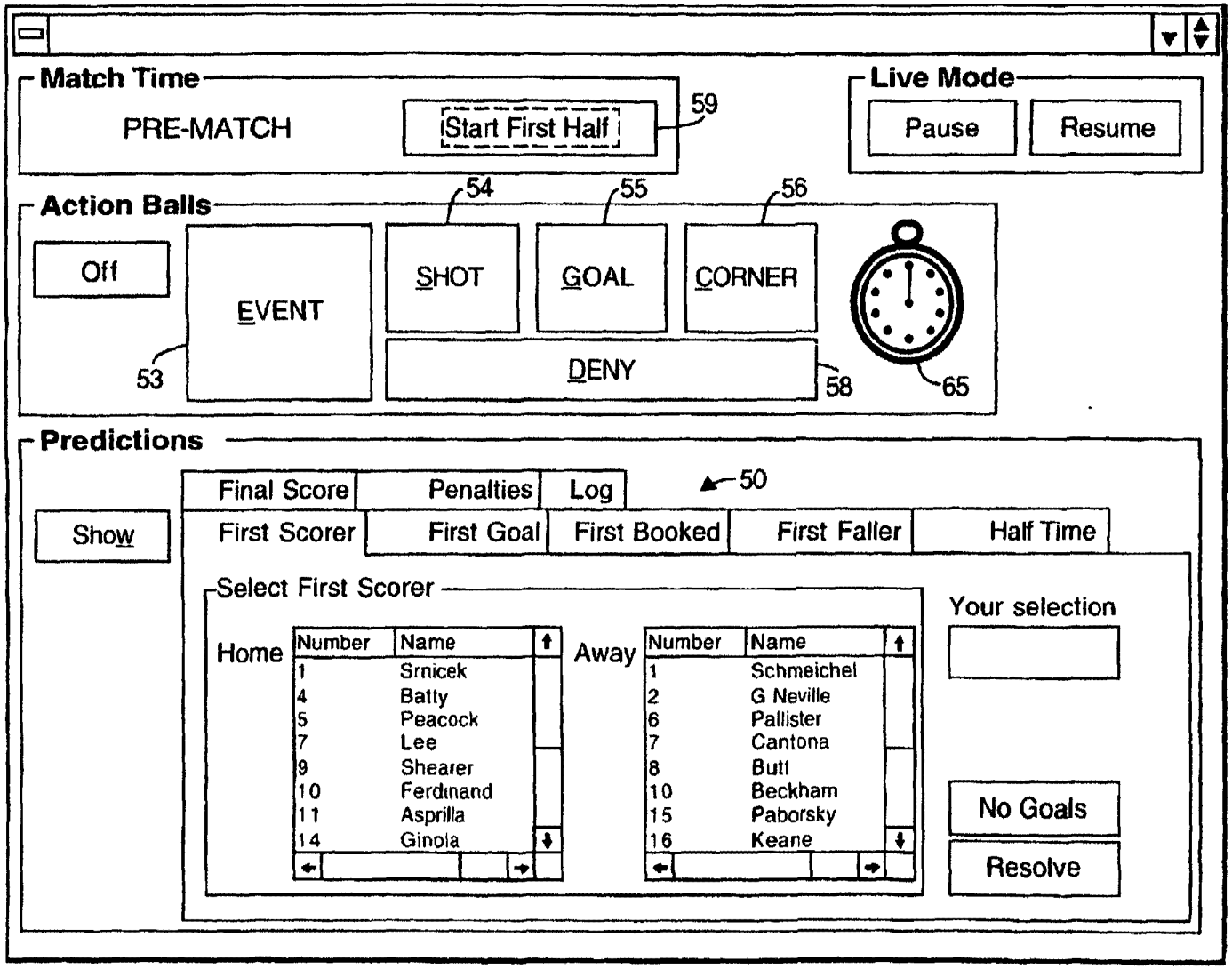
Fig.4.



EP 0 873 772 B1

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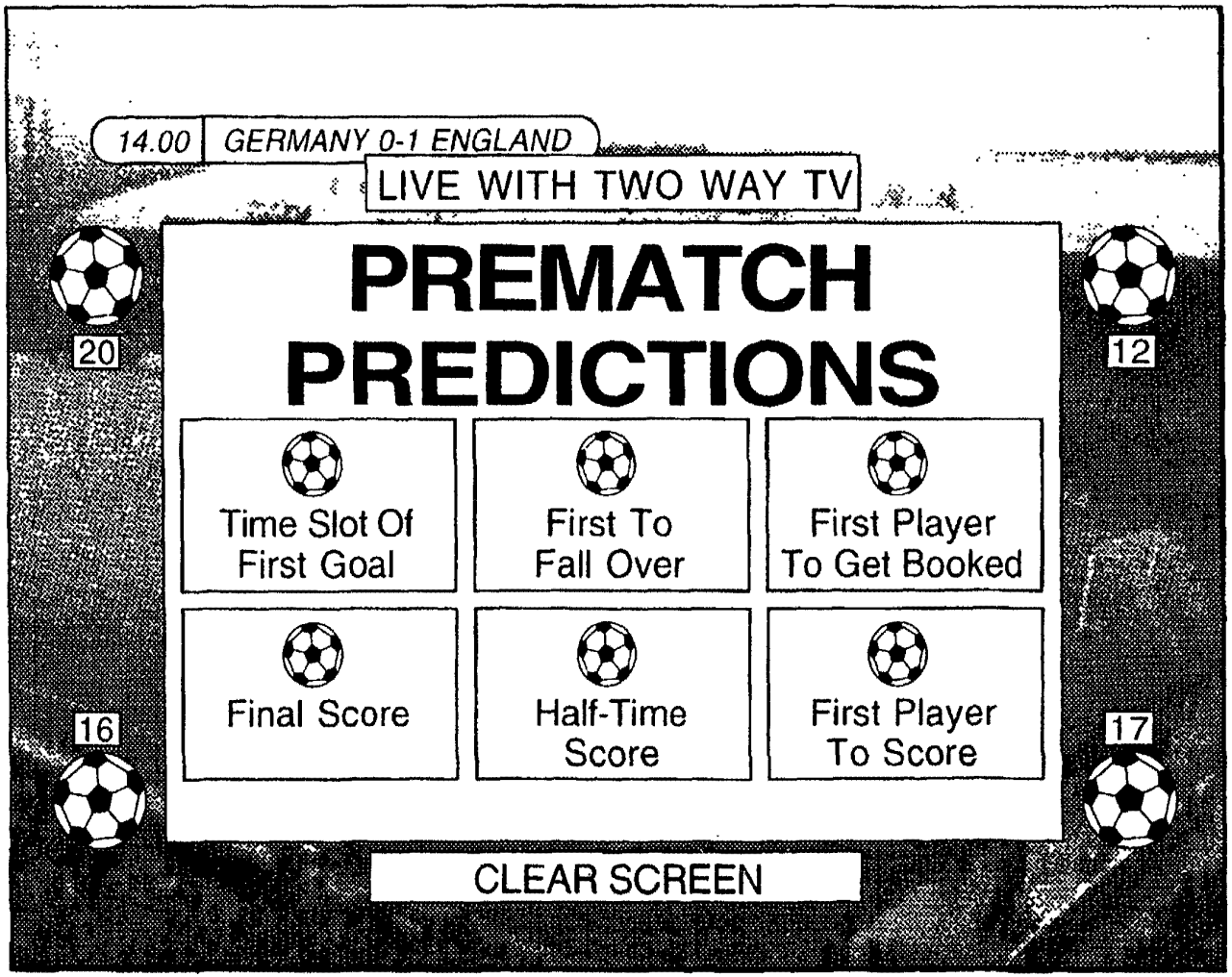
Fig.5.



EP 0 873 772 B1

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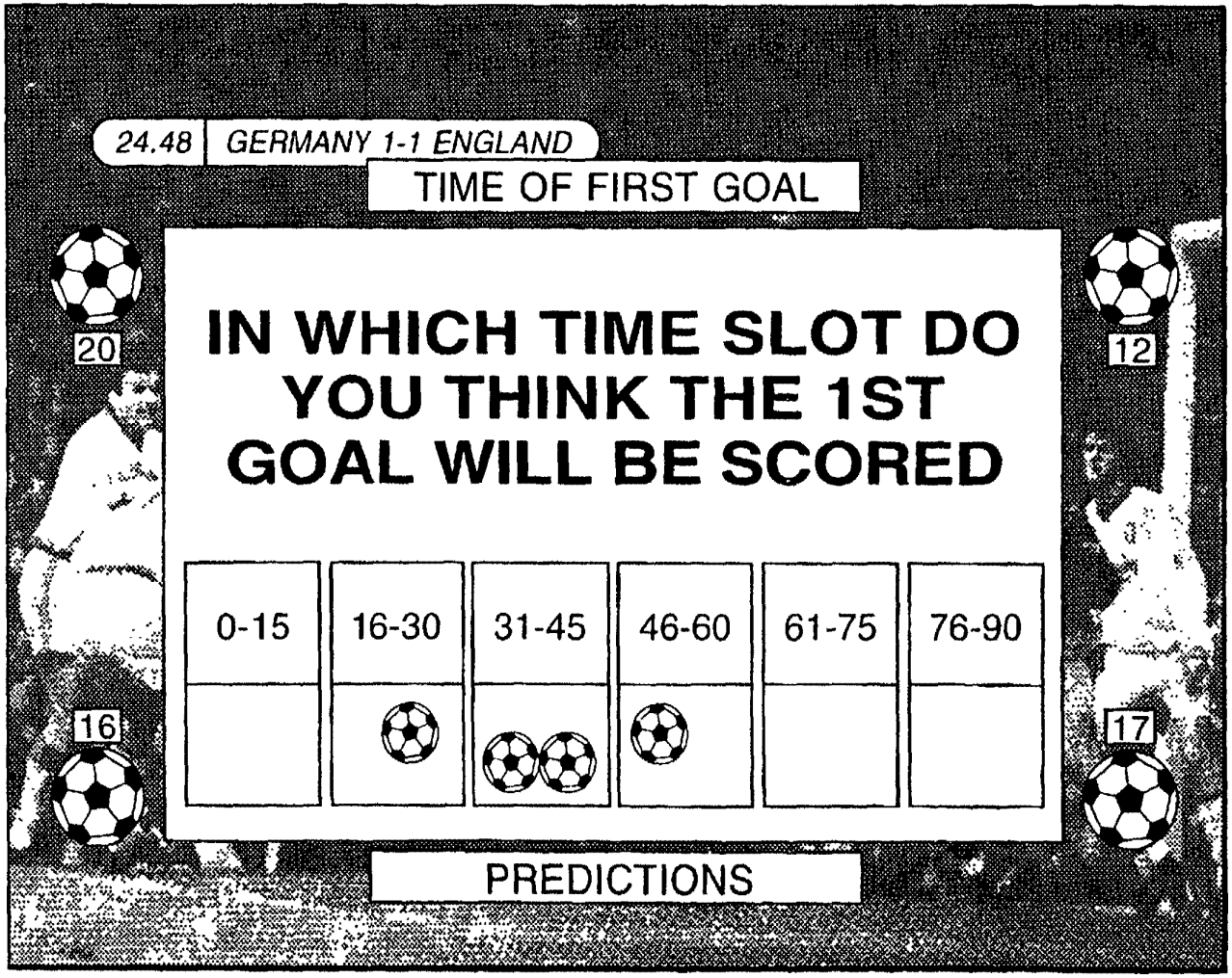
Fig.6.



EP 0 873 772 B1

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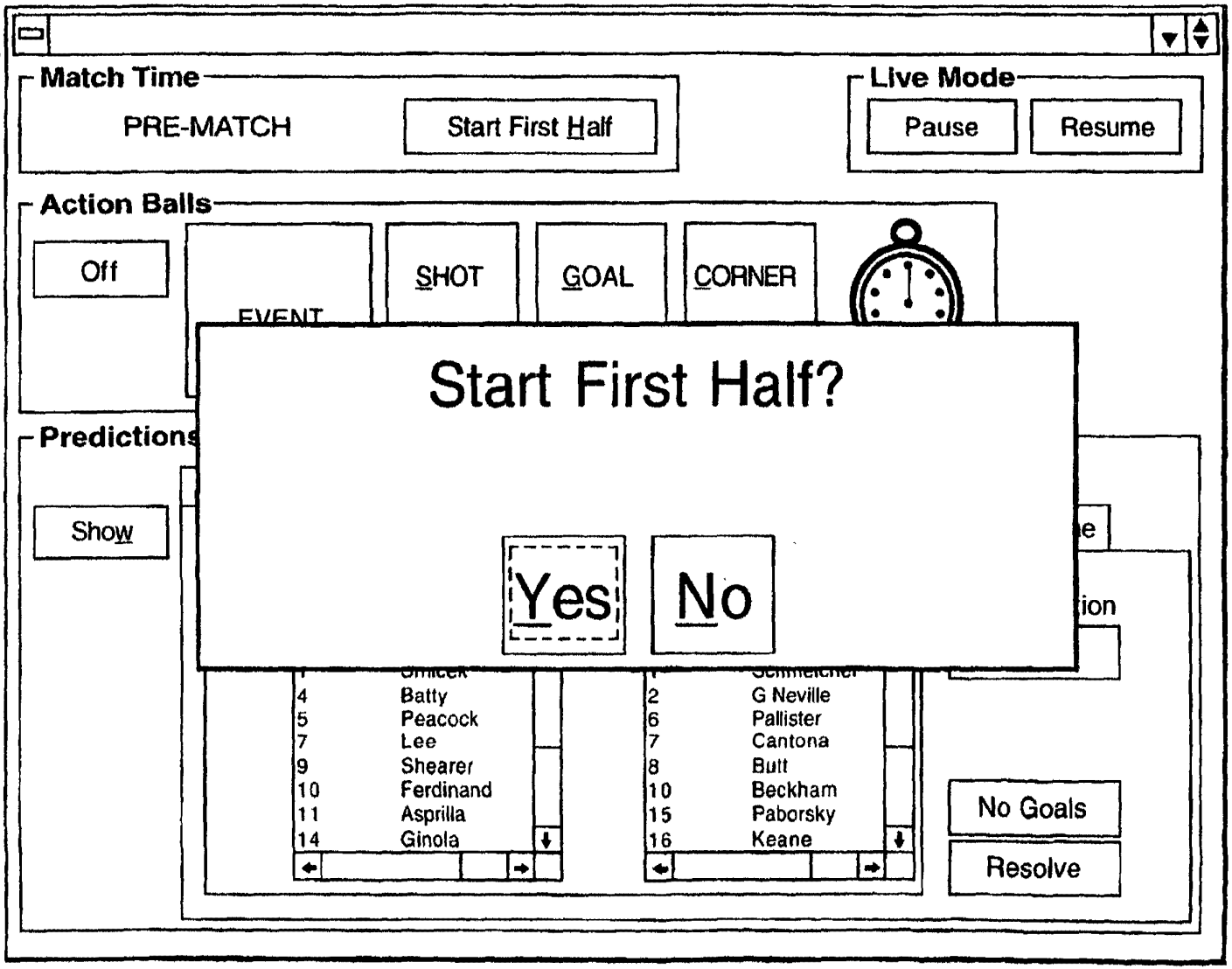
Fig.7.



EP 0 873 772 B1

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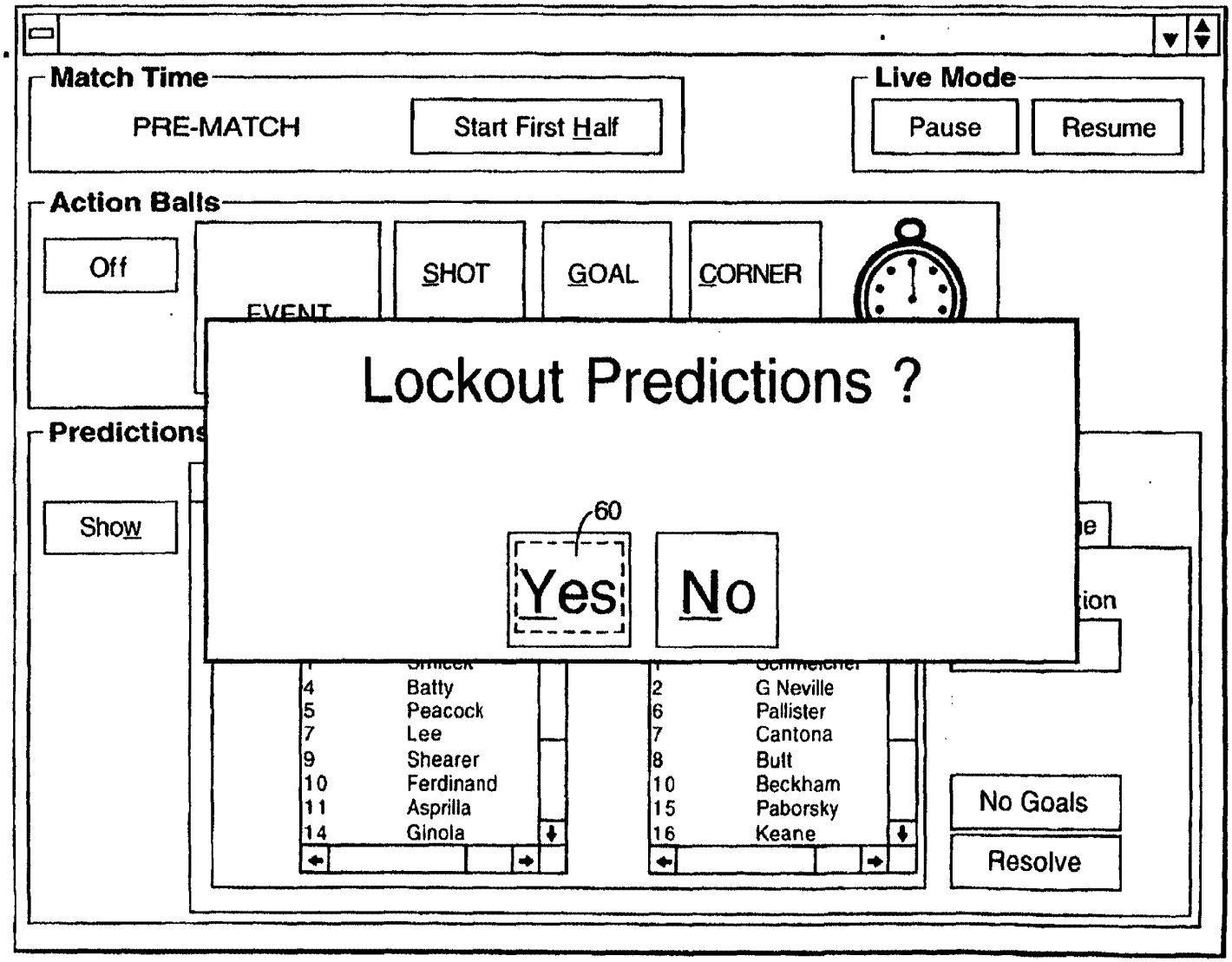
Fig.8.



EP 0 873 772 B1

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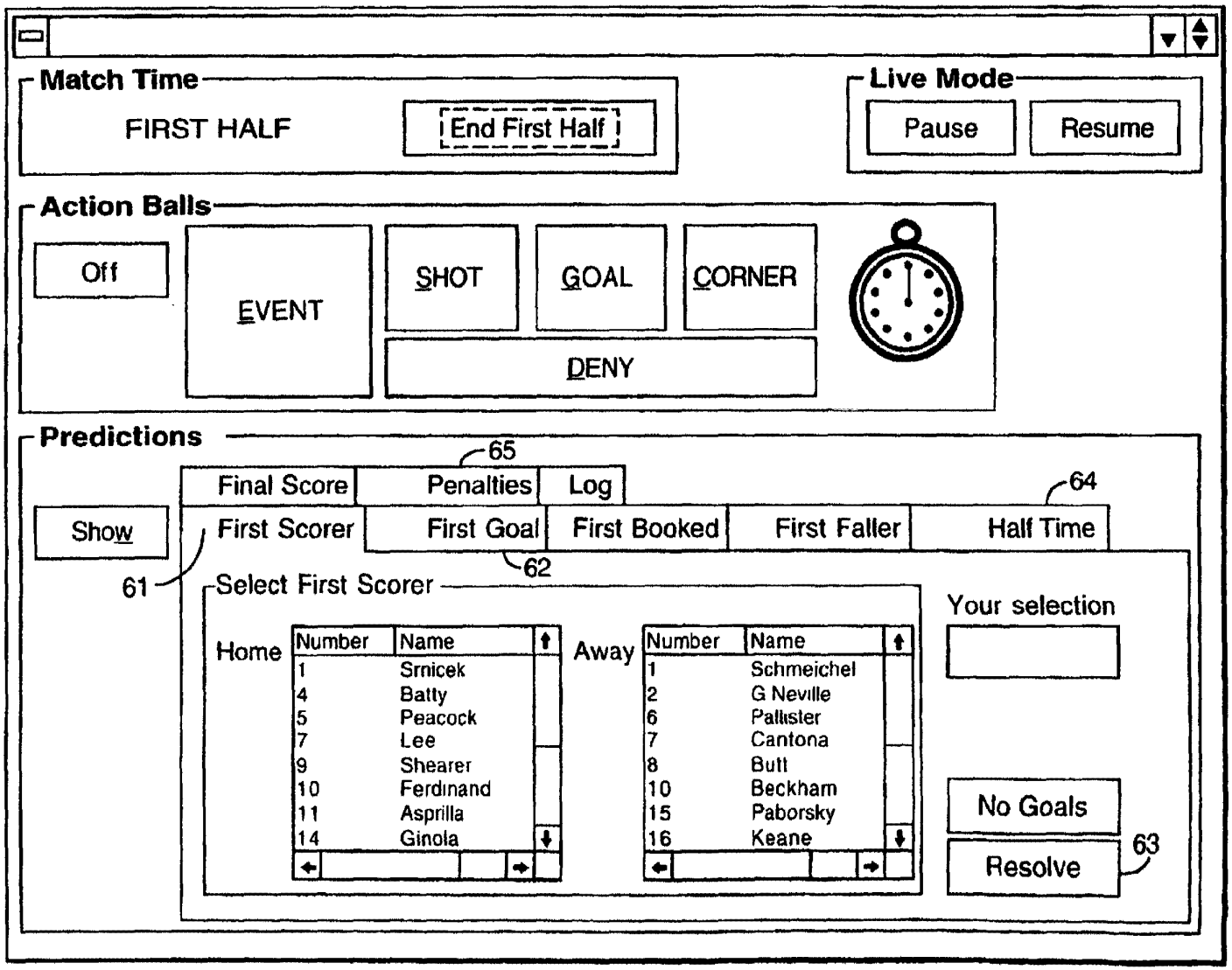
Fig.9.



EP 0 873 772 B1

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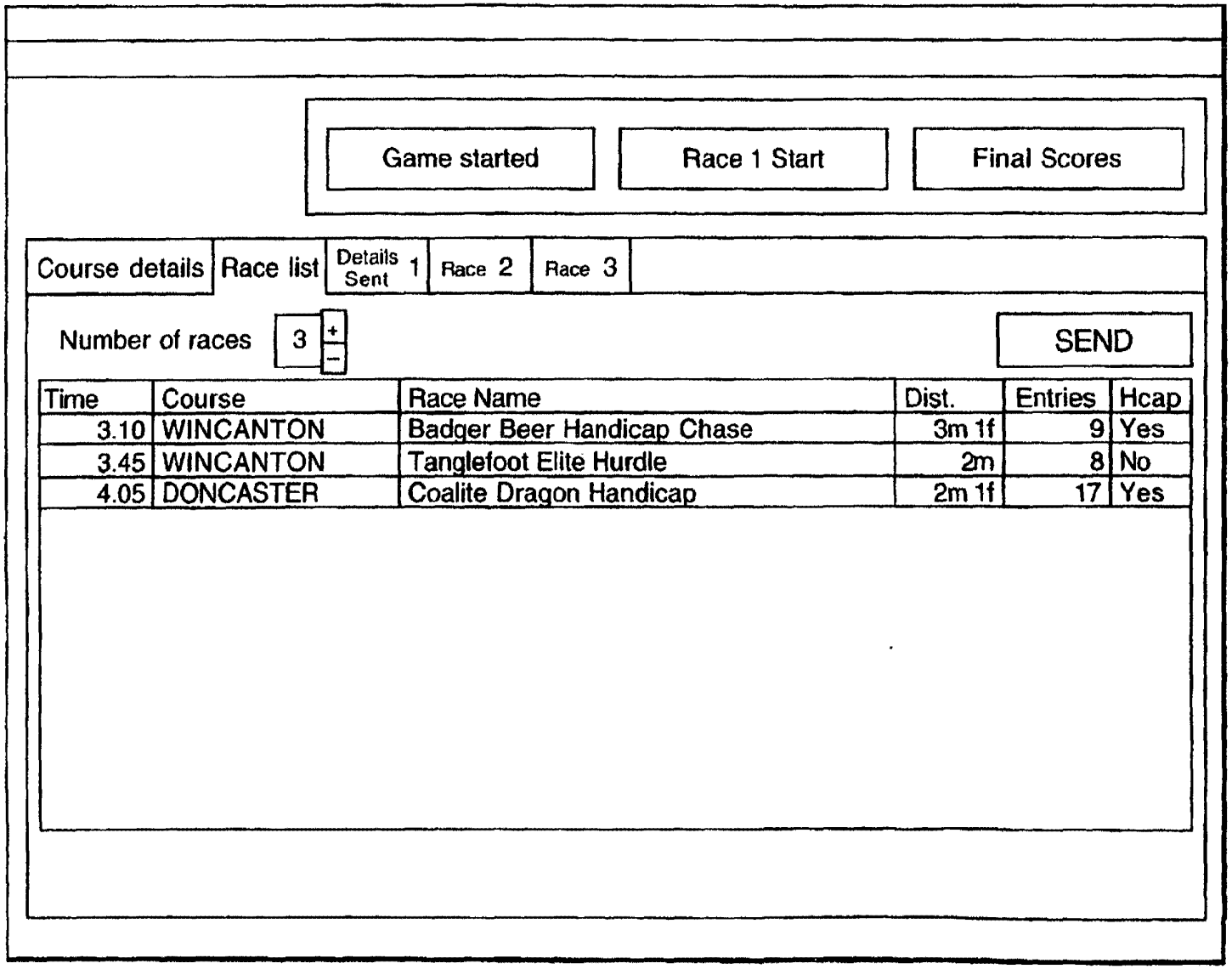
Fig.10.



EP 0 873 772 B1

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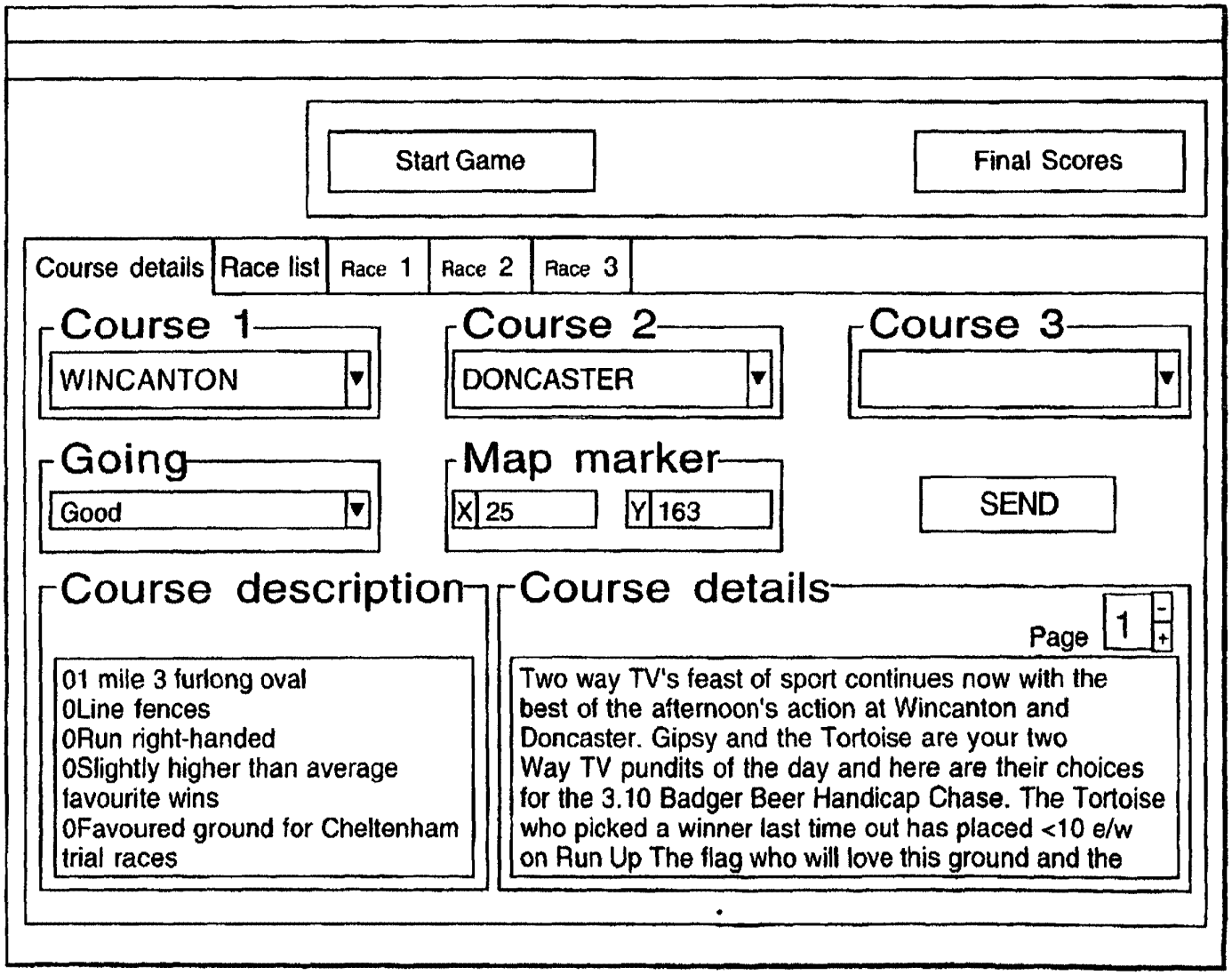
Fig.11.



EP 0 873 772 B1

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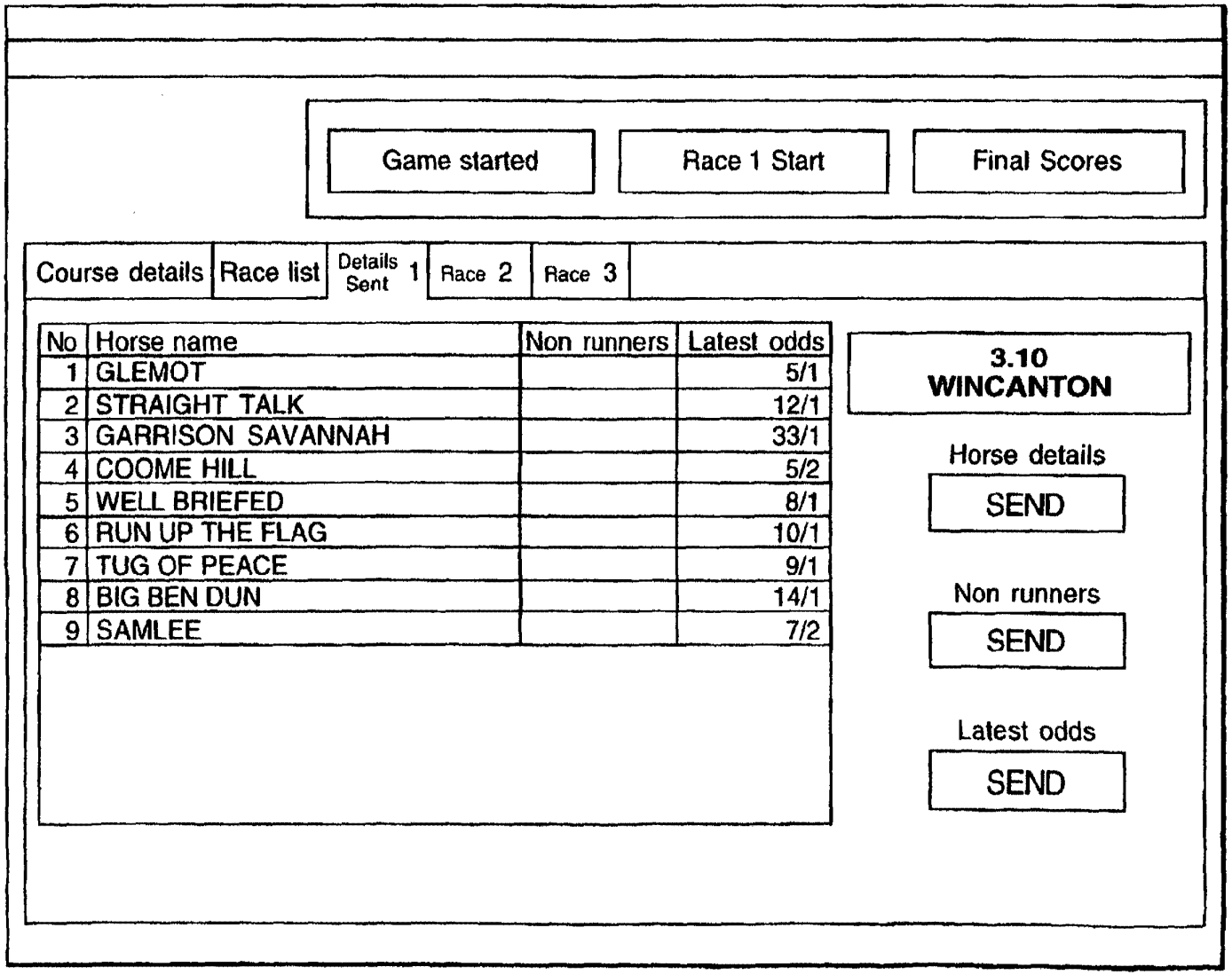
Fig.12.



EP 0 873 772 B1

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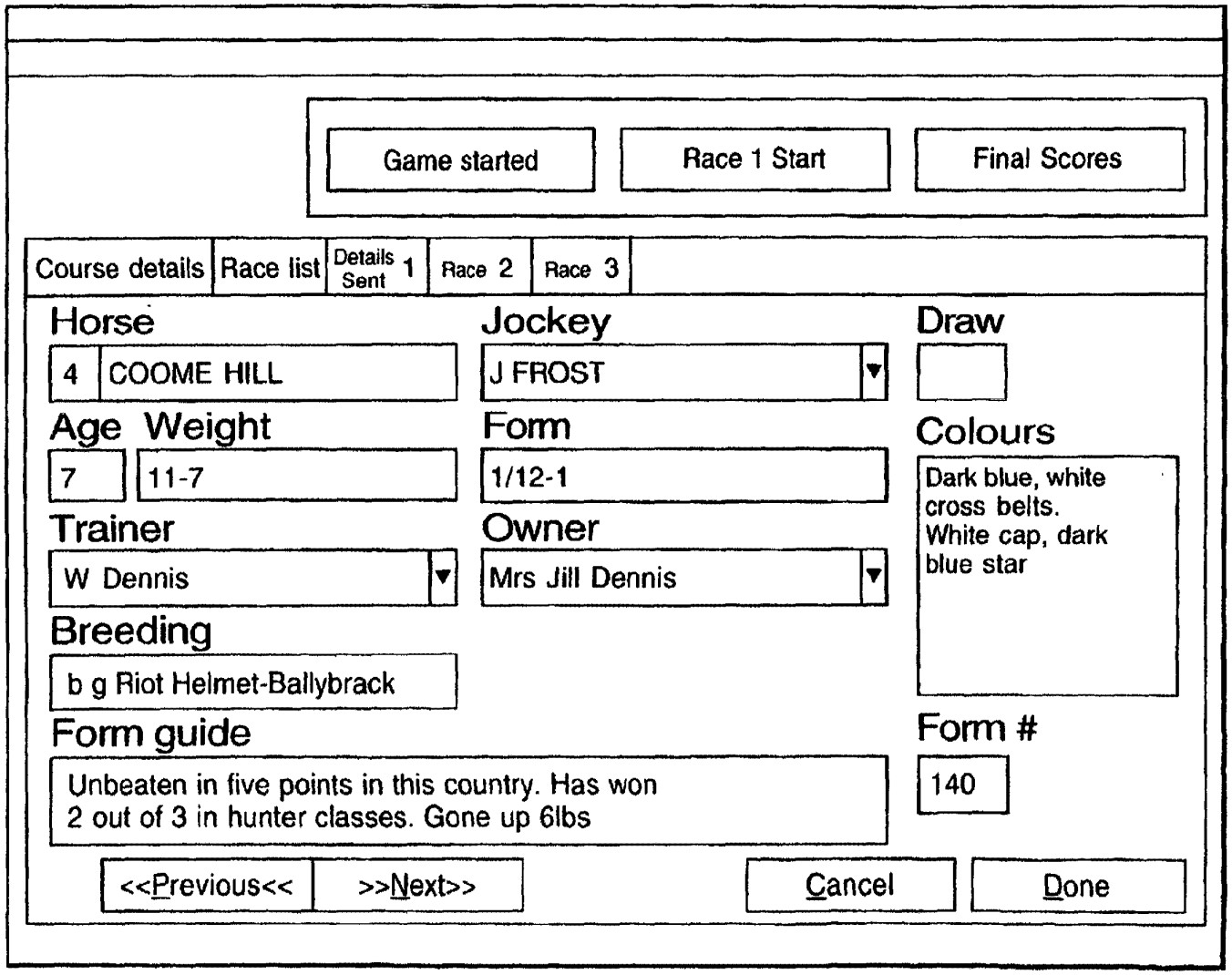
Fig.13.



EP 0 873 772 B1

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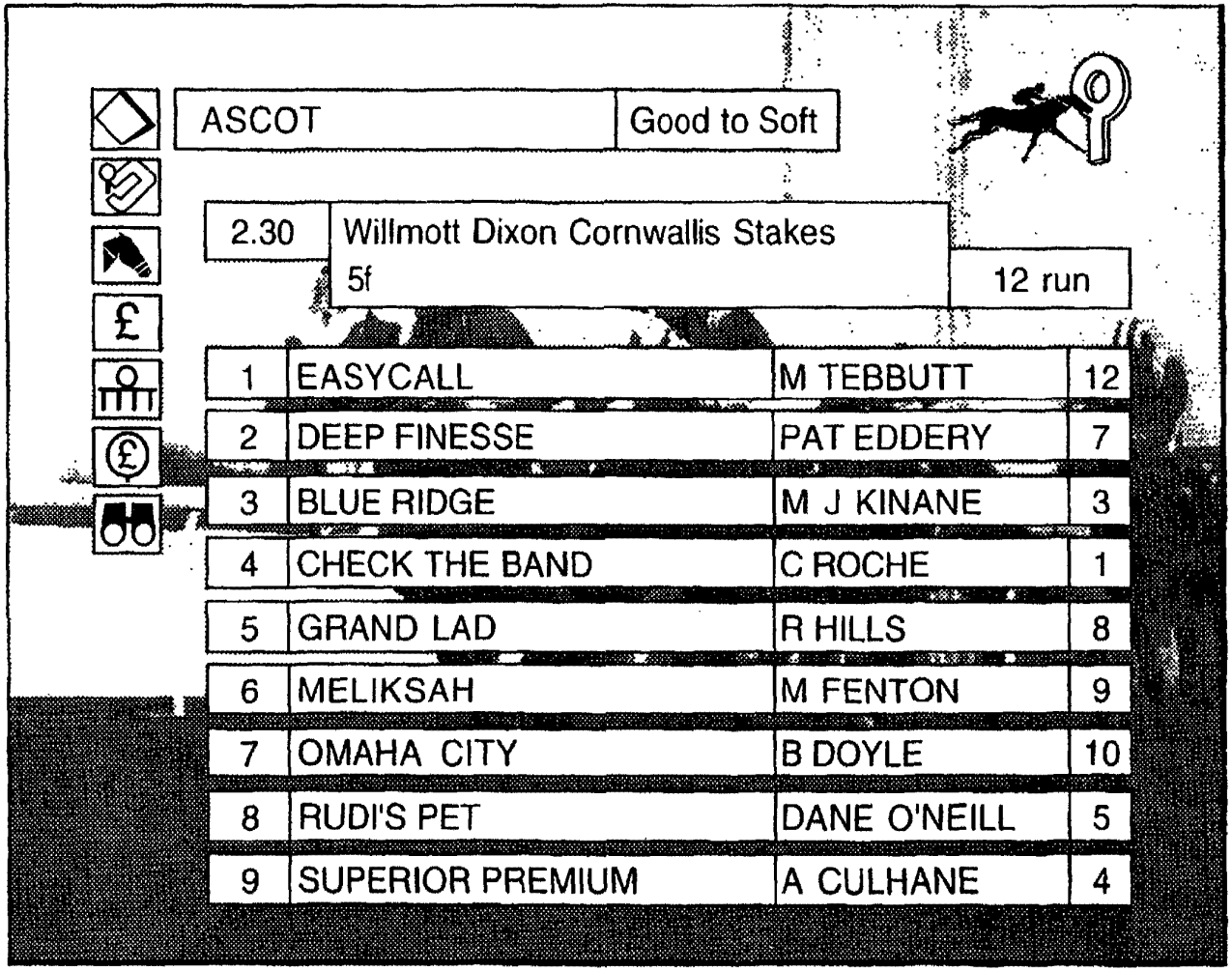
Fig.14.



EP 0 873 772 B1

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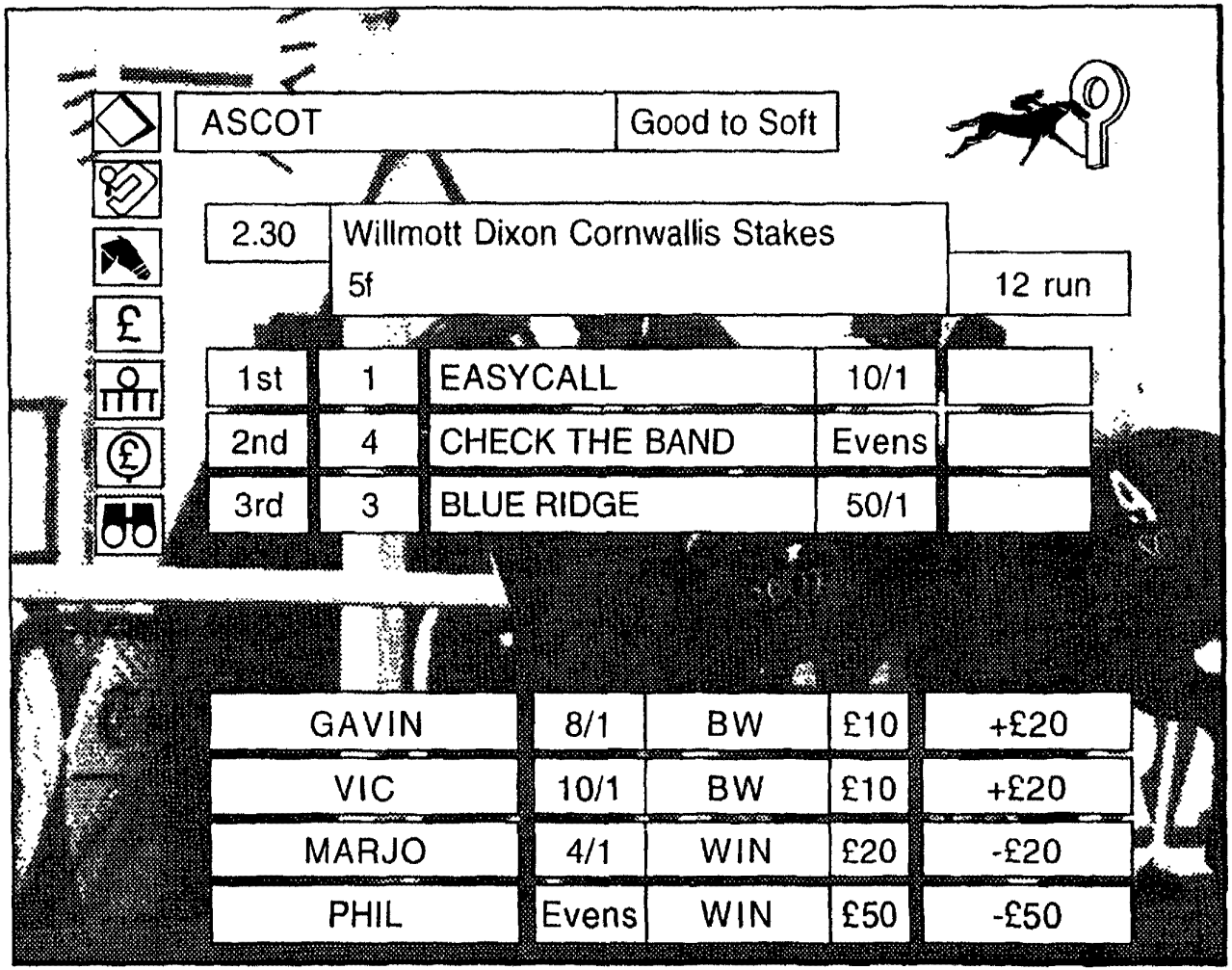
Fig.15.



EP 0 873 772 B1

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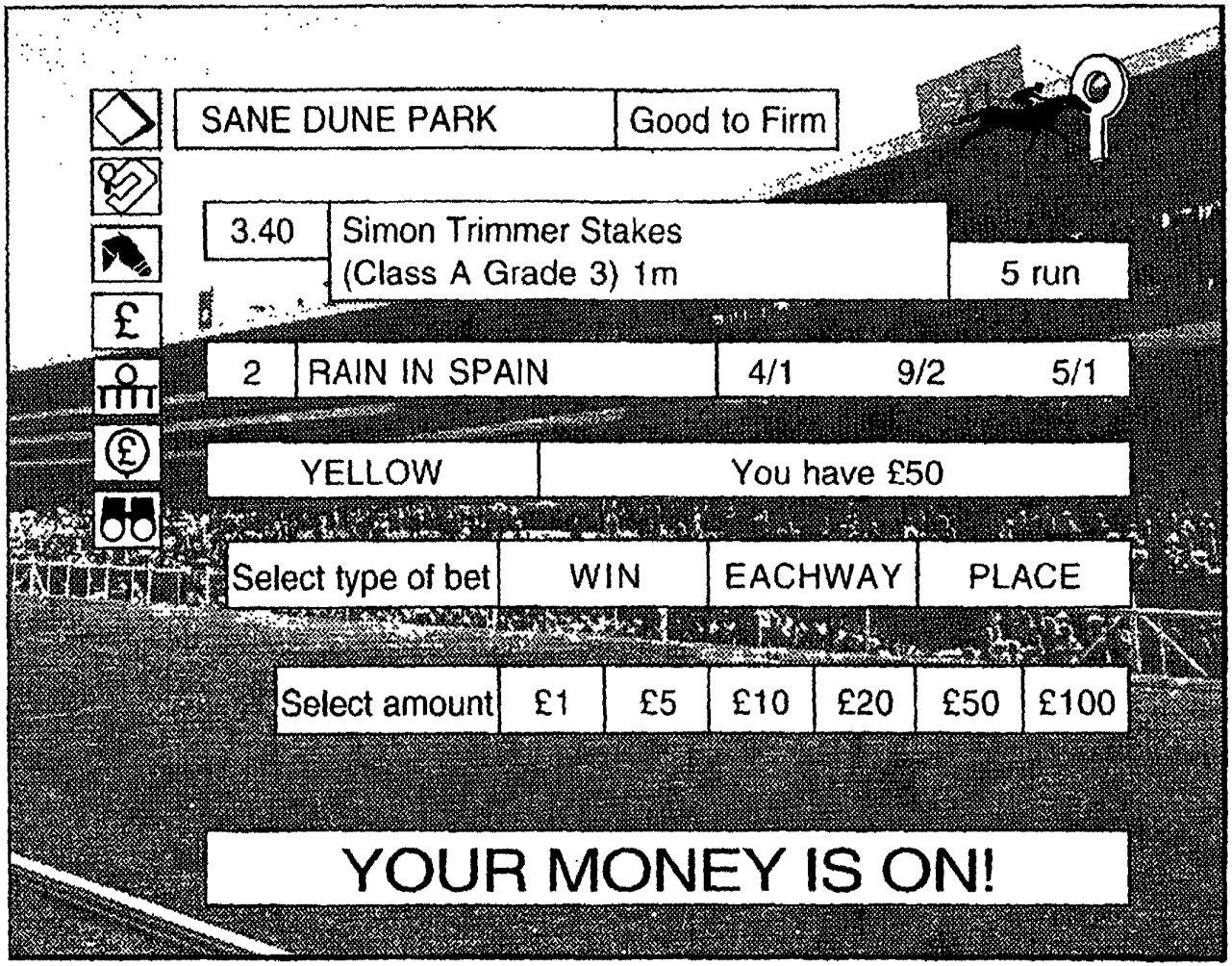
Fig.16.



EP 0 873 772 B1

FanDuel Ex. 1002-1377
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Fig.17.



EP 0 873 772 B1

FanDuel Ex. 1002-1378
FanDuel Ex. 1002-1378

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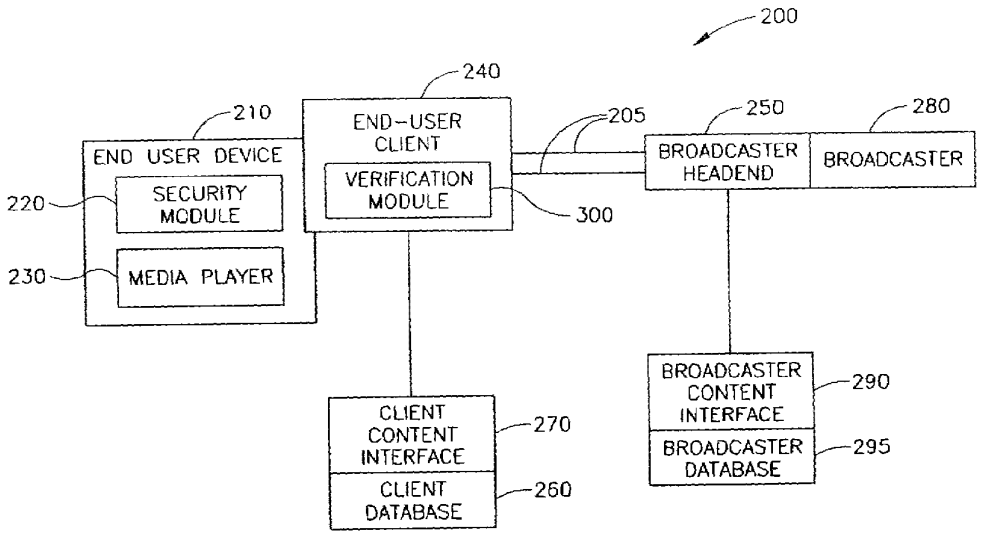
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[Continued on next page]

(54) Title: SECURE DIGITAL CONTENT DELIVERY SYSTEM AND METHOD OVER A BROADCAST NETWORK



(57) Abstract: A system and a method for secure distribution of digital media content through a packet-based network such as the Internet. The security of the present invention does not require one-to-one key exchange, but rather enables keys, and/or information required in order to build the key, to be broadcast through the packet-based network. The digital media content is then also preferably broadcast, but cannot be accessed without the proper key. However, preferably only authorized end-user devices are able to access the digital media content, by receiving and/or being able to access the proper key. Thus, the present invention is useful for other types of networks in which digital media content is more easily broadcast rather than unicast, in addition to packet-based networks.

WO 01/91465 A2

FanDuel Ex. 1002-1379

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

FanDuel Ex. 1002-1380

SECURE DIGITAL CONTENT DELIVERY SYSTEM AND METHOD OVER A BROADCAST NETWORK

FIELD OF THE INVENTION

The present invention relates to a system and a method for digital content delivery, and in particular, to such a system and method in which the digital content is broadcast and/or multicast securely through a broadcast network, such as a packet-based network and/or IP network.

BACKGROUND OF THE INVENTION

Digital media content can easily and efficiently be delivered through any type of suitable network, although typically such digital content has been delivered through cable and/or satellite networks as broadcast digital content. However, in order for digital content to be fully effectively delivered to users, the basis for secure delivery needs to be provided. In particular, if payment is required, the digital content should be secure against theft, such that only authorized users can retrieve and display the digital content. At the same time, the content also should be delivered in an efficient manner, for example by enabling the secure delivery to be performed efficiently, without hindering or otherwise reducing the performance of the delivery mechanism itself, such as broadcast and/or multicast, for example.

One attempt to provide such effective mechanisms is described in US Patent Nos. 5,282,249 and 5,481,609, both to Cohen et al., which are hereby incorporated by reference as if fully set forth herein. The disclosed system enables a signal containing media content to be broadcast widely, yet only to be played back or otherwise displayed by authorized users. This signal could contain a television program for example. The signal is scrambled, such that the authorized users are able to unscramble the signal and play back or otherwise display the media content only with the proper security device, such as a smart card for example. Thus, widely received media content is still protected from access by unauthorized users.

Scrambled television data streams described in the Cohen et al patents comprise both scrambled data representing television signals and coded control messages, also known as ECMs (Entitlement Control Messages). The ECMs of Cohen et al comprise, in a coded form, data necessary for generating a control word (CW) which may be used to descramble the scrambled data representing television signals. An ECM is also termed a control word packet or CWP.

Data necessary for generating a control word is known in the background art to take many different forms and may include, in general, at least any of the following: a control word; an encrypted control word packet which is intended to be decrypted before use; and a seed to a generating function such as, for example, a one-way function which generates the control word upon input of the seed. Throughout the present specification and claims the terms "control word generating information" and "CW generating information" are used interchangeably to designate data necessary for generating a control word in any appropriate form, as described above.

Another attempted solution is described in published European Patent Application No. EP 0858184 and in corresponding US Patent 6,178,242, which disclose a digital recording protection system and which are hereby incorporated by reference as if fully set forth herein. The disclosed system enables the digital content to be sent in a digitally scrambled format, such that the digital content cannot be read and/or displayed without a key. The key is obtained from a control message, which is only sent to authorized users. Preferably, the key is obtained from coded information contained within the Entitlement Control Message, or ECM, for generating a control word associated with the ECM. Thus, only authorized users are able to correctly read and/or display the digital content.

In addition, the system and method described in European Patent Application No. EP 0858184 enable the authorized user to record and playback or otherwise display the digital content, while preventing the user from producing and distributing multiple playable copies of the digital content to other, non-authorized users. Therefore, the authorized user is able to fully use and enjoy the digital content, while the content itself is still protected from unauthorized use.

As described in European Patent Application No. EP 0858184, and as shown in background art Figure 1 taken from this Application, such a system includes a media device **100**, such as a television set, for playing the digital content, such as a television program for example. Media device **100** is connected to an integrated receiver-decoder (IRD) **110**, for receiving and decoding the digitally scrambled digital content. The system also features a removable security element **120**, such as a smart card for example, for providing control words for unscrambling, or otherwise rendering into a clear format, the digitally scrambled digital content by IRD **110**. In addition, the system features a digital VCR **130** for communicating with media device **100** and IRD **110**. Digital VCR **130** is able to record the digital content for later playback and/or display by media device **100**.

IRD **110** receives digitally scrambled digital content which features a plurality of ECMs, each of which is associated with, and is typically followed by, a digitally scrambled digital data

segment, containing the actual digital content. Each ECM includes coded information which can be used to generate a control word for unscrambling the associated digitally scrambled digital data segment. Typically, removable security element **120** generates the control word. IRD **110** is then able to unscramble the digitally scrambled digital content, for example for being played by media device **100**.

Background art Figure 2, also taken from European Patent Application No. EP 0858184, is a flow diagram illustrating the production of the digitally scrambled digital content. As shown, the digitally scrambled digital content is produced as an SDDS (digitally scrambled digital data stream) **140**, featuring a plurality of ECMs such as an nth ECM **145**, and a plurality of associated SDSEGs such as an nth SDSEG (digitally scrambled digital data segment) **150** which is associated with nth ECM **145**. IRD **110** of Figure 1, in cooperation with removable security element **120**, is able to use SDDS **140** in order to form a recording SDDS **165**. Recording SDDS **165** is produced with the addition of a TECM (transformed ECM) key, which is permanently associated with the system of Figure 1, even if removable security element **120** is changed, replaced or exchanged, for example. This TECM key is used to make a plurality of TECMs, shown as nth TECM **175**, from the control words of the ECMs. Thus, a system which did not feature the correct TECM key could not unscramble the recording SDDS **165** for playing back or otherwise displaying the digital content, while the authorized user is always able to play back or otherwise display the recorded digital content as long as the TECM key is available.

All of these background art references describe mechanisms for the secure delivery of content which are quite useful for such networks as cable and/or satellite networks. However, these references are less useful for packet-based networks, such as the Internet for example, as well as for other types of IP networks. Packet-based networks are typically not dedicated networks for the delivery of particular types of digital media content. Certainly, many different types of content are delivered through the Internet. Furthermore, the Internet is an inherently open, insecure conduit for digital content, as it is widely accessible. The general accessibility of the Internet is also quite useful, since digital media content could be delivered to many different users, internationally, easily and at relatively low cost. Unfortunately, the above-referenced background art references do not teach or suggest a mechanism for secure delivery of digital media content through a packet-based network, particularly for selected, targeted digital media content.

Furthermore, encryption for media content which is transmitted according to such formats and standards as MPEG (Motion Picture Expert Group) is handled at the PID level, such

that only 13 bits of information are provided, and such that decryption and re-encryption of the data would be required when transmitted across networks. Such a small amount of information is not sufficient for both encrypting the digital media content and for identifying those devices which are permitted to decrypt and access the content. The further requirement for encryption/decryption when crossing networks is also a disadvantage, since encryption of data which is transmitted according to IP protocols provides an "end-to-end" solution, such that the encrypted data is transmitted in its encrypted format to the end device or client. By contrast, PID is a data link protocol only, and as such, any encrypted data which is transmitted must be decrypted and re-encrypted at each segment of the transmission path, such that the encrypted data cannot be transmitted directly to the end device or client in its encrypted format.

Currently, security for the transmission of content over packet-based networks is handled through one-to-one key exchange mechanisms, in which a central server sends a key individually to each end user computer. Clearly, sending such a key separately to each such computer is inefficient, as it requires extensive bandwidth. Furthermore, the management of such keys is also difficult, although a number of attempted solutions have been proposed.

For example, IPSEC (Internet security framework) was initially developed as a framework for unicast protocols, which was also intended for use for multicast transmission as an additional feature (but which was not specifically designed for multicast transmissions). However, some of the elements that can be useful in a unicast environment become problematic when extended to multicast situations. A case in point is key based security systems and their required infrastructure.

There are two main areas for classic key management in a multicast environment: initializing a multicast group with a common key and rekeying (or updating) the multicast group. For example, public key systems require a mechanism for obtaining the public keys necessary. A server and request model per session is notably insecure, e.g. imposter, man-in-the-middle, etc. If a client-server model is to be used, then third party authentication and certification is also necessary, for example according to the X.509 standard. This standard allows for certification hierarchy, and traversal of trusted paths; however, it is a slow and traffic heavy distribution method.

Cryptographic techniques have been proposed in order to increase the security of key distribution, by encrypting the keys before they are sent. Unfortunately, a basic problem with using cryptographic techniques for key distribution is that each user must be authenticated to receive a key.

In general, standard group key management schemes establish and manage a common key for all members of a group. These management schemes are used for encryption standards and group authentication. A particular problem in this area is related to key revocation methods, as these models tend to work with largely static key possession, since updating with the distribution methods available tends to be bandwidth expensive and time consuming. Examples of key management protocols are described with regard to United Kingdom Patent No. GB 2353682 and US Patent Application No. 09/502,867, both of which are hereby incorporated by reference as if fully set forth herein.

One example of a significant Group Key Management proposal is the GKMP protocol, which uses symmetric keys for all members of the group. This mechanism features a dedicated Group Controller (GC) whose responsibility is managing the group keys. The GC generates group keys in a joint operation with a selected group member. It then communicates with each member separately, validating permissions and sending it a group key, which is encrypted using a shared key (between that member and the GC). This method has very obvious and severe scaling difficulties.

The Scalable Multicast Key Distribution protocol uses Core-Based Tree routing protocol and provides a secure join to a group tree in a scalable method. In such a tree, the routers know the identities of their tree neighbors, and starting from the core which serves as a GC (for generating group session keys and key distribution keys) and working outwards, each router is delegated the ability to authenticate joining members and provide them with the group key. This method is scalable, however it is tied to a specific routing protocol, and combines routing with security, such that each router must be fully trusted since it has the same keys as the GC.

In MKMP (Multicast Key Management Protocol), the initial Group Key Manager (GKM) delegates key distribution authority dynamically. The GKM generates a group key and then sends a multicast message soliciting members to whom it can delegate the distribution authority for the rest of the group members. A message containing keys and access lists is sent to and decrypted by those solicited members, who will then operate as GKMs in their own right. This method allows for a dynamic adaptable on-line group topology. Since MKMP uses a single key for the total group it avoids multiple (hop-by-hop) decryption/re-encryption of payload.

Iolus deals with scalability issues by using a "secure distribution tree", wherein the multicast group is divided into a hierarchical set of subgroups. There is a Group Security Controller (GSC) at the top level and Group Security Intermediaries (GSIs) for managing the subgroups. Each subgroup has its own sub-key, chosen by the GSI. The GSI knows the keys to

the subgroup and the next higher group and translates messages between the levels. This models suffers from built in latency, during decryption and re-encryption and has difficulties dealing with untrusted GSIs.

In general, GKMP systems which rely on a single group controller still have difficulty scaling to large systems and are burdened by the 'single point of failure' attribute. Single point of failure in this instance also reflects in the security realm. Where, in some of the models above, more than one GC is used, the compromise of one such GC usually means a compromise of the other GCs as well. Furthermore, all of these protocols suffer from drawbacks in the area of compromise recovery and/or revocations of membership.

Various methods have been discussed in the literature in order to improve group key management systems, for example by using groups of members as controllers and cluster architectures. Hardjono, et al ("Secure IP Multicast: Problem areas, Framework, and Building Blocks ", Internet Research Task Force, draft-irtf-smug-framework-01.txt September 2000; for other references, see the list at the end of this section) suggest a further extension of the Iolus tree distribution model, and other extensions/proposed solutions have also been suggested.

In 'Key management for Multicast: Issues and Architecture' (see full reference below), a hierarchical tree approach is proposed in order limit the number of transmissions (key exchanges) and storage (of keys) required. Although more efficient than other variations, the basic key distribution principles are still enforced and are still subject to the same arguments previously cited against standard key distribution models.

The above problems become even more complex with regard to key revocation. In order to prevent new group members from accessing older data or leaving members from accessing new data, a group controller has to change the multicast group key whenever membership in the group changes. Adding a new member either from a central GC or from one of the distributed models is fairly straight forward and efficient, i.e. using a one to one unicast model. However revoking membership rights in the standard group key protocols becomes very problematic, because the leaving member already has the group key.

The approach taken by many key management protocols (GKMPA, SMKD, MKMP) to remove members is to generate a new group key, and to send it independently to each of the remaining group members, usually using secret keys which are shared between each of the members and the GC. In this scenario, a new multicast group is created. But the scaling problems here are significant, as are the timing issues, i.e. how to make the new key available in time to access the new data, and how to manage cases where it does not. In particular, the group

is not operational during the recovery process once the old key has been declared to be invalid, such that recovery/revocation processes are inefficient and may even prevent the legitimate members from receiving data and/or other services. Timing issues are less significant for the initial creation of the group, since members may be selected and may receive the key(s) well in advance of the actual operation of the group.

The alternatives discussed above where groups are divided into various sub-groups, be they trees, hierarchical trees, clusters, etc allow for better scaling by simply requiring changes within the affected subgroup. It does become more complex when one of the local controllers for a group becomes untrusted, since replacement keys must be handled within a complex structure, and between different levels of influence.

Various other mechanisms are defined in the literature to overcome these problems, including using sets and subsets of keys distributed amongst the group members, multiple keys distributed in such a fashion that each member cannot compute a new key value on its own, but rather requires active participation of the other members, etc. None of these mechanisms overcome the previously described problems which are inherent to such key distribution mechanisms.

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The disclosures of all references mentioned above and throughout the present specification are hereby incorporated herein by reference.

SUMMARY OF THE INVENTION

None of the disclosed background art solutions provides a security system for the delivery of targeted digital media content through a packet-based network such as the Internet. Furthermore, none of the references teaches or discloses a mechanism for providing such a security system without requiring one-to-one key exchange, while still enabling selection of specific digital media content by particular end users. In addition, none of the references teaches or suggests a mechanism for broadcasting digital media content in a secure manner to a general group of end users, while still maintaining the desired degree of specificity in terms of those end users who actually use or access the digital media content. Also, none of the references teaches or suggests a mechanism for broadcasting and/or multicasting which is itself both efficient and secure, such that the security mechanisms do not detract from the performance of the actual delivery mechanism.

Therefore, there is an unmet need for, and it would be highly useful to have, a system and a method for secure digital content delivery, which enables digital media content to be delivered through a packet-based network such as the Internet, without requiring any inherent security in the provisions of the network itself, and without requiring one-to-one key exchange.

The present invention, in preferred embodiments thereof, fulfills these needs by providing a system and a method for secure distribution of digital media content through a broadcast network, which may be a packet-based network such as the Internet and/or any type of IP network (even for those IP networks which are not packet-based networks). However, for the purposes of discussion only, the following description centers around packet-based networks, and more specifically IP networks which are packet-based networks, such as the Internet for example. In addition, the present invention is particularly concerned with broadcast and/or multicast transmissions through such networks.

The security of the present invention does not require one-to-one key exchange, but

rather enables keys, and/or information required in order to build the key, to be broadcast through the network. The digital media content is then also preferably broadcast, but cannot be accessed without the proper key. However, preferably only authorized end-user devices are able to access the digital media content, by receiving and/or being able to access the proper key. Thus, the present invention is useful for other types of networks in which digital media content is more easily broadcast rather than unicast, in addition to packet-based networks.

The present invention, in preferred embodiments thereof, supports the distribution of content to end user devices from one or more central distribution points, as in client-server models and variations thereof, and/or peer-to-peer distribution, for example between end user devices. In addition, the present invention, in preferred embodiments thereof, also supports distribution models within either of these mechanisms for unitary distribution, to a specified end user device, or broadcast/multicast distribution, to a plurality of end user devices. In any case, in order for the distributed content to be operative, for example to be "played back" or otherwise displayed, the recipient end user device is optionally and more preferably in communication with a broadcaster at least once before such a display is permitted. The broadcaster then enables the recipient end user device to play back or otherwise display the received content, for example by sending a code to the recipient end user device. Optionally, the broadcaster may require payment to be received before enabling the content for the recipient end user device. Thus, the present invention supports flexible distribution of content according to a number of different distribution models, while still preventing unauthorized play back or other display.

According to preferred embodiments of the present invention, there is provided a combination of secure hardware and software to prevent and/or at least retard unauthorized access or "hacking". In order for access to the distributed content to be controlled, the content itself must be protected, for example by encryption or scrambling. Hereinafter, the term "scrambling" is considered to encompass both encryption, which involves the mathematically determined alteration of content or even only a part thereof to a form which cannot be read without the proper key, and a simpler form of scrambling, which involves the rearrangement of portions of the content, such that the content is only readable when properly rearranged. Indeed, even the simpler forms of scrambling can be effectively performed by altering, or otherwise rendering inaccessible, a small percentage of the overall content, after which the entire unit of content can no longer be displayed. By protecting the content itself, the present invention enables the content to be completely portable, and to be distributed freely, while still ensuring that control of access to the content is maintained by a central authority as required.

The preferred combination of hardware and software components enables the present invention to most effectively protect access to the content, while still enabling the user to easily and transparently play back, or otherwise display, the content. More preferably, the end user device which is used for the present invention includes a security module, for unscrambling the digitally scrambled content according to a received code. The security module optionally and more preferably features a renewable security submodule, such as a smart card with a smart card reader for example, although of course any suitable combination of software and/or hardware may optionally be used. The security module receives the necessary code from the broadcaster, and is then able to unscramble the received content for play back or other display. Most preferably, the operation of the security module is transparent or substantially transparent to the end user.

According to the present invention, there is provided a method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising: providing a plurality of packets; securing the plurality of packets according to security information to form secured packets; transmitting the security information to more than one end user device simultaneously through the packet-based network; and multi-casting the secured packets to the plurality of end user devices.

According to another embodiment of the present invention, there is provided a method for producing a conditional access (CA) system for use in a packet-switched environment (packet CA system) from a CA system for use in a broadcast environment (broadcast CA system), the method comprising: providing a broadcast CA system comprising at least one CA security characteristic; providing a packet-switched data transmission system including a security subsystem having a plurality of packet-switched security characteristics; and creating a mapping from the at least one CA security element to at least one of the plurality of packet-switched security elements, thereby producing a packet CA system.

According to yet another embodiment of the present invention, there is provided a packet-switched conditional access (CA) system for use with an end-user playback device, the CA system comprising: a protected data receiver for receiving protected data protected with at least one key; an ECM packet receiver for receiving at least one ECM packet from a packet-switching network; and an ECM-based key generator for generating the at least one key from the at least one ECM packet.

According to still another embodiment of the present invention, there is provided a method for providing an entitlement control message (ECM) based conditional access (CA)

system based on a packet-switching network comprising: receiving a plurality of ECMs via the packet-switching network; storing the plurality of received ECMs; and choosing, from among the plurality of stored ECMs, an ECM for providing access to CA-protected data.

According to yet another embodiment of the present invention, there is provided a method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising: encrypting a plurality of packets with a key to form encrypted packets, the key having associated key information for determining the key; multi-casting the associated key information to the plurality of end user devices through the packet-based network, thereby obviating the need to send the associated key information to each end user device individually; and multi-casting the encrypted packets to the plurality of end user devices to form the secure transmission mechanism.

According to still another embodiment of the present invention, there is provided a method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising: multi-casting a plurality of secured packets and security information to the plurality of end user devices, thereby obviating the need for a one-to-one transmission of the security information to each end user device individually and thereby forming the secure transmission mechanism.

Hereinafter, the terms "file", "portion", "item" or "stream", with regard to digital content, are used interchangeably and refer to any unit of data for such digital content, whether as a functional unit such as a packet for example, or as a conceptual unit such as a television program for example. "Streamed" or "streaming" data may also be considered as being formed from any type of unit of data.

Hereinafter, the term "display" refers to any type of playback or playing out of media content data for a user, or otherwise rendering such data sensible to one or more human senses, including, but not limited to, the audible production of audio data and the visible production of video data, and combinations thereof.

Hereinafter, the term "network" refers to a connection between any two or more computational or other electronic devices which permits the transmission of data.

Hereinafter, the term "computational device" includes any type of digital instrument which is capable of operating a software program.

For the present invention, a software application could be written in substantially any suitable programming language, which could easily be selected by one of ordinary skill in the art. The programming language chosen should be compatible with the computational device

according to which the software application is executed. Examples of suitable programming languages include, but are not limited to, C, C++, Java and Assembly.

In addition, the present invention could be implemented as software, firmware or hardware, or as a combination thereof. For any of these implementations, the functional steps performed by the method could be described as a plurality of instructions performed by a data processor.

Hereinafter, "Applied Cryptography" by Bruce Schneier, John Wiley 2nd ed. 1996, is incorporated by reference as if fully set forth herein, for the teachings regarding cryptography and techniques for implementation thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

FIG. 1 is a schematic block diagram of a background art system;

FIG. 2 shows a flow diagram illustrating the production of the digitally scrambled digital content according to the background art;

FIG. 3 is a schematic block diagram of a system according to the present invention for secure delivery of digital content through a packet-based network;

FIG. 4 shows an exemplary format of an encrypted media content packet according to the present invention;

FIG. 5 shows an exemplary format for ECM packets according to the present invention;

FIG. 6 shows an exemplary EMM packet according to the present invention;

FIG. 7 shows an exemplary but preferred implementation of the broadcaster headend of Figure 3 in greater detail according to the present invention; and

FIG. 8 shows an exemplary but preferred implementation of the end-user client of Figure 3 in greater detail according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention features a system and a method for secure distribution of digital media content through a packet-based network such as the Internet, or another type of IP network, through multicasting and/or broadcasting of data. The security of the present invention does not require one-to-one key exchange, but rather enables keys, and/or information required in order to build the key, to be broadcast through the packet-based network. The digital media

content is then also preferably broadcast, but cannot be accessed without the proper key. However, preferably only authorized end-user devices are able to access the digital media content, by receiving and/or being able to access the proper key. Thus, the present invention is useful for other types of networks in which digital media content is more easily broadcast rather than unicast, in addition to packet-based networks and/or various types of IP networks.

The present invention supports the distribution of content to end user devices from one or more central distribution points, as in client-server models and variations thereof, and/or peer-to-peer distribution, for example between end user devices . In addition, the present invention also supports distribution models within either of these mechanisms for unitary distribution, to a specified end user device, or broadcast/multicast distribution, to a plurality of end user devices. However, for the purposes of the present invention, distribution by broadcast and/or multicast is considered to be particularly preferred. In any case, in order for the distributed content to be operative, for example to be "played back" or otherwise displayed, the recipient end user device must have been in communication with a broadcaster at least once before such a display is permitted. The broadcaster then enables the recipient end user device to play back or otherwise display the received content, for example by sending a code to the recipient end user device. Optionally, the broadcaster may require payment to be received before enabling the content for the recipient end user device. Thus, the present invention supports flexible distribution of content according to a number of different distribution models, while still preventing unauthorized play back or other display.

According to a preferred embodiment of the present invention, the digital media content is securely transmitted through an IP network as the packet-based network (although non-packet based IP networks and/or non-IP but packet-based networks are also optionally implemented with the present invention). Optionally, the IP network is the Internet. However, transmission of such digital media content may be different than transmission of other types of data through a network such as the Internet. For example, a typical Internet-based content provider does not have a continuous or at least continuing relationship with the end user, but instead may only supply such content on a "one-off" or one-time basis.

By contrast, a broadcaster of digital media content through an IP network may optionally wish to require a subscription or repeated payments for repeated accesses to the digital media content, although alternatively, the security information may optionally be "hard-wired" into the end user receiving device. Also, payment is more likely to be regular and repeated, rather than a single individual payment. Therefore, broadcasters of content through an IP network need be

able to handle many end users in a secure, scalable manner. As previously described, one-to-one key exchanges are clearly not a reasonable, efficient, scalable mechanism for such security.

The environment of IP networks such as the Internet is also based upon a particular group of standards, which define the protocols for communication through such a network, and which are different from the communication protocols and standards for transmission through a dedicated cable network, for example. These protocols must be used for communication through the network. Thus, the present invention is preferably constructed with agreed standards and protocols, of which an example is given below for an IP network, it being understood that the present invention is operative with substantially any type of packet-based network.

Security for IP networks is currently based upon the IPSEC (Internet security framework) for creating the related set of standards, which are intended to provide a security protocol in the network layer as part of the network structure. The IPSEC standards assume but do not require that security is based upon key exchange protocols. These standards do not consider multicast scalability issues, particularly with regard to key exchange and management issues for large numbers of simultaneous users. However, the present invention is preferably compatible with the IPSEC standards, while differing in the actual application of the security protocol itself, for example by associating the media content stream with the matching ECMs (entitlement control messages) according to the IPSEC announcement protocol. More preferably, at least certain IPSEC mechanisms are used for coordinating the delivery of security information such as ECMs to the end user devices, in order to ensure compatibility between the system of the present invention and other systems.

According to preferred embodiments of the present invention, there is provided a combination of secure hardware and software to prevent and/or at least retard unauthorized access or "hacking". In order for access to the distributed content to be controlled, the content itself must be protected, for example by encryption or scrambling. Hereinafter, the term "scrambling" is considered to encompass both encryption, which involves the mathematically determined alteration of content or even only a part thereof to a form which cannot be read without the proper key, and a simpler form of scrambling, which involves the rearrangement of portions of the content, such that the content is only readable when properly rearranged. Indeed, even the simpler forms of scrambling can be effectively performed by altering, or otherwise rendering inaccessible, a small percentage of the overall content, after which the entire unit of content can no longer be displayed. By protecting the content itself, the present invention enables the content to be completely portable, and to be distributed freely, while still ensuring

that control of access to the content is maintained by a central authority.

The preferred combination of hardware and software components enables the present invention to most effectively protect access to the content, while still enabling the user to easily and transparently play back, or otherwise display, the content. More preferably, the end user device which is used for the present invention includes a security module, for unscrambling the digitally scrambled content according to a received code. The security module optionally and more preferably features a renewable security submodule, such as a smart card and smart card reader for example, although any combination of hardware and/or software may optionally be used. The security module receives the necessary code from the broadcaster, and is then able to unscramble the received content for play back or other display. Most preferably, the operation of the security module is transparent or substantially transparent to the end user.

The principles and operation of the present invention may be better understood with reference to the drawings and the accompanying description.

Referring now to the drawings, Figure 3 is a schematic block diagram of an illustrative system according to the present invention for secure delivery of digital media content through a packet-based network as an exemplary but preferred implementation of the present invention, as previously described.

As shown, a system **200** features an end user device **210** with an associated security module **220**. Security module **220** optionally and preferably comprises a smart card, such that end user device **210** (or security module **220**) would also feature a smart card reader, although of course other implementations are possible. For example, security module **220** could optionally be implemented as software alone, or as a combination of hardware and software. For the purposes of description below only and without any intention of being limiting in any way, security module **220** is assumed to include a smart card reader and smart card.

End user device **210** also features a media player **230** for playing back or otherwise displaying at least one type of media content, such as audio content for example. End user device **210** operates an end-user client **240**, which acts as the interface between end user device **210** and a broadcaster headend **250**. End user device **210** and broadcaster headend **250** communicate through at least one channel **205**. Two such channels **205** are shown, although optionally system **200** could feature more channels **205**, or alternatively could feature only one channel **205**. At least one channel **205** is preferably a network, which could be substantially any type of suitable network, including but not limited to, the Internet, a cable network or a satellite distribution mechanism. Optionally but more preferably, as described in greater detail below,

such a channel **205** is an IP network, such that communication between end user device **210** and broadcaster headend **250** is in the form of an IP session. However, the term "channel" itself may refer to any type of mechanism for data transmission, regardless of the type of data and/or the transmission medium.

Broadcaster headend **250** in turn communicates with broadcaster **280** in order to provide at least the security information to end user device **210** through end-user client **240**.

More preferably, only security features are provided to end user device **210** through end-user client **240**, and the actual content is transmitted separately. Optionally and more preferably, the actual media content is transmitted from a broadcaster content interface **290** to a client content interface **270**, through a same or different channel **205** as the associated security information, such that the security information is not necessarily transmitted with the secured content. Client content interface **270** then passes the media content to media player **230**, after such media content has been accessed with the necessary security information. Optionally and most preferably, each of client content interface **270** and broadcaster content interface **290** has access to a particular database for storing the security information, shown in Figure 3 as a client database **260** and a broadcaster database **295** respectively. Each of client database **260** and broadcaster database **295** is preferably secured with some type of security mechanism.

The security features for the content are preferably provided by encrypting the content, such that access to the media content is only possible for authorized users, although optionally contact with broadcaster **280** and/or broadcaster headend **250** is not required. However, rather than using one-to-one key exchange, which would be very inefficient as it would require specific transmission of the key to each end user device **210**, preferably access information is broadcast or multicast to a plurality of end user devices **210**. This information could be sent in the form of a particular message through channel **205**, in which case the information would be a permission message. The presence or absence of information which is locally accessible by each end user device **210** then determines whether the broadcast or multicast access information is actually usable by a particular end user device **210**, more preferably in order to create a key which is then used to access the media content by security module **220**. Optionally, if a plurality of different broadcasters **280** are present, separate storage space for credit information and/or other broadcast information is preferably provided on said security module **220** for each broadcaster **280**.

According to a particularly preferred embodiment of the present invention, the access information is preferably distributed through an ECM (control message), which more preferably enables end user device **210** to create the correct key and as such may be considered to be an

example of a permission message. For example, the ECM could comprise a seed which is input into a function performed by security module **220**, the result of which is the key required to access the media content, by decrypting the media content or otherwise rendering the media content into a displayable format.

Optionally, the ECM is broadcast to all end user devices **210**, but the particular end user device **210** is more preferably only able to generate the key if this end user device **210** also receives an EMM, or entitlement message, from broadcaster headend **250**. The EMM is optionally and more preferably used for periodic renewal of security module **220**, such that without periodic receipt of such an EMM, security module **220** eventually is no longer able to access the media content, since security module **220** is no longer able to use the ECM information to generate the key for decrypting or otherwise accessing the media content. More preferably, each EMM contains one or more content service identifiers, which may be an alphanumeric string for example. Although the term "service identifier" is used herein, it should be noted that in face such identifiers may optionally refer to any type of authorization, and not only authorizations for services. At least one such identifier is also present in the ECM, such that security module **220** is more preferably only able to access those ECMs for which a matching service identifier has been delivered in a EMM. It should be noted that there is not necessarily a one-to-one relationship between each EMM and/or each service identifier and each ECM, since service identifiers may optionally be used for granting permission to access more than one ECM, and since each ECM may optionally contain more than one such service identifier. Most preferably, each service identifier expires after the multi-cast session has finished, in order to prevent security module **220** from being able to grant access to "old" previously transmitted data, although optionally the service identifier could then be renewed and used again for a different such session.

According to an optional but preferred embodiment of the present invention, for "pay per view", an EMM is not necessarily required, although it may optionally be required in order to set those conditions under which the purchase may be made, such as possession of a particular number of credits by security module **220** for example. Instead, security module **220** would preferably receive a ECM which allows a "free preview", and/or which contains the necessary information for purchasing the content. Such an ECM could optionally and more preferably be labeled with a "general" or generic service identifier, such that the ECM would be accepted by any security module **220** and/or by security modules **220** of a particular type of end user device **210**. The user could then more preferably instruct end user device **210** to purchase the content,

for example through security module **220**. Optionally and most preferably, credits or other units of exchange for content are kept on security module **220**, particularly if security module **220** is implemented with a smart card, in order for the account of the end user to be immediately or later debited for the purchased content. Also optionally, an EMM could be used to deliver credits, tokens or the like, to enable end user device **210** to be used to purchase the "pay per view" content.

According to the optional but preferred embodiment of the present invention, the content of the EMM is stored securely in the smart card or other secure portion of security module **220**. Thus, the key, or information required to generate the key, may optionally be broadcast, while the ability to use such a key is preferably still controlled by broadcaster **280**, through the distribution of some type of permission message for example.

The EMM itself could also optionally be sent to a plurality of different end user devices **210** at one time, as a broadcast or multicast, such that a group of end user devices **210** would receive the information at once. For example, a particular EMM could be designated for one group of end user devices **210**, according to a particular subscription plan or other type of payment structure, and/or according to the network address of the members of the group of end user devices **210**. Alternatively or additionally, a particular ECM may preferably be blocked for a particular group of end user devices **210** for a "blackout". Such a blackout may optionally be implemented for such a group according to geographical location, for example in order to obey laws in a particular country, and/or according to characteristics of individual end users within the group, for example according to subscription and/or parental rating information. Preferably, the blackout is determined through a blackout identifier which is contained in the ECM, for identifying an end user device blocked from accessing the content of a particular ECM, such that access may also include the ability to use a control word and/or information for generating such a control word which is provided through the ECM.

Other types of differential access may also optionally be implemented within the present invention such that differential access is preferably defined for different levels of users. For example, such differential access can optionally be determined within the ECM based on service identifiers, where multiple service identifiers apply to one transmission and are contained in a single ECM, such that a blackout would preferably be applied to the services which are not allowed.

For a packet-based network, and particularly for an IP network such as the Internet, the EMM and ECM information is preferably sent through channel **205** according to a particular

packet format. End-user client **240** would receive a packet for ECM information which would optionally and preferably contain a header for specifying those service identifiers to which the packet information would apply, thereby also specifying which security modules **220** are able to access the ECM information, since preferably only those security modules **220** with the corresponding service identifier would be permitted to access the ECM information. Security module **220** would then compare the specified service identifier(s) to the service identifier information stored by security module **220**, and/or within an associated component, such as a smart card for example. If the packet is relevant to such a stored service identifier, then security module **220** would read the ECM information contained within the packet, in order to be able to access particular media content. Such a mechanism would enable ECM information to be generally transmitted to a plurality of end user devices **210**, but only to be used by those end user devices **210** for which it is relevant.

More preferably, broadcaster **280** controls the connection between each ECM and the media content to which the ECM provides access. If the use of EMM information/ service identifiers is implemented as preferred, broadcaster **280** also preferably controls the connection between each service identifier and the ECM information to which the service identifier grants access. Such control enables broadcaster **280** to determine which end user device **210** receives access to which media content, for example according to payment by the end user, subscription basis and/or other factors, without requiring broadcaster **280** to specifically transmit a key to each end user device **210** on a one-to-one basis. Furthermore, since most preferably both ECM information and service identifiers are renewed periodically, and indeed most preferably must be renewed periodically, the ability to broadcast or multicast ECM information and/or service identifiers to end user devices **210** is even more important, since otherwise significant amount of bandwidth for channel **205** and computational resources would need to be devoted simply to renewing the access information.

Optionally, broadcaster headend **250** repeatedly transmits the ECM while the media content is being received and displayed by end user device **210**, in order to require security module **220** to repeatedly derive the key for decrypting or otherwise accessing the media content. This requirement provides additional security, such that if the key or other security information is somehow obtained by an unauthorized user, changing the security information would prevent the unauthorized user from accessing all of the media content. Additionally or alternatively, repeatedly transmitting the ECM has the advantage of enabling an authorized security module **220** to rapidly access the multi-cast content, even if access is initiated in the

middle of a multi-cast session. Each period for which the security information is transmitted and/or valid may be termed a "key period", optionally for validating the ECM. The length of the key period may optionally be determined according to a length of time, for example, and/or could be determined by the duration of a particular multi-cast session. Other optional but preferred features of the key period include, but are not limited to, transmitting the security information, such as the ECM, in advance of the media content; short duration for the key period itself and/or rapid key change (on the order of seconds between changes); and buffering previously received ECM information and/or previously derived keys, if such information is not changed but only renewed. Both optional features prevent access to the media content from being disrupted because the transmission of the ECM is delayed, which is particularly important for IP networks and other types of networks for which transmission of the packet is not guaranteed. A corresponding preferred feature of EMMs is an authorization period, such that EMMs are preferably only valid for the authorization period, after which a new EMM must be received. Thus, the security information is still renewed, while also supporting access of authorized end users to the media content, even in a non-reliable network environment such as the Internet.

According to a preferred embodiment of the present invention, end user device **210** operates a verification module **300** for verifying both the received security information from broadcaster headend **250** and the authenticity of the information contained within security module **220**.

Verification module **300** preferably filters all communication external to end user device **210**, whether from broadcaster headend **250** or from another communication source, in order to determine whether such communication should be passed to security module **220**. For example, verification module **300** could optionally have access to identifiers for identifying particular information which is contained in EMMs, in order to determine whether security module **220** has access to such EMMs. Such identifiers may optionally include, but are not limited to, identifiers for determining access according to at least one characteristic selected from the group consisting of a characteristic of end user device **210** and a characteristic of information stored on end user device **210**.

Verification module **300** would then optionally be able to determine whether a received packet is relevant to that security module **220**, according to the EMM information as previously described. Furthermore, verification module **300** could also optionally and preferably have access to the service identifiers which are stored in security module **220**, in order to determine

whether a particular ECM should be passed to security module **220** for further processing. In addition, more preferably verification module **300** also determines the authenticity of EMMs and/or ECMs, for example by determining whether such messages are digitally signed for verification.

According to other optional but preferred embodiments of the present invention, particularly in implementations containing a plurality of broadcaster headends **250**, broadcaster headends **250** are distinguished with different levels of authorization and/or abilities. For example, some broadcaster headends **250** may only be allowed to transmit content based upon the type of service identifier.

In order to ensure compatibility between system **200** and other mechanisms for IP network security, preferably system **200** is in compliance with the IPSEC (Internet security framework) framework for determining standards, even if the features provided in these standards are not always completely used. As previously described, security for IP networks is currently based upon the IPSEC set of standards, which are intended to provide a security protocol in the network layer as part of the network structure. Optionally and more preferably, one of the announcement protocols of the IPSEC standards is used in order to associate encrypted or otherwise protected media content with the security information which is required for access, such as the particular ECM or ECMs for example. For any type of announcement protocol which is used, optionally and more preferably, the packets associated with such a protocol are encrypted, most preferably with a key which is not session-based but which is available and accessible over a longer duration (for example, during a particular subscription period). One non-limiting example of a standard for providing such encryption is the SAP (session announcement protocol) protocol of IETF. Alternatively, the announcements may also be delivered as plaintext, without encryption. However, for certain types of announcements, access to the information would preferably and preferably be restricted, for example only to those end user devices and/or security modules associated with a subscription. Alternatively or additionally, certain announcements could optionally and preferably be more freely available, for example in order to deliver general information such as a "free preview mode" for previewing content which could then optionally be purchased, which would optionally and more preferably be available to any end user device having an associated smart card (or other general characteristic).

One non-limiting example of a suitable IPSEC announcement protocol is the SDP (session description protocol), as described in RFC 2327, which is hereby incorporated by

reference as if fully set forth herein. Of course, other types of announcement protocols could also optionally be used, such as CDF (Channel Definition Format) and new XML-based proposals for example. The protocol is intended to be able to describe multimedia sessions, in which a "session" is a set of multimedia sending and receiving devices, and the streams of multimedia data which flow from sending devices to receiving devices. The description of such sessions is intended to permit those participants in the session to receive information about initiating participation, and also about the session itself. With regard to the present invention, SDP is optionally and preferably used for conveying information about the protected media content which is transmitted from broadcaster headend **250** to end user device **210**, and to coordinate between each ECM and the associated protected media content.

SDP is a text-based protocol, formatted by lines, in which each line has the format *<type>=<value>*. This information would be contained within a packet as the payload for that packet. The information contained in the *<type>* field is exactly one character and is case-significant. The information contained in *<value>* is a structured text string. The protocol permits proprietary extensions to the list of various types which are permitted, by using the type *a* for attribute. Values of type *a* can optionally be used for the entire session, but alternatively may only be used for particular components within the session.

SDP is stated to be usable for transmitting encryption keys for one-to-one key exchange mechanisms. However, the background art does not teach or suggest the use of SDP for transmitting security information through the use of the *a* or attribute parameter. The present invention uses the attribute parameter for associating an ECM with the relevant session and/or a portion of the session, by transmitting the ECM as the value for the attribute. In addition, the attribute parameter could also optionally be used in order to limit access to different portions of any given service, for example based upon payment schemes or authority levels. For example, the line containing the ECM information could optionally have the format *a=ecm:<CASID><IP address><UDP port#>*, in which "CASID" is an optional parameter for identifying the vendor of the particular system.

Another IPSEC standard which is optionally and preferably used for the present invention is the ESP (IP encapsulating security payload) protocol, as described in RFC 2406, which is hereby incorporated by reference as if fully set forth herein. The ESP format is optionally and preferably used in order to encapsulate encrypted content and to synchronize content packets with ECM information. ESP provides a header, containing information about security services, which is intended to be inserted after the IP header and before the upper layer

protocol header for IP packets being transmitted in the transport mode. According to the standard, ESP is used to provide confidentiality, data origin authentication, connectionless integrity and limited traffic flow confidentiality.

The first value in the ESP header is the 32-bit security parameters index (SPI), which is stated in the standard to be used for uniquely identifying the Security Association for the packet, in combination with the destination IP address and the security protocol. The present invention uses the SPI value in order to associate a packet containing encrypted media content with the ECM that is required to generate the key which encrypted that media content. More preferably, client database **260** contains a table for determining this association, such that the SPI is at least part of a set of information for identifying the correct ECM for the media content, and hence the correct key which is to be used for decrypting the encrypted media content. Optionally, this set of information also includes the destination IP address, the protocol being used (such as ESP for example) and the port to which the media content is sent. The port information is preferred when the security information, such as the ECM, is sent to a particular port of end user device **210**, for example when multiple vendors may supply end user device **210**. However, only the SPI is preferably used in order to be able to announce to security module **220** that the ECM or other security information has been changed when the key period changes. Therefore, a range of SPI values is preferably provided, such that each of change of SPI value indicates a change to the required ECM, and hence to the key which must be generated in order to be able to decrypt the media content.

The background art does not teach or suggest the use of SPI values for indicating the initiation of a new key period, and hence the change of ECM information which is required. However, this implementation is particularly useful since it enables security module **220** to receive a plurality of different ECMs in advance of their actual use, without compromising the ability of broadcaster headend **250** to still control access by end user device **210**. Without the SPI value itself, more preferably end user device **210** is not able to determine the correct ECM to be used to generate the key, since as previously described, the SPI is at least a part of the set of information which is required for determining the correct ECM to be used for decrypting or otherwise accessing the media content. Furthermore, the advantage of the SPI over background art methods for synchronization, such as using a binary (odd/even) value for synchronizing between the ECM and the media content, is that the SPI can optionally have a large range of values. In a non-reliable/potentially latent environment such as the Internet, which does not guarantee delivery of packets and which may as a result have a large latency period for such

delivery, the large range of values effectively removes the dependence of each packet from the previous packet, so that receiving packets out of transmission order and/or even failing to receive a packet would not disrupt the security scheme.

According to an exemplary but preferred implementation of the present invention, the format of each encrypted media content packet is preferably as shown in Figure 4. As shown, an IP header **400** for the packet is followed by the SPI value **410**, as determined by the ESP standard as previously described. Next, a 32-bit sequence number **420** is included, also as determined by the ESP standard. Sequence number **420** starts at the value "1" and is monotonically increased for each packet until the maximum value (2^{32}-1) is reached, at which point the associated SPI value **410** is no longer valid and the next SPI value from the range of permitted values must be used. In fact, the maximum value may not be reached, since sequence number **420** is preferably reset for each key period when both the security information for the key and SPI **410** change.

The next value in the encrypted packet is optionally and more preferably an initialization vector (IV) **430**, which may be required for operating certain types of encryption methods such as RC4, for example in order to improve the strength of the encryption by increasing the randomness thereof, as is known in the art. The format and length of IV **430** depend upon the particular encryption method.

The packet next features the encrypted media content itself, which is shown as a payload **440** for the packet. Payload **440** may also optionally include such information as the transport layer (UDP or TCP) header. After payload **440**, the packet preferably features a PAD length **450** of one byte, which is always equal to zero. The packet then optionally and preferably features a next header **460**, the value of which preferably depends upon the type of data which is included after the ESP header, in order to indicate whether the packet is being transmitted in transport mode or tunnel mode.

Figure 5 shows an exemplary format for ECM packets, which are preferably encapsulated as regular clear UDP packets. As shown, the ECM packet features an IP header **500**, followed by a UDP header **510**. After UDP header **510**, a UDP payload **520** more preferably has two components: an SPI **530** for indicating the correct associated SPI value for the ECM information, and an ECM information payload **540**, which contains the actual ECM information. However, substantially any other suitable format of packet could be used for transmitting the ECM information, as long as the ECM information is somehow associated with the correct SPI, so that end user device **210** is able to determine which ECM should be used with

received encrypted media content.

Preferably, verification module **300** is able to filter ECM packets in order to determine which such packets are relevant to security module **220** (both not shown; see Figure 3). Such filtration is optionally and more preferably performed by comparing previously distributed information from the announcement message about the association between the content and the combination of the IP multicast, UDP port and SPI values from the ECM packet, which are most preferably provided in the header. Most preferably, the IP address of the ECM packet is announced with the announcement message, as previously described, such that security module **220** may effectively "filter" the ECM packets by only listening to those IP address(es) for ECM packets for which security module **220** has an authorization, for example from the relevant EMM. Thus, only relevant ECM packets are preferably passed to security module **220**.

According to other preferred embodiments of the present invention, and as specifically described with regard to Figure 6, the EMM information, such as the service identifier(s), is transmitted in a packet having a particular structure. This packet is then more preferably filtered by end-user client **240** and/or verification module **300** (see Figure 3) in order to determine if the EMM information is relevant to the particular end user device **210** before the EMM packet is delivered to security module **220** of that end user device **210**. Such filtration is preferred in order to avoid overwhelming security module **220** with a huge amount of non-relevant EMM information.

In order to assist end-user client **240** to rapidly filter EMM packets, optionally and more preferably such packets have the structure shown in Figure 6. As shown, an exemplary EMM packet format is described with regard to implementation as an IP/UDP packet. The packet features an IP header **600** and a UDP header **610**. Next, at least one, and preferably a plurality of, EMM **620** are included. Each EMM **620** optionally and more preferably features a filter type **630**, which may be unique, group or general. Filter type **630** determines whether each EMM is allocated to a single IP address for a particular end user/subscriber (unique), all IP addresses (general) or a group of IP addresses (group). For both group and general addresses, the EMM may optionally be sent on a fixed multicast IP address, which could then be distributed based on regions in order to optimize EMM delivery performance and client performance. Such a multicast IP address may optionally be configured according to MADCAP (Multicast Address Dynamic Client Allocation Protocol) for example. Filter type **630** may also optionally and more preferably contain information related to a particular characteristic or characteristics which are stored on security module **220**, such as a smart card for example, and/or are otherwise stored on,

or accessible to, end-user client **240** (both not shown; see Figure 3). One non-limiting example of such a characteristic would be an identifier for security module **220** itself, such as a smart card identifier for example.

Similarly, after each filter type **630**, an address **640** contains information as to whether the EMM is unique, group or general in type. A length field **650** is then used, after which an EMM payload **660** contains the actual EMM information. This packet structure is one example of a format which may be optionally implemented for greater ease of filtering by end-user client **240**.

EMMs may also optionally and alternatively or additionally be sent by e-mail as e-mail messages over the SNMP (simple network message protocol) protocol, such that end-user client **240** and/or end user device **210** could then optionally retrieve the EMMs as e-mail messages, for example at the initialization of operation of end user device **210** for each session.

Figure 7 shows a schematic block diagram of a preferred embodiment of broadcaster headend **250**. As shown, broadcaster headend **250** optionally and preferably features a plurality of components for performing encryption of the media content, and for synchronizing transmission of encrypted or otherwise protected media content and the corresponding security information and/or access schemes for determining access to the protected media content. A traffic system **700** receives information about the media content, metadata and schedules of new IP sessions. Traffic system **700** also preferably ensures that sufficient bandwidth is available on channel **205** (not shown) and/or within broadcaster headend **250** before scheduling IP sessions. In addition, traffic system **700** optionally and more preferably determines if the media content is within an authorized size range. If sufficient bandwidth is available and/or if other criteria are met, then traffic system **700** preferably generates the appropriate access criteria for being included in the ECM, and configures the system-wide security association parameters, which are required for enabling end user device **210** to eventually obtain access to the protected media content. Examples of access criteria include but are not limited to, price (particularly for the previously described pay-per-view system), parental rating and "blackout" criteria, which are criteria for determining whether a particular end user device **210** may not be granted access to the associated content. Traffic system **700** may optionally be implemented as a traditional television traffic system or data content provider system. In the latter type of system, the content provider has remote access to the system in order to define and schedule multicast sessions asynchronously as desired.

Once traffic system **700** has scheduled the new IP session, with the appropriate security

parameters, information about the IP session is preferably passed to a transmission server **710**. Transmission server **710** preferably announces each IP session and transmits the content to the appropriate IP address and UDP port of end user device **210** according to the schedule which is determined by traffic system **700**. The media content and associate security information is then preferably passed to an IPSEC encryption system **720** for encryption and packaging into packets ("packetization") as described in greater detail below.

Transmission server **710** itself optionally and more preferably also features a separate announcement server **725** for creating and transmitting announcement messages, for example according to the SDP standard as previously described. Announcement server **725** preferably receives information from traffic system **700** concerning the schedule for the IP session, addresses of content and an ECM address pair (IP address and client port address), as well as the identifier for the ECM itself. The announcement message preferably includes all of these different types of information, and is preferably transmitted on a well known port address, although the session itself may optionally be conducted on different client ports. The address for the announcement may itself optionally be transmitted to each end user device **210** (not shown) automatically through standard digital video broadcast (DVB) streams such as the program specific information (PSI) and/or programming mapping table (PMT) streams, or the service information (SI) or service definition table (SDT) streams.

Turning back to traffic system **700**, the information concerning the media content to be transmitted, the identity of the recipient end user devices **210**, optionally subscriber information and other types of information are preferably sent from an external management server **730**, which manages and configures separate network entities. Examples of such entities include, but are not limited to, subscribers, addresses, access criteria and bandwidth. External management server **730** also passes the necessary information to, and manages the activities of, a content encryption server **740**, which may optionally operate according to any standard encryption method, including but not limited to, AES (advanced encryption standard), and DES.

Content encryption server **740** is also optionally and preferably in communication with a synchronization system **750**. Synchronization system **750** preferably synchronizes the transmission of announcement messages, media content and ECMs, after receiving information about the IP sessions from traffic system **700**. The transmission of EMMs is not necessarily synchronized with the transmission of these other messages, as long as the service identifier(s) are transmitted in a timely manner before the ECM is to be received and/or used. Furthermore, an EMM is not necessarily transmitted at all, such as for the optional "pay per view"

mechanism, which as previously described does not require EMMs for operation. Synchronization system **750** also more preferably assigns all system addresses, including IP and port addresses.

Once the session has been scheduled, the security information has been selected (including at least one ECM for encrypting the media content), and the content has been synchronized with the security information, content encryption server **740** then encrypts the actual media content itself. More preferably, the media content is encrypted with the key which would be generated from the ECM, as received by the end user device (not shown; see Figure 3). Optionally and most preferably, content encryption server **740** contains an ECM generator **745** for generating the security information. ECM generator **745** generates a control word for actually encrypting the media content.

The same control word must then be generated again at the end user device (not shown) in order for the media content to be accessed and displayed. The ECM itself must also be generated from at least the control word, and more preferably also from access criteria, concerning those end user devices (not shown) which are allowed to have access to the media content. However, the present invention is not limited to this type of mechanism, but may also include implementations in which ECM generator **745** does not generate the control word, which is instead generated separately by a separate control word generating module (not shown). For the latter type of implementation, preferably ECM generator **745** generates the ECM from a combination of the control word and access information.

Next, ECM generator **745** preferably schedules transmission of the corresponding ECM and transmits the ECM when ready. Also, ECM generator **745** optionally and preferably inserts the SPI within the packet containing the ECM information, as previously described. If the SPI is used, then ECM generator **745** also optionally and preferably increments the SPI counter at each key period change, also as previously described.

A corresponding service identifier is preferably determined (as one type of access criteria) for association with an ECM, in order to be able to inform the end user devices as to whether they are authorized to use the ECM. The EMM information (service identifier) is preferably placed in a EMM by a separate EMM generator **755**. The EMM information is optionally sent on a fixed multicast IP address and port to the end user devices.

The encrypted content is then passed to an IPSEC management system **760**, which manages the process of forming packets and including the IPSEC encryption information at IPSEC encryption system **720**. IPSEC management system **760** more preferably manages the

security policy database and the security association database based upon input received from synchronization system **750** and content encryption server **740**. IPSEC management system **760** optionally and preferably stores information in the security association database concerning the type of encapsulation protocol for creating the packets, such as ESP for example as previously described; the type of encryption method which is used for encrypting the actual media content, such as RC4, DES or 3DES, for example; the type of IP mode for transmitting the packet, such as transport mode for example; and information about the initialization vector (IV) if in fact one such vector exists.

IPSEC management system **760** also preferably merges the control word, security association parameters and SPI information with IP multiplexing information.

IPSEC encryption system **720** preferably performs two functions: encryption according to the IPSEC standards, and packet formation. The packets are formed by receiving the incoming encrypted content and associated information, according to the IPSEC standards as previously described. More preferably, the packets are formed by adding the ESP header with the appropriate SPI to the encrypted content, after which the packets are transmitted. Optionally and more preferably, packets containing security information such as ECMs and EMMs, and also announcement messages, are forwarded for distribution through the IP network without being transformed into packets by IPSEC encryption system **720**. IPSEC encryption system **720** then performs encryption of the packet contents as required.

According to optional but preferred embodiments of the present invention, the previously described management and encryption system may be optionally implemented with Simulcrypt protocols. These protocols enable an IPSEC-enabled encryptor, such as IPSEC encryption system **720** for example, to encrypt the IP content (streams or files) once based on a unique key (or control word) generated by a local key generator. This key may then optionally be sent over standard Simulcrypt protocols to multiple separate ECM generators of separate CA (content access) systems to enable secure ECM delivery across these different content access systems. In other words, with one encrypted content stream and/or file and one key or control word, multiple ECMs may be possible.

Figure 8 shows an exemplary but preferred implementation of end-user client **240** in greater detail. As shown, end-user client **240** preferably features an IPSEC decryption system **800** for receiving all packet data, which is preferably IP data, and also for decrypting such data if necessary. IPSEC decryption system **800** is preferably able to retrieve the necessary SPI and other security related information, in order to decrypt the packet data.

The decrypted data is then passed to an application **810** which has requested this data. Each application **810** preferably acts as a trigger for receiving more data, by opening a socket and receiving content from IPSEC decryption system **800**.

IPSEC decryption system **800** also preferably communicates with an IPSEC management system **820** for implementing the security policy database and security association database, for storing the necessary security information. Such information is optionally stored in client database **260** (not shown; see Figure 3). IPSEC management system **820** preferably manages EMM information and other security information as well, including, but not limited to, source IP and source port addresses; destination IP and port addresses; SPI, control word and IP multiplexing information. IP multiplexing information may include such information as the type of encryption algorithm, initialization vector, transport or tunnel mode, and so forth. All of these components are preferably in communication with security module **220** and/or verification module **300** (not shown; see Figure 3). Optionally, IPSEC management system **820** also manages the functions of security module **220** as well.

One optional embodiment for the present invention involves membership revocation for an end user device which has left a group, involving revocation of authorization for service identifiers and/or limiting the key period for the service identifiers. The remaining group members then require reauthorization, although with short key periods, such reauthorization would be frequently performed without a special procedure. It is even possible to make a reauthorization necessary within a multi-cast session. The local security module could optionally prevent access to the service identifiers and/or other authorization information. As an example, a system of rules for this usage of service identifiers is optionally and preferably determined at the broadcaster headend, and then transmitted to the smartcard (security module). Revocation is optionally performed by sending information with an EMM, although alternatively or additionally, revocation is preferably performed with an ECM. For example, revocation is optionally performed by sending an EMM hidden within an ECM, thereby causing the smart card or other local security module to obtain or lose authorization, according to the desired outcome.

The method of the present invention also avoids another major loophole and problem for multicast security, with regard to key sharing conspiracies. In the standard model in the background art, the keys can be shared quite easily, since they tend to last a long time. In the present invention, the keys (control words) are preferably changed very often according to a

relatively short key period, so sharing is more difficult, certainly for streaming data. This solution also prevents the reuse of old keys and/or old content, since any current key is then preferably unable to decrypt previous or future transmissions of content. Standard models for multicast in the background art do not deal with this problem efficiently.

The previous discussion has clearly demonstrated the utility of the present invention in a broadcaster-controlled network environment, in which one broadcaster transmits data to a plurality of end user devices simultaneously through a network, particularly a packet-based network in a non-reliable environment or at least an environment in which reliability is not guaranteed, such as the Internet or other IP network. Other security mechanisms have been developed for such network environments, but they have not been shown to be useful for broadcast data, as they are concerned with security for a session between two parties.

As an example, the SSL (secure sockets layer) protocol may be considered. SSL is clearly only useful for secure, reliable communication between two hosts through a network, unlike the present invention, such that SSL is not only not intended for multicasting, but in fact is not usable for multicasting. SSL also relies upon a trusted certificate authority; once both parties have received such certificates, they mutually trust each other completely. By contrast, the present invention requires continuous or at least repeated authentication of the end user device, thereby preventing an unauthorized user from gaining initial access and then continuing to receive services from the broadcaster. Also, SSL only supports the TCP/IP connection protocol, but does not operate over the UDP connectionless protocol, while the method of the present invention works with both the connection and connectionless protocols. Thus, SSL is not scalable to a large number of end user devices, while the present invention is scalable to such a large number of end user devices.

According to another preferred embodiment of the present invention, there is provided a mechanism for transferring content through a "peer-to-peer" system. The term "peer-to-peer" refers to the transfer of data, such as the content and/or associated security information, between end user devices. This preferred embodiment may be used to reduce the load on the central server or other central authorization entity.

There are various scenarios that are possible in order to manage peer-to-peer sessions. The simplest model preferably features a security server at each peer end user device. The security server could optionally be implemented with any platform which is capable of secure storage and secret cryptographic calculations, whether in protected hardware or software. One

non-limiting example of such a platform is a smart card with a smart card reader. Each such security server would be capable of all the procedures previously described as occurring in the host, at the broadcaster/broadcaster headend in Figure 3, for example. Each host can optionally and preferably generate its own list of service identifiers and Control Words or another type of key to be used to authorize any other peer end user device (or set of hosts), and to encrypt communications.

Authorizations are more preferably performed with locally generated EMMs signed by the local security server, while data is more preferably encrypted by the local security server. SDP announcements would be generated locally and digitally signed to authenticate the session call. One potential drawback of this mechanism is the significant potential for collisions for all elements, particularly with regard to service identifiers. Therefore, as a preferred feature, for all sessions with a membership group of peer devices, each local host would optionally and preferably coordinate through a central host, a Group Controller. This coordination could optionally occur in advance of a specific session; for example, each new local host which becomes a member is then assigned a range of service identifiers, for example. Alternatively, this coordination could optionally be performed through the packet-based network in "real time", such that before or at the start of each session, the local host would request an identifier from the Group Controller (GC). This GC is preferably not a classic Group Controller as defined in the discussions above, but would have a very limited function of coordination, with minimal overhead.

Once recourse is made to Group Controller involvement in peer to peer interactions, a model may optionally and more preferably be implemented in which the Group Controller plays an even more significant role in the peer to peer session. In addition to the coordination and assignment of service identifiers, the Group Controller may also optionally schedule all synchronization requirements for the system including announcements and access criteria generation. Optionally and most preferably, the GC generates the ECMs to be transmitted, while locally generating the CW (control word; used for local creation of the control word as previously described).

For local hosts that are very limited in terms of computational power and/or bandwidth, the model is optionally altered to enable all elements to be generated and/or coordinated by the GC, including data encryption and CW generation, apart from the setup parameters, which are defined by the local hosts.

An intermediate version of the above model preferably features a general broadcaster

headend (as for Figure 3, for example) to register a session and to generate a steady flow of CW to encrypt and decrypt peer to peer sessions. Such a model may be preferably implemented if the local headend is not considered secure enough to have a CW generator on-site, particularly in cases where the CW generator is implemented in software. For this model, each EMM carrying service identifiers is supplied by the central, general headend upon registration, but alternatively may be generated by each peer for another peer.

Any suitable combination of the above features is considered to be within the scope of the present invention, and may optionally be implemented as practicable depending upon the needs of the specific session, and the capabilities of the hosts.

An additional, optional configuration of the peer to peer model would be a variation on the tree model of distribution (and authentication) by using a cluster model. The cluster would preferably have special attributes, where any given peer would reside in a cluster, and a specific topology of other peers would be established for each session (like a flat tree model), such that any change to that topology would affect some change in either authentication or distribution. For example, other peer devices would optionally and preferably be allowed to introduce new peer devices to the topology. This model could be effective in supporting various superdistribution models, for example where there are business rules that allow the redistribution of content from receivers of that content, under certain specified conditions.

Such a model could optionally be specifically implemented according to the preferred embodiments of the present invention by enabling a local peer device, which has been authorized by an EMM for a specific service identifier, to send a new EMM for authorizing another host for that service identifier. If tighter control is desired, then another service identifier is most preferably required, which would then be reported back to the originating service provider (such as the broadcaster of Figure 3, for example), which is an example of a central authorization entity. The central authorization entity preferably at least coordinates the cluster, and more preferably continuously validates the cluster.

Once the new service identifier is received, the provider could then add this service identifier to the list that becomes included in the ECM for decryption access. This avoids passing control of the new peer device from the interested peer device to a central authorizing authority, without involving any need to decrypt and re-encrypt at the local host level.

Based on the previous model, local clusters of peer devices could optionally generate specific groups of requests to the central server which then arbitrates sessions to other clusters of such peer devices.

Alternatively or additionally, the local peer device is preferably able to receive an ECM, use the control word to encrypt local content (through the security module such as the smart card) and then transmit such encrypted content to other peer devices. Alternatively, if the peer device is not able to perform encryption locally, or if the data is such that it does not require encryption, the generated control word could optionally still be used as a basis (or seed) for a hashed signature scheme, for example by using the smart card for generating the signature.

However, the requirement for a certain level of computational ability of the peer device is a feature of these preferred embodiments. For example, if the peer devices are required to generate announcements, such as SPI messages, and/or EMMs, as well as to deliver content, a certain amount of buffer space is required to store all incoming CWs and SPI messages for decrypting. The generation of ECMs is most preferably kept at a central ECM generator, both for security reasons and to reduce the computational load on the peer devices.

Optionally and more preferably, peer devices are distinguished with different levels of authorization and/or abilities. For example, some peer devices can view and write to all other devices, while some such devices can only view or write to certain devices, etc. Optionally, some peer devices may only be allowed to transmit content based upon the type of service identifier.

According to other optional but preferred embodiments of the present invention, EMMs are delivered out of band (that is, separately from the content). For example, EMMs could optionally and preferably be delivered through encrypted (or open) e-mail messages. Using IETF standards such as Privacy Enhanced Mail (PEM) or MIME Object Security Services, or non-IETF PGP (Pretty Good Privacy). Unfortunately, delivery by e-mail messages again raises the issue of scalability. If the email message should be secured, then finding and using public keys is a problem. Such keys could optionally be cached locally or obtained from a public directory, although this may cause the processing overhead to become very high with a very slow distribution. Thus, preferably this mechanism is not used for key distribution, but only for EMM distribution, which could optionally be performed without encryption, such that only authentication signatures are preferably required, as a replacement for e-mail message invitations to multi-cast sessions.

According to other optional embodiments of the present invention, particularly with regard to peer-to-peer distribution of content, content is authenticated by authenticating the source. For example, a signature or other secret information could optionally be added for this

purpose, such as an identifier for the source device (such as the source security module), and/or a public key signature. Preferably, however, the signature or other secret information is used as a seed to a simple hash function, which then enables the end user device to rapidly authenticate the source of the information.

5

While the invention has been described with respect to a limited number of embodiments, it will be appreciated that many variations, modifications and other applications of the invention may be made.

WHAT IS CLAIMED IS:

1. A method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising:

providing a plurality of packets;

securing said plurality of packets according to security information to form secured packets;

transmitting said security information to more than one end user device simultaneously through the packet-based network; and

multi-casting said secured packets to the plurality of end user devices.

2. The method of claim 1, wherein said plurality of packets contain broadcast data from a broadcasting event.

3. The method of claims 1 or 2, wherein said packets are distributed through a second distribution channel, said second distribution channel being different from the packet-based network.

4. The method of claim 3, wherein said second distribution channel is selected from the group consisting of satellite, cable, and wireless channels.

5. The method of claims 1 or 2, wherein said packets are distributed through the packet-based network.

6. The method of any of claims 1-5, wherein said security information includes control word information for key generation at each end user device.

7. The method of claim 6, wherein an ECM (entitlement control message) is sent to said end user devices for said security information for said key generation, such that said ECM contains said control word information for said key generation.

8. The method of claim 7, wherein said ECM is multi-cast to said end user devices, and wherein an EMM (entitlement control message) is also transmitted to said end user devices, such that EMM information contained in said EMM is required for said end user device to access said ECM.

9. The method of claim 8, wherein said EMM is transmitted to said end user devices by an out-of-band message, such that said EMM is not transmitted with said secured packets.

10. The method of claim 9, wherein said out-of-band message is an e-mail (electronic mail) message.

11. The method of claims 8-10, wherein the packet-based network is an IP network and said ECM is transmitted through said IP network according to at least one of a multicast IP address and an IP port, such that said end user device is notified of said at least one of said multicast IP address and said IP port through an IP notification protocol.

12. The method of any of claims 8-11, wherein said end user device filters at least one of said ECM and said EMM according to at least one characteristic selected from the group consisting of a characteristic of said end user device and a characteristic of information stored by said end user device.

13. The method of claim 12, wherein said end user device filters said ECM according to EMM information, such that only an ECM for which EMM information has been received is accessed by said end user device.

14. The method of claim 13, wherein said ECM is contained in a packet, and an IP address for said packet is announced to said end user device, such that said end user device filters said ECM by listening to said IP address for receiving said packet if said end user device has received said EMM information.

15. The method of claim 12, wherein said end user device filters at least one of said ECM and said EMM according to whether said at least one of said ECM and said EMM is designated as unique, group or general.

16. The method of any of claims 8-15, wherein said EMM information includes a service identifier, and wherein said service identifier is related to a type of content of said secured packets.

17. The method of claim 16, wherein said secured packets contain a plurality of different types of content, each type of content having a separate service identifier, such that differential access to said different types of content by said end user device is provided according to said service identifiers.

18. The method of claims 16 or 17, wherein said service identifier corresponds to a plurality of ECMs.

19. The method of any of claims 8-18, wherein said EMM information includes an identifier for determining access to said secured packets according to at least one characteristic selected from the group consisting of a characteristic of an end user device and a characteristic of information stored on said end user device.

20. The method of claim 19, wherein said identifier is a blackout identifier for identifying an end user device blocked from accessing a content of said ECM.

21. The method of claim 20, wherein said blackout identifier corresponds to at least one characteristic stored in said end user device.

22. The method of claim 21, wherein said at least one characteristic includes a geographical location of said end user device.

23. The method of any of claims 8-22, wherein said ECM enables differential access to said secured packets by said end user device according to a plurality of identifiers transmitted in said EMM.

24. The method of any of claims 8-23, wherein said end user device stores at least a content of at least one of said ECM and said EMM.

25. The method of claim 24, wherein said ECM has a limited key period, such that a new ECM is periodically received to access said plurality of packets.

26. The method of claim 25, wherein a length of said key period is at least partially determined by a length of a session for receiving said secured packets by said end user device.

27. The method of claim 26, wherein said length of said key period is less than said length of said session, such that at least one of a new ECM and a new EMM must be received repeatedly during said session.

28. The method of claim 27, wherein said EMM has a limited authorization period, such that a new EMM is periodically received to access said plurality of packets.

29. The method of any of claims 7-28, wherein at least a portion of said secured packets are accessible with said ECM only, without said EMM, as a preview of said secured packets.

30. The method of any of claims 8-29, wherein said security information is transmitted according to a standard IP protocol.

31. The method of claim 30, wherein said packets are transmitted as part of a multi-cast session, and wherein an announcement for said session is transmitted according to a standard announcement protocol.

32. The method of claims 30 or 31, wherein said standard IP protocol is IPSEC .

33. The method of claim 32, wherein said announcement includes information for relating each ECM to a service identifier contained in an EMM.

34. The method of claim 33, wherein said announcement protocol is SDP (session description protocol).

35. The method of claims 33 or 34, wherein said ECM is associated with at least a portion of a multi-cast session with said end user device, and wherein said association is transmitted in said secured packets as an attribute parameter.

36. The method of claim 35, wherein said ECM is synchronized with said secured packets with an SPI (security parameters index) value of said secured packets.

37. The method of claim 36, wherein a new key period is indicated by a change in said SPI value, such that a new ECM is required to access said secured packets.

38. The method of any of claims 31-37, wherein announcement packets are encrypted.

39. The method of any of claims 19-38, wherein said end user device is blocked from further access to said secured packets through revocation with at least one of an EMM and an ECM.

40. The method of claim 39, wherein said revocation is for a specific end user device.

41. The method of claim 40, wherein said revocation is for a plurality of end user devices.

42. The method of any of claims 39-41, wherein said revocation causes a new service identifier to be required for accessing a content of an ECM corresponding to said secured packets.

43. The method of any of claims 8-42, wherein said end user devices receive at least said secured packets from at least one peer end user device.

44. The method of claim 43, wherein said at least one peer end user device generates at least one of said EMM and said ECM.

45. The method of claim 44, wherein said at least one peer end user device includes a

secure server for generating said least one of said EMM and said ECM.

46. The method of claims 44 or 45, wherein said EMM generated by said at least one peer end user device is authenticated by a central authorization entity.

47. The method of claims 44-46, wherein said EMM generated by said at least one peer end user device is mapped to a new ECM for accessing said secure packets by a central authorization entity.

48. The method of any of claims 44-47, wherein said packets are transmitted as part of a multi-cast session, an announcement for said session is transmitted according to a standard announcement protocol, and said announcement includes at least an SPI (security parameters index) for relating each ECM to a service identifier contained in an EMM, such that said at least one peer end user device generates at least one of said announcement and said SPI.

49. The method of any of claims 37-48, wherein said central authorization entity controls at least one of said ECM, said EMM, said announcement and said SPI.

50. The method of any of claims 37-49, wherein at least one of said EMM and said ECM is generated by said central authorization entity.

51. The method of any of claims 37-50, wherein said end user devices are located in a cluster, and wherein each cluster is coordinated by said central authorization entity.

52. The method of claim 51, wherein said cluster is continuously validated by said central authorization entity.

53. The method of any of claims 7-52, wherein a pay-per-view ECM contains purchasing information for purchasing access to said secured packets and wherein EMM information is not required to access said pay-per-view ECM.

54. The method of any of claims 7-52, wherein an EMM contains a credit for purchasing access to said secured packets for pay-per-view content.

55. A secure transmission mechanism produced by the method of any of claims 1-54.

56. A method for producing a conditional access (CA) system for use in a packet-switched environment (packet CA system) from a CA system for use in a broadcast environment (broadcast CA system), the method comprising:

providing a broadcast CA system comprising at least one CA security characteristic;

providing a packet-switched data transmission system including a security subsystem having a plurality of packet-switched security characteristics; and

creating a mapping from the at least one CA security element to at least one of the plurality of packet-switched security elements, thereby producing a packet CA system.

57. The method according to claim 56 and wherein the packet-switched data transmission system comprises an IP system.

58. The method according to claim 57 and wherein the IP system comprises an IPSEC subsystem, and

the IPSEC subsystem comprises the plurality of packet-switched security elements.

59. The method according to any of claims 56-58 and wherein the broadcast CA system comprises an EMM / ECM based CA system.

60. A conditional access (CA) system for use in a packet-switched environment (packet CA system) produced by the method of any of claims 56-59.

61. A packet-switched conditional access (CA) system for use with an end-user playback device, the CA system comprising:

a protected data receiver for receiving protected data protected with at least one key;

an ECM packet receiver for receiving at least one ECM packet from a packet-switching network; and

an ECM-based key generator for generating said at least one key from said at least one ECM packet.

62. The system according to claim 61 and also comprising:

a key synchronizer for synchronizing said at least one key generated by the ECM-based key generator with a portion of said protected data protected with said at least one key generated by the ECM-based key generator.

63. The system according to claim 62 and wherein the key synchronizer comprises:

an ECM memory for storing a plurality of ECM packets; and

an ECM packet chooser for choosing, from among the plurality of ECM packets stored by the ECM memory, an ECM packet corresponding to said portion of said protected data and sending said chosen ECM packet to said ECM-based key generator.

64. The system according to any of claims 61-63 and wherein the ECM packet receiver comprises an IPSEC receiver for receiving the at least one ECM packet from the packet-switching network using an IPSEC protocol.

65. A method for providing an entitlement control message (ECM) based conditional access (CA) system based on a packet-switching network comprising:

receiving a plurality of ECMs via the packet-switching network;

storing the plurality of received ECMs; and

choosing, from among the plurality of stored ECMs, an ECM for providing access to CA-protected data.

66. The method according to claim 65 and wherein the CA-protected data comprises encrypted data, and

the method also comprises:

utilizing the chosen ECM to decrypt the encrypted data.

67. The method according to claim 66 and wherein the utilizing comprises:

generating, from the ECM, a key for decrypting the encrypted data.

68. The method according to claim 67 and wherein the generating comprises, at least in part:

utilizing at least a portion of the ECM as an input to a one-way function; and

utilizing an output of the one-way function as at least a portion of the key.

69. The method according to any of claims 65-68 and wherein the packet-switching network comprises an IP-based network.

70. The method according to claim 69 and wherein the IP-based network comprises an IPSEC-based network.

71. The method according to claim 70 and wherein the plurality of ECMs are delivered using an IPSEC-based protocol.

72. A method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising:

encrypting a plurality of packets with a key to form encrypted packets, said key having associated key information for determining said key;

multi-casting said associated key information to the plurality of end user devices through the packet-based network, thereby obviating the need to send said associated key information to each end user device individually; and

multi-casting said encrypted packets to the plurality of end user devices to form the secure transmission mechanism.

73. The method of claim 72, wherein said associated key information is used by each end user device to generate said key.

74. The method of claims 72 or 73, wherein said plurality of packets include streaming data from a broadcasting event.

75. The method of claims 72 or 73, wherein said plurality of packets include data from a broadcasting event transmitted as a file.

76. A method for creating a secure transmission mechanism for a plurality of end user devices in a packet-based network, comprising:

multi-casting a plurality of secured packets and security information to the plurality of

end user devices, thereby obviating the need for a one-to-one transmission of said security information to each end user device individually and thereby forming the secure transmission mechanism.

77. The method of claim 76, wherein said security information is sent through the packet-based network and said plurality of secured packets is sent through a separate channel to the plurality of end user devices.

78. A system for multi-casting secure packets to a plurality of end user devices in a packet-based network, the secure packets being secured according to security information, comprising:

(a) a broadcast headend connected to the plurality of end user devices at least through the packet-based network, said broadcast headend transmitting the security information to more than one of the plurality of end user devices, thereby obviating the need to send the security information to each end user device individually, and said broadcast headend transmitting the secure packets to the plurality of end user devices, wherein at least one of the security information and the secure packets is transmitted through the packet-based network.

79. In a system for multi-casting secure packets to a plurality of end user devices in a packet-based network, the system comprising a broadcast headend connected to the plurality of end user devices at least through the packet-based network, providing a method for securing the packets, the method comprising:

securing the secure packets according to security information;

transmitting the security information by the broadcast headend to more than one end user device simultaneously according to a multi-casting protocol; and

transmitting the secure packets by the broadcast headend to the plurality of end user devices;

wherein at least one of the security information and the secure packets is transmitted through the packet-based network.

80. The method of claim 79, wherein the secure packets are multi-cast in a session and the broadcast headend transmits an authorization message to the plurality of end user devices to enable the end user devices to access said session, such that the security information

includes said authorization message.

81. A method for creating a secure transmission mechanism for a plurality of end user devices in an IP network, comprising:

providing a plurality of data units for transport through the IP network;

securing said plurality of data units according to security information to form secured data units;

transmitting said security information to more than one end user device simultaneously through the IP network; and

multi-casting said secured data units to the plurality of end user devices.

82. A method for creating a secure transmission mechanism for a plurality of end user devices in a network having a characteristic of being at least one of packet-based and IP, comprising:

providing a plurality of data units;

securing said plurality of data units according to a control word to form secured data units, said control word being generated from security information;

transmitting said security information to more than one end user device simultaneously through the network;

multi-casting said data units to the plurality of end user devices; and

generating said control word at each end user device with said security information.

83. A method for creating a secure transmission mechanism for a plurality of end user devices in an IP network, comprising:

providing a plurality of data units for transport through the IP network;

securing said plurality of data units according to security information to form secured data units;

transmitting said security information to more than one end user device simultaneously through the IP network;

transmitting an announcement according to SDP (session description protocol) of IPSEC to said end user devices for indicating an association between said security information and said secured data units; and

multi-casting said secured data units to the plurality of end user devices.

84. The method of claim 83, wherein said security information is related to a key for securing said secured data units, said key being changed according to a key period, a change of said key period being announced by an SPI (security parameters index) in a security information message according to ESP (IP encapsulating security payload) protocol.

85. The method of claim 83, wherein said security information is related to a single key for securing said secured data units, and wherein said security information is transmitted according to a plurality of different ECMs, generated according to Simulcrypt protocols.

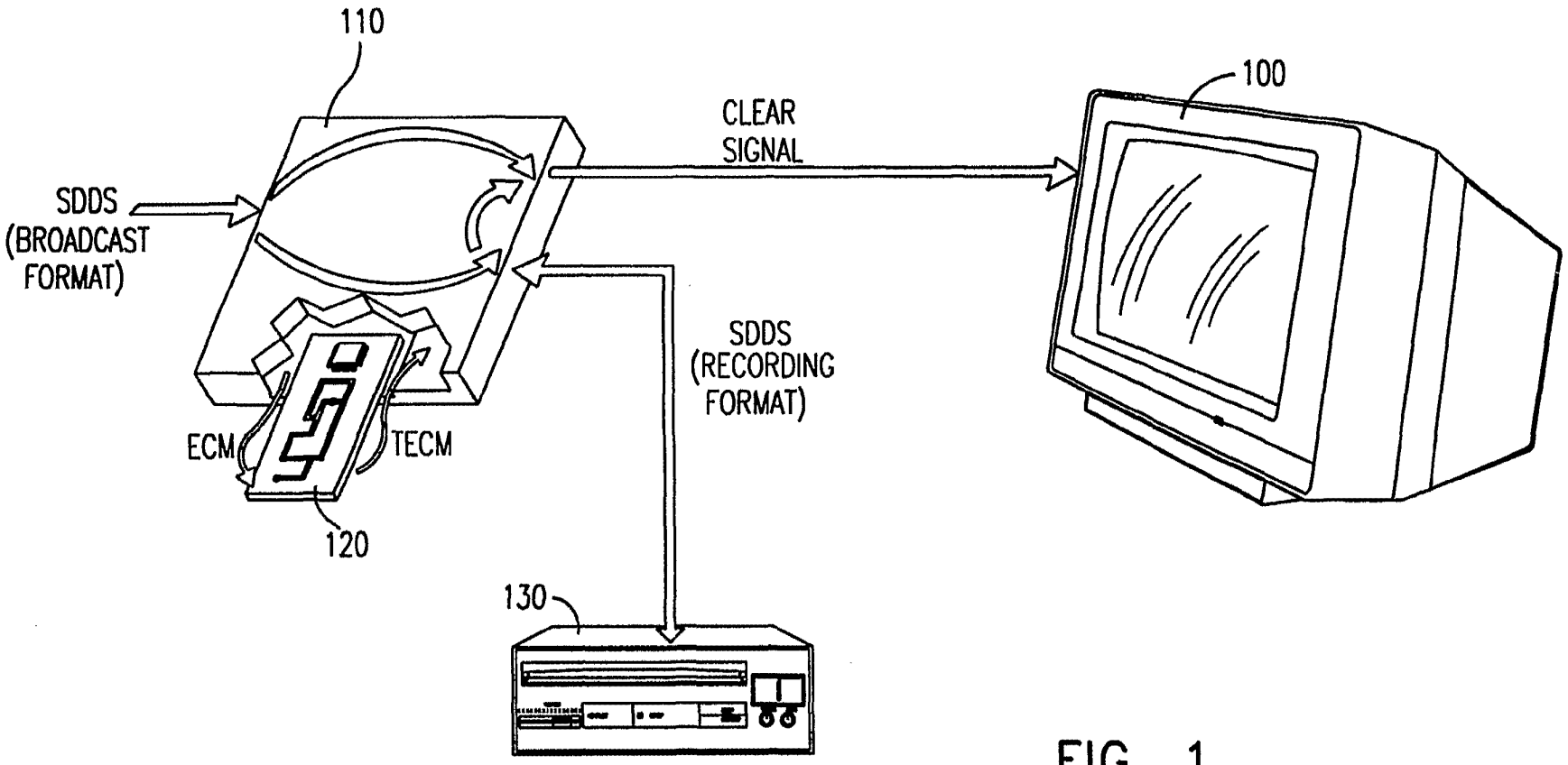
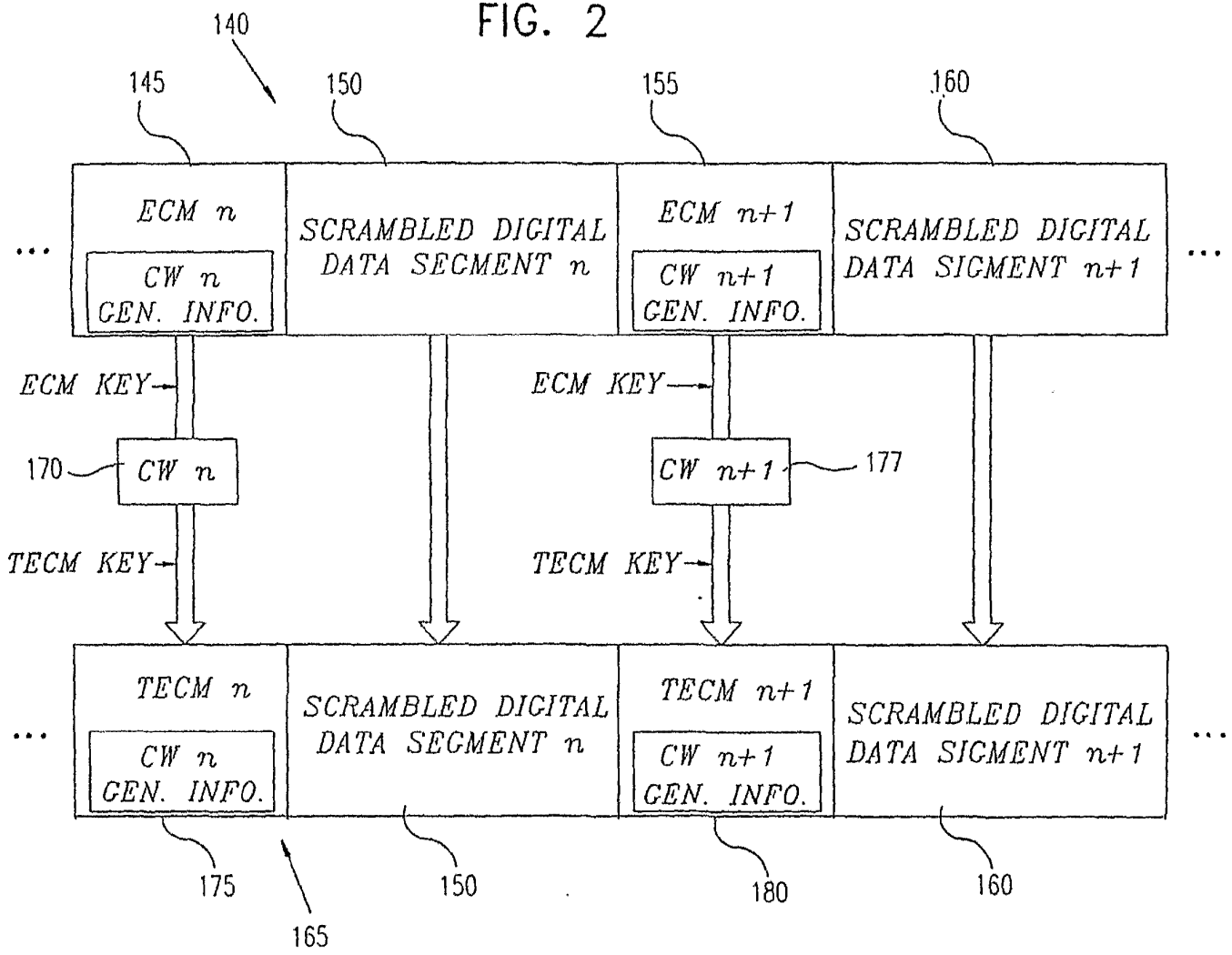


FIG. 1

FanDuel Ex. 1002-1430
FanDuel Ex. 1002-1430

FIG. 2



FanDuel Ex. 1002-1431
FanDuel Ex. 1002-1431

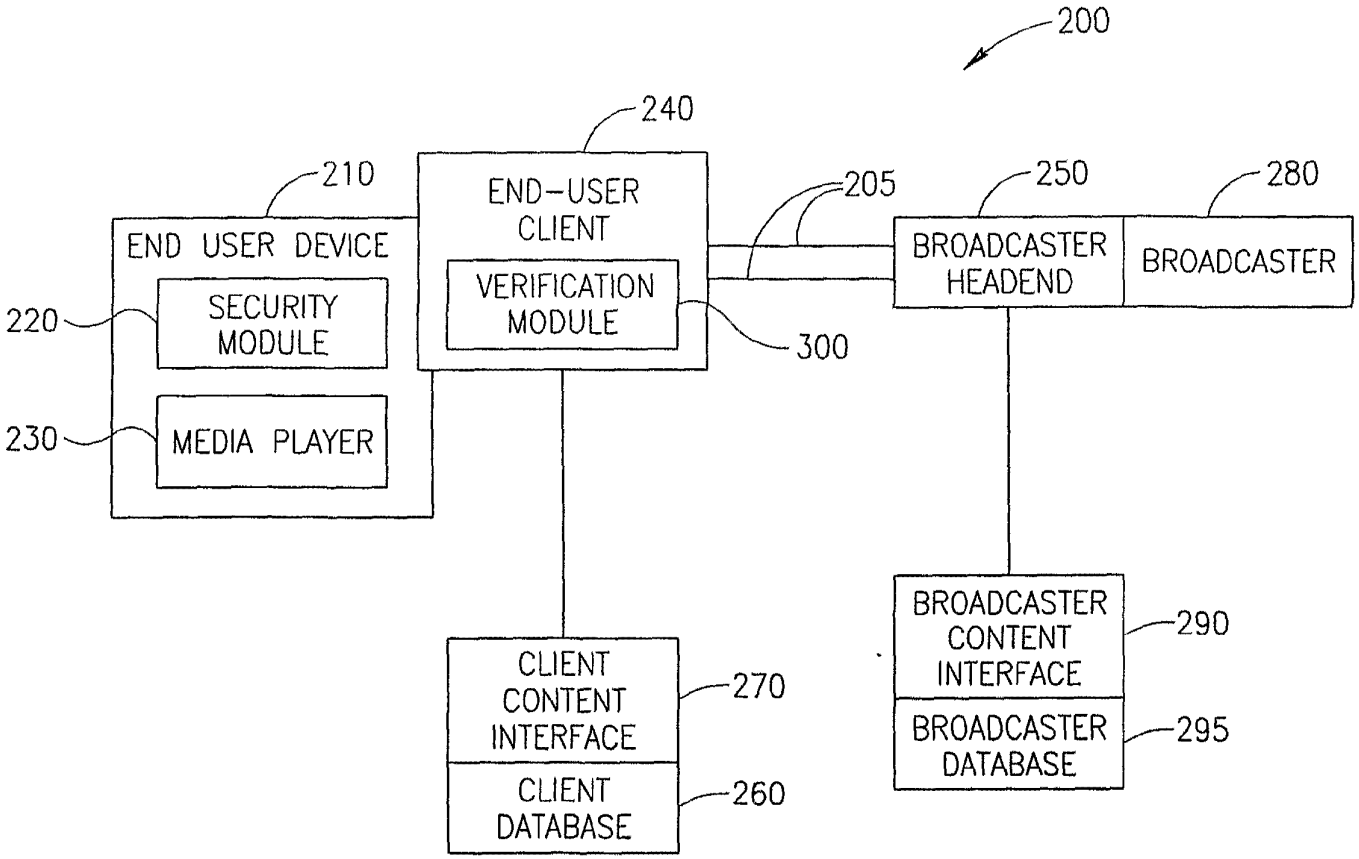


FIG.3

FanDuel Ex. 1002-1432
FanDuel Ex. 1002-1432

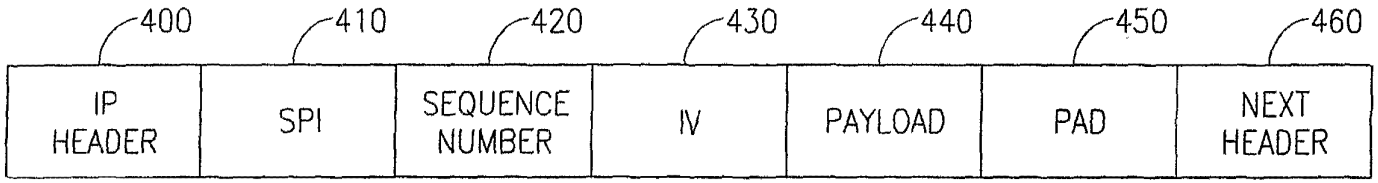


FIG.4

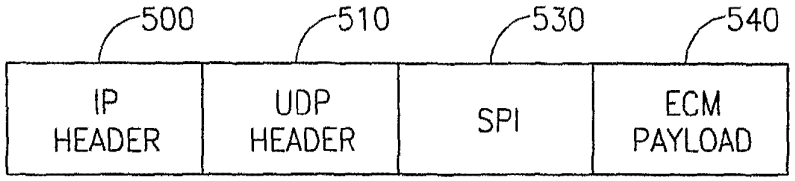


FIG.5

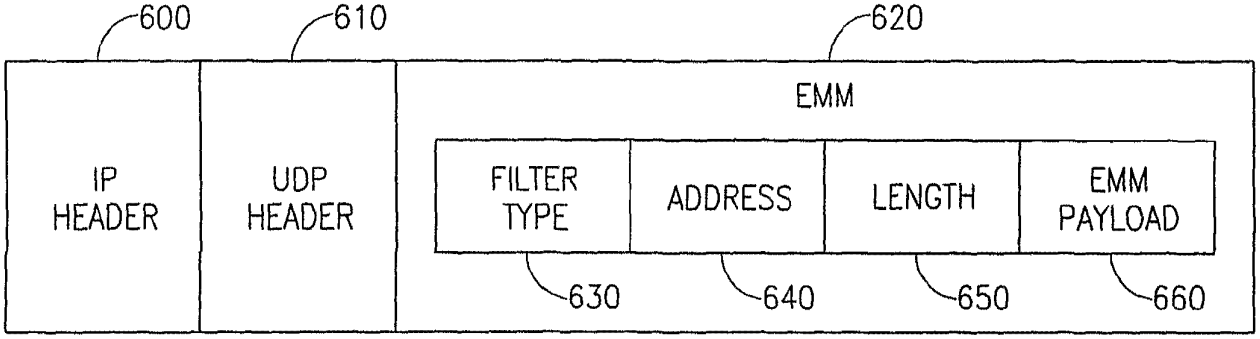


FIG.6

FanDuel Ex. 1002-1433
FanDuel Ex. 1002-1433

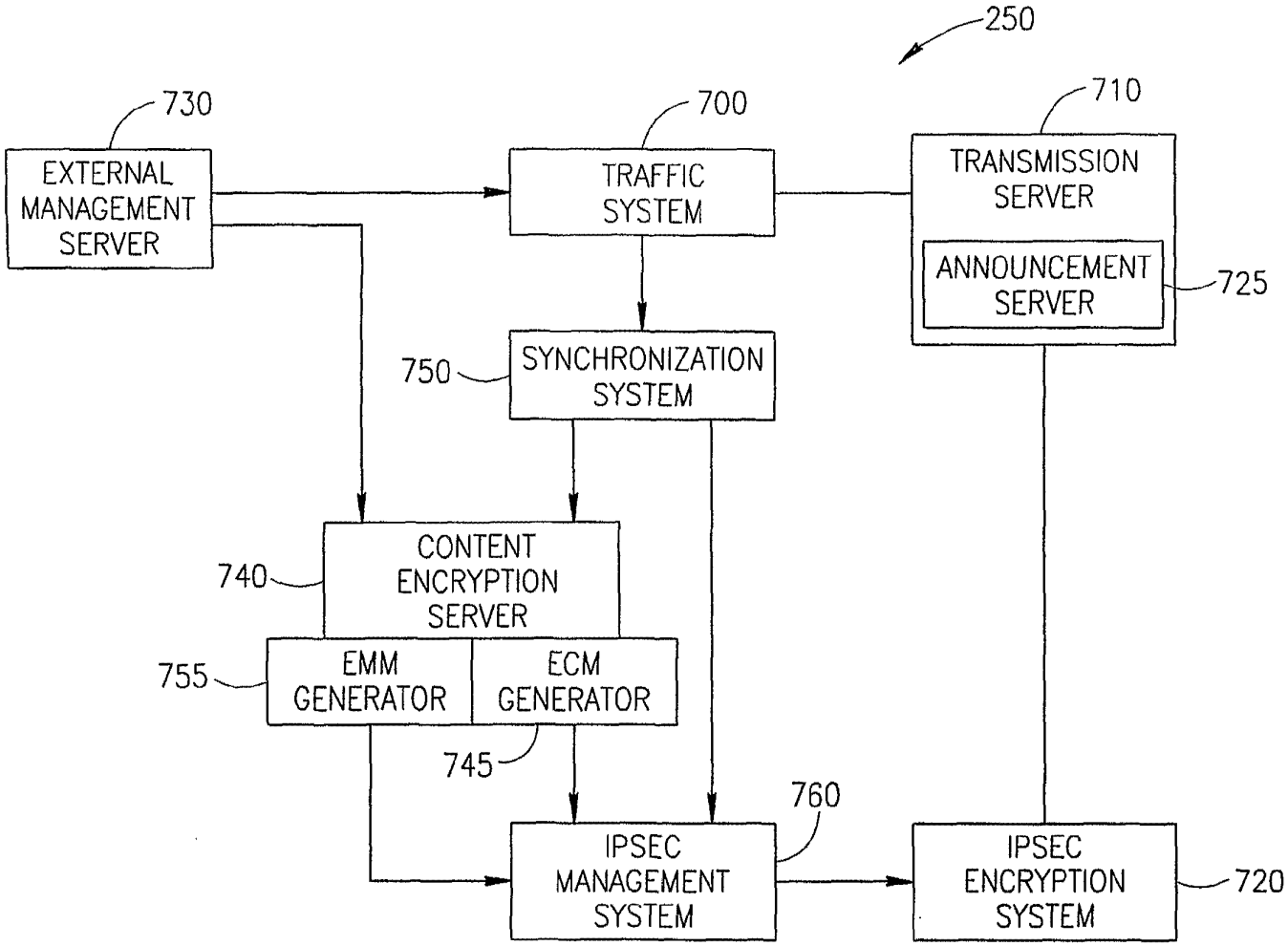


FIG.7

FanDuel Ex. 1002-1434
FanDuel Ex. 1002-1434

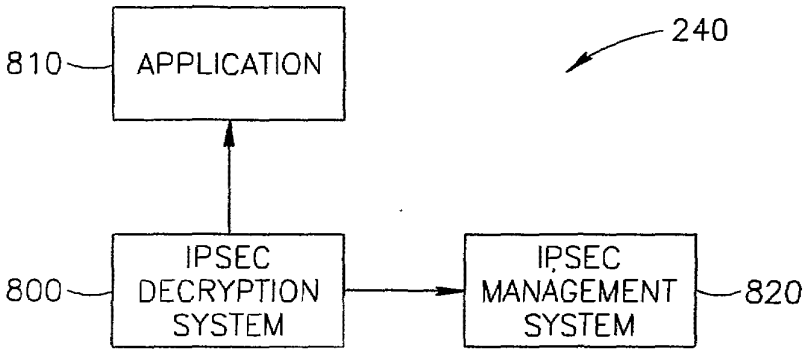


FIG.8

FanDuel Ex. 1002-1435

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(54) **Delivering interactive applications**

Ablieferung von Interaktiven Anwendungen

Distribution d'applications interactives

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EP-A- 0 714 684
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US-A- 5 446 490
US-A- 5 797 010

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EP 1 003 313 B1

FanDuel Ex. 1002-1437

Description

[0001] The present invention relates to a method and apparatus for delivering an interactive application to a plurality of target platforms.

[0002] Interactive application providers employ skilled programmers to develop new interactive applications. Examples of such interactive applications are predictive games for use in conjunction with a live sporting broadcast, quiz games for use in conjunction with a live quiz broadcast, on-demand quiz games (ie. not used in conjunction with a live quiz broadcast), home shopping applications and home banking applications.

[0003] With the rapid development of new target platforms for interactive services (each employing a broadcast network with a different respective broadcast protocol) it is desirable to deliver the interactive applications over any chosen network in a simple and cost effective way. However conventionally this has been difficult because it has been necessary for the skilled programmers to take into account the different broadcast protocols during development of the new application.

[0004] US-A-5,797,010 describes a broadcast system in which different applications to be broadcast require different environments for their execution. Instead of providing set-top processors which have all the data required for each possible application, the system arranges for the execution environment associated with a particular application to be downloaded to a set-top processor first.

[0005] WO-A-98/37695 describes a cable television system in which programs and services are connected via a digital switch or multiplexer to a cable system communication network via an interactive cable gateway which converts the data to a suitable format.

[0006] "Transcoding Internet Content for Heterogeneous Client Devices", May 1998, J.R. Smith, R. Mohan, Chung-Sheng Li, IEEE International Conference on Circuits and Systems discloses a system for transcoding Internet content into different formats depending upon the nature of the receiving device.

[0007] In accordance with a first aspect of the present invention there is provided a method of delivering an interactive application to a plurality of target platforms constituted by respective different broadcast networks, the method comprising

providing a set of application components;

converting the set of application components into a plurality of streams of broadcast data, each stream of broadcast data conforming with a respective broadcast protocol; and

delivering each stream of broadcast data to its respective broadcast network for subsequent delivery to user interfaces.

[0008] In accordance with a second aspect of the present invention there is provided apparatus for delivering an interactive application to a plurality of target platforms constituted by respective different broadcast networks, the apparatus comprising

means for providing a set of application components;

a plurality of broadcast systems interfaces each for converting the set of application components into a respective stream of broadcast data, conforming with a respective broadcast protocol; and

means for delivering each stream of broadcast data to its respective broadcast network for subsequent delivery to user interfaces.

[0009] Instead of having to provide multiple sets of application components (each set complying with a different respective target platform) the invention allows the programmers to merely provide a single set of application components in any desired format, without needing to know anything about the ultimate target platforms. The broadcast system interfaces (BSIs) then convert the application components shortly before, or during the broadcast.

[0010] The invention provides a convenient method of delivering an interactive application to a number of target platforms each having different requirements.

[0011] The "open" architecture of the system enables new BSIs to be added when the interactive application is to be delivered to a new target platform.

[0012] In the case where the application comprises a real-time application (eg a predictive game for use in conjunction with a live sporting broadcast) the method typically further comprises manually inputting real-time application data;

converting the real-time application data into a plurality of streams of real-time broadcast data, each stream of real-time broadcast data conforming with a respective target platform; and

delivering each stream of real-time broadcast data to its respective target platform.

[0013] The application components and/or real-time application data may be generated, converted and broadcast on-the-fly. However preferably the method further comprises storing the application components and/or real-time application data in a data store; and retrieving the application components and/or real-time application data from the data store before converting it into a stream of broadcast data.

[0014] A number of conversion steps may be necessary, including translating, substituting, selecting, time managing, or adapting for different data transmission mechanisms.

[0015] Provision may also be made for return path processing of return data (eg game-play input or home banking requests) from the target platforms.

[0016] An embodiment of the present invention will now be described with reference to the accompanying drawings, in which:

Figure 1 is a schematic functional diagram of an in-

FanDuel Ex. 1002-1438

teractive service network;

Figures 2-4 illustrate examples of screen displays presented to an operator during preparation for a live football game;

Figures 5 and 6 illustrate screen displays presented to a remote player of the live football game;

Figure 7 is a schematic diagram illustrating two return data paths; and

Figure 8 is a schematic diagram illustrating the function of the Two Way TV engine.

[0017] Referring to Figure 1, the network comprises a central system 1 and a number of target platforms 2. Each target platform comprises a respective broadcast network 3 and user interface 4. The central system 1 is controlled by a central computer system (CCS) 5 which comprises a Sun SPARC binary file designed to operate UltraSPARC architecture workstations or servers (not shown). Although the CCS is shown as a single unit it may be split into more than one binary file for performance and distributive requirements.

[0018] The CCS 5 communicates with a number of sub-systems 6 via a CCS text message gateway 7.

[0019] Authoring tools 8 include suitable tools (eg PCs) which are used by game programmers to develop new interactive applications. The interactive applications may all be very different but in general will include a number of application components such as executable program files, bitmaps, sound samples, real-time data instructions, video clips, and other multimedia and data resources. When the new applications have been developed and tested, the game programmer logs on to a Windows NT™ based submit tool 9 which saves the application components in an application database (not shown).

[0020] A number of previously saved applications are shown in Figure 1, namely six interactive, predictive games 10-15 for use in conjunction with a live sporting broadcast and a set of on-demand game engines 16.

[0021] A set of Universal Live Tools 17 (which include PCs running Windows NT™ based applications, and suitable input devices) are used by skilled operators to support the live applications 10-15.

[0022] A Mission Control system 18 (a Windows NT™ based application) is used by a system control officer to initiate application transmissions and manage real-time broadcasts.

[0023] An example of one of the interactive, predictive games (football 10) will be described below. The game is described in more detail in EP-A-0873772. In the interactive football game, remote players are able to attempt to predict certain events prior to commencement of a live football match and can also attempt to predict certain events during the live broadcast.

[0024] Initially, prior to commencement of the live broadcast, the football application 10 is initiated by the system control officer using Mission Control 18, and an operator uses the Live Tools 17 to set up certain predetermined information relating to the live broadcast for transmission to the user interfaces 4.

[0025] The operator is first presented with a screen as shown in Figure 2 in which he can select a home team and an away team from a list of such teams which have been previously stored in the application database. The operator can select the appropriate home and away teams and then click the OK button. This information is then stored in a Live File store (not shown) associated with the Live Tools 17. The application database stores information relating to each team squad which will typically include more players than those actually selected to play the match. Shortly before commencement of the match, the actual team will be announced and this information will be conveyed to the operator. The operator then causes the Live tools 17 to display all members of the squad of each team (Figure 3) allowing the operator to indicate which members of the squad have been picked to play and at the same time, he can define the type of player, for example goalkeeper, attacker, midfield or defender. Once that information has been indicated, it is then stored in the Live File store.

[0026] The operator also sets up the particular types of event which can be predicted during the live broadcast. In this example, these events include the time of the first goal, the time of the first booking etc. Examples of such events are indicated by the line of buttons at 50 in Figure 4.

[0027] Once all the information for the live broadcast has been set up by the operator, a screen such as that shown in Figure 4 is displayed which at this time is inactive since the interactive game has not commenced. It will be noted, however, that the operator has been able to set up a significant amount of information in advance of the live broadcast itself.

[0028] At the appropriate time, but before commencement of the football game, the operator will click the button 51 and the application will then be transmitted to the CCS 5 and broadcast to all the user interfaces 4 over the broadcast network 3 as discussed below. The following application components are broadcast:

1. Real-time data instructions such as "display copyright message at start of football game"; or "display [bit map] at half-time".
2. Executable computer code to be run by the user interfaces to implement the game.
3. Bit maps - eg. player faces, team logos etc.
4. Sounds - eg sampled referee's whistle or crowd noises.
5. Video clips, eg of individual players scoring a goal.
6. Team data - eg team names, player names and player positions.

[0029] The central system 1 is designed to be able to deliver applications on any target platform. Five target platforms are illustrated in Figure 1, each employing a

FanDuel Ex. 1002-1439

different broadcast network, ie. NCI DTV Naviagator 20, OpenTV digital TV 21, MHEG-5 22, WebTV/WinCE 23 and PowerTV 24. The system can also be expanded to handle any number of additional broadcast networks 25. Each broadcast network 20-25 has a respective different broadcast protocol. In order to deal with this problem, each target platform has an associated Broadcast System Interface (BSI) 26 which converts the set of application components associated with each application into a plurality of streams of broadcast data, each stream of broadcast data conforming with the broadcast protocol of its respective target platform. Thus when the operator clicks on button 51, the set of application components (ie. executable program files, bitmaps, sound samples, real-time data instructions, video clips etc.) are passed to the CCS 5 and then fed as parallel data streams to the BSIs 26 which convert the application components as appropriate prior to delivery over a respective broadcast network 3. The BSIs 26 are previously encoded to make any necessary conversions in order to conform the data to their associated target platform. The conversion may (amongst others) include the following techniques:

Translation

[0030] This is the most basic data manipulation. Here the data is converted from an internal representation required by the authoring tools 8 into a representation appropriate to a respective broadcast protocol.

[0031] For example, a target platform may only receive ASCII text. In this case the BSI converts all data being transmitted from a binary representation to ASCII.

[0032] Translation takes place on a byte-to-byte basis and is the lowest level of transformation employed by the BSIs 26.

Substitution

[0033] In some cases the BSIs will replace application components with an alternative. This is similar to translation, except that substitution is normally done at a component level.

[0034] An example of this might take place where a game is being broadcast to two networks where the capabilities of the user interfaces 4 are different. The game being played contains a real-time video component that is delivered to the user interface 4 for display. On one network, the user interface is not capable of storing the video component due to lack of memory and the BSI substitutes the video component with a set of still frames extracted from the video component. On another network the user interface is capable of storing the video component and the BSI delivers the video component unchanged.

[0035] In another example a 16-colour bit map is to be delivered and one of the broadcast networks 3 or user interfaces 4 may only be able to support an 8-colour bit map. In this case the BSI converts the bit map into 8-colour format on the fly prior to delivery.

Selection

[0036] In the case of selection, the BSI selects which application components to send or not to send. An example would be an application that contains three different binary files, one for a browser target platform, one for a target platform with an OpenTV broadcast network, and another for a target platform with a PowerTV broadcast network. The BSI associated with the OpenTV network would transmit the binary file for the OpenTV network, and ignore the others. The BSIs supporting the other target platforms behave in a similar way.

Timing

[0037] Different broadcast networks delivering the same programme are not necessarily temporally synchronised. Differences in timing may be up to one or two seconds, indeed set top boxes on different networks would generally have slight variances in their clocks, ie a box on one network may think that the time is 12:34.00 whilst a box on another network may believe it is 12:34.03. In addition to different networks having different clocks it is also a fact that different networks may not be broadcasting content at exactly the same time, ie a video program may start up to 1 or 2 seconds later on another network even though the clocks are the same.

[0038] In order to manage these anomalies between networks it is necessary for the BSI handling that network to compensate by introducing the required delay, either by delaying the broadcast of messages, or more appropriately by altering the timing information within messages.

[0039] Some networks do not provide a synchronised clock on all set top boxes. In these cases it is necessary for the BSI handling those networks to provide a clock message which the user interface may use to update its own synchronised clock.

Data Transmission Mechanisms

[0040] Different broadcast networks will probably use different techniques for transmission. Some may present a single large bandwidth download path for all data, some may provide a high bandwidth mechanism for application components, and a smaller bandwidth mechanism for real-time data. In all of these cases the BSI will manage the different transmission techniques.

[0041] Exploring the above example in more detail, it is likely that a browser based architecture would provide some mechanism for providing application components from the service provider's server, using a carousel for example. In this scenario browser BSI would forward all game components to the server to be placed on the carousel. The binary data messages would most likely be

FanDuel Ex. 1002-1440

fed to the server which would then use IP tunnelling or similar to transmit the data to the user interfaces.

[0042] In the case of the MPEG-II system the BSI would produce MPEG-II transmit packets contains MPEG-II private data sections containing the binary data messages and the component downloads in a defined format.

[0043] The user interfaces 4 each include a Two Way TV engine 27 which decodes incoming data and presents it to an application processor 28 which runs executable program code and also incorporates suitable memory for storing data. Items 27,28 are typically provided in a set-top-box (STB) which is connected to a conventional home TV set. Alternatively items 27,28 may be part of a personal computer. Although only a single user interface 27,28 is shown in Figure 1 with each broadcast network 20-25, it will be appreciated that each network 20-25 will broadcast to a large number of user interfaces.

[0044] In a commercial broadcast such as cable, satellite or the internet, the application processors 28 (in the form of set top boxes or personal computers) may have different capabilities. It is possible that the processors 28 may have different graphical abilities (such as colour depth, background mpeg and bitmap formats), different amounts of RAM and differing audio capabilities.

[0045] It is not desirable to target the lowest capability processor only, as customers who have payed more for a more powerful decoder should reap the benefits.

[0046] Therefore in order to provide the highest quality of interactivity on any given processor it is necessary to create applications which can selectively use different display models, colour depths, sounds and bitmaps. In addition different sections of code may be used for different processors. The Two Way TV engines 27 are able to interrogate the capabilities of the application processors 28 at runtime and dynamically decide which components of the broadcast applications to utilise.

[0047] The function of the Two Way TV engines 27 is illustrated in more detail in the example of Figure 8. In this case a broadcast system interface 70 is encoded to convert the application components into the format required by an Open TV digital TV broadcast network 71. A second BSI 72 converts the application components into the format required by a PowerTV broadcast network 73. Two types of user interface 74,75 are connected to the open TV network 71. User interface 74 includes an application processor 76 which can support 16-colour bitmaps. In contrast, user interface 75 includes an application processor 77 which can only support 4-colour bitmaps. The BS1 70 delivers 4-colour and 16-colour bitmaps over the network 71. Each user interface 74,75 has a respective Two Way TV engine 78,79. The engine 78 interrogates the application processor 76 and determines that the processor can support 16-colour bitmaps, and so downloads the 16-colour bitmaps on to the processor 76. In contrast, the engine 79 downloads the 4-colour bitmaps and discards the 16-colour bitmaps.

[0048] Bitmaps are a relatively simple example, code modules are more complex. For instance one type of user interface may use a store and forward return path mechanism, whilst another (on the same network) may use an instant access high bandwidth modem. Depending on which, the engine 27 would have to load and link the corresponding code module.

[0049] The Two Way TV engines 27,78,79 are generic items of code (i.e. the same engine is provided with each user interface). This enables the system to be easily expanded to deal with a new application processor 28 with different capabilities.

[0050] The engines 27,78,79 may either by previously provided in a user's personal computer or set-top-box, or may be broadcast over the broadcast network 3 before broadcast of the application components.

[0051] Returning to Figure 8, only a single type of user interface 81 is supported on network 73. In this case, the BS1 72 broadcasts 16-colour bitmaps only, and the engine 83 downloads the 16-colour bitmaps to the processor 82. Therefore in this case the engine 83 is effectively "transparent" as far as the 16-colour bitmaps are concerned.

[0052] When the application has been downloaded to the user interfaces 4, the interfaces display a screen similar to that shown in Figure 5. This indicates to the player the type of prediction which he can attempt. A comparison of Figures 4 and 5 will show that six of the events selected by the operator for prediction set out in the line 50 are displayed on the display of Figure 5.

[0053] The remote player can then select one or more of the predictions. For example, if he selects the "Time Slot of First Goal", the screen shown in Figure 6 will be displayed which defines six different 15 minute periods during the playing of a football game. The player can then indicate one of those periods, for example, the period 16-30 minutes, and this prediction is then stored in memory. In a similar way, the player can predict any one or more of the other items set out in Figure 5.

[0054] As the game develops, various events may or will occur. For example, when the first goal is scored, the operator clicks on an appropriate button and the information is then transmitted to the user interfaces 4.

[0055] During and/or after a game, the user interfaces 4 compare the associated player's predictions with the actual events. If the local player was successful in his prediction then the user interface 4 will indicate this to the player and will also pass that information via a suitable return path (eg the public switched telephone network) to the CCS 5 where it is handled by suitable return path processing 29.

[0056] An example of the return path processing 29 is illustrated in Figure 7. STB 30 is connected to a cable modem 31 which compresses the return data prior to transmitting it over a cable network to a cable service provider server 32. The return path processing 29 in-

FanDuel Ex. 1002-1441

cludes a decompressor 33 which decompresses the data into a form suitable for the CCS 5. STB 34 is connected to a modem 35 which transmits the return path data to a modem 36 in the return path handling system 29 over the conventional public switched telephone network (PSTN). Once the return data has been converted by the return path processing system 29, it is processed by the CCS 5 which provides standard scoring and voting facilities. For instance the users playing the football game may each have an individual score which is stored in a user database 30' and updated by the CCS 5 when the user makes a correct prediction. Alternatively the return path data may be used by the CCS 5 to register votes from the user interfaces. The return path processing facilities provided by the CCS may be augmented by a plug-in processing application 37. For instance a programmer can develop a new game which requires overall results or league positions to be broadcast back to the user interfaces and a suitable plug-in processing application 37 can be installed by the programmer. In some applications, however, return path communication with the CCS 5 is not necessary.

Claims

1. A method of delivering an interactive application to a plurality of target platforms (2) constituted by respective different broadcast networks (3), the method comprising

   providing a set of application components;
   converting the set of application components into a plurality of streams of broadcast data, each stream of broadcast data conforming with a respective broadcast protocol; and
   delivering each stream of broadcast data to its respective broadcast network (3) for subsequent delivery to user interfaces (4).

2. A method according to claim 1 further comprising manually inputting real-time application data;

   converting the real-time application data into a plurality of streams of real-time broadcast data, each stream of real-time broadcast data conforming with a respective broadcast protocol (2); and
   delivering each stream of real-time broadcast data to its respective target platform (2).

3. A method according to any of the preceding claims further comprising storing the application components and/or real-time application data in a data store; and retrieving the application components and/or real-time application data from the data store before converting it into a stream of broadcast data.

4. A method according to any of the preceding claims wherein the step of converting comprises translating, substituting, selecting, time managing, or adapting for different data transmission mechanisms.

5. A method according to any of the preceding claims further comprising receiving and processing return data from one or more of the target platforms (2).

6. A method according to claim 5 wherein the application comprises a game and the return data comprises game-play input.

7. A method according to any of the preceding claims wherein each target platform (2) includes an application processor (28).

8. A method according to claim 7 further comprising interrogating the application processor (28) to determine the data capabilities of the application processor; and downloading data from the stream of broadcast data in accordance with the determined data capabilities of the application processor.

9. A method according to claim 7 or claim 8, wherein each target platform comprises a plurality of application processors.

10. A method according to any of claims 7 to 9, wherein the converting step compensates for timing differences between the broadcast networks (3) in handling the broadcast data so as to temporally synchronise the broadcast data at each application processor.

11. A method according to claim 10, wherein the compensation is achieved by selectively delaying broadcast of data to the target platforms.

12. A method according to claim 10, wherein the compensation is achieved by including timing information in the broadcast data.

13. A method according to any of the preceding claims, wherein the application components comprise one or more of executable program files, bitmaps, sound samples, real-time data instructions, video clips.

14. Apparatus for delivering an interactive application to a plurality of target platforms (2) constituted by respective different broadcast networks (3), the apparatus comprising

   means (6) for providing a set of application components;

   a plurality of broadcast systems interfaces (26) each for converting the set of application com-

FanDuel Ex. 1002-1442

ponents into a respective stream of broadcast data, conforming with a respective broadcast protocol; and

means (20-25) for delivering each stream of broadcast data to its respective broadcast network (3) for subsequent delivery to user interfaces.

15. Apparatus according to claim 14, wherein each target platform (2) comprises an application processor.

16. Apparatus according to claim 15, wherein each target platform (2) comprises a plurality of application processors.

17. Apparatus according to claim 15 or claim 16, wherein the broadcast systems interfaces have means for compensating for timing differences between the broadcast networks (3) in handling the broadcast data so as to temporally synchronise the broadcast data at each application processor.

18. Apparatus according to claim 17, wherein the broadcast systems interfaces have means for carrying out the compensation step by selectively delaying the broadcast of data to the target platforms (2).

19. Apparatus according to claim 17, wherein the broadcast systems interfaces have means for carrying out the compensation step by including timing information in the broadcast data.

Patentansprüche

1. Verfahren zum Liefern einer interaktiven Anwendung an mehrere Zielplattformen (2), die aus entsprechenden verschiedenen Ausstrahlungsnetzen (3) bestehen, wobei das Verfahren die folgenden Schritte aufweist:

Vorsehen eines Satzes von Anwendungskomponenten;
Konvertieren des Satzes von Anwendungskomponenten in mehrere Ströme von Ausstrahlungsdaten, wobei jeder Strom von Ausstrahlungsdaten einem entsprechenden Ausstrahlungsprotokoll gemäß ist; und
Liefern jedes Stroms von Ausstrahlungsdaten an sein entsprechendes Ausstrahlungsnetz (3) zur nachfolgenden Lieferung an Benutzerschnittstellen (4).

2. Verfahren nach Anspruch 1, weiter mit den folgenden Schritten: manuelles Eingeben von Echtzeit-Anwendungsdaten;
Konvertieren der Echtzeit-Anwendungsdaten in mehrere Ströme von Echtzeit-Ausstrahlungsdaten, wobei jeder Strom von Echtzeit-Ausstrahlungsdaten einem entsprechenden Ausstrahlungsprotokoll (2) gemäß ist; und
Liefern jedes Stroms von Echtzeit-Ausstrahlungsdaten an seine entsprechende Zielplattform (2).

3. Verfahren nach einem der vorhergehenden Ansprüche, weiter mit den folgenden Schritten: Speichern der Anwendungskomponenten und/oder Echtzeit-Anwendungsdaten in einem Datenspeicher; und Abrufen der Anwendungskomponenten und/oder Echtzeit-Anwendungsdaten vom Datenspeicher vor ihrer Konvertierung in einen Strom von Ausstrahlungsdaten.

4. Verfahren nach einem der vorhergehenden Ansprüche, bei dem der Schritt des Konvertierens das Übersetzen, Ersetzen, Auswählen, Zeitverwalten oder Anpassen an unterschiedliche Datenübertragungsmechanismen umfasst.

5. Verfahren nach einem der vorhergehenden Ansprüche, weiter mit dem Empfangen und Verarbeiten von Rückdaten von einer oder mehreren der Zielplattformen (2).

6. Verfahren nach Anspruch 5, bei dem die Anwendung ein Spiel umfasst und die Rückdaten Spieleingaben umfassen.

7. Verfahren nach einem der vorhergehenden Ansprüche, bei dem jede Zielplattform (2) einen Anwendungsprozessor (28) aufweist.

8. Verfahren nach Anspruch 7, weiter mit den folgenden Schritten: Abfragen des Anwendungsprozessors (28) zum Feststellen der Datenfähigkeiten des Anwendungsprozessors; und Herunterladen von Daten aus dem Strom von Ausstrahlungsdaten in Übereinstimmung mit den festgestellten Datenfähigkeiten des Anwendungsprozessors.

9. Verfahren nach Anspruch 7 oder Anspruch 8, bei dem jede Zielplattform mehrere Anwendungsprozessoren umfasst.

10. Verfahren nach einem der Ansprüche 7 bis 9, bei dem der Konvertierungsschritt Zeitdifferenzen zwischen Ausstrahlungsnetzen (3) bei der Handhabung der Ausstrahlungsdaten kompensiert, um so die Ausstrahlungsdaten bei jedem Anwendungsprozessor zeitlich zu synchronisieren.

11. Verfahren nach Anspruch 10, bei dem die Kompensation durch selektives Verzögern der Ausstrahlung von Daten an die Zielplattformen erzielt wird.

FanDuel Ex. 1002-1443

12. Verfahren nach Anspruch 10, bei dem die Kompensation durch das Einfügen von Zeitabstimmungsinformation in die Ausstrahlungsdaten erzielt wird.

13. Verfahren nach einem der vorhergehenden Ansprüche, bei dem die Anwendungskomponenten eine oder mehrere ausführbare Programmdateien, Bitmaps, Klangsamples, Echtzeit-Datenbefehle, Videoclips umfassen.

14. Vorrichtung zum Liefern einer interaktiven Anwendung an mehrere Zielplattformen (2), die aus entsprechenden unterschiedlichen Ausstrahlungsnetzen (3) bestehen, wobei die Vorrichtung umfasst:

    Mittel (6) zum Vorsehen eines Satzes von Anwendungskomponenten; mehrere Ausstrahlungssystemschnittstellen (26), von denen jede zum Konvertieren des Satzes von Anwendungskomponenten in einen entsprechenden Strom von Ausstrahlungsdaten dient, der einem entsprechenden Ausstrahlungsprotokoll gemäß ist; und
    Mittel (20-25) zum Liefern eines jeden Stroms vom Ausstrahlungsdaten an sein entsprechendes Ausstrahlungsnetz (3) zur nachfolgenden Ausstrahlung an Benutzerschnittstellen.

15. Vorrichtung nach Anspruch 14, bei der jede Zielplattform (2) einen Anwendungsprozessor umfasst.

16. Vorrichtung nach Anspruch 15, bei der jede Zielplattform (2) mehrere Anwendungsprozessoren umfasst.

17. Vorrichtung nach Anspruch 15 oder Anspruch 16, bei der die Ausstrahlungssystemschnittstellen Mittel zum Kompensieren von Zeitabstimmungsdifferenzen zwischen den Ausstrahlungsnetzen (3) bei der Handhabung der Ausstrahlungsdaten aufweisen, um die Ausstrahlungsdaten bei jedem Anwendungsprozessor zeitlich zu synchronisieren.

18. Vorrichtung nach Anspruch 17, bei der die Ausstrahlungssystemschnittstellen Mittel zum Durchführen des Kompensationsschrittes durch selektives Verzögern der Ausstrahlung von Daten an die Zielplattformen (2) aufweisen.

19. Vorrichtung nach Anspruch 17, bei der die Ausstrahlungssystemschnittstellen Mittel zum Durchführen des Kompensationsschritts durch Einfügen von Zeitabstimmungsinformation in die Ausstrahlungsdaten aufweisen.

Revendications

1. Procédé de distribution d'une application interactive à une pluralité de plates-formes cibles (2) constituées de différents réseaux de diffusion respectifs (3), le procédé comprenant :

    la fourniture d'un ensemble de composantes d'application ;
    la conversion de l'ensemble de composantes d'application en une pluralité de flux de données de diffusion, chaque flux de données de diffusion correspondant à un protocole de diffusion respectif ; et
    la distribution de chaque flux de données de diffusion à son réseau de diffusion respectif (3) pour distribution ultérieure à des interfaces utilisateurs (4).

2. Procédé selon la revendication 1, comprenant en outre une entrée manuelle de données d'application en temps réel ;
    la conversion des données d'application en temps réel en une pluralité de flux de données de diffusion en temps réel, chaque flux de données de diffusion en temps réel correspondant à un protocole de diffusion respectif ; et
    la distribution de chaque flux de données de diffusion en temps réel à sa plate-forme cible respective (2).

3. Procédé selon l'une quelconque des revendications précédentes, comprenant en outre le stockage des composantes d'application et/ou des données d'application en temps réel dans un magasin de données ; et la récupération des composantes d'application et/ou des données d'application en temps réel du magasin de données avant de les convertir en un flux de données de diffusion.

4. Procédé selon l'une quelconque des revendications précédentes, dans lequel l'étape de conversion comprend la conversion, la substitution, la sélection, la gestion du temps ou l'adaptation à différents mécanismes de transmission de données.

5. Procédé selon l'une quelconque des revendications précédentes, comprenant en outre la réception et le traitement de données de retour en provenance de l'une ou de plusieurs des plates-formes cibles (2).

6. Procédé selon la revendication 5, dans lequel l'application comprend un jeu et les données de retour comprennent une entrée en cours de jeu.

7. Procédé selon l'une quelconque des revendications précédentes, dans lequel chaque plate-forme cible

FanDuel Ex. 1002-1444

(2) comprend un processeur d'applications (28).

8. Procédé selon la revendication 7, comprenant en outre l'interrogation du processeur d'applications (28) pour déterminer les capacités de données du processeur d'applications ; et le téléchargement de données en provenance du flux de données de diffusion en fonction des capacités de données déterminées du processeur d'applications.

9. Procédé selon la revendication 7 ou 8 dans lequel chaque plate-forme cible comporte une pluralité de processeurs d'applications.

10. Procédé selon l'une quelconque des revendications 7 à 9, dans lequel l'étape de conversion compense les différences de synchronisation entre les réseaux de diffusion (3) dans le traitement des données de diffusion de façon à synchroniser dans le temps les données de diffusion à chaque processeur d'applications.

11. Procédé selon la revendication 10, dans lequel la compensation est réalisée en retardant sélectivement la diffusion de données aux plates-formes cibles.

12. Procédé selon la revendication 10, dans lequel la compensation est réalisée en incluant des informations de synchronisation dans les données de diffusion.

13. Procédé selon l'une quelconque des revendications précédentes, dans lequel les composantes d'application comprennent un ou plusieurs fichiers de programmes exécutables, images pixélisées, échantillons de son, instructions de données en temps réel, clips vidéo.

14. Appareil de distribution d'une application interactive à une pluralité de plates-formes cibles (2) constituées de différents réseaux de diffusion respectifs (3), l'appareil comprenant :

des moyens (6) de fourniture d'un ensemble de composantes d'application ;
une pluralité d'interfaces de systèmes de diffusion (26), chacune étant destinée à convertir l'ensemble de composantes d'application en un flux respectif de données de diffusion, correspondant à un protocole de diffusion respectif ; et
des moyens (20-25) de distribution de chaque flux de données de diffusion à son réseau de diffusion respectif (3) pour distribution ultérieure à des interfaces utilisateurs.

15. Appareil selon la revendication 14, dans lequel chaque plate-forme cible (2) comprend un processeur d'applications.

16. Appareil selon la revendication 15, dans lequel chaque plate-forme cible (2) comprend une pluralité de processeurs d'applications.

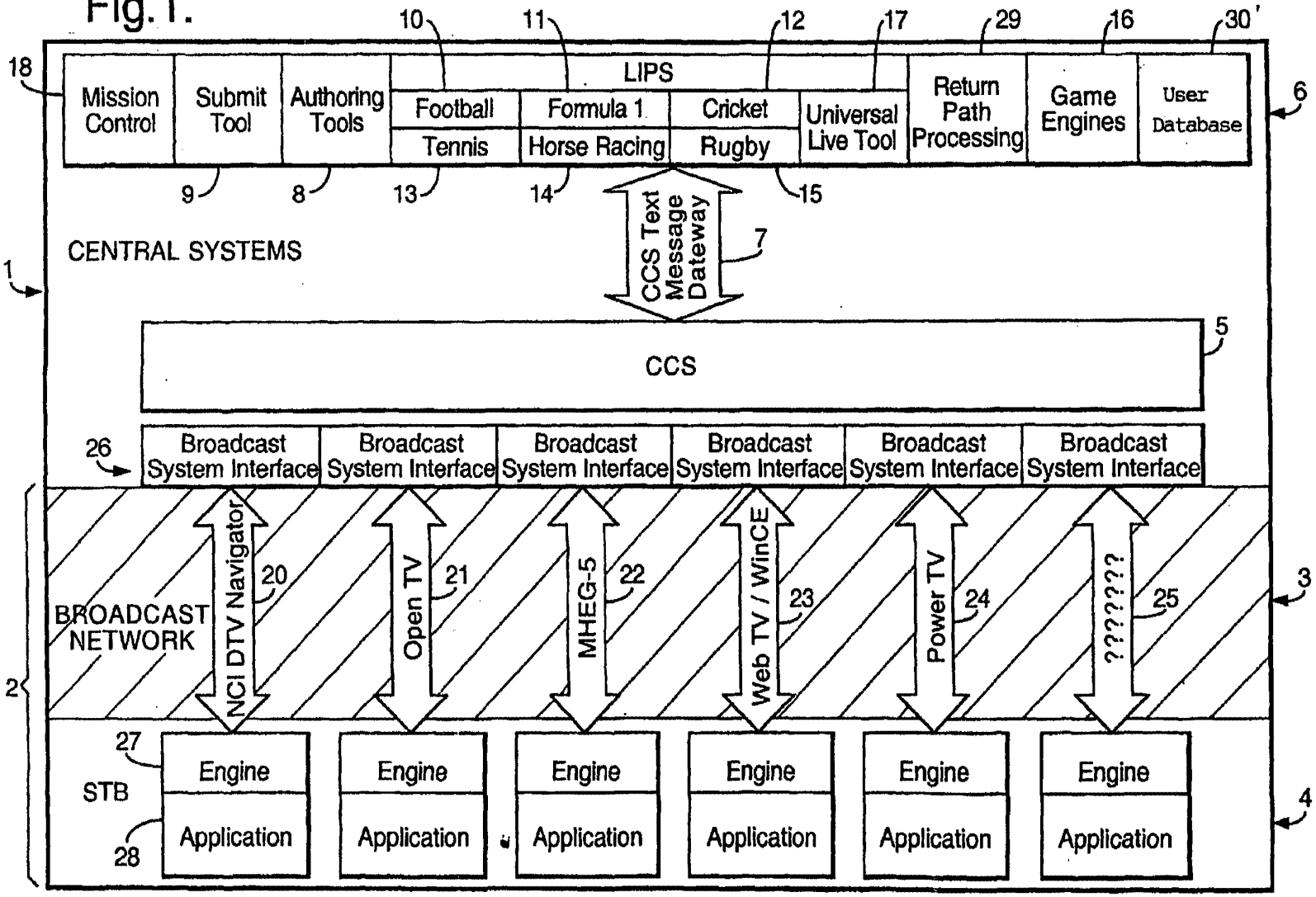
17. Appareil selon la revendication 15 ou 16, dans lequel les interfaces des systèmes de diffusion comportent des moyens de compensation des différences de synchronisation entre les réseaux de diffusion (3) dans le traitement des données de diffusion pour synchroniser dans le temps les données de diffusion à chaque processeur d'applications.

18. Appareil selon la revendication 17, dans lequel les interfaces des systèmes de diffusion comportent des moyens pour effectuer l'étape de compensation en retardant sélectivement la diffusion des données aux plates-formes cibles (2).

19. Appareil selon la revendication 17, dans lequel les interfaces des systèmes de diffusion comportent des moyens pour effectuer l'étape de compensation par inclusion d'informations de synchronisation dans les données de diffusion.

FanDuel Ex. 1002-1445

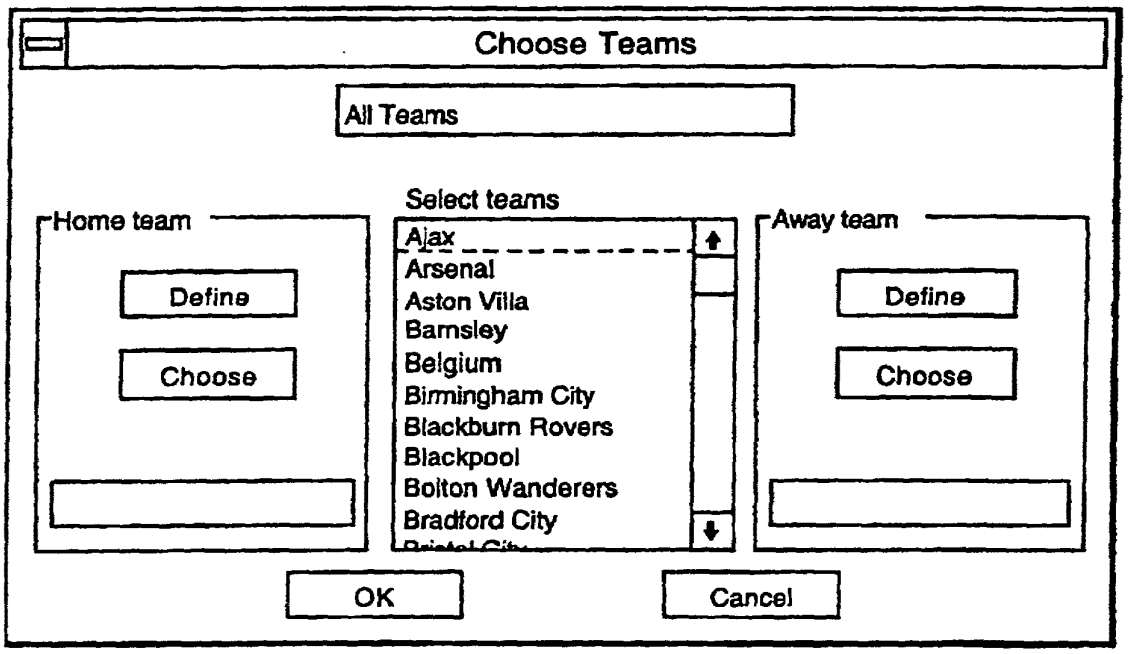
Fig.1.



EP 1 003 313 B1

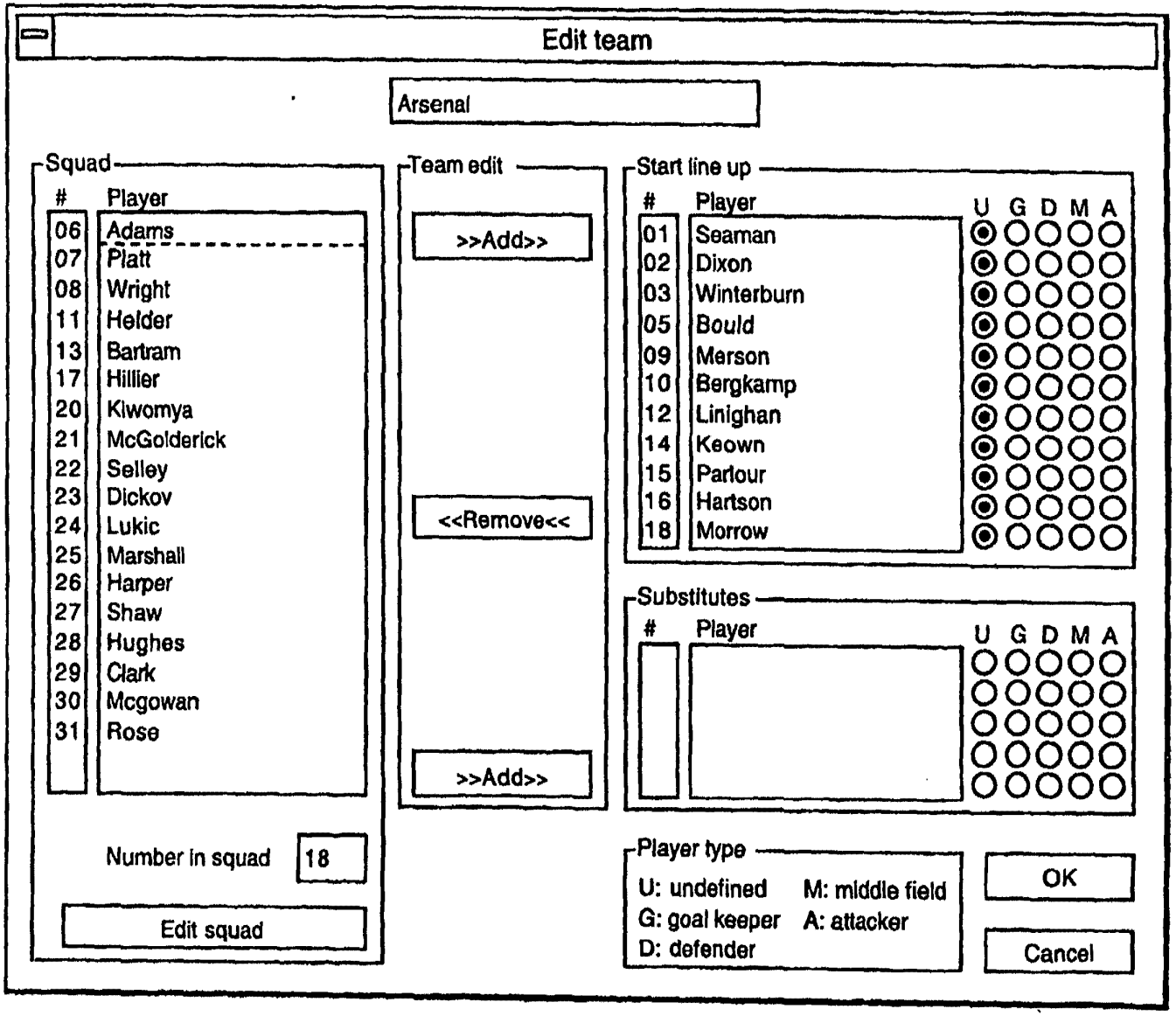
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FanDuel Ex. 1002-1446

Fig.2.



FanDuel Ex. 1002-1447

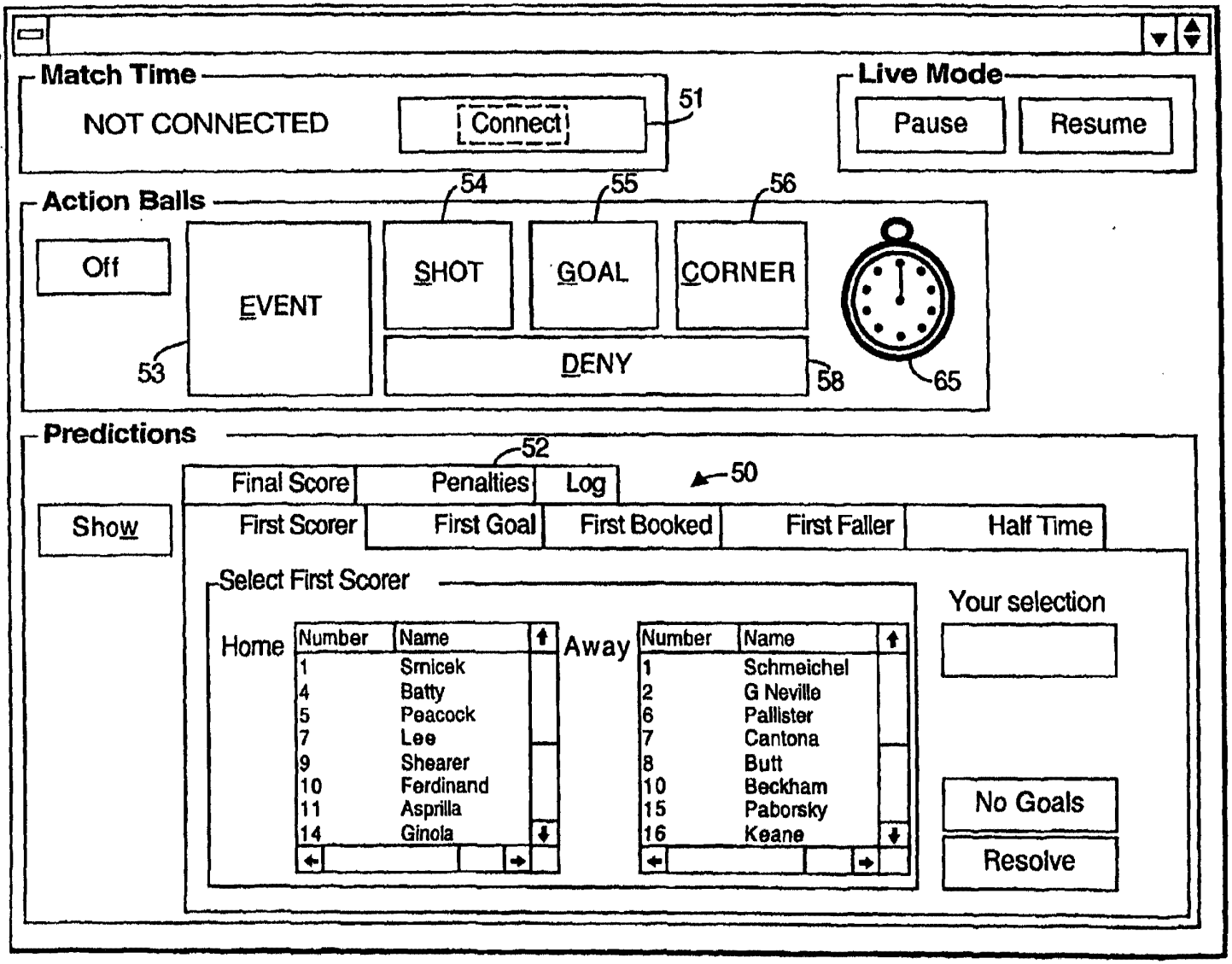
Fig.3.



EP 1 003 313 B1

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FanDuel Ex. 1002-1448

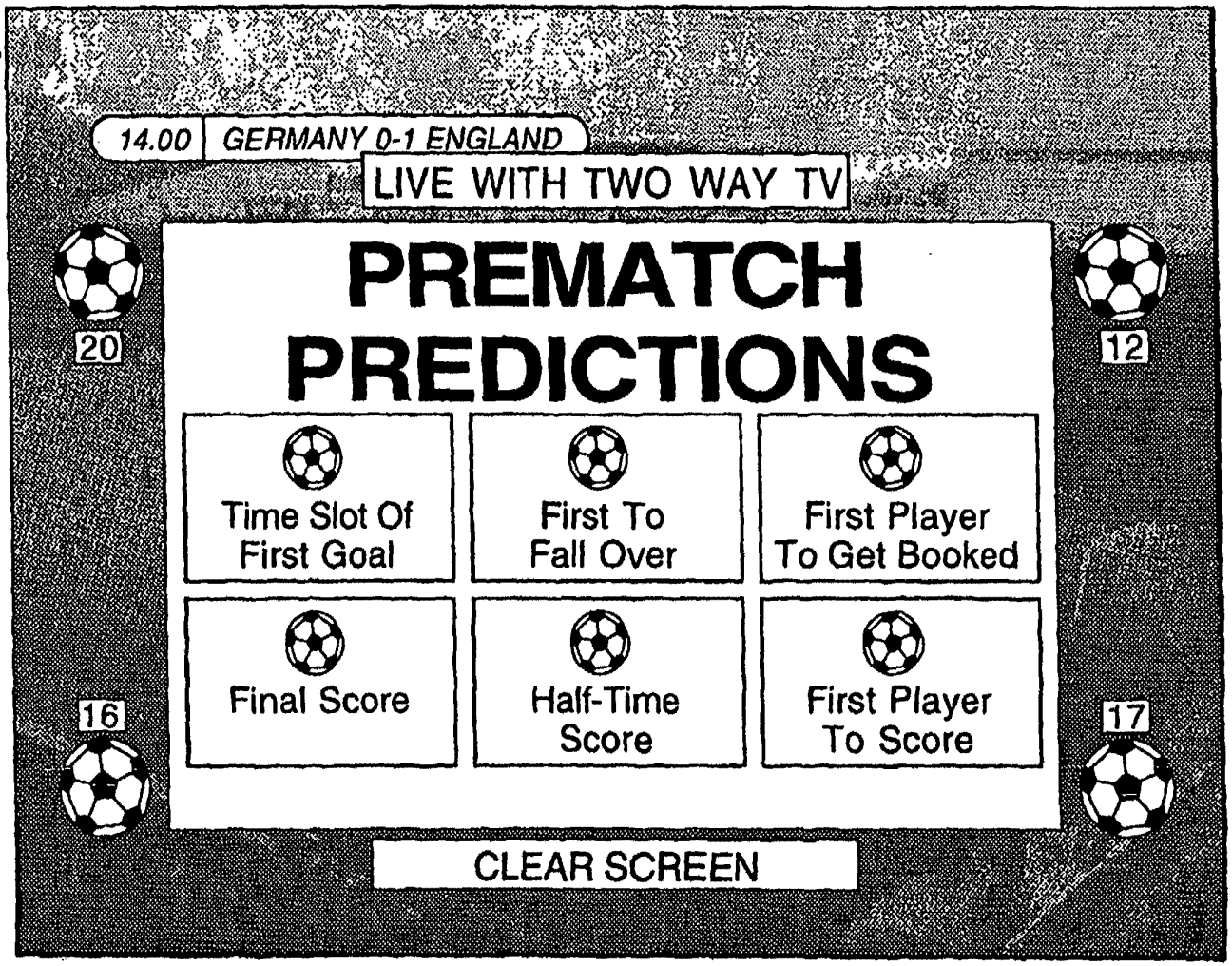
Fig.4.



EP 1 003 313 B1

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FanDuel Ex. 1002-1449

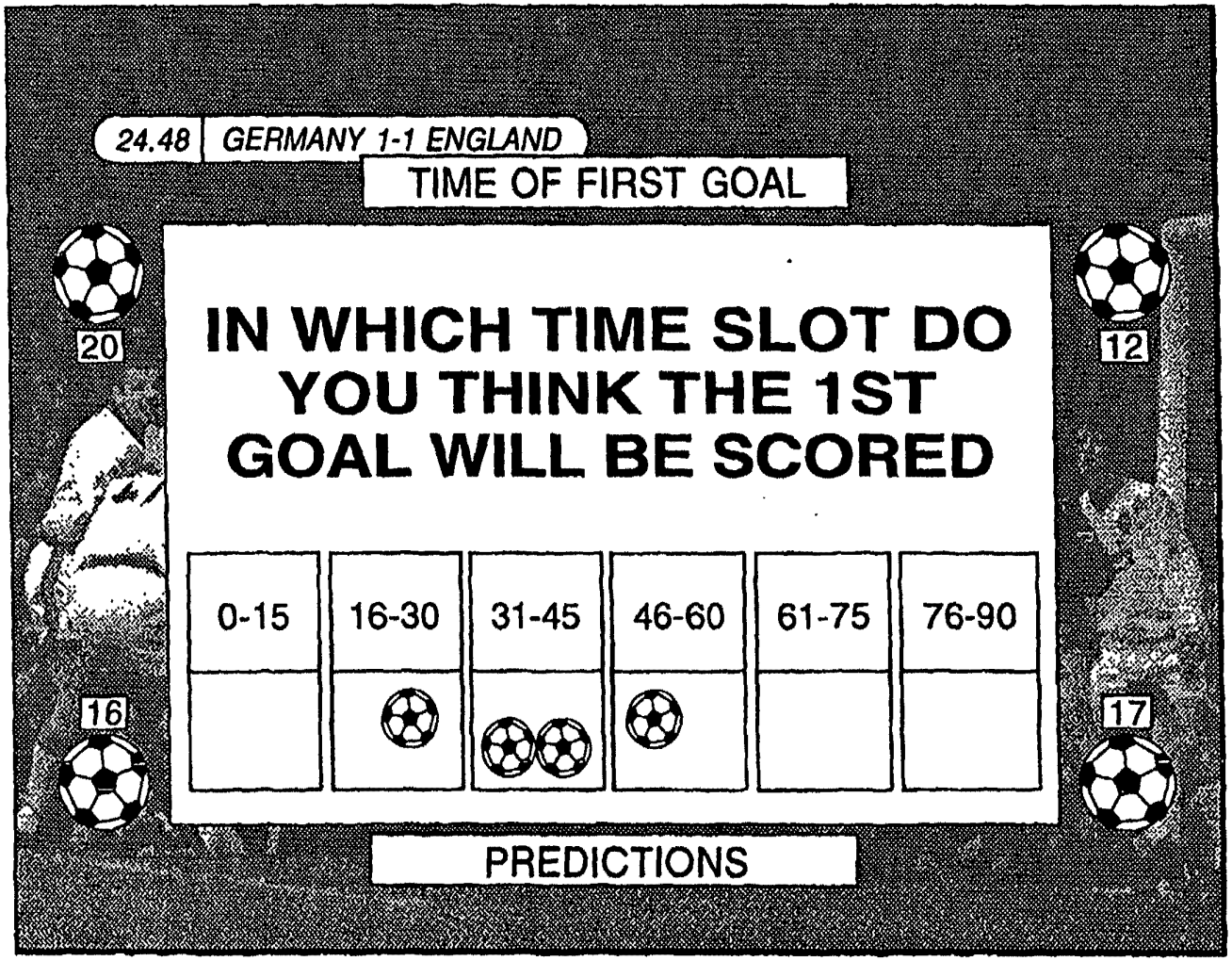
Fig.5.



EP 1 003 313 B1

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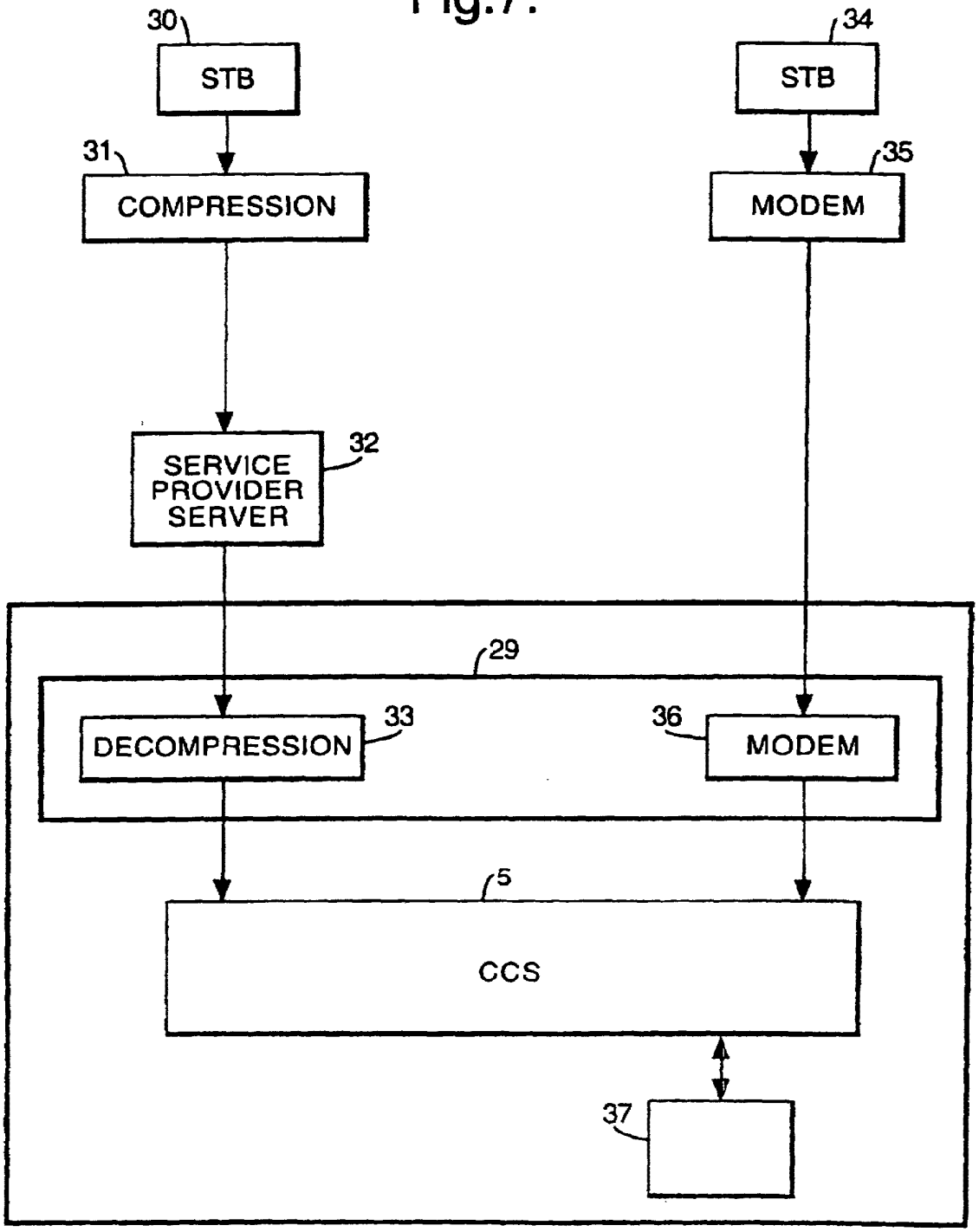
Fig.6.



EP 1 003 313 B1

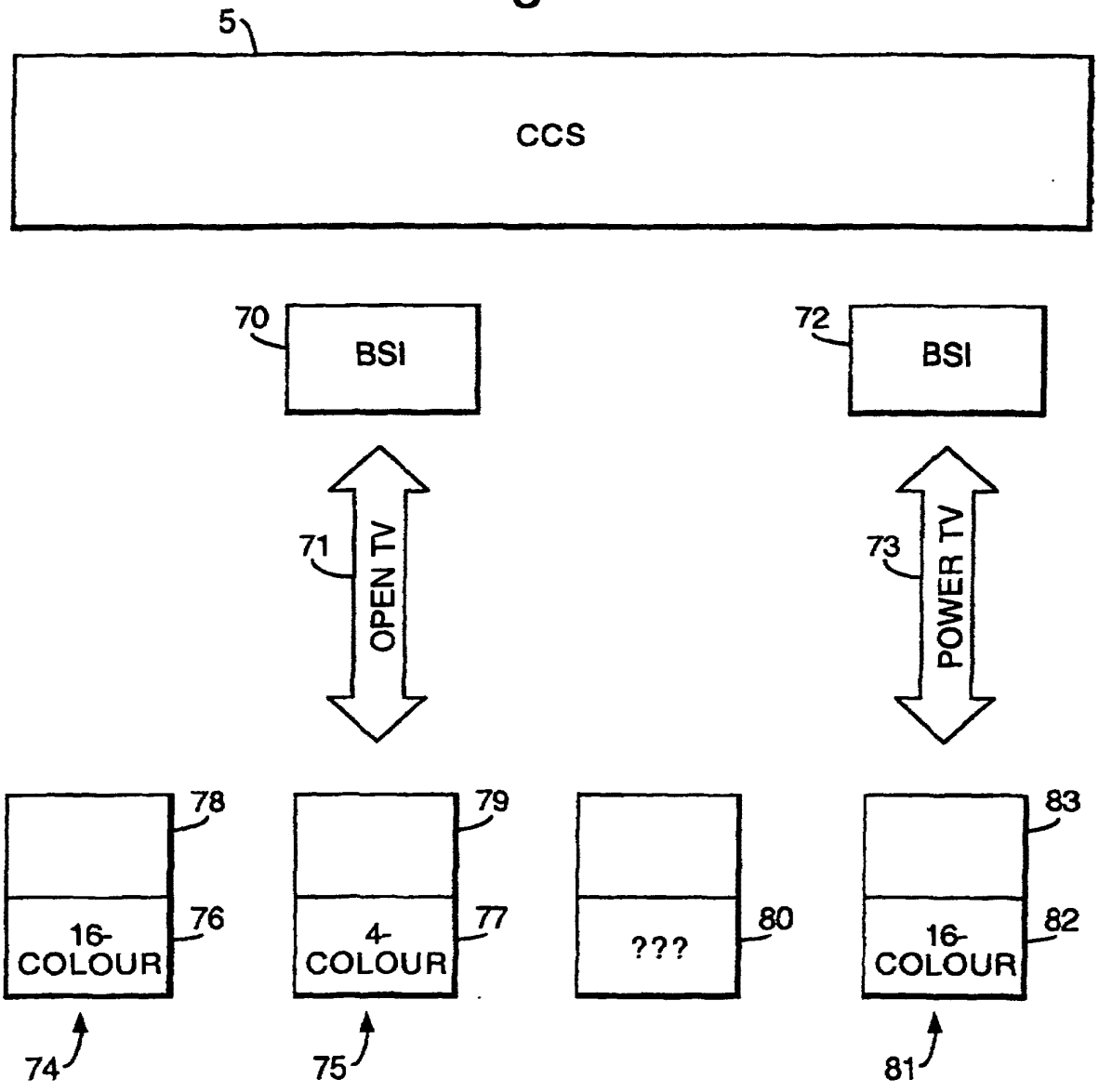
FanDuel Ex. 1002-1451
FanDuel Ex. 1002-1451

Fig.7.



FanDuel Ex. 1002-1452

Fig.8.



FanDuel Ex. 1002-1453

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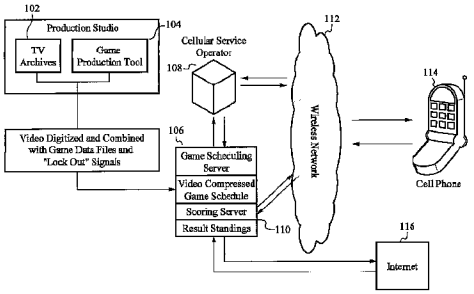
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最終頁に続く

(54)【発明の名称】ゲーム提供方法、ゲーム提供システム、ゲーム装置及びネットワーク

(57)【要約】
テレビジョンアーカイブに基づく携帯電話用ゲームによって、ユーザは、アーカイブテレビ番組に基づくゲームを携帯電話機で遊戯することができる。ゲームは、参加者間で同時に又はオンデマンドで遊戯できる。ゲームデータ及びビデオデータは、１つのファイルに結合され、ゲームに参加する携帯電話機に送信され、これにより、各携帯電話機は、必要な情報を同時に受信する。各携帯電話機は、ゲームデータ及びビデオデータを処理し、ユーザにゲームを遊戯させるためのソフトウェアを備える。ゲームは、ビデオクリップを視聴し、ユーザの携帯電話機上のボタンを用いて、ビデオクリップに関連する選択肢を選択することによって遊戯される。ユーザの得点は、ビデオクリップに関連する問題に対する回答に応じて決定され、結果が参加者に配信される。



FanDuel Ex. 1002-1454

【特許請求の範囲】
【請求項１】
アーカイブテレビ番組に基づき、ゲームを提供するゲーム提供方法において、
ａ．１つ以上のビデオファイル及び１つ以上のゲームデータファイルを受信するステップと、
ｂ．携帯電話ベースのプログラムを動作させ、上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルからビデオデータ及びゲームデータを表示するステップとを有するゲーム提供方法。
【請求項２】
ゲーム開始信号を受信し、ゲームを開始するステップを更に有する請求項１記載のゲーム提供方法。
【請求項３】
上記ビデオデータに関連した１つ以上の選択肢を選択することによって、ゲームを遊戯するステップを更に有する請求項１記載のゲーム提供方法。
【請求項４】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、結合されたファイルとして受信されることを特徴とする請求項１記載のゲーム提供方法。
【請求項５】
上記ビデオデータ及びゲームデータは、同時に表示されることを特徴とする請求項１記載のゲーム提供方法。
【請求項６】
得点を収集し、携帯電話機への参加者に成績を報告するステップを更に有する請求項１記載のゲーム提供方法。
【請求項７】
ロックアウト信号によって更なる入力を禁止するステップを更に有する請求項１記載のゲーム提供方法。
【請求項８】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、圧縮されていることを特徴とする請求項１記載のゲーム提供方法。
【請求項９】
上記ゲームデータは、上記ビデオデータに加えて、グラフィック情報を含むことを特徴とする請求項１記載のゲーム提供方法。
【請求項１０】
上記グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ及びグラフィカルオーバレイのうちの選択された１つとして表示されることを特徴とする請求項９記載のゲーム提供方法。
【請求項１１】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、スケジュールされた開始時刻より前に受信されることを特徴とする請求項１記載のゲーム提供方法。
【請求項１２】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト及びブロードキャストのうちの選択された１つの伝送方式で伝送されることを特徴とする請求項１記載のゲーム提供方法。
【請求項１３】
上記伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択されることを特徴とする請求項１２記載のゲーム提供方法。
【請求項１４】
上記ゲームは、同時ライブ、オンデマンド及び練習のうちから選択される１つとして遊戯されることを特徴とする請求項１３記載のゲーム提供方法。

FanDuel Ex. 1002-1455

【請求項１５】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルと共に一組のデジタルオーディオが受信されることを特徴とする請求項１記載のゲーム提供方法。
【請求項１６】
上記ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することを特徴とする請求項１記載のゲーム提供方法。
【請求項１７】
上記挑戦された競争相手の全てが競争型ゲームを完了した後、該挑戦された競争相手に、順位を含む結果が送信されることを特徴とする請求項１６記載のゲーム提供方法。
【請求項１８】
上記ユーザは、インターネットを用いて、挑戦し、競争するリモートの競争相手を指定することを特徴とする請求項１６記載のゲーム提供方法。
【請求項１９】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、特定の時刻に、全ての参加者に同時にブロードキャストされることを特徴とする請求項１記載のゲーム提供方法。
【請求項２０】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、予め生成されていることを特徴とする請求項１記載のゲーム提供方法。
【請求項２１】
上記アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーからなるグループから選択されることを特徴とする請求項１記載のゲーム提供方法。
【請求項２２】
上記１つ以上のビデオファイルは、上記アーカイブテレビ番組の１つ以上のセグメントを含むことを特徴とする請求項１記載のゲーム提供方法。
【請求項２３】
上記１つ以上のセグメントは、５分から２０分のセグメントであることを特徴とする請求項２２記載のゲーム提供方法。
【請求項２４】
アナログビデオ信号をデジタル化するステップを更に有する請求項１記載のゲーム提供方法。
【請求項２５】
上記１つ以上のビデオファイル及び上記１つ以上のゲームデータファイルは、無線携帯電話ネットワークを介して受信されることを特徴とする請求項１記載のゲーム提供方法。
【請求項２６】
上記ビデオデータ及びゲームデータは、同期して表示されることを特徴とする請求項１記載のゲーム提供方法。
【請求項２７】
ユーザが遊戯したエピソードの記録をサーバ上で維持し、ユーザが以前に遊戯していないゲームをユーザに提供することを確実にすることを特徴とする請求項１記載のゲーム提供方法。
【請求項２８】
アーカイブテレビ番組のセグメントに基づき、ゲームを提供するゲーム提供方法において、
ａ．サーバから無線携帯電話ネットワークを介して、
１．ビデオデータを含む１つ以上の予め生成されたビデオファイルと、
２．上記ビデオデータに加えてグラフィック情報を含むゲームデータを含む１つ以上のゲームデータファイルと、
３．１つ以上のオーディオファイルとを含む一組のファイルを伝送するステップと

FanDuel Ex. 1002-1456

、
ｂ．携帯電話機において、上記一組のファイルを受信するステップと、
ｃ．上記携帯電話機に含まれている携帯電話ベースのプログラムによって、上記ビデオデータ及び上記ゲームデータを同時に表示するステップと、
ｄ．１つ以上の選択肢を選択することによってゲームを遊戯させるステップとを有するゲーム提供方法。
【請求項２９】
上記一組のファイルは、結合されたファイルにまとめられていること特徴とする請求項２８記載のゲーム提供方法。
【請求項３０】
得点を収集し、携帯電話機への参加者に成績を報告するステップを更に有する請求項２８記載のゲーム提供方法。
【請求項３１】
上記グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ及びグラフィカルオーバレイのうちの選択された１つとして表示されることを特徴とする請求項３０記載のゲーム提供方法。
【請求項３２】
上記一組のファイルは、圧縮データを含むことを特徴とする請求項２８記載のゲーム提供方法。
【請求項３３】
上記一組のファイルは、スケジュールされた開始時刻より前に受信されることを特徴とする請求項２８記載のゲーム提供方法。
【請求項３４】
上記一組のファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト及びブロードキャストのうちの選択された１つの伝送方式で伝送されることを特徴とする請求項２８記載のゲーム提供方法。
【請求項３５】
上記伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択されることを特徴とする請求項３４記載のゲーム提供方法。
【請求項３６】
上記ゲームは、同時ライブ、オンデマンド及び練習のうちから選択される１つとして遊戯されることを特徴とする請求項３５記載のゲーム提供方法。
【請求項３７】
上記ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することを特徴とする請求項２８記載のゲーム提供方法。
【請求項３８】
上記挑戦された競争相手の全てが競争型ゲームを完了した後、該挑戦された競争相手に、順位を含む結果が送信されることを特徴とする請求項３７記載のゲーム提供方法。
【請求項３９】
上記一組のファイルは、特定の時刻に同時に全ての参加者にブロードキャストされることを特徴とする請求項２８記載のゲーム提供方法。
【請求項４０】
上記アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーからなるグループから選択されることを特徴とする請求項２８記載のゲーム提供方法。
【請求項４１】
アーカイブテレビ番組に基づき、ゲームを生成及び配信するゲーム提供システムにおいて、
ａ．ビデオデータ及びゲームデータを一組のファイルにグループ化するゲーム生成機器と、

FanDuel Ex. 1002-1457

ｂ．上記ゲーム生成機器に接続され、上記一組のファイルを送受信する第１のサーバとを備えるゲーム提供システム。

【請求項４２】

上記一組のファイルは、結合されたファイルにまとめられていること特徴とする請求項４１記載のゲーム提供システム。

【請求項４３】

上記ビデオデータ及びゲームデータに基づき、ユーザは、該ビデオデータに関連した１つ以上の選択肢を選択することによってゲームを遊戯することを特徴とする請求項４１記載のゲーム提供システム。

【請求項４４】

上記第１のサーバに接続され、得点データを受信し、順位表を生成し、該順位表を参加者に送信する第２のサーバを更に備える請求項４１記載のゲーム提供システム。

【請求項４５】

上記第１のサーバ及び上記第２のサーバは、単一のサーバ機器内に含まれていることを特徴とする請求項４４記載のゲーム提供システム。

【請求項４６】

上記第１のサーバ及び無線ネットワークに接続され、該無線ネットワークに上記一組のファイルを送信する携帯電話サービスオペレータを更に備える請求項４１記載のゲーム提供システム。

【請求項４７】

上記一組のファイルは、圧縮データを含むことを特徴とする請求項４１記載のゲーム提供システム。

【請求項４８】

上記一組のファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト及びブロードキャストのうちの選択された１つの伝送方式で伝送されることを特徴とする請求項４１記載のゲーム提供システム。

【請求項４９】

上記伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択されることを特徴とする請求項４８記載のゲーム提供システム。

【請求項５０】

上記ゲームは、同時ライブ、オンデマンド及び練習のうちから選択される１つとして遊戯されることを特徴とする請求項４９記載のゲーム提供システム。

【請求項５１】

上記一組のファイルには、一組のデジタルオーディオデータがグループ化されていることを特徴とする請求項４１記載のゲーム提供システム。

【請求項５２】

上記一組のファイルは、特定の時刻に同時に全ての参加者にブロードキャストされることを特徴とする請求項４１記載のゲーム提供システム。

【請求項５３】

上記ビデオデータ及びゲームデータは、予め生成されていることを特徴とする請求項４１記載のゲーム提供システム。

【請求項５４】

上記アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーからなるグループから選択されることを特徴とする請求項４１記載のゲーム提供システム。

【請求項５５】

上記アーカイブテレビ番組の１つ以上のセグメントは、ビデオデータに含まれていることを特徴とする請求項４１記載のゲーム提供システム。

【請求項５６】

上記１つ以上のセグメントは、５分から２０分のセグメントであることを特徴とする請

FanDuel Ex. 1002-1458

求項５５記載のゲーム提供システム。
【請求項５７】
ビデオデータ及びゲームデータを含む一組のファイルを受信し、プログラム及び該一組のファイルに基づき、該ビデオデータ及びゲームデータをユーザに表示する携帯電話機を備え、アーカイブテレビ番組に基づくゲームを遊戯するためのゲーム装置。
【請求項５８】
上記一組のファイルは、結合されたファイルにまとめられていること特徴とする請求項５７記載のゲーム装置。
【請求項５９】
上記ビデオデータ及びゲームデータは、同時に表示されることを特徴とする請求項５７記載のゲーム装置。
【請求項６０】
上記ゲームデータは、上記ビデオデータに加えてグラフィック情報を含むことを特徴とする請求項５７記載のゲーム装置。
【請求項６１】
上記グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ及びグラフィカルオーバレイのうちの選択された１つとして表示されることを特徴とする請求項６０記載のゲーム装置。
【請求項６２】
上記ビデオデータ及びゲームデータは、同期されることを特徴とする請求項５７記載のゲーム装置。
【請求項６３】
上記ゲームは、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択される１つを用いて携帯電話に送信されることを特徴とする請求項５７記載のゲーム装置。
【請求項６４】
上記ゲームは、同時ライブ、オンデマンド及び練習のうちから選択される１つとして遊戯されることを特徴とする請求項５７記載のゲーム装置。
【請求項６５】
上記ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することを特徴とする請求項５７記載のゲーム装置。
【請求項６６】
上記挑戦された競争相手の全てが競争型ゲームを完了した後、該挑戦された競争相手に、順位を含む結果が送信されることを特徴とする請求項６５記載のゲーム装置。
【請求項６７】
順位表情報は、サーバから受信されることを特徴とする請求項５７記載のゲーム装置。
【請求項６８】
上記ビデオデータ及びゲームデータは、予め生成されていることを特徴とする請求項５７記載のゲーム装置。
【請求項６９】
上記アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーからなるグループから選択されることを特徴とする請求項５７記載のゲーム装置。
【請求項７０】
上記アーカイブテレビ番組の１つ以上のセグメントは、上記ビデオデータに含まれていることを特徴とする請求項５７記載のゲーム装置。
【請求項７１】
アーカイブテレビ番組のセグメントに基づいてゲームを提供する機器のネットワークにおいて、
ａ．ビデオデータとゲームデータとを結合して、結合されたファイルを生成するゲーム生成機器と、

FanDuel Ex. 1002-1459

ｂ．上記ゲーム生成機器に接続され、上記結合されたファイルを送受信する第１のサーバと、

ｃ．無線ネットワークを介して上記第１のサーバと通信し、上記結合されたファイルを受信し、プログラム及び該結合されたファイルに基づき、該ビデオデータ及びゲームデータをユーザに表示する複数の機器とを備えるネットワーク。

【請求項７２】

上記ビデオデータ及びゲームデータに基づき、ユーザは、該ビデオデータに関連した１つ以上の選択肢を選択することによってゲームを遊戯することを特徴とする請求項７１記載のネットワーク。

【請求項７３】

上記複数の機器は、携帯電話機、パーソナルコンピュータ、ラップトップコンピュータ及び携帯情報端末からなるグループから選択されることを特徴とする請求項７１記載のネットワーク。

【請求項７４】

上記結合されたファイルは、上記各機器に実質的に同時に受信されることを特徴とする請求項７１記載のネットワーク。

【請求項７５】

上記無線ネットワークに接続され、得点データを受信し、順位表を生成する第２のサーバを更に備える請求項７１記載のネットワーク。

【請求項７６】

上記第１のサーバ及び第２のサーバは、単一のサーバ機器内に含まれていることを特徴とする請求項７５記載のネットワーク。

【請求項７７】

順位表及び結果は、参加者に送信されることを特徴とする請求項７１記載のネットワーク。

【請求項７８】

上記第１のサーバ及び無線ネットワークに接続され、該無線ネットワークに上記結合されたファイルを送信する携帯電話サービスオペレータを更に備える請求項７１記載のネットワーク。

【請求項７９】

上記ビデオデータ及びゲームデータは、同時に表示されることを特徴とする請求項７１記載のネットワーク。

【請求項８０】

上記結合されたファイルは、圧縮データを含むことを特徴とする請求項７１記載のネットワーク。

【請求項８１】

上記ゲームデータは、上記ビデオデータに加えてグラフィック情報を含むことを特徴とする請求項７１記載のネットワーク。

【請求項８２】

上記グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ及びグラフィカルオーバレイのうちの選択された１つとして表示されることを特徴とする請求項８１記載のネットワーク。

【請求項８３】

上記結合されたファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト及びブロードキャストのうちの選択された１つの伝送方式で伝送されることを特徴とする請求項７１記載のネットワーク。

【請求項８４】

上記伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択されることを特徴とする請求項８３記載のネットワーク。

【請求項８５】

FanDuel Ex. 1002-1460

上記ゲームは、同時ライブ、オンデマンド及び練習のうちから選択される１つとして遊戯されることを特徴とする請求項８４記載のネットワーク。
【請求項８６】
上記結合されたファイルには、一組のデジタルオーディオデータが結合されていることを特徴とする請求項７１記載のネットワーク。
【請求項８７】
上記ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することを特徴とする請求項７１記載のネットワーク。
【請求項８８】
上記競争相手は、上記競争型ゲームを適切な時刻に遊戯できることを特徴とする請求項８７記載のネットワーク。
【請求項８９】
上記挑戦された競争相手の全てが競争型ゲームを完了した後、該挑戦された競争相手に、順位を含む結果が送信されることを特徴とする請求項８８記載のネットワーク。
【請求項９０】
上記結合されたファイルは、特定の時刻に同時に全ての参加者にブロードキャストされることを特徴とする請求項７１記載のネットワーク。
【請求項９１】
上記ビデオデータ及びゲームデータは、予め生成されていることを特徴とする請求項７１記載のネットワーク。
【請求項９２】
上記アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーからなるグループから選択されることを特徴とする請求項７１記載のネットワーク。
【請求項９３】
上記アーカイブテレビ番組の１つ以上のセグメントは、上記ビデオデータに含まれていることを特徴とする請求項７１記載のネットワーク。
【請求項９４】
上記１つ以上のセグメントは、５分から２０分のセグメントであることを特徴とする請求項９３記載のネットワーク。
【請求項９５】
上記ビデオデータ及びゲームデータは、同期されることを特徴とする請求項７１記載のネットワーク。
【請求項９６】
競争相手のグループを登録するためにインターネット[an Internet]を更に備える請求項７１記載のネットワーク。
【発明の詳細な説明】
【関連出願】
【０００１】
本出願は、米国特許法第１１９条（ｅ）項に基づき、参照することによって全体が援用される、２００５年１０月３日に出願された係属中の米国仮特許出願番号第６０／７２３，３０１号、発明の名称「テレビジョンアーカイブに基づく携帯電話用ゲーム（CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES）」の優先権を主張する。
【技術分野】
【０００２】
本発明は、配信型のエンターテインメントの分野に関する。詳しくは、本発明は、コンピューティング装置を利用した、以前に放送され、アーカイブテレビ番組に対応する配信型の娯楽に関する。
【背景技術】
【０００３】

FanDuel Ex. 1002-1461

携帯電話機は、米国だけで、１億７０００万台以上登録されている。ファセンダ（Fascenda）他に付与されていた米国特許番号第４，５９２，５４６号の特許権の満了に伴い、現在、各社は、携帯電話機及びマルチキャストネットワークを利用する他のモバイル通信機器を用いて、例えば、次のプレーに関して、クォーターバックが何をコールするかといった予想に基づいて、腕前に左右されるゲーム（game of skill：以下、スキルゲームと呼ぶ。）におけるテレビジョンビューワをコントロールする技術を利用できるようになった。更に、携帯電話機の所有者間で、クラシックカード、サイコロ、トリビア及び他のゲームに基づくスキルゲームを、共通の開始時刻で、同時に行うことができる。様々な州の反ゲーム法の適用を回避するために、このようなゲームでは、各個別のゲームのプレーヤの相対的な技能、経験、熟練度に基づいて、勝者を決定しなければならない。

【０００４】

現在、アメリカンアイドル（American Idol：商標）というオーディション番組は、テレビジョン視聴者が携帯電話機を使用して番組に参加できるという点で人気が高い。全米で放送されているこのオーディション番組の最終審査段階では、ＡＴ＆Ｔ社（AT&T：商標）の携帯電話機の契約者が、気に入ったオーディション参加に投票できる。この投票に、６千万人以上が参加している。これらの投票による得票数によって、最終的な優勝者が決定される。他のライブテレビ番組、例えば、テレビ番組「ソー・ユー・シンク・ユー・キャン・ダンス（So You Think You Can Dance）」等は、携帯電話機を介するユーザインタラクティブ性を組み込み、ユーザが、選択肢の選択又はダイヤルによって、テキストメッセージを送信できる。

【０００５】

エアプレイネットワーク社（AirPlay Network, Inc）は、２００６年９月７日に、テレビ放送されるフットボールの試合の視聴者が、放送を視聴しながら、それぞれの携帯電話機を用いて、互いに競争することができる全米的なサービスを開始した。ここで、視聴者が生のイベント又は生のテレビ番組に参加できない場合、番組の放送に時間差がある場合、ユーザが、任意の時刻に任意の場所で同等の体験を享受することを望む場合等、更なるゲーム遊戯の可能性が望まれている。

【発明の開示】

【課題を解決するための手段】

【０００６】

テレビジョンアーカイブに基づく携帯電話ベースのゲームにより、ユーザは、携帯電話機を用いて、アーカイブテレビ番組に関連するゲームを遊戯することができる。ゲームデータとビデオデータは、１つのファイルに結合され、ゲームの参加者の携帯電話機にストリーミング、ブロードキャスト又はマルチキャストされ、各携帯電話機は、必要な情報を同時に受信し、又は必要な情報をダウンロードし、同時にゲームを開始する。ユーザがゲームを遊戯するために、各携帯電話機は、ゲームデータ及びビデオデータを処理するソフトウェアを備える。ゲームは、ユーザがアーカイブテレビ番組からのビデオクリップを見て、ユーザの携帯電話機上のインタフェースを用いて、ビデオクリップに関連した選択肢を選択することによって遊戯される。ビデオクリップに関連する問題に対する回答又は予想に基づいてユーザの得点が決定される。

【０００７】

本発明の一側面として、アーカイブテレビ番組に基づき、ゲームを提供するゲーム提供方法は、１つ以上のビデオファイル及び１つ以上のゲームデータファイルを受信するステップと、携帯電話ベースのプログラムを動作させ、１つ以上のビデオファイル及び１つ以上のゲームデータファイルからのビデオデータ及びゲームデータを表示するステップとを有する。ファイルは、スケジュールされた開始時刻の前に携帯電話機にダウンロードされる。ゲーム提供方法は、ゲーム開始信号を受信し、ゲームを開始するステップを更に有していてもよい。ゲーム提供方法は、ビデオデータに関連した１つ以上の選択肢を選択することによってゲームを遊戯するステップを更に有していてもよい。１つ以上のビデオファイルと１つ以上のゲームデータファイルは、結合されたファイルとして受信されてもよい

FanDuel Ex. 1002-1462

。ビデオデータ及びゲームデータは、同時に表示してもよい。第３の手法では、全てのプレーヤが、マルチキャスト、ブロードキャスト又はリアルタイムでの一対多のブロードキャストの他の形式で、データを受信する。ゲーム提供方法は、得点を収集し、携帯電話機への参加者に成績を報告するステップを更に有していてもよい。ゲーム提供方法は、ロックアウト信号によって更なる入力を禁止するステップを更に有していてもよい。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、圧縮されていてもよい。ゲームデータは、ビデオデータに加えてグラフィック情報を含んでいてもよい。グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ又はグラフィカルオーバレイとして表示してもよい。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、スケジュールされた開始時刻より前に受信される。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト又はブロードキャストで伝送される。伝送の具体例として、クアルコム社（Qualcomm：商標）が開発したＭｅｄｉａＦＬＯネットワーク、ベライゾンワイヤレス（Verizon Wireless：商標）、スプリント（Sprint：商標）等を用いてもよく、或いは、ＴＣＰ接続又はマルチキャストモードでの３Ｇ携帯電話ネットワークを利用してもよく、デジタルラジオ、デジタルテレビジョン放送又はこれらの放送の副搬送波を介してデジタルデータのブロードキャストを行ってもよい。伝送は、デジタルブロードキャスト、個別ストリーミング又はダウンロードによって行われる。ゲームは、同時ライブ、オンデマンドでの競争、又はオンデマンドでの練習のうちの１つとして遊戯される。１つ以上のビデオファイル及び１つ以上のゲームデータファイルと共に一組のデジタルオーディオを受信してもよい。ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することができる。挑戦された競争相手の全てが競争型ゲームを完了した後、挑戦された競争相手に、順位を含む結果を送信してもよい。幾つかの実施の形態では、ユーザは、インターネットを用いて、挑戦し、競争するリモートの競争相手を指定することができる。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、特定の時刻に、全ての参加者に同時にブロードキャストしてもよい。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、予め生成してもよい。アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーを含む。１つ以上のビデオファイルは、アーカイブテレビ番組の１つ以上のセグメントを含む。１つ以上のセグメントは、５分から２０分のセグメントであってもよい。ゲーム提供方法は、アナログビデオ信号をデジタル化するステップを更に有していてもよい。１つ以上のビデオファイル及び１つ以上のゲームデータファイルは、無線携帯電話ネットワークを介して受信してもよい。ビデオデータ及びゲームデータは、同期して表示される。ユーザが遊戯したエピソードの記録をサーバ上で維持し、ユーザが以前に遊戯していないゲームをユーザに提供することを確実にしてもよい。

【０００８】

他の側面として、アーカイブテレビ番組のセグメントに基づき、ゲームを提供するゲーム提供方法は、サーバから無線携帯電話ネットワークを介して、ビデオデータを含む１つ以上の予め生成されたビデオファイルと、ビデオデータに加えてグラフィック情報を含むゲームデータを含む１つ以上のゲームデータファイルと、１つ以上のオーディオファイルとを含む一組のファイルを伝送するステップと、携帯電話機において、一組のファイルを受信するステップと、携帯電話機に含まれている携帯電話ベースのプログラムによって、ビデオデータ及びゲームデータを同時に表示するステップと、１つ以上の選択肢を選択することによってゲームを遊戯させるステップとを有する。一組のファイルは、結合されたファイルにまとめてもよい。ゲーム提供方法は、得点を収集し、携帯電話機への参加者に成績を報告するステップを更に有していてもよい。グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ又はグラフィカルオーバレイとして表示してもよい。一組のファイルは、圧縮データを含んでいてもよい。一組のファイルは、スケジュールされた開始時刻より前に受信してもよい。一組のファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト又はブロードキャストで伝送してもよい。伝

FanDuel Ex. 1002-1463

送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択してもよい。ゲームは、同時ライブ、オンデマンドでの競争、又はオンデマンドでの練習のうちの１つとして遊戯される。ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することができる。挑戦された競争相手の全てが競争型ゲームを完了した後、挑戦された競争相手に、順位を含む結果を送信してもよい。一組のファイルは、特定の時刻に、全ての参加者に同時にブロードキャストしてもよい。アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーを含む。

【０００９】

更に他の側面として、アーカイブテレビ番組に基づき、ゲームを生成及び配信するゲーム提供システムは、ビデオデータ及びゲームデータを一組のファイルにグループ化するゲーム生成機器と、ゲーム生成機器に接続され、一組のファイルを送受信する第１のサーバとを備える。一組のファイルは、結合されたファイルにまとめてもよい。ビデオデータ及びゲームデータに基づき、ユーザは、ビデオデータに関連した１つ以上の選択肢を選択することによってゲームを遊戯できる。ゲーム提供システムは、第１のサーバに接続され、得点データを受信し、順位表を生成し、順位表を参加者に送信する第２のサーバを更に備えていてもよい。幾つかの実施の形態においては、第１のサーバ及び第２のサーバは、単一のサーバ機器内に含まれている。ゲーム提供システムは、第１のサーバ及び無線ネットワークに接続され、無線ネットワークに一組のファイルを送信する携帯電話サービスオペレータを更に備えていてもよい。一組のファイルは、圧縮データを含んでいてもよい。一組のファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト又はブロードキャストで伝送してもよい。伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択してもよい。ゲームは、同時ライブ、オンデマンドでの競争、又はオンデマンドでの練習のうちの１つとして遊戯される。一組のファイルには、一組のデジタルオーディオデータをグループ化してもよい。一組のファイルは、特定の時刻に、全ての参加者に同時にブロードキャストしてもよい。ビデオデータ及びゲームデータは、予め生成してもよい。アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーを含む。１つ以上のビデオファイルは、アーカイブテレビ番組の１つ以上のセグメントを含む。１つ以上のセグメントは、５分から２０分のセグメントであってもよい。

【００１０】

更に他の側面として、本発明は、ビデオデータ及びゲームデータを含む一組のファイルを受信し、プログラム及び一組のファイルに基づき、ビデオデータ及びゲームデータをユーザに表示する携帯電話機を備え、アーカイブテレビ番組に基づくゲームを遊戯するためのゲーム装置を提供する。一組のファイルは、結合されたファイルにまとめてもよい。ビデオデータ及びゲームデータは、同時に表示してもよい。ゲームデータは、ビデオデータに加えてグラフィック情報を含んでいてもよい。グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ又はグラフィカルオーバレイとして表示してもよい。ビデオデータ及びゲームデータは、同期される。ゲームは、デジタルブロードキャスト、個別ストリーミング又はダウンロードによって伝送される。ゲームは、同時ライブ、オンデマンドでの競争、又はオンデマンドでの練習のうちの１つとして遊戯される。ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することができる。挑戦された競争相手の全てが競争型ゲームを完了した後、挑戦された競争相手に、順位を含む結果を送信してもよい。順位表情報は、サーバから受信してもよい。ビデオデータ及びゲームデータは、予め生成してもよい。アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーを含む。１つ以上のビデオファイルは、アーカイブテレビ番組の１つ以上のセグメントを含む。

【００１１】

更に他の側面として、アーカイブテレビ番組のセグメントに基づいてゲームを提供する機器のネットワークは、ビデオデータとゲームデータとを結合して、結合されたファイルを生成するゲーム生成機器と、ゲーム生成機器に接続され、結合されたファイルを送受信

FanDuel Ex. 1002-1464

する第１のサーバと、無線ネットワークを介して第１のサーバと通信し、結合されたファイルを受信し、プログラム及び結合されたファイルに基づき、ビデオデータ及びゲームデータをユーザに表示する複数の機器とを備える。ビデオデータ及びゲームデータに基づき、ユーザは、ビデオデータに関連した１つ以上の選択肢を選択することによってゲームを遊戯することができる。複数の機器は、携帯電話機、パーソナルコンピュータ、ラップトップコンピュータ及び携帯情報端末からなるグループから選択してもよい。結合されたファイルは、各機器に実質的に同時に受信してもよい。ネットワークは、無線ネットワークに接続され、得点データを受信し、順位表を生成する第２のサーバを更に備えていてもよい。幾つかの実施の形態においては、第１のサーバ及び第２のサーバは、単一のサーバ機器内に含まれている。順位表及び結果は、参加者に送信される。ネットワークは、第１のサーバ及び無線ネットワークに接続され、無線ネットワークに結合されたファイルを送信する携帯電話サービスオペレータを更に備えていてもよい。ビデオデータ及びゲームデータは、同時に表示してもよい。上記結合されたファイルは、圧縮データを含んでいてもよい。ゲームデータは、ビデオデータに加えてグラフィック情報を含んでいてもよい。グラフィック情報は、クローリング情報、クローズド・キャプション情報、ピクチャインピクチャ又はグラフィカルオーバレイとして表示してもよい。結合されたファイルは、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト又はブロードキャストで伝送してもよい。伝送は、デジタルブロードキャスト、個別ストリーミング及びダウンロードのうちから選択してもよい。ゲームは、同時ライブ、オンデマンドでの競争、又はオンデマンドでの練習のうちの１つとして遊戯される。結合されたファイルには、一組のデジタルオーディオデータをグループ化してもよい。ユーザは、競争型ゲームにおいて、挑戦し、競争するリモートの競争相手を指定することができる。競争相手は、都合がいいときにゲームを遊戯できる。挑戦された競争相手の全てが競争型ゲームを完了した後、挑戦された競争相手に、順位を含む結果を送信してもよい。結合されたファイルは、特定の時刻に同時に全ての参加者にブロードキャストしてもよい。ビデオデータ及びゲームデータは、予め生成してもよい。アーカイブテレビ番組は、スポーツ競技、ゲームショー及びエンターテインメントショーを含む。１つ以上のビデオファイルは、アーカイブテレビ番組の１つ以上のセグメントを含む。１つ以上のセグメントは、５分から２０分のセグメントであってもよい。ビデオデータ及びゲームデータは、同期してもよい。ネットワークは、競争相手のグループを登録するためにインターネット[an Internet]を更に備えていてもよい。

【発明を実施するための最良の形態】

【００１２】

本発明は、以前に放送されたテレビ番組のアーカイブ映像に基づいて、携帯電話機又は他のモバイル機器上で、ゲームを生成し、制作し、配信し、遊戯するためのシステム及び方法を提供する。ここで言うゲームは、本出願の発明者のうちの何人かを発明者とする先の特許文献に開示されている、生のテレビ放送に基づく、腕前に左右されるゲーム（game of skill：以下、スキルゲームと呼ぶ。）と同様である。参考によって本願に援用される、ロクトン（Lockton）に付与された（２００４年４月に期限切れとなった）米国特許番号第４，５９２，５４６号には、生の及び収録されたテレビ放送に関して、２個の別々のマスメディアを使用してスキルゲームを行う方法が開示されている。同様に、参考によって本願に援用される、ロクトン（Lockton）に付与された米国特許番号第５，０８３，８００号には、別々のマスメディアを用いてコンピュータとテレビゲームとを制御して同時に遊戯を行う方法が開示されている。１９８９年から１９９５年にかけて開発された対話型ネットワークを用いた周知の技術によって、例えば、「ホイール・オブ・フォーチュン（Wheel of Fortune：商標）」及び「ジョパディ！（Jeopardy!：商標）」等の事前に収録されたゲームショー番組の放送に関連して、スキルゲームを同時に大規模に行う手法が実現された。

【００１３】

例えば、テレビ番組「ジョパディ！」では、テレビ番組の放送の前に、テレビ番組の制作者が協働して、３つの更なる誤答を予め作成する。これらのゲームデータファイルは、

FanDuel Ex. 1002-1465

予め準備され、放送サーバに保存されたゲームショー番組のビデオテープと時間的に正確に同期される。テレビ放送とは別のマスコミュニケーション（データ放送）メディア、例えば、ＳＣＡ副搬送波又はテレビジョン信号の垂直帰線消去期間（vertical blanking interval：ＶＢＩ）を使用するＦＭ放送局のネットワークは、マーケット毎に、放送局から搬送波を貸与されている。独立したマスメディアは、参加者が所有する無線データ受信機にデジタルデータファイルをマルチキャストする。各マーケットにおいて、独立局に販売された「生の」テレビ番組を見ながら、通常、３０分間のゲームショーの予め作成されたデータファイルが、テレビ番組の始めに手動で同期される。テレビ番組には、ローカルのコマーシャル及び全国的なコマーシャルが挿入されるため、同期は、テレビ放送を通して監視される。これらの予め作成されたデータファイルには、無線データ受信機に常駐するゲームソフトによって使用され、正解の発表の前に、回答の受付を打ち切る「ロックアウト（lock out）」信号が含まれる。ソフトウェアは、通常、個々のテレビジョン放送信号に正確に同期させて、テレビ放送マーケット内で同時にデータファイルを受信する各参加者の総得点に基づき、個々の成績ファイルを生成する。

【００１４】

テレビ放送ベースのゲームに加えて、対話型ネットワークでは、クラシックカード、サイコロ、ワード、トリビアゲームに基づくスキルゲームを実行する技術が実現されている。これらのゲームの生成は、例えば、トリビアゲームの場合、問題、及び「ロックアウト」信号によって更なる回答が禁止された後に、参加者に明らかにされる正解を含むゲームのためのデジタルファイルの生成を含む。問題及び回答の両方を含む全体のファイルは、ゲームの開始の前に、参加の意思を示した全ての契約者にブロードキャストされる。スケジュールされた開始時刻までのカウントダウンの後に、参加者への一方向信号のブロードキャストによって、全ての参加者のゲームが開始され、ファイルは、結果が出るまで、１０～１５分間、「遊戯」される。

【００１５】

現在、携帯電話機で遊戯できるゲームには、コンピュータ及びテレビゲームプラットフォームで遊戯できるあらゆるジャンルのゲームを略々網羅するダウンロード可能なゲームが含まれる。更に、携帯電話機の分野では、通常、「第三世代」又は３Ｇと呼ばれる新たな広帯域通信技術によって、インターネットを用いてデジタルビデオファイルをストリーミングすることによって、又は圧縮ファイルをダウンロードした後、携帯電話機のＬＣＤカラーディスプレイ上でこれを「再生」することによって、携帯電話機上でビデオクリップを閲覧できるようになった。ベライゾンワイヤレス社（Verizon Wireless：商標）及びクアルコム社（Qualcomm：商標）等の企業は、コンテンツ所有者と連携して、これらの技術を用いて、携帯電話契約者が、ニュース放送のテレビジョンクリップ、スポーツ競技のハイライト、及び他のテレビ番組をオンデマンドでダウンロードできるようにした。クアルコム社は、近年、例えば、ＮＦＬフットボール（NFL：商標）等の生のテレビ放送イベント又はこれらのイベントからのクリップを携帯電話機のカラーＬＣＤ上に表示し、視聴できるようにするためのＭｅｄｉａＦＬＯプロジェクトを発表した。

【００１６】

本発明は、携帯電話契約者がオンデマンドで、又は同時に遊戯できるスキルゲーム及び抽選的ゲームを実現するシステム及び方法を提供し、ここで、ゲームの基底にあるイベントは、例えば、既に放送されたフットボール、野球、バスケットボール、又は他のスポーツ競技、又はゲームショー（「ホイール・オブ・フォーチュン」（又は「ジョパディ」））、又は他のテレビ番組等、アーカイブ番組映像に基づく。

【００１７】

以下、本発明に基づき、ゲームを生成し、ゲームを再生し及び表示する手法について説明する。

【００１８】

ゲーム生成

全てのテレビジョン番組制作者は、少なくとも１９６０年以降、自らが制作し、放送し

FanDuel Ex. 1002-1466

たテレビ番組をテープに記録し保存（アーカイブ）している。ゲームサービスのプロデューサは、以前にテレビ放送されたスポーツ競技又はゲームショーの適当な長さ、通常、５～１０分間のセグメントを選択する。例えば、フットボールに基づく携帯電話ベースのゲームの場合、１９８０年のスーパーボールゲームにおけるピッツバーグ・スティーラーズ対ロサンゼルス・ラムズの試合からの１０分間の一連の攻撃（スコアリングドライブ：scoring drive）が選択される。ゲームショーの場合、過去に放送されたテレビ番組「ジョパディ！」の７分間の「ラウンド」が選択される。選択されるセグメントの期間は、必要に応じて異なる。

【００１９】

アナログビデオファイルは、様々な標準方式に基づき、無線携帯電話又は放送ネットワークを用いてブロードキャストするために適切なフォーマットにデジタル化される。ゲームプロデューサは、競争可能なスキルゲーム及び抽選的ゲームをサポートするデータファイルを生成し、このゲームは、ゲーム生成ツールを用いて、デジタル化されたビデオファイルと正確に同期される。フットボールの場合、これらのデータファイルは、周知の対話型ネットワーク及び上述したロクトンの特許文献に開示されているように、ゲームのビデオファイルの観察に基づいて、各プレーが、ロングパスか、ショートパスか、右に走るか、左に走るかの判定に関する更なる入力を禁止する「ロックアウト」信号を含む。回答の正解及び不正解に応じて、得点を決定し、上述した文献に記載されている手法と同様の手法でゲームがプレーされる。「ジョパディ！」ゲームショーの場合、選択された「ジョパディ！」の問題のそれぞれについて、３つの誤答が作成され、１つの正解を含む合計４つ選択肢が生成される。

【００２０】

ゲームの生成段階において、ゲームデータファイルは、ゲーム生成ツールを用いて、ビデオファイルと時間的に正確に同期される。

【００２１】

遊戯では、ユーザは、ゲームファイルに含まれている、タイムスタンプが付された「ロックアウト」信号が更なる入力を禁止する前に、自らの携帯電話機を用いて、選択肢１、２、３、４の何れかを選択して問題に回答する。テレビの出場者が正解を選択した場合、競争相手の選択した回答が正解か不正解かに応じて、ゲームファイルのソフトウェアは、得点を加点又は減点する。

【００２２】

デジタル化されたビデオファイル及び独立して生成され、同期されたゲームプレーファイルは、ストリーミング又はブロードキャストのために単一のデータファイルに結合され、又は、周知のデータ圧縮技術を用いて、シングルＴＣＰ、ＵＤＰ、３Ｇ、マルチキャスト、ブロードキャスト又は他の伝送方式で、両方のファイルを同時に伝送する他の手法を用いて伝送される。ここでは、ＷｉＦｉを含む如何なる適切な伝送技術を用いてもよい。ゲームデータファイルは、例えば、フットボールテレビ放送に基づくゲームの場合、「走る」、「パスする」等の選択肢等、ゲーム放送の映像から独立したグラフィック情報を含む。別々のデジタルサウンドトラックであるテレビ番組からのサウンドトラックとゲームプログラムからのサウンドトラックとを一度に送信できるように結合してもよい。換言すれば、データは、Ａ）予めダウンロードしてもよく、Ｂ）ストリーミングしてもよく、Ｃ）ブロードキャストしてもよい。異なるタイプのデータ、すなわち、１）デジタル化されたビデオ及びオーディオデータ、２）グラフィックゲームプレーデータ、３）付属オーディオデータは、互いに結合してもよく、個別に送信してもよい。したがって、各ユーザは、ストリーミング、ブロードキャスト又はダウンロードによって、ビデオ、オーディオ及びゲームプレーデータを受信し、共通の開始時刻で、同時に遊戯を行うことができる。また、ユーザは、自らの要求に応じたストリーミング、ブロードキャスト又はダウンロードによって、ビデオ、オーディオ及びゲームプレーデータを受信し、オンデマンドで遊戯を行うこともできる。また、ユーザは、他のプレーヤと競争することなく、オンデマンドゲームを楽しむこともできる。これらの離散的な情報の断片が、携帯電話機にどのように配

FanDuel Ex. 1002-1467

信されるかにかかわらず、携帯電話機に常駐するソフトウェアは、ゲームプレーデータ及びオーディオと、ビデオアーカイブとを確実に同期させる。

【００２３】

ゲームプレー

この手法においては、一時的な利用者、又は契約者であるユーザ、又は携帯電話使用料に必要な金額の課金を承諾したユーザは、以前に放送されたテレビ番組に基づくコンテストに参加する意志を示す。コンテストは、例えば、「１９８０年のスーパーボールゲーム、午後３時１５分」等、携帯電話機上に表示される特定の開始時刻を有し、変形例においては、携帯電話機上のメニューが任意の時刻に遊戯できるゲームを表示し、携帯電話機の所有者は、携帯電話機に表示されるメニューからゲームを選択することによってゲームを遊戯する。メニューからゲームが選択されると、ゲームに必要なビデオファイル及びデータファイルが携帯電話機にストリーミング又はダウンロードされ、携帯電話機クライアントに持続的に又は一時的に常駐する、フル動画ビデオを表示するように設計されたソフトウェアを用いて、テレビ放送されたスポーツイベントゲームショー又は他の娯楽番組の映像が携帯電話機に表示される。契約者がまだ遊んでいないゲームを契約者に常に提供できるようにするために、サービスサーバは、個々の契約者について、どのゲームのどのエピソードが遊戯されたかに関する記録を維持する。

【００２４】

友人と競争するオンデマンドゲーム

リアルタイムで同時にプレーされないゲームの場合、オンデマンドゲームをプレーする契約者は、携帯電話機のディスプレイを用いて、同様の契約者である友人の電話番号、契約上のニックネーム又は他の識別情報を追加することによって、これから遊戯するゲームについて、友人と得点を競争することもできる。変形例として、ユーザは、ウェブサイトを介して、競争を望む相手を選択することもできる。この情報は、中央のゲーム管理／スケジューリングサーバに登録され、選択された契約者がゲームプロバイダのメインメニューにアクセスしたとき直ちに、又は他の時刻に、契約者にこの情報が通知される。例えば、契約者がフットボールゲームを行い、自らの得点を友人らと競うことを望み、サーバがこの特定のゲームを識別し、競争を挑まれ、通知された友人が、フットボールゲームの遊戯を選択した場合、この新たな競争相手の携帯電話機に、先に遊戯され、識別されたゲームと同一のゲームがストリーミング又はダウンロードされる。最後のプレーヤのゲーム結果が確定すると、一群のプレーヤの全ての得点が、全ての競争相手の携帯電話機に送信され、ゲームの参加者は、それぞれの相対的ランキングを知ることができる。

【００２５】

更なる種類のコンテンツ

上述した手法に基づく、テレビ放送されたスポーツ及びゲームショーの場面を伴うゲームに加えて、様々なジャンルのテレビ番組からの既存のアーカイブテレビ番組の場面を独自に再利用することによって、携帯電話用ゲームを実現することもできる。例えば、放送が終了している『となりのサインフェルド』（Seinfeld show）等のコメディードラマに基づくゲームでは、シーンの短いクリップを使用し、この短いクリップ内の出来事、問題又は状況がどのように解決されるかの予想に関する問題をユーザに出題してもよい。また、歴史的な、記憶に残るスポーツプレー、例えば、フットボールのパス、ラン、キャッチ又は様々なスポーツのハイライトシーンを表示し、プレーヤは誰か、クリップが何年の試合であるか及びその結果をゲームの参加者に出題するようにしてもよい。これまでの説明に限定されず、アーカイブ番組に関連する如何なる種類の問題／回答も可能である。なお、如何なる場合も、映像の場面及びこれに伴うゲームデータが予め生成され、結合され、送信され、表示されて、ゲームが遊戯される。

【００２６】

ゲームの表示

同時に受信されるゲームプレーを管理するためのデータファイルは、携帯電話機のＬＣＤ上の表示を管理するためのクライアントに常駐するソフトウェアによって処理される。

FanDuel Ex. 1002-1468

このゲームソフトは、独立した「ゲーミングクライアント」であってもよく、ビデオデータ及びゲームデータを処理する「オールインワン」アプリケーションであってもよい。また、テレビ映像の場面にテキスト及びシンボルを重ねることによって、又は、変形例として、制作者のオプションにより、携帯電話機の画面の独立した部分にこれらの情報を表示することによって、ゲームデータグラフィクスをプレーヤに表示することもできる。後者の手法の具体例としては、テレビ画面の底部に表示される株価相場情報を含むクローリング情報、又はテレビ画面へのクローズド・キャプション情報の表示等がある。変形例として、ピクチャインピクチャ（picture in picture：ＰＩＰ）技術を用いて、元のテレビ番組の場面とは別にゲームプレー情報を表示してもよい。他の変形例として、単に、映像上にゲームプレー情報をスーパーインポーズしてもよい。

【００２７】

本発明では、契約者は、５～１５分のテレビ番組のセグメントを伴うゲームを遊戯し、結果を出し、ゲームの最後に、携帯電話機に常駐するソフトウェアに基づき、自らが獲得した総得点を知る。幾つかの実施の形態として、より長い又はより短いセグメントを用いてもよい。このゲームの成績情報を、編集のために中央サーバに送信することによって、ゲームの参加者は、ゲームの他のプレーヤが獲得した得点と、自らの得点との関係に関する情報を得ることができる。「オンデマンド」のゲームプレーフォーマットでは、ユーザは、友人を競争相手として、選択的に遊戯を行うことができるが、１人のユーザが何度も同じゲームを遊戯でき、又は既にゲームを遊戯した誰かから正解を知ることができるため、通常、懸賞付きゲームは成立しない。

【００２８】

同時のブロードキャストに基づくゲーム

変形例として、ビデオファイルと、上述した手法で生成されたゲームデータファイルとを結合し、結合したファイルを、特定の時刻に全ての参加者に、例えば、１５分毎に、特定のゲームに参加する意図を登録したプレーヤの全てに、同時にブロードキャストしてもよい。このフォーマットでは、これらのファイルは、個別にストリーミングされ、或いは、全ての参加者に正確に同時に、デジタル的にブロードキャストされる。他の手法として、ストリーミング、ブロードキャスト又は他のダウンロード技術を介して、予めデータをダウンロードしてもよい。この手法では、アプリケーションは、適切な時刻にビデオ及びゲームプレーが開始されることを確実にする。これは、全てのプレーヤに「開始」信号をシグナリングすることによって実現できる。

【００２９】

ゲームの遊戯は、米国特許番号第４，５９２，５４６号に開示されているゲームと同様に進められるが、本発明と、従来の技術との重要な相違点は、ゲームに使用される全ての情報が予め生成され、単一のデータファイルに結合され、ブロードキャストによって、全ての参加者の携帯電話機に同時に受信され、分離され、上述した手法によって、携帯電話機に同時に表示される点である。参加者は、生のスポーツ競技のテレビ中継又はゲームショーに基づくゲームと同じ手法でゲームを進めるが、携帯電話機は、基底にあるテレビ番組に同期された第２のマスメディア通信のための受信機器として使用されるのではなく、テレビ番組の映像とゲームデータ情報との両方を含む単一のデータファイルを受信する。そして、ビデオデータ及びゲームデータは、携帯電話機に常駐するアプリケーションソフトウェアによって分離され、単一のカラーＬＣＤディスプレイに同時に表示される。

【００３０】

全てのプレーヤは、同じゲームデータを同時に受け取るので、オンデマンドゲームで可能なプレーヤ間の不正行為は、不可能であり、したがって、勝者に懸賞を与えることができる。

【００３１】

利点

スポーツ競技のテレビ中継又は独立局に販売されたゲームショーに基づく懸賞付きのスキルゲームには、大きな潜在需要があるが、これらのゲームへの参加は、通常、平日のゴ

FanDuel Ex. 1002-1469

ールデンタイム又はゴールデンタイム付近の時間帯及び週末のスポーツ競技に制限されている。携帯電話用ゲームが短期間で爆発的に普及したことによって、携帯電話機の所有者は、１日につき、行き帰りの通勤時間又は勤務時間帯の休憩中の５～１０分間、携帯電話機を用いた娯楽に興じていることがわかった。本明細書に開示する手法は、新しく、ユニークな娯楽の一形態を提供する。ゲームをテレビジョンアーカイブから生成することによって、オンデマンドで、何度も又はスケジュールされた開始時刻に、人気があるテレビ番組に基づくゲームを楽しむことができる。ゲームの内容は、人気があるテレビ番組に基づいて、変化し続ける。本発明により、既存のビデオゲーム、コンピュータゲーム及び携帯電話用ゲームより安価な制作費で高品質なゲームを制作することができる。他のゲーム、例えば、ＥＡスポーツ（EA Sports：商標）のジョンマデンフットボール（John Madden Football）又はソニー株式会社のジョパディ（Jeopardy：商標）等、実際のテレビ番組と可能な限り近い、フルモーション３Ｄグラフィクスのゲームを制作するためには、有能なグラフィクスアーチスト及びデザイナーによる作業と、大規模なプログラミングが必要である。本発明は、実際に放送されたテレビ番組の場面を再利用し、これらのイベントの放送時の興奮を低コストで提供することができる。

【００３２】

共通の開始時刻を有するゲームは、懸賞付きゲームとして提供することができる。ゲームの参加者が過去において、これらのテレビ番組を視聴している可能性はあるが、５～１０年前に放送されたテレビ番組の単一の出来事を詳細に覚えている者はいない。仮に、ユーザがテレビ番組の内容を覚えていたとしても、トリビア問題又は回答を記憶する能力及びこの他の記憶に関するテストは、正当なスキルゲームとみなされているため、これらのゲームは、スキルゲームとみなすことができる。したがって、以前に放送されたテレビ番組の場面に基づくこれらのゲームは、法律が許す限り、懸賞付きゲームとして提供することができる。

【００３３】

図１は、本発明の好ましい実施の形態を図式的に示している。まず、制作スタジオ又はゲームを制作できる他の組織において、ゲームが制作される。上述したように、一組のテレビジョンアーカイブ１０２は、何年も前から保存されている。アナログ形式で保存されているテレビジョンアーカイブは、周知の変換技術を用いて、デジタルフォーマットに変換される。ゲーム生成ツール１０４は、好ましくは、デジタル化されたビデオファイルと正確に同期されるスキルゲーム又は抽選的ゲームをサポートする１つ以上のゲームデータファイルを生成するために使用される。幾つかの実施の形態では、ビデオデータファイル及びゲームデータファイルには、オーディオも含まれる。ゲーム生成ツール１０４は、デジタル化されたビデオデータファイル及びゲームデータファイルをゲームスケジューリングサーバ１０６に送信する。

【００３４】

ゲームスケジューリングサーバ１０６は、ビデオデータファイル及びゲームデータファイルの配信に加えて、遊戯されるゲームのスケジュールを決定する。ゲームスケジューリングサーバ１０６は、スプリント（Sprint：商標）、ベライゾンワイヤレス（Verizon Wireless：商標）又はシングラー（Cingular：商標）等の携帯電話サービスオペレータ１０８と通信し、無線ネットワーク１１２を介して、データを送受信する。そして、ユーザの携帯電話機１１４に、ゲームの基礎となるビデオデータファイル及びゲームデータファイルがストリーミング又はダウンロードされる。ユーザがゲームを遊戯すると、得点サーバ１１０が、そのゲームの結果及び得点を算出する。幾つかの実施の形態では、ゲームスケジューリングサーバ１０６及び得点サーバ１１０は、同じ物理的なサーバユニット内に含まれ、他の実施の形態では、ゲームスケジューリングサーバ１０６及び得点サーバ１１０は、それぞれ独立し、互いに通信を行う。ユーザは、得点サーバ１１０と通信することによって、順位表を見ることもできる。

【００３５】

幾つかの実施の形態では、ユーザは、インターネット１１６を介して、ゲームサービス

FanDuel Ex. 1002-1470

にサインアップすることができる。また、ユーザは、競争のために競争相手のグループを登録できる。例えば、ユーザは、インターネット１１６を介してウェブサイトにログインし、オンデマンドゲームの競争相手となる友人のユーザ名を選択することができる。

【００３６】

図２は、本発明に基づく処理の手順を示している。ステップ２００では、ユーザの携帯電話機にビデオファイル、オーディオファイル及びゲームファイルを送信する。幾つかの実施の形態では、ファイルは、個別に送信され、他の実施の形態では、ビデオデータ、オーディオデータ及びゲームデータは、１つのファイルに結合され、まとめて送信される。幾つかの実施の形態では、例えば、ユーザが無音でゲームを遊戯することを選択したために、オーディオデータを送信しない場合もある。ステップ２０２では、ユーザの携帯電話機は、伝送方式に応じて、一括して又は個別に、ビデオファイル、オーディオファイル及びゲームファイルを受信する。ステップ２０４では、携帯電話機は、携帯電話機ベースのソフトウェアによって、ビデオデータ及びゲームデータを同時に表示する。場合によっては、ステップ２０６において、携帯電話機は、ゲーム開始信号を受信して、ゲームを開始する。スタート信号は、例えば、「１９８０年のスーパーボールを午後４時に開始」等、ユーザがサインアップしたイベントについて指定された開始時刻に基づいて受信される。また、ユーザは、メニューから遊戯するゲームを選択し、すぐにゲームを開始することもできる。また、ユーザは、そのユーザを含むオンデマンドグループのメンバになることができ、グループ内の競争が開始されたことを通知され、直ちに又はユーザの準備が整い次第、開始信号がユーザの携帯電話機に送信される。上述したように、ユーザがスタート信号を受信すると、ユーザは、ステップ２０８において、問題及び回答を含むビデオクリップ及びゲームデータを見ながら、ビデオクリップに関する問題に関連する選択肢を選択し、自らの携帯電話機でゲームを遊戯する。ステップ２１０では、ゲーム実行中に、必要に応じて、ロックアウト信号を送信し、ユーザの更なる入力を禁止し、不正行為を防止する。ステップ２１２では、携帯電話機は、得点サーバに成績データを報告し、順位表情報を取得し、これによりユーザは、他の競争相手と比較した自らの成績を確認することができる。

【００３７】

図３は、本発明に基づく機器のネットワークを示している。機器のネットワーク３００は、ゲーム生成ツール１０４と、テレビジョンアーカイブ１０２と、ゲームスケジューリングサーバ１０６と、携帯電話サービスオペレータ１０８と、得点サーバ１１０と、無線ネットワーク１１２と複数の機器３０２とを備える。幾つかの実施の形態では、携帯電話機１１４に加えて、例えば、パーソナルコンピュータ１２６、ラップトップコンピュータ１１８及び携帯情報端末（personal digital assistant：ＰＤＡ）１２０等の他の機器も、無線ネットワークに接続して、ゲームを実行することができる。ゲーム生成ツール１０４は、１つ以上のゲームファイルからなるゲームの生成し、テレビジョンアーカイブのセグメントがデジタル化された後、ゲームファイルと、テレビジョンアーカイブの１つ以上のビデオファイルとの結合する。幾つかの実施の形態では、ゲームファイル及びビデオファイルは、圧縮される。また、幾つかの実施の形態では、ゲームファイル及びビデオファイルにデジタルオーディオを付加する。ゲームファイル、ビデオファイル、及び幾つかの実施の形態では、オーディオファイルは、ゲームスケジューリングサーバ１０６に１つの結合されたファイルとして保存される。また、ゲームスケジューリングサーバ１０６は、携帯電話サービスオペレータ１０８及び無線ネットワーク１１２を介して、複数の機器３０２にゲームのスケジュールを供給する。得点サーバ１１０は、無線ネットワーク１１２を介して複数の機器３０２に接続され、得点結果を受信し、順位表を作成し、送信する。幾つかの実施の形態では、ユーザは、インターネット１１６を介して、ゲームに登録し、オンデマンドゲームのための競争相手のグループを選択する。ユーザは、複数の機器３０２を用いて、必要なゲームデータ及びビデオデータを受信する。複数の機器３０２に含まれる各機器は、ゲームデータ及びビデオデータを処理して、アーカイブテレビ番組に基づくゲーム体験を提供するソフトウェアを有する。ゲームスケジューリングサーバ１０６及

FanDuel Ex. 1002-1471

び得点サーバ１１０により、複数の機器３０２を用いて、ユーザ間の競争を行うことができ、すなわち、複数のユーザが指定された時間に同じゲームを遊戯し、正解数及び他のゲーム条件に基づいて、ユーザは、得点を獲得し、得点の合計が最も高いユーザに懸賞を与え、又は少なくともあるアーカイブテレビ番組に関して、最も多く知識を有すると認定することができる。

【００３８】

ユーザがオンデマンドでゲームを遊戯することを望む一実施の形態では、携帯電話機１１４は、ゲームスケジューリングサーバ１０６及び複数の機器３０２内の他の携帯電話機と通信し、ゲームの開始を通知する。例えば、ユーザが、テレビ番組「ジ・エミーズ（The Emmys）」に関連したゲームを友人と競争することを望んだとする。ユーザは、例えば、携帯電話番号、ユーザ名又は他の識別子等、グループ内の他のユーザを検出／特定するために使用できる情報を入力する。そして、ゲームスケジューリングサーバ１０６は、他のユーザに接続し、これらのユーザに必要なゲームファイル及びビデオファイルを提供する。グループに含まれているユーザのみがゲームに参加することができ、したがって、これらのユーザの得点だけが比較され、友人のグループは、「ジ・エミーズ」又は他のアーカイブテレビ番組に関して、誰が最も知識を有しているかを競争することができる。

【００３９】

本発明の利用には、２つの側面がある。ゲームプロデューサは、ゲーム生成ツールを用いて、ゲームを開発し、デジタル化されたテレビ番組のビデオクリップにゲームを組み合わせる。そして、組み合わされたゲーム及びビデオデータは、ゲームスケジューリングサーバに供給され、ここから、ユーザの携帯電話機に送信される。携帯電話機ユーザは、遊戯するゲームを選択した後に、適切な時刻になると、ゲーム及びビデオデータを受信する。このとき、ユーザは、それぞれ、携帯電話機内のソフトウェアを用いて、ビデオクリップ及びゲームデータを含むゲームを遊戯する。ビデオクリップは、ユーザの携帯電話機に表示され、ユーザは、視聴したビデオクリップに基づいて、選択肢を選択する。ゲームが進行し、又はゲームが完了すると、選択の結果が得点サーバと送受信され、ユーザは、自らの成績を確認することができる。幾つかの実施の形態では、設定された時刻にユーザがゲームを開始するのではなく、ユーザは、上述のように、選択されたグループに含まれる友人と共に、オンデマンドでゲームを行うことができる。

【００４０】

実際の動作では、本発明により、ユーザは、アーカイブテレビ番組に基づくゲームを携帯電話機で遊戯することができる。ゲームデータ及びビデオデータは、１つのファイルに結合され、ゲームに参加する携帯電話機に送信され、これにより、各携帯電話機は、必要な情報を同時に受信する。各携帯電話機は、ゲームデータ及びビデオデータを処理し、ユーザにゲームを遊戯させるためのソフトウェアを備える。ゲームは、ビデオクリップを視聴し、ユーザの携帯電話機上のボタンを用いて、ビデオクリップに関連する問題に回答し／選択肢を選択することによって遊戯される。ユーザの得点は、問題に対する回答に応じて決定される。幾つかの実施の形態では、ゲームにおいて、他者より優秀な成績を収めたユーザに賞を与えてもよい。

【００４１】

以上の説明では、ゲームを遊戯するための機器の主な例として、携帯電話機を用いたが、上述した方法及びシステムにおいて、如何なるコンピューティング装置を用いてもよいことは明らかである。

【００４２】

本発明の構成及び動作原理を明瞭に説明するために、様々な詳細を含む特定の実施の形態を用いて本発明を説明した。このような特定の実施の形態の説明及びその詳細は、特許請求の範囲を制限するものではない。本発明の主旨及び範囲から逸脱することなく、例示的に選択された実施の形態を変更できることは、当業者にとって明らかである。

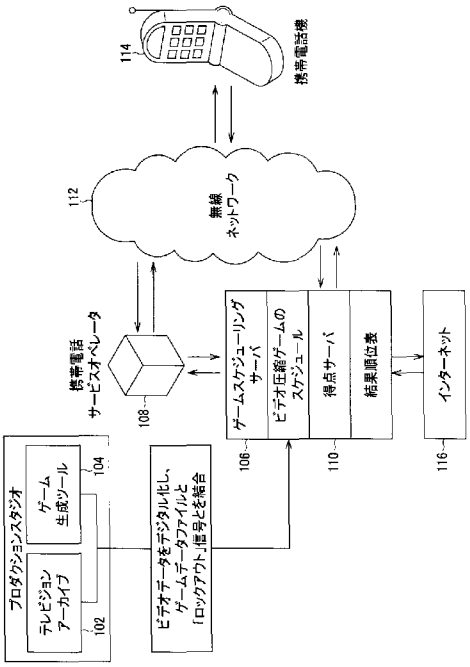
【図面の簡単な説明】

【００４３】

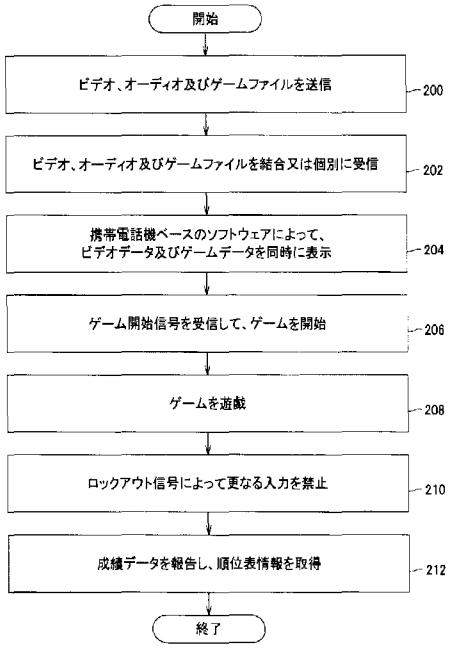
FanDuel Ex. 1002-1472

【図１】本発明の好ましい実施の形態を図式的に示す図である。
【図２】本発明に基づく処理の手順を示すフローチャートである。
【図３】本発明に基づく機器のネットワークを示す図である。

【図１】

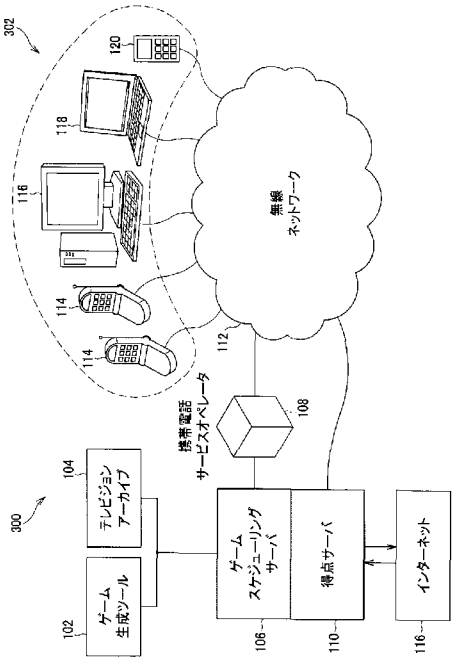


【図２】



FanDuel Ex. 1002-1473

【図３】


302
120
118
116
114
114
無線
ネットワーク
112
携帯電話
サービスオペレータ
108
300
104
テレビジョン
アーカイブ
102
ゲーム
生成ツール
ゲーム
スケジューリング
サーバ
106
得点サーバ
110
インターネット
116

【国際調査報告】

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 06/38922

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8): H04M 11/00 (2007.01)
USPC: 379/93.13
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC: 379/93.13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 725/62; 463/1, 41; 455/500.0

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWest (USPT,PGPB,EPAB,JPAB) - Terms: Game, phone, old or past or archive, television or tv, program or show, cell phone, mobile phone, video, files or data, broadcast, internet, simultaneous

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,817,947 B2 (Tanskanen), 16 November 2004 (16.11.2004), entire patent	1-96
Y	US 6,942,574 B1 (LeMay et al.) 13 September 2005 (13.09.2005), entire patent	1-96
Y	US 2005/0076371 A1 (Nakamura), 07 April 2005 (07.04.2005), para [0007], [0009], [0014], [0017]-[0018]	8, 20, 24, 32, 47, 53, 68, 80 and 91
Y	US 2004/0158855 A1 (Gu et al.), 12 August 2004 (12.08.2004), para [0021], [0033]-[0034]	9, 13-15, 35-36, 46, 49-51, 60, 63-64, 78, 81 and 84-85
Y	US 2004/0178923 A1 (Kuang), 16 September 2004 (16.09.2004), para [0021] and Abstract	2, 11 and 33
Y	US 6,863,610 B2 (Vancraeynest), 08 March 2005 (08.03.2005), col. 3 lines 12-38; col. 4, lines 5-21; and col. 5, lines 22-29	6, 16-18, 30, 37-38, 44, 65-67, 75, 77, 87-89 and 96

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 March 2007 (17.03.2007)	08 MAY 2007
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2005)

FanDuel Ex. 1002-1475

フロントページの続き

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アメリカ合衆国 カリフォルニア州 ９５０５０ サンタクララ ジョンソン プレイス ２５８３

Ｆターム(参考) 2C001 CB08 CC01 DA04

FanDuel Ex. 1002-1476

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1477

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	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1479

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	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1483

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	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1484

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	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1485

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	First Named Inventor	David B. Lockton
	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1487

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	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1489

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	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1490

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	Attorney Docket Number	AIRP-01054

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	Attorney Docket Number	AIRP-01054

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2024-02-26
Name/Print	Jonathan O. Owens	Registration Number	37,902

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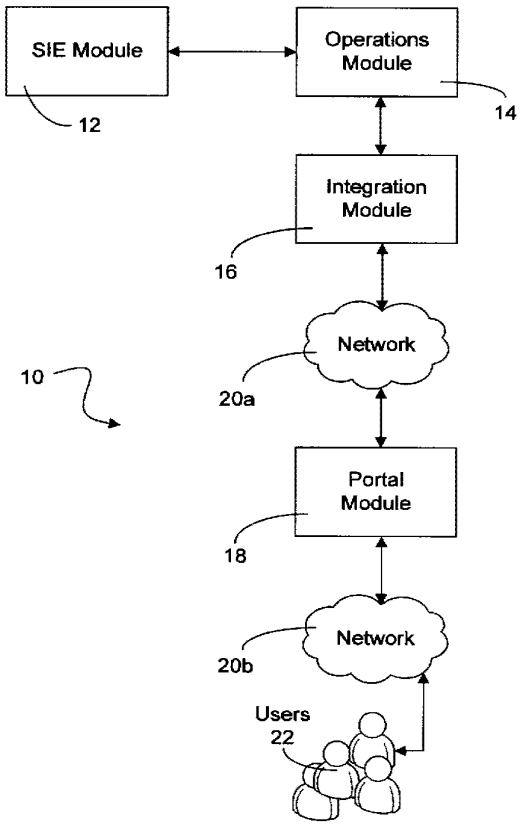
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(54) **Title:** OFFERING BETS ON EVENTS DURING A LIVE EVENT WHILE THE LIVE EVENT IS IN PROGRESS



(57) **Abstract:** Wagering on the outcome of discrete events in a sporting event via a network such as the Internet is made possible. Multiple components work together to provide odds on each event and deliver the odds to users via a network in real time. In determining odds both statistical and heuristics based methods are used with the results being combined and then subjected to transformation based on a number of models. Upon receiving the odds a user may then place one or more bets which are resolved upon the outcome of the event. Multiple sources of event status are reviewed. A reconciliation process to deal with conflicting event status is provided. The results of an event are stored and utilized in a feedback process to aid in predicting odds for similar events in the future. Multiple forms of wagering are supported, including variants of the standard pari-mutuel model.

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FanDuel Ex. 1002-1497

Offering Bets on Events During a Live Event while the Live Event is in Progress

BACKGROUND

[0001] A large number of Internet portals currently exist, allowing consumers to wager on sporting events. Despite the use of the Internet to offer these gaming services, the wagers available for selection are virtually identical to those of conventional bookmakers. Wagers may be placed to bet on the winner of a contest, or which player will score the winning goal, but these fail to embrace the real-time interactive capabilities of the Internet.

[0002] Entertainment systems exist which allow viewers of sporting events to predict a play, such as NTN Communications' 'QB1' game offered in sports bars and restaurants. However, these systems require specialized hardware, require the consumer to play the game at participating establishments, and do not allow any form of legal wagering to occur. Consequently, the options available for internet-based sports wagering currently lag behind both the available technology, and the consumer demand for more interactive and comprehensive wagering options.

[0003] The present invention allows consumers to wager small amounts on real-time "nano-events" from any Internet equipped device. Wagers against nano-events might take the form of questions such as:

a) Hockey: "Will the Boston Bruins score on this power-play?"

b) Basketball: "Will Vince Carter hit this next free-throw?"

c) Football: "Will the Green Bay Packers issue a run play or a pass play next?"

d) Golf: "Will Tiger Woods sink his next putt?"

e) NASCAR: "Will Jeff Gordon pass the race leader on this lap?"

[0004] The inventors refer to this new field as NanoGaming. NanoGaming brings to consumers a highly entertaining gaming mechanism, which has not existed before. It allows consumers to play armchair quarterback while watching a live event, and place small nano-wagers on the outcome, which is typically known in under a minute. This creates an impulse wagering mentality for sports wagering.

SUMMARY

[0005] The present invention is directed to a method for permitting a user to wager on the outcome of an event while said event is in progress, said method comprising the steps of:

presenting to said user said event, as well as odds and projected payouts of said event based upon combining heuristics and statistics;

accepting a wager from said user on said outcome;

updating odds and projected payouts on said event while said event is in progress and providing the results of said updating to said user; and

upon the completion of said event informing said user of said outcome and reconciling the account of said user based upon said outcome.

[0006] The present invention is also directed to a system for permitting a user to wager on the outcome of an event while said event is in progress, said system comprising:

means for presenting to said user said event, as well as odds and project payouts of said event based upon combing heuristics and statistics;

means for accepting a wager from said user on said outcome;

means for updating said odds and projected payouts on said event while said event is in progress and providing the results of said updating to said user; and

means for upon the completion of said event informing said user of said outcome and means for reconciling the account of said user based upon said outcome.

[0007] The present invention is further directed to a computer readable medium comprising instructions for executing the method for permitting a user to wager on the outcome of an event while said event is in progress.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] For a better understanding of the present invention, and to show more clearly how it may be carried into effect, reference will now be made, by way of example, to the accompanying drawings which aid in understanding an embodiment of the present invention and in which:

[0009] Figure 1 is an block diagram of a system implementing NanoGaming;

[0010] Figure 2 is a block diagram of the components of the SIE Module;

[0011] Figure 3 is a flowchart illustrating the loading of information into the statistical database;

[0012] Figure 4 is a logical flow diagram of a likelihood model;

[0013] Figure 5 is a deterministic decision tree of the logical steps of a play call model for a run;

[0014] Figure 6 is a block diagram of the logical functions of a fusion module;

[0015] Figure 7 a block diagram illustrating an example of the utilization of a compensation module;

[0016] Figure 8 is a block diagram illustrating the components utilized by an operations module;

[0017] Figure 9 is a block diagram of the logical functions of a game state auto-advance module;

[0018] Figure 10 is an example of flowchart for updating the game state;

[0019] Figure 11 is a block diagram of the logical functions of a conflict resolution module;

[0020] Figure 12 is a block diagram illustrating the components used by the integration module;

[0021] Figure 13 is a block diagram illustrating the steps of a betting pool lifecycle;

[0022] Figure 14 is a block diagram illustrating the components used by the portal module;

[0023] Figure 15 is a block diagram of the structure of the portal database;

[0024] Figure 16 is an example of a graphical user interface for a user;

[0025] Figure 17 is a block diagram illustrating the steps of raked pari-mutuel wagering;

[0026] Figure 18 is diagram illustrating an example of a cascaded pari-mutuel betting model; and

[0027] Figure 19 is a block diagram illustrating the steps of cascaded pari-mutuel wagering.

DETAILED DESCRIPTION

[0028] Referring now to Figure 1 a block diagram of a system implementing NanoGaming is shown generally as 10. System 10 comprises four main modules, namely Situational Intelligence Engine (SIE) module 12, operations module 14, integration module 16 and portal module 18. Integration module 16 and portal module 18 are connected via a network 20a. Portal module 18 is connected to a plurality of users 22 by network 20b. Networks 20a and 20b may take any form that allows communication between their appropriate modules, one such example being the Internet.

[0029] SIE module 12 determines nominal odds for the various betting interests being offered by system 10. SIE module 12 combines statistical knowledge and expert strategy (heuristics-based) knowledge to produce context appropriate initial odds, which account for the game situation, involved personnel, and surrounding environment. These odds are stored in a SIE Database (not shown) which is accessed by operations module 14 when a new betting interest is about to be offered to users 22.

[0030] Operations module 14 handles the tasks of (i) upkeeping the current game state, (ii) selecting betting interests to be offered to users 22, (iii) resolving previously issued betting interests, and (iv) issuing timing labels to control the betting window lifecycle. Operations Module 14 makes use of trained operators watching event broadcasts, automatic sensing modules, and third-party event loggers to determine what events are relevant for wagering, what the situational parameters are for that event, and what the ultimate result of that event was.

[0031] Integration module 16 handles the tasks of (i) issuing available betting interests to one or more portal modules 18, (ii) controlling the lifecycle of all betting interests, and (iii) auditing and reporting on betting activity for each portal module 18.

[0032] Multiple instances of a portal module 18 may exist and each handles the tasks of (i) issuing multiple betting interests to participating users 22, (ii) updating users 22 with changing odds on the outstanding betting interests, (iii) storing and resolving all individual betting interests, and (iv) providing a multi-device remote interface for wager placement and account viewing, such as via mobile devices, a personal computer, or a Personal Digital Assistant (PDA) capable of accessing network 20b.

[0033] As can be appreciated by one skilled in the art, Figure 1 shows only one embodiment of how communication between users and modules may occur. Due to legal requirements in various jurisdictions regarding gambling, networks 20a and 20b may not be permitted in a specific jurisdiction. Similarly the same issue occurs regarding where the modules of the invention reside. Thus, modules and networks reside in jurisdictions that provide for legal gambling through the use of the present invention.

[0034] Referring now to Figure 2 a block diagram of the components of SIE module 12 is shown. Statistical database 30 provides statistical data, such as play outcomes and performance statistics for previous sporting events, to statistics module 34. An expert 32, who may be a person or an expert system, provides information to predict the outcome of an event to heuristics module 36. Fusion module 38 combines the results of statistics module 34 and heuristics module 36. In one embodiment fusion module 38 would be an expert system such as a neural network. Compensation module 40 may adjust the outcome of an event provided by fusion module 38. In doing so, compensation module may consider such factors as (i) team strategy, (ii) on field personnel, (iii) weather conditions, (iv) stadium conditions, (v) player performance and (vi) external factors. Many other factors may be incorporated into the model; this list is intended as an example only, in particular for an American football game.

[0035] In describing how the present invention may be utilized we will continue to use the example of American football. It is not the intent of the inventors to restrict the present invention to a single type of sport but rather to provide clear examples of how the invention may be implemented with regard to one event. It is not the intent of the inventors to restrict the event to a sporting event, the present invention may be utilized with any real time event, for example: poker tournaments, reality television episodes, awards presentations, a weather forecast, in essence any real time event where wagers may be made while the real time event is in progress. In another embodiment, wagers may include the use of token bets in the form of simulated currency that do not involve the payment of actual funds by the bettor or payments to a winner. In this embodiment the game is essentially "wager for free" and may be used in skill-gaming tournaments or competitions.

[0036] Compensation module 40 stores the odds for an event in SIE database 42. SIE database 42 is accessed by operations module 14 whenever a new event is offered to users.

SIE database 42 further provides feedback to fusion module 38 so that fusion module 38 may learn from the results of its prediction of an event outcome.

[0037] We will now describe each of the components of an embodiment of the present invention as shown in Figure 2. Referring now to Figure 3, a flow chart illustrating the loading of information into statistical database 30 is shown. Beginning at step 50 detailed game logs are provided. These game logs are typically provided by a third party in a format of their choice. Each game log will contain information on each event during a game. For example in the case of American football examples of events would include the team in control of the ball, the time of the event, the play executed and the result of the play. In essence a game log is a play by play description of the game. A game log is then parsed by parser 52 based upon knowledge of the format of a game log and a parsed event listing 54 is created which is then stored in statistical database 30.

[0038] In order to create odds for given situations based on how similar situations resolved historically, the statistical database 30 is discretized. This involves the creation of a number of "bins" within each parameter space. For instance, the following discretized parameter space shown as Table 1 may be used to represent historical performance in American football.

Table 1.

Parameter	Bin 1	Bin 2	Bin 3	Bin 4
Down	1	2	3	4
Yard Line	0 to 20	21 to 79	80 to 100	
Time Left	First 58 Minutes	Last 2 Minutes		
Yards to Go	Short (<=2 yards)	Medium (2-7 yards)	Long (8+ yards)	

[0039] The information stored in bins can be converted into odds by looking at the percentage of the occurrence. For example in bin 2 shown in Table 1 there may be two hundred times that a run happened and fifty times a pass happened. These can be turned into percentage likelihood's, the reciprocals of which are the odds.

[0040] Performance statistics 56 contain information on how each team in the game has historically performed for a number of events. Performance statistics 56 are provided by a third party source and stored in statistical database 30. The performance statistics 56 are

typically not placed in a bin, but may be. An example of performance statistics would be "average yards per run at Giant's stadium".

[0041] Statistics module 34 utilizes the data stored in statistical database 30 to provide odds for each wagering option. These odds are then provided to fusion module 38. The information stored in a bin is utilized to determine the odds of an outcome

[0042] Referring now to Figure 4 a logical flow diagram of a likelihood model is shown. Within heuristics module 36 there reside multiple likelihood models. Likelihood models calculate a likelihood value for the next event based upon the current game factors. A likelihood model is not based upon statistical data in statistical database 30 but rather on an expert system embodied within heuristics module 36. In the case of American football, factors to be considered may include the current down, the number of yards to go, position of the ball and current game time. Here we show a "Play Call" model. Other models may include "Play Result", "Next Penalty", "Coin-toss", "Next Score", "Player" or any other models that apply to wagering scenarios.

[0043] Pass likelihood model 60 calculates a likelihood value of the next play being a pass. Models 62, 64 and 66 calculate likelihood values for a run, field goal attempt and punt respectively. The likelihood values 68, 70, 72, and 74 are the outputs from each model. Based upon the current game situation, the highest likelihood value is from model 62 as a run play is expected and the lowest likelihood value is from model 66, as a punt is not expected. The likelihood values are then normalized by feature 76 and output as probabilities 78, 80, 82, and 84. The normalization process is straightforward:

normalized value = likelihood value / sum of likelihood values

[0044] Thus we see that the probability of the play call being a run is .61. These normalized values are then sent to fusion module 38 to combine them with the results provided by statistics module 34. At this stage the probabilities calculated are for average players in an average game situation. Compensation module 40 may modify the probabilities. Further the probabilities will eventually be modified to provide for a commission to the house.

[0045] To further explain how a heuristics-based likelihood model may be enabled we refer now to Figure 5. Figure 5 is a deterministic decision tree of the logical steps of a play call model for a run. The tree shown in Figure 5 contains a record of expert knowledge.

Figure 5 is a simplification of how the likelihood of a run play may be determined and serves simply as an example of how the logic for a likelihood model may be implemented. For simplicity we will refer only to the nodes in Figure 5 that result in the likelihood value shown as feature 70 of Figure 4, i.e. the next play will be a run. For this example the current game situation is: third down, nine yards to go, third quarter, tie game, on the fifty yard line. Beginning at node 90 the game time is determined, as it is in the third quarter processing moves to node 92. A test is made at node 94 to determine that the current down is the third and processing moves to node 96. At node 98 a test is made to determining how many yards are required to make the next down. Since there are nine yards to go, processing moves to node 100 and the likelihood value for the next play being a run is shown as feature 70.

[0046] We now refer to Figure 6, a block diagram of the logical functions of a fusion module. Fusion module 38 utilizes the results from statistics module 34 and heuristics module 36 and fuses them using a neural network 114 to provide odds on the outcome of a game event. As one skilled in the art will appreciate the use of neural network 114 is only one embodiment, any expert system that meets the needs required may be utilized in place of neural network 114.

[0047] Both statistics module 34 and heuristics module 36 provide odds on an event and have their own advantages. Statistics module 34 uses actual historical evidence and as such is strong when there is a presence of significant statistical evidence in a particular bin. However, when odds are required for a situation that rarely occurs, the statistical evidence in a discrete bin is often sparse or non-existent. As well, even in moderately populated bins, the bin's historical contents may not adequately describe all possible outcomes, as such, the probability of certain betting interests might incorrectly be calculated as zero. For both of these reasons, complementary data is provided from the heuristics module 36. The heuristics module 36 works well in that it applies general rules, which can cover all game situations using "expert knowledge". However, the odds provided are only as good as the expert writing the model. As such, it is always desirable to use the results of the statistics module 34 as much as possible when the historical evidence in that situation is available.

[0048] The fusion strategy described in Figure 6 calculates F_H (shown as feature 110) which is a heuristics model fusion factor and has a value between zero and one. The higher the F_H value, the more heuristics are relied upon in the overall calculation of hybrid odds and

vice versa. Hybrid odds are calculated by summation module 112 and sent to compensation module 40. An expert system such as neural network 114 is used to calculate F_H. In general, the more statistical evidence that is available, the lower the value of F_H.

[0049] In calculating F_H, NN inputs module 120 accepts data from operations module 14, historical database 116 and transfer function module 124. Operations module 14 provides the current game state. Historical database 116 provides information on which of the statistics module 34 or heuristics module 36 has done a better job in predicting correct odds for the current game state.

[0050] To allow the neural network 114 to improve over time, the SIE database 42 produces a feedback loop to the neural network 114 via historical database 116. This allows the fusion module 36 to know how successfully the neural network 114 predicted the actual outcome in reality, and whether heuristics or statistics would have been better for predicting the outcome. In neural networks weights are assigned to each of the nodes. There are many algorithms for doing this; a common one is called the back propagation algorithm. The algorithm cycles through the collection of known inputs and desired outputs, and creates an optimal set of node weights. Periodically, after new historical data arrives in historical database 116 this algorithm will be run. Over time, the neural network 114 will become increasingly accurate at determining the correct value of F_H.

[0051] Transfer function 124 provides input to NN inputs module 120 on the number of statistics in a particular bin.

[0052] A neural network such as neural network 114 is a computing technique, which attempts to solve complex tasks in a way similar to the human brain. They are often used for tasks where there occur a large number of sample input values coupled with the desired output values, but there's no clear way of constructing a formula to translate future input values into the correct output values. There are a large variety of neural networks, but in general, they take in a set of inputs, which are then cross multiplied through a network of weighted nodes. The inputs provided by NN inputs 120 are accepted by multi-layer NN 122. The more sophisticated the problem, the more layers of nodes may be required to build a robust model. Nodes are weighted such that they multiply and sum to produce numerical values in each of the output nodes, which correspond to the likelihood of each output. In the present invention, the input nodes would represent information such as the game state, how many statistical

samples are available for the game situation, and how well the model has historically predicted event results in this game situation. The input nodes then multiply through the network to produce a single output node, the F_H value shown as feature 110. This value represents how heavily the system should use heuristics versus the statistics.

[0053] By way of example on how the components of Figure 6 interact we provide the following. The game state provided by operations module 14 indicates: (i) third down, (ii) nine yards to go, (iii) third quarter, (iv) tie game, and (v) on the fifty yard line. The information provided by transfer function 124 indicates there are eight hundred and forty samples in the bin corresponding to this game state. Historical database 116 indicates that the deviation from the actual outcome results for statistics module 34 was 11%, while heuristics module 36 had a deviation of 26%. After sum and multiply operations calculated by neural net 114 the value of F_H is determined to be 0.15, thus the system suggests to rely heavily on the values provided by statistics module 34. If the statistics module 34 indicated that the play call odds for a run are 0.39 and the heuristics module 36 had odds of 0.48, then summation module 112 calculates the odds for a run as: (0.85) x (0.39) + (0.15) x (0.48) for a total of 0.4035 as shown by features 126 and 128 respectively.

[0054] Referring now to Figure 7 a block diagram illustrating an example of the utilization of the compensation module 40 is shown. Compensation module 40 comprises a plurality of compensation models. One example is shown as wind compensation model 140. Fusion module 38 provides a number of odds for each wagering event. In the example shown, the odds are based on a "play call" event. Examples of other events may include "play result", "next penalty" or "next score".

[0055] As previously discussed with the example shown in Figure 4, the probabilities of a specific play call are provided. For example feature 84 indicates that the probability of a play call being a punt is shown as .02. In this example a test is first made at step 142 to determine if there is wind on the playing field. Should wind be in the range of 5-20 kilometres per hour as shown by feature 144 processing moves to step 146. At step 146 the probability of a play being a pass is multiplied by 1.10 and the probability of a play being a run is multiplied by 0.90. The output from compensation model 140 is then combined with additional compensation models 148. Ate step 148 the new odds are calculated and stored in SIE database 42. We will now briefly discuss other examples of compensation models 148.

1. A team tendencies model may use an analysis of the deviation of a team's play calling or play success from the league averages. This will provide a set of odds with bias toward a particular team's game play and strategic tendencies.

2. A player tendencies model may use an analysis of the deviation of a player's skill or tendencies from the league average. This will provide a set of odds with bias toward a particular player's game play and strategic tendencies. Making multiple transformations to account for several key players on the field (both offense and defense) will create a set of odds tailored to the on field personnel.

3. A weather factor model may be utilized to alter the odds based upon the on field conditions.

4. A stadium factor model may be utilized to alter the odds based upon an analysis of the stadium conditions. Examples of stadium conditions may include artificial turf versus grassy, field size (in the case of baseball), or prevailing winds.

[0056] Referring now to Figure 8 a block diagram illustrating the components utilized by an operations module is shown. In the embodiment shown, operations module 14 comprises game state consolidation module 180, conflict resolution module 182, current game state 184, wager module 186, result reporting module 188 and game state auto-advance module 190. Game state consolidation module 180 receives input from multiple sources as shown.

[0057] Event location 192 is the site where the event is being played and broadcast to operator station 194 and third party event logger 196. This broadcast would typically be in the form of a television broadcast 198. Game info 200 represents the source of the broadcast information for the event. which is sent to broadcast facility 198. Game state sensors 202 are sensors that may sense some aspect to the game state automatically. For instance they could be tied to an electronic line judge in a tennis match or a goal light in a hockey game. Game state sensors 202 allow for means to sense events without requiring an operator 206 to enter the information. Event results and situation details are sent by game state sensors 202 via network 204 such as the Internet to game state consolidation module 180. The same information is also sent to third party event logger 196 from broadcast facility 198 which in turn forwards the information in the form of event results and situation details via network 204 to game state consolidation module 180. Third party event logger 196 is an external source, which provides game state information, for example a fan website, a weather reporting

website, or a sports cast. In some cases the information provided by third party event logger 196 will be very similar to that provided by operator 206. In other instances third party event logger 196 would not provide information as complete as that provided by operator 206 but rather partial real time information such as score changes, injury updates and weather information.

[0058] Operator station 194 also receives information from broadcast facility 198. Operator station 194 is managed by an operator 206 who views the broadcast on television 208 (or other electronic device) and through the use of rapid entry console 210 inputs event data for use by game state consolidation module 160. Operator 206 utilizes an interface on rapid entry console 202 to provide the results of each game event.

[0059] Game state consolidation module accepts information such as event results to create a current game state 184. A game state as its name implies, indicates the current state of the game. In the case of American football this would include information such as (i) which teams are playing, (ii) players are on the field, (iii) who has the ball, (iv) the current time, (v) the current down, (vi) yards to next down, (vii) position of the ball on the field, (viii) weather conditions, (ix) stadium in which the game is being played and other relevant information to aid in determining the odds and betting opportunities of the next game event.

[0060] Game state consolidation module 180 takes the game states provided by game state sensors 202, operator station 194 and third party event logger 196 to create a current game state 184. Current game state 184 may be modified by conflict resolution module 182. In the case of conflicting information on a current game state, a supervisor 212 will utilize a supervisory console 214 to provide input to conflict resolution module 182 to resolve conflicting game states. In addition game state auto-advance module 190 may automatically provide input to game state consolidation module based on the last play. If for example the football was advanced five yards for a first down, it will automatically provide this information to game state consolidation module 180, thus providing another source of information in creating a game state 184.

[0061] Wager module 186 examines the current game state and determines what the relevant wagering opportunities are. For instance if the current game state is first down, ten yards to go on the fifty yard line it knows to offer a play call run or pass bet, or a play result

being a touchdown or a first down, but not a punt return as a punt is not a relevant option for the current game state.

[0062] Result reporting module 188 provides information to SIE database 42 and integration module 16 on the outcome of an event which is inferred from the current game state 184 and used by integration module 16 to resolve wagers.

[0063] Referring now to Figure 9 a block diagram of the logical functions of the game state auto-advance module is shown. Game state auto-advance module 190 is used to update the game state based on the input from rapid entry console 210. Game state auto-advance module 190 reduces errors and reduces input time for operator 206. By way of example, say that the current game status is first down, with ten yards to go to the next down, on the twenty yard line. Further if the operator 206 enters that there was a five yard pass, then game auto-advance module 190 can determine that the game state should be updated to indicate the current down is the second, the ball is on the twenty five yard line and the yards to go is five. A decision tree can be utilized to update the game state automatically and provide suggested relevant wagering pools for betting.

[0064] Beginning at step 220 a game event is created. At step 222 the event commences. At step 224 module 190 waits for the event to be resolved. This resolution is provided by game state consolidation module 180. At step 226 a test is made to determine if the event was indeed resolved by the play being completed or if the event is cancelled by for example time running out to complete the event.

[0065] If the event was resolved processing moves to step 228 and then to step 230. At step 230 an explicit update is made to updated game state 232 based upon the event result, for example a first down was made. At step 234 an inferred update is made to updated game state 232 based upon the event result, for example the current yard line. At step 236 natural next bets are calculated based upon the event result, for example for the point after attempt after a touchdown is scored. This information is then passed to step 238 where suggested wagers are then provided to rapid entry console 210.

[0066] Returning to step 226 if the event was cancelled, processing moves to step 240 and then directly to step 236.

[0067] Rapid entry console 210 receives game status information from the updated game state 232 and suggested wagers 238 to provide input to operator 206 so that new events 220 may be created and the process continues.

[0068] Referring now to Figure 10 an example of flowchart for updating the game state is shown. Step 224 waits for an update of event status. When an update occurs, step 250 determines if a play was executed. If not control returns to step 224. If a play was executed a test is made at step 252 to determine if there was a turnover (i.e. the other team received the ball). If this is the case processing moves to step 254 where a flag is set to indicate that the other team now has the ball. Both steps 252 and 254 converge at step 256 where a test is made to determine if there was a score. If there was a score, the type of score is determined. We discuss only the example of a safety 258 which adds two points to the score of the team scoring the safety, this is done at step 260 and this information is provided to create updated game state 232.

[0069] Returning to step 256, if there was not a score a test is made at step 262 to determine if enough yards were gained to obtain a first down. If so, processing moves to step 264 where the down is set to one and the information provided to updated game state 232. If at step 262 a first down was not obtained, processing moves to step 266 where the current down is incremented by one. Processing then moves to step 268 where a test is made of the current down. In American football rules the team holding the ball has four downs to advance ten yards. If the current down is equal to five they have failed and team possession is switched at step 270. Both steps 268 and 270 convey the results of the event to updated game state 232.

[0070] Referring now to Figure 11 a block diagram of the logical functions of the conflict resolution module is shown. Conflict resolution module 182 resolves discrepancies that may exist between input sources such as rapid entry consoles 210, third party event loggers 196 or game state sensors 202. Discrepancies could be one of two types.

[0071] Type 1 are timing conflicts, and these are easy to deal with. For instance, if and operator 206 enters into rapid entry console 210 that the event lock out (the time after which no new bets are allowed) was 12:00:00, and a third party event logger 196 said it was 12:00:01, then to error on the side of caution the earlier time is chosen. Simple rules may be used to determine in each type of scenario whether to choose the earliest of the time stamps, the later of the time stamps, or to select an average of them. This update is handled by timing

conflict resolution module 286, which updates the current game state 184 through conflict identification module 282.

[0072] Type 2 conflicts are game state conflicts, and are a little more difficult to deal with. For instance, if an operator 206 says it was a first down, but a game sensor 202 said it was a next down, then there is no simple or automated way to determine which is right. In this case supervisor 212 through the use of supervisory console 214 relies on logged video evidence to determine what the actual event result was. The logged video is stored in broadcast database 280. This process is partially automated as follows:

1) Conflict identification module 282 determines that the game state 184 is showing a discrepancy of type 2.

2) The time window of the relevant event is determined.

3) Game state conflict resolution module 284 requests a video stream from the broadcast database 280 for the time period around the event plus or minus x seconds. The Broadcast database 280 maintains a sliding buffer of the last several minutes of broadcast data for all events being supported.

3) Supervisory console 214 alerts the supervisor 212 that a conflict requires investigation and presents the supervisor 212 with the video stream and the discrepancy information. Upon investigation, the supervisor 212 determines the correct game state and updates current game state 184 via the conflict identification module 202.

[0073] Referring now to Figure 12 a block diagram illustrating the components used by the integration module 16 is shown. Integration module 16 comprises three main components, fact server 290, fact database 292 and audit server 294.

[0074] Wager options/odds are received from operations module 14 and stored into fact database 292 by fact server 290. Module 296 receives the wager options/odds from operations module 14 and passes them to module 298, which updates the fact database 292.

[0075] The fact database 292 controls the pool lifecycle when appropriate timing signals are received from the fact server 290 of integration module 16. A number of tables are stored in fact database 292 and we will discuss each in turn. Stored procedures interface table 310 contains context lifecycle operations 312 and pool lifecycle operations 314.

[0076] The fact database 292 stores facts such as game state information, time stamps and event outcomes. Context lifecycle operations 312 is a virtual container in which betting events and the amounts placed on those betting events is grouped. A context lifecycle consists of three steps, (i) creation, (ii) activation and (iii) deactivation. If a context is active a user may bet on an event. Once deactivation occurs no bets are permitted. This information is used to determine the change in odds based upon betting activity.

[0077] Pool lifecycle operations 314 are methods controlling among other features: betting windows, performing lockouts, and rolling back retroactive lockouts. Progression of a pool from one state to another is controlled by these methods.

[0078] One or more Context tables 316 each comprise one or more pool tables 318. A pool table 318 contains information on a specific betting pool. Betting interest 320 tracks a specific pool such as "play call run - initial odds 1.49". Pool lifecycle history 322 tracks the status of a pool from creation to closure such as timing information as the state of a pool changes.

[0079] The active betting pools 318, which include information on initial odds, results and timing signals are then broadcast by module 300 via network 20a to portal module 18. Although only one portal module 18 is shown there may be multiple instances. Each participating portal module 18 is then responsible for rebalancing the odds within their own pools and implementing the actual wager lock out processes indicated by the pool lifecycle (see Figure 13). The audit server 294 receives aggregate betting activity from each portal module 18 via network 20c. The audit server 294 audits and monitors the aggregate activity of each portal module 18 to ensure they are properly billed. The aggregate betting activity is received by the transaction logging module 302. Reconciliation module 304 then reconciles the records by user for the purpose of auditing and invoicing, and stores them in the audit database 306. Reporting module accesses audit database 306 so that reports may be prepared for the administrators of operations module 14.

[0080] Referring now to Figure 13 a block diagram illustrating the steps of a betting pool lifecycle is shown. Figure 13 shows the transition of a betting pool from time of creation to time of closeout and payout to winners. The operations module 14 identifies the appropriate timing signals for each transition in the lifecycle; the fact server 290 of integration module 16 stores records of these.

[0081] A pool is created at step 350 to support betting on a particular event. Pool creation includes creation of at least two betting interests 352, corresponding to the possible outcomes of the event. Nominal payout rates for each betting interest 352 are set by the SIE module 12. The nominal payout rates are also the starting rates with fixed payout calculation; in pari-mutuel payout calculation, nominal payout rates are only used as a guide to the end user and as a seed to the pari-mutuel process.

[0082] Pools are unavailable for betting (invisible) until opened. Once opened as shown at step 354, a pool and its betting interests are presented to users and bets may be placed as shown at step 356. The payout rate for each outcome may remain fixed over the lifecycle of the pool (pool-fixed payout); the rates may remain fixed over the lifecycle of each particular placed bet, but change from bet to bet over time (bet-fixed payout); or the rate for each bet may remain completely undecided until after the pool closes (pure pari-mutuel).

[0083] Pools remain open indefinitely, until locked by the operations module 14. Bets may be placed until the instant the pool is locked, but any late bets 360 made within the configurable blackout period 358 prior to lock time are rejected.

[0084] No further bets may be placed once the pool has been locked as shown at step 362. Because lock time occurs at an unpredictable time, based on real world events unfolding, bets falling within the blackout period 358 are only conclusively determined and rejected after the pool has been locked.

[0085] Sometime after the pool has been locked at step 362, the event will conclude and the actual outcome will become known. When the winning betting interest is specified, the pool is closed at step 366 and all bets in the pool are resolved at step 368. Bet resolution depends on whether a pari-mutuel or fixed-payout methodology is used.

[0086] Users are granted a fixed period of time (e.g. 24 hours) to dispute the outcome of the pool, during which the pool remains closed. Gains and losses are reported, but gains are unavailable for cash out during this period. Gains may be used to participate in further betting during this period.

[0087] After the reasonable period for protesting the pool outcome has elapsed, the pool is finally frozen at step 370 and all wins and losses are made final. All gains from the pool are made available for cash out.

[0088] Referring now to Figure 14 a block diagram illustrating the components used by the portal module 18 is shown. Portal module 18 comprises two main components, portal wager processing server 380 and web server 382. Portal wager processing server 380 accepts real time wager information from fact server 290 of integration module 16 via network 20a. Portal wagering server 380 also reports the results of bets to integration module 16 via network 20c. Web server 382 interacts with one or more users 22 through the use of user interface 384 and network 20b.

[0089] A user 22 places a bet through the use of user interface 384 and the bet is stored in portal database 386 by module 392. The bet is also passed to module 394 where payout rates are adjusted as necessary to maintain a balanced betting pool. Any adjustments are provided to module 396, which maintains a dynamic cache on the current odds and payout rates for each pool. This dynamic information is provided to user interface 384 via webservice interface 390 by module 396. Module 398 tracks information on betting events provided by fact server 290 of integration module 16 and in turn propagates this information to module 396 and portal database 386. Once a pool has closed module 400 resolves the payouts for each bet and communicates this information to both integration module 16 and portal database 386. In addition bet payouts are communicated to module 396 which in turn informs users 22 via webs service interface 390 of the outcome. Module 402 sends audit information on closed pools to integration module 16 via network 20c from information it extracts from portal database 386. This information may include (i) number of bets placed in each pool, (ii) amounts of bets, (iii) payouts made, (iv) the number of users, and other relevant data for auditing purposes.

[0090] Web server 382 comprises two interfaces, dynamically generated HTML interface 388 and web service interface 390, either of which may interact with a user interface 384. User interface 384 can take on many forms depending upon the type of device being used by user 22. For example, if the user interface 384 makes use of a web browser or a mobile browser then it will connect to interface 388. In another embodiment user interface 384 may make use of a standalone client such as a program that runs on the computing device of the user that does not make use of web based languages that generate HTML. In this case a connection would be made to interface 390.

[0091] Referring now to Figure 15, a block diagram of the structure of the portal database 386 is shown. Portal database 386 controls the pool lifecycle when appropriate timing signals

are received from the fact server 290 of integration module 16. A number of tables are stored in portal database 386 and we will discuss each in turn. Stored procedures interface table 420 contains context lifecycle operations 422, pool lifecycle operations 424, bet lifecycle operations 426 and user management information 428.

[0092] Context lifecycle operations 422 is a virtual container in which betting events and the amounts placed on those betting events is grouped. A context lifecycle consists of three steps, (i) creation, (ii) activation and (iii) deactivation. If a context is active a user may bet on an event. Once deactivation occurs no bets are permitted. This information is used to determine the change in odds based upon betting activity.

[0093] Pool lifecycle operations 424 are methods controlling among other features: betting windows, performing lockouts, and rolling back retroactive lockouts. Progression of a pool from one state to another is controlled by these methods. Bet lifecycle operations 426 are methods that control the betting records. These methods handle the submission of a bet from a user and track the consequences of a bet until the event has been resolved. For example the progression of an individual bet from one state to another such as a pending request to bet, an approved or rejected bet, a confirmed bet and a resolved bet is handled by bet lifecycle operations 426.

[0094] User management 428 provides methods to allow information stored in user table 438 to be updated. User table 438 contains information on each user who has placed a bet.

[0095] One or more Context tables 430 each comprise one or more pool tables 432. A pool table 432 contains information on a specific betting pool. Betting interest 434 tracks a specific pool such as "play call run - odds 1.49". Pool lifecycle history 436 tracks the status of a pool from creation to closure such as timing information as the state of a pool changes.

[0096] Bet table 440 contains information on each type of bet placed such as (i) the user, (ii) the event they bet on, (iii) the time of the bet, and (iv) the amount wagered. Bet history table 442 contains the betting history for all bets in portal database 386.

[0097] Referring now to Figure 16 an example of a graphical user interface for a user is shown. Any number of styles of user interfaces may be utilized by the present invention, the example shown in Figure 16 is merely meant to illustrate the types of information that may be displayed. Feature 450 indicates the current account balance for the user. Feature 452

indicates available wager categories such as play call, play result, next score and feature player. Feature 454 indicates the available odds and wagers for the play category chosen. Feature 456 indicates pending wagers and feature 458 indicates resolved wagers. Feature 460 indicates game details in a scoreboard like format. Feature 462 indicates other games that may be bet on. Feature 464 indicates the amount of the current wager, in this case five dollars. Feature 466 indicates a tournament view, i.e. how the user is doing relative to other bettors. Feature 468 indicates a head to head view, i.e. how the user is doing relative to a single bettor in a head to head competition.

[0098] Referring now to Figure 17 a block diagram illustrating the steps of raked pari-mutuel wagering is shown. The following terms will be used in describing the example of raked pari-mutuel wagering flow.

1) All accounting is done in integer quantities of the minimum currency increment i_c. By definition, i_c is always normalized to 1 and one increment of i_c is one credit.

2) Stakes are placed in integer quantities of the stake increment i_s.

3) Payouts are made in integer quantities of the payout increment i_p.

4) $i_s \geq i_p \geq i_c$. For example: i_c: \$0.01 (= 1), i_p: \$0.10 (= 10), i_s: \$1.00 (= 100)

5) Pool X consists of N offered betting interests $\{x_1, x_2, ..., x_N\}$. A single betting interest x_n is identified as the winner when the pool is closed.

[0099] Beginning at step 480 a rake rate k is assigned by portal supervisor 482 through the used of supervisory console 484. The rake rate k determines what portion of the total sums bet in a pool will be retained by the house. The supervisor 482 monitors suggested wagers via supervisory console 484 and may override them. In essence the supervisor 482 monitors all suggested wagers before they are sent to integration module 16. For example the supervisor 482 may determine that the outcome of a play is obvious to one knowledgeable of the game given the current game state and may delete the option to wager. A supervisor 482 may provide other input such as manually overriding the odds to be offered.

[00100] At step 486 nominal probabilities $\{p_1, p_2, ..., p_N\}$ of a given betting interest being the exclusive winner in a wager category are calculated by fact server 290. From this nominal payout rates $\{r_1, r_2, ..., r_N\}$ are calculated as $r_n = 1 / p_n$.

[00101] At step 488 users 22 are provided with odds and place bets. Stakes $\{s_1, s_2, ..., s_N\}$ are placed on available betting interests (s_n is the total of all individual bets b_i placed on x_n).

Total of stakes in a pool are $s_T = s_1 + s_2 + ... + s_N$. Users are provided with odds and pay out rates continuously by step 488 while the betting pool is open

[00102] At step 490 payout rates are calculated once the betting pool has closed. A number of different actual payout rates may be calculated for example:

1) Actual payout rate (continuous-simple) $a_n = s_T / s_n$.

2) Actual payout rate (continuous-raked) $a_n = (1 - k) \cdot s_T / s_n$.

3) Actual payout rate (discrete-raked) $a_n = \mathbf{max(1, floor[(1 - k) \cdot (i_s / i_p) \cdot s_T / s_n])}$

[00103] This expresses the discrete-raked actual payout rate as an integer number of payout increments i_p paid per stake increment i_s to the winners of the pool. The actual payout is not permitted to be less than one. Further, the payout rate is undefined where $s_n = 0$.

[00104] At step 492 the pool is closed and processing moves to step 494 where the payouts are distributed to the users 22. The total actual payout is $a_T = a_n \cdot s_n$. Payout to a given winning bet b_i is $w_i = b_i \cdot a_n$. Total house retained rake $K_T = s_T - a_T$. A record of the payouts made is provided to audit server 294.

[00105] Referring now to Figure 18 a diagram illustrating an example of a cascaded pari-mutuel betting model is shown. Figure 18 illustrates how a cascaded pari-mutuel model works by dividing a joint wager into multiple fractional base pool wagers. The formula is explained more completely in Figure 19. Basically, cascaded pari-mutuel allows bettors to wager at any level of resolution, i.e.any level of detail in their bet. However, at high levels of details (e.g. "a pass to the running back for 20+ yards") there may not be a densely populated base pool. As such, the payout may not be appropriate for the significant risk being taken. To handle this, cascaded pari-mutuel allows sparsely populated joint wager pools to be broken into their parent base pools via fractional wagers. To ensure the bettor is given an incentive to make it a joint wager instead of two independent base pool wagers, the joint wager is given credit for more than was actually wagered. This is a portal customizable setting called the joint factor. A joint factor of 1.3 means for every fractional wager of $1, the bettor will be given credit in the pool of $1.30. The non-existent credit dollars are in essence taken from the base pool.

[00106] There are two types of pools shown in Figure 18, a play call pool 500 and a feature player pool 502. Groups of users 22a to 22e may make bets in these pools. Feature 504 indicates that users 22a have bet a total of $6,000 that the next play will be a run and a total of

$9,000 that the next pay will be a pass. Feature 506 indicates that users 22e have bet a total of $4,000 that the next player will be a running back (RB), $8,000 that the next player will be a wide receiver (WR), and $1,500 that the next player will be a tight end (TE).

[00107] An additional set of users 22b to 22d have placed joint wagers. Feature 508 indicates that $400 was bet on the next play being a pass to a running back. Feature 510 indicates that $500 was bet on the next play being a pass to a wide receiver. Feature 510 indicates that $500 was bet on the next play being a run by a running back. Each of the bets placed as shown by features 508, 510 and 512 is split in half. Thus the bets indicated in feature 508 are split into the bets shown in features 514 and 516. The same is shown for bets indicated by features 510 and 512.

[00108] The results of these betting patterns are shown within the features play call pool 500 and feature player pool 502. In the case of pool 500 a total of $6,050 has been bet on a run and a total of $9,450 has been bet on a pass. In the case of pool 502, bets on the running back total $4,250, bets on the wide receiver total $8,250 and bets on the tight end total $1,500. Both pools 500 and 502 have a rake of 0.15 and a joint factor of 1.30.

[00109] Referring now to Figure 19 a block diagram illustrating the steps of cascaded pari-mutuel wagering is shown.

[00110] Beginning at step 510 pool is assigned a rake rate k, joint factor f, and Joint threshold t, by portal supervisor 482 through the used of supervisory console 484.

[00111] At step 512 nominal base pool probabilities $\{p_{b,1}, p_{b,2}, ..., p_{b,N}\}$ of a given betting interest 'n' being the exclusive winner in a pool 'b' are calculated by fact server 290 for each of the betting base pools. Nominal payout rates $\{r_{b,1}, r_{b,2}, ..., r_{b,N}\}$ are calculated as $r_{b,n} = 1 / p_{b,n}$.

[00112] At step 514 stakes on betting interest 'n' in base pool 'b' are represented as $S_{b,n}$ which is the total of all individual bets b_i placed on interest $x_{b,n}$. The value of $s_{b,n} = X_{b,n} + Y_{b,n} + Z_{b,n}$ where X, Y, Z represent the three sources for stakes on a particular interest in a base pool. The value $\mathbf{X}_{b,n}$ represents wagers entered directly into a base pool. The value $\mathbf{Y}_{b,n}$ represents fractional joint wagers placed into the base pool and resolve to be incorrect across all tied joint interests. The total of stakes in the pool is represented by $s_{b,T} = s_{b,1} + s_{b,2} + ... + s_{b,N}$.

[00113] At step 516, odds $z_{b,n}$ for the correct joint wagers $Z_{b,n}$ are calculated, applying the joint factor f to give them additional credit to correspond to the increased risk of their wager. Next, odds $x_{b,n}$ for the direct base pool wagers are calculated. This is done by calculating the odds normally, after first removing the payouts to the correct joint wagers from the pool of winnings to be paid out. The following formulas are utilized:

$$z_{b,n} = (s_{b,T} / s_{b,n}) \cdot (1\text{-}k) \cdot f$$
$$x_{b,n} = ((s_{b,T} \cdot [1\text{-}k]) - (z_{b,n} \cdot Z_{b,n})) / (X_{b,n})$$

[00114] This method is implemented to accommodate sparsely populated joint-wager spaces. A threshold calculation should be made in which if $(s_{b,T} - X_{b,T}) > t$, then the joint-wagers are broken into a separate base pool. If no joint wagers are correct across all dependant joins, then all winnings in the base pool are divided up solely amongst the direct base pool winners (as indicated by the formula). As shown above, the true payout odds for direct base pool bettors is not possible to calculate until all outcomes are resolved and it can be determined if any joint wagers were correct. As such, prior to event resolution, the minimum of all possible $x_{b,n}$ values should be displayed to the users. As such, after resolution the odds $x_{b,n}$ displayed to those users will either remain constant, or increase slightly.

[00115] At step 518 the pool is closed and processing moves to step 520 where the payouts are distributed to the users 22. The total actual payout is $(Z_{b,n})(z_{b,n}) + (X_{b,n})(x_{b,n})$. The winning direct pool bet $wi = b_i \cdot x_{b,n}$. The wining joint pool bet is $wi = b_i \cdot z_{b,n}$. Where b_i is the fractional portion of the total bet that was placed in the joint pool.

[00116] The above disclosure has provided examples of pari-mutuel and cascaded pari-mutuel betting pools.. The term cascaded wagering refers to a general method that can be applied to any odds calculation scheme, for example pari-mutuel, fixed odds, or rebalanced fixed odds. Cascaded wagering allows betting to be parlayed across multiple pools and for a bettor to wager to an arbitrary level of detail.

[00117] Static fixed odds simply uses the initial nominal odds and maintains those throughout the betting window. In balanced fixed odds, the system uses any number of the well known rebalancing algorithms which attempt to look at book imbalance periodically through out the betting window. Typically the odds are given to a user and kept stable for 'X' seconds. After 'X' seconds if the user has not placed a bet, then the odds are updated via the

rebalancing algorithm. This ensures that the house's exposure can be limited when betting distribution is not in match with the initial odds.

[00118] Although the subject matter has been described in language specific to structural features and/or methodological acts, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features or acts described above. Rather, the specific features and acts described above are disclosed as example forms of implementing the claims.

WE CLAIM:

1. A method for permitting a user to wager on the outcome of an event while said event is in progress, said method comprising the steps of:

presenting to said user said event, as well as odds and projected payouts of said event based upon combining heuristics and statistics;

accepting a wager from said user on said outcome;

updating said odds and projected payouts on said event while said event is in progress and providing the results of said updating to said user; and

upon the completion of said event informing said user of said outcome and reconciling the account of said user based upon said outcome.

2. The method of claim 1 further comprising the step of in addition to said combining, utilizing compensation to adjust said odds and projected payouts.

3. The method of claim 2 wherein said utilizing compensation utilizes environmental conditions.

4. The method of claim 2 wherein said utilizing compensation utilizes information on players in the event.

5. The method of claim 1 wherein prior to presenting to said user, said event is approved by a supervisor.

6. The method of claim 1 wherein said combining utilizes an expert system for calculating said odds, said expert system utilizing feedback from the outcome of previous events to aid in calculating said odds.

7. The method of claim 1 further comprising the step of determining a game state based upon information received from a plurality of sources.

8. The method of claim 7 further comprising the step of providing conflict resolution to resolve said game state.

9. The method of claim 7 further comprising the step of automatically advancing a game state.

10. The method of claim 1 further comprising the step of permitting said user to wager upon said event in a cascaded wagering pool.

11. The method of claim 1 further comprising the step of communicating with said user via an Internet equipped device.

12. The method of claim 1 further comprising the step of allowing a supervisor to modify the odds for the outcome of an event.

13. A system for permitting a user to wager on the outcome of an event while said event is in progress, said system comprising:

means for presenting to said user said event, as well as odds and project payouts of said event based upon combing heuristics and statistics;

means for accepting a wager from said user on said outcome;

means for updating said odds and projected payouts on said event while said event is in progress and providing the results of said updating to said user; and

means for upon the completion of said event informing said user of said outcome and means for reconciling the account of said user based upon said outcome.

14. The system of claim 13 further comprising means for utilizing compensation to adjust said odds and projected payouts.

15. The system of claim 14 wherein said means for utilizing compensation utilizes environmental conditions.

16. The system of claim 14 wherein said means for utilization compensation utilizes information on players in the event.

17. The system of claim 13 further comprising means for a supervisor to approve said event for presentation to said user..

18. The system of claim 13 wherein said combining comprises an expert system for calculating said odds, said expert system utilizing feedback from the outcome of previous events to aid in calculating said odds.

19. The system of claim 13 further comprising means for determining a game state based upon information received from a plurality of sources.

20. The system of claim 19 further comprising means for providing conflict resolution to resolve said game state.

21. The system of claim 19 further comprising means for automatically advancing a game state.

22. The system of claim 13 further comprising means for permitting said user to wager upon said event in a cascaded wagering pool.

23. The system of claim 13 further comprising means for communicating with said user via an Internet equipped device.

24. The system of claim 13 further comprising means for allowing a supervisor to modify the odds for the outcome of an event.

25. A computer readable medium comprising instructions for the execution of the steps of claim 1.

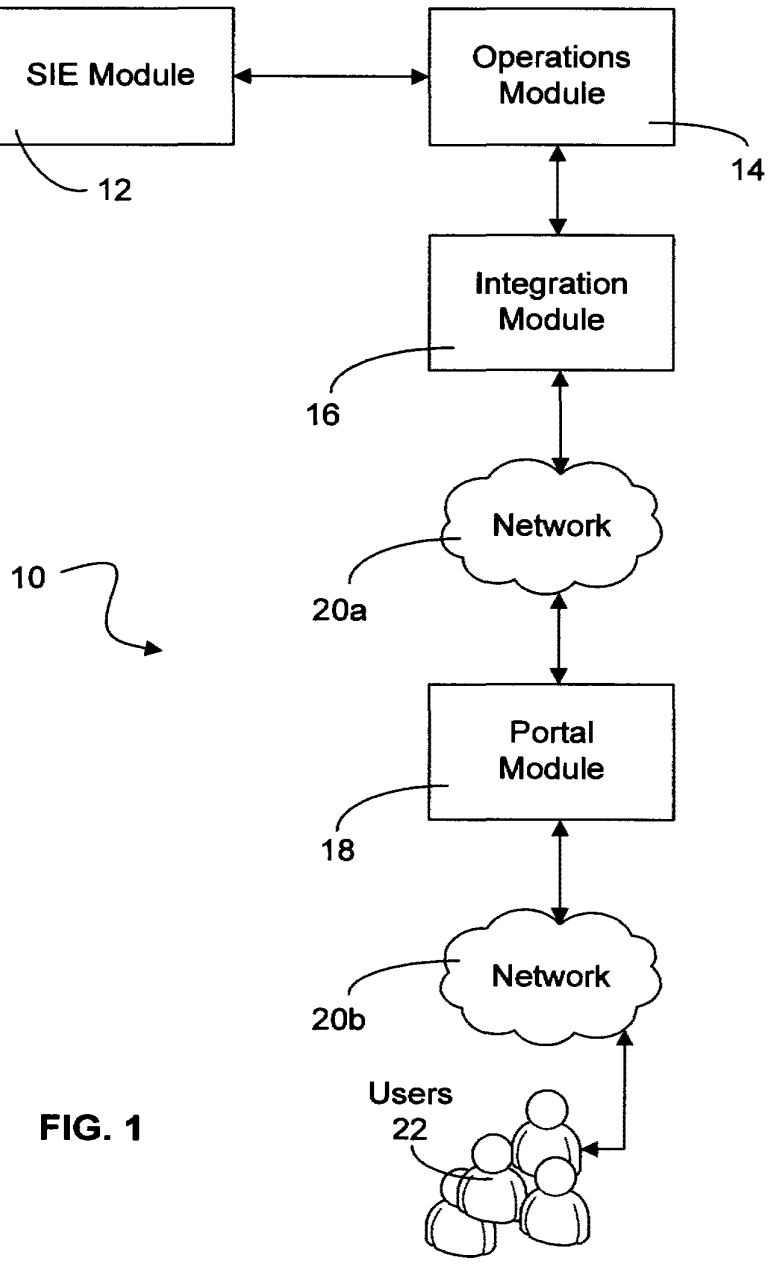

SIE Module
Operations Module
12
14
Integration Module
16
Network
10
20a
Portal Module
18
Network
20b
Users
22

FIG. 1

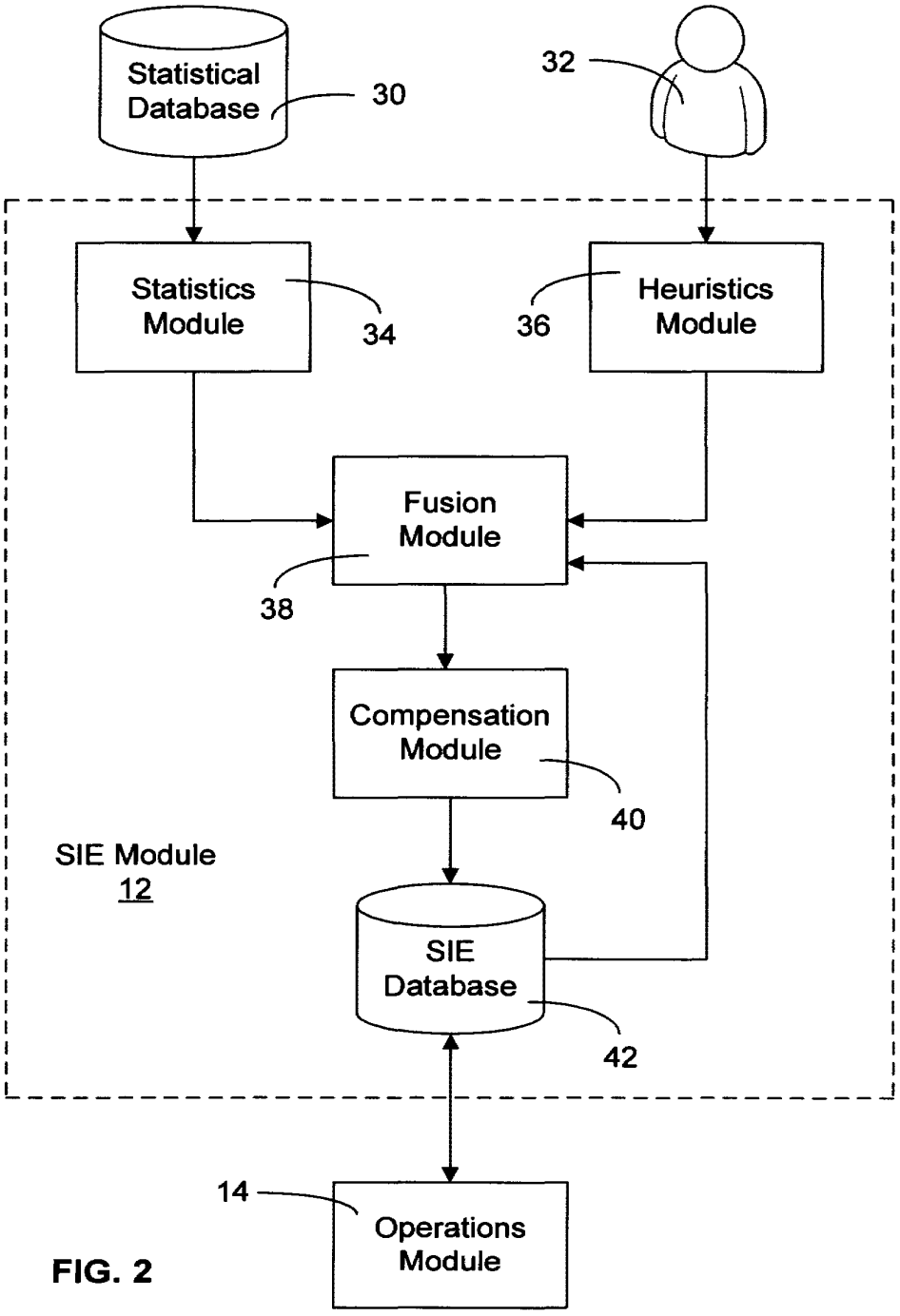

Statistical Database
30
32
Statistics Module
34
36
Heuristics Module
Fusion Module
38
Compensation Module
40
SIE Module
12
SIE Database
42
14
Operations Module

FIG. 2

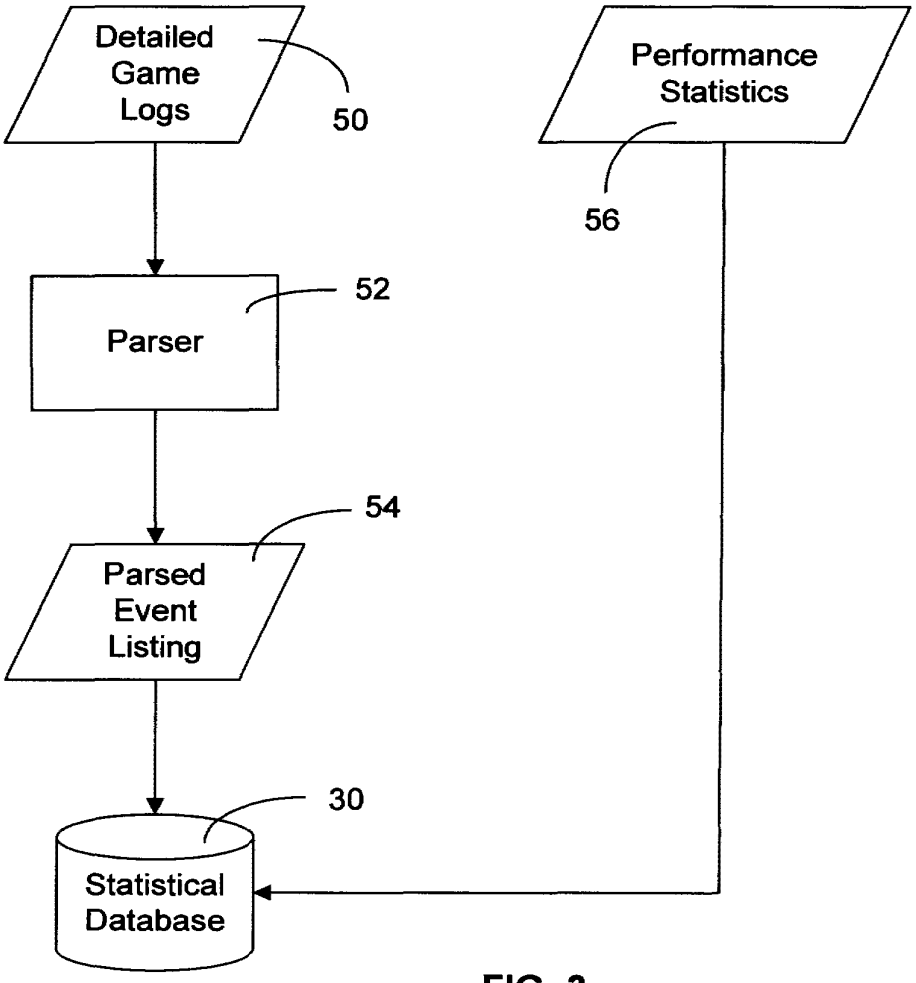
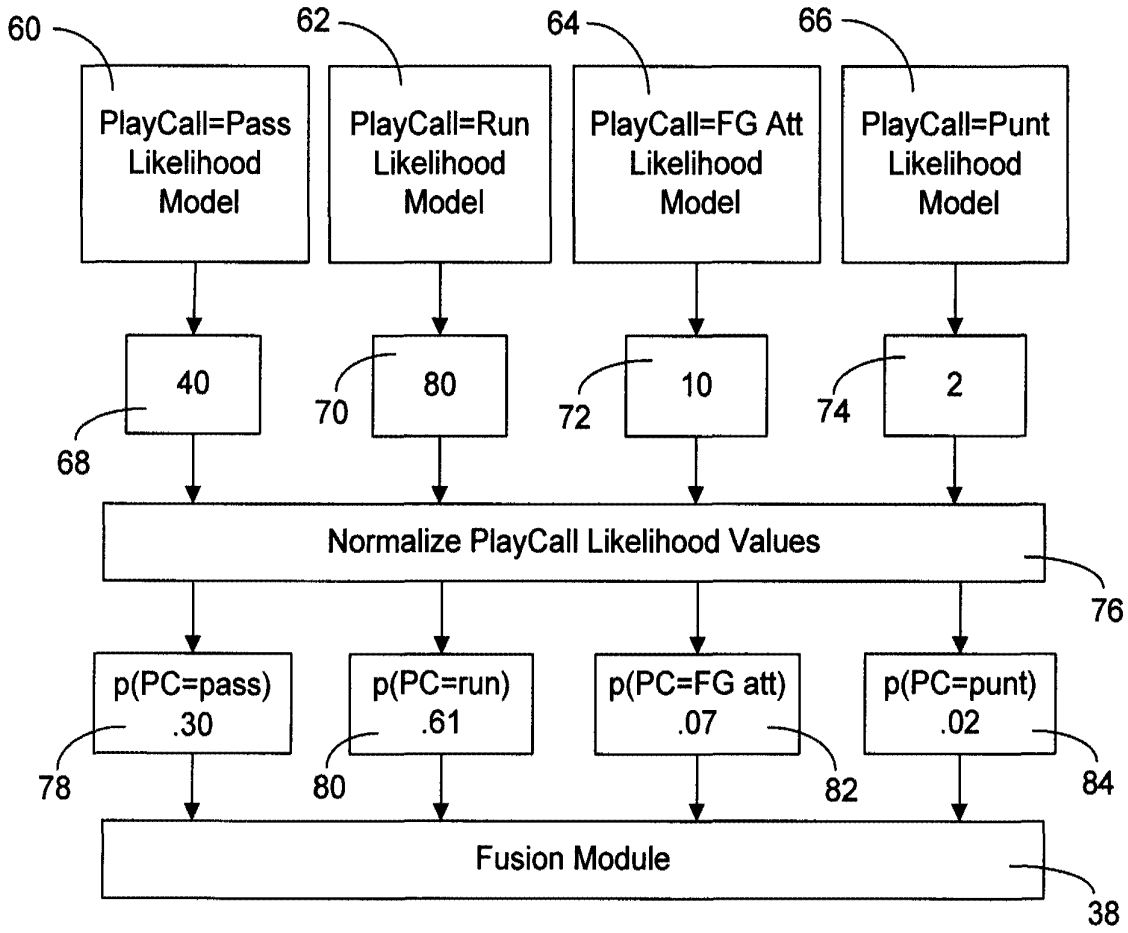

Detailed Game Logs
50
Performance Statistics
56
Parser
52
Parsed Event Listing
54
Statistical Database
30

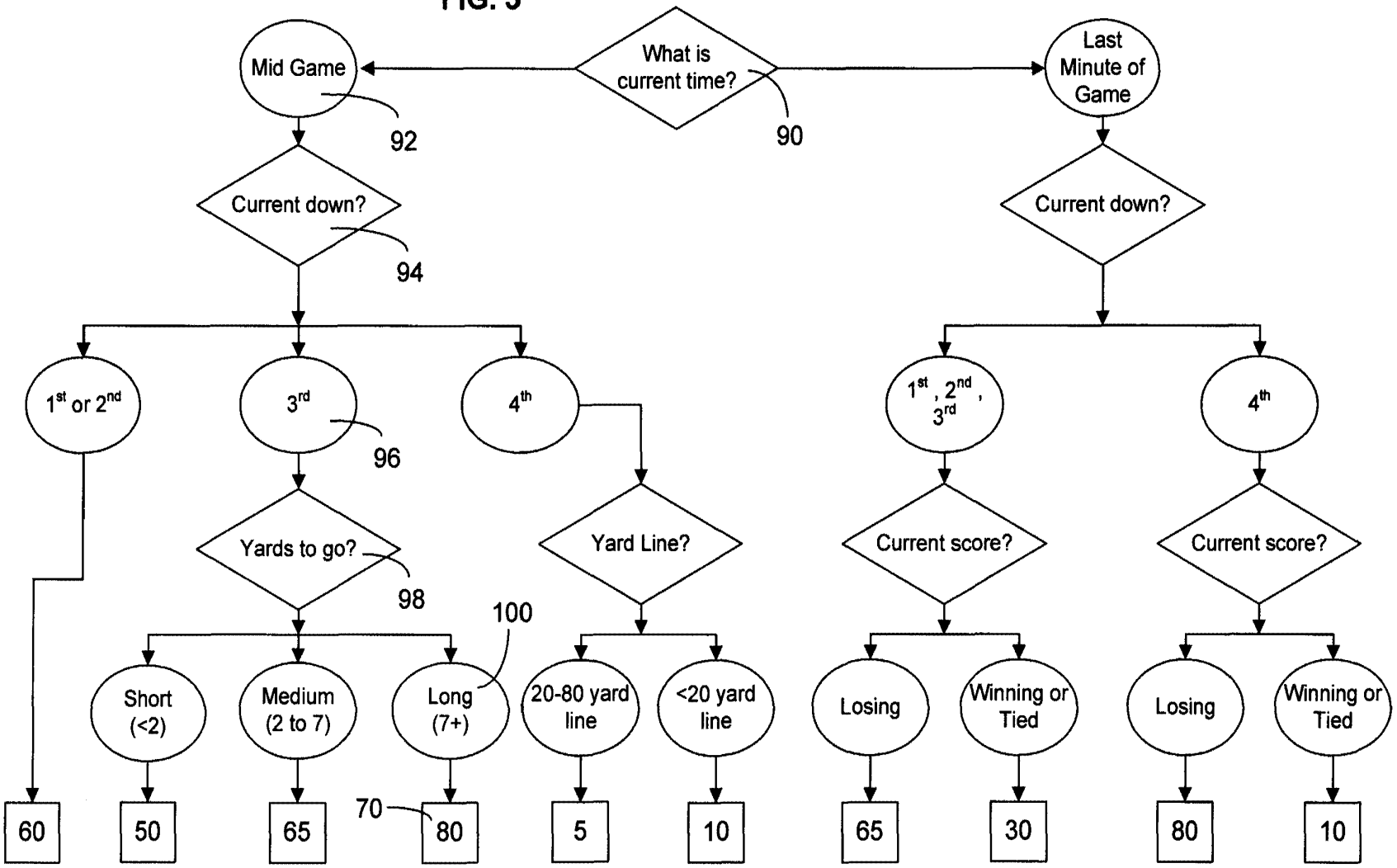
FIG. 3

FIG. 4



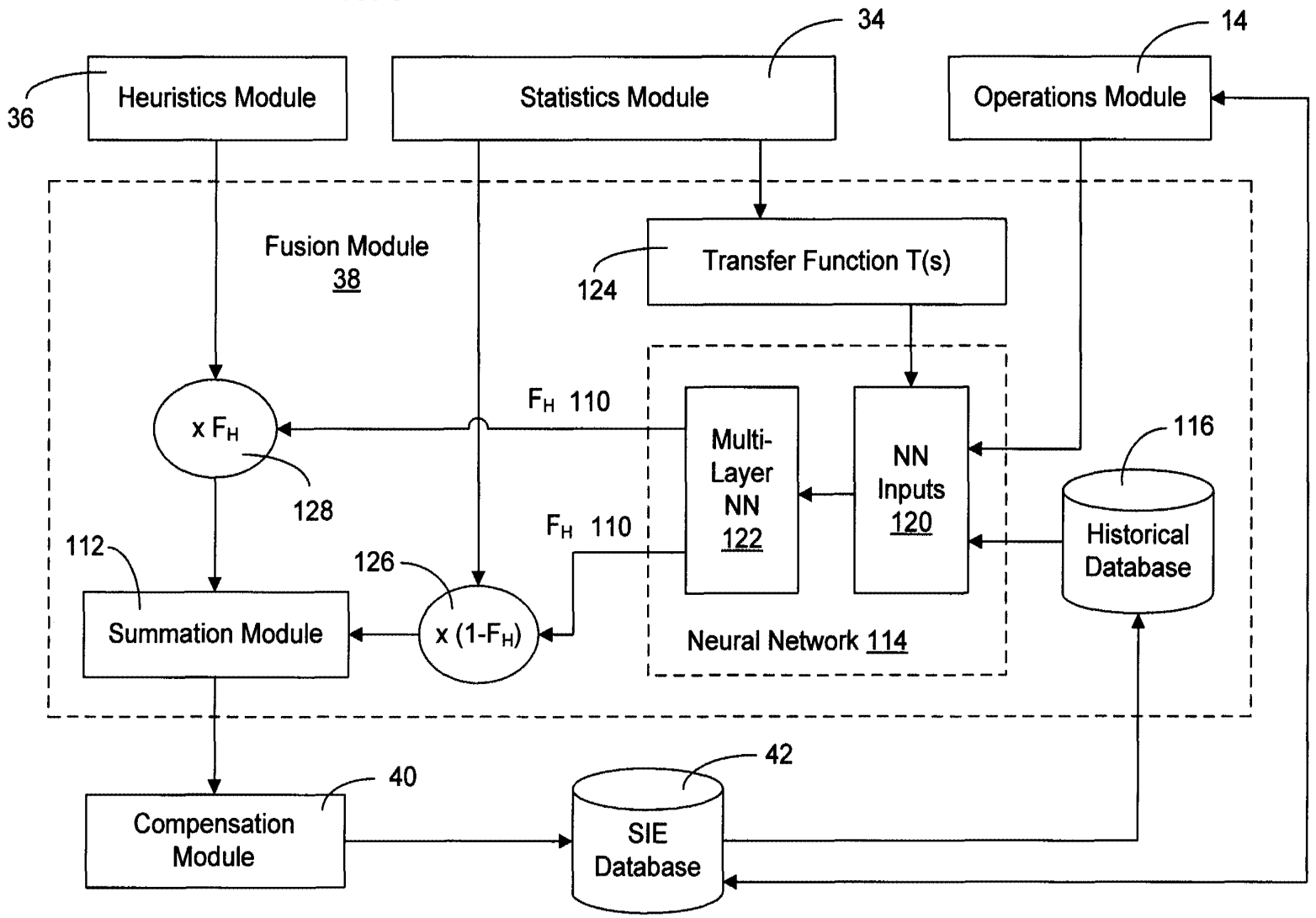
FanDuel Ex. 1002-1529
FanDuel Ex. 1002-1529

FIG. 5



FanDuel Ex. 1002-1530
FanDuel Ex. 1002-1530

FIG. 6



FanDuel Ex. 1002-1531
FanDuel Ex. 1002-1531

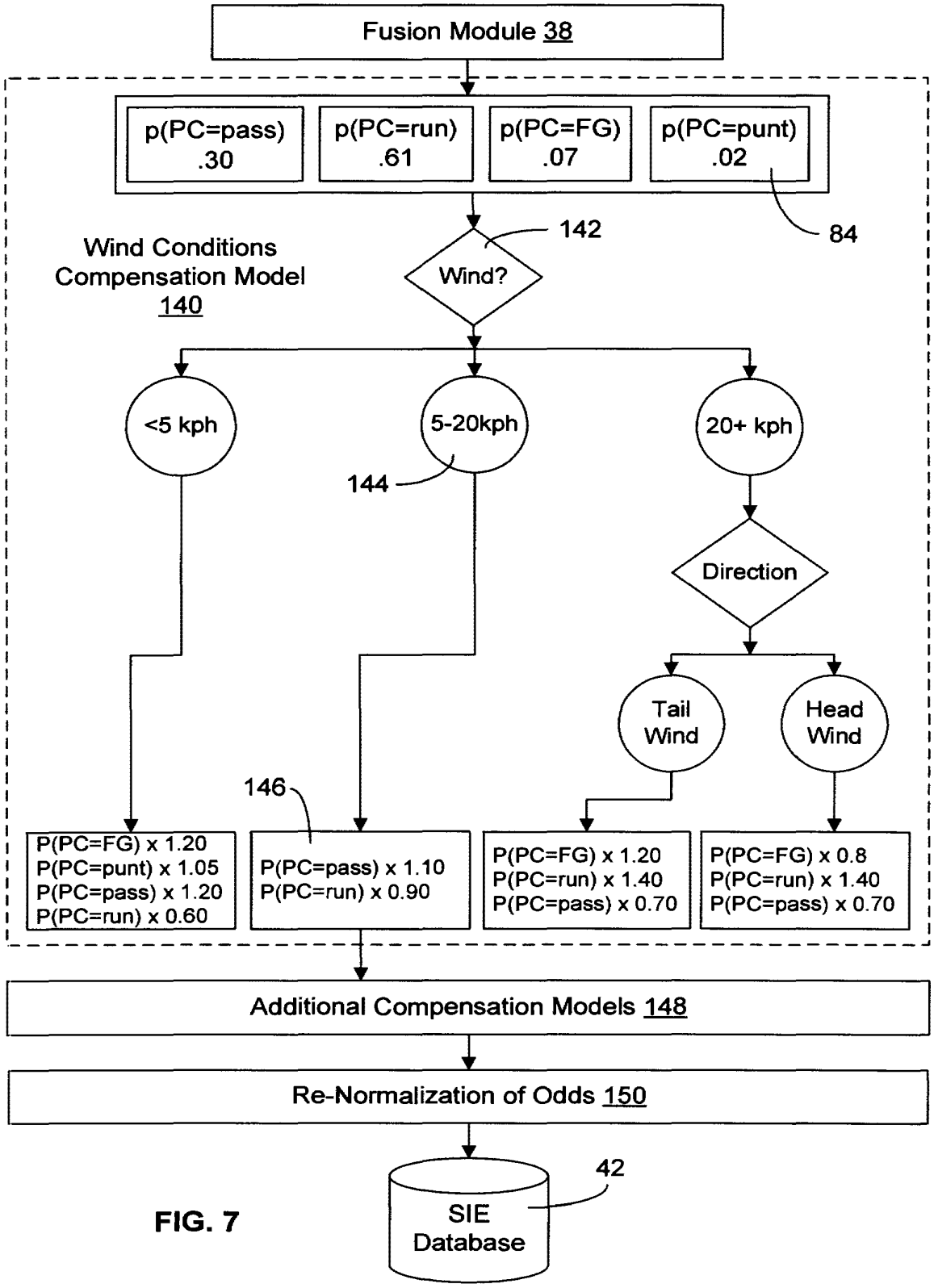

Fusion Module 38
p(PC=pass) .30
p(PC=run) .61
p(PC=FG) .07
p(PC=punt) .02
84
Wind Conditions Compensation Model 140
142
Wind?
<5 kph
5-20kph
144
20+ kph
Direction
Tail Wind
Head Wind
146
P(PC=FG) x 1.20
P(PC=punt) x 1.05
P(PC=pass) x 1.20
P(PC=run) x 0.60
P(PC=pass) x 1.10
P(PC=run) x 0.90
P(PC=FG) x 1.20
P(PC=run) x 1.40
P(PC=pass) x 0.70
P(PC=FG) x 0.8
P(PC=run) x 1.40
P(PC=pass) x 0.70
Additional Compensation Models 148
Re-Normalization of Odds 150
42
SIE Database

FIG. 7

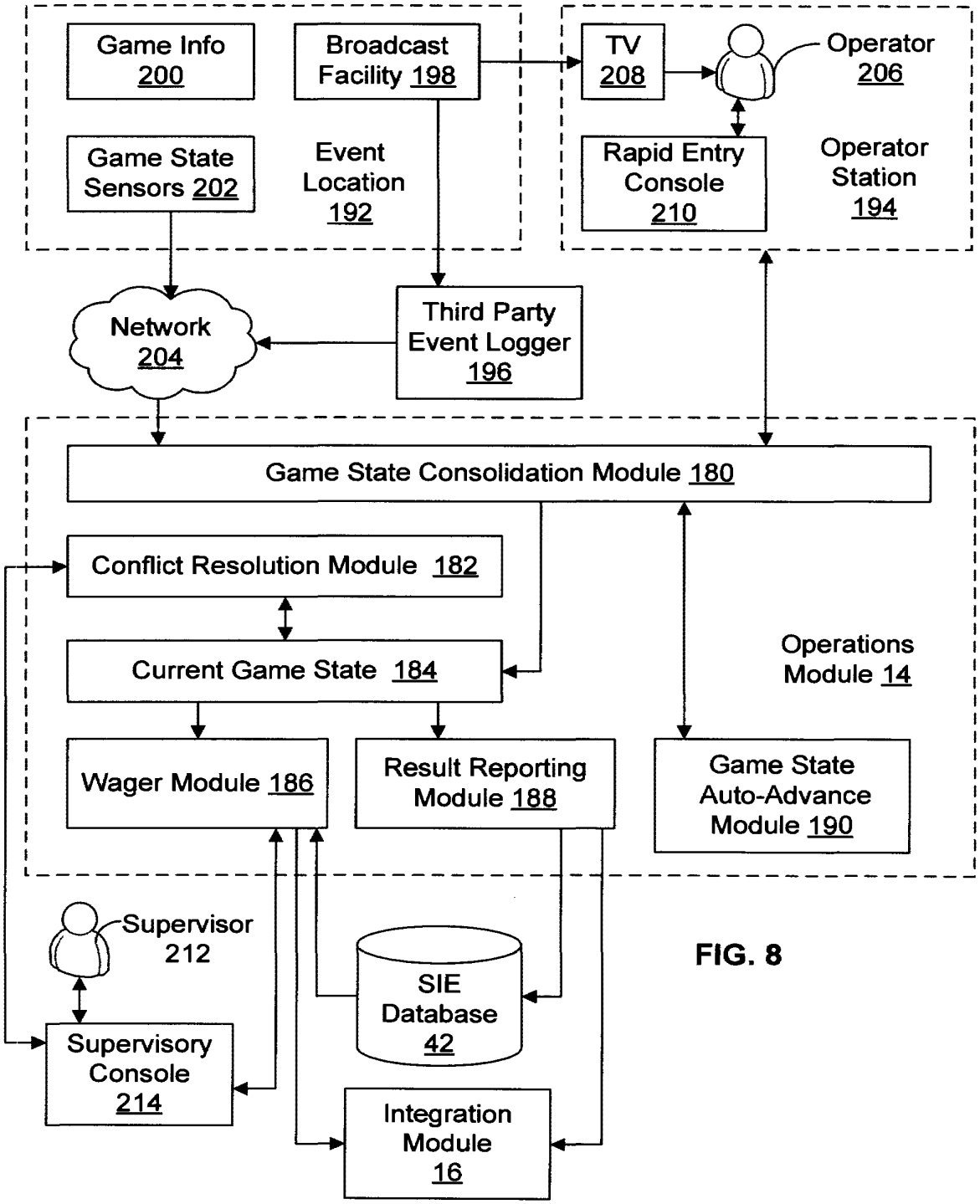
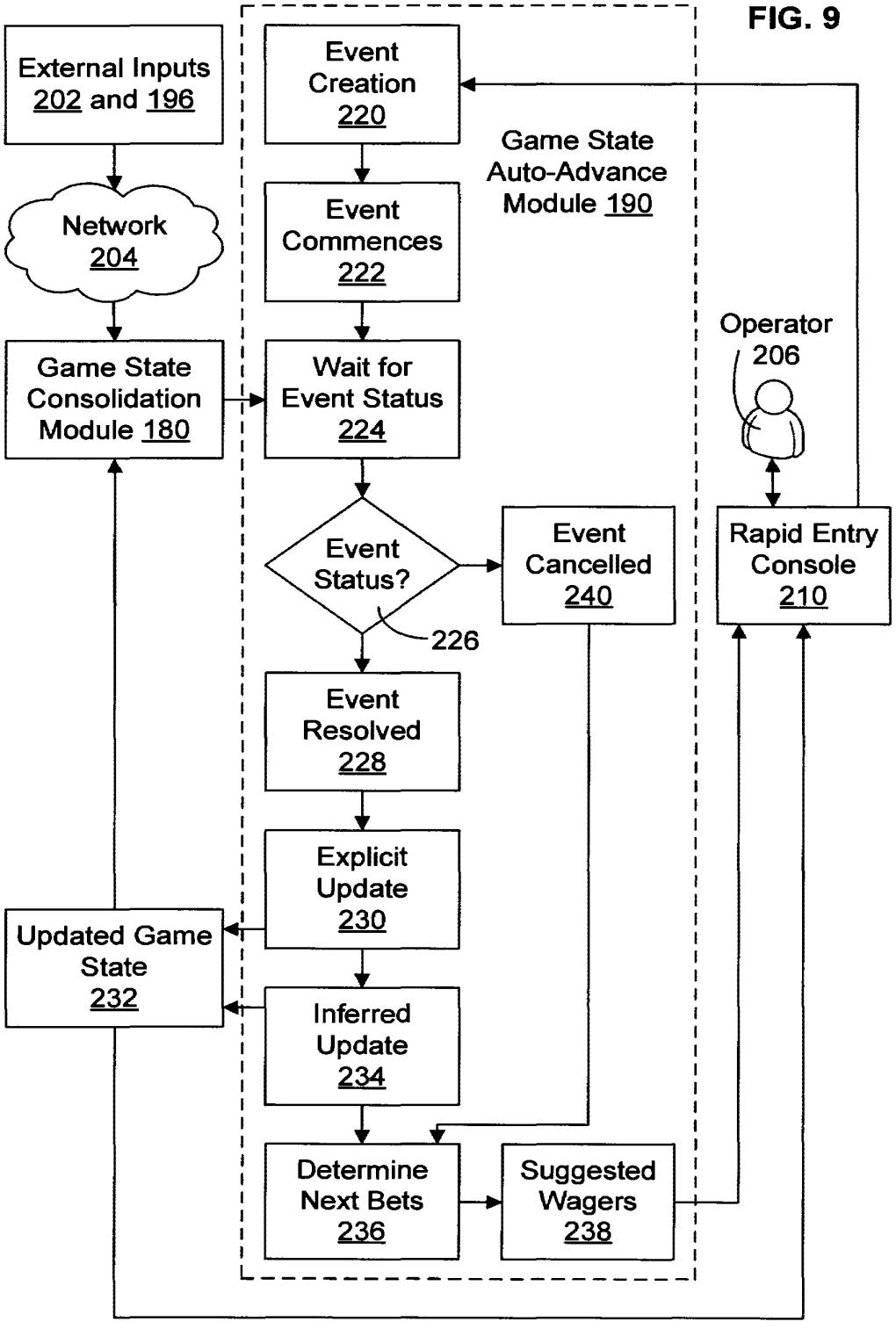

Game Info 200
Broadcast Facility 198
TV 208
Operator 206
Game State Sensors 202
Event Location 192
Rapid Entry Console 210
Operator Station 194
Network 204
Third Party Event Logger 196
Game State Consolidation Module 180
Conflict Resolution Module 182
Current Game State 184
Operations Module 14
Wager Module 186
Result Reporting Module 188
Game State Auto-Advance Module 190
Supervisor 212
SIE Database 42
Supervisory Console 214
Integration Module 16

FIG. 8

FIG. 9


External Inputs 202 and 196
Network 204
Game State Consolidation Module 180
Updated Game State 232
Event Creation 220
Event Commences 222
Wait for Event Status 224
Event Status?
226
Event Cancelled 240
Event Resolved 228
Explicit Update 230
Inferred Update 234
Determine Next Bets 236
Suggested Wagers 238
Game State Auto-Advance Module 190
Operator 206
Rapid Entry Console 210

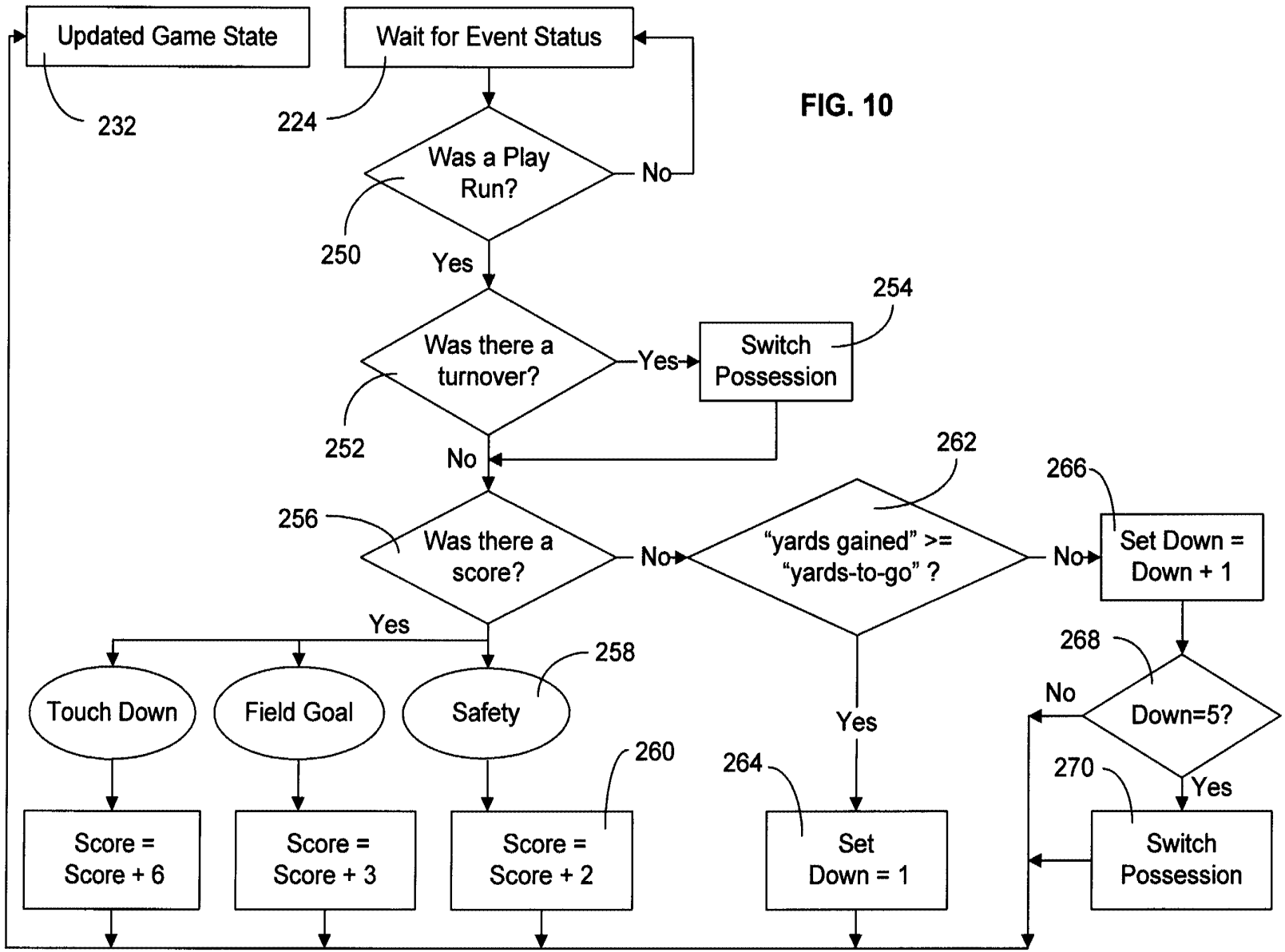
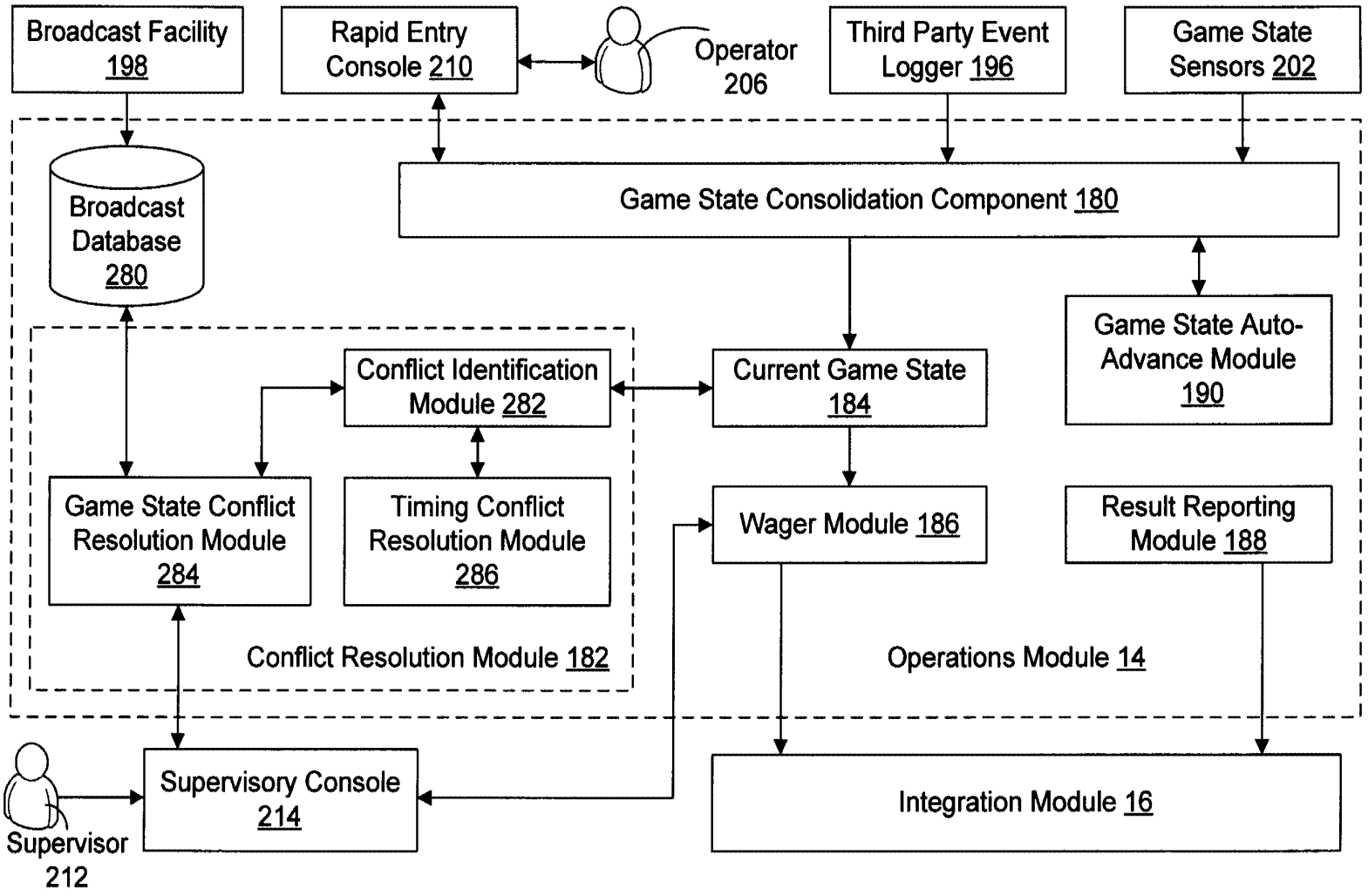


FIG. 10

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FIG. 11



FanDuel Ex. 1002-1536
FanDuel Ex. 1002-1536

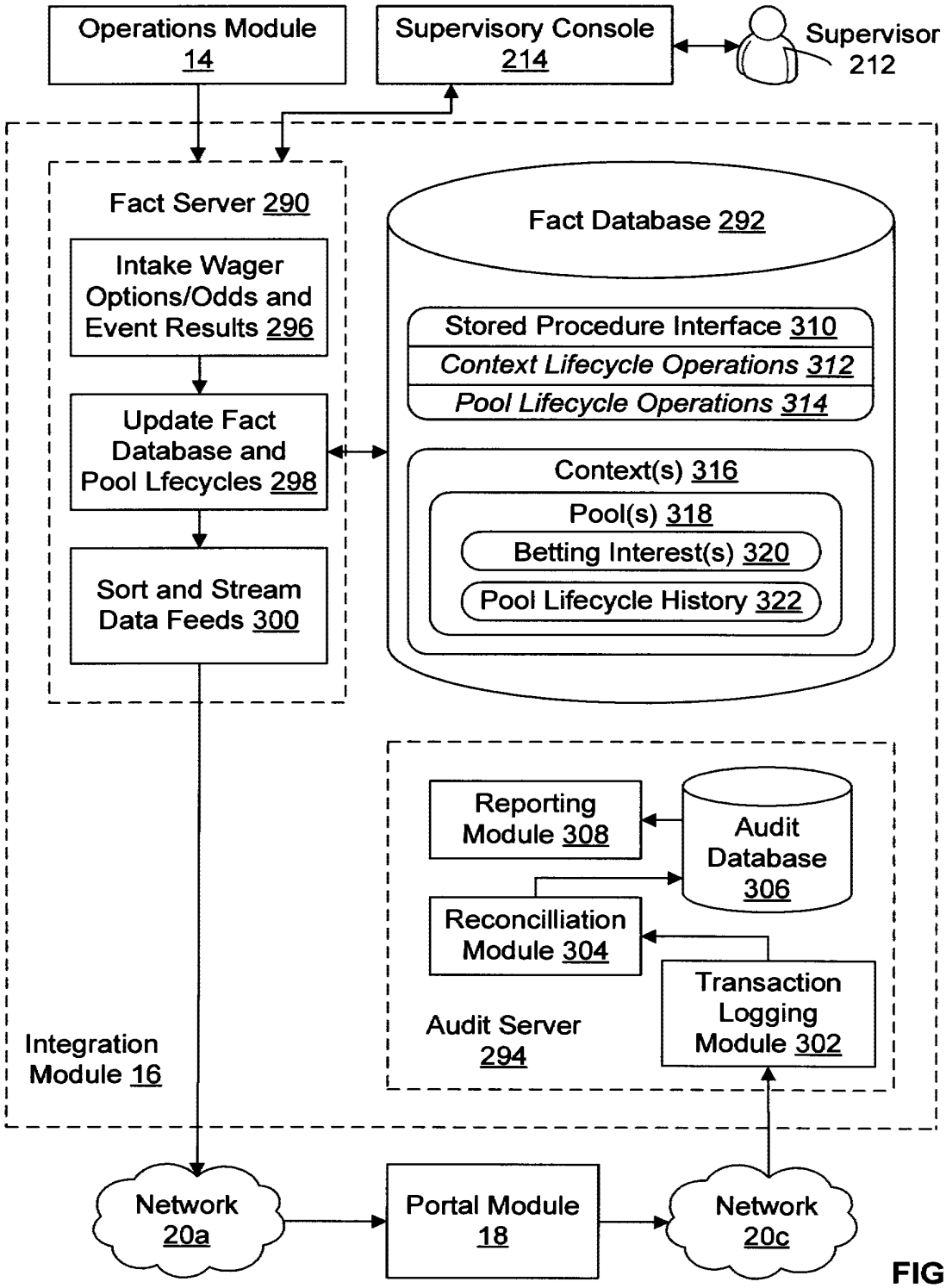

Operations Module 14
Supervisory Console 214
Supervisor 212
Fact Server 290
Intake Wager Options/Odds and Event Results 296
Update Fact Database and Pool Lfecycles 298
Sort and Stream Data Feeds 300
Fact Database 292
Stored Procedure Interface 310
Context Lifecycle Operations 312
Pool Lifecycle Operations 314
Context(s) 316
Pool(s) 318
Betting Interest(s) 320
Pool Lifecycle History 322
Reporting Module 308
Audit Database 306
Reconcilliation Module 304
Transaction Logging Module 302
Audit Server 294
Integration Module 16
Network 20a
Portal Module 18
Network 20c

FIG. 12

FIG. 13

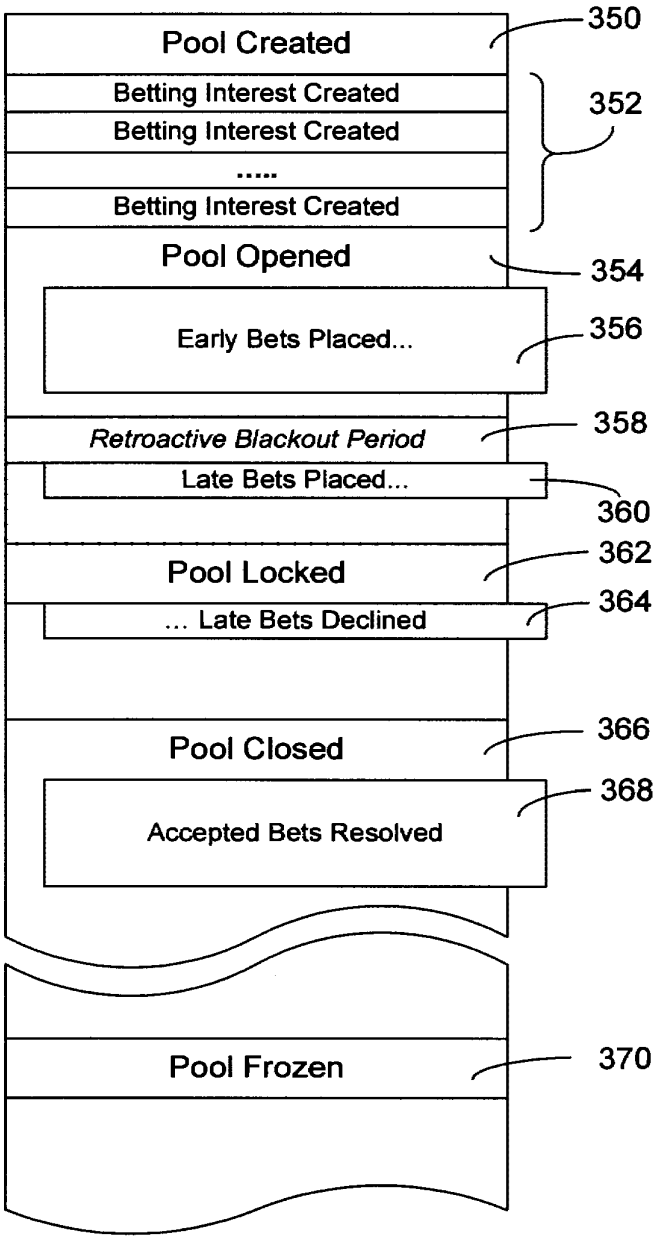
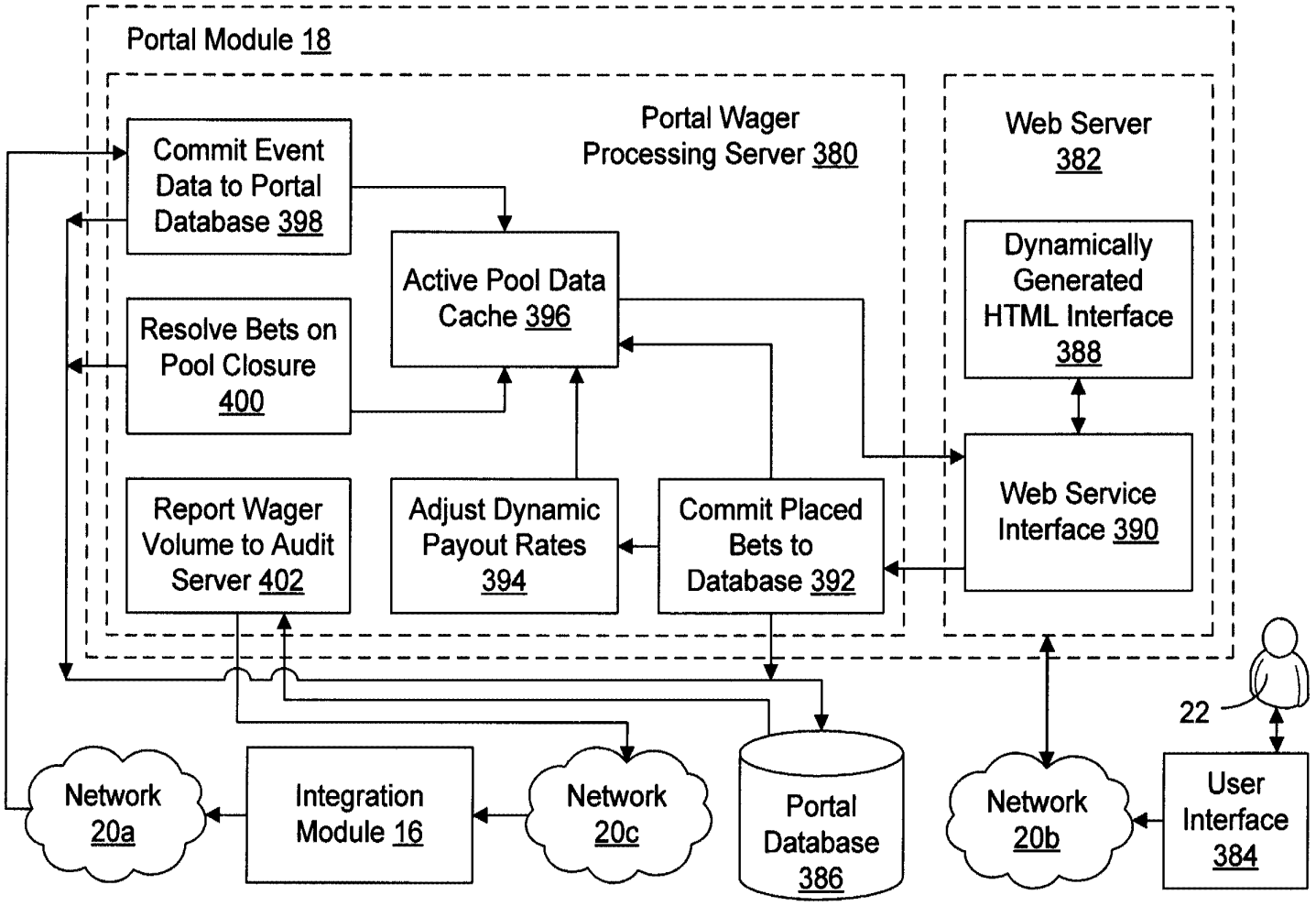

Pool Created
350
Betting Interest Created
Betting Interest Created
.....
Betting Interest Created
352
Pool Opened
354
Early Bets Placed...
356
Retroactive Blackout Period
358
Late Bets Placed...
360
Pool Locked
362
... Late Bets Declined
364
Pool Closed
366
Accepted Bets Resolved
368
Pool Frozen
370

FIG. 14



FanDuel Ex. 1002-1539
FanDuel Ex. 1002-1539

FIG. 15

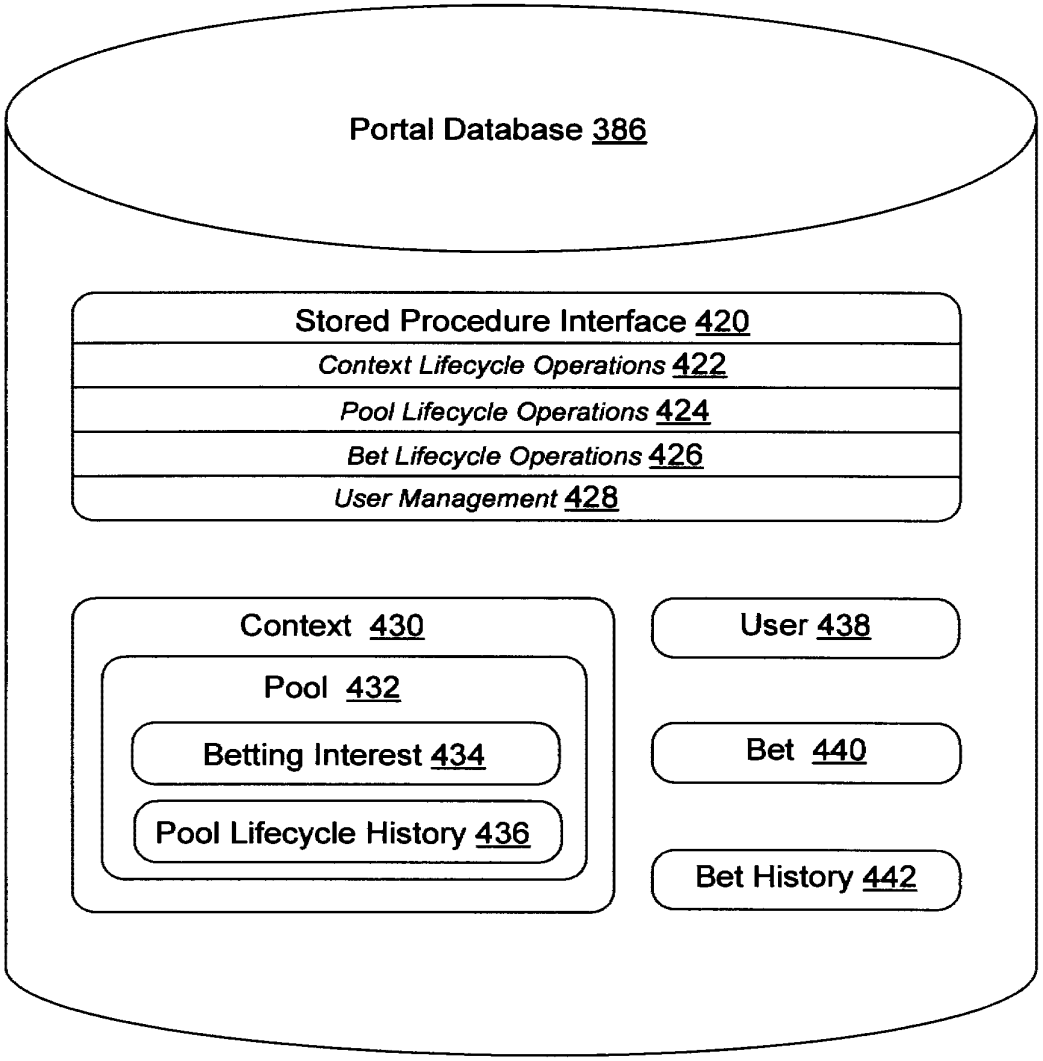
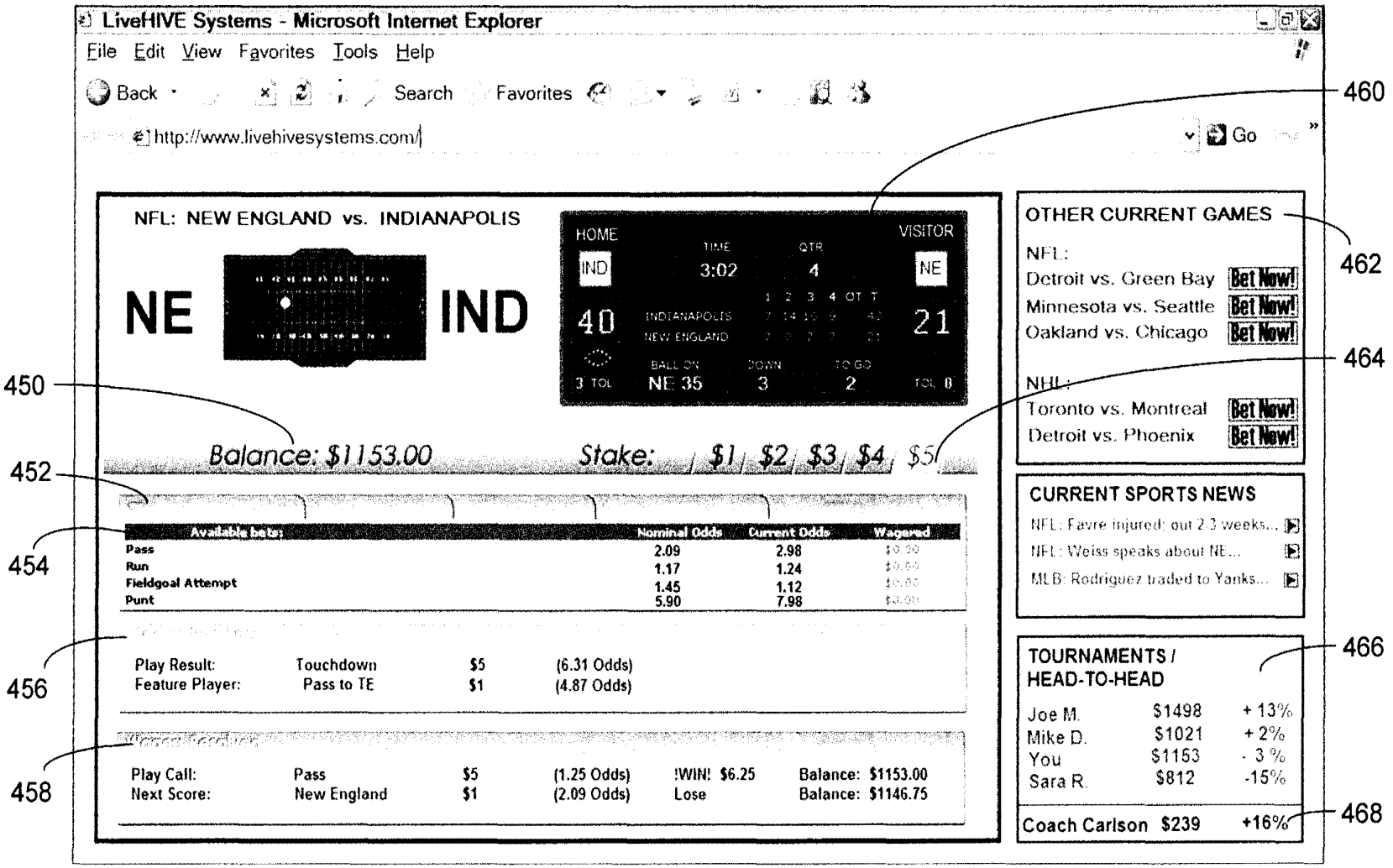

Portal Database 386
Stored Procedure Interface 420
Context Lifecycle Operations 422
Pool Lifecycle Operations 424
Bet Lifecycle Operations 426
User Management 428
Context 430
Pool 432
Betting Interest 434
Pool Lifecycle History 436
User 438
Bet 440
Bet History 442

FIG. 16



FanDuel Ex. 1002-1541
FanDuel Ex. 1002-1541

FIG. 17

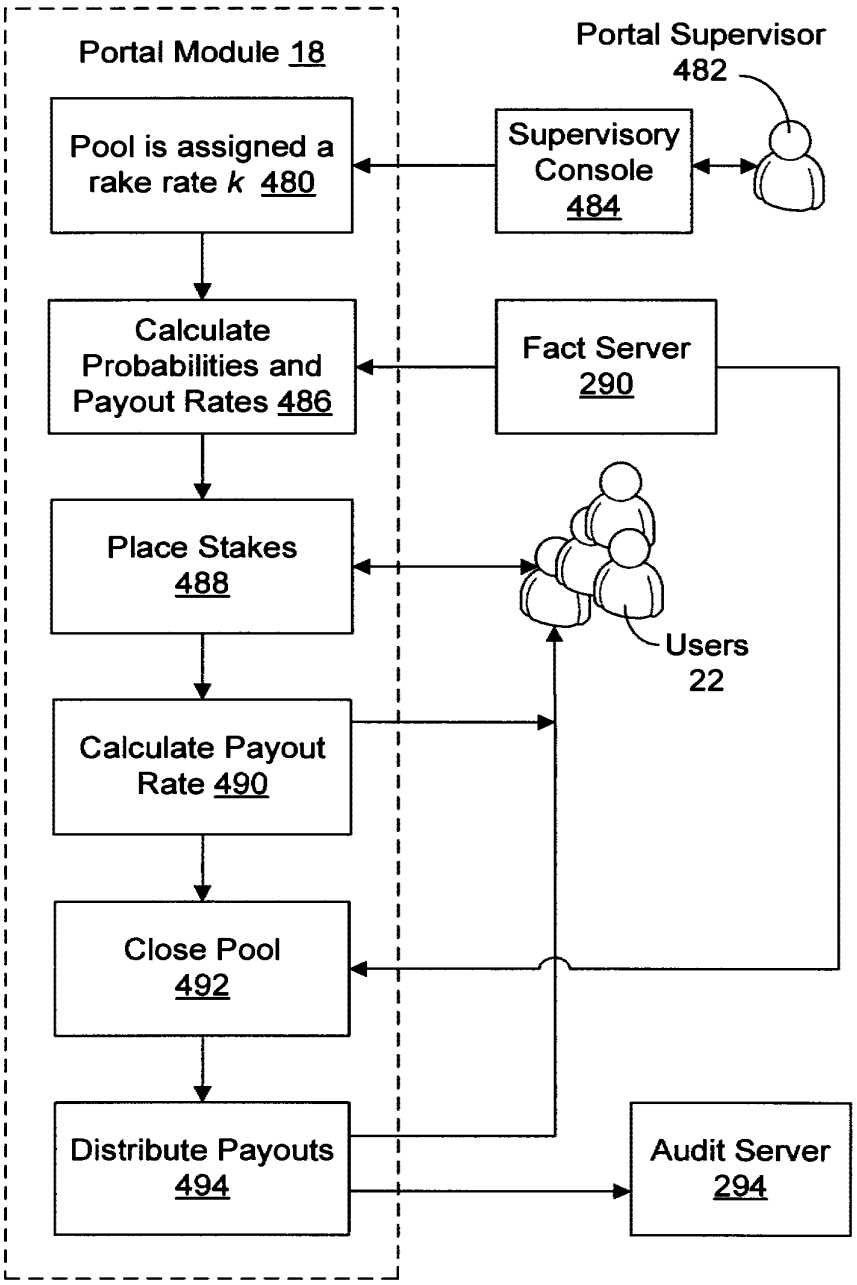
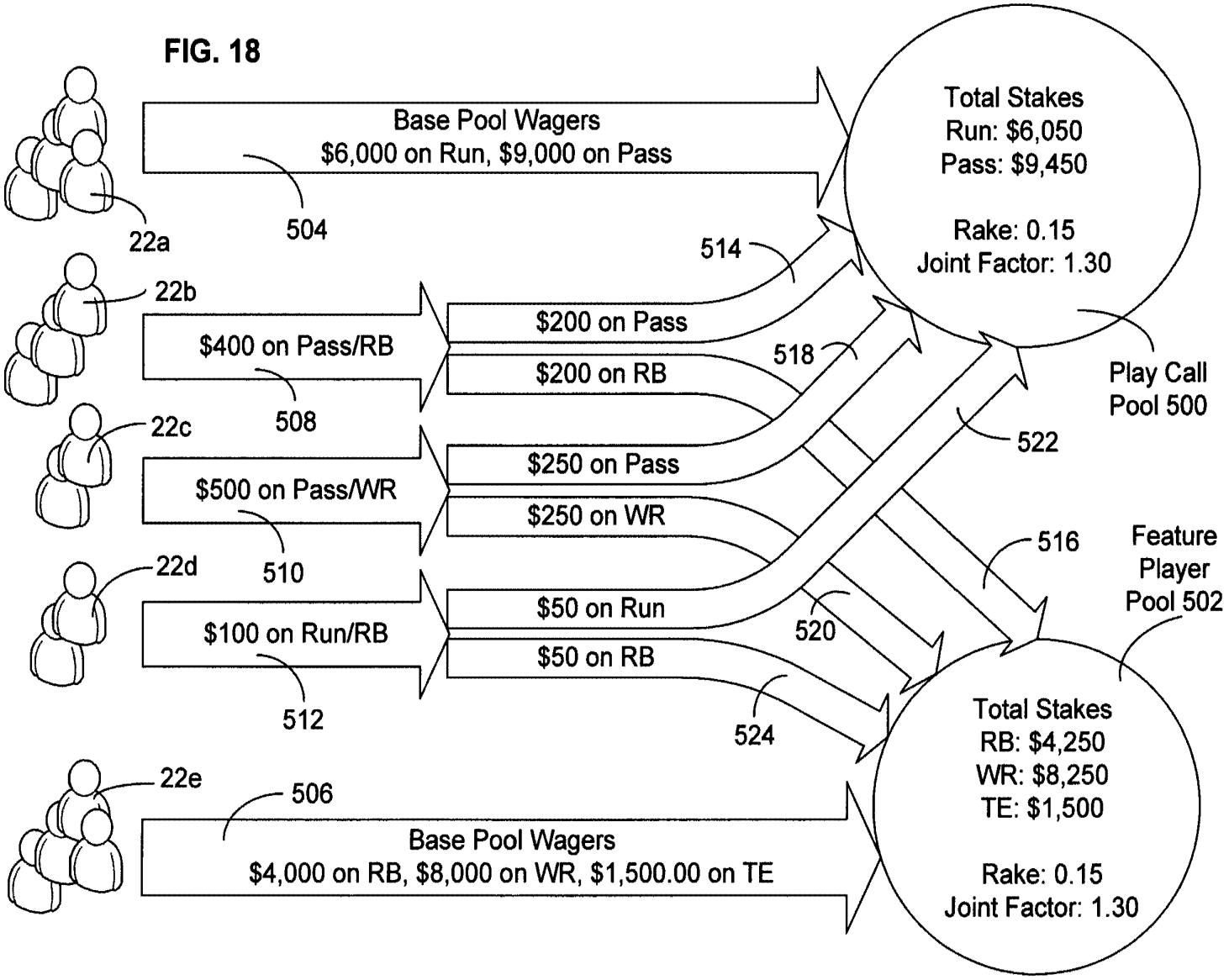
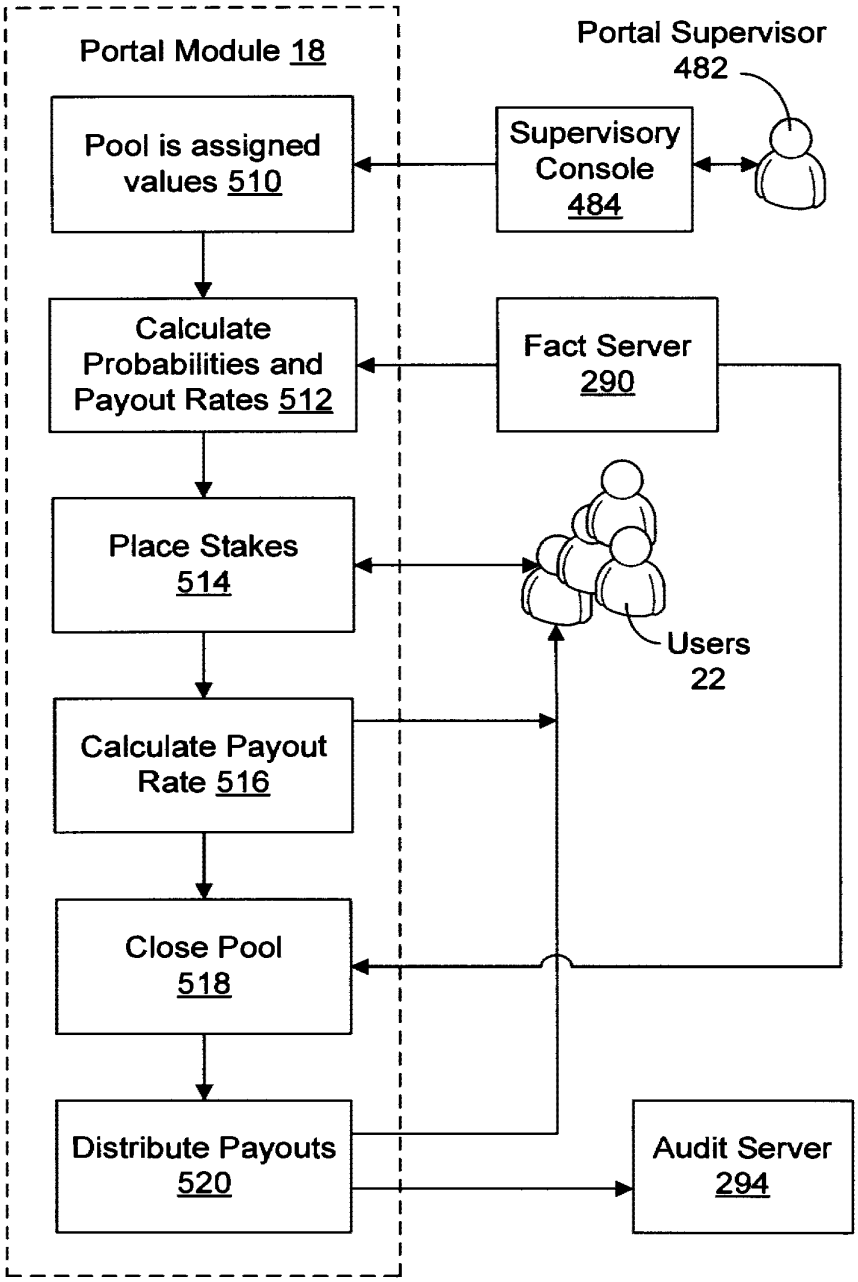

Portal Module 18
Portal Supervisor 482
Pool is assigned a rake rate k 480
Supervisory Console 484
Calculate Probabilities and Payout Rates 486
Fact Server 290
Place Stakes 488
Users 22
Calculate Payout Rate 490
Close Pool 492
Distribute Payouts 494
Audit Server 294

FIG. 18



FanDuel Ex. 1002-1543
FanDuel Ex. 1002-1543

FIG. 19


Portal Module 18
Portal Supervisor 482
Pool is assigned values 510
Supervisory Console 484
Calculate Probabilities and Payout Rates 512
Fact Server 290
Place Stakes 514
Users 22
Calculate Payout Rate 516
Close Pool 518
Distribute Payouts 520
Audit Server 294

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2006/000633

A. CLASSIFICATION OF SUBJECT MATTER
IPC: ***G06Q 50/00*** (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC: G06F* (2006.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)
Delphion, USPTO WEST, European patent database, Japanese patent database, Canadian patent database, IEEE, and Google Keywords: ("*gambling*" and "*updating odds*"), ("*gambling*" and "*presenting odds*"), ("*display* odds*"), ("*accept* wager*"), ("*expert system*"), ("*gambling*" and "*display*"), ("*gambling*" and ("*sport*" or "*contest*")), ("*gambling*" and "*display*" and "*live*"), ("*sports gambling*"), (("*wager*" or "*bet*" or "*betting*") and ("*sport*" or "*event*") and "*live*") ("*calculating odds*").

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 2005/0227757 A1 (SIMON) 13 October 2005 (13-10-2005) (abstract, sections 0002, 0008 to 0015, 0021, 0034, 0037 to 0045, 0090, and 0113 to 0118)	1-5, 7, 9-17, 19, and 21-25 6, 8, 18, and 20
Y	US 5,823,872 (PRATHER et al.) 20 October 1998 (20-10-1998) (column 1, lines 19 to 33, column 5, line 33 to column 6, line 40, and column 7, lines 25 to 44)	6, 8, 18, and 20
A	US 5,795,226 (YI) 18 August 1998 (18-08-1998) Whole document	1-25

[X] Further documents are listed in the continuation of Box

[X] See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search	Date of mailing of the international search report
11 September 2006 (11-09-2006)	17 January 2007 (17-01-2007)

Name and mailing address of the ISA/CA	Authorized officer
Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001(819)953-2476	Ali Mian (819) 934-7571

FanDuel Ex. 1002-1545

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant	Relevant to claim No.
A	US 6,126,543 (FRIEDMAN) 03 October 2000 (03-10-2000) Whole document	1-25
A	WO 02/24675 A1 (HOARTON et al.) 04 April 2002 (04-04-2002) Whole document	1-25

FanDuel Ex. 1002-1546

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US 2005/227757	13-10-2005	US 2003/157976 A1	21-08-2003
US 5,823,872	20-10-1998	NONE	
US 5,795,226	18-08-1998	NONE	
US 6,126,543	03-10-2000	AU 2,558,399 A WO 99/34887 A2	26-07-1999 15-07-1999
WO 02/24675	28-03-2002	AU 2,879,601 A	02-04-2002

FanDuel Ex. 1002-1547

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16/276,292 14 February 2019 (14.02.2019) US

(71) Applicant: **WINVIEW, INC.** [US/US]; 370 Convention Way, Redwood City, California 94063 (US).

(72) Inventors: **LOCKTON, David B.**; 370 Convention Way, Redwood City, California 94063 (US). **LOCKTON, Kathy A.**; 370 Convention Way, Redwood City, California 94063 (US).

(74) Agent: **OWENS, Jonathan O.**; 162 North Wolfe Road, Sunnyvale, California 94086 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) Title: METHOD AND SYSTEMS FOR REDUCING RISK IN SETTING ODDS FOR SINGLE FIXED IN-PLAY PROPOSITIONS UTILIZING REAL TIME INPUT

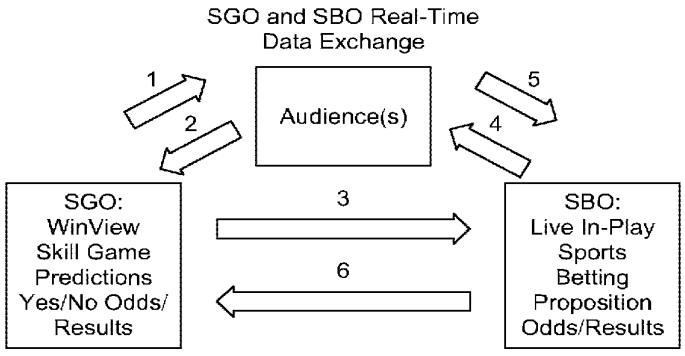


Fig. 5

(57) Abstract: A skill game operator provides real time propositions to a viewing audience, and based on the input received from those propositions, comparable In-Play wagering propositions are able to be generated, and the odds of the In-Play propositions are able to be accurately adjusted based on the actual input received from the same participating audience the skill game operator's responses to the same propositions.

WO 2020/076657 A1

FanDuel Ex. 1002-1548

METHOD AND SYSTEMS FOR REDUCING RISK IN SETTING ODDS FOR SINGLE FIXED IN-PLAY PROPOSITIONS UTILIZING REAL TIME INPUT

CROSS-REFERENCE TO RELATED APPLICATION(S)

This application claims the benefit of U.S. Provisional Patent Application Ser. No. 62/742,593, filed October 8, 2018 and titled "METHOD AND SYSTEMS FOR REDUCING RISK IN SETTING ODDS FOR SINGLE FIXED IN PLAY PROPOSITIONS UTILIZING REAL TIME INPUT," which is hereby incorporated by reference in its entirety for all purposes.

FIELD OF THE INVENTION

The present invention relates to the field of computer analysis. More specifically, the present invention relates to the field of computer analysis related to gaming.

BACKGROUND OF THE INVENTION

With repeal of PASPA, sports betting in the U.S. is projected to be ultimately legalized in up to 33 states in the next ten years, with over $60-100 billion projected to generate in gross gaming revenues from live In-Play or In Running wagers. Live betting already constitutes over 70% of the estimated $175 billion sports betting industry.

For sports betting companies such as consumer facing William Hill, MGM, or live betting data suppliers such as Betradar and BetGenius, the challenges in generating consistent profit margins on wagers while games are in progress are different than the challenges facing a cash skill game provider such as WinView - www.winviewgames.com. With WinView's proposition based legal games of skill, the accuracy of the odds set on "Yes" "No" In-Play propositions produced by WinView's live producers have no effect on WinView's revenues. WinView conducts paid entry contests and tournaments of skill between the entrants and charges a set management fee or "rake" for providing the service. Their fee is the same regardless of the outcome of a single proposition or multiple propositions in the contests of skill.

FanDuel Ex. 1002-1549

In traditional legalized pre-game fixed odds "outcome" betting, ("Who will win the first half"?) the bookmaker generally adjusts the odds as the bets are booked, with a goal of balancing its financial risk of being on the wrong side of an unbalanced book. Having all wagers placed on one team would cause potential catastrophic losses if that team won, because unlike in the WinView skill game system, each individual bet is against the house. For traditional pre-game outcome betting , e.g., "who will win?" with points spreads , "over and under" points, bookmakers attempt to balance odds based on the amount of money wagered on the two (or more) options of the wager with the goal of putting the bookmaker in a position where they are indifferent to which side of the wager pays off. This is accomplished by adjusting the odds to attract wagers on the less favored side of the proposition. The following article is hereby incorporated by reference in its entirety: https://betting.betfair.com/the-art-of-bookmaking.html as background on how this kind of bookmaking works.

The Problem For In-Play Betting

In live sports betting, unlike WinView, the punter is wagering directly against the house. The more frequently live betting propositions are produced, the more potential profit. Bookmakers presenting live betting must think and work quickly to optimize accuracy in selecting the appropriate situational proposition and then set the accompanying odds to optimize returns immediately and present it to the bettors. This is extremely challenging. Each game is unique, and each moment of the game lends itself to a unique question about "what is going to happen next." The closer a live proposition is to what the collective viewing audience is thinking about what's going to happen next, the more participation it will generate. Entertaining and entrancing propositions are customized to the immediate situation on the field and are often unique one of a kind. With legal sports books, however, the frequency and relevancy of the live propositions to be presented are restricted by the risk they involve.

With no prior historical data on the exact game situation, and without any knowledge of the betting TV audience's collective wisdom expressed by actual "voting" with their wallets on a

FanDuel Ex. 1002-1550

proposition as with pre game outcome betting, optimally setting the odds for each unique short-term In-Play proposition under severe time pressure is currently based on the level of sophistication, relevancy, speed and accuracy of the data and sophisticated software systems, combined with subjective judgment of the live bookmakers.

As referenced below, "In Running" betting is the term utilized herein to describe wagers where the wording of the proposition is unchanged after offered, e.g., "Who will win the first quarter?" With each major change in the probabilities created through, for example, a score in a soccer game, the acceptance of new wagers is briefly suspended at the server while the new odds are recalculated and betting on that proposition is reopened with new odds.

With the "In-Play" version of live bookmaking, unlike traditional outcome betting, the permanent odds for each successive proposition must be quickly set without any direct feedback about the betting audience's collective betting response as the game action continues. The fundamental method of risk elimination for non-live outcome bookmaking, as described in the previous paragraph is not available, and the lockout for that proposition comes within a matter of seconds after presentation.

Live In-Play bookmakers, in order to maximize the TV betting audience's collective focus on the " in the moment" game state, generate an In-Play proposition that reflects the unique and generally one-of -a kind game situation –("Will the Colts score on the next play?"- "Will the ruling on the field be overturned?") and depending on the sport, set the odds within 5-10 seconds, varying by whether there is, for example, a time out, commercial break, replay, injury or ongoing action as in soccer. Today live book makers utilize a combination of AI driven computer programs utilizing machine learning and neural networks which rely on historic performance data and probabilities, real time analysis of the in progress game's statistics, historical data on the experience with the same or similar proposition, analysis of competitor bookmakers odds, and human experts who evaluate all these sources available and the computer systems' recommendations. Finally, the bookmakers optionally utilize their own judgment to modify or select the recommended odds, within

FanDuel Ex. 1002-1551

a matter of seconds. One bookmaker's methods are reflective of the industry are described in Appendix A of the U.S. Provisional Patent Application No. 62/742,593, an article from the EGM Sports Betting 2017 report referenced above. This method limits not only the frequency, but also the flexibility and creativity in creating live customized propositions by limiting the live betting possibilities to a pre-produced standard list where sufficient historic data exists to yield AI computer generated odds with an acceptable risk factor. The result is fewer, more repetitive generic propositions and the desired maximization of return is not infrequently achieved.

SUMMARY OF THE INVENTION

A real-time, two screen skill game operator like WinView, presents propositions to the viewing audience, and based on the collective predictive input received from those propositions, comparable In-Play sports betting propositions are able to be generated, and the odds of the In-Play betting propositions are able to be adjusted based on the actual reaction of the same audience of potential customers to input received from the skill game operator's propositions to optimize the separate single proposition's odds.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates a flowchart of a method of utilizing SGO data to optimize SBO propositions according to some embodiments.

Figure 2 illustrates a diagram of a network of devices involved in the method of utilizing SGO data to optimize SBO propositions according to some embodiments.

Figure 3 illustrates a block diagram of an exemplary computing device configured for implementing the method of utilizing SGO data to optimize SBO propositions according to some embodiments.

Figure 4 illustrates a flowchart of a method of utilizing SGO data and artificial intelligence to optimize SBO propositions according to some embodiments.

FanDuel Ex. 1002-1552

Figure 5 illustrates a diagram of reducing risk in setting odds according to some embodiments.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A skill cash game operator offering proposition-based games of skill based on the overall performance over a set of 20-30 propositions in a skill contest like WinView offers is referred to as an "SGO" for Skill Game Operator. A legal sports book offering live betting will be referred to as an "SBO" or Sports Betting Operator.

Real time analytics programs utilizing real time data for individual and team on the on-field performances, combined with massive historical statistics relative to the probability of a specific In-Play betting proposition important to In-Play bookmaking is an important innovation in live fixed-odd bookmaking. For example, for a proposition on the likelihood of the Patriots, playing the Colts at home, to score on a possession within the "Red Zone," the system can generate odds for each proposition sufficiently accurate enough to substantially reduce financial exposure. But these odds will not be consistently as effective in achieving the ideal of a 50/50 split on the "Yes" or "No" amounts wagered, or optimize the bookmakers return, as unlike outcome betting, the bookmaker's odds can only be set once in a matter of seconds, and bets cannot be accepted until the proposition with these fixed odds are published. In In Running wagers, bookmakers immediately see the response to the odds and as the contest unfolds, can close or lock out the previous proposition and course correct by offering new odds proposed by their Artificial Intelligence (AI) systems, constantly maximizing potential return for this segment of live betting. The bookmakers' most fundamental tool in traditional pre-match outcome betting: the ability to utilize actual bets placed on the current odds offered to adjust the odds to balance the book, or to lay off or hedge their portfolio, is not available.

In a hypothetically ideal system, a live sports bookmaker might be able, after utilizing all the expert systems and real-time tools at their disposal, to set the "initial" odds for an In-Play proposition, and present these preliminary odds to the existing betting universe for that

FanDuel Ex. 1002-1553

proposition. Then, based on the collective response of this actual wagering market, revealing the wisdom of the actual universe of the skilled and unskilled punters, the exact target for the SBO, the bookmaker would feed the actual result data received on how the skill game competitors collectively responded to the originally proffered odds into an AI-based software system to instantly recalculate significantly more accurate, if not optimal odds. These new empirically adjusted odds would then be formally presented to the same betting universe as the actual betting odds, and all of this is accomplished in a timely manner which does not antagonize the betting audience.

Described herein are the methods and systems to optimize InPlay wagering returns utilizing the capabilities of a Skill Game Operator's (SGO) paid entry contests of skill such as WinView's, to provide an In-Play wagering service offered by a Sports Betting Operator (SBO) with the optimum odds setting capability for In-Play wagers, offered simultaneously to the same audience for the televised athletic or other type of contest being offered by both services.

As used herein, propositions are able to be generated for sports events, esports events, athletic events, non-athletic events and occurrences, televised events and occurrences, live events and occurrences and recorded events and occurrences.

Overview

The primary application of the system utilizes the direct cooperation of the "SGO" and the "SBO." The SGO's live game producers, following its In-Play proposition setting procedures would generate the wording of the contemplated live proposition, arbitrarily setting what their data and experience indicates has a probability of achieving as close as possible to a 50/50% distribution between "Yes" and "No." Immediately after the proposition is published, the SGO's audience begins to "vote" with their predictions on the "yes" or "no" wagers at the odds that were set in real time by the SGO's audience, for example, "Will the Patriots score on this drive?" If in setting these odds, from their prior data and experience, the SGO's human bookmakers (game producers) determined

FanDuel Ex. 1002-1554

the true odds were 40% "Yes" and 60% "No," the odds for one betting unit would be "2.5" for "Yes" and "1.67" for "No."

Simultaneously, the SBO (with or without the teachings herein) is utilizing their sophisticated AI computer systems dedicated to coming as close as possible to optimizing their financial return on the yes/no option of a proposition using identical wording. But, the most sophisticated real time data tools and software, even utilizing analysis of the unfolding game statistics to get a sense of what the viewing audience thinks the probabilities are, does not come close to the actual audience's behavior these systems are attempting to predict. The only way to predict such complex behavior is to capture the actual response of the identical targeted television audience displaying the "wisdom of crowds." This wisdom in turn results from the potential betting audience observing and experiencing the same game's unique unfolding facts relevant to the proposition in question, such as the personnel and formations on the field, injuries, wind and weather conditions and momentum and the bias based on the percent of cash players who are fans of one team or the other. The sophisticated AI, neural network-based odds setting system is dedicated to estimating what the viewing audience will do with their money at stake within a 5-second window, and one chance to get it right.

The system described herein enables a procedure where live betting odds are set with real time input from the same betting viewing audiences' actual response to the SGO's prop which is effectively utilized as a test proposition to provide a target audience's response to recast the critical odds for actual In-Play and In Running propositions resulting in significantly improved ability of the bookmaker to optimize bookmaking return.

The participating SGO generates accurate objective data on the betting audience's view of "even odds" for a specific live proposition.

WinView is a company offering games of skill based on the real-time offering of In-Play propositions to TV viewers. The contests qualify as games of skill because the winnings of the cash

FanDuel Ex. 1002-1555

entry fees are distributed to the winners based on the overall performance in selecting a series of 20-25 "Yes" or "No" answers to predictive statements and risking "points" from a limited supply of points (e.g., 5000) provided to every competitor. On each proposition, players can risk from a choice of 250, 500, or 750 "points" (or other number) based on their view of the probabilities of the proposition as it relates to the odds presented by the WinView game producers. The winners are those entrants who "win" the most net points at the end of a quarter long contest (or other time period such as at the end of a half, inning or period, encompassing 20-25 separate In-Play propositions. Again these skill contests entrants are competing against each other, and the SGO makes its money by charging a management fee. The accuracy of the odds does not affect revenues. In fact a major skill factor making these cash contests legal in 41 states is the competitors' knowledge in recognizing where the odds deviate from what they calculate as the true odds. Nevertheless, the expert live game producers are incentivized and graded by how close each proposition comes to achieving a 50/50% distribution between "Yes" and "No" selections by the participants.

For U.S. sports in the U.S. market these SGO propositions are generally presented during breaks in the action and are left open until the second that play is about to resume with a lock out determined when contestants physically present at the game or receiving the earliest arriving TV signal would begin to gain a competitive advantage. For example, the proposition: "The 56 yd field goal attempt will be made," offered within 25 seconds after the commercial break would be locked out as the ball is snapped based on the observation of an employee physically present at the game or another system adjusting for the difference in the arrival of a TV signal and the Web-delivered game data. This would provide the participants in both the SGO and SBO offerings approximately 45 seconds or 25 seconds at worst to make and enter their selection.

From the time that proposition is offered, such as at a commercial break until the lockout, the SGO receives continuous real-time data on how each contestant is reacting to the odds set by live game producers through their "Yes" or "No" selections. In a matter of 1-2 seconds, the percentage of the SGO participants divided between "Yes" and "No" is obtained to an accuracy of +/-

FanDuel Ex. 1002-1556

1-2%. If the In-Play odds presented by the SBO were not required to be set and displayed concurrent with the time of presentation, or the presentation of the same proposition with the SBO betting odds were delayed a non-essential 2 seconds, then the utilization of the empirical reaction of the same target market generated by a skill game two-screen operator such as WinView received in real time by the SBO to present to the punter continually changing odds driven by the selections of the competitors the continually changing odds would be an experience very similar to that of pari mutuel horse racing wagering. This format is not a legal game of skill, not the method by which sports betting odds are set, and is illegal under the laws governing both the SGO and the SBO.

Methods and Systems of an SBO, utilizing an SGO's real-time response of the betting universe , to increase frequency and accuracy in presenting Live In-Play propositions

EXAMPLE

1. Skill Game operator's 1st Quarter contest: Colts at Patriots. Colts intercept on Patriots' 19 yd line. TV goes to commercial break. SGO operator such as WinView's producers push new proposition 10 seconds later.

"The Colts will score a touchdown on this possession."

Odds: "Yes" 2.5 "No" 1.7

2. Within 0.5 to 2 seconds the SGO (WinView) receives 5000 responses with 30% "Yes" and 70% "No" (accurate +/- 2%) and transmits this information via continuous feed to SBO.

3. SBO receives the WinView proposition as published, feeds it into their AI real time system and pushes the same proposition with the same wording to its sports betting audience within .1 seconds with odds left blank. Within 1-2 seconds after receiving the cash skill game players' response to the SGO (WinView's) odds from a projectable sample, the SBO's computer systems generate and display their own odds of 2.8 "Yes" and 1.5 "No" calculated to achieve 50/50%.

4. SBO's customers (for example) actually bet 47% "Yes" and 53% "No" on those adjusted odds.

FanDuel Ex. 1002-1557

5. Results of this entire transaction plus specific background including teams, date, weather, universe of bettors, and any other relevant information to this specific proposition are entered into both SGO and SBO's databases of their AI computer systems continually and appropriately adjust and store in memory the data to further improve the accuracy of the system expanding the real world data bases. The system will continually improve the accuracy of the system for this proposition not only for the specific teams and game situation but for the entire system.

The systems and methods utilizing the real time information generated by an SGO such as WinView can also be utilized by a sportsbook presenting In-Play and In Running fixed odds proposition betting to significantly balance risk including those described herein.

The methods and systems of notifying and presenting similar or identical individual live betting propositions to the participants utilizing a web connected application offered in live skill games to users are covered in U.S. Provisional Application No. 62/737,653 filed September 27, 2018, and incorporated herein by reference in its entirety. The capabilities described herein are able to be offered on a single web connected application provided by either the SGO, the SBO, or jointly by both the SGO and the SBO, or by the SBO and a third party with appropriate capability.

In one implementation of this application, the SBO would couple the real-time feed providing the percentage of participant's predictions based on their selections of "Yes" or "No" to a known set of fixed odds from the SGO, which would be incorporated into the software systems utilized to generate the fixed odds the SBO is preparing to offer. This real time data would be incorporated into the real time AI systems using neural network technology and utilized as a factor in setting their odds for the same proposition, presented within seconds of the presentation of the SGO's presentation of the same proposition to the same cohort of bettors watching a sports telecast. Depending on the universe of the SGO users, this might range between 1 and 10 seconds with time lag decreasing in proportion to the participant universe.

FanDuel Ex. 1002-1558

In another implementation, the SBO would wait until the level of response from the SGO's player universe reached a statistically significant level of response. It would then calculate using either the SBO's algorithm, the SGO's, or a third-party supplier's, the computation of the true 50-50% odds implied by the actual reaction to the odds presented by their live producers. The SGO would then present the proposition with these odds to sports bettors. In this example, the presentation of the SBO's proposition and odds would lag the SGO's presentation of the proposition by the small amount of time it takes to have a sufficient number of responses to be statistically accurate. Artificial intelligence is able to take into account bettor's reactions to SBO and/or SGO propositions and corresponding odds to develop additional propositions and odds and/or update current propositions and/or odds. For example, if Proposition X receives very little action (e.g., very few selections/bets), then similar propositions may not be offered. In some embodiments, the propositions are grouped or classified (e.g., a group related to passing, a group related to running backs, a group related to fun bets, a group related to color/clothing, and so on). For example, a proposition is offered regarding the color of Tom Brady's socks which is in the color/clothing group, and a small percentage of bettors actually bet on that proposition, then other propositions in the color/clothing group are avoided or are only rarely offered or are offered with much higher odds. In some embodiments, taking into account bettors' reactions includes utilizing video/image analysis to determine facial reactions to the propositions. For example, when a proposition appears, a video capture of users' faces are taken and analyzed, and if it is determined that many users' expressions (e.g., above a threshold) are a frown or a look of disgust (as determined by facial recognition/expression recognition), then that proposition and/or similar propositions are not provided. In some embodiments, the facial expressions and the betting history/results are analyzed in combination by the artificial intelligence. For example, even if many users have a confused expression, if they are still placing wagers, then the artificial intelligence may still determine to provide an additional similar proposition. Any other analysis is able to be performed to determine bettors' reactions to update and/or provide future propositions and/or odds.

FanDuel Ex. 1002-1559

In another implementation, a statistically significant panel of selected paid or unpaid viewers could enter their inputs which would be representative of the larger audience watching the game. This "panel" could also be comprised of expert bookmakers or sports bettors whose collective input would be used.

In another implementation the SBO could display with the proposition changing odds driven by either the SGO's live feed or their own feed which incorporates the SGO feed, in a manner similar to the way pari mutuel odds are displayed for horse and dog race wagering as the data changes, the pari mutuel odds change.

A variation of this approach would be used for In Running betting where the proposition's wording is unchanged, but the odds are adjusted periodically by unfolding events and the decrementing game clock. In this incidence the SGO could reoffer the same proposition with new odds to its contest participants. For example, after a score in a soccer game, the same proposition with new odds set by the SGO's producers would be utilized in one or more of the ways addressed above to reset the SBO's odds for the same proposition.

In doing this, the SBO might suspend the acceptance of bets after the score at their server (or any significant odds changing event) while they receive the relevant input from the SGO, reset their odds and inform their bettors whether their bets made before or during the suspension were accepted or rejected by the game server, with software and other systems determining whether advantage has been gained by individuals or cohorts of punters.

As shown in the example, this process will involve computer learning, AI and neural networks, and the systems will have the 20/20 hindsight of seeing the results of the odds reset by the SBO in reliance on the SGO data for different sports and different kinds of propositions. This data is then utilized to continually train and adjust the algorithms using machine learning and neural network technology applying the SGO's feedback mechanism to continually improve accuracy.

FanDuel Ex. 1002-1560

The process described herein also addresses separate claims on the collection of the empirical data generated by the SGO on the relationship of the collective reaction to the estimated odds, to the betting response to the recalculated odds utilized and presented by the SBO. The actual betting results from the SBO's proposition are then compared to the response to the odds, then utilized by the SBO and/or the SGO to adjust and perfect the algorithms, both for the specific game in progress and for optimizing the system over time.

An implementation includes an SBO providing a proposition for wagering without odds (e.g., a preview proposition), and also providing the same proposition to the SGO, wherein the SGO receives input in real-time, and based on the input received, provides that information to the SBO who then generates the appropriate odds to be displayed with the previewed proposition. Betting for the SBO proposition may or may not be available until the odds are posted. In a variation the odds provided for the SBO's proposition can be changed before being locked out, or after lockout and then replaced, as is currently being done with live In Running betting where the proposition wording is unchanged, but new odds are presented while the previous odds are locked.

A significant benefit is the ability to offer not only more interesting and attractive propositions tracking the game play, but the ability to offer more custom betting opportunities for each televised game; for example, the very popular propositions with some sense of humor- "If Gronk scores in this quarter his celebratory spin of the football will last more than 8 seconds"-. This system would eliminate the very substantial risk this kind of proposition presents which would have no data to support it.

To summarize, the desired end result of the process is to enable the sports betting operator to make available more frequent, more varied, and more unique propositions to their customers which will increase engagement and participation. At the same time, the process provides the SBO with a real-time system which not only eliminates the risk in offering "one of a kind" in the moment propositions for which insufficient data exists, but also instantly and accurately predicts the actual response to the target betting audience for that proposition. Live bookmakers may have different

FanDuel Ex. 1002-1561

goals and strategies to maximize their return on a proposition, which may not necessarily be achieving a risk free 50/50 balance of the book on a prop. They might offer "sucker" odds to take advantage of the fact that the system indicates which team is drawing the strongest backing. The AI driven software system can accurately calculate the risk/reward ratio to the bookmaking strategy for each proposition. Conversely, data generated by the SBO would be sent to the SGO production computer systems to enable more controlled, faster predictable odds setting procedures to provide fun and entertainment as well as odds that enable more skilled competitors to prevail.

Figure 1 illustrates a flowchart of a method of utilizing SGO data to optimize SBO propositions according to some embodiments. In the step 100, an SGO utilizing live producers provides real-time skill game propositions as described herein (e.g., will the next pass be completed - yes/no). The SGO (or SGO's system) receives responses from participants such as out of the first 10,000 participants, 6,000 participants select "yes," and 4,000 participants select "no." The collected data is then able to be processed and/or communicated to the SBO. In the step 102, the SBO utilizes the collected data (and/or additional data) to generate and present odds/propositions more reflective of true odds based upon the opinions of a sample universe of potential punters/bettors viewing the same contest. In some embodiments, the process is implemented automatically using AI to provide a proposition or the odds for skill game participants, collect the results from those participants and use that data to automatically generate appropriate odds for the same or similar propositions for the live sports betting participants. In some embodiments, the process occurs in a very short amount of time; sometimes under 1 second, much faster than a human could collect the data, analyze the data and provide an output based on the data. In some embodiments, additional or fewer steps are implemented.

Figure 2 illustrates a diagram of a network of devices involved in the method of utilizing SGO data to optimize SBO propositions according to some embodiments. An SGO device 200 is utilized to provide SGO propositions and/or receive user input based on the propositions. For example, the SGO device 200 is a game server or a group of servers configured to generate/host/send/control

FanDuel Ex. 1002-1562

real-time skill game propositions and receive any communications (e.g., selections/responses) from skill game users/participants.

An SBO device 202 is utilized to provide SBO propositions and/or receive user input based on the propositions. For example, the SBO device 202 is a server or a group of servers configured to generate/host/send/control real-time sports betting propositions and receive any communications (e.g., selections/responses) from sports betting users/participants.

The SGO device 200 and the SBO device 202 are able to communicate with each other as well, directly (e.g., peer-to-peer) or over a network 204 (e.g., the Internet, a LAN, a cellular network). The SGO device 200 is able to send information (e.g., input results from real-time propositions) to the SBO device 202 which then utilizes the information to generate odds for sports betting propositions. The SBO device 202 is able to then communicate the odds to casinos and/or gaming applications to receive wagers on the propositions.

In some embodiments, the SGO device 200 and the SBO device 202 are one device.

Devices such as a laptop 206, a mobile phone 208, a computer 210, a dedicated betting terminal 220, or any other web connected capable devices are able to be used to participate in the skill game competitions and/or the sports betting by sending information (e.g., responses) to and receiving information (e.g., propositions) from the SGO device 200 and/or the SBO device 202.

The devices of the network are able to communicate through the network 204 or directly with each other. A user is able to use the computer 210, a television, the mobile phone 208 and/or any other device to perform tasks such as to join competitions, view betting odds, provide selections for propositions, watch events (e.g., sports) and/or any other tasks.

In some embodiments, fewer or additional devices are able to be included in the network of devices. The network of devices is able to include any number of devices. For example, the network of devices is able to include a smart television with an internet connection.

FanDuel Ex. 1002-1563

Figure 3 illustrates a block diagram of an exemplary computing device configured for implementing the method of utilizing SGO data to optimize SBO propositions according to some embodiments. The computing device 300 is able to be used to acquire, store, compute, process, communicate and/or display information. In general, a hardware structure suitable for implementing the computing device 300 includes a network interface 302, a memory 304, a processor 306, I/O device(s) 308, a bus 310 and a storage device 312. The choice of processor is not critical as long as a suitable processor with sufficient speed is chosen. The memory 304 is able to be any conventional computer memory known in the art. The storage device 312 is able to include a hard drive, CDROM, CDRW, DVD, DVDRW, High Definition disc/drive, ultra-HD drive, flash memory card or any other storage device. The computing device 300 is able to include one or more network interfaces 302. An example of a network interface includes a network card connected to an Ethernet or other type of LAN. The I/O device(s) 308 are able to include one or more of the following: keyboard, mouse, monitor, screen, printer, modem, touchscreen, button interface and other devices. SGO/SBO proposition application(s) 330 used to perform the SGO/SBO proposition method are likely to be stored in the storage device 312 and memory 304 and processed as applications are typically processed. More or fewer components shown in Figure 3 are able to be included in the computing device 300. In some embodiments, SGO/SBO proposition hardware 320 is included. Although the computing device 300 in Figure 3 includes applications 330 and hardware 320 for the SGO/SBO proposition method, the SGO/SBO proposition method is able to be implemented on a computing device in hardware, firmware, software or any combination thereof. For example, in some embodiments, the SGO/SBO proposition applications 330 are programmed in a memory and executed using a processor. In another example, in some embodiments, the SGO/SBO proposition method is programmed hardware logic including gates specifically designed to implement the SGO/SBO proposition method.

FanDuel Ex. 1002-1564

In some embodiments, the SGO/SBO proposition application(s) 330 include several applications and/or modules. In some embodiments, modules include one or more sub-modules as well. In some embodiments, fewer or additional modules are able to be included.

Examples of suitable computing devices include a personal computer, a laptop computer, a computer workstation, a dedicated betting terminal, a server, a mainframe computer, a handheld computer, a personal digital assistant, a cellular/mobile telephone, a smart appliance, a gaming console, a digital camera, a digital camcorder, a camera phone, a smart phone, a portable music player, a tablet computer, a mobile device, a video player, a video disc writer/player (e.g., DVD writer/player, high definition disc writer/player, ultra high-definition disc writer/player), a television, a home entertainment system, an augmented reality device, a virtual reality device, smart jewelry (e.g., smart watch) or any other suitable computing device.

Figure 4 illustrates a flowchart of a method of utilizing SGO data and artificial intelligence to optimize SBO propositions according to some embodiments. In the step 400, one or more real-time skill game propositions are developed. For example, a set of 20 real-time skill game propositions are generated and organized so that they are easily displayed at a specific time/situation. The real-time skill game propositions are able to be generated manually by a producer or automatically using artificial intelligence. For example, using artificial intelligence, a device acquires event-related information such as the weather, current player statistics, current event information (e.g., in football, the down and distance and time remaining), historical information, and/or any other information. The information is able to be very specific or organized such that cross-references are able to be generated or determined. For example, the data is able to be stored in a manner such that when a quarterback is playing in a game that is going to be very cold, past historical information, including specifically cold-weather games, is able to be located. The device is able to acquire the information from one or multiple sources. The artificial intelligence utilizes structures and neural networks to learn based on additional information (e.g., received daily or weekly). For example, the device using artificial intelligence generates a structure/object using object oriented programming

FanDuel Ex. 1002-1565

for each player and/or event and collects data for the player/event to develop the structure/object. As additional information is acquired regarding a player and/or event, the structure/object is able to be modified and/or grow. The developed structure/object is able to be utilized in determining a real-time skill game proposition. For example, if the quarterback has thrown 8 consecutive incomplete passes, a real-time skill game proposition could inquire whether the next pass will be completed, or since viewers may be aware of the quarterback's struggles, the real-time skill game proposition would avoid asking a pass question since most users would likely assume that he will not complete the next pass, so a question about running with the football is able to be asked or a more general question about passing could be asked, such as "will the quarterback complete at least one pass on the next drive?"

In the step 402, an SGO provides real-time skill game propositions as described herein (e.g., will the next pass be completed - yes/no). The real-time skill game propositions are presented in any manner such as displayed directly on the user's television or displayed on a mobile device (e.g., cellular/smart phone, tablet, smart watch) or other device such as a laptop computer or personal computer. In some embodiments, a countdown is provided with each real-time skill game proposition. The real-time skill game propositions are able to be presented for a limited amount of time (e.g., 3 or fewer seconds, 5 seconds, 30 seconds or more). In some embodiments, factors may affect how long the real-time skill game propositions are presented, such as delays in receiving a televised/broadcast/Internet signal.

In the step 404, the SGO (or SGO's system) receives responses from participants, such as out of the first 10,000 participants, 6,000 participants select "yes," and 4,000 participants select "no." The participants are able to provide their selections through any user interface provided. The user interface is able to be a complex web page providing vast amounts of statistical data in addition to the propositions and buttons to select a response. The user interface is able to be a simple app that is displayed on a mobile phone or smart watch which shows each real-time skill game proposition in conjunction with a "yes" button and a "no" button. Any GUI features are able to be utilized. Any

FanDuel Ex. 1002-1566

programming language is able to be utilized. In some embodiments, instead of or in addition to yes/no selections, other types of selections are possible such as true/false, multiple choice from (3, 4 or more choices) and/or others.

In the step 406, the collected data is then able to be processed and/or communicated to the SBO. The data is processed to detect for patterns and/or make calculations as well as for any other purposes (e.g., to process the real-time skill game propositions). For example, the percentage of "yes" versus "no" selections is determined which is then used to affect odds of other propositions. As described herein, a formula is able to be used which takes a first set of odds (e.g., initially generated manually by an employee at a sportsbook or utilizing artificial intelligence) and then adjust the first set of odds based on the results of the real-time skill game propositions. In some embodiments, pattern recognition is implemented to determine if any users are cheating or performing the same selection repeatedly. For example, if the selection history of User A shows all "no" selections, then those selections should be ignored when performing the calculations as there does not appear to be a valid and fair attempt at making a selection.

In the step 408, the SBO utilizes the collected/processed data (and/or additional data) to generate and present odds/propositions more reflective of true odds based upon the opinions of a sample universe of potential punters/bettors viewing the same contest. The odds are for the same or similar propositions for the live sports betting participants. For example, if an SGO generates a question: "Will Team X score on its next possession?" an SBO will provide the same or a comparable question/proposition. The odds for the SBO proposition will be affected based on the input received for the SGO question. Furthering the example, the initial odds for the proposition are "yes" 2.5 and "no" 1.7, but based on responses to the SGO question which are 30% "yes" and 70% "no," the odds for the proposition are changed to "yes" 2.8 and "no" 1.5, so that the betting on the proposition is closer to 50% for either option of the bet. In some embodiments, the process occurs in a very short amount of time; sometimes under 1 second, much faster than a human could collect the data,

FanDuel Ex. 1002-1567

analyze the data and provide an output based on the data. In some embodiments, additional or fewer steps are implemented.

To use the method of utilizing SGO data to optimize SBO propositions, operators receive data based on skill game propositions and then base sports bet propositions (including odds) on that data. Users are able to participate in the skill game competitions and the sports bet propositions.

In operation, the method of utilizing SGO data to optimize SBO propositions enables that which is impossible without it. In particular, to determine proper, accurate odds for unique situational In-Play propositions, significant real-time data must be collected and analyzed in real time, which is not possible without a computing device, and is significantly improved by utilizing skill game information, where the skill game information is collected from thousands or millions of users across the globe.

Although skill game propositions and In-Play propositions have been described herein, any type of propositions are able to be implemented.

The method, devices and systems described herein are able to implement additional features such as age verification, user location verification (e.g., determining a physical, geographical location of a user/device based on GPS information or other information, and using the geographical location to determine if the laws in that location permit the activity/gaming/service), user home address verification, receiving credit card information, receiving wagering options, providing prizes and/or other winnings, cheating detection, and/or any other features described herein or incorporated by reference herein.

The event for which the propositions are made is able to be: a televised-event, live event, broadcast event, Internet-broadcast event, a single competition, multiple genres of athletic or other types of contests, multiple competitions taking place at the same time, in a single day, week or season, a partial contest, an arbitrary or specific segment of an athletic or other type of contest, sport-based contests, non-sport-based contests, a weekly event, a week-long event, a competitive

FanDuel Ex. 1002-1568

game show, a television show, a movie, a video, an electronic sports (e-sports) event, card, dice, trivia, math, word, and/or puzzle games, a television-based event, a scheduled competition, a scheduled series of competitions, a sporting event, a real-time skill and chance-based sports prediction games, an event based on a video game, a computer game or electronic game, an entertainment show, a taped event, a game show, a reality show, a news show, a commercial contained in a broadcast, and/or any other events described herein or incorporated by reference herein.

The event is able to be attended by a user and/or an employee with a device to trigger lockout signals or otherwise control when selections are able to be made and/or blocked.

In some embodiments, the devices and/or servers are optimized to implement the odds setting implementations. For example, data that is accessed more frequently is stored on faster access storage (e.g., RAM as opposed to slower storage devices). Furthering the example, the data relevant for the current week is stored on faster access storage, and data from past weeks is stored on slower storage devices. In another example, when a user selects a competition/contest, information related to that competition/contest is moved to local storage for faster access.

For the real-time skill-game propositions, latency issues could possibly give some users an unfair advantage. The latency issues are solved through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained, and the user experience is optimized for all players.

The solution includes first determining how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system, via streaming). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the

FanDuel Ex. 1002-1569

homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. A variety of methodologies are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

One approach is to survey the delays encountered through the various delivery systems such as cable, over the air or satellite in various geographic areas and adjust the synchronization of the game control information for all players to optimize the game play experience while defeating cheating enabled by receiving late lock outs to questions.

In another approach, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some other methodologies for determining the delays experienced by various cohorts who are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon first entry into a game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the

FanDuel Ex. 1002-1570

television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast/stream by the production crew and those in each discrete sub-group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in a game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture or streaming content through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire

FanDuel Ex. 1002-1571

data stream so that competitors receiving their content slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals or streaming content in advance of the one with the slowest receipt of the television signal or streaming content would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Patent No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors' cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television-based (or streaming-based) information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

In some embodiments, the SGO data (e.g., propositions and odds) is provided to an SBO app. In some embodiments, the SGO implements an app which utilizes the SGO data to provide propositions (e.g., real-time skill game and In-Play) and odds through the app. In some embodiments, hot links are provided to partnering apps. In some embodiments, the SGO populates a database with propositions, proposition selections/results, team information, player information,

FanDuel Ex. 1002-1572

historical data, and/or any other information, and makes the database/information accessible in real-time to licensed bookmakers to generate odds and/or propositions.

Figure 5 illustrates a diagram of reducing risk in setting odds according to some embodiments. The SGO provides propositions (e.g., yes/no predictions) and/or odds to an audience (e.g., competitors for a real-time game of skill). The audience provides feedback to the SGO such as responses to the propositions based on the specific propositions and/or odds. The SGO provides the feedback/results to an SBO. The SBO provides propositions (e.g., sports betting propositions) and/or odds to the audience. The audience for the SBO propositions is able to be the same audience for the SGO propositions, a different audience, or any combination thereof. The SBO receives the results from the propositions. The results from the SBO propositions are able to be sent to the SGO to update an algorithm for providing the SGO propositions and/or odds. The data provided and received by the SGO, the SBO and the audience is able to be used in any manner by AI, one or more learning algorithms, and/or any other analytical system to optimize the accuracy and efficiency of the betting operation (e.g., such that 50% of the audience selects one side of a proposition, and the other 50% of the audience selects the other side of the proposition).

As shown in the example, this process will involve computer learning, AI and neural networks, and the systems will have the 20/20 hindsight of seeing the results of the odds reset by the SBO in reliance on the SGO data for different sports and different kinds of propositions. This data is then utilized to continually train and adjust the algorithms using machine learning and neural network technology applying the SGO's feedback mechanism to continually improve accuracy.

The process described herein also addresses separate claims on the collection of the empirical data generated by the SGO on the relationship of the collective reaction to the estimated odds, to the betting response to the recalculated odds utilized and presented by the SBO. The actual betting results from the SBO's proposition are then compared to the response to the odds, then utilized by the SBO and/or the SGO to adjust and perfect the algorithms, both for the specific game in progress and for optimizing the system over time.

FanDuel Ex. 1002-1573

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

FanDuel Ex. 1002-1574

CLAIMS

What is claimed is:

1. A method programmed in a non-transitory memory of a device for interaction with televised events comprising:

providing one or more real-time skill game propositions;

receiving selections to the one or more real-time skill game propositions relating to the events; and

providing odds for one or more In-Play live betting propositions based on a measured response to the selections to the one or more real-time skill game propositions.

2. The method of claim 1 further comprising developing the one or more real-time skill game propositions.
3. The method of claim 2 wherein developing the odds for one or more real-time live betting propositions comprises utilizing artificial intelligence or analytics to automatically acquire real time statistical information from the concurrent real time skill contest.
4. The method of claim 1 wherein providing the one or more real-time skill game propositions comprises displaying the one or more real-time skill game propositions simultaneously with an underlying broadcast of an event.
5. The method of claim 1 wherein receiving the selections to the one or more real-time skill game propositions includes receiving input from end user devices.
6. The method of claim 1 further comprising real-time processing the selections to the one or more real-time skill game propositions.

FanDuel Ex. 1002-1575

7. The method of claim 6 wherein processing includes determining percentages of the selections.

8. The method of claim 7 wherein providing the odds for one or more In-Play live betting propositions includes adjusting previously determined odds based on the percentages of the concurrent skill game selections.

9. The method of claim 1 further comprising providing the one or more In-Play betting propositions.

10. The method of claim 1 wherein an In-Play betting proposition is presented initially without the odds, and then after the information related to real-time skill game propositions is received and processed, the odds are presented.

11. The method of claim 1 wherein the one or more real-time skill game propositions are related to a live esports tournament.

12. The method of claim 1 wherein the one or more real-time skill game propositions are related to one or more non-athletic, televised events.

13. The method of claim 1 wherein the one or more real-time skill game propositions are related to one or more occurrences.

14. A system comprising:

a skill game server device configured to provide real-time skill game propositions; and

a real-time sports betting server device configured to receive responses related to the real-time skill game propositions from the skill game server device and provide In-Play betting propositions, wherein odds for the In-Play proposition is determined based on the information received by the server related to the real-time response to the same skill game proposition.

FanDuel Ex. 1002-1576

15. The system of claim 14 wherein the skill game server device is further configured for developing the one or more real-time skill game propositions.

16. The system of claim 15 wherein developing the one or more real-time skill game propositions comprises utilizing analytical software including artificial intelligence to automatically acquire statistical information utilized by human game producers to provide propositions and set accompanying odds.

17. The system of claim 16 where a database and real-time data from the competitors' responses to the propositions in the skill games are processed by dedicated computers running programs utilizing, artificial intelligence and machine learning to generate an archival database continually utilized by the live sports betting system to improve performance in odds setting accuracy.

18. The system of claim 14 wherein the sports betting server device is further configured for providing the one or more real-time skill game propositions which comprises displaying the one or more real-time skill game propositions simultaneously with an underlying broadcast of an event.

19. The system of claim 14 wherein receiving the selections to the one or more real-time skill game propositions includes receiving input from end user devices.

20. The system of claim 14 wherein the sports betting server device is further configured for simultaneous processing of the selections to the one or more real-time skill game propositions.

21. The system of claim 20 wherein processing includes determining the percentages of the alternative selections to the propositions.

22. The system of claim 21 wherein the sports betting server device is further configured for providing the odds for one or more In-Play betting propositions including

FanDuel Ex. 1002-1577

adjusting previously determined odds based on the percentages of the concurrent selections by the skill contest competitors.

23. The system of claim 14 wherein the sports betting server device is further configured for providing the same one or more In-Play betting propositions through receipt of real time data from the skill game operator game server.

24. The system of claim 14 wherein an In-Play betting proposition is presented initially without the odds, and then after the information related to real-time skill game propositions is received, the odds are presented.

25. The system of claim 14 wherein the real-time skill game propositions are related to a live esports tournament.

26. The system of claim 14 wherein the real-time skill game propositions are related to one or more non-athletic, televised events.

27. The system of claim 14 wherein the real-time skill game propositions are related to one or more occurrences.

28. The system of claim 14 wherein data generated by the real-time sports betting server is sent to the skill game server to enable more controlled, faster and more predictable odds-setting procedures to provide entertainment in addition to skill game odds.

29. A server device comprising:

a memory configured for storing an application in connection with observation of a competition, the application configured for:

providing one or more real-time skill game propositions;

FanDuel Ex. 1002-1578

receiving selections to the one or more real-time skill game propositions; and

providing odds for one or more In-Play propositions based on the selections to the one or more real-time skill game propositions; and

a processor configured for processing the application.

30. The server device of claim 29 wherein the application is further configured for developing the one or more real-time skill game propositions.

31. The server device of claim 30 wherein developing the one or more real-time skill game propositions comprises utilizing artificial intelligence or analytics to automatically acquire statistical information.

32. The server device of claim 29 wherein providing the one or more real-time skill game propositions comprises displaying the one or more real-time skill game propositions simultaneously with an underlying broadcast of an event.

33. The server device of claim 29 wherein receiving the selections to the one or more real-time skill game propositions includes receiving input from end user devices.

34. The server device of claim 29 wherein the application is further configured for processing the selections to the one or more real-time skill game propositions.

35. The server device of claim 34 wherein processing includes determining percentages of the competitor's selections.

36. The server device of claim 35 wherein providing the odds for one or more In-Play propositions includes real-time adjustment of previously recommended odds based on analysis of the percentages of the selections by the skill game competitors.

37. The server device of claim 29 wherein the application is further configured for providing the one or more In-Play propositions.

FanDuel Ex. 1002-1579

38. The server device of claim 29 wherein an In-Play proposition is presented initially without the odds, and then after the information related to real-time skill game propositions is received, the odds are presented.

39. The server device of claim 29 wherein the one or more real-time skill game propositions are related to a live esports tournament.

40. The server device of claim 29 wherein the one or more real-time skill game propositions are related to one or more non-athletic, televised events.

41. The server device of claim 29 wherein the one or more real-time skill game propositions are related to one or more occurrences.

42. A method programmed in a non-transitory memory of a device comprising:

providing one or more real-time skill game propositions in connection with a live event;

providing a first set of odds for one or more In-Play live betting propositions based on an expert panel or a subset of viewers of the live event;

receiving selections to the one or more real-time skill game propositions; and

providing a second set of odds for the one or more In-Play live betting propositions based on analysis of the first set of odds and the selections to the one or more real-time skill game propositions.

43. The method of claim 42 wherein the subset of competitors is selected based on previous results.

44. The method of claim 42 further comprising developing the second set of odds for the one or more In-Play live betting propositions comprises utilizing artificial intelligence

FanDuel Ex. 1002-1580

to automatically acquire real time statistical information from a concurrent real time skill contest.

45. The method of claim 42 wherein providing the one or more real-time skill game propositions comprises displaying the one or more real-time skill game propositions simultaneously with an underlying broadcast of an event.

46. The method of claim 42 wherein receiving the selections to the one or more real-time skill game propositions includes receiving input from end user devices.

47. The method of claim 42 further comprising processing the selections to the one or more real-time skill game propositions.

48. The method of claim 47 wherein processing includes determining percentages of the selections.

49. The method of claim 48 wherein providing the second set of odds for the one or more In-Play live betting propositions includes adjusting previously determined odds based on the percentages of the concurrent skill game selections.

50. The method of claim 42 further comprising providing the one or more In-Play live betting propositions.

51. The method of claim 42 wherein the one or more real-time skill game propositions are related to a live esports tournament.

52. The method of claim 42 wherein the one or more real-time skill game propositions are related to one or more non-athletic, televised events.

53. The method of claim 42 wherein the one or more real-time skill game propositions are related to one or more occurrences.

54. A method programmed in a non-transitory memory of a device comprising:

FanDuel Ex. 1002-1581

acquiring reactions from a plurality of bettors to one or more propositions, one or more odds, or any combination thereof;

adjusting the one or more odds based for the one or more propositions based on the reactions; and

generating one or more future propositions, one or more future odds, or any combination thereof based on the reactions.

55. The method of claim 54 wherein the reactions include betting history.

56. The method of claim 54 wherein the reactions include facial expressions as determined by image and/or video analysis.

57. The method of claim 54 wherein the subset of competitors is selected based on previous results.

58. The method of claim 54 wherein adjusting the one or more odds comprises utilizing artificial intelligence to automatically acquire real time statistical information from a concurrent real time skill contest.

59. The method of claim 54 wherein the one or more propositions are related to a live esports tournament.

60. The method of claim 54 wherein the one or more propositions are related to one or more non-athletic, televised events.

61. The method of claim 54 wherein the one or more propositions are related to one or more occurrences.

62. A method comprising:

providing one or more sports betting propositions while an event is in progress; and

FanDuel Ex. 1002-1582

providing odds for the one or more sports betting propositions utilizing results to one or more predictions made in real-time to a same one or more propositions presented to users in a game of skill being played concurrently with the event.

63. The method of claim 62 wherein the odds are provided by a live sports betting operator.

64. The method of claim 62 wherein collective responses by users or a sample of users to the one or more odds are presented to sports bettors and their bets placed in response to the adjusted odds are used to train a betting system to continually refine and optimize financial returns of a sports betting provider.

65. The method of claim 62 further comprising developing the odds for the one or more sports betting propositions comprises utilizing artificial intelligence to automatically acquire real time statistical information from a concurrent real time skill contest.

66. The method of claim 62 further comprising receiving selections to the one or more sports betting propositions including receiving input from end user devices.

67. The method of claim 62 further comprising processing the selections to the one or more sports betting propositions.

68. The method of claim 67 wherein processing includes determining percentages of the selections.

69. The method of claim 68 wherein providing the odds for the one or more sports betting propositions includes adjusting previously determined odds based on the percentages of responses to the concurrent skill game selections.

70. The method of claim 62 wherein the one or more sports betting propositions are related to a live esports tournament.

FanDuel Ex. 1002-1583

71. The method of claim 62 wherein the one or more sports betting propositions are related to one or more non-athletic, televised events.

72. The method of claim 62 wherein the one or more sports betting propositions are related to one or more occurrences.

73. A method comprising:

providing one or more real-time skill game propositions in connection with a live event;

providing a first set of odds for one or more In-Play live betting propositions;

receiving selections to the one or more real-time skill game propositions;

providing a second set of odds for the one or more In-Play live betting propositions based on analysis of the first set of odds and the selections to the one or more real-time skill game propositions; and

training and adjusting algorithms to improve accuracy of providing the first set of odds and the second set of odds.

74. The method of claim 73 wherein training and adjusting the algorithms includes acquiring reactions to the first set of odds, the second set of odds or any combination thereof.

75. The method of claim 74 wherein training and adjusting the algorithms includes recalculating the second set of odds based on the reactions.

76. The method of claim 73 further comprising comparing the results from the one or more skill game propositions to the responses.

77. The method of claim 76 further comprising utilizing the comparison of the results and the responses to optimize the algorithms.

FanDuel Ex. 1002-1584

78. The method of claim 73 wherein training and adjusting the algorithms includes using machine learning.

79. The method of claim 73 wherein training and adjusting the algorithms includes using neural networks.

FanDuel Ex. 1002-1585

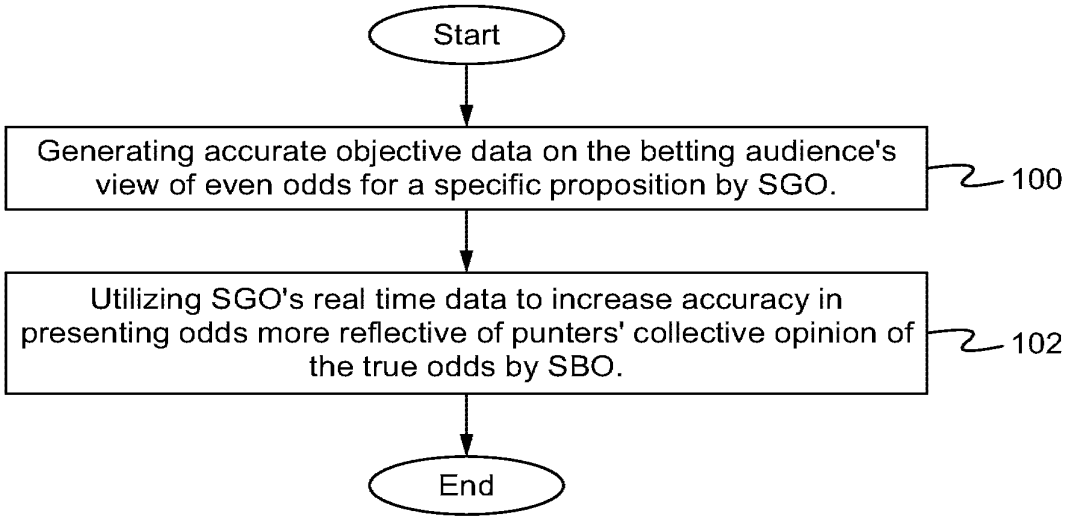

Start
Generating accurate objective data on the betting audience's view of even odds for a specific proposition by SGO.
100
Utilizing SGO's real time data to increase accuracy in presenting odds more reflective of punters' collective opinion of the true odds by SBO.
102
End

Fig. 1

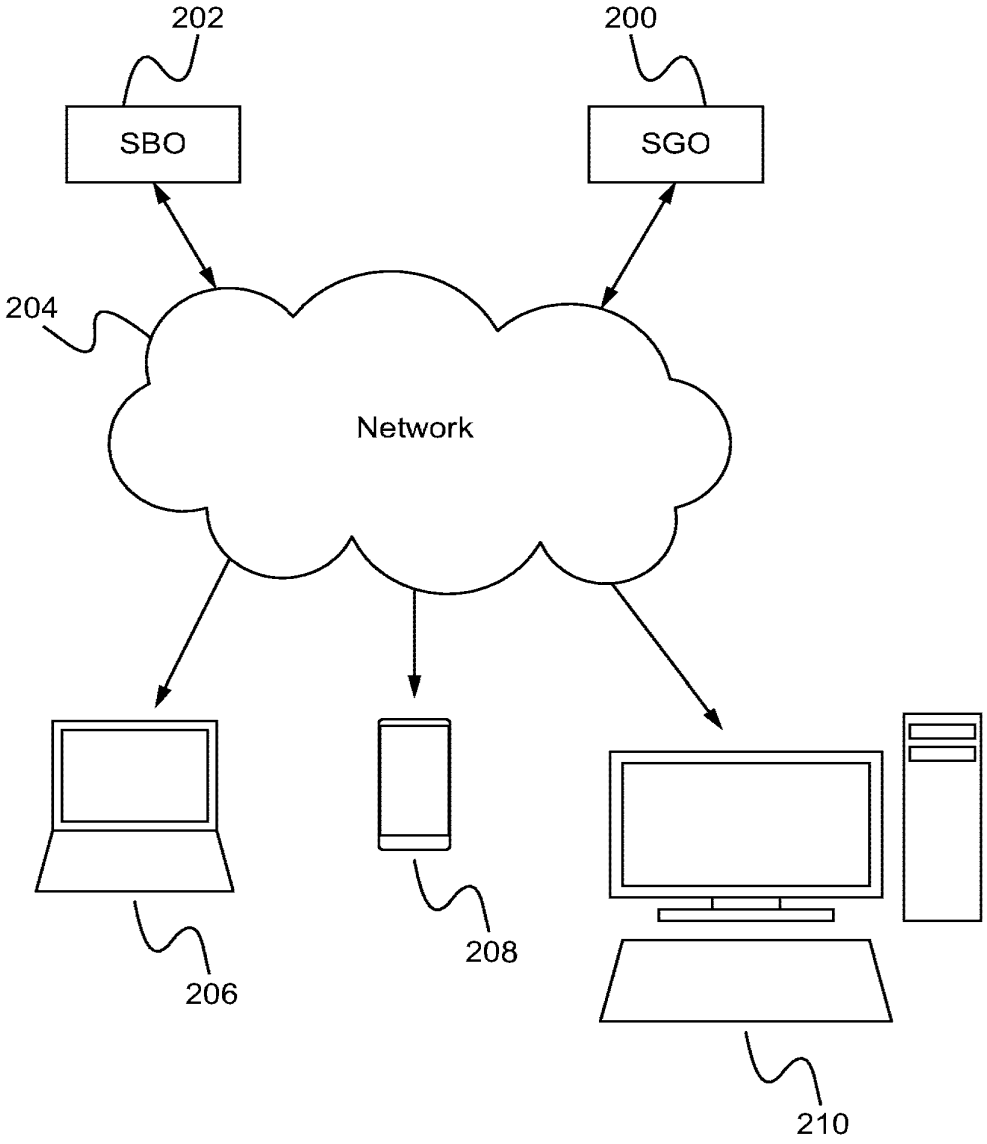


Fig. 2

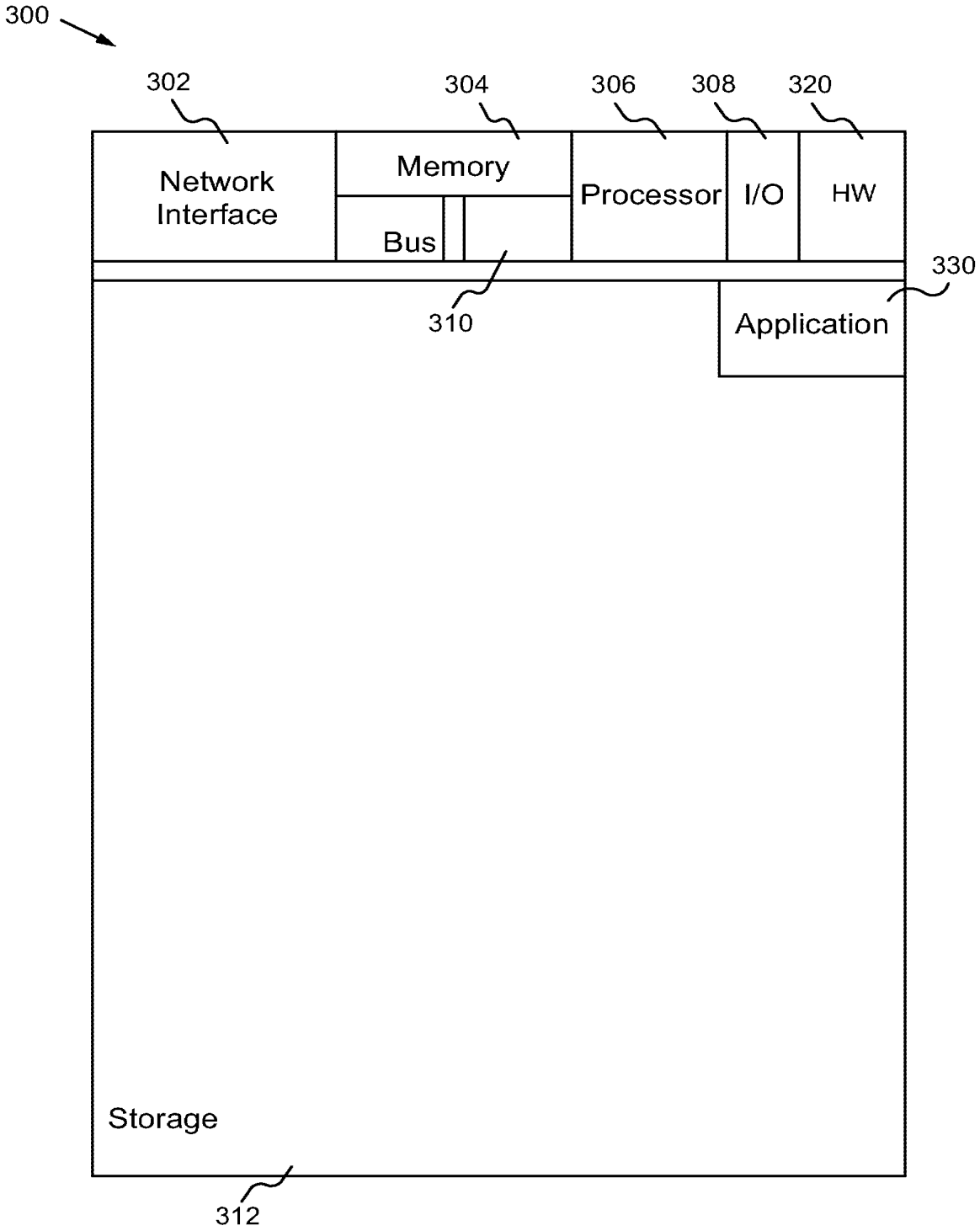

300
302
304
306
308
320
Network Interface
Memory
Bus
Processor
I/O
HW
330
310
Application
Storage
312

Fig. 3

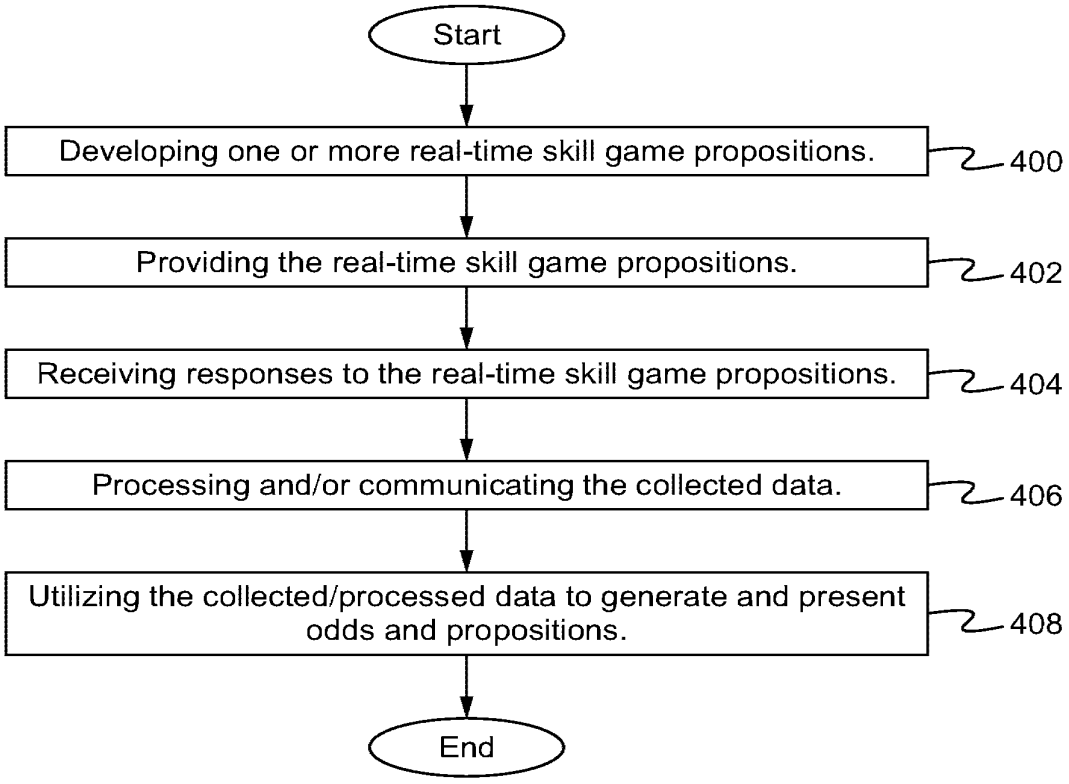

Start
Developing one or more real-time skill game propositions.
400
Providing the real-time skill game propositions.
402
Receiving responses to the real-time skill game propositions.
404
Processing and/or communicating the collected data.
406
Utilizing the collected/processed data to generate and present odds and propositions.
408
End

Fig. 4

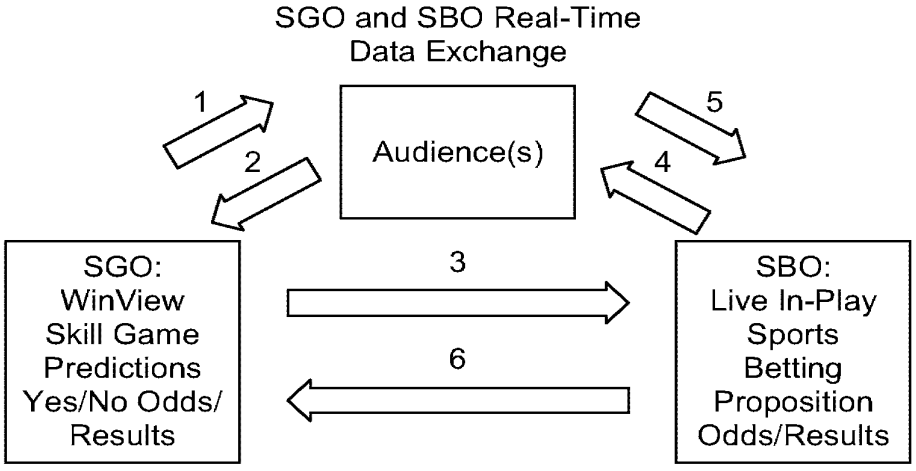

SGO and SBO Real-Time Data Exchange
1
2
Audience(s)
5
4
SGO: WinView Skill Game Predictions Yes/No Odds/ Results
3
6
SBO: Live In-Play Sports Betting Proposition Odds/Results

Fig. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/054859

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G07F 17/32; A63F 9/24; A63F 13/828; G06F 19/00; G06Q 99/00 (2020.01)
CPC - G07F 17/3288; A63F 13/828; G07F 17/3244; G07F 17/3276 (2020.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 463/12; 463/25 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017/0103615 A1 (THEODOSOPOULOS) 13 April 2017 (13.04.2017) entire document	1-6, 9, 10, 13-15, 18-20, 23, 24, 27-34, 37, 38, 41, 62, 63, 66, 67, 72
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Y		7, 8, 11, 12, 16, 17, 21, 22, 25, 26, 35, 36, 39, 40, 42-53, 64, 65, 68-71, 73-79
Y	PINNACLE. "The basics of reverse line movement." 19 January 2018 (19.01.2018) Retrieved on 22 January 2020 (22.01.2020) from <https://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD> entire document	7, 8, 21, 22, 35, 36, 42-53, 68, 69
Y	GAMBLING COMMISSION. "Virtual currencies, eSports and social casino gaming – position paper." March 2017 (03.2017) Retrieved on 22 January 2020 (22.01.2020) from <https://www.gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf> entire document	11, 25, 39, 51, 70
Y	US 2004/0210507 A1 (ASHER et al) 21 October 2004 (21.10.2004) entire document	12, 26, 40, 52, 71
Y	US 2017/0243438 A1 (UPLAY1) 24 August 2017 (24.08.2017) entire document	16, 17, 44, 65

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 January 2020	04 FEB 2020
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 571-273-8300	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

FanDuel Ex. 1002-1590

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/054859

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SIPKO et al. "Machine learning for the prediction of professional tennis matches." In: MEng computing-final year project, Imperial College London. 15 June 2015 (15.06.2015) Retrieved on 22 January 2020 (22.01.2020) from <https://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf> entire document	64, 73-79
A	US 2009/0186676 A1 (AMAITIS et al.) 23 July 2009 (23.07.2009) entire document	1-53, 62-79
A	US 2015/0238873 A1 (GAMBLIT GAMING, LLC) 27 August 2015 (27.08.2015) entire document	1-53, 62-79
A	WINVIEW GAME PRODUCER. "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season." In: Winview Games. 21 December 2016 (21.12.2016) Retrieved on 21 January 2020 (21.01.2020) from <https://www.winviewgames.com/press-releases/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/> entire document	1-53, 62-79

FanDuel Ex. 1002-1591

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/054859

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
See extra sheet(s).

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-53, 62-79

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FanDuel Ex. 1002-1592

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/054859

Continued from Box No. III Observations where unity of invention is lacking

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-53 and 62-79, drawn to a method programmed in a non-transitory memory of a device for interaction with televised events comprising: providing one or more real-time skill game propositions.

Group II, claims 54-61, drawn to a method programmed in a non-transitory memory of a device comprising: acquiring reactions from a plurality of bettors to one or more propositions.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: providing one or more real-time skill game propositions; receiving selections to the one or more real-time skill game propositions relating to the events; and providing odds for one or more In-Play live betting propositions based on a measured response to the selections to the one or more real-time skill game propositions as claimed therein is not present in the invention of Group II. The special technical feature of the Group II invention: acquiring reactions from a plurality of bettors to one or more propositions, one or more odds, or any combination thereof; adjusting the one or more odds based for the one or more propositions based on the reactions; and generating one or more future propositions, one or more future odds, or any combination thereof based on the reactions as claimed therein is not present in the invention of Group I.

Groups I and II lack unity of invention because even though the inventions of these groups require the technical feature of providing one or more odds for one or more betting propositions, this technical feature is not a special technical feature as it does not make a contribution over the prior art.

Specifically, US 2009/0186676 to Amaitis et al. teaches providing one or more odds for one or more betting propositions (Paras. [0282-0286]).

Since none of the special technical features of the Group I or II inventions are found in more than one of the inventions, unity of invention is lacking.

FanDuel Ex. 1002-1593

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**02/26/2024 06:02:22 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	64452693	FILING DATE	09/29/2021
CUSTOMER #	28960	FIRST NAMED INVENTOR	David B. Lockton
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 30

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
AIRP_01054_IDS_2_26_2024.pdf	19	Information Disclosure Statement (IDS) Form (SB08)	1015 KB
EP0873772B1.pdf	24	Foreign Reference	868 KB
EP1003313B1.pdf	17	Foreign Reference	475 KB
EP3864635A0.pdf	1	Foreign Reference	232 KB
JP2009509717A.pdf	23	Foreign Reference	7723 KB
WO2001091465.pdf	57	Foreign Reference	3052 KB
WO2007118300.pdf	52	Foreign Reference	1939 KB
WO2020076657A1.pdf	46	Foreign Reference	2449 KB
Other1.pdf	8	Non Patent Literature	4351 KB

Other2.pdf	6	Non Patent Literature	10967 KB
Other3.pdf	6	Non Patent Literature	13606 KB
Other4.pdf	3	Non Patent Literature	482 KB
Other5.pdf	3	Non Patent Literature	911 KB
Other6.pdf	7	Non Patent Literature	1596 KB
Other7.pdf	10	Other reference-Patent/Application/Search Documents	893 KB
Other8.pdf	7	Non Patent Literature	2166 KB
Other9.pdf	14	Non Patent Literature	12773 KB
Other10.pdf	7	Non Patent Literature	1059 KB
Other11.pdf	124	Non Patent Literature	1071 KB
Other12a.pdf	25	Non Patent Literature	12389 KB
Other12b.pdf	25	Non Patent Literature	21217 KB
Other13.pdf	19	Non Patent Literature	4554 KB
Other14.pdf	294	Non Patent Literature	8179 KB
Other15.pdf	1086	Non Patent Literature	16139 KB
Other16.pdf	88	Other reference-Patent/Application/Search Documents	18963 KB
Other17.pdf	20	Other reference-Patent/Application/Search Documents	372 KB
Other18.pdf	86	Other reference-Patent/Application/Search Documents	16654 KB
Other19.pdf	19	Other reference-Patent/Application/Search Documents	3716 KB
Other20.pdf	80	Other reference-Patent/Application/Search Documents	1243 KB
Other21.pdf	22	Other reference-Patent/Application/Search Documents	4507 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
AIRP_01054_IDS_2_26_2024.pdf	AB8981577E675E8F4F21773ABA4A90E840CF89E5DA5CCD2607B668A04D15D4ACE1AE688A5C74AE609BF68F57CF891D989233F2ECFA090DE32DDBF7AE4BDDB057
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EP1003313B1.pdf	6B05F175A837965F3061E8B411A86CD09A5A779C01BB0E3E03650445FB6159A643A998594CDECD9401AE858F71CF2B32DBEBA0AE2CAD35F9D8CB79D6E680C0AF
EP3864635A0.pdf	A7DC295BDCB1AC6A1BD45019B33B61E421DEC99FAB81BF927E926B8BEC098A87D108CAC51AF1410C97E244A28A1EAB0E11AA0EC2660864320CB1C073FD95109B
JP2009509717A.pdf	A744A90B967770437A58A3E09323198CA0F69157D4F7A86FEF81A335DDCC2CD2F086788876297B4092557279308E981329AA9ADF227B25D05DB6AA1810A7561A
WO2001091465.pdf	3E3755390B5058973E92C065E3989F0F7D732DB047FDAA5978FBC4E81EBC8DAF2CC740F4F92E6250128E2AD7310D6BC4D3DADD35779884761FC50ABCFF4A81DA
WO2007118300.pdf	FF75EACBE690CC0FFB6C6A8ACDAF2C61655F3A2998F04187C8F0EA641FFE54A41B4CE4D5C6B67066C593B35AA64EE855159B2BEC9ED0697E956CFF2A519BC427
WO2020076657A1.pdf	B30FC7FC912CA21CD14B40964B7177294FD0A509CFF5394796312CCC4DE14AF61FD10D4D6207D3034415DD8A739E8DD7E414261639A6EC271E5FAC3D1C4FA359
Other1.pdf	C9EB955D3F0F9BFB4832DCB94E050CD1926CC999BC2CBA87A9F23654FC2ED68BC7785FE6278FDEC654C146886519EE52CF84C92560FB1B403DE826FB650427C0
Other2.pdf	439BFC03228B1B96D37DE2C774DE2E2ADB8F9E65A0AD34B6030C07615E9E1B39C0142322460EAA76E394A7F43F7CD3A4630153A8D4F11FF96FA5E7FA498643BB
Other3.pdf	4F181C15C8754E9EECB8715BAB20635D5945CDE137F47C8B42414169F5DCBA0D01F2A432D0E6AEE133A2ACA61EEF9E3312ED482CA779438FC5DB0761F29C74F8
Other4.pdf	481480641F256475658AFA298A06CB800A150EC0EB3F79CEA84E82FB703D42F9F1A74E7AE5E3EB77427D3A229FA96B2A2DCA8ABA27625AC55CB2CBF0345E5E75

Other5.pdf	332ABD50231E215208205FC0C8209722F22EBD82A3F18BABC A712184A0B6421F55D622CB05E6F085F625164BBB3B9FE2220 2C7CF6818C735D2B87C7AFA241217
Other6.pdf	2C6F67D9D02EFDC2BC11D7CC24154E7C860C00CF91C1B2A C8E832E7B3500A1E11D9B788EE4E2243C7CF95FBCEEECE05 B44C6E55316693D46D9EEF696E6E23167
Other7.pdf	50C58C64F127F90BB4CA960523AB2B483987BD58C869642ED 214147EFB7745C92A9EC250D8E1C662D06D65206E14B52DFA 02E27147A85DA7DAD0F707E919C1AB
Other8.pdf	984530AF461C183FE92F6F168D7AD53F99719E549F477B5C31 D8685AA0F2E6025CE013A25E069C6C6CE353A7B76785766E7 B5373B70ABDCE8D7054AA71A05297
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Other10.pdf	0A1F6135BACAB85F9643F58751004FC8DB45296C8A84661167 855853D550E241E2DD06EA56A9D0E46A2318AE02B80C5E3C6 C959C380BD6B707D15F28DD4CD735
Other11.pdf	9F36C06D4A37872C8505B04F0D2C095EB1696FBA6F30A5440 F7880E54F8E4F1A8F3793C9C57260EC62962057F2E40C984C4 132A0027E265131BA39C0C07ED786
Other12a.pdf	F56B989DCB72A7B756A71D4CC307143CCA9D176EEAB13B82 DC7C1A168CD3E2925643B0D296A113B6CAC6398EDEF8609E FD07273FDC730B716DC56B4A1004AEBA
Other12b.pdf	FB95A3127448909A7D7B3394911E243BD56A4F3A51FF415C73 456DB497EAE4EB2C4A9CD2DE130D1FE5472CC1C41B930288 8BA43C1BDBA372B3A91F920BAD8047
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Other14.pdf	0EA849CB357FC4586809B4ADB26CD66A574AA84E360E856C 9FB2E4E73103F1FE142F8B84B21DA841E84D782125E7CB0E7 15F928D04D332173FA38D63169AB845
Other15.pdf	7A426723BE667F33CEF412FCA23E3061FA6C9C42A2404B7A3 18DB039FF2F6A8CA8B1A257DC620EEB4AB2F6A1DBF6CC3E 408FD39862B247DCA0FC5BACE63C3B0C
Other16.pdf	78989713624E472AA9FAE2BA1EF2C22771396A47C34F818619 C5C4E846F2467F00971A062A375DD62ED9A9D9994C2E5236C 63BA1FDA86D07DAD63EDE94C07217
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	32A6E854AEF4530CAD8C3192F37CDCBB
Other18.pdf	421884E2B17F68B2908CE704A9429DAD4224E9017F8EAA6D1 F4D7D3235C9D081F901B747F4B0CD6B7441480D7D38C1D53 C5C0DE5ECF7BE88686F8B665BE30508
Other19.pdf	2871DDDB94BC0F172E8AEC81F98A5F8A11AA415726176B5E1 D57392420E29D65F808B3FAF15CDBBFFAEB662AEE9F666D8 35C1E7B973CA82171F2F50BC33F64A5
Other20.pdf	BA9850B091546BD7F6A60769F2DCF61504AB77EAEF4BCFAF F4AD25D0D8992702F96F2DDA7BFC3173625BEA6F9D09A542 F0BE48B0FAD404233E93A4C7491F18DB
Other21.pdf	56C669AF93C267257B8F9E57B0C3EA2B0E4B29049743990558 057E28A8146DB342BBEE9816E471F0CEB1B6F6127885A2711 F4B3EF0C73FF515F31C68FC81AC61

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**02/26/2024 06:02:22 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	64452693	AUTHORIZED BY	-
CUSTOMER #	28960	FILING DATE	09/29/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	David B. Lockton

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0538	**E20242PI03435604**	**Jonathan Owens**

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
081275	**37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2806	SUBMISSION OF AN INFORMATION DISCLOSURE STATEMENT	104.00	1	104.00
			TOTAL AMOUNT:	**$104.00**

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4141548		1979-02-27	Everton	
	2	4270755		1981-06-02	Willhide et al.	
	3	4496148		1985-01-29	Morstain et al.	
	4	4592546		1986-06-03	Fascenda et al.	
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	6	5013038		1991-05-07	Luvenberg	
	7	5035422		1991-07-30	Berman	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	9	5083271		1992-01-21	Thatcher et al.	
	10	5083800		1992-01-28	Lockton	
	11	5120076		1992-06-09	Luxenberg et al.	
	12	5213337		1993-05-25	Sherman	
	13	5227874		1993-07-13	Von Kohom	
	14	5263723		1993-11-23	Pearson et al.	
	15	5283734		1994-02-01	Von Kohom	
	16	5343236		1994-08-30	Koppe et al.	
	17	5343239		1994-08-30	Lappington et al.	
	18	5462275		1995-10-31	Lowe et al.	
	19	5479492		1995-12-26	Hofstee et al.	

FanDuel Ex. 1002-1602

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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	21	5566291		1996-10-15	Boulton et al.	
	22	5585975		1996-12-17	Bliss	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	34	5860862		1999-01-19	Junkin	
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FanDuel Ex. 1002-1604

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1605

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	83	6846239	B2	2005-01-25	Washio	
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FanDuel Ex. 1002-1608

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1609

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1610

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1611

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	119	8109827	B2	2012-02-07	Cahill et al.	
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FanDuel Ex. 1002-1612

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1613

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	144	6816628		2004-11-09	Sarachik et al.	
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FanDuel Ex. 1002-1614

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1615

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1617

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1618

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1619

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1620

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1621

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1622

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1623

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1624

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1625

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1626

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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FanDuel Ex. 1002-1627

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	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	2	2252074	CA		1997-11-25	Two Way TV Limited		
	3	2279069	CA		1999-07-28	Two Way TV Limited		
	4	2287617	CA		1999-10-25	Two Way TV Limited		
	5	0649102	EP	A3	1996-06-26	Two Way TV Limited		
	6	2364485	GB		2002-01-23	Muzaffar, Saj		
	7	11-46356	JP		1999-02-16	Two Way TV Limited		
	8	11-239183	JP		1999-08-31	Two Way TV Limited		
	9	2001-28743	JP		2001-01-30	Two Way TV Limited		
	10	2000-165840	JP		2000-06-16	Two Way TV Limited		
	11	2000-209563	JP		2008-07-28	Two Way TV Limited		
	12	2000-217094	JP		2000-08-04	Two Way TV Limited		

FanDuel Ex. 1002-1629

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	13	2000-358255	JP		2000-12-26	Two Way TV Limited		
	14	330242	NZ		1989-10-28	Two Way TV Limited		
	15	01/65743	WO	A1	2001-09-07	Hookam-Miller, P.		
	16	02/03698	WO	A1	2002-10-01	Muzaffar, Saj		
	17	2005064506	WO	A1	2005-07-14	Oy Veikkaus		
	18	2008027811	WO	A2	2008-03-06	Walter et al.		
	19	2008115858	WO	A1	2008-09-25	POPLIO, INC.		

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Two Way TV Patent and Filing Map "www.twowaytv.com/version4/technologies/tech_patents.asp	
	2	'Ark 4.0 Standard Edition, Technical Overview 'www.twowaytv.com/version4/technologies/tech_ark_professionals.asp	

FanDuel Ex. 1002-1630

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	3	"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, COMMUNICATIONS OF THE ACM, July 2005, Vol. 48, No. 7, Pages 103-105	
	4	"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.	
	5	"IST and Sportal.com: Live on the Internet September 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.	
	6	"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.	
	7	"SMS BASED VOTING AND SURVEY SYSTEM FOR MEETINGS", www.abbit.be/technology/SMSSURVEY.html.	
	8	"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.	
	9	"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp.1490-1499, vol. 3, IEEE, New York, NY.	
	10	Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.	
	11	Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, November 2004, Vol. 6, Issue 4, pgs. 360-369.	
	12	http://help.yahoo.com/help/us/tourn/tourn-03.html	

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FanDuel Ex. 1002-1631

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

EXAMINER SIGNATURE			
Examiner Signature	/PETER J IANNUZZI/	Date Considered	02/22/2024

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-1632

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2021-12-28
Name/Print	Jonathan O. Owens	Registration Number	37902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-1633

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

FanDuel Ex. 1002-1634

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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

28960 7590 02/28/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
02/28/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JOWENS@HOLLP.COM
us_docketing@hollp.com

FanDuel Ex. 1002-1635

Corrected ***Notice of Allowability***	**Application No.** 17/488,674	**Applicant(s)** Lockton, David B.	
	Examiner PETER J IANNUZZI	**Art Unit** 3715	**AIA (FITF) Status** No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to TD, amendments and remarks filed January 5, 2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 25-37 and 62-89 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date attached.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PETER J IANNUZZI/
Primary Examiner, Art Unit 3715

FanDuel Ex. 1002-1636

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

7590 03/12/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
03/12/2024	ELECTRONIC

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) filed 02/26/2024 in the above-identified application fails to meet the requirements of 37 CFR 1.97(d) for the reason(s) specified below. Accordingly, the IDS will be placed in the file, but the information referred to therein has not been considered.

The IDS is not compliant with 37 CFR 1.97(d) because:

☑ The IDS lacks a statement as specified in 37 CFR 1.97(e).

☐ The IDS lacks the fee set forth in 37 CFR 1.17(p).

☐ The IDS was filed after the issue fee was paid. Applicant may wish to consider filing a petition to withdraw the application from issue under 37 CFR 1.313(c) to have the IDS considered. See MPEP 1308.

C. Garner, for

571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

FanDuel Ex. 1002-1637

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

FanDuel Ex. 1002-1638

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	3715
	Examiner Name	Iannuzzi, Peter J.
	Attorney Docket Number	AIRP-01054

	1	A copy of Final Written Decision Determining All Challenged Claims Unpatentable, dated January 29, 2024, in IPR2022-01306, Patent 9,993,730 B2.	☐
	2	A copy of Final Written Decision Determining All Challenged Claims Unpatentable, dated January 29, 2024, in IPR2022-01307, Patent 10,721,543 B2.	☐
	3	A copy of Final Written Decision Determining All Challenged Claims Unpatentable, dated January 29, 2024, in IPR2022-01351, Patent 9,878,243 B2.	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

FanDuel Ex. 1002-1639

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	3715
Examiner Name	Iannuzzi, Peter J.
Attorney Docket Number	AIRP-01054

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jonathan O. Owens/	Date (YYYY-MM-DD)	2024-04-02
Name/Print	Jonathan O. Owens	Registration Number	37,902

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

FanDuel Ex. 1002-1640

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**04/02/2024 08:15:44 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	64940271	FILING DATE	09/29/2021
CUSTOMER #	28960	FIRST NAMED INVENTOR	David B. Lockton
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 4

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
AIRP_01054_IDS_4_2_2024.pdf	4	Information Disclosure Statement (IDS) Form (SB08)	1010 KB
Other1.pdf	62	Other reference-Patent/Application/Search Documents	696 KB
Other2.pdf	61	Other reference-Patent/Application/Search Documents	461 KB
Other3.pdf	42	Other reference-Patent/Application/Search Documents	341 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
AIRP_01054_IDS_4_2_2024.pdf	66AE654B73F2BE5747C06166407F9F6348152599CE93B1004810C7534DBF1EC7E71CB72E3B228EBA9B251B6508FADE4E3431AFBC27C83E635509198A45BDF00F
Other1.pdf	198C871DA8CBCD1AFAD09C095C7AE191C03D9791A8F4962B32988002383757FAA0F8CF6DE5529F717ECD970C215B0435E5A4EB3018F0C466BA61B2DDAC3F5FFC
Other2.pdf	CF48FB78EC0D76FC1100B1CD388900E84F6954EEF79250CBF1A9AEC5F0C1FA1A0DCF7FA9381E9ADF84BC10E0A647FDAFB936E831D0F83CA1EF5046AEA55A7BCF
Other3.pdf	1A94E367F31716A9984C8B2FD104663F49C420A41D6F4747EA923611F9AF21209655D8B875B732A03369D328772CD8970931040BE92420440927 7B466ACC2D40

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

FanDuel Ex. 1002-1643
FanDuel Ex. 1002-1643

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

7590 04/26/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
IANNUZZI, PETER J	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
04/26/2024	ELECTRONIC

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) filed 04/02/2024 in the above-identified application fails to meet the requirements of 37 CFR 1.97(d) for the reason(s) specified below. Accordingly, the IDS will be placed in the file, but the information referred to therein has not been considered.

The IDS is not compliant with 37 CFR 1.97(d) because:

- ☐ The IDS lacks a statement as specified in 37 CFR 1.97(e).
- ☑ The IDS lacks the fee set forth in 37 CFR 1.17(p).
- ☐ The IDS was filed after the issue fee was paid. Applicant may wish to consider filing a petition to withdraw the application from issue under 37 CFR 1.313(c) to have the IDS considered. See MPEP 1308.

C. Garner, for

571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

FanDuel Ex. 1002-1644

UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	**05/08/2024 04:32:25 PM Z ET**	**AIRP-01054**

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	65431172	FILING DATE	09/29/2021
CUSTOMER #	28960	FIRST NAMED INVENTOR	David B. Lockton
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
AIRP_01054_Issue_Fee_5_8_2024.pdf	1	Issue Fee Payment (PTO-85B)	424 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
AIRP_01054_Issue_Fee_5_8_2024.pdf	696772083592A471A1F549B1373CE6D434E2F96887226A0D05A1609E0D0D8601E978BD23DCC102BCDB057A51D68D7B7C052EE8D6999D651F2416676C9ACE7016

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by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

28960 7590 02/09/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

TITLE OF INVENTION: SYNCHRONIZED GAMING AND PROGRAMMING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	05/09/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
IANNUZZI, PETER J	3715	463-042000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

Haverstock & Owens, A Law Corporation

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Winview IP Holdings, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Charlotte, North Carolina

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 08-1275

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Jonathan O. Owens/ Date May 8, 2024

Typed or printed name Jonathan O. Owens Registration No. 37,902

FanDuel Ex. 1002-1647

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/488,674	05/08/2024 04:32:25 PM Z ET	AIRP-01054

Title of Invention

SYNCHRONIZED GAMING AND PROGRAMMING

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8881	FILED BY	Jonathan Owens
PATENT CENTER #	65431172	AUTHORIZED BY	-
CUSTOMER #	28960	FILING DATE	09/29/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	David B. Lockton

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 3007	E202458G33465424	Jonathan Owens

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
081275	37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2501	UTILITY ISSUE FEE	480.00	1	480.00
			TOTAL AMOUNT:	$480.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement

Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	86	10709987	B2	2020-07-14	David B. Lockton et al.	
	87	10721543	B2	2020-07-21	Tim Huske et al.	
	88	5838909	A	1998-11-17	H. Scott Roy	
Change(s) applied to document, /P.H./ 2/15/2024	89	6038599	A	03/2000 ~~2016-12-17~~	Black, Norman R.H.	
	90	6343320	B1	2002-01-29	Fairchild, Steven E.	
	91	6418298	B1	2002-07-09	Sonnenfeld	
	92	6446262	B1	2002-09-03	Malaure et al.	
	93	6697869	B1	2004-02-24	Mallart, Raoul	
	94	7124410	B2	2006-10-17	Berg, Thomas B.	
	95	7187658	B2	2007-03-06	Hisako Koyanagi	
	96	7510474	B2	2009-03-31	Carter, Sr.	

FanDuel Ex. 1002-1650

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	64	6475090	B2	2002-11-05	Gregory Robert R.	
Change(s) applied to document, /P.H./ 2/15/2024	65	6659861	B1	12/2003 ~~2003-12-09~~	Sadeg M. Faris	
	66	6811487	B2	2004-11-02	Toshio Sengoku	
	67	6845389	B1	2005-01-10	Sanjoy Sen	
	68	6903681	B1	2005-06-07	Sadeg M. Faris	
	69	4930010	A	1990-05-29	Lindsay W. MacDonald	
	70	5530483	A	1996-06-25	James C. Cooper	
	71	8849255	B2	2014-09-30	Choti, Joseph Francis	
	72	10248290	B2	2019-04-02	Phillip Galfond	
	73	2831105	A	1958-04-15	Louis W. Parker	
	74	4386377	A	1983-05-31	Richard E. Hunter Jr.	

FanDuel Ex. 1002-1651

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

Change(s) applied to document. /P.H./ 2/15/2024	72	20130079150	A1	~~2013-04-06~~ 03/2013	Lockton et al.	
	73	20130079151	A1	2013-03-28	Lockton et al.	
	74	20130196774	A1	2013-08-01	Lockton et al.	
	75	20130225285	A1	2013-08-29	Lockton	
	76	20130225299	A1	2013-08-29	Lockton	
	77	20140031134	A1	2014-01-30	Lockton et al.	
	78	20140106832	A1	2014-04-17	Lockton et al.	
	79	20140155130	A1	2014-06-05	Lockton et al.	
	80	20140155134	A1	2014-06-05	Lockton	
	81	20140206446	A1	2014-07-24	Lockton et al.	
	82	20140237025	A1	2014-08-21	Huske et al.	

FanDuel Ex. 1002-1652

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	39	20070028272		2007-02-01	Lockton	
	40	20070054695		2007-03-08	Huske et al.	
	41	20070078009		2007-04-05	Lockton et al.	
	42	20070107010		2007-05-10	Jolna et al.	
	43	20070222652		2007-09-27	Cattone et al.	
	44	20070086465		2007-04-19	Paila et al.	
	45	20070210908		2007-09-13	Putterman et al.	
	46	20080013927		2008-01-17	Kelly et al.	
	47	20080066129		2008-03-13	Katcher et al.	
Change(s) applied to document, /P.H./ 2/15/2024	48	20080051201		02/2008 ~~2008-02-28~~	Vito Lore	
	49	20080104630		2008-05-01	Les Bruce	

FanDuel Ex. 1002-1653

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	152	5794210		1998-08-11	Goldhaber et al.	
	153	5846132		1998-12-08	Junkin	
	154	5848397		1998-12-08	Marsh et al.	
	155	6015344		2000-01-18	Kelly et al.	
Change(s) applied to document. /P.H./ 2/15/2024	156	6104815		08/2000 ~~2001-09-11~~	Alcorn et al.	
	157	6110041		2000-08-29	Walker et al.	
	158	6135881		2000-10-24	Abbott et al.	
	159	6287199	B1	2001-09-11	Alcorn et al.	
	160	6371855	B1	2002-04-16	Gravriloff	
	161	6837789	B2	2005-01-04	Garahi et al.	
	162	6837791	B1	2005-01-04	McNutt et al.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17488674
Filing Date	2021-09-29
First Named Inventor	David B. Lockton
Art Unit	
Examiner Name	
Attorney Docket Number	AIRP-01054

	75	4918603		1990-04-17	Hughes et al.	
	76	5018736		1991-05-28	Pearson et al.	
	77	5636920		1997-06-10	Shur et al.	
	78	5794210		1998-08-11	Goldhaber et al.	
	79	5846132		1998-12-08	Junkin	
	80	5848397		1998-12-08	Marsh et al.	
Change(s) applied to document, /P.H./ 2/15/2024	81	6015344		01/2000 ~~2019-04-08~~	Kelly et al.	
	82	6110041		2000-08-29	Walker et al.	
	83	6135881		2000-10-24	Abbott et al.	
	84	6371855	B1	2002-04-16	Gavriloff	
	85	6837789	B2	2005-01-04	Garahi et al.	

FanDuel Ex. 1002-1655

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17488674
	Filing Date	2021-09-29
	First Named Inventor	David B. Lockton
	Art Unit	
	Examiner Name	
	Attorney Docket Number	AIRP-01054

	31	7835961	B2	2010-11-16	Davie et al.	
	32	7926810	B2	2011-04-19	Fisher et al.	
	33	7937318	B2	2011-05-03	Davie et al.	
	34	8025565	B2	2011-09-27	Leen et al.	
	35	8086510	B2	2011-12-27	Amaitis et al.	
	36	8092303	B2	2012-01-10	Amaitis et al.	
Change(s) applied to document. /P.H./ 2/15/2024	37	8105141	B2	01/2012 ~~2011-01-31~~	Leen et al.	
	38	8128474	B2	2012-03-06	Amaitis et al.	
	39	8147313	B2	2012-04-03	Amaitis et al.	
	40	8186682	B2	2012-05-29	Amaitis et al.	
	41	8204808	B2	2012-06-19	Amaitis et al.	

FanDuel Ex. 1002-1656

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	06/11/2024	12005349	AIRP-01054	8881

28960 7590 05/22/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 82 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

FanDuel Ex. 1002-1657

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

David B. Lockton, Redwood City, CA;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

Winview, Inc., Redwood City, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/488,674	09/29/2021	David B. Lockton	AIRP-01054	8881

28960 7590 06/11/2024

Haverstock & Owens, A Law Corporation
162 NORTH WOLFE ROAD
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EXAMINER	
IANNUZZI, PETER J	

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