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Sir:

Transmitted herewith for filing is the Patent Application of:

Inventors **: Oded SHMUELI and Benny YEHEZKEL;**

FOR **: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES;**

Enclosed are:

☒ **__24__ pages of specification (including Abstract page)**
☒ **__1__ sheets of drawings**
☒ **__25__ total pages**
☒**Executed Declaration**
☒**Executed Power of Attorney**
☒ **Application Data Sheet. See 37 CFR 1.76.**
☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

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Respectfully,

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APPLICATION FOR PATENT

Inventors: Oded SHMUELI and Benny YEHEZKEL

Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

RELATED APPLICATIONS

This application is a Continuation of U.S. Patent Application No. 13/118,503 filed on May 30, 2011, which is a continuation of U.S. Patent Application No. 10/347,388 filed on January 21, 2003, now U.S. Patent No. 7,969,990, which claims the benefit of priority of U.S. Provisional Patent Application No. 60/398,077 filed on July 25, 2002. The contents of the above Applications are incorporated herein by reference.

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to routing of data including multimedia between electronic devices, and more particularly but not exclusively to rerouting of incoming communications that may or may not include multimedia to devices other than the initial receiving device. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional.

With the introduction of mobile communication devices, telecommunications technology has transformed society over the past decade. The ability to communicate almost anywhere, anytime, with few geographical limitations has resulted in a society, in both social and business contexts, which is almost always on-line. Mobile communication devices today typically have data processing ability which allows them to handle multi-media, and different types of devices are today able to communicate with each other, either directly via a permanent or temporary link or indirectly via a network. Thus data, including multimedia, can be directed or routed from one device to another device. The idea of multi-media routing stems from the myriad of opportunities which present themselves in routing signals from one device or kind of device to another. However, in general, the playing of multimedia data is limited, at least in the short term, to the device on which it is received, or to those in

which the data originates. This limitation can be a considerable limitation on the user's ability to enjoy the multimedia since different devices have very different capabilities regarding the playing of multimedia.

The media playing devices considered specifically in the present disclosure include both mobile devices (cell phones, PDA's, handheld devices, etc.) and non-mobile devices (land/fixed line phones, computer monitors, Hi-Fi sets, speakers, etc.). Some of the devices may be used for just one or two media types and others are more general in their applicability, which is to say it is possible to use the devices in different modes for playing several media types: voice, text, images, and video. Likewise, the devices are used in various locations: at the office, home, car, hotel room, plane, outdoors, etc.

Most current mobile devices in particular provide relatively poor multi-media capabilities including digital audio, image, and/or video capabilities (as well as other media capabilities) in comparison with other existing devices such as land/fixed line phones, computer monitors, TV screens and Hi-Fi sets. Compared to high quality media playing equipment, even 3rd generation mobile devices (3G) are of inferior quality.

A number of patent applications discuss rerouting of communications from one communication unit to another. An example is GB 2,370,451, which discloses a communication unit that detects the presence in its vicinity of a second communication unit and determines its identity. If the identity is found to be of a predetermined set (*e.g.* of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

WO0141317A3: call diversion system, discloses a system specifically for redirecting calls between satellite and terrestrial cellular systems. The disclosure addresses the issue of reformatting data messages for the transition.

Neither of the above systems takes into consideration the types of multimedia content of the incoming calls data or playing quality and usage comfort when deciding whether to redirect, and redirection is based on devices having a shared ownership or otherwise being part of a predetermined set. In the above-described systems the user typically has only limited control over rerouting. Nevertheless, it would be highly

advantageous to provide the user with the ability to select a target device, based on the type of multimedia content, and furthermore to choose a device for play or storage of the content independently of the initially targeted or originating device.

SUMMARY OF THE INVENTION

According to a first aspect of the present invention there is thus provided data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

The apparatus preferably further comprises a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

Preferably, said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

Preferably, a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

The apparatus preferably further comprises a media cloner for making multiple copies of the data, in particular but not exclusively an incoming communication, thereby to enable said apparatus to redirect, for example, a single incoming communication to a plurality of locations.

Preferably, said announcer is an active device, operable to transmit at least status information to respective surroundings.

Preferably, said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

Preferably, said passive device further carries status information of said device.

Preferably, said announcer comprises a barcode and wherein said scout is a barcode reader.

The apparatus preferably further comprises an outgoing multimedia transmitter for directing rerouted media directly to a selected device.

The apparatus preferably further comprises control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

The apparatus preferably comprises control functionality operable to carry out said rerouting directly.

The apparatus preferably comprises control functionality operable to carry out said rerouting through locally available network infrastructure.

The apparatus preferably comprises a device database for storing compatibility data of different equipment types.

According to a second aspect of the present invention there is provided a method of rerouting data comprising:

Receiving or generating said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

The method preferably comprises determining compatibility of said available devices in said vicinity with said communication.

The method preferably further comprises carrying out media type transformation from a media type of said data to a media type compatible with a selected device.

The method preferably further comprises carrying out selection between devices found to be available, via a user interface.

The method preferably further comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

The method preferably further comprises selecting a plurality of devices to reroute said data thereto, and cloning said data for each selected device.

The method preferably further comprises determining availability of other devices in the vicinity of said target device, and

rerouting said data to at least one further target device selected from devices found to be available.

According to a third aspect of the present invention there is provided a data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, purely by way of example, to the accompanying drawings.

With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice. In the accompanying drawings:

Fig. 1 is a simplified diagram showing a plurality of electronic devices in the vicinity of one another, between which communications can be rerouted according to a preferred embodiment of the present invention, and

Fig. 2 is a simplified block diagram showing a preferred apparatus for attachment to an electronic device for allowing the device to support rerouting according to preferred embodiments of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The capability of routing of multi-media content (possibly including media transformation and multiplication, i.e. cloning) from one device to another may dramatically upgrade media playing quality, and grant the user the liberty to play the

content on any device he wishes, preferably the most suitable device available, regardless of the origin of the content or the device to which the content may initially have been directed, or at which the content originates. Furthermore, by rerouting to a more capable device, a user's satisfaction level may be increased in comparison to having to remain with a device that say is limited by inferior data rate, processing power, memory capacity or input/output facilities. For example, a cellular communication device such as a mobile telephone is such a limited capability device which is typically the initial recipient of a communication. Such an initial recipient, or originator, is referred to hereinafter as the routing-source device. Furthermore, as will be explained below, the ability to route content from non-mobile, that is land or fixed devices to nearby mobile and other devices permits a range of possibilities for use which is currently not provided for.

For example, the ability to route an incoming phone call, typically comprising voice, from a mobile device to a land/fixed line phone may generally be expected to upgrade the quality of the call. The ability to route hand held calendar content from a mobile device having some digital ability to a computer monitor, may allow for better viewing of the information. Such rerouting may also enhance the user's ability to share the information with other people or with computer applications, for example applications that capture information displayed on the monitor and use it to trigger other events. Such applications can easily be run on a PC or laptop computer but are difficult to run on a mobile telephone for example.

An incoming call or other originating data may be rerouted more than once. In preferred embodiments, individual devices do not need to know whether they are an initial receiving device or a first or subsequent rerouting device, and may treat any arriving communication in the same way.

Furthermore, a preferred embodiment of the present invention provides an ability to route an incoming voice message from say a mobile device or voice mailbox to a facsimile machine or display monitor, combined with a transformation capability – in this case an ability to transform voice to text. Software packages that interpret voice and translate into text are well known and commercially available. Such packages, which presently require training on a specific voice in order to produce reasonable results, may broaden the usage of voice messages. However, even without training, the best packages can produce sufficiently good results to enable say the hard of hearing to make a reasonable interpretation of an incoming voice signal. Thus such

a rerouting-while-transforming capability may be highly desirable for people with special needs - impaired senses (hearing, vision) who may use such a capability to receive information in a form more usable to them. Likewise such a capability may be useful for receiving communications in difficult environments such as a noisy factory floor.

As a further example, an incoming phone call directed at a land/fixed line may be rerouted to a mobile device, thus, effectively using the mobile as a cordless phone. Such a technique may ease acceptance of a phone call in a hotel lobby, at a colleague's office, at a restaurant and in many other settings.

Routing an incoming call away from a mobile telephone may also be advantageous health-wise in decreasing the physical proximity of electromagnetic radiation (emitted by mobile devices) to the user.

It is pointed out that communication-enabled devices can receive an incoming communication for rerouting. However as long as rerouting is direct from device to device, the device to which the rerouting is made need not be generally enabled for external communication as typically managed by a service provider be it phone, cellular, internet and the like. Furthermore, routing is not limited to rerouting of incoming communications but also applies to routing of data from any kind of data source to any kind of data player. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional. Thus video data being captured at a video camera may be directed using embodiments of the present invention to a convenient nearby video player or multimedia enabled PC. Thus, a generally non-communication enabled device will be unable to receive initial communications but can route data to other devices and can receive data as a rerouting target.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is applicable to other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

Reference is now made to Fig. 1, which is a simplified schematic diagram showing a cellular telephone 10 in proximity to a fixed telephone 12 and a computer monitor 14. The three electronic devices need have no relationship to each other except that of proximity. An incoming call is received at cellular telephone 10. As will be explained below, the cellular telephone 10 detects the presence of the other devices 12 and 14 and allows the user to retain the call at the cellular telephone 10 or alternatively to transfer it to either of the other devices 12 and 14. If the user chooses the fixed telephone 12 then the call is rerouted in one of a number of ways explained below to the fixed telephone 12 where the call may be taken in the usual way. If the user chooses the computer monitor 14 then assuming the presence of speakers and a microphone the call may be taken again in the normal way. In addition, software may be provided, either at the cellular telephone 10 or at the computer 14 to convert the voice signal into text.

It is noted that in the case of a cellular telephone, the telephone communication is a bi-directional type of communication, and any rerouting should preferably support a return path for the communication.

In addition, using the above rerouting, a call can be set up to support a game session. The call can be set up using a cellular telephone, and then one or both users reroutes the call to a game console.

The above may be achieved by sending rerouting control data along with the rerouted communication, which control data includes a return address. The return address may be a final return address for single stage rerouting, or may be an intermediated return address in the case of multi-stage rerouting. In the latter case, the intermediate return address can be used in an intermediate rerouting device to find a further rerouting address.

Reference is now made to Fig. 2, which is a simplified block diagram showing in schematic form the elements of a modification to be applied to a communication device for use in call rerouting of the kind described in Fig. 1. It will be appreciated that the elements are not restricted to a cellular telephone but may be applicable to any electronic device and more particularly but not exclusively to communication-enabled devices. Depending on the device type, some functionality may be disabled. For example, a land/fixed line phone might not need an outgoing multi-channel multi-media transmitter component. A device not enabled for external communication may not be able to receive originating communications from an external communication

network but may be able to route data to other devices and be the target for data and communication rerouting.

The device comprises an incoming multi-media receiver 20 which is responsible for capturing media content and passing it to one of the other components in the device, depending on the circumstances, as will be explained below. One of these other components is outgoing multi-channel multi-media transmitter 22. Transmitter 22 is responsible for transmitting (directly) media streams to external devices which are specified to it. Transmitter 22 comprises a multi-channel port which is able to transmit several media types to several devices at the same time.

A media transformer 24 is responsible for transforming its input (incoming media) into a required media type, or types, and outputting the resulting media stream(s), or file(s). It too preferably has a multi-channel Output. The media types required as output are preferably specified externally. A preferred embodiment of a media transformer includes a voice to text transformer as discussed above. The voice to text transformer may be augmented by a text to fax transformer. Further transformations include image transformations such as color to black and white, resolution reductions, and image format transformations. Similar transformations may be provided for video, and to the extent applicable for sound formats.

Media cloner 26 is responsible for duplication of its input channel content, preferably received from the incoming multi-media receiver 20 (input media) into as many output channels as indicated to it externally. Each output stream, or file, is routed, as indicated to it externally, to either the media transformer 24 or the outgoing multi-media transmitter 22.

Controller 28 is responsible for managing all the other components and monitoring their activities. In particular, any media (packaged or streamed) transfer between components, input and output, is performed under the controller's supervision.

In operation, content is received at incoming multimedia receiver 20. As will be explained in detail below, one or more destinations for the data as well as media type transformations are selected. In the case of straightforward rerouting of the media to another device, the content is sent directly to outgoing multi-media transmitter 22 for simple media routing to a similar content type device. In other circumstances, transforming from one media to another may be required prior to rerouting. In such a case, content is directed to media transformer 24 prior to

rerouting, where transforming is carried out. The transformed content is then directed to the outgoing multi-media transmitter 22 as before. Content is directed to media cloner 26 in cases where it is intended to route the content to more than one device, or if for any reason it is intended to send multiple copies to the same device. From the media cloner the content may then be sent directly to the outgoing multi-media transmitter 22 for direct output, or one or more of the copies may be sent to the media transformer for transformation prior to output. Routing of the content and operation of the above-mentioned components is preferably controlled by controller 28.

In order to make decisions about selecting destinations and media types and in order to allow other devices to receive availability information, three more components are preferably provided, an announcer device 30, a scout device 32 and a device library 34.

The announcer device 30 is responsible for announcing to the environment the availability of a current device for accepting routed media. It may also indicate device type and use conditions, preferably including any usage charges, thus enabling surrounding devices to avoid say sending video data to a fax machine, or enabling security conscious users to avoid receiving non-trusted data at their device. When the device becomes busy (for example, a phone that is handling a call), it announces this to the environment, typically via transmissions. Similarly, it announces its becoming available. Announcements may be periodically repeated. As an alternative the announcer device 30 may signal only when available or only when unavailable. Another (optional) function of the announcer 30 is that of informing the environment, typically a user, that media content has been routed to it and is now usable (for example, to announce that a rerouted call is now available on this telephone). The latter kind of announcement, that is to say to persons rather than to electronic equipment, may typically comprise light flashes, rings, a loudspeaker sound or even a smell.

Typically, the announcer device 30 may be active (transmitting) or passive (reacting, or reflecting). A simple example of a passive announcer device is a sticker attached to a phone and supplying say device type and conditions of use information using a barcode. The sticker may be scanned and comprehended by the scout devices 32. In addition to a sticker, a passive announcer may be provided using an LCD screen displaying a barcode. The LCD or like screen is advantageous in that, since its display can change, the barcode can indicate current status information. An

alternative way of providing status information along with a barcode is by providing a color display alongside the barcode. The color display may be changed electronically or mechanically by the device to indicate different states, and can be read optically along with the barcode.

The scout device 32 is responsible for scanning the environment to find other devices therein and to determine their status, typically free or busy. The scout is also responsible for obtaining any specific use conditions from announcers 30 of the devices being detected. The scout may be activated periodically and/or upon demand.

Device library 34 contains information needed for communicating with various devices. Such information may typically include usage related information as well as technical information regarding expected media formats and transmission technology specifications, including protocols, used by the device type. It may also contains pre-defined user preferences if defined, including default user preferences.

The controller 28 is responsible for integrating knowledge accumulated by the scout, and for directing operation of the announcer 30. The controller uses either pre-defined user preferences from the device library 34 or it may obtain preferences over a network, or it may simply capture user preferences using menus or like user interaction. The controller preferably follows the appropriate receiving/transmitting protocol including hand shake, identification, authentication, encryption procedures and the like.

The apparatus described in respect of Fig. 2 may be physically packaged, for example as a card, a chip or an attached stand-alone unit. The apparatus may also be realized as software within another apparatus, host device - for example, on a personal computer (PC), cell phone, a personal digital assistant (PDA) or other standard electronic devices. In any case, the host apparatus preferably possesses its own transmission and receiving capabilities, or is connected, perhaps via a network, to another device that does have such capabilities.

For example, a host cellular telephone may use already installed IR for scouting and announcing or any of the previously described technologies. A PC may use an existing peripheral digital camera for scouting and local network devices for transmission.

In many situations, as briefly described in previous examples, certain apparatus activities may be initiated via user interaction, and preferred ways of enabling user interaction comprise displaying menus, or using voice menus, or

conceivably even using feel or smell menus. Certain actions are preferably taken automatically, that is to say without user interaction. Such automation may be based on profiles, terms, and conditions. Conditions may for example be associated with the device that performs the routing, as well as with a device to which media is routed. Profiles may be stored with the modification apparatus of Fig. 2 or obtained from remote sources.

Menus may be activated in the following modes:

a) Automatic pop-up menu upon event (incoming call, message etc.)

b) Manual (menu) activation ("always on".)

To protect against hostile or non-trusted parties, the modification preferably provides some level of firewall protection for both receiving and transmitting components. Such protection may comprise identification and/or authentication, and may comprise restrictions on routing or receiving information to devices whose owners are not trusted. In addition, to protect privacy, transmitted information may be encrypted.

Considering the outgoing multi-media transmitter 22 in greater detail, the transmitter may incorporate one or more of the following transmission technologies for transmitting media to a nearby device:

- Infra-red (IR)
- Microwave
- Radio (any suitable frequency)
- Sound waves
- Ultrasound
- Wire (and cable) transmission technologies
- Light (visible)
- Laser
- Chemical (mainly smell)
- Quantum techniques

and other technologies that will occur to the skilled person. The choice of technology may depend on general and specific circumstances, such as the type of data to be transmitted, the environment of the transmission, safety and like considerations, and compatibility with as many as possible other devices.

As described above, rerouting may be direct, that is device to device. Direct (local) routing between devices uses one or more of the technologies specified above but does not usually use any external service provider services, network, or infrastructure. Such routing may however use a local computer network, for example cable or radio-based, or simple end-to-end communication (for example, IR communication between two or more devices).

In addition, rerouting may be indirect. Indirect non-local routing relies on external service provider services, network and infrastructure. Indirect routing still requires the device initially receiving the communication to detect available receiving devices and determine their capability and availability and also requires potential rerouting recipients to announce their capabilities to the environment. The device initially receiving the communication then makes a decision, typically with the help of user interaction, to determine whether to reroute the message and if so to what device, just as before. However the rerouting information is then sent to the external provider who carries out the rerouting of the communication by switching at the exchange. Such a switching method can take advantage of higher data rates over land lines as opposed to wireless connections.

A third rerouting mode uses local network infrastructure to carry out the rerouting. The communication is routed through a local area network (LAN), or a wide area network (WAN) infrastructure with information to indicate to the network which device has been selected for rerouting. However the network has to interpret the information to decide how to route the information. Either kind of rerouting through the available network infrastructure may be useful, for example for rerouting of an incoming phone call from a cellular telephone to a colleague in another room within the same organization.

There are many ways to exploit the capability to route different content (media) types between different devices. Using only rerouting, one may route one form of content (for example audio) only to devices that handle audio (for example, routing an audio stream to nearby speakers). Using rerouting combined with a media type transformation capability, one may route content transformed specifically for a receiving device. Thus for example voice may be transformed into text and then routed to a fax machine. It may also be possible to transform color images to smell and reroute them to a device able to output smell. Finally, cloning allows the same content to be sent to several devices, and combinations of different transformations

for different devices may allow additional dimensions to incoming multi-media. Thus, for example an incoming signal comprising music and voice could be cloned. One of the clones could be transformed into text and transmitted to a monitor able to display text. The other clone could be transmitted to speakers to give high quality reproduction of the music. As a further variation, if the incoming music signal is initially directed at a mobile device, it could first of all be rerouted at the service provider level to a land device so as to support a better data rate and then cloned and redirected for text output as described above. Thus high quality audio play of the music can be combined with a display of the words of the song.

The list below describes typical device/media type combinations for rerouting capability. It is noted that not all the devices are typical external-communication-enabled devices. As mentioned above, non-external-communication enabled devices may not receive original incoming communications but they can route data to other devices and receive data as rerouting targets.

1. Audio and Voice

Audio, and voice type media may be routed from devices including cellular telephones and other cellular or mobile devices including voice enabled PDA's, two-way radios etc., land or fixed line telephones, voice mail boxes (voice messages), Hi-Fi sets, both mobile and non-mobile including radio receivers, MP3 players, Cassette, CD, DVD and VCR players, and the like, and TV sets.

Audio and voice-type media may typically be routed to land or fixed line telephones, cellular telephones and like cellular mobile devices, Hi-Fi sets (mobile and non mobile), car audio systems, TV sets, speakers, and LAN/WAN servers and like infrastructure.

2. Video

Video media may be routed from cellular telephones, especially 2.5G and 3G devices, and other similar hand held devices, DVD and VCR players – both mobile and non-mobile, video cameras and recorders, monitors (screens) including those of TV sets, computer monitors, etc. mobile game devices (for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure.

Video media may typically be routed to cellular telephones and especially 2.5G and 3G devices, other cellular hand held devices, monitors (screens) including those of TV sets, computer monitors, etc. DVD and VCR players – including both mobile and non-mobile devices, video cameras and recorders, mobile game devices (for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure etc.

3. Text

Text type data may be routed from cellular telephones where they may be in the form of SMS, email messages and the like, other hand-held devices, unified messaging mail boxes, electronic books, standard computers, and the like.

Such text type data may be routed to monitors (screens) – including TV sets, computer screens, etc. printers, facsimile machines, cellular telephones and other hand held devices, unified messaging mail boxes and LAN/WAN servers and like infrastructure, etc.

4. Images

Image data may typically be routed from digital cameras, facsimile machines, monitors (screens) including TV sets, computer screens, etc., digital vision-oriented equipment such as microscopes, telescopes, binoculars, etc.

Such image data may be routed to cellular telephones, especially 2.5G and 3G devices, other hand held devices, monitors (screens) - including TV sets, computer screens, etc. digital cameras, facsimile machines, printers, unified messaging mail boxes, and LAN/WAN servers and like infrastructure.

As stated earlier, combining the routing capability with the media transformation capability in principle enables routing of any media between any pair of devices appearing in the lists above. Furthermore, combined with cloning, media may be used in different ways at different devices. Such different ways may even be carried out concurrently, thus enabling the simultaneous routing of any media type to any number of devices.

The following is a series of procedure flows for different scenarios.

In the scenarios, appropriate combinations of Routing, Transforming and Cloning an incoming communication are selected to fit the circumstances.

Scenario 1

1. A person carrying a mobile phone enters his colleague's office
2. In the office there are a land/fixed line phone and a computer screen (monitor)
3. An incoming phone call arrives at the person's cell phone
4. The cell phone detects the said land/fixed line phone and monitor
5. A pop up menu appears on the cell phone display and after the person acknowledges, the phone call is routed to the land/fixed line phone
6. The land/fixed line phone flashes to indicate an incoming call
7. The person receives the call on the land/fixed line phone
8. The person wishes his colleague to be aware of what's being said on the other side of the line
9. He activates a menu on the cell phone display and chooses the "Clone to Monitor" option
10. The monitor shows the conversation text as it is carried out, enabling the colleague to monitor the conversation's content in text form

Scenario 2

This scenario is similar to scenario A. The difference is:

The phone call is automatically routed to the land/fixed line phone (based on the person's preferences and environment scanning and detection)

Scenario 3

1. A person, say Smith, carrying a cell phone is sitting in a hotel lobby
2. In the lobby there are four land/fixed line phones
3. A phone call arrives at the person's cell phone
4. Option A:
    a. The person points his phone at one of the land/fixed line phones
    b. The cell phone detects the said phone as busy
    c. The person points his phone at another land/fixed line phones
    d. The phone call is routed to that, available, land/fixed phone
    e. The chosen land/fixed phone rings, or flashes to indicate the rerouted call

5. Option B:

a. While ringing, the cell phone indicates on its display that a nearby phone is available

b. The person approves the routing of the call to that nearby phone

c. The nearby phone rings, or flashes to indicate the rerouted call

6. Option C:

a. The call is automatically routed to an available nearby phone

b. The person is notified of the routing on the cell phone display

c. In parallel, the nearby phone uses a loudspeaker to announce the call by calling out Smith's name

d. The nearby phone rings, or flashes to indicate the rerouted call

7. The person receives the call on the available/chosen land/fixed line phone

Scenario 4

1. A hearing impaired person carrying a cell phone enters his colleague's office

2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the colleague's land (fixed) line phone

4. The colleague receives the call and at some point wishes his friend (the hearing impaired person) to participate in the conversation

5. The colleague then clones the voice conversation to both:

i) His monitor (the voice is then transformed to text and appears, as it is spoken, on the monitor)

ii) The hearing impaired person's cell phone

6. The hearing impaired person "hears" the conversation by reading the text appearing on the monitor

7. The hearing impaired person speaks to his cell phone microphone and can thereby participate in the conversation

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention

which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Unless otherwise defined, all technical and scientific terms used herein have the same meanings as are commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods are described herein.

All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the patent specification, including definitions, will prevail. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described hereinabove. Rather the scope of the present invention is defined by the appended claims and includes both combinations and subcombinations of the various features described hereinabove as well as variations and modifications thereof which would occur to persons skilled in the art upon reading the foregoing description.

WHAT IS CLAIMED IS:

1. Apparatus for routing and rerouting streaming data, the apparatus being mobile and comprising:

a streaming device comprising:

an announcer device configured to indicate to surrounding media handling devices that said streaming device is available to receive streaming data, thereby to enable receipt of data or routed data from said surrounding media handling devices, and

a scout device configured to scan surroundings of said streaming device to identify surrounding media handling devices as being compatible to handle given media, and determine availability of said identified compatible media handling devices, thereby to route or reroute streaming data between said streaming device and a selected one of said surrounding media handling devices, said scout device further being configured to determine media type requirements of said compatible media handling devices, said apparatus configured to set up a wireless communication link between said streaming device and a respective one of said media handling devices;

a user interface for allowing a user to select one of said media type requirements of said respective media handling device, and

a media cloner, , for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect said single incoming data stream to a plurality of locations.

2. The apparatus of claim 1, incorporated into one member of the group consisting of a cell phone, a smartphone, a tablet, and an iPod.

3. The apparatus of claim 1, when directing streaming to a media handling device that is a device not equipped for telephony or mobile telephony, or is not a mobile or portable device.

4. The apparatus of claim 1, wherein said streaming data is one member of the group consisting of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data.

5. The apparatus of claim 1, wherein said announcer device is an active device.

6. The apparatus of claim 1, wherein said announcer device is a passive device.

7. The apparatus of claim 1, further comprising a device library, said device library containing said media type requirements for respective devices.

8. The apparatus of claim 1, wherein said user interface comprises a voice interface.

9. The apparatus of claim 1, wherein said routing or rerouting uses a local radio network.

10. The apparatus of claim 1, wherein the media handling device is a fax machine and said media type requirement is a requirement for text, said streaming device being configured to convert an incoming voice stream to text.

11. Apparatus according to claim 1, wherein said mobile communication device is a game console or Wii, Xbox, PlayStation, or game enabling device or Galaxy device or iPod touch, and said streaming data is game data or video or audio and said streaming data being directed to surrounding devices, said surrounding devices comprising one member of the group consisting of TV, set-top boxes, tablet computers, and smartphones, to be displayed and played from such devices as well as or instead of on said mobile communication device.

12. Apparatus according to claim 1, wherein said mobile communication device is a smartphone, mobile handset, a computer, a computer equipped with Skype, a tablet, said mobile communication device configured to receive or generate a call and to redirect said call to said surrounding equipment.

13. Apparatus according to claim 1, wherein said mobile communication device comprises a smartphone or tablet computer and said data is a barcode promotion information, the mobile device directing the barcode data to a surrounding

device or to a point of sale device, or wherein said barcode data is transformed by said surrounding device.

14. Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

15. Apparatus according to claim 1, wherein said scout device is operable to determine said media type requirements of said compatible equipment.

16. Apparatus according to claim 1, wherein said announcer comprises barcode data and wherein said scout is a barcode reader.

17. Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

18. Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available infrastructure.

19. Apparatus according to claim 1, wherein said streaming data is one member of the group consisting of an incoming multimedia communication received from a communication network and an incoming multimedia communication received from a cellular communication network and an incoming multimedia communication received from a local wireless communication network.

20. Apparatus according to claim 1, wherein said streaming data in said first link direction is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment.

21. A method of routing streaming data comprising:

carrying out one member of the group consisting of receiving and generating streaming data at a mobile streaming device,

scouting a vicinity of said mobile streaming device with a scanning device, said scanning device being associated with said mobile streaming device,

through said scanning device determining availability of other devices in said vicinity, wherein the availability is determined based, at least partly, on determining media type requirements of said compatible equipment, and

routing or rerouting said data from said mobile streaming device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said target device and said mobile streaming device, said bidirectional link being capable of carrying a multimedia streaming data in both directions of said bidirectional data link;

when more than one media type requirement is available, allowing a user to select one of said determined media type requirements; and

making multiple copies of incoming streaming data to redirect a single incoming communication to a plurality of locations.

ABSTRACT OF THE DISCLOSURE

Rerouting apparatus for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

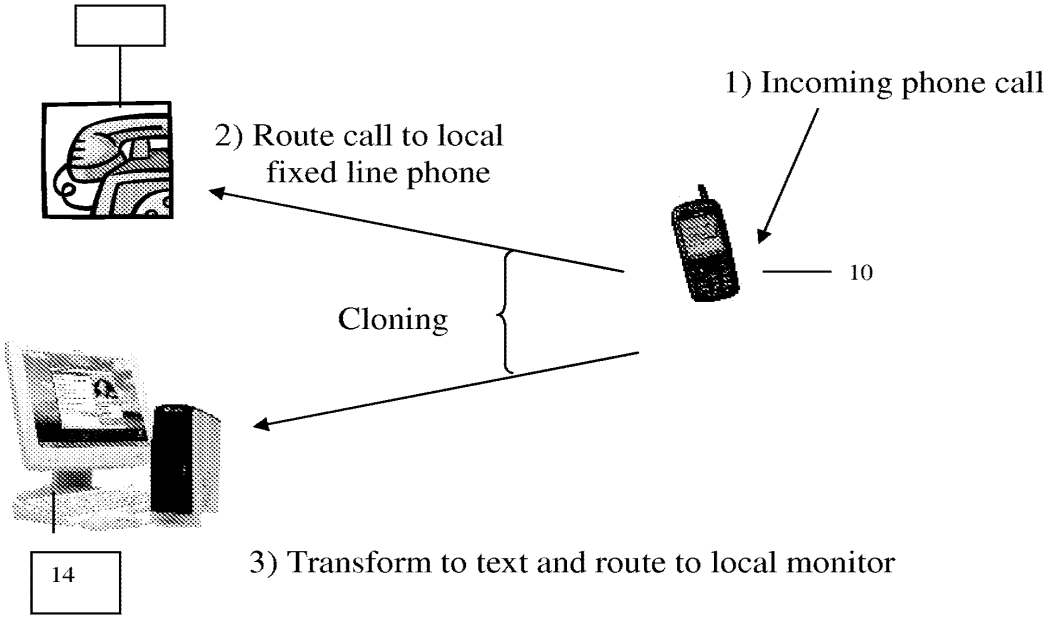

1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

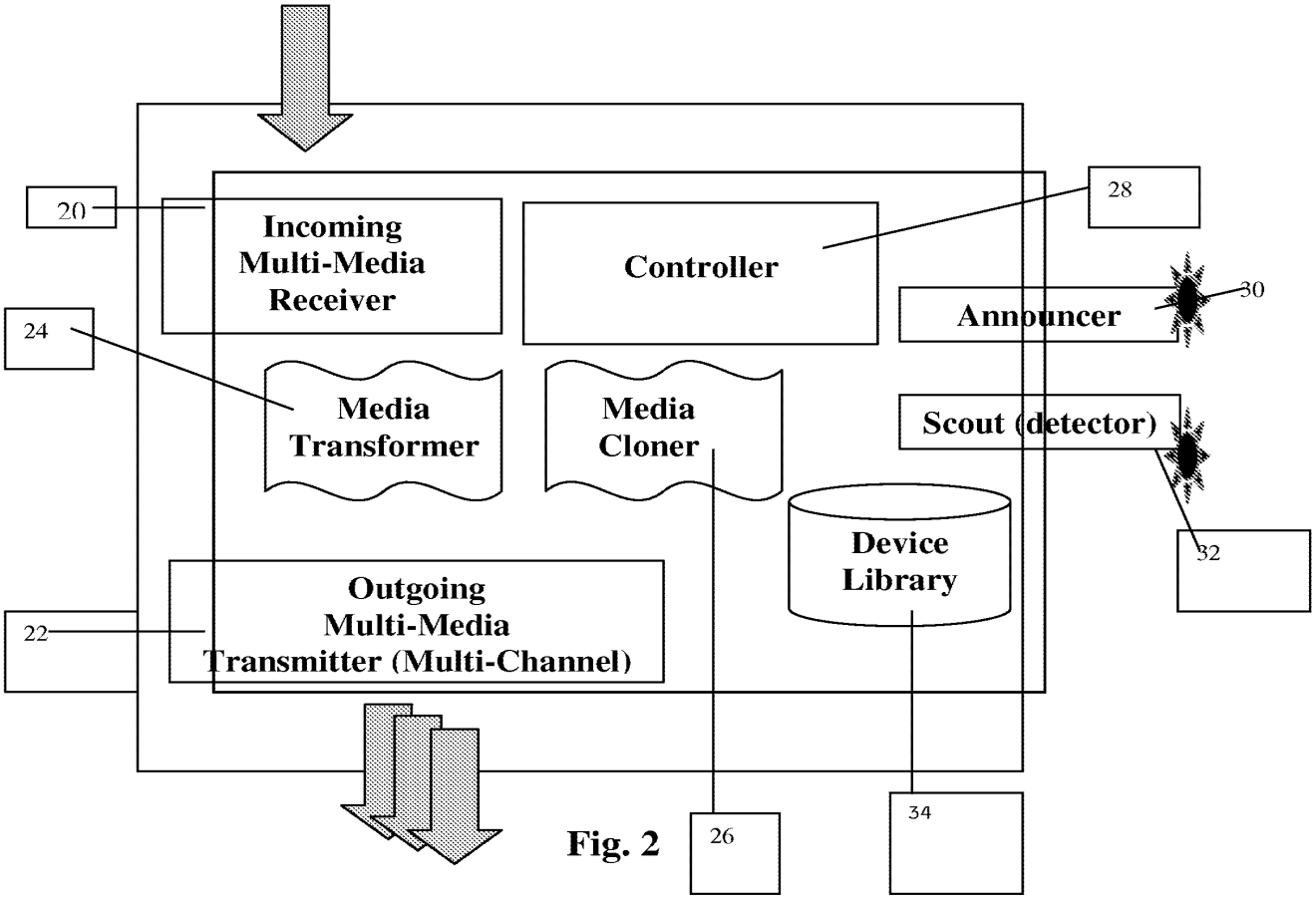

20
Incoming Multi-Media Receiver
Controller
28
30
Announcer
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
Outgoing Multi-Media Transmitter (Multi-Channel)
22
26
34

Fig. 2

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	58710
	Application Number	
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Oded		SHMUELI	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

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Postal Code	3600100	**Country** i	IL

Inventor 2 Remove

Legal Name

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	Benny		YEHEZKEL	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	58710
	Application Number	
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

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Email Address	Jason@ipatent.co.il	Add Email	Remove Email

Application Information:

Title of the Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES		
Attorney Docket Number	58710	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	1	**Suggested Figure for Publication (if any)**	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
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Customer Number	67801		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending	Remove

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	58710
	Application Number	
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13118503	2011-05-30
Prior Application Status	Patented		Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13118503	Continuation of	10347388	2003-01-21	7969990	2011-06-28

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
10347388	non provisional of	60398077	2002-07-25

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Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Priority Claimed
			○ Yes ◉ No

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Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

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In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	58710
	Application Number	
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◯ Assignee ◯ Legal Representative under 35 U.S.C. 117 ◯ Joint Inventor

◯ Person to whom the inventor is obligated to assign. ◯ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Non-Applicant Assignee Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	58710
	Application Number	
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

Assignee 1

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Email Address			

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Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications

Signature	/Jason H. Rosenblum/			Date (YYYY-MM-DD)	2014-03-09
First Name	Jason	Last Name	Rosenblum	Registration Number	56437

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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.

Doc Code: Oath
Document Description: Oath or declaration filed

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☑ Declaration Submitted With Initial Filing

☐ Declaration Submitted After initial Filing (surcharge (37 CFR 1.16(f)) required

Attorney Docket Number	**58710**
First Named Inventor	**Oded SHMUELI**
COMPLETE IF KNOWN	
Application Number	
Filing Date	
Art Unit	
Examiners Name	

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

(Title of the Invention)

As below named inventor, I hereby declare that:

This declaration is directed to:

☑ The attached application,
OR
☐ United States Application or PCT Number _____
Filed On _____.

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Authorization To Permit Access To Application by Participating Office

☑ If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

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In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

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DECLARATION — Utility or Design Patent Application

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I have reviewed and understand the contents of the above identified application.

I acknowledge the duty to disclose information material to the patentability of the claims, as defined by 37 CFR 1.56.

LEGAL NAME OF SOLE OR FIRST INVENTOR:

(E.g., Given Name (first and middle (if any)) and Family Name or Surname)

Oded SHMUELI

Inventor's Signature	Date (Optional)
Oded Shmueli	

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☒ Additional inventors are being named on the 1 supplemental sheet(s) PTO/AIA/10 attached hereto

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Apple EX1002 Page 34

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SUPPLEMENTAL SHEET FOR DECLARATION — **ADDITIONAL INVENTOR(S) Supplemental Sheet (for PTO/AIA/08,09)**

Page 1 of 1

Legal Name of Additional Joint Inventor, if any:
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)
Benny YEHEZKEL

Inventor's Signature | Date (Optional) March 7, 2014

Ramat-Gan Residence: City | State | **Israel** Country

74 Bialik Street Mailing Address

Ramat-Gan City | State | **52441** Zip | **Israel** Country

Legal Name of Additional Joint Inventor, if any:
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)

Inventor's Signature | Date (Optional)

Residence: City | State | Country

Mailing Address

City | State | Zip | Country

Legal Name of Additional Joint Inventor, if any:
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)

Inventor's Signature | Date (Optional)

Residence: City | State | Country

Mailing Address

City | State | Zip | Country

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Doc Code: PA..
Document Description: Power of Attorney

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Attorney Docket Number: 58710

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	
First Named Inventor	Oded SHMUELI
Title	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
Art Unit	
Examiner Name	
Attorney Docket Number	58710

SIGNATURE of Applicant or Patent Practitioner

Signature	/Jason H. Rosenblum/	Date (Optional)	2014-03-09
Name	Jason H. Rosenblum	Registration Number	56437
Title (if Applicant is a juristic entity)			
Applicant Name (If Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of _____2_____ forms are submitted.

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POWER OF ATTORNEY BY APPLICANT

Attorney Docket Number: 58710
Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
By: Oded SHMUELI et al

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 67801

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

YEHEZKEL Benny

☑ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Oded Shmueli/	Date (Optional)	MARCH 2, 2015
Name	ODED SHMUELI		
Title			

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.46. 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 1.11 and 1.14. This collection is estimated to take 3 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.**

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Doc Code: PA
Document Description: Power Of Attorney

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POWER OF ATTORNEY BY APPLICANT

Attorney Docket Number: 58713
Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
By: Oded SHMUELI et al.

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

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☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

67801

OR

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☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

YEHEZKEL Benny

☑ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/N/	Date (Optional)	2015-05-05
Name	Yehezkel Yitzhak		
Title			

NOTE: Signature. This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.**

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Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded SHMUELI
Filer:	Jason Rosenblum
Attorney Docket Number:	58710
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Claims in excess of 20	2202	1	40	40
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
	Total in USD ($)			**770**

Electronic Acknowledgement Receipt	
EFS ID:	18411773
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded SHMUELI
Customer Number:	67801
Filer:	Jason Rosenblum
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	09-MAR-2014
Filing Date:	
Time Stamp:	10:18:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$770
RAM confirmation Number	9192
Deposit Account	501407
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 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	Transmittal of New Application	58710TransmittalSheet.pdf	34584 ecd300bcfed76c389a36886322705adcdf7efb2c	no	1
Warnings:					
Information:					
2	Specification	58710Specification.pdf	115005 af4cc890f32700a16b3bb0180a776656eca0e739	no	24
Warnings:					
Information:					
3	Drawings-only black and white line drawings	58710Figures.pdf	49125 9a06b6f941fc966f71137303aaf5ef039157a7d0	no	1
Warnings:					
Information:					
4	Application Data Sheet	58710ADS.pdf	87959 1681970c26c4dc20322cd47b4136161f2b252494	no	6
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
5	Oath or Declaration filed	58710ExecutedDeclaration.pdf	4105693 3f153df8a15ee570e9c68f2ddf329177822e2562	no	3
Warnings:					
Information:					
6	Power of Attorney	58710ExecutedPowerofAttorney.pdf	4170298 a0bcf3cb69148741571e9c074086e2d0640c34cb	no	3
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	36568 64b52314ff6e06fae62e0b65f8d7143f403f4b74	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	8599232		

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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
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SCORE Placeholder Sheet for IFW Content

Application Number: 14201870 Document Date: 03/09/2014

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- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions below.

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- Other USPTO employees can bookmark the current SCORE URL (http://Score.uspto.gov/ScoreAccessWeb/).
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Form Revision Date: September 30, 2013

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(*use as many sheets as necessary*)

Complete if Known	
Application Number	14/201,870
Filing Date	March 09, 2014
First Named Inventor	SHMUELI Oded et al
Art Unit	
Examiner Name	
Attorney Docket Number	58710

Sheet 1 of 2

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2002/0058499	16-May-2002	Ortiz	
	2	2002/0133545	19-Sep-2002	Fano et al.	
	3	2002/0161862	31-Oct-2002	Horvitz	
	4	2003/0073412	17-Apr-2003	Meade II	
	5	2003/0172121	11-Sep-2003	Evans et al.	
	6	2004/0017788	29-Jan-2004	Shmueli et al.	
	7	2004/0080779	29-Apr-2004	Kawamoto	
	8	2006/0013254	19-Jan-2006	Shmueli et al.	
	9	2007/0285504	13-Dec-2007	Hesse	
	10	2008/0043693	21-Feb-2008	Mousseau et al.	
	11	2009/0055707	26-Feb-2009	Proctor Jr.	
	12	5,854,834	29-Dec-1998	Gottlieb et al.	
	13	5,913,038	15-Jun-1999	Griffiths	
	14	6,134,433	17-Oct-2000	Joong et al.	
	15	6,144,671	07-Nov-2000	Perinpanathan et al.	
	16	6,333,919	25-Dec-2001	Gaffney	
	17	6,594,699	15-Jul-2003	Sahai et al.	
	18	6,961,754	01-Nov-2005	Christopoulos et al.	
	19	7,969,990	28-Jun-2011	Shmueli et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Foreign Patent Documents Country Code[3] Number[4] Kind Code[5] (*if known*)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [6]
	20	GB 2370451	26-Jun-2002	Sydanmaa et al.		
	21	WO 01/41317	07-Jun-2001	Allaway et al.		
	22	WO 2004/012026	05-Feb-2004	Shmueli et al.		

Examiner Signature		Date Considered	

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

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	14/201,870
Filing Date	March 09, 2014
First Named Inventor	SHMUELI Oded et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	58710

Sheet 2 Of 2

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	23	Notice of Allowance Dated 18 February 2011 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	24	Notice of Allowance of 14 January 2014 From the US Patent and Trademark Office Re. Application No. 13/118,503.	
	25	Official Action Dated 04 November 2013 From the US Patent and Trademark Office Re. Application No. 13/118,503.	
	26	Official Action Dated 05 July 2007 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	27	Official Action Dated 05 July 2007 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	28	Official Action Dated 07 July 2010 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	29	Official Action Dated 09 June 2009 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	30	Official Action Dated 17 April 2008 From the US Patent and Trademark Office Re.: Application No. 11/146,130.	
	31	Official Action Dated 23 December 2009 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	32	Official Action Dated 25 April 2013 From the US Patent and Trademark Office Re. Application No. 13/118,503.	
	33	Official Action Dated 27 October 2008 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	34	Official Action Dated 27 October 2008 From the US Patent Office Re.: Application No. 10/347,388.	
	35	Official Action Dated 28 December 2007 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	36	Official Action Dated 28 December 2007 From the US Patent Office Re.: Application No. 10/347,388.	
	37	Response Dated 06 December 2010 to Official Action of 07 July 2010 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	38	Response Dated 22 April 2010 to Official Action of 23 December 2009 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	39	Supplemental Notice of Allowability Dated 13 April 2011 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	

Examiner Signature		Date Considered	

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

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§	
		§	
	SHMUELI Oded et al	§	
		§	Confirmation No.: 4442
Serial No.:	14/201,870	§	
		§	
Filed:	March 09, 2014	§	Group Art Unit:
		§	
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	
		§	Attorney Docket: 58710
Examiner:		§	

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited, other than U.S. Patents and U.S. patent applications. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56, 37 CFR 1.97 and 37 CFR 1.98. The Examiner is requested to make these citations of official record in this application.

The undersigned states:

A. NO CERTIFICATION OR FEE DUE

☒ This Information disclosure Statement is being filed within three months of filing a national application or entry of a national phase of an international application; or before the mailing date of a first Office action on the merits of the above-identified application. Accordingly, no fee or Certification is believed due. However, if a fee is due, authorization to deduct such fee from the Deposit Account 501407 of the undersigned is hereby provided.

B. CERTIFICATION

☐ 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; 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.

C. FEE

☐ Please charge the fee of $180 (Large Entity Status) / $90 (Small Entity Status) set forth in 37 CFR 1.17(p) to Deposit Account 501407. Appropriate fee attached.

This Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any one or more of the citations listed constitutes prior art as defined by 35 U.S.C. 102.

It is respectfully requested that the Examiner consider the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims, and sign the enclosed form PTO-1449 to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application. Notwithstanding any statements by the Applicant, the Examiner is urged to form his/her own conclusion regarding the relevance of the cited information.

Respectfully submitted,

/Jason H. Rosenblum/

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Registration No. 56,437

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GB 2304258 A **EP 0996272 A1**

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INT CL[7] **H04Q 7/32 7/38**
ONLINE: WPI, EDOC, JAPIO

(54) Abstract Title
Diverting calls between different telephones

(57) A communication unit detects the presence in its vicinity of a second communication and determines its identity. If the identity is found to be of a predetermined set (e.g. of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

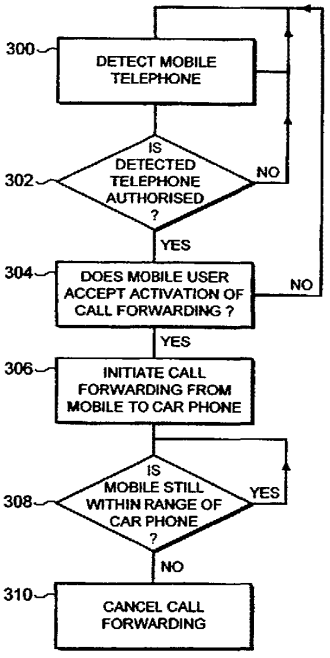


FIG. 3

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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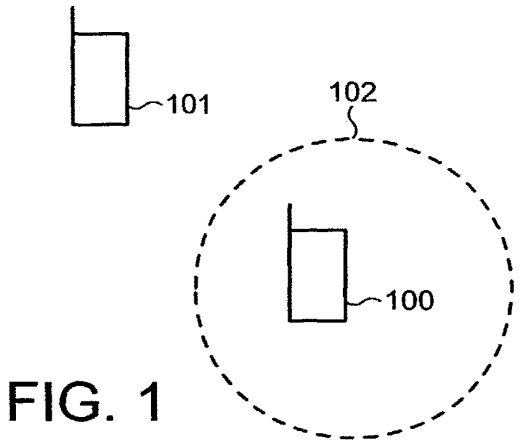

101
102
100

FIG. 1

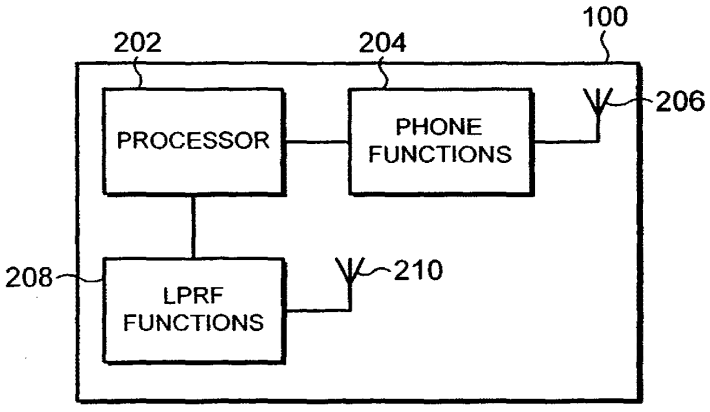

100
202
204
206
PROCESSOR
PHONE FUNCTIONS
208
210
LPRF FUNCTIONS

FIG. 2

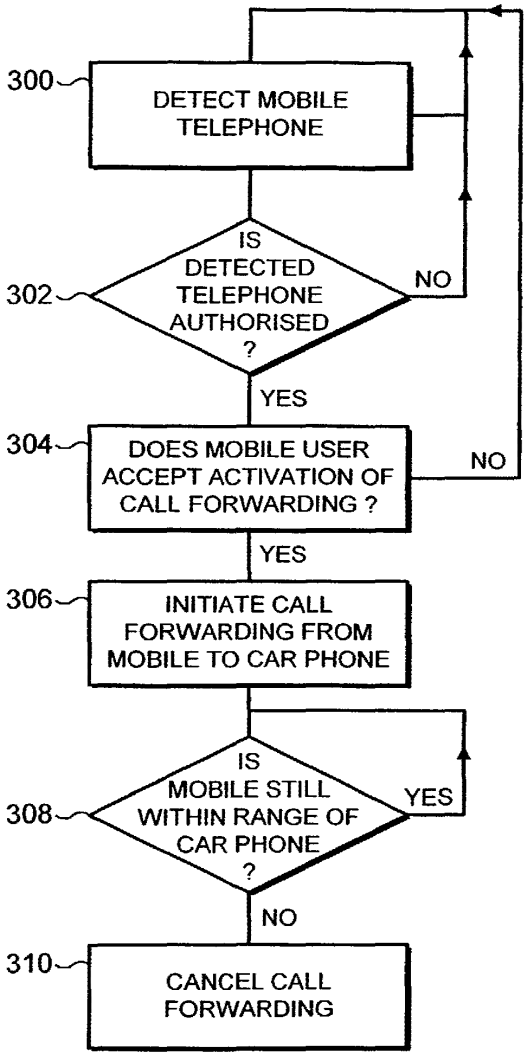

300
DETECT MOBILE TELEPHONE
302
IS DETECTED TELEPHONE AUTHORISED ?
NO
YES
304
DOES MOBILE USER ACCEPT ACTIVATION OF CALL FORWARDING ?
NO
YES
306
INITIATE CALL FORWARDING FROM MOBILE TO CAR PHONE
308
IS MOBILE STILL WITHIN RANGE OF CAR PHONE ?
YES
NO
310
CANCEL CALL FORWARDING

FIG. 3

PAT 00411 GB

MANAGING MULTIPLE RADIOTELPHONES

The present invention relates to radiotelephones and, more particularly, to the management of multiple radiotelephones.

In recent years, the penetration of handheld portable radiotelephones has grown enormously, and now, in many countries, the majority of people possess a portable radiotelephone. Of these people, an increasing number also posses more than one portable radiotelephone, for example a car phone and a handheld mobile radiotelephone. One problem with this is that a user ends up having multiple telephone numbers and people trying to contact the user do not know on which radiotelephone the user is may be contacted.

Accordingly, one aim of the present invention is to overcome the above-mentioned problems of the prior art.

According to a first aspect of the present invention, there is provided a communication device for communicating with a compatible communication device over a telecommunications network, wherein the communication devices have unique identities, the communication device comprising: a detector for detecting the presence of the compatible communication device; determination means for determining the identity of the detected compatible communication device; and a controller effective for redirecting incoming calls intended for the detected compatible communication device having the determined identity to the communication device.

According to a second aspect of the present invention, there is provided a method of redirecting calls to a communication device from a compatible communication device, wherein the communication device and the compatible communication device have unique identities and are capable of communicating over a telecommunications network, the method at the

communication device comprising: detecting the presence of the compatible communication device; determining the identity of the detected compatible communication device; and redirecting incoming calls intended for the compatible communication device having the determined identity to the communication device.

According to a third aspect of the present invention, there is provided a communications system having a first and a second communication device each having a unique identity and capable of being connected via a telecommunications network, wherein the first communication device comprises: a detector for detecting the presence of the second communication device; means for determining the identity of the second communication device; a controller effective for redirecting calls intended for the second communication device having the determined identity to the first communication device.

One advantage of the present invention is that a user is always contactable on whichever telephone they are currently using. This prevents people trying to contact the user from having to try multiple numbers in order to reach the user.

The present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 shows a first embodiment of the present invention according to the present invention;

Figure 2 is a block diagram showing the telephone 100 of Figure 1 in greater detail; and

Figure 3 is a flow diagram outlining the main steps of one embodiment according to the present invention.

Figure 1 shows a mobile phone 100, preferably mounted in a fixed location such as a car. The mobile phone, hereinafter referred to as car phone 100, has a detector (not shown) which can detect the presence of a compatible mobile telephone 101 within a range 102.

For the purposes of this description the term car phone will be used to describe a mobile telephone mounted in a car, and the term mobile telephone will be used to describe a hand-held mobile telephone.

If the user has both a car phone and a mobile telephone this can cause severe confusion for people trying to contact the user. For example, whilst driving the car the user may be unable, due to safety reasons or legislation, to use his mobile telephone. Additionally, whilst out of the car the user will not be able to answer the car phone. Someone trying to contact the user on his mobile telephone number whilst he is driving will therefore be unable to be connected, unless he redials using the number of the car phone. Someone trying to call the user will therefore will require both the number of the car phone and the mobile telephone and may have to try calling both numbers in order to reach the user, depending on whether the user is in or out of the car.

Each of the telephones 100 and 101 contain a subscriber identification module (SIM) which provide each of the telephones with a unique subscriber number (i.e. a telephone number). In this way, each of the telephones 100 and 101 may operate independently. However, as described above, this does present the user with a number of problems.

When the mobile telephone 101 is detected within the range 102 of the car phone 100, the car phone 100 can be programmed to perform a number of predetermined tasks. Such tasks may include initiating network based call forwarding from the mobile telephone to the car phone, determining the identity of the detected phone, authorising the detecting phone etc...

For example, when a user having a mobile telephone enters a car having a car phone, the car phone detects the presence of the mobile telephone and causes all subsequent phone calls to the mobile telephone to be diverted to the car phone. In this way, calls to the mobile telephone may be safely answered using the car phone. Typically a car phone is specially designed to be safely operated whilst driving and may include features such a separate loudspeaker and microphone, a separate display and a separate control panel. When the user leaves the car, the car phone no longer detects the presence of the mobile telephone and cancels the call forwarding. This arrangement enables the user to be always contactable on a single subscriber number, that of his mobile telephone.

In an embodiment having a car phone, it is preferable that the range in which a compatible telephone can be detected is limited so as not to extend beyond the perimeter of the car. This is to prevent unintentional detection of compatible telephones whilst outside of the car.

Figure 2 is a block diagram showing the telephone 100 of Figure 1 in greater detail.

The mobile telephone 100 of Figure 1 has a central processor 202 which is connected to a control module 204 which controls the expected functions of a mobile telephone, such as the key pad, call management, display, etc. These functions will not be described in detail as they are well understood in the art, and do not directly form part of the present invention. An antenna 206 is used to transmit signals to and to receive signals from a cellular or other wireless telecommunications network. Also connected to the processor 202 is a module 208 which controls the function of a local wireless connection, via an antenna 210. The module 208 may use low power radio frequency (LPRF) technology, such as the commonly called Bluetooth standard, to communicate to similarly equipped devices. Alternatively, the module 208 may use any other appropriate communication medium, for example, an infra-red link, or

even a direct electrical connection which may be provided through a mobile phone holder.

In LPRF communications it is common for one device to act as a master to other slave devices. In the present embodiment it is preferred that the car phone acts as the master device, and the mobile phone acts as the slave device, although the invention will work equally well with the reverse arrangement. The car phone transmits a signal over the LPRF network requesting other compatible devices to respond over the LPRF network. Since the car phone transmits these requests frequently this increases the power requirements of the car phone. It is for this reason that it is preferable that the car phone is chosen to be the master device, since the car phone will generally be connected to a large capacity car battery.

When a compatible device, such as the mobile phone 101 is within range of the master LPRF signal transmitted by the car phone, the request signal is received by the slave LPRF module of the mobile phone 101. The slave LPRF module of mobile phone 101 transmits a signal to the master LPRF module of the car phone 100 indicating that the mobile phone 101 is within range of the car phone 100. The precise details regarding handshaking between the master and slave devices will not be discussed in detail here since they will be apparent to those skilled in the art. However, an outline of the steps undertaken by a master LPRF device according to one embodiment of the present invention are shown in Figure 3.

The master LPRF module of the car phone 100 attempts to detect, at a step 300, the presence of a compatible mobile telephone 101 within transmission range of its signal. If no compatible mobile telephone is detected, the master LPRF module of the car phone 100 periodically transmits a request that any compatible device acknowledges with an appropriate response signal. Once a compatible device has been detected an authorisation step 302 is performed. The authorisation step 302 ensures that only authorised mobile telephones be

used with the car phone. The authorisation step 302 determines the identity of the detected device, for example by determining the subscriber number of the device. Authorisation consists of comparing the identity of the detected device with a list of previously authorised identities. If the identity of the detected device is among the list of previously authorised identities, authorisation may be given, otherwise authorisation may be refused. Additionally, authorisation may require, for example, the entering of a security code by the user, either on the mobile phone or on the car phone in order to complete the authorisation step.

The car phone may also be configured to allow any compatible device to be used, regardless of identity.

The car phone 100 may, optionally at step 304, request confirmation from the user of the mobile telephone to initiate call forwarding from the mobile telephone 101 to the car phone 100. If the mobile phone user does not accept call forwarding, the master LPRF device of the car phone 100 returns to execute step 300.

The authorisation step may also add to the list of authorised mobile telephones any mobile telephones which are successfully used with the car phone. In other words, once a mobile telephone has been authorised for use with the car phone once, it will always be authorised until it is removed from the authorisation list.

If the user accepts activation of call forwarding, the car phone 100 initiates call forwarding of the mobile phone 101 to the car phone 100 at a step 306. In an alternative embodiment the car phone 100 may instruct the mobile telephone 101 to initiate call forwarding from the mobile telephone 101 to the car phone 100. The call forwarding may be performed on the network, by sending appropriate control signals to the network such that calls made to a given subscriber number are automatically re-routes to a forwarded number.

Alternatively, call forwarding may be established by a mobile telephone handset itself. In this case, when a call arrives at a mobile telephone, the mobile telephone makes a new call to the forwarded number, and connects the calls together.

Once call forwarding is initiated, the master LPRF device of the car phone 100 periodically checks to see whether the mobile telephone 101 is still within range of the car phone. As soon as the mobile telephone 101 is no longer within range, for example when the user leaves the car with his mobile phone, call forwarding is automatically cancelled by the car phone 100. In an alternative embodiment the mobile telephone 101 acts to cancels the call forwarding when out of range of car phone 100. Preferably call forwarding is also cancelled whenever the LPRF link is broken, for example when the mobile telephone is switched off or when the battery of the mobile telephone runs out. It may be preferable in these instances to request confirmation from the user, via the car phone 100, as to whether call forwarding should be cancelled. If no response is received from the user within a given time period call forwarding may be cancelled automatically.

In yet a further embodiment of the present invention, the call forwarding performed by either the car phone 100 or the mobile phone 101 is user customisable. For example, there are many telephone companies which now provide so called personal or non-geographic telephone numbers. This allows a user to choose an easy to remember telephone number. Such telephone numbers are not associated with any particular telephone, but are forwarded to a predetermined telephone number. The call forwarding capability of the car phone or the mobile phone enables call forwarding of the personal number to which ever device is currently in use. For example, when a user enters the car, the car phone causes the personal number to be forwarded to the car phone. When the user leaves the car, the car phone causes the personal number to be forwarded to the mobile telephone.

In yet a further embodiment of the present invention, the mobile phone acts as the master LPRF device, and the car phone acts as the slave LPRF device.

It is common when using call forwarding that the telephone which is being forwarded is charged for the forwarded portion of the call. The telecommunications network operator, however, can arrange for these charges not to be incurred. The network operator can also arrange that calls made by the car phone, whilst having calls forwarded to it from a mobile telephone, show the caller line identification (CLI) of the forwarded mobile telephone. Additionally, the network operator can also arrange that calls made in this manner are billed to the forwarded telephone. In this way, calls made from the car phone will appear to be made by the mobile telephone which is forwarded thereto.

Although the present invention is described above with reference to a car phone and a mobile telephone, it will be appreciated that the car phone could be replaced by any other fixed or semi-permanent telephone having an LPRF module. For example, the present invention could also be used in an office or home environment. Additional embodiments provide that, for example in an office environment, when a user is at his desk, calls to a mobile telephone are forwarded to a desktop phone connected to a private switched telecommunications network (PSTN). When the user is away from his desk, this is automatically detected by the desktop phone (or the mobile telephone) and calls to the desktop phone may be automatically forwarded to the mobile telephone.

Those skilled in the art will appreciate that other combinations are also possible within the scope of the present invention. For example, the presence of the car phone could be detected by a mobile telephone, and the mobile telephone could effect the call forwarding in response to the detection.

Reference above to mobile telephone or car phone is also intended to include reference to radiotelephones and portable radiotelephones.

CLAIMS

1. A communication device for communicating with a compatible communication device over a telecommunications network, wherein the communication devices have unique identities, the communication device comprising:

a detector for detecting the presence of the compatible communication device;

determination means for determining the identity of the detected compatible communication device; and

a controller effective for redirecting incoming calls intended for the detected compatible communication device having the determined identity to the communication device.

2. The communication device of claim 1, wherein the detector establishes communication with the detected communication device over a local connection.

3. The communication device of claim 2, wherein the means for determining the identity determines the identity over the local connection.

4. The communication device of claim 1, 2 or 3, wherein the controller sends control signals to the telecommunications network such that the network can redirect the incoming calls.

5. The communication device of claim 1, 2 or 3, wherein the controller sends control signals to the compatible communication device such that the compatible communication device can redirect the incoming calls.

6. The communication device of any preceding claim, wherein the detector detects the presence of the compatible communication device substantially within a predetermined range.

7. The communication device of any preceding claim, further comprising authorising means for authorising the use of the compatible communication device with the communication device, and only effecting call redirection if authorisation is given.

8. The communication device of claim 7, wherein the authorising means contains a list of the identities of authorised compatible communication device, and wherein authorisation is given only if the determined identity of the detected compatible communication device matches one of the identities in the list of identities.

9. The communication device of claim 8, wherein the determined identity of any detected compatible communication device is added to the list identities of authorised compatible communication devices.

10. The communication device of claim 7, 8 or 9, wherein the means for authorising further comprises a memory for storing a list of passwords associated with each identity in the list of identities, and wherein authorisation is given only when a matching password is entered on the communication device.

11. The communication device of any of claims 2 to 10, wherein the local connection is a low power radio frequency connection.

12. The communication device of any preceding claim, wherein the detector comprises a low power radio frequency transceiver capable of transmitting signals to and for receiving signals from compatible low power radio frequency transceivers.

13. The communication device of any of claims 2 to 10, wherein the local connection is a fixed wire connection.

14. The communication device of any of claims 2 to 10, wherein the local connection is an optical connection.

15. The communication device of any preceding claim, wherein the controller is effective to cancel call redirection when the detector no longer detects the presence of the compatible communication device.

16. The communication device of any preceding claim, wherein the communication device is a telephone.

17. The communication device of any preceding claim, wherein the compatible communication device is a radiotelephone.

18. A method of redirecting calls to a communication device from a compatible communication device, wherein the communication device and the compatible communication device have unique identities and are capable of communicating over a telecommunications network, the method at the communication device comprising:

detecting the presence of the compatible communication device;

determining the identity of the detected compatible communication device; and

redirecting incoming calls intended for the compatible communication device having the determined identity to the communication device.

19. The method of claim 18, wherein the step of detecting comprises detecting the compatible communication device over a local connection.

20. The method of claim 18, wherein the step of determining the identity comprises determining the identity over the local connection.

21. The method of claim 18, 19 or 20, wherein the step of redirecting comprises sending control signals to the telecommunications network such that the network can redirect the incoming calls.

22. The method of claim 18, 19 or 20, wherein the step of redirecting comprises sending control signals to the compatible communication device such that the compatible communication device can redirect the incoming calls.

23. The method of any of claims 18 to 22, wherein the step of detecting detects the presence of the compatible communication device substantially within a predetermined range.

24. The method of any of claims 18 to 23, further comprising authorising the use of the compatible communication device with the communication device, and only effecting call redirection if authorisation is given.

25. The method of claim 24, wherein the step of authorising comprises comparing the identity of the detected compatible communication device with a list of identities of authorised compatible communication devices stored in the communication device, and only giving authorisation if a match occurs.

26. The method of claim 25, further comprising adding to the list of identities the identity of any detected compatible communication device for which authorisation is given.

27. The method of claims 24, 25 or 26, wherein the step of authorising further comprises comparing a password entered on the communication device with a list of passwords stored in the communication device in association with the list of identities, and wherein authorisation is given only when the entered

password and the stored password for the detected compatible communication device match.

28. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over a low power radio frequency connection.

29. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over a fixed wire connection.

30. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over an optical connection.

31. The method of any of claims 19 to 30, further comprising cancelling the redirection of calls when the presence of the compatible communication device is no longer detected.

32. The method of any of claims 19 to 31, wherein the communication device is a telephone.

33. The method of any of claims 19 to 32, wherein the compatible communications device is a radiotelephone.

34. A communications system having a first and a second communication device each having a unique identity and capable of being connected via a telecommunications network, wherein the first communication device comprises:

a detector for detecting the presence of the second communication device;

means for determining the identity of the second communication device;

a controller effective for redirecting calls intended for the second communication device having the determined identity to the first communication device.

35. The communications system of claim 34, wherein the detector establishes communication with the detected second communication device over a local connection.

36. The communications system of claim 35, wherein the means for determining the identity determines the identity over the local connection.

37. The communications system of claim 34, 35 or 36, wherein the controller sends control signals to the telecommunications network such that the network can redirect the incoming calls.

38. The communications system of claim 34, 35 or 36, wherein the controller sends control signals to the second communication device such that the second communication device can redirect the incoming calls.

39. The communications system of any of claims 34 to 38, wherein the detector detects the presence of the second communication device substantially within a predetermined range.

40. The communications system of any of claims 34 to 39, the first communication device further comprising authorising means for authorising the use of the second communication device with the first communication device, and only effecting call redirection if authorisation is given.

41. The communications system of claim 40, wherein the authorising means contains a list of the identities of authorised communication devices, and

wherein authorisation is given only if the determined identity of the detected communication device matches one of the identities in the list of identities.

42. The communications system of claim 41, wherein the determined identity of any detected communication device is added to the list identities of authorised communication devices.

43. The communications system of claim 40, 41 or 42, wherein the means for authorising further comprises a memory for storing a list of passwords associated with each identity in the list of identities, and wherein authorisation is given only when a matching password is entered on the first communication device.

44. The communications system of any of claims 34 to 44, wherein the local connection is a low power radio frequency connection.

45. The communications system of any of claims 34 to 44, wherein the detector comprises a low power radio frequency transceiver capable of transmitting signals to and for receiving signals from compatible low power radio frequency transceivers.

46. The communications system of any of claims 35 to 43, wherein the local connection is a fixed wire connection.

47. The communications system of any of claims 35 to 43, wherein the local connection is an optical connection.

48. The communications system of any of claims 35 to 47, wherein the first communication device is a telephone.

49. The communication system of any of claims 35 to 48, wherein the second communication device is a radiotelephone.

50. A communication device substantially as hereinbefore described with reference to the accompanying drawings.

51. A method of redirecting calls to a communication device from a compatile communication device substantially as hereinbefore described with reference to the accompanying drawings.

52. A communications system substantially as hereinbefore described with reference to the accompanying drawings.

INVESTOR IN PEOPLE

Application No: GB 0030968.2 **Examiner:** Nigel Hall
Claims searched: 1-52 **Date of search:** 29 August 2001

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): H4L (LDPD, LRCMR, LRCMX)

Int Cl (Ed.7): H04Q 7/32, 7/38

Other: Online: WPI, EDOC, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X, E	GB 2353441 A (SAGEM) See whole document	1, 18, 34 at least
X, E	GB 2352126 A (VTECH) ,, ,, ,,	,,
X	GB 2304258 A (NEC) ,, ,, ,,	;;
X, E	EP 0996272 A1 (SAGEM) ,, ,, ,,	,,

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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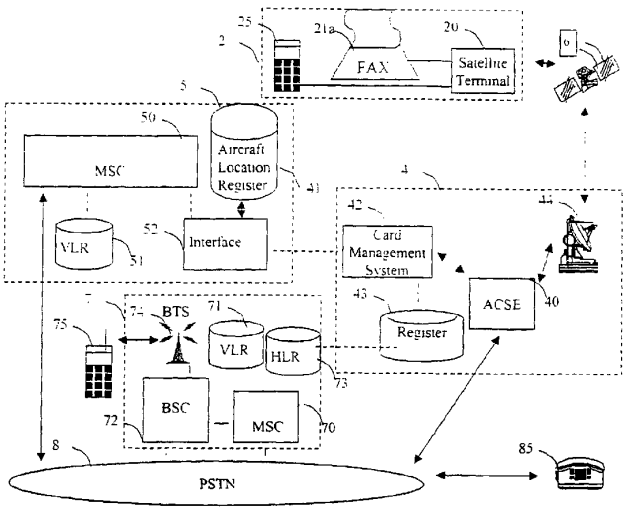
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[Continued on next page]

(54) Title: MOBILE TELEPHONY



(57) Abstract: An interface (52) is provided between a satellite telephone system (4) and a cellular telephone system (5) for allowing calls to a user's cellular telephone to be diverted to a satellite telephone handset (25) when the user is unable to use his cellular telephone, for example when on board an aircraft (2) fitted with a satellite telephone system (20). The user inserts a card (which may be the SIM of his mobile phone, or a card compatible with existing satellite telephone equipment) into a suitable reader in the satellite telephone (20), which causes the satellite ground station's card verification system (42) to connect to a host cellular network (50). The host cellular network has an interface unit (52) which emulates the operation of a normal base station, so that the host cellular system (50) acts as if the mobile user's terminal is roaming on the host network, but is currently "busy". The interface (52) also resets the user's existing call diversion instructions so that when the host cellular system (5) receives a busy tone from the base station emulator (52), it routes calls to the directory number of the terminal (20). Data messages originally formatted for transmission over the cellular telecommunications network for generation of a display on a display unit of a cellular telephone, can instead be transmitted over the satellite network for display on the information and entertainment system of the aircraft by replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message. A new data message is created, addressed to the server of the information display system and having the amended data message as payload. The onboard server has means for converting the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

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MOBILE TELEPHONY

This invention relates to mobile telephony, and in particular to systems for use on board vehicles.

There has been considerable activity in recent years in proposals to allow the use of mobile telephones in environments where conventional cellular telephony base stations cannot provide coverage, in particular on board ships and aircraft. These vehicles frequently travel beyond the range of land-based cellular base stations, which typically have a range of the order of 1 to 10km.

There are also circumstances when temporary provision of cellular telephone facilities is required at a remote location where such facilities are not normally available, or are temporarily unavailable, for example when the fixed infrastructure has been damaged by a natural disaster.

There are a number of special difficulties to be addressed if a standard cellular telephone is to be used in an aircraft. Firstly, many cellular base stations have antennas arranged for maximum gain in the horizontal plane, so an airborne cellular telephone may not be able to obtain a signal from any base station, even when flying over land served by a cellular base station network. If the range of the base stations does extend to the normal flying height of aircraft, frequency re-use patterns, which allow several base stations to use the same radio frequencies without interference, are designed on the assumption that a mobile unit served by one base station is not able to exchange radio signals with other base stations using the same frequency. This assumption ceases to be valid if a mobile unit is several thousand metres above the ground, since it may be in line-of-sight of a large number of base stations simultaneously. Moreover, although reliable handover of a mobile unit can be achieved from moving vehicles travelling at speeds of up to 200km/h, a typical passenger aircraft travels at speeds approaching 1000 km/h. Airlines also impose restrictions on the use of powerful radio signals on board, as a precaution against possible interference with the aircraft's electronic systems.

For truly global coverage, satellite telephones are available. However, these are expensive and much heavier than a cellular telephone. Both cellular telephones and satellite telephones also suffer from the screening effect of being inside a metal

hulled vehicle. As with cellular telephones, the unrestricted use of a portable satellite telephone within an aircraft may be prohibited.

A user without his own satellite telephone may use special facilities provided on board, such as the service provided to several airlines by the applicant company under the Registered Trade Mark "Skyphone". This uses onboard terminals connected, through a satellite link between the aircraft and a satellite ground station, to the telephone network. Another system, TFTS (terrestrial flight telephony system, marketed as "Jetphone"), operates in a similar manner, but uses a direct link between the aircraft and the ground station, without a satellite link. Similar systems are provided on board ships. However payment for these services is generally at the point of use (or prepaid), and may be in a foreign currency. Calls made to the user's cellular telephone will not be successful unless the calls can be diverted to the telephone number of the onboard user terminal (which will generally not be known to the caller), and any special facilities offered by the user's cellular network will in general be unavailable. A user with his own cellular telephone account which, through "roaming" agreements between network operators, can be used in many different countries, would therefore prefer to continue to use his cellular telephone subscription when travelling within or between these countries on board an aircraft or other vehicle.

Proposals have been made, for example EP0915577 (Rohde & Schwartz) for a facility which would allow cellular telephones to make outgoing calls by way of the aircraft's own onboard telephone system. This allows the aircraft's onboard systems to impose power control on the mobile units and ensure that their radio transmissions are kept within safe limits. However, the cellular telephone is not directly connected to the cellular network, so conventional cellular radio location update processes cannot be used to inform the user's home network of its current location and allow incoming calls to be routed to the telephone.

Proposals have also been made to allow a user to use his own cellular radio identity when using the satellite facility, instead of a special identity under the satellite system. This would allow billing to be made through the user's normal cellular radio account, and would also allow incoming calls made to his cellular telephone number to be received whilst travelling. To this end, systems have been developed which allow call diversions to be set up to allow calls made to the user's

cellular number to be transferred to a destination node of the tracking radio system. The destination node may be an onboard handset temporarily allocated the user's cellular identity, or it may be an onboard base station capable of wireless connection to the user's own cellular telephone. Systems of this general kind have been disclosed in International Patent Applications WO99/12227 (Nokia), WO94/28684 (Nordictel) and WO98/26521 (Ericsson); European Patent Applications 0920147 (Alcatel) and 0915577 (Rohde & Schwartz), and United Kingdom Patent Application 2310973 (Motorola). An onboard base station can be integrated with other onboard systems, allowing local control of the base station's transmitter, and those of the mobile units with which it is co-operating, so as to keep their power within permitted limits.

This is made possible by an invention disclosed in the International application filed on the same date as the present application, with applicant's reference A25823 and priority date 14th September 1999, which provides apparatus for enabling a termination point of a first telecommunications system to initiate call diversion instructions in the switching system of a second telecommunications system such that calls initially directed to a telephone apparatus usable with the second telecommunications system are diverted to the said termination point in the first telecommunications system, the apparatus comprising means in the first telecommunications system for identifying the telephone apparatus from which calls are to be diverted and the termination point to which calls are to be diverted, and an interface means between the first telecommunications system and the switching system of the second telecommunications system, the interface means comprising:

means to indicate to the switching system that the telephone apparatus is in a specified operating condition, irrespective of the true operating condition of the telephone apparatus,

and means to generate an instruction to the switching system to divert calls, intended for the telephone apparatus, to the said termination point of the first telecommunications system when the telephone apparatus is indicated as being in the said predetermined operating condition.

In the preferred arrangement the first and second telecommunications systems are a satellite telephone system and a cellular telephone system respectively, the

identification information being a user identity associated with the telephone apparatus, and the network address of the termination point.

Other aspects of the invention disclosed in the aforementioned International patent application provide the novel features of each of the individual telecommunications systems which co-operate to form the complete system, and methods of operation of these individual co-operating systems and of the complete process.

A second arrangement, disclosed in the applicant's International Patent Application having the same filing date as the present application and the applicant's case reference A25937, claiming the priority date 25th August 1999, has apparatus for providing telephone connection between one or more cellular radio telephones and a fixed cellular radio switching system, comprising a moveable cellular system on board a vehicle, a fixed cellular radio switching system, and a tracking radio link providing radio connection between the moveable cellular switching system and the fixed cellular switching system, the moveable cellular system comprising a moveable telephone switching system connected to one or more base transceiver stations for providing radio connection with the cellular radio telephones, and having means for initiating a control call over the tracking radio link to the fixed cellular radio switching system in response to the detection of the presence of a cellular radio telephone in the area of coverage of base transceiver stations, and the fixed cellular radio switching system having registration means responsive to such control calls to indicate to other switching systems that calls to a cellular radio telephone currently served by the moveable switching system should be initially directed to the fixed cellular radio switching system, the fixed cellular radio switching system also having call diversion means responsive to such control calls to allow incoming calls directed to the cellular radio telephone to be diverted to the moveable cellular switching system by way of the tracking radio link. In the embodiment described in that application, the movable system has means for generating an association between a destination node of the tracking radio link and an identity code of a cellular radio telephone, and means for storing the said associated identities in stores associated with the fixed and moveable cellular switching systems, thereby allowing both cellular radio switching systems to translate between the cellular radio identity and the node identity. The apparatus is arranged such that calls directed to a cellular

telephone currently co-operating with the moveable switching cellular system are diverted by the fixed cellular switching system to a node of the tracking radio system having the identity associated with the cellular radio identity, the node having means for connecting the call to the moveable cellular switching system and the moveable switching system having means for retrieving the cellular network identity associated with the node and routing the call to the cellular telephone having that identity.

In the cellular telephone systems described in the aforementioned International Patent applications the interface units are arranged to appear to the switching system as a typical radio base station control system, to which the mobile handset is currently working, although in fact no radio base stations are actually controlled by it. This interface unit may therefore be considered to be a "Virtual" Base Site Controller. The switching system itself requires no modification: it merely registers that the user is working to the "Virtual" Base Site Controller and stores the user details in its "Visitor Location Register" (VLR), in the same way as it would for a mobile unit working to any real base site controller to which it is connected. The interface unit also generates a call diversion instruction, which will appear to the switching system to have come from the mobile handset, by way of the "Virtual" Base Site Controller. This call diversion instruction is set up in the switching system such that if the "Virtual" Base Site Controller responds to a call request directed to the mobile unit with a "busy line" response (or some other specified condition), calls are to be diverted, through normal network interconnects, to a specified directory number, namely that of the satellite termination point to which the user is connected. The interface unit does not in fact monitor the real condition of the user terminal, (which is not operatively connected to the interface unit), but instead always returns the "line busy" signal to the switching system.

The interface unit includes a store to record any diversion settings existing for the telephone apparatus prior to the diversion to the second network being set up. This allows these settings to be retrieved when the user disconnects from the first telecommunications system, so that they can be reinstated in the switching system of the second telecommunications system, or transferred to another telecommunications system, when the telephone apparatus makes contact with a real radio base station, thereby initiating a handover procedure from the "Virtual" Base Site Controller to the real one.

Should a second call attempt to the user's cellular telephone be made whilst a call is in progress to the onboard system, the switching system may be arranged to divert it to another predetermined number, such as the user's "voicemail", or automatic answering service, address.

If the user termination is in an aircraft or other vehicle connected to a ground station (by satellite or otherwise), it may move from the area covered by one satellite (or ground station) to that of another. In that case, the network address of the termination changes. To accommodate this, the interface may be provided with means to store the address of termination points in the first system, means to record changes to the said addresses transmitted to it from the first system, and means to modify the diversion instruction in the switching system when such a change takes place. Alternatively, the termination point may be arranged simply to repeat the set-up process, causing the mobile unit to be re-registered with the interface unit, (which will not be apparent to the switching system, as it will perceive the same "virtual" base site controller), and to transmit a new call divert instruction to the revised address of the termination point.

The inventions disclosed in the aforementioned International patent applications allow the diversion of PSTN-compatible speech calls to the user's current location in the first telecommunications network. However, modern cellular telephone systems have other capabilities, in particular the data system known in the GSM standard as "Short Message Service" (SMS). In the cellular network data messages are carried over a separate data network and cannot be diverted to a different directory number, such as that of the user's current satellite terminal, or the satellite address currently associated with the user's terminal, in the same way as voice calls because the PSTN cannot handle them. Moreover, with regard to arrangements in which the call is routed to a standard satellite telephone terminal as provided in aircraft, such terminals are not equipped to receive such messages.

A first aspect of the present invention provides a method of converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, wherein the address information in the original data message is

replaced by address information appropriate to the selected display unit to generate an amended data message, and a new data message is created, addressed to the server of the information display system and having the amended data message as payload, and wherein the server converts the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

A second aspect provides apparatus for converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, comprising

means for replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message, and

means for creating a new data message addressed to the server of the information display system and having the amended data message as payload.

A third aspect provides server apparatus forming part of a server-based information display system for receiving messages generated by the apparatus defined above, for display by a selected display unit, the server comprising means for converting a data message formatted for display on a display unit of a first type into control instructions suitable to display the information content of the data message on an information display unit of a second type controlled by the server, the information display unit being identified in the data message

In the described embodiment the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset. The data message may be generated by the cellular switching system in response to a message being deposited in a call answering system.

In one arrangement, prior to transmission of the amended original data message to the server an alerting data message is created, indicative of the presence of the original data message, addressed to the server of the information display system, and carrying address information appropriate to the selected display unit, thereby causing the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and wherein the

amended original data message is forwarded to the server in response to an instruction from a termination point associated with the destination display unit. This ensures that data messages are only transmitted when the user has accepted them, thus allowing the network operator to charge the user for the service.

The amended data message may also include password data, the server being arranged such that when it receives a data message it causes the display means to indicate the presence of a data message, and displays the data message only if it receives a predetermined input from a user terminal associated with the display means.

Embodiments of the invention will now be described with reference to the Figures, in which:

Figure 1 is a schematic diagram showing the functional relationships between the systems which co-operate to form one embodiment of the invention

Figure 2 is a more detailed schematic diagram of the network termination and associated card reading equipment, which for illustrative purposes will be assumed to be on board an aircraft

Figure 3 is a diagram showing part of an alternative arrangement of network termination, arranged for co-operation with a cellular telephone handset

Figure 4 is a schematic diagram showing the functional relationships between the components of the fixed part of the first telecommunications system which co-operate in the invention,

Figure 5 is a schematic diagram of the switching system, interface unit, and associated parts of the second telecommunications system;

Figure 6 is a flow chart showing the process by which a diversion is set up in the second network to a termination connected to the first network

Figure 7 is a flow chart showing the process by which a call coming in to the second network is connected to a telephone connected to the first network

Figure 8 is a flow chart showing the process by which the second network restores the original settings for a telephone when it disconnects from the first network.

Figure 9 illustrates the forwarding process implemented to a data message.

Figure 10 illustrates a conditional forwarding process for a data message.

Figures 11 and 12 show the general arrangement of the various components which co-operate in a further embodiment of the invention: Figure 11 shows the moveable vehicle-borne parts and Figure 12 the fixed, ground based, parts.

Figures 13 and 14 show the method of operation of this embodiment

Figure 15 is a flow chart showing a call diversion process, for use when the system has to be temporarily shut down.

The following embodiments illustrate the invention using a standard switched cellular network, using the terminology of the "GSM" standard for illustrative purposes. However, the invention is applicable to other cellular networks, including packet networks, which are used to carry data over a distributed computer network such as the "Internet", carrying messages using formats such as the "Internet Protocol" (IP). Thus, unless the context clearly demands otherwise, any reference in this specification to switching includes the equivalent routing functions in a packet network of this kind.

Figure 1 shows the general arrangement of the various components which co-operate in this embodiment. Note that traffic links (which can carry speech, data, etc) are shown as full lines, signalling links used only for call set up are shown as broken lines.

The onboard part 2 (shown in more detail in Figure 2) comprises one or more handsets 25 (which, in the alternative arrangement of Figure 3, are the users' own cellular telephone handsets 31), connected to a termination point 20 of the satellite network. The termination point 20 is in communication with a ground station 4, shown in more detail in Figure 4. In this embodiment, the communication link is made through an earth-orbiting satellite 6.

The principal components of the ground station 4 relevant to this invention are an antenna 44 which communicates, by way of the satellite 6, with the onboard system 2, an Access Control and Signalling Equipment (ACSE) 40 which carries out call switching functions to allow calls to be placed through the public switched telephone network (PSTN) 8 to other telephones 85, and a Card Management System 42 which authorises the use of an individual terminal 25 according to user identities entered with respect to that terminal. There is also a register 43 of card identities, to provide a correspondence between the user identities used by the satellite terminal and the corresponding cellular telephone user identities (not necessary if the cellular

telephone identity is read directly by the terminal 20, as will be described with reference to Figure 3), and to provide billing information.

The card management system 42 interacts with an interface unit 52 of a "host" cellular telephone network 5, shown in more detail in Figure 5. This network 5 is connected to the public switched telephone network (PSTN) 8 and to other cellular networks 7 through a switching centre 50. Associated with the interface unit 52 there is an "aircraft location register" 41 which monitors the terminals currently served by each individual satellite, and modifies the functioning of the interface unit 52 when a terminal 20, for example on board an aircraft 2, moves from the coverage area of one satellite 6 (and its ground station 44) to another

The cellular network 7 illustrates in simplified form the system architecture of a "GSM"-standard cellular radio system, and the terminology used in this standard. The network 7 has a switching system (MSC) 70 to allow connection of one or more base transceiver sites (BTS) 74, through one or more base site control systems 72, to the PSTN 8 and thus to other telephones 85. A mobile telephone 75 may establish radio contact with one of the base stations 74 in order to make and receive telephone calls. The network 7 also includes a "Visitor Location Register" 71, which maintains details of those cellular telephones 75 currently co-operating with the network 7. Mobile telephones according to the "GSM" standard are capable of co-operating with different networks ("roaming" between networks). To allow this to take place, when a mobile telephone 75 changes from one network to another, the network to which it has moved retrieves data from a "Home Location Register" 73 permanently associated with the handset 75. The network 7 in which the Home Location Register 73 associated with a given handset is to be found is identifiable from the handset's identity code. The Home Location Register also records the identity of the network 7 with which the mobile handset 75 is currently operating.

The "host" network 5 operates like conventional cellular network, but is provided with an interface unit 52, which interacts with the mobile switching centre 50 as a base site controller would. This interface unit 52 may be in addition to one or more base site controllers (not shown). The interface unit does not interact with any base transceiver sites or mobile handsets, but obtains user details (in particular the identity of a mobile handset) from the card management system 42 to allow it to appear to the switching centre 50, and the HLR 73 in the user's home network, that

it is in radio communication with a mobile handset 25. It can then control the call forwarding instructions stored in the host network's VLR 51, to cause incoming calls directed to that handset to be diverted, through the switching system 40 of the satellite network 4, to the satellite terminal 20.

Figures 2, 3 and 4 illustrate a first embodiment of the invention, applied to a satellite telephone system such as that provided by the applicant company under the Registered Trade Mark "Skyphone". Figure 2 shows a first embodiment of the mobile part which has a standard card reader, whilst Figure 3 shows an alternative arrangement which allows a user to use his cellular telephone handset. Figure 4 shows the ground station.

The onboard system 20 shown in Figure 2 comprises a plurality of user terminals 21, 21a (only one shown in detail), connected by a multiplex and radio interface unit 28 to an antenna 29 which provides radio communication with a satellite 6. Each user terminal 21 has a card reading unit 23 into which an intending user can insert a card 24 or other data carrier providing user identification data. The data may give details of the user's credit card account, or a special account for the use of the onboard telephone service. The card reader 23 may be adapted to read the SIM (Subscriber Identity Module) of a GSM-standard cellular telephone. (It should be noted that one variant of the method according to the invention does not make use of the card reading apparatus 23,24,26, although it may nevertheless be present for use by other customers of the satellite system).

Further user terminals 21a may be set aside for non-voice applications, for example an onboard facsimile machine.

The user handset 25 provides the usual keypad, microphone and earphone to allow the user to make telephone calls. The user handset 25 and the card reader 23 are both connected to a processor 26 which converts data read from the card 24, and keystrokes input from the handset 25, into data signals for transmission over the radio link 29. It also provides identification data indicative of which of the terminals 21 it is. A further processor 27 performs analogue/digital conversion of speech signals from the handset 25.

The digitised signals from each terminal 21 are multiplexed and modulated onto a radio carrier in a interface unit 28, and transmitted from the antenna 29.

The antenna 29 also receives signals which are demodulated and demultiplexed in the unit 28. Data signals are processed in the processor 26, whilst digitised speech is converted to analogue speech in the analogue/digital converter 27 and fed to the handset 25.

The interface unit 28 also includes a connection to the data bus 22 of the aircraft 2 giving access to aircraft parameters such as undercarriage deployment, "weight-on-wheels", time to destination, altitude, etc. When a predetermined condition indicative of the impending end of a flight is met, the interface unit 28 transmits a signal to the ground station to cause a deregistration signal to be transmitted to the card management system 42.

Because the onboard telephone system was originally designed for making outgoing calls, the handsets 25 provided in existing terminals 21 are not equipped with a suitable call alerting device. The handsets 25 could be modified to provide a buzzer or light to alert the user to an incoming call. Alternatively, to avoid distracting other passengers on the aircraft, the telephone terminal 21 may be connected to an at-seat entertainment system 200, to provide an alert either through the earpieces 202 or on the screen 201.

Instead of the terminals 25, an alternative arrangement may be used as shown in Figure 3. In this arrangement each onboard terminal 25 is replaced by an onboard interface device 311 to which a user's own mobile radio telephone 31 can be connected electrically, thereby allowing the mobile telephone to be used without using its radio antenna. It is a modification of the system described in the applicant company's International Patent Application WO97/36442, published on 2nd October 1997, to which the reader is referred for further details. In this modified version a GSM (Global System for Mobile communication) mobile telephone 31 comprises r.f. transceiver circuitry 32 coupled to an antenna 33, base band signal processing and control circuitry 34, a rechargeable battery pack 35, a switch 36 and a socket 37. The processing and control circuitry 34 has a data output terminal 34a coupled to both the r.f. transceiver circuitry 32 and a first contact 37a of the socket 37. A data input terminal 34b of the processing and control circuitry 34 is coupled to the r.f. circuitry 32 and a second contact 37b of the socket 37. A third contact 37c of the socket 37 is coupled to a control input of the processing and control circuitry 34. Fourth and fifth contacts 37d, 37e of the socket 37, which are respectively for 0V

and +V power supply lines, power the telephone 31, and may also be arranged to recharge its batteries 35. The +V terminal of the battery pack 35 is also connected to the processing and control circuitry 34 and to an input terminal of the switch 36. The output terminal of the switch 36 is coupled to a +V input terminal of the r.f. circuitry 32. A control terminal of the switch 36 is coupled to an output of the processing and control circuitry 34.

The interface unit 311 comprises a control circuit 312, a user input unit 313, including a keypad and a display, a V.24 33.6 kbit/s modem 314, a power supply unit 315 and a plug 316. The plug 316 has five contacts 316a-316e which correspond to contacts 37a-7e of the socket 37 of the mobile telephone 31. The first contact 316a of the plug 316 is coupled to a data input terminal of the control circuit 312 and the second contact 316b of the plug 316 is coupled to a data output terminal of the control circuit 312. A bi-directional serial link 318 is provided between the control circuit 312 and the modem 314 for modem control and data signals. The third contact 316c and fifth contact 316e of the plug 316 are coupled to the +V output of the power supply unit 315. The fourth contact 316d of the plug 316 is coupled to the interface unit's 0V supply wiring. The user input unit 313 is coupled to the control circuit 312 for the input of user commands and the output of display control signals from the control unit 312 to the user input unit 313. The +V output of the power supply unit 315 is also coupled to +V input terminals 312a, 313a, 314a of the control circuit 312, the user input unit 313 and the modem 314. The modem 314 is coupled to a telephone line 317 and the power supply unit 315 is arranged to receive power from an electricity supply 319.

When the user wishes to connect to the interface unit 311, he connects the plug 316 of the interface unit 311 to the socket 37 on his telephone 31 by a cable (not shown). The voltage on the third contact 37c of the socket 37 is detected by the processing and control circuitry 34 which thereby determines that the telephone 31 has been connected to the interface unit 311. The connection of the battery 35 to the power supply 315 by way of the connections 37d/316d and 37e/316e also allows the battery to be recharged.

Once the processing and control circuitry 34 has determined that the telephone 31 has been connected to the interface unit 311, it sends a control signal to the switch 36, causing it to open, isolating the r.f. circuitry 32 from the battery

pack 35 and the power supply 315 in the interface unit 311. The processing and control circuitry 34 also responds to the voltage on the third contact 37c of the socket 37 by selecting alternative control programs or constant data to allow for delays in the signal path from the telephone 31 to the controller 30 which are caused by the use of the satellite link 6 and the modems 314, 32.

In this arrangement, instead of the need for a separate card reader 23, the telephone 31 identifies itself to the telephone network 40/42 by generating its terminal identity code (IMSI in the case of a GSM telephone). The registration signal is not transmitted from the antenna 3 because the r.f. circuitry 32 is disabled. Instead, it is output to the interface unit 311 via the first contacts 37a, 316a of the socket 37 and plug 316

The operation of this onboard system will now be described with reference to Figure 6. When the card reader 23 or interface unit 311 detects the presence of a card 24 or handset 31 respectively, (step 601) it generates a prompt to indicate to the user that he may wish to have calls diverted to the onboard system. If the user requires this service, he enters a code on the keypad of the handset 25, 31 which causes a divert request to be generated (step 602). The details from the card 23 (or SIM of the handset 31) are then passed to the processor 26 which also provides the identity of the terminal 21 (step 603) and transmits the data to the interface unit 28.

Alternatively, these steps (602, 603) may be activated by the user without a card, by dialling an access code (divert request 602) followed by further keystrokes to identify the account to be used (terminal identity step 603). These keystrokes may include the user's MSISDN (which, as his own directory number would be known to him). To prevent misuse of the system by unauthorised personnel, a security code (Personal Identification Number: "PIN") may be added. This code may have been issued previously to the user, or the user may request such a code by making a call using the satellite system to his home network's customer service department and providing personal details to the operator to prove his identity.

The user may select for the identity of a terminal 21a other than his own at seat terminal 21 to be selected as the destination for incoming calls. For example, if his MSISDN code (or one of them) relates to a facsimile machine having cellular capability, he may request that incoming calls to that number be directed to an onboard facsimile machine 21a.

The data received by the interface unit 28 is then transmitted to the ground station 4 (step 604). The further steps (605-615) in the process are carried out by the co-operating networks 4, 5 and will be described later.

If the user decides that he no longer wishes to have his calls diverted to the terminal 21, he may cancel the diversion instruction by entering a special code on the keypad of the handset 25, 31. Disconnect codes may also be generated in the interface unit 28 for all the termination points 21, either by the cabin crew or automatically in response to a signal detected on the aircraft's data bus 22 which is indicative of the imminent end of the journey, such as undercarriage deployment, weight on wheels, low altitude, or time remaining to destination as determined by the aircraft's flight management system. The disconnect instruction is transmitted (step 801, Figure 8) by way of the switching system 40 in the ground station 4, to the interface unit 52 whose operation (steps 802 to 805) will be described later.

The Ground Station 4 shown in Figure 4 has a radio antenna system 44 for communicating with the terminal 20, through a satellite link 6 or otherwise. Signals are handled by an Access Control Signalling Equipment (ACSE) 40 which carries out switching functions to route calls to or from the public switched telephone network (PSTN) 8.

A card management system 42 comprises a data acquisition unit 47 which reads data transmitted from the card reader 24, and/or keyed in by the user, to identify the type of user, confirm the user's account details and arrange billing for any calls made, through a billing system 45 which raises invoices, or interacts with the systems of a credit card operator or bank.

In the existing onboard systems a user cannot receive calls, unless the caller knows the unique "AES" number of the handset 21, 21a. This is unlikely, as the number depends on the identity of the aircraft, the seat, and the serving satellite or base station.

The equipment just described is augmented in the present embodiment by an interface 46 with the host network 5, and through that to the Home Location Register 73 of each network 7 (Figure1) whose subscribers are to be given access to the service, which stores a concordance between the card identities and the card-holder's cellular radio telephone number (MSISDN: mobile systems integrated services data network number), on request from the data acquisition unit 47, which is

arranged to recognise the card identities which require such translation. In a preferred embodiment the concordance is supplied to a register 43 in the ground station by the operator of user's home network 7, when the network operator provides the user with the card. The operator of the home network 7 also records the concordance in its own Home Location Register 73. This arrangement allows the existing card readers 23 to be used on board the aircraft, without modification. If the users' mobile subscriber identities are supplied from the onboard system, either by reading the identity (reader 311) or by the user keying it in, the store 43 can be used for verification, or omitted. Billing information is also returned to the user's home network 7.

The operation of the ground station 4 will now be described with reference to Figure 6. The data acquisition unit 47 receives the card details from the reader 23 (see steps 601 to 604 already discussed) and if it identifies as those details as corresponding to a cellular user (step 605), it retrieves the cellular user identity from the store 43 containing this concordance, or from the HLR 73 of the user's home network, (step 606). (This step can be omitted if the user's mobile network identity is provided by the onboard apparatus 20).

The data transmission unit 46 then generates a signal for transmission of the cellular user identity, together with the identity of the terminal 21, to the cellular network 5 acting as host to the interface (step 607). This host network 5 will, in general, not be the same as the user's home network 7. The further steps (608 to 615) in this process will be described later, with reference to Figure 5.

If a cancellation signal is received from the aircraft in respect of a given terminal 21, (step 801, previously discussed) the data transmission unit 46 transmits a "cancellation" signal to the host network 5. As already discussed, the cancellation signal may be generated either for an individual handset 21, by its user dialling a special code, or for all handsets as the result signals received by the radio interface unit 28 over the aircraft's data bus 22 indicative of the imminent end of the flight.

An embodiment of the host network 5 of the invention is shown in Figure 5. Its operation will be discussed with reference to Figures 6, 7 and 8 In this network 5 an interface unit 52 is provided, which is arranged to appear to the switching system 50 as if it is a normal base station of the cellular radio system.

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In order to do this, the interface unit 52 is provided with a data acquisition unit 54 which receives from the card management system 42 of the ground station 4 the identity of the cellular telephone it is to represent, and the AES identity of the onboard terminal 20 (step 608, Figure 6). Mobile telephones have three identification codes: the equipment identity (IMEI, which will not be discussed further here), the directory number (MSISDN) and the actual SIM identity (IMSI). In practice, for security reasons, the IMSI is not made generally known, and a user is normally identified by his MSISDN unless the SIM itself is used. If the SIM is used in the card reader 23, or the user's telephone is used in the arrangement of Figure 3, (in which case no concordance is required) the IMSI can be read directly from the data received by the data acquisition unit 54. However, if the user keys in his own identification data (step 603), or a concordance is provided by the card reader 23, the data acquisition unit will receive the MSISDN, and not the IMSI. (There may also be a PIN or other security code, which is checked by the data acquisition unit 54).

In the GSM standard it is possible to obtain an IMSI if the MSISDN is known by interrogating the appropriate Home Location Register 73. To do this, the interface unit 52 transmits a "request for routing information" signal, using the MSISDN (step 609). The standard HLR 73 responds to such a request with a signal which includes the IMSI corresponding to the MSISDN in the request (step 610).

(The "request for routing information" signal was provided under the GSM standard as a means of obtaining routing information for data messages intended for a destination for which only the MSISDN number is known. However, it may be used for other purposes, such as that described above).

The telephone identity (IMSI), whether obtained directly from the card reader 23 or handset 31, or indirectly as just described, is passed to a network registration unit 55 which exchanges signals with the mobile switching centre 50 in the same way that a real cellular telephone would do. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 5 (step 611). The Home Location Register 73 records that the mobile handset is now registered with host MSC 50 (step 612).

It should be noted that, although registered with the host MSC 50, the user's mobile handset is not operatively connected to the host MSC 50 - in fact the mobile handset may be switched off to allow the card 24 to be used, or it may be connected

to a user terminal 311. The user may be in an aircraft, anywhere in the world within the coverage area of the satellite network.

The user's details, including any diversion instructions, are sent by the Home Location Register 73 to the network's VLR 51 (step 613). A store 57 records a copy of the details of these diversion instructions (step 614).

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 7, and the HLR 73 provides information to identify the MSC 50 where the mobile handset can currently be found. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 5, as the mobile user is currently registered there.

The data acquisition unit 54 in the interface 52 now passes the directory number of the termination point 21 to a call diversion instruction unit 56, which generates a "divert on busy" instruction to the VLR 51 (step 615). This is a standard divert arrangement, and operates such that should the mobile unit appear to be engaged on another call when a call attempt is made to it, the call attempt is diverted to a specified directory number, in this case the termination point 21 or 21a, identified by its AES code. This diversion instruction replaces any previous instruction held in the VLR 51. Further settings may be made in the call diversion instruction unit 56, such as the identification of a termination point 21 to which a data message is to be sent when a call is diverted to another termination point 21a.

Of course, there is in fact no mobile telephone connected to the interface unit 52, and therefore it is unable to connect incoming calls to the mobile telephone in the conventional way, or to identify the current true operating condition (switched off, busy, ready for calls, etc) of the mobile handset. Instead, the system responds to a call attempt as will now be described with reference to Figure 7.

When a call attempt is made (step 701), the home MSC 70 to which the call is initially routed obtains from the HLR 73 the current location of the mobile telephone (step 702), and on receiving the identity of the host MSC 50 (step 703), directs the call there (step 703). The host MSC 50 in turn transmits the call attempt to the currently serving base station, which is in fact the interface unit 52 (step 704). If the disconnect procedure (to be described later with reference to Figure 8) has been carried out, the call will not be connected to the onboard system (step 705), and instead a signal is transmitted back to the home MSC 70. Otherwise, call

attempts received by the interface unit 52 are handled by a call request handling unit 58, which automatically returns a "busy" signal to any such request (step 706). The MSC 50, on receiving the "busy" signal, retrieves the diversion information from the VLR 51 (step 708) allowing it to route the call through the PSTN 8 to the user terminal 21, 21a (step 710).

In the event that the destination terminal 21a is not the terminal 21 that originated the instruction, the call request handling unit 58 of the ground-based interface unit 52 may be arranged such that whenever a message addressed to the user's MSISDN is diverted to the terminal 21a, the call request handling unit 58 also generates a data message (step 711) for transmission to the instructing terminal 21 by way of the MSC 50, PSTN 8, and satellite system 4, 6 (step 712) either during the call or after it ends. Such a message can be used for example to alert the user of the terminal 21 that a facsimile message addressed to him has been sent to the terminal 21a. As with the call alerting process described above, the message may be displayed using the in flight entertainment system 200.

If a second call attempt is made, the ACSE 40 may identify that the divert instruction will not work as it is currently handling a diverted call to that number. The default condition in such cases is to arrange for the second call to be diverted to the user's voicemail address (not shown) in his home network 7. The user may also be sent a data message to inform him of the new voicemail message. This message would normally be sent to the mobile unit, which appears to the MSC 50 to be co-operating with the interface unit 52, so the MSC 50 transmits the data message to the interface unit 52 (step 711). In order to inform the user of the new voice mail message, the interface unit 52 now regenerates the data message for forwarding to the user terminal 21 via the MSC 50, PSTN 8, and satellite system 4, 6 (step 712) either during the call or after it ends. However, data messages are not suitable for switching via the MSC 50 and PSTN 8, nor for handling by the on-board terminal 21 as it is only equipped for voice. Because the IMSI is recorded in the HLR 73 as being registered with the "Virtual" BSC, or interface unit, 52, any other data messages intended for the user will also be routed to the interface unit 52, and require forwarding to the user. The way this is achieved, according to the invention, will be discussed later, with reference to Figures 9 and 10. As with the call alerting process

described above, the message may be displayed using the in flight entertainment system 200.

Generally, the detection of the same IMSI from two sources causes an HLR to disconnect both callers as a fraud prevention measure. Since this system causes the generation of an IMSI from the interface unit 52, instead of directly from the mobile telephone to which that IMSI relates, the user's mobile telephone should be switched off, or connected to an onboard interface device 311 which disconnects the radio circuits, to prevent the network detecting the IMSI in two places, which would disrupt the call routing processes in the HLR 73 and elsewhere.. If the user is on board an aircraft, he should not be using his mobile handset in the conventional manner, and so there should be no problem. However, if the user, having left the aircraft, switches on his telephone 75 before the network 5 has reported a loss of the mobile unit from its own network, the mobile unit may be perceived by the HLR 73 as being registered with two networks at once. To avoid this possibility, a disconnection procedure is followed as described with reference to Figure 8.

As already discussed, to stop calls being diverted to the user termination point 21, and restore the original call diversion settings, a disconnection signal may be transmitted from the onboard system 28 to the host network's interface unit 52 (step 801). The disconnection signal may be activated by a special code entered by the user, or it may be generated automatically by data collected from the aircraft's data bus 22 indicative of the imminent end of the flight. Note that this disconnection signal merely controls the interface 52 – it has no effect on calls in progress, which is routed from the host MSC 50 by way of the PSTN 8.

The disconnect instruction is received by the interface unit 52 (step 802) and causes the call diversion instruction unit 56 to retrieve the call diversion data stored in the store 57 (step 803) and generate a call diversion instruction restoring the original settings to the VLR 51 (step 804). This ensures no further calls are routed to the onboard terminal 21.

The interface unit 52 next causes the network registration unit 55 in the interface unit 5 to instruct the MSC 50 that the user is no longer connected to the network 5 (step 805). This allows the mobile unit to register with another network 7 in the normal way. Call attempts to the user number will continue to be routed by the Home HLR 73 to the MSC 50 with which the mobile unit was most recently

registered, (i.e. the host MSC 50) but as that MSC cannot now find the mobile unit, any such incoming call will return a "not found" signal to the home MSC 70 which will divert the call according to any diversion instructions set up, or fail the call. Alternatively, the host MSC 50 may handle the diversion itself if the mobile unit is "not found", using the original diversion instructions now in the VLR 51, having been retrieved from the store 57 (step 804 above).

Having left the aircraft, the user may switch on his mobile telephone 75, which will register with the local network (e.g.7) and will retrieve the original divert information from the HLR 73 (note that in general the HLR 73 will not be in the same network), and will cause all data relating to the user to be deleted from the VLR 51 in the "host" network 5.

An alternative embodiment, in which voice calls are handled by a user's cellular handset but data calls and call alerts are still handled by the onboard in-flight entertainment system, is depicted in Figures 11 and 12.

The system can be categorised into two main components: namely the onboard part 101 (Figure 11) and the fixed part 102 (Figure 12), which communicate with each other through a satellite connection 6. The onboard part (Figure 11) comprises a moveable cellular system 111,112,114,116 and the onboard part 113 of the tracking radio system. The fixed part 102 (Figure 12) is itself in two parts, namely a satellite ground station 4, which is similar to that shown in Figure 1, and the fixed "host" cellular network 104, which is a public land mobile network (PLMN) 104, in turn interconnected with other PLMNs 70 and conventional wired networks (PSTN) 8 to allow calls to be made between users of different networks.

As shown in Figure 11, the system provides a cellular radio subscriber with the ability to use his own handset 110 aboard an aircraft, located anywhere within an agreed satellite coverage area. The coverage on board the aircraft can be provided by any suitable means, using known radio repeater distribution systems 111 to provide radio coverage wherever required.

The distribution system 111 is fed by a base transceiver site 112, served by a base site controller 114 and a mobile switching centre 116, which may have its own visitor location register 117, for onward transmission to the satellite ground station 4 via a satellite tracking system 113. The satellite tracking system may be a

conventional satellite telephone system as commonly used for ship-to-shore communications, and for the airborne systems previously referred to, providing a satellite link 6 from the aircraft or ship's satellite tracking system 113 to the satellite ground station 4. The satellite ground station 4 is in turn connected to the mobile switching centre (MSC) 141 of a conventional cellular telephone system, referred to hereinafter as the "host" system 104 and shown in Figure 12.

The satellite link 4 – 6 - 113 is therefore between the onboard MSC 116 and an MSC 141 (the "host" MSC) of the land-fixed "host" network 104. The user record in the home location register (HLR) 73 of the user's home network identifies the mobile unit 110 as currently served by the land-based network 104, and routes the call to the host MSC 141, which will in turn recognise from its entry in the land based VLR 144 that this mobile unit is currently being served by the onboard MSC 116. The way this is arranged will be described later.

This arrangement allows integration of the onboard MSC 116 with the onboard switching capability associated with the conventional satellite telephone system and the aircraft's internal communications system 115. In particular it provides a simple means of providing passengers and crew with a "Wireless PBX" facility, as users on board the aircraft can communicate with each other through the BSC 114 without using the satellite link 4 - 6 - 113. When a call is made by a cellular telephone 110, the onboard MSC 116 first consults its VLR 117 to establish whether the called party is currently served by the same MSC 116. If this is the case, it connects the call without the use of any inter-MSC links. Thus calls made between two users both on board the aircraft 101 may be made without the use of the satellite link 4 – 6 – 113. The satellite connection provides several voice channels and a signalling channel (supervisory control – management channel), and can be made by any connection of appropriate capacity.

The host network 104 may support one or more further base site controllers 142 controlling conventional base transceiver sites 74. The host Mobile Switching Centre 141 also has an associated "Visitor Location Register" 144 which, in conventional manner, records details of the cellular telephones currently co-operating with the Mobile Switching Centre 141, so that details can be exchanged with the Home Location Register 73 of the user's home network for billing purposes, and to allow incoming calls to be routed correctly. These details include the identity of the

link 4, 142 to which the user is connected, allowing different call charges to be applied for use in different cells, and in particular to distinguish between calls made through the onboard base transceiver site 112 and calls made through conventional base site controllers 142.

In the cellular mobile network 104, standard GSM functionality is used. Users aboard the aircraft will be able to use this service provided they are subscribers to the host network 104, or any other network 70 which has a "roaming" agreement with the host network 104, provided the subscriber has the roaming capability authorised by his service provider.

In this embodiment of the invention, the "host" network 104 operates like a conventional cellular network, but is provided with an interface unit 148 for interworking with the satellite ground station 4. This interface 148 allows the switching centre 141 to obtain user details (in particular the identity of a mobile handset) from the satellite system 4 to allow it to appear to the network 104, and thus to the HLR 73 in the user's home network, that the mobile handset is in radio communication with a base station under the control of the mobile switching centre 141 when in fact it is in communication with the onboard MSC 116. The mobile switching centre can then arrange for call forwarding instructions to be stored in the VLR 144, to cause incoming calls directed to that handset to be diverted, through the switching system 40 of the satellite network 4, to the onboard MSC 116.

The operation of the system is as follows. When a mobile unit 110 first makes contact with the onboard cellular system 101 it transmits its identity code (IMSI) to the onboard MSC 116 in the usual way. The onboard MSC 116 can obtain verification data from the user's HLR 73 (identified by the IMSI code) to verify the authenticity of the user, and permit outgoing calls. However, because the onboard MSC 116 is only contactable through the satellite system, incoming calls to the mobile unit 110 cannot be reliably routed to the onboard MSC 116 over a conventional link. In order to avoid a requirement for special facilities in each network 70 it is convenient to make the mobile unit 110 appear to be working to a conventional mobile switching centre 141.

When the onboard MSC 116 detects a call attempt or registration attempt from a mobile unit 110, it collects from the mobile unit its identity code (IMSI) and passes it to a processor 118. If the processor 118 has not previously done so, it

generates a temporary onboard identity for association with the mobile identity code (IMSI), and stores it in a memory 119. For aircraft fitted with at-seat satellite telephone equipment, each handset has an identity code (generally related to the number of the passenger seat to which the handset is fitted) to allow outgoing calls to be billed to the correct user and to allow the system to be used to communicate between passengers. Spare numbers in this system (referred to herein as "pseudo seat numbers" - PSN) may be used as the temporary onboard identities allocated to mobile handsets working to the onboard MSC 116. If the mobile handset 110 has previously contacted the onboard MSC 116, and not subsequently de-registered, the processor 118 now retrieves the PSN corresponding to the IMSI from the memory 119.

As with the arrangement of Figure 1, the present embodiment allows the host network to translate the called party's IMSI to an AES code (including seat number), which in this case is a pseudo-seat number (PSN) allocated randomly from the numbers left spare after codes have been allocated for at-seat terminals. The translation takes place in the host network, without the need for the caller to know the AES code. The temporary onboard identity code PSN associated with the called party's IMSI is returned to the onboard MSC 116 which sets up a call over the satellite system to the host MSC 141 of the host network 104. The satellite system requires certain authentication data on call set up, namely the AES code and a subscriber identity code which normally identifies an individual subscriber to the satellite system or, if the user does not have an account with the satellite system, credit card details or other details to allow payment to be made. In the present case the onboard MSC 116 provides the cellular telephone's code (IMSI) as the subscriber identity code. For security reasons, this code may be encrypted. If an outgoing call attempt is being made, a call attempt is then made to the number dialled; otherwise a special code, referred to herein as the non-call code ("NCC") is used.

If the caller has not previously been registered, but a special non-call registration code is used, the ACSE 40 of the ground station 4 recognises it as being an authorised free call to the host MSC 141 and routes it accordingly. Calls using this code are permitted even if the IMSI has not previously been registered with it.

The host network 104 will, in general, not be the same as the user's home network 70. In the host network 104 an interface unit 148 provides certain additional functionality to co-operate with the satellite ground station 4.

When a call is received by the satellite ground station 4 using the non-call code (NCC) the ACSE 40 retrieves the data and passes it to an interface unit 148, which retrieves the identity (IMSI) of the cellular telephone, and the PSN associated with it. The IMSI (de-encrypted if necessary), is passed to a network registration unit 145 which exchanges signals with the host mobile switching centre 141 in the same way that a real cellular telephone would do if registering through one of its base stations 74. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 104. The Home Location Register 73 records that the mobile handset is now registered with host MSC 141.

It should be noted that, although registered with the host MSC 141, the user's mobile handset is not operatively connected to the host MSC 141. The user, and the handset, may be on a suitably equipped vehicle anywhere in the world within the coverage area of the satellite network 6.

The user's details, including any diversion instructions, are next sent by the Home Location Register 73 to the network's VLR 144. A store 147 records a copy of the details of these diversion instructions for subsequent retrieval when the mobile unit deregisters.

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 70, and the HLR 73 provides information to identify the MSC where the mobile handset is expected to be found, which is the host MSC 141. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 104, as the mobile user is currently registered there.

The interface unit 148 passes the AES code to a call diversion instruction unit 146, which generates a "divert on busy" instruction to the VLR 144. This is a standard divert arrangement, and operates such that should the mobile unit appear to be already engaged on a call when a new call attempt is made to it, the new call attempt is diverted to a specified directory number, in this case the AES code

allocated to the mobile unit. This diversion instruction replaces any previous instruction held in the VLR 144.

Finally, the registration process is closed by returning an authorisation code from the host MSC 141 to the subscriber management system 42 of the satellite system 4, to allow the IMSI to be recognised as a valid user identification for subsequent outgoing calls.

The aircraft may have an at seat information system 200 with provision for connection of the handset 110, similar to the hands-free sets commonly provided in cars. This allows audio signals to be transferred to the at-seat system's headset 202, preventing disturbance to other passengers. The at-seat system may also have means for collecting ringing tone from the handset 110, and generating a visual alert on the display screen 201 or an audible one on the headset 202.

The operation of the system will now be described with reference to Figure 13. When a mobile unit 10 first makes contact with the onboard cellular system 101 it transmits its identity code (IMSI) to the onboard MSC 116 in the usual way. The onboard MSC 116 can obtain verification data from the user's HLR 73 (identified by the IMSI code) to verify the authenticity of the user, and permit outgoing calls. However, because the onboard MSC 116 is only contactable through the satellite system, incoming calls to the mobile unit 110 cannot be reliably routed to the onboard MSC 116 over a conventional link. In order to avoid a requirement for special facilities in each network 70 it is convenient to make the mobile unit 110 appear to be working to a conventional mobile switching centre 141.

When the onboard MSC 116 detects a call attempt or registration attempt from a mobile unit 110, (step 1601) it collects from the mobile unit its identity code (IMSI) and passes it to a processor 118. If the processor 118 has not previously done so, it generates a temporary onboard identity for association with the mobile identity code (IMSI), and stores it in a memory 119 (step 1602). For aircraft fitted with at-seat satellite telephone equipment, each handset has an identity code (generally related to the number of the passenger seat to which the handset is fitted) to allow outgoing calls to be billed to the correct user and to allow the system to be used to communicate between passengers. Spare numbers in this system (referred to herein as "pseudo seat numbers" - PSN) may be used as the temporary onboard identities allocated to mobile handsets working to the onboard MSC 116. If the mobile handset

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110 has previously contacted the onboard MSC 116, and not subsequently de-registered, the processor 118 retrieves the PSN corresponding to the IMSI from the memory 119 (step 1603).

In existing onboard systems a user cannot receive calls unless the caller knows the unique "AES" number of the at-seat terminal 201, which is made up of the seat code and an identity code of the aircraft (which together make up a unique "AES" code). It is unlikely, even for a normal satellite handset, that a caller would know the AES code, as the number depends on the identity of the aircraft, the seat, and the serving satellite or base station. (It should be noted that the passenger list of an aircraft is not normally released to the general public until the flight has ended, for security reasons). The present embodiment allows the host network to translate the called party's IMSI to an AES code, which includes a pseudo-seat number (PSN), which is allocated randomly from the numbers left spare after codes have been allocated for at-seat terminals. The translation takes place in the host network, without the need for the caller to know the AES code.

The temporary onboard identity code PSN associated with the called party's IMSI is returned to the onboard MSC 116 which sets up a call over the satellite system to the host MSC 141 of the host network 104 (step 1604). For a normal satellite call, the satellite system requires certain authentication data on call set up, namely the AES code and a subscriber identity code which normally identifies an individual subscriber to the satellite system or, if the user does not have an account with the satellite system, credit card details or other details to allow payment to be made. In the present case the onboard MSC 116 provides the cellular telephone's code (IMSI) as the subscriber identity code. For security reasons, this code may be encrypted. If an outgoing call attempt is being made, a call attempt is then made to the number dialled; otherwise a special code, referred to herein as the non-call code ("NCC") is used.

The satellite ground station 4 shown in Figure 4 has a radio antenna system 44 for communicating with the onboard system 101, through a satellite link 6 or otherwise. Signals are handled by an Access Control Signalling Equipment (ACSE) 40 which carries out switching functions to route calls to or from the public switched telephone network (PSTN) 8.

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A subscriber management system 42 in the satellite ground station comprises a data acquisition unit 47 which reads identification data transmitted from the aircraft (step 1605) to identify the subscriber, confirm his account details and arrange billing for any calls made, through a billing system 45 which raises invoices, or interacts with the systems of a credit card operator, bank, or other telephone operator. In the present case the card management system recognises the IMSI transmitted as the subscriber identity. Provided the IMSI has previously been registered with the subscriber management system 42 (as will shortly be described: step 1616) the call is authorised using the satellite system's authorisation checking and billing system as for any call from an onboard satellite terminal, and connected to the PSTN 8 (step 1606), billing details being passed to the home network through the host MSC 141.

If the caller has not previously been registered, but a special non-call registration code is used, the ACSE 40 recognises it as being an authorised free call to the host MSC 141 and processes it accordingly (step 1607) by retrieving the data and forwarding it to the interface unit 52 in the host network 5 . Calls using this code are permitted by the subscriber management system 42 even if the IMSI has not previously been registered with it.

The host network 5, 104 will, in general, not be the same as the user's home network 70. In the host network an interface unit 148 provides certain additional functionality to co-operate with the satellite ground station 4.

When a call is received from the satellite ground station 4 using the non-call code (NCC) the ACSE 40 transmits the data to the interface unit 148 (step 1608). The interface unit 148 then retrieves the identity (IMSI) of the cellular telephone, and the AES identity of the onboard terminal 201 (step 1608, Figure 13). The IMSI (de-encrypted if necessary), is passed to a network registration unit 145 which exchanges signals with the host mobile switching centre 141 in the same way that a real cellular telephone would do if registering through one of its base stations 74. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 104 (step 1611). The Home Location Register 73 records that the mobile handset is now registered with host MSC 141 (step 1612).

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It should be noted that, although registered with the host MSC 141, the user's mobile handset is not operatively connected to the host MSC 141. The user, and the handset, may be on a suitably equipped vehicle anywhere in the world within the coverage area of the satellite network 6.

The user's details, including any diversion instructions, are next sent by the Home Location Register 73 to the host network's VLR 144 (step 1613). A store 147 records a copy of the details of these diversion instructions (step 1614).

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 70, and the HLR 73 provides information to identify the MSC where the mobile handset is expected to be found, which is the host MSC 141. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 104, as the mobile user is currently registered there.

The interface unit 148 passes the AES code to a call diversion instruction unit 46, which generates a "divert on busy" instruction to the VLR 144 (step 1615). This is a standard divert arrangement, and operates such that should the mobile unit appear to be already engaged on a call when a new call attempt is made to it, the new call attempt is diverted to a specified directory number, in this case the AES code allocated to the mobile unit. This diversion instruction replaces any previous instruction held in the VLR 144.

Finally, the registration process is closed by returning an authorisation code from the host MSC 141 to the subscriber management system 42 (step 1616) to allow the IMSI to be recognised as a valid user identification for subsequent outgoing calls.

Of course, although the mobile telephone 10 is recorded in the home location register 73 and in the host's visitor location register 144 as being connected to the host MSC 141, it is not really there and therefore the host MSC 141 is unable to connect incoming calls to the mobile telephone in the conventional way, or to identify the current true operating condition (switched off, busy, ready for calls, etc) of the mobile handset 110. Instead, the system responds to a call attempt as will now be described with reference to Figure 14.

When a call attempt is made (step 1701), the MSC in the home network 70 to which the call is initially routed obtains from the HLR 73 the current location of the

mobile telephone (step 1702), and on receiving the identity of the host MSC 141, directs the call there (step 1703). The host MSC 141 in turn attempts to transmit the call attempt to the currently serving base station, which is in fact the interface unit 148 (step 1704). If the disconnect procedure already described with reference to Figure 8) has been carried out, the call will not be connected (step 1705) and a signal is transmitted back to the home MSC 70. Otherwise, the interface unit 148 automatically returns a "busy" signal to any such request (step 1706). Note that the interface unit 148 has no information regarding the true operating state of the mobile unit 110. It is merely arranged to emulate the target mobile unit's response to a call attempt when the target mobile unit is in the "busy" condition.

The host MSC 141, on receiving the "busy" signal, checks whether any incoming call currently in progress to that mobile handset has already been diverted (step 1707). (This is a standard procedure, done to ensure that call diversions are not attempted if they will not actually succeed). If there is no such diverted call in progress, the host MSC 141 retrieves the diversion information (the AES) from the VLR 144 (step 1708) allowing it to route the call through the PSTN 8 and the satellite system 3 to the onboard system 101 (step 1710).

The onboard system 101 routes incoming calls to a node of the onboard system according to the AES code. If the node is connected to a real at-seat terminal, the call is simply routed to that terminal. However, in this case, the code corresponds to a pseudo seat number, which the onboard satellite system switch 113 recognises as meaning that the call is to be routed to a node connected to the onboard MSC 116. The onboard MSC 116 uses the processor 118 to retrieve from the memory 119 the cellular identity (IMSI) corresponding to the PSN, (step 1711) and then connects the call to the mobile handset 110 having that identity in the conventional manner (step 1712). Thus the interaction between the onboard MSC 116 and the handset 110 is entirely conventional: ordinary handsets can be used and no initial authorisation is required other than the standard procedures used to ensure that international "roaming" is permitted.

If a second call attempt is made to a handset already in use, the ACSE 50 will identify that the divert instruction will not work as it is already handling a diverted call to that number. The default condition in such cases is to arrange for the second call to be diverted to the users' voicemail address (not shown) in his home

network 70. The user may also be sent a message to inform him of the new voicemail message. This message would normally be sent to the mobile unit, which appears to the host MSC 141 to be co-operating with the interface unit 148, so the host MSC 141 transmits the data message to the interface unit 148 (step 1711). In order to inform the user of the new voice mail message, the interface unit 148 now regenerates the data message for forwarding to the onboard MSC 116 via the satellite system 3 (step 1712) for alerting the user terminal 110 either during the call or after it ends.

As the onboard system 101 is itself mobile, being on board an aircraft, call routing to that termination may require revision from time to time. For example, the "Inmarsat" satellite system comprises several geostationary satellites, which each provide cover for part of the earth's surface. These areas of coverage overlap to a large extent, but nevertheless on a long flight the aircraft may pass out of the area covered by one satellite into that served by another. This causes a small but significant change in the network address AES of any terminal on board the aircraft. The aircraft location register 41 monitors the identity of all aircraft currently being handled by the satellite ground station 4. When an aircraft moves into range of a different satellite 6, the call diversion unit 146 responds by transmitting a new call diversion instruction to the VLR 144, so that any further incoming call attempts are diverted to the new network address (AES) of the node corresponding to the terminal 110. Note that the diversion store 147 is not updated.

Note also that this does not affect calls already in progress. There is usually sufficient overlap in satellite coverage areas that handover from one satellite or base station to another can be arranged to take place when no call is in progress

During the flight the user may decide that he no longer wishes to have his calls diverted to the terminal 110, and switches it off. The onboard MSC 116 will therefore fail to locate the mobile handset 110 at the next registration update. As previously discussed, it is also desirable to disable the onboard system 101 when the aircraft is on approach to landing, to avoid interference with aircraft systems at this critical point in the flight (or distractions to passengers in the event of an emergency), and also to avoid interference with base stations on the ground. Disconnect codes may therefore be generated in the onboard MSC 116 for all the handsets 110, either by the cabin crew or automatically in response to a signal

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detected on the aircraft's data bus 22 which is indicative of the imminent end of the journey, such as time remaining to destination (as determined by the aircraft's flight management system), low altitude, deployment of undercarriage, or weight on wheels.

On receiving a de-registration signal (steps 801,802 Figure 8), the host network 104 retrieves the original divert information from the store 147 (step 803) and stores that in the VLR 144 (step 804), thereby restoring the user's own selected divert instructions automatically.

Once he has left the aircraft, the user may switch on his mobile telephone 110, which will register with the local network (e.g. network 70), informing the home location register 73 of the location update (note that in general the HLR 73 will not be in the same network as the local network 70). The HLR 73 retrieves the user's VLR settings from the previous host network 102. Because the original VLR data has been restored (step 804), the temporary divert data used whilst the user was connected to the onboard system is not fed back to the HLR. All data relating to the user can then be deleted from the VLR 44 in the "host" network 102.

In use, both parties to a call, and most of the cellular network, operate normally. The cellular telephone 110 co-operates with the base station 112 on the aircraft as it would with any other base station 74. The home location register 73 identifies the cellular telephone 110 as currently served by the host MSC 141, and routes incoming calls accordingly. This invention therefore allows connection to be made to conventional handsets 110 using standard cellular telephony equipment. The operation of the host MSC 141 and the onboard MSC 116 are both largely conventional except for the number translation functions carried out by the interface units 118, 148. Using roaming capabilities, just one host MSC 141 can provide connection to a large number of airborne MSCs 116, anywhere in the range of the satellite system 4, 6.

To allow the use of the at seat display system 201 for data messages, not suitable for transmission over the PSTN and satellite system in their original form the interface unit 52 (Figure 5), 148 (Figure 12) is provided with a data handling processor 53,149 for receiving data messages received over a packet data system 9 by way of the MSC 50,141 and intended for users currently associated with the interface unit 52,148. These messages include SMS messages sent from other

callers, and SMS messages generated by the MSC 50,141 itself to alert the user that a message has been sent to the voice mail system. The format of such a message is shown in Figure 9, and the process of sending and receiving it is shown in Figure 10.

The original message 900 basically consists of a data payload 901 and an address 902, which is the IMSI of the destination mobile telephone (figure 9a).

When the interface unit 53,148 receives such a data message (step 990) it retrieves from the data acquisition unit 54,149 the data network address of the at-seat entertainment terminal 201 corresponding to the user's cellular identity which was originally provided to the data acquisition unit 54,149 when the user carried out the registration procedure (step 991). The interface unit 53,148 next generates a data call to that address (step 992), in a form suitable for transmission by the MSC 50,141 (step 993) over the packet data network 9 to the aircraft, with an address header corresponding to the data network address of the user's at–seat terminal 201,201. This data call may be a short message to indicate that a message is awaiting delivery, and displaying on the screen 201 an invitation to the user to dial a special code on his handset 25,110 to accept the message (step 994), and any charge associated with it. This acceptance is transmitted back, by way of the MSC 50, 141 to the interface unit 53,148 (step 995). (These steps 992 – 995 may be omitted if it is not required for users to acknowledge acceptance before receiving a data message).

The interface unit 53,148 then replaces the address header (the IMSI) 902 in the original data message with a code 912 identifying the terminal 201 and encapsulates the message in a form suitable for transmission over the packet data network 9 to the aircraft (step (996), with an address header 910 to send it to the data network interface 28, 204 serving the onboard entertainment system 200. It can thus be transmitted to the interface 28, 204 over the packet data network 9 (step 997), effectively as a packet with an address header 910 and a payload made up of the at-seat terminal number 912 and true payload 901 (Figure 9b).

On receipt of the data message, the on board data interface 28, 204 extracts the data message payload 901, 912, (Figure 9c) (step998) and identifies the individual at-seat terminal 201 identified by the address 912. It can then cause display of the data message payload 901 on the screen 201 of the appropriate terminal (step 999).

If password protection is required, for example to ensure that the user is present when the message is displayed, the payload 901, 912 can also include a password code 913, which causes the interface 28, 204 to withhold the remainder of the payload until a predetermined sequence of keystrokes has been entered by the user in the terminal 201.

In the embodiment of Figures 11 and 12 it is arranged that the MSC 141 has similar features to those described for the MSC 50 and described with reference to Figure 9 and 10. the invitation (step 992) is sent as a voice message to the user terminal 110, and prompts the user to identify his at-seat terminal (in practice the user will be asked for his seat number), either by key presses (using DTMF coding) or by voice (step 995). The acceptance step is therefore performed over the voice network, rather than the data network. The MSC uses this information to generate an AES code identifying the user terminal, to be applied to the data message 910 (Figure 9). The host MSC may store this code for use with subsequent data messages, allowing the host MSC 141 to process further data messages without requesting this information from the user again. The request for the user's seat number may instead be made when he first registers his telephone 110 with the onboard MSC 116.

As the termination is itself mobile, being on board an aircraft, call routing to that termination may require revision from time to time. For example, the "Inmarsat" satellite system comprises several geostationary satellites, which each provide cover for part of the earth's surface. These areas of coverage overlap to a large extent, but nevertheless on a long flight the aircraft may pass out of the area covered by one satellite into that served by another. This causes a small but significant change in the network address of any satellite terminal on board the aircraft. The aircraft location register 41 monitors the identity of all aircraft currently being handled by each ground station 4. When it an aircraft location is updated, it sends an instruction to the interface unit 5, 148. The call diversion instruction unit 56, 146 responds by transmitting a new call diversion instruction to the VLR 51,144 so that any further incoming call attempts are diverted to the new network address of the terminal. Note that the diversion store 57,147 is not updated. Note also that this does not affect calls already in progress: there is usually sufficient overlap in coverage areas that handover from one satellite or base station to another can be arranged to take place when no call is in progress.

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Figure 15 shows a process for intercepting calls when the onboard system 2, 101 is switched off at times when its operation could interfere with conventional land-based cellular systems or with electronic control systems of the vehicle, to enforce "quiet" periods on board, or to allow transfer of the satellite link from one satellite to another. The control to switch the system off may be performed manually or under the control of a sensor detecting interference from nearby radio base stations 74, or an operational condition of the vehicle, such as deployment of the aircraft undercarriage, low altitude, or "weight on wheels", communicated to the onboard system by means of the control data bus 22. When such a disconnection occurs (step 1501), a signal is generated in the onboard system 2, 101 (step 1502) for transmission over the satellite link 6 to the ground station 4 (step 1503). This signal causes the satellite ground station to invoke a call failure mode for any call directed to the onboard system 2, 101 of the specified vehicle (step 1504).

Any call now diverted by the MSC 70, 141 to a number corresponding to a node on board the vehicle (step 1505) will then receive a "call failed" indication from the ground station (step 1506), without any signalling required over the satellite link 6, 206, 406, 506. Such failed calls will be re-routed according to the user's own diversion instructions, stored by the host MSC 50, 141, 241, 470, 541 for use when the user's handset is busy (step 1507). Generally, such instructions will be to divert the call to a voicemail system in the user's home network. In addition, the host MSC 50, 141, 241, 470, 541 will record the existence, and possibly the origin (Calling line identity – CLI) of any such call attempts (step 1508).

When the onboard system 2, 101 is re-activated (step 1511) a further signal is transmitted by the onboard system (step 1512) for transmission over the satellite link 6 to the ground station 4 (step 1513). This signal causes the satellite ground station to revoke the call failure mode for calls directed to the onboard system 2, 101 of the specified vehicle (step 1514). When a user 25, 110 reconnects to the onboard system 2, 101 (step 1515) the onboard system transmits a signal to the host MSC 70, 141 (step 1516) which causes the host MSC to retrieve the call attempt record previously stored for that user (step 1518). If one or more such call attempts have been made, the MSC returns a message to the user 25, 110 (step 1519), prompting the user to retrieve his messages from the voicemail system should he so wish.

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CLAIMS

1. A method of converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, the conversion being such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, wherein the address information in the original data message is replaced by address information appropriate to the selected display unit to generate an amended data message, and a new data message is created, addressed to the server of the information display system and having the amended data message as payload, and wherein the server converts the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

2. A method according to claim 1, wherein the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset.

3. A method according to claim 1, wherein the data message is generated by the cellular switching system in response to a message being deposited in a call answering system.

4. A method according to any preceding claim, wherein prior to transmission of the amended original data message to the server an alerting data message is created, indicative of the presence of the original data message, addressed to the server of the information display system, and carrying address information appropriate to the selected display unit, thereby causing the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and wherein the amended original data message is forwarded to the server in response to an instruction from a termination point associated with the destination display unit.

5. A method according to any preceding claim, wherein the amended data message includes password data, and wherein when the server receives a data message it causes the display means to indicate the presence of a data message, and displays the data message only if it receives a predetermined input from a user terminal associated with the display means.

6. Apparatus for converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, the apparatus comprising

means for replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message,

means for creating a new data message addressed to the server of the information display system and having the amended data message as payload.

7. Apparatus according to claim 6, comprising

means for creating an alerting data message indicative of the presence of the original data message, addressed to the server of the information display system, the alerting message carrying address information appropriate to the selected display unit to cause the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and

means for forwarding the amended original data message to the selected server in response to an instruction from a termination point associated with the destination display unit.

8. Apparatus according to claim 6 or 7 further comprising means to generate password data.

9. Server apparatus forming part of a server-based information display system for receiving messages generated by the apparatus of claim 6, 7 or 8, for display by a selected display unit, the server comprising means for converting a data message

formatted for display on a display unit of a first type into control instructions suitable to display the information content of the data message on an information display unit of a second type controlled by the server, the information display unit being identified in the data message

10. Apparatus according to claim 9, comprising means to cause the display means to indicate the presence of a data message, and means responsive to a predetermined input from a user terminal associated with the display means to display the data message, the predetermined input being a password associated with the data in the data message.

11. Apparatus according to any of claims 6 to 10, wherein the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset.

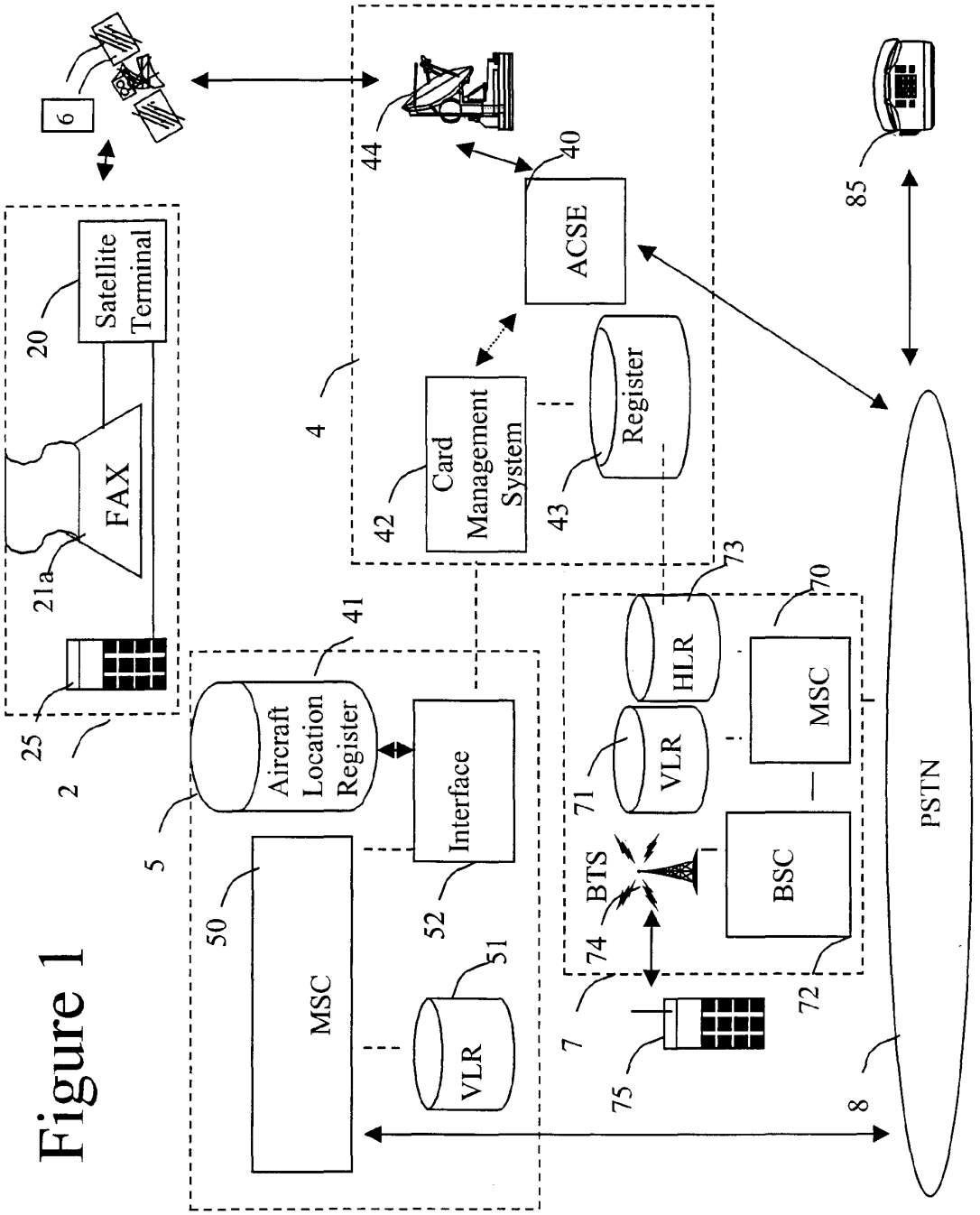

6
Satellite Terminal
20
FAX
21a
25
2
Aircraft Location Register
5
41
Interface
52
MSC
50
VLR
51
4
44
40
ACSE
Card Management System
42
Register
43
85
73
HLR
70
MSC
VLR
71
BTS
74
BSC
72
7
75
PSTN
8

Figure 1

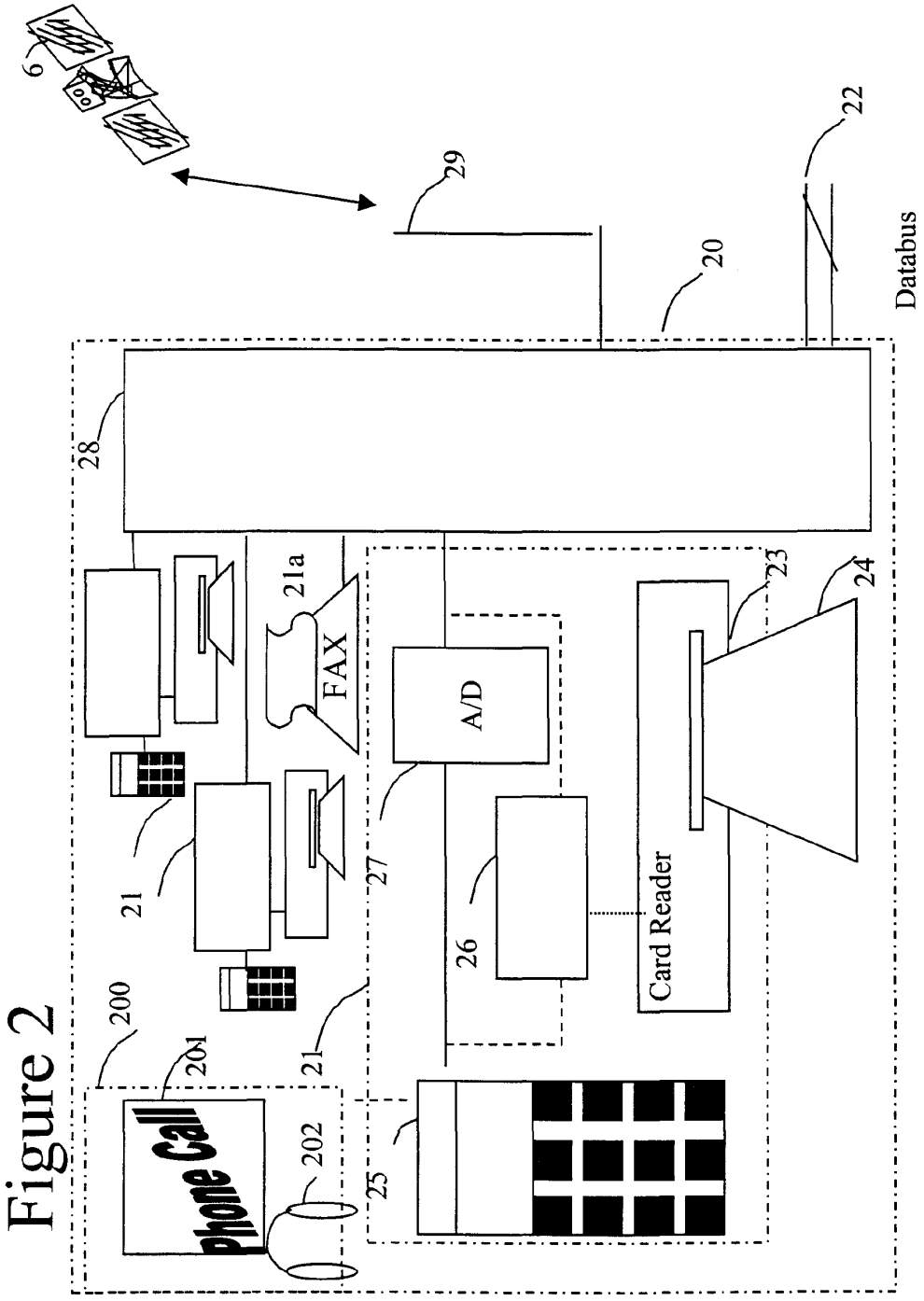
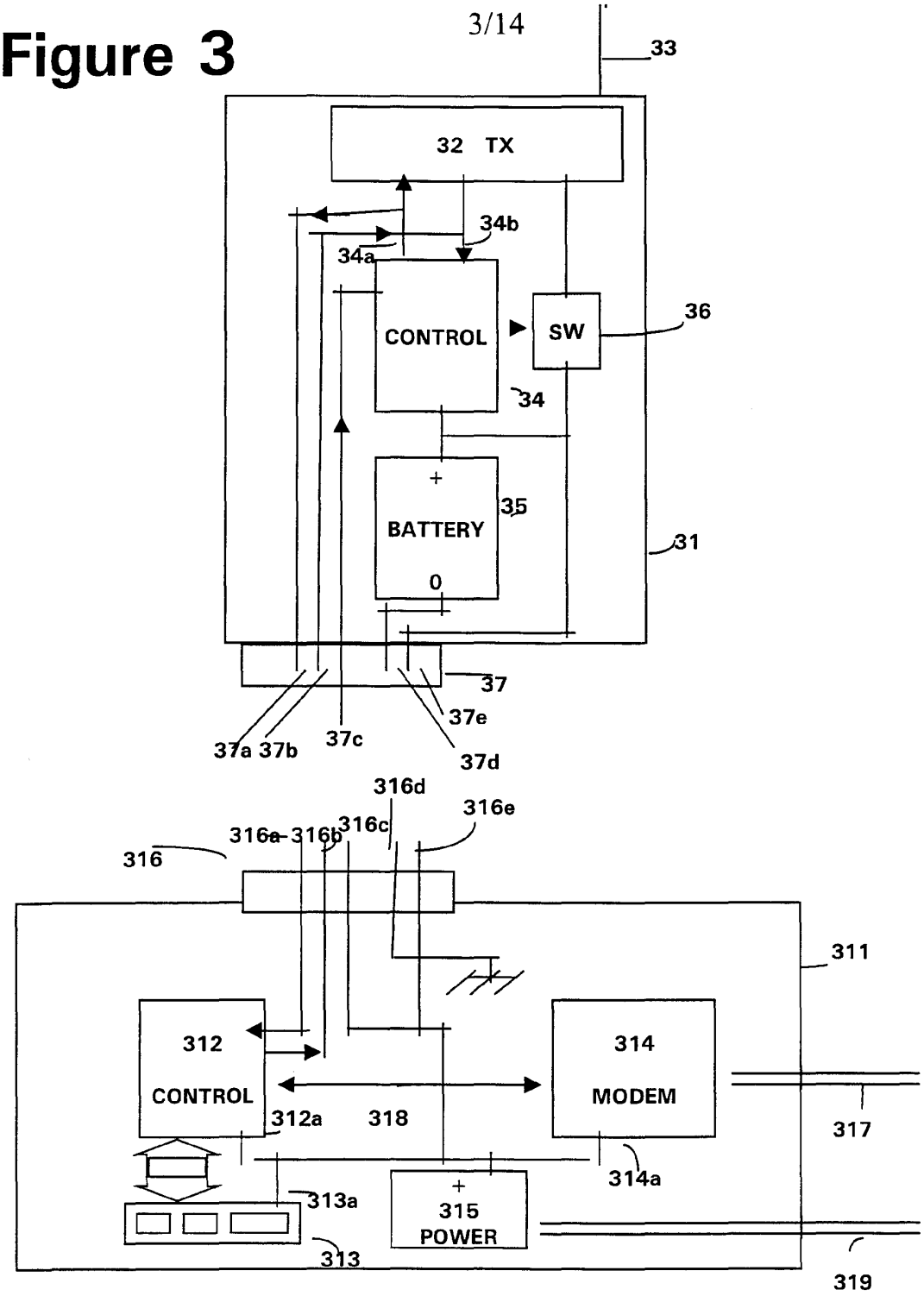

6
29
22
Databus
20
28
21a
FAX
A/D
23
24
21
27
26
Card Reader
200
201
21
Phone Call
202
25

Figure 2

Figure 3


33
32 TX
34b
34a
CONTROL
SW
36
34
+
BATTERY
35
0
31
37
37e
37a 37b
37c
37d
316d
316e
316a 316b
316c
316
311
312
CONTROL
312a
318
314
MODEM
317
314a
313a
+
315
POWER
313
319

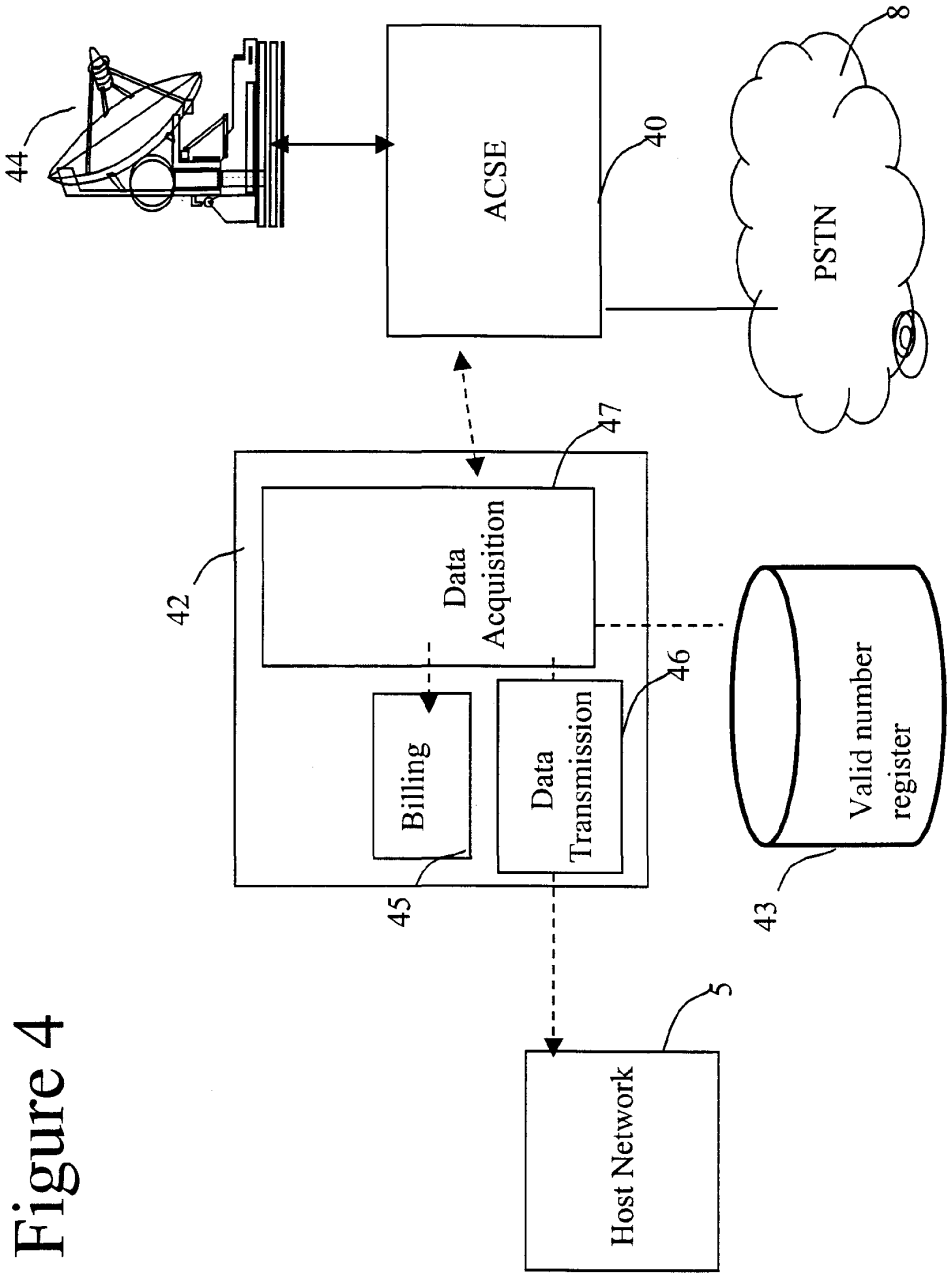

44
ACSE
40
8
PSTN
47
42
Data Acquisition
46
Billing
Data Transmission
45
43
Valid number register
5
Host Network

Figure 4

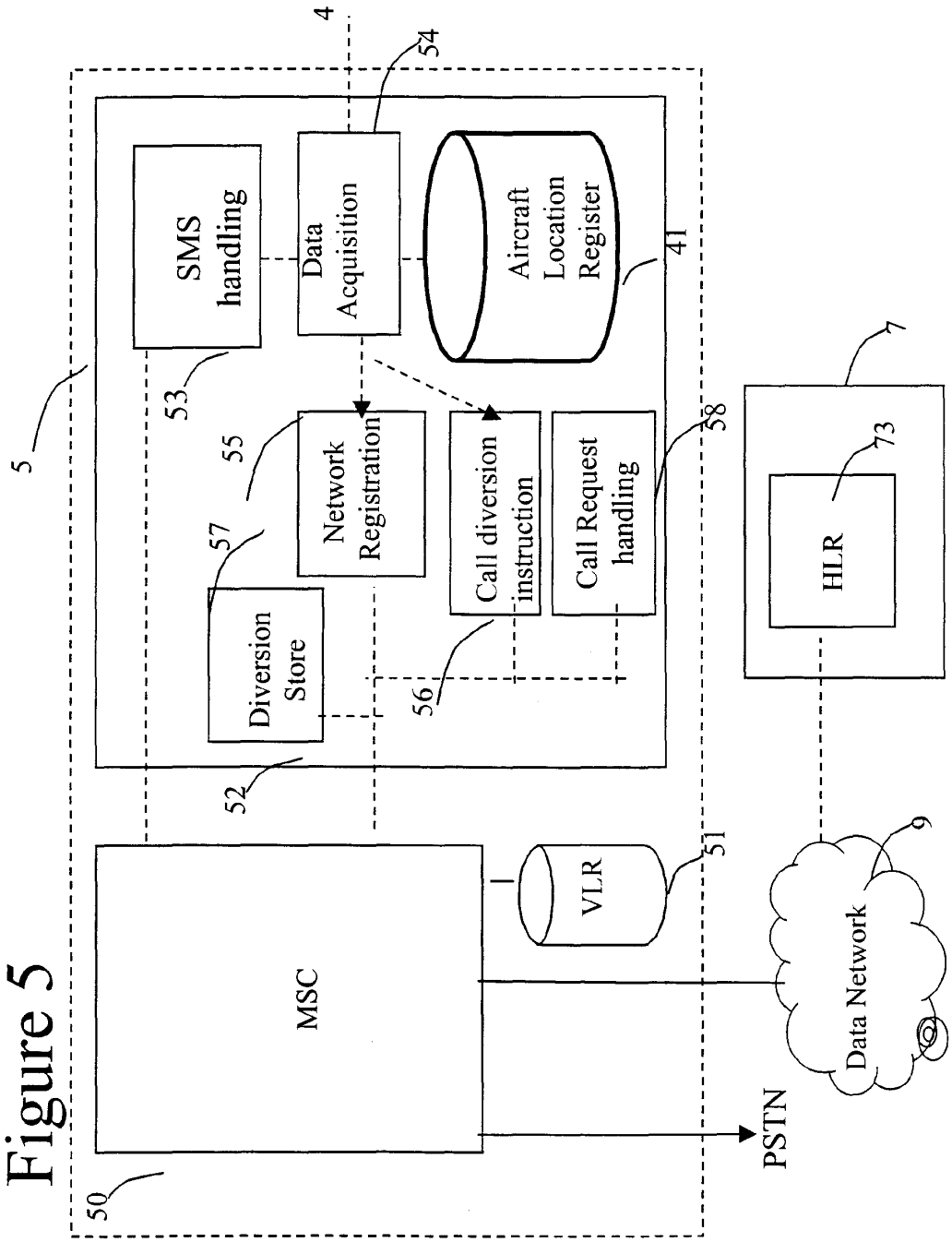

4
54
SMS handling
Data Acquisition
Aircraft Location Register
41
53
5
55
Network Registration
Call diversion instruction
Call Request handling
58
57
Diversion Store
56
52
HLR
73
7
MSC
VLR
51
Data Network
9
PSTN
50

Figure 5

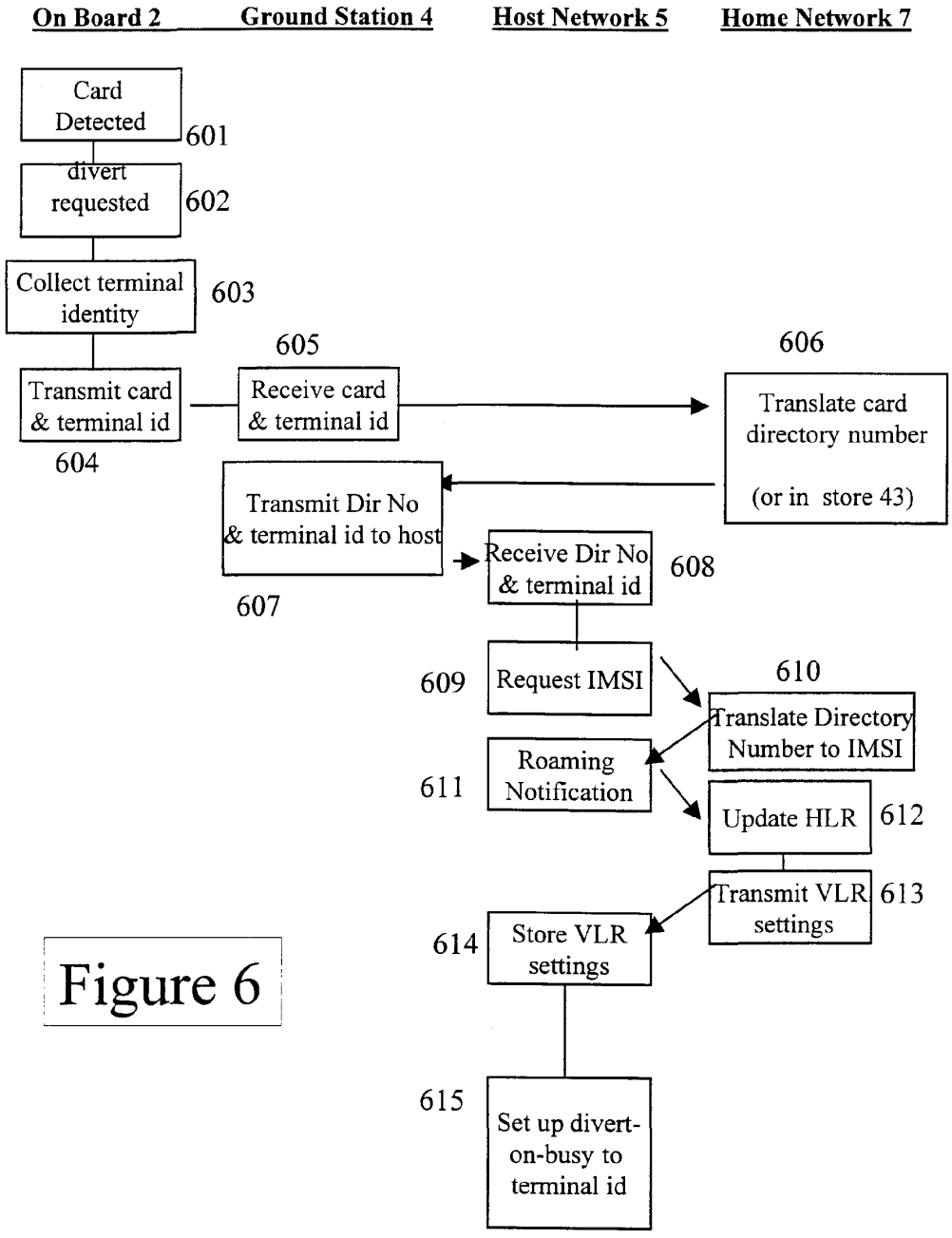

On Board 2
Ground Station 4
Host Network 5
Home Network 7
Card Detected
601
divert requested
602
Collect terminal identity
603
Transmit card & terminal id
604
605
Receive card & terminal id
606
Translate card directory number
(or in store 43)
Transmit Dir No & terminal id to host
607
Receive Dir No & terminal id
608
609
Request IMSI
610
Translate Directory Number to IMSI
611
Roaming Notification
Update HLR
612
Transmit VLR settings
613
614
Store VLR settings
615
Set up divert-on-busy to terminal id

Figure 6

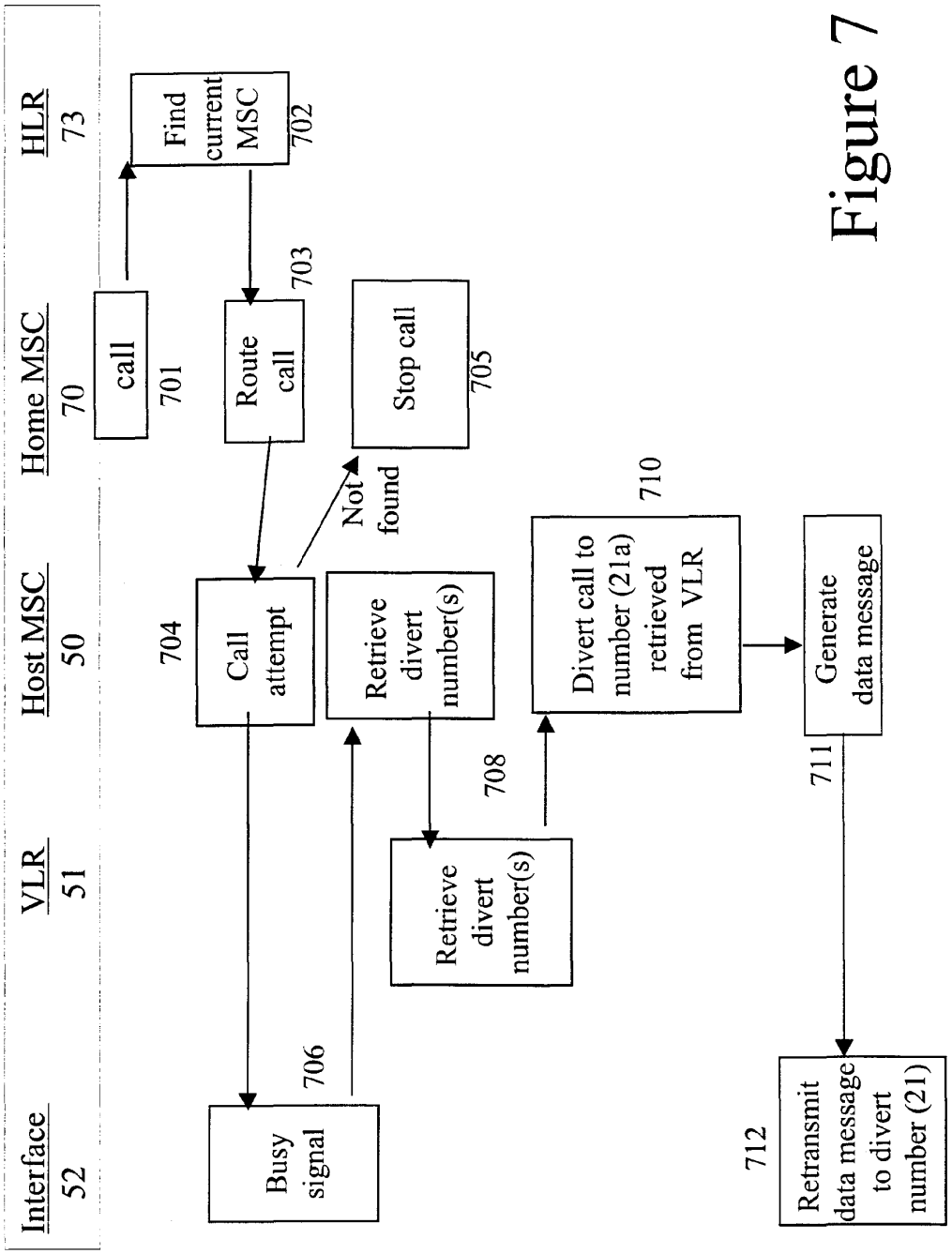

Interface 52
VLR 51
Host MSC 50
Home MSC 70
HLR 73
call 701
Find current MSC 702
Route call 703
Stop call 705
Not found
Call attempt 704
Retrieve divert number(s)
Retrieve divert number(s) 708
Divert call to number (21a) retrieved from VLR 710
Generate data message 711
Busy signal 706
Retransmit data message to divert number (21) 712

Figure 7

Figure 9

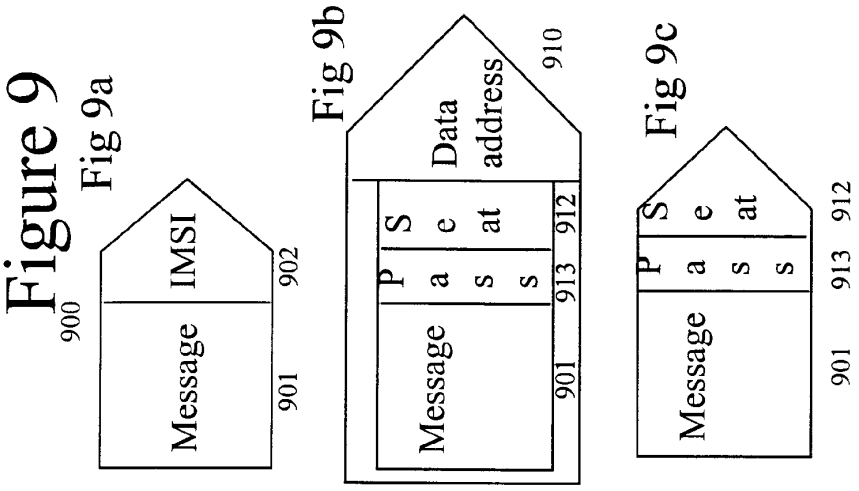
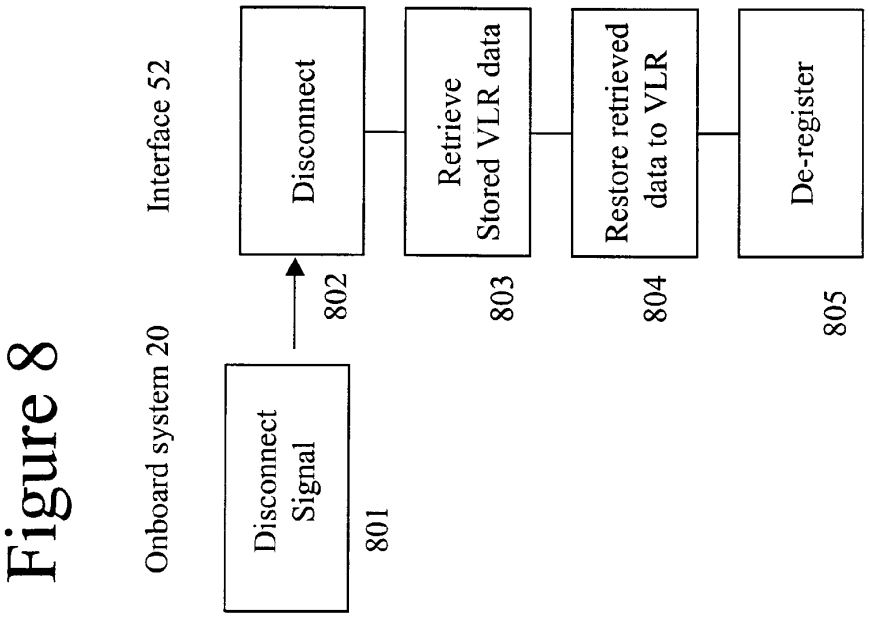


Figure 8



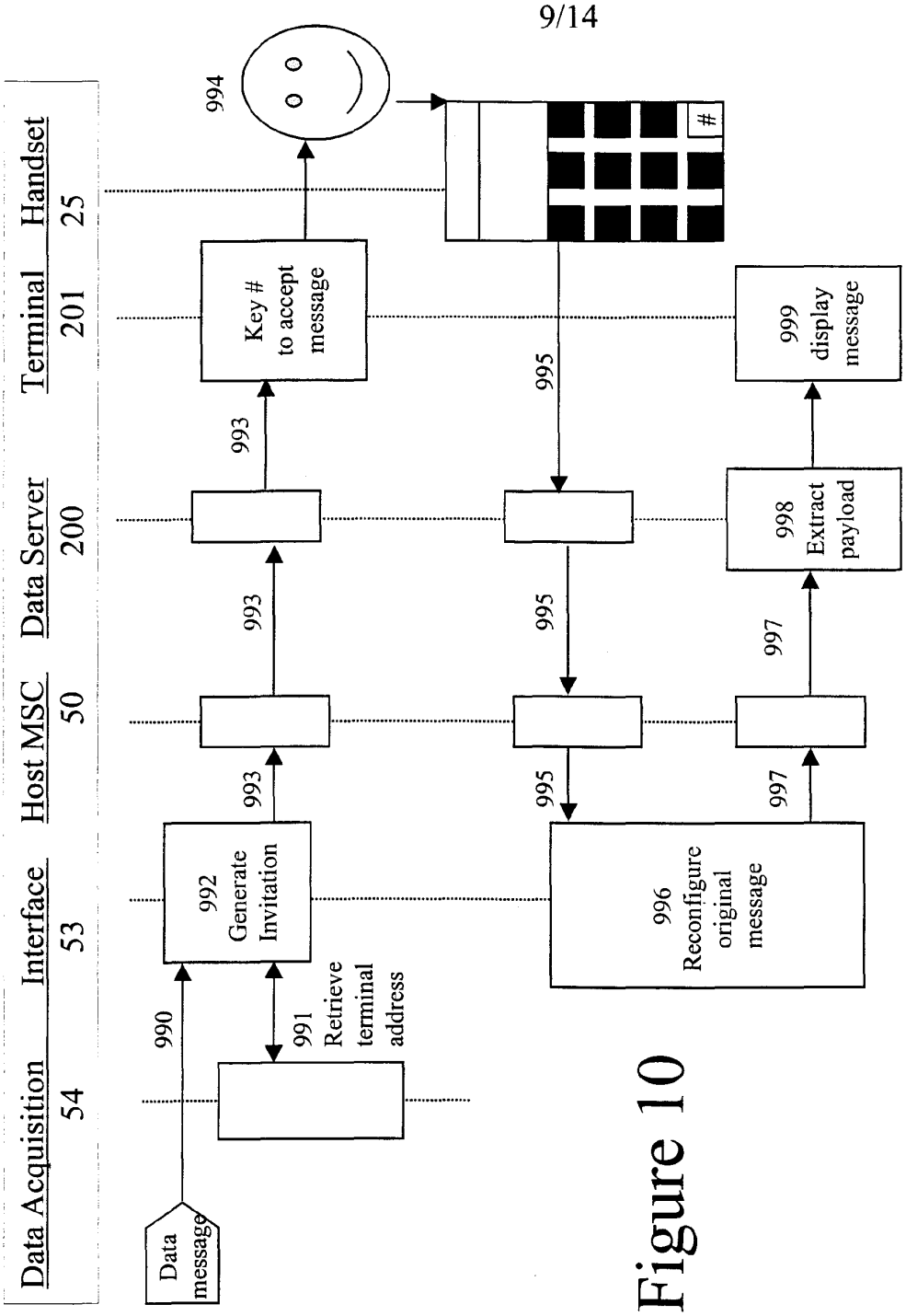

Data Acquisition 54
Interface 53
Host MSC 50
Data Server 200
Terminal 201
Handset 25
Data message
990
991 Retrieve terminal address
992 Generate Invitation
993
Key # to accept message
994
995
996 Reconfigure original message
997
998 Extract payload
999 display message
#

Figure 10

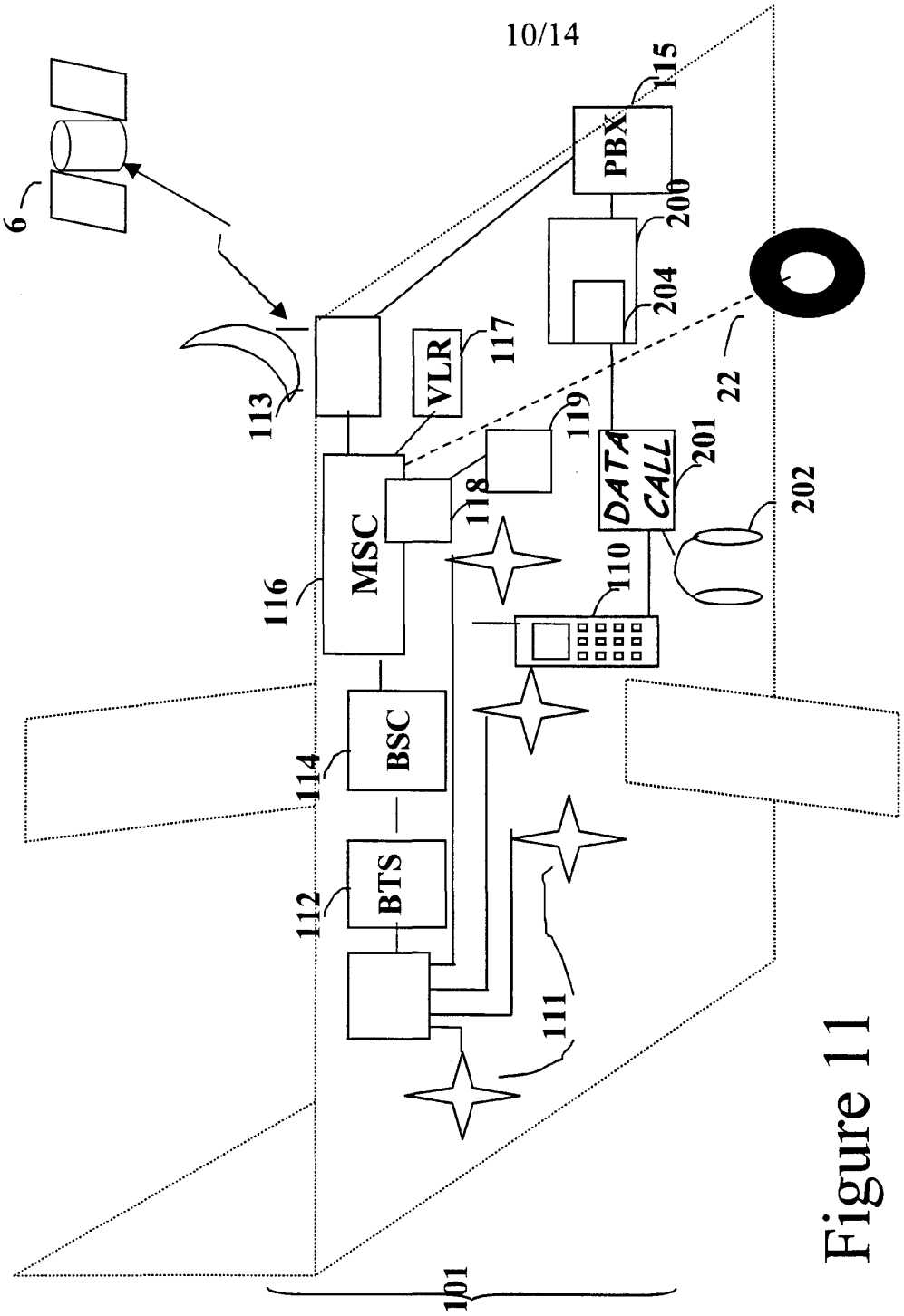

6
113
VLR
117
119
MSC
116
118
DATA CALL
201
202
22
PBX
115
200
204
110
BSC
114
BTS
112
111
101

Figure 11

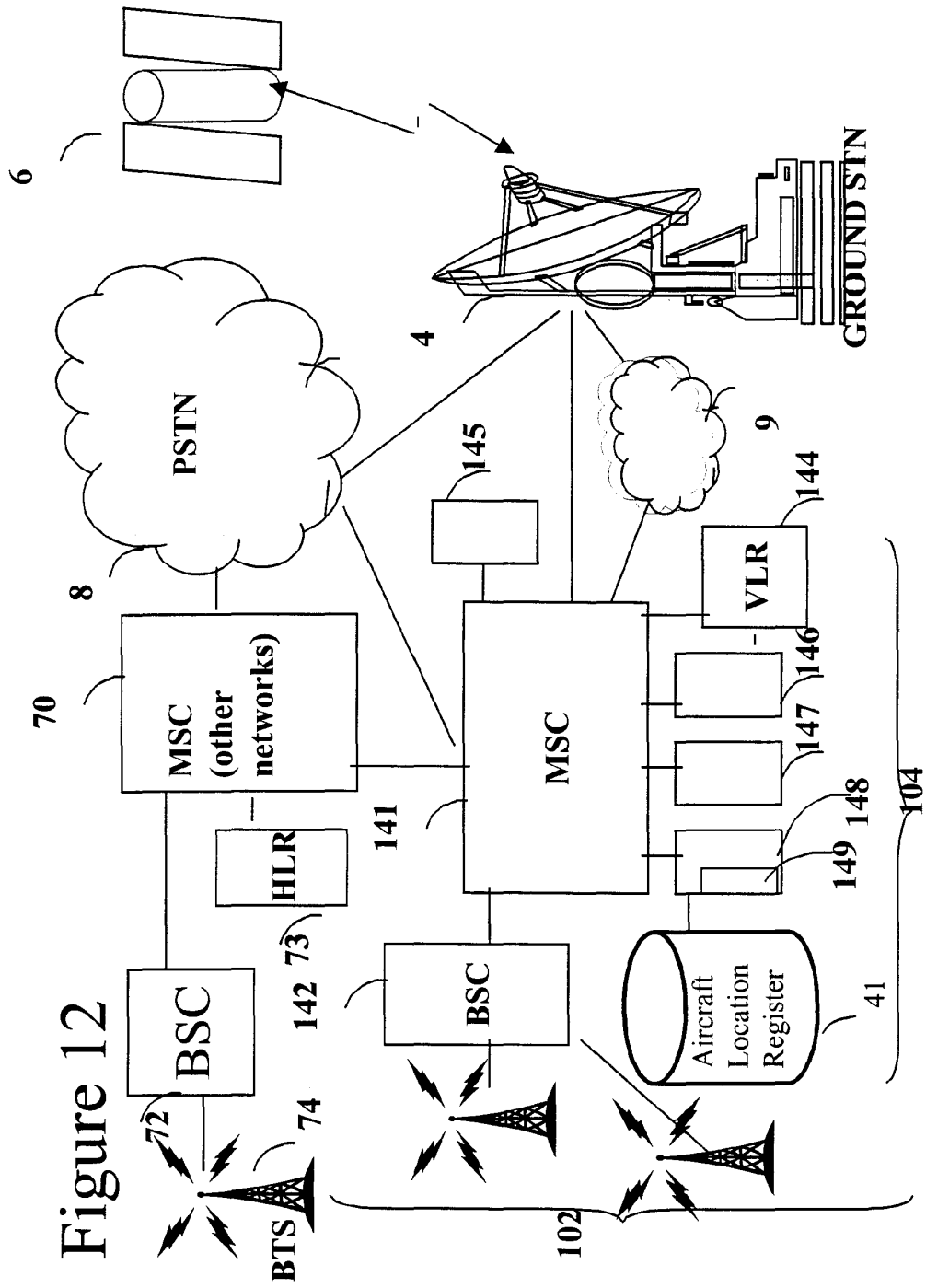

6
4
GROUND STN
PSTN
8
9
145
144
VLR
70
MSC (other networks)
MSC
146
147
148
149
104
141
HLR
73
142
BSC
BSC
Aircraft Location Register
41
72
74
BTS
102

Figure 12

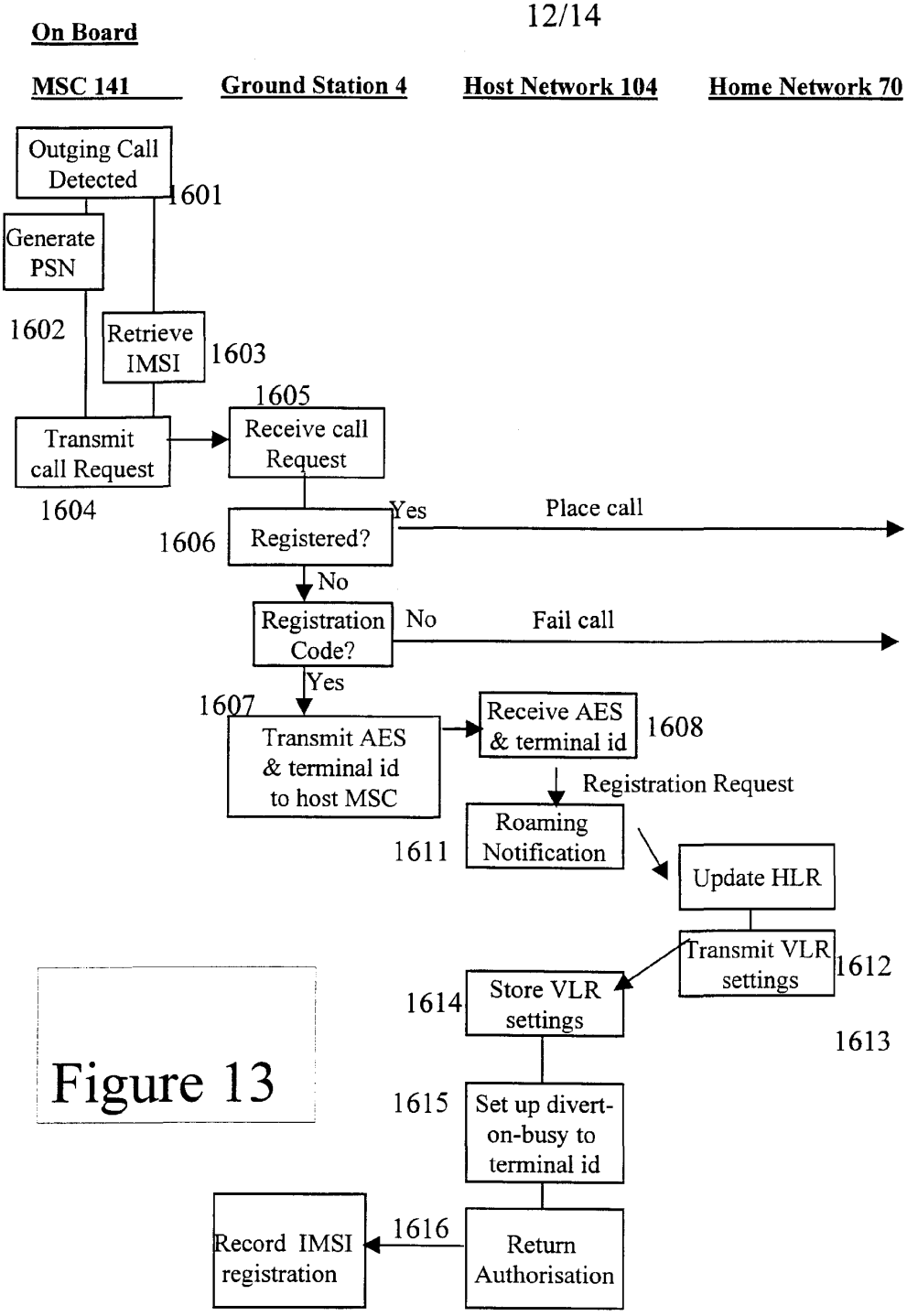

On Board
MSC 141
Ground Station 4
Host Network 104
Home Network 70
Outging Call Detected
1601
Generate PSN
1602
Retrieve IMSI
1603
Transmit call Request
1604
1605
Receive call Request
1606
Registered?
Yes
Place call
No
Registration Code?
No
Fail call
Yes
1607
Transmit AES & terminal id to host MSC
Receive AES & terminal id
1608
Registration Request
1611
Roaming Notification
Update HLR
Transmit VLR settings
1612
1613
1614
Store VLR settings
1615
Set up divert-on-busy to terminal id
1616
Return Authorisation
Record IMSI registration

Figure 13

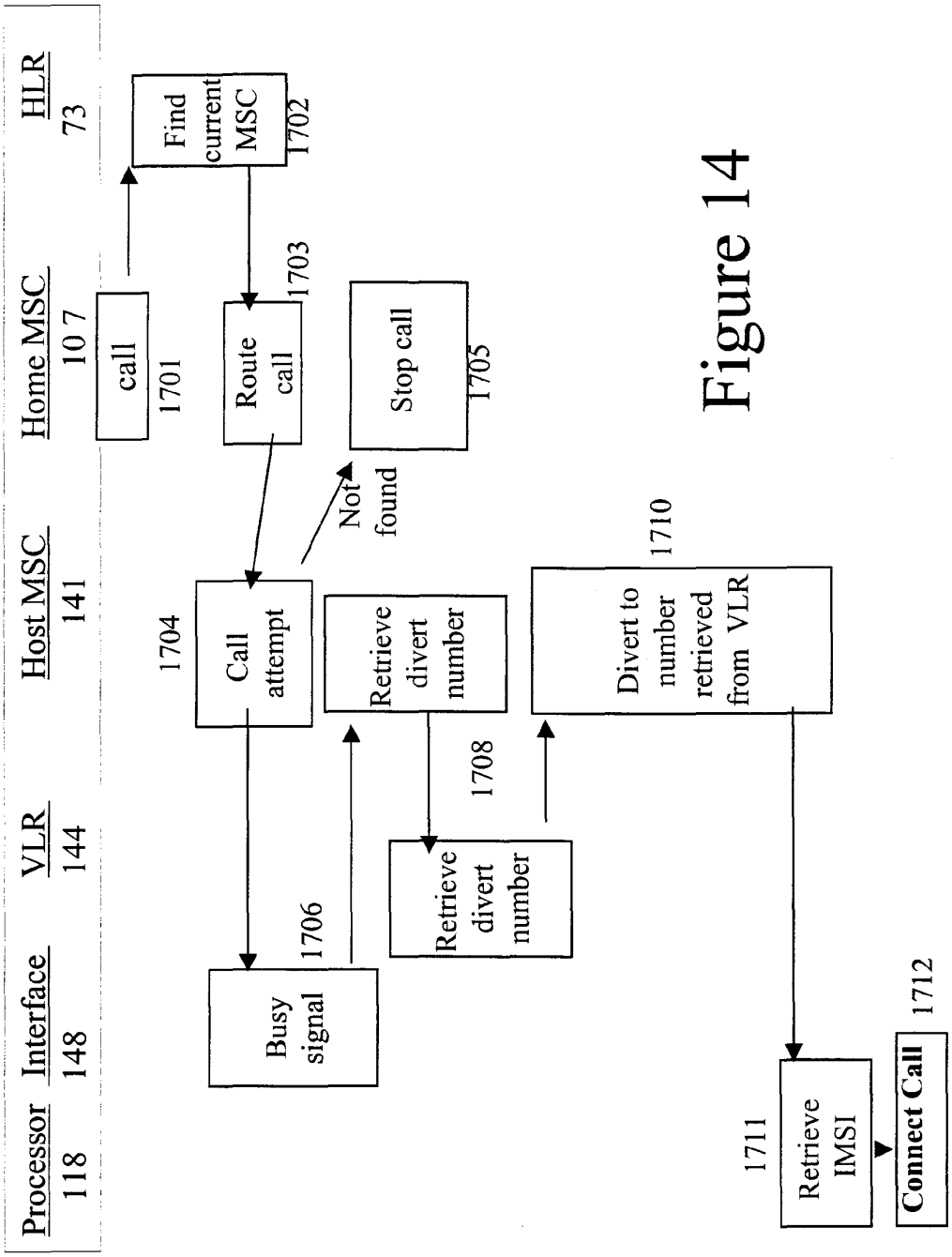
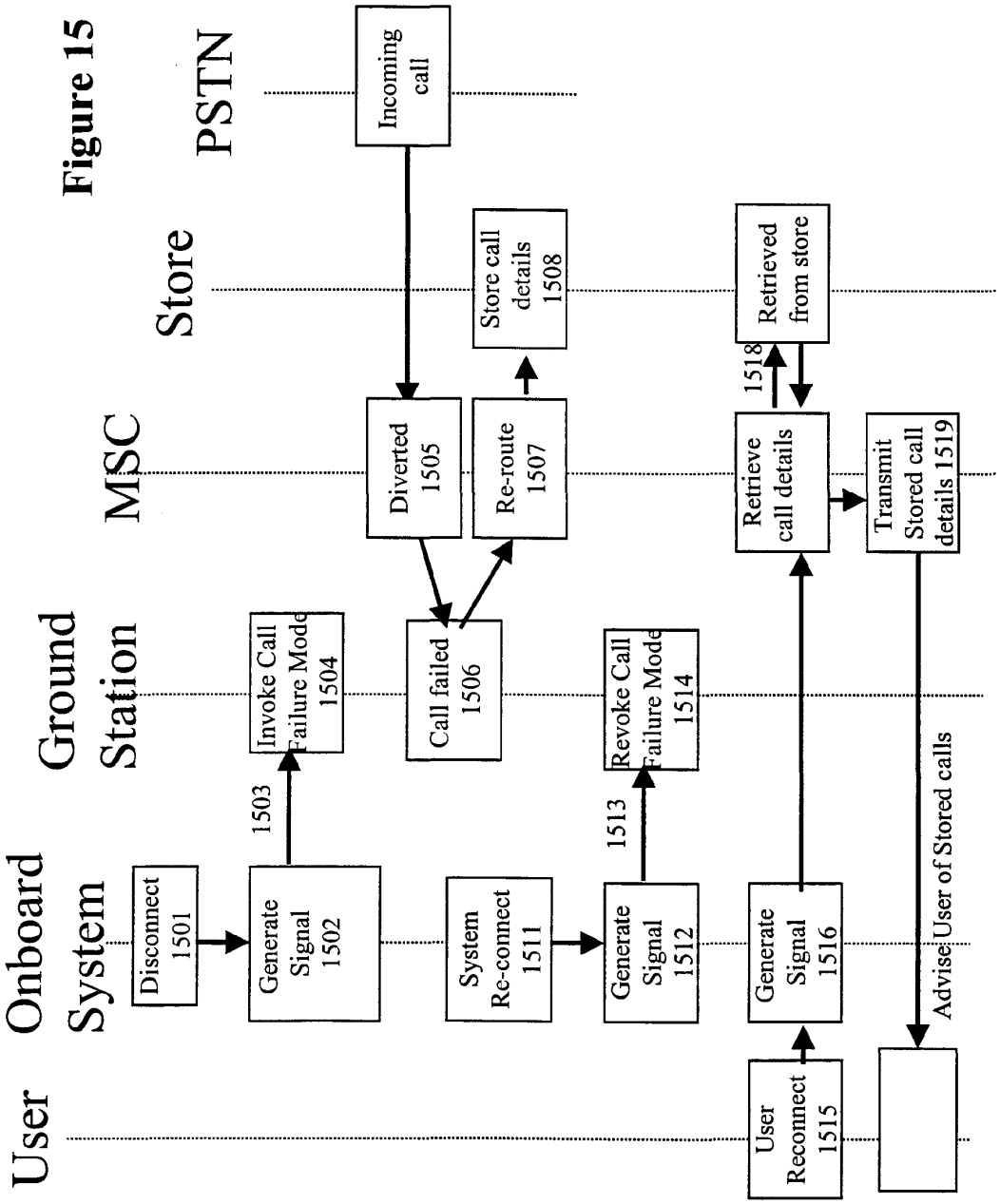

Processor 118
Interface 148
VLR 144
Host MSC 141
Home MSC 10 7
HLR 73
call 1701
Find current MSC 1702
Route call 1703
Stop call 1705
Not found
1704
Call attempt
Retrieve divert number
1708
Divert to number retrieved from VLR
1710
Busy signal 1706
Retrieve divert number
1711
Retrieve IMSI
Connect Call 1712

Figure 14

Figure 15


User
Onboard System
Ground Station
MSC
Store
PSTN
Incoming call
Diverted 1505
Store call details 1508
Retrieved from store
1518
Re-route 1507
Retrieve call details
Transmit Stored call details 1519
Disconnect 1501
Generate Signal 1502
1503
Invoke Call Failure Mode 1504
Call failed 1506
System Re-connect 1511
1513
Revoke Call Failure Mode 1514
Generate Signal 1512
Generate Signal 1516
User Reconnect 1515
Advise User of Stored calls

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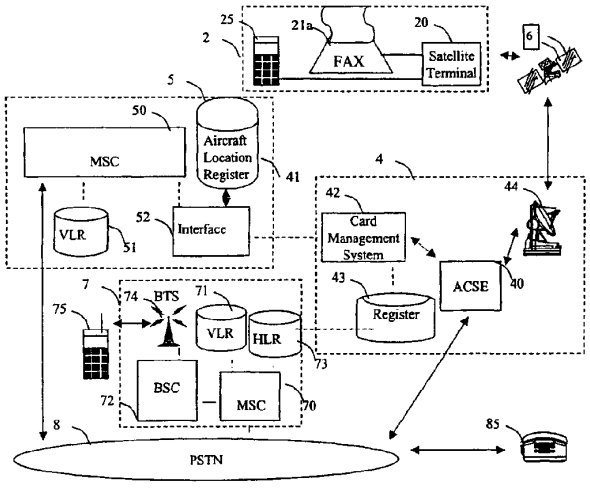
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[Continued on next page]

(54) Title: CALL DIVERSION SYSTEM



(57) Abstract: An interface (52) is provided between a satellite telephone system (4) and a cellular telephone system (5) for allowing calls to a user's cellular telephone to be diverted to a satellite telephone handset (25) when the user is unable to use his cellular telephone, for example when on board an aircraft (2) fitted with a satellite telephone system (20). The user inserts a card (which may be the SIM of his mobile phone, or a card compatible with existing satellite telephone equipment) into a suitable reader in the satellite telephone (20), which causes the satellite ground station's card verification system (42) to connect to a host cellular network (50). The host cellular network has an interface unit (52) which emulates the operation of a normal base station, so that the host cellular system (50) acts as if the mobile user's terminal is roaming on the host network, but is currently "busy". The interface (52) also resets the user's existing call diversion instructions so that when the host cellular system (5) receives a busy tone from the base station emulator (52), it routes calls to the directory number of the terminal (20). Data messages originally formatted for transmission over the cellular telecommunications network for generation of a display on a display unit of a cellular telephone, can instead be transmitted over the satellite network for display on the information and entertainment system of the aircraft by replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message. A new data message is created, addressed to the server of the information display system and having the amended data message as payload. The onboard server has means for converting the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in 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 document 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

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/03091

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(54) Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

(57) Abstract: Rerouting apparatus for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

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ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

Field and Background of the Invention

The present invention relates to routing of data including multimedia between electronic devices, and more particularly but not exclusively to rerouting of incoming communications that may or may not include multimedia to devices other than the initial receiving device. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional.

With the introduction of mobile communication devices, telecommunications technology has transformed society over the past decade. The ability to communicate almost anywhere, anytime, with few geographical limitations has resulted in a society, in both social and business contexts, which is almost always on-line. Mobile communication devices today typically have data processing ability which allows them to handle multi-media, and different types of devices are today able to communicate with each other, either directly via a permanent or temporary link or indirectly via a network. Thus data, including multimedia, can be directed or routed from one device to another device. The idea of multi-media routing stems from the myriad of opportunities which present themselves in routing signals from one device or kind of device to another. However, in general, the playing of multimedia data is limited , at least in the short term, to the device on which it is received, or to those in which the data originates. This limitation can be a considerable limitation on the user's ability to enjoy the multimedia since different devices have very different capabilities regarding the playing of multimedia.

The media playing devices considered specifically in the present disclosure include both mobile devices (cell phones, PDA's, handheld devices, etc.) and non-mobile devices (land/fixed line phones, computer monitors, Hi-Fi sets, speakers, etc.). Some of the devices may be used for just one or two media types and others are more general in their applicability, which is to say it is possible to use the devices in different modes for playing several media types: voice, text, images, and video. Likewise, the devices are used in various locations: at the office, home, car, hotel room, plane, outdoors, etc.

Most current mobile devices in particular provide relatively poor multi-media capabilities including digital audio, image, and/or video capabilities (as well as other media capabilities) in comparison with other existing devices such as land/fixed line phones, computer monitors, TV screens and Hi-Fi sets. Compared to high quality media playing equipment, even 3rd generation mobile devices (3G) are of inferior quality.

A number of patent applications discuss rerouting of communications from one communication unit to another. An example is GB 2,370,451, which discloses a communication unit that detects the presence in its vicinity of a second communication unit and determines its identity. If the identity is found to be of a predetermined set (*e.g.* of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

WO0141317A3: call diversion system, discloses a system specifically for redirecting calls between satellite and terrestrial cellular systems. The disclosure addresses the issue of reformatting data messages for the transition.

Neither of the above systems takes into consideration the types of multimedia content of the incoming calls data or playing quality and usage comfort when deciding whether to redirect, and redirection is based on devices having a shared ownership or otherwise being part of a predetermined set. In the above-described systems the user typically has only limited control over rerouting. Nevertheless, it would be highly advantageous to provide the user with the ability to select a target device, based on the type of multimedia content, and furthermore to choose a device for play or storage of the content independently of the initially targeted or originating device.

Summary of the Invention

According to a first aspect of the present invention there is thus provided data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

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a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

The apparatus preferably further comprises a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

Preferably, said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

Preferably, a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

The apparatus preferably further comprises a media cloner for making multiple copies of the data, in particular but not exclusively an incoming communication, thereby to enable said apparatus to redirect, for example, a single incoming communication to a plurality of locations.

Preferably, said announcer is an active device, operable to transmit at least status information to respective surroundings.

Preferably, said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

Preferably, said passive device further carries status information of said device.

Preferably, said announcer comprises a barcode and wherein said scout is a barcode reader.

The apparatus preferably further comprises an outgoing multimedia transmitter for directing rerouted media directly to a selected device.

The apparatus preferably further comprises control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

The apparatus preferably comprises control functionality operable to carry out said rerouting directly.

The apparatus preferably comprises control functionality operable to carry out said rerouting through locally available network infrastructure.

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The apparatus preferably comprises a device database for storing compatibility data of different equipment types.

According to a second aspect of the present invention there is provided a method of rerouting data comprising:

Receiving or generating said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

The method preferably comprises determining compatibility of said available devices in said vicinity with said communication.

The method preferably further comprises carrying out media type transformation from a media type of said data to a media type compatible with a selected device.

The method preferably further comprises carrying out selection between devices found to be available, via a user interface.

The method preferably further comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

The method preferably further comprises selecting a plurality of devices to reroute said data thereto, and cloning said data for each selected device.

The method preferably further comprises determining availability of other devices in the vicinity of said target device, and

rerouting said data to at least one further target device selected from devices found to be available.

According to a third aspect of the present invention there is provided a data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

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Brief Description of the Drawings

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, purely by way of example, to the accompanying drawings.

With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice. In the accompanying drawings:

Fig. 1 is a simplified diagram showing a plurality of electronic devices in the vicinity of one another, between which communications can be rerouted according to a preferred embodiment of the present invention, and

Fig. 2 is a simplified block diagram showing a preferred apparatus for attachment to an electronic device for allowing the device to support rerouting according to preferred embodiments of the present invention.

Description of the Preferred Embodiments

The capability of routing of multi-media content (possibly including media transformation and multiplication, i.e. cloning) from one device to another may dramatically upgrade media playing quality, and grant the user the liberty to play the content on any device he wishes, preferably the most suitable device available, regardless of the origin of the content or the device to which the content may initially have been directed, or at which the content originates. Furthermore, by rerouting to a more capable device, a user's satisfaction level may be increased in comparison to having to remain with a device that say is limited by inferior data rate, processing power, memory capacity or input/output facilities. For example, a cellular communication device such as a mobile telephone is such a limited capability device which is typically the initial recipient of a communication. Such an initial recipient, or originator, is referred to hereinafter as the routing-source device. Furthermore, as will be explained below, the ability to route content from non-mobile, that is land or

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fixed devices to nearby mobile and other devices permits a range of possibilities for use which is currently not provided for.

For example, the ability to route an incoming phone call, typically comprising voice, from a mobile device to a land/fixed line phone may generally be expected to upgrade the quality of the call. The ability to route hand held calendar content from a mobile device having some digital ability to a computer monitor, may allow for better viewing of the information. Such rerouting may also enhance the user's ability to share the information with other people or with computer applications, for example applications that capture information displayed on the monitor and use it to trigger other events. Such applications can easily be run on a PC or laptop computer but are difficult to run on a mobile telephone for example.

An incoming call or other originating data may be rerouted more than once. In preferred embodiments, individual devices do not need to know whether they are an initial receiving device or a first or subsequent rerouting device, and may treat any arriving communication in the same way.

Furthermore, a preferred embodiment of the present invention provides an ability to route an incoming voice message from say a mobile device or voice mailbox to a facsimile machine or display monitor, combined with a transformation capability – in this case an ability to transform voice to text. Software packages that interpret voice and translate into text are well known and commercially available. Such packages, which presently require training on a specific voice in order to produce reasonable results, may broaden the usage of voice messages. However, even without training, the best packages can produce sufficiently good results to enable say the hard of hearing to make a reasonable interpretation of an incoming voice signal. Thus such a rerouting-while-transforming capability may be highly desirable for people with special needs - impaired senses (hearing, vision) who may use such a capability to receive information in a form more usable to them. Likewise such a capability may be useful for receiving communications in difficult environments such as a noisy factory floor.

As a further example, an incoming phone call directed at a land/fixed line may be rerouted to a mobile device, thus, effectively using the mobile as a cordless phone. Such a technique may ease acceptance of a phone call in a hotel lobby, at a colleague's office, at a restaurant and in many other settings.

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Routing an incoming call away from a mobile telephone may also be advantageous health-wise in decreasing the physical proximity of electromagnetic radiation (emitted by mobile devices) to the user.

It is pointed out that communication-enabled devices can receive an incoming communication for rerouting. However as long as rerouting is direct from device to device, the device to which the rerouting is made need not be generally enabled for external communication as typically managed by a service provider be it phone, cellular, internet and the like. Furthermore, routing is not limited to rerouting of incoming communications but also applies to routing of data from any kind of data source to any kind of data player. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional. Thus video data being captured at a video camera may be directed using embodiments of the present invention to a convenient nearby video player or multimedia enabled PC. Thus, a generally non-communication enabled device will be unable to receive initial communications but can route data to other devices and can receive data as a rerouting target.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is applicable to other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

Reference is now made to Fig. 1, which is a simplified schematic diagram showing a cellular telephone 10 in proximity to a fixed telephone 12 and a computer monitor 14. The three electronic devices need have no relationship to each other except that of proximity. An incoming call is received at cellular telephone 10. As will be explained below, the cellular telephone 10 detects the presence of the other devices 12 and 14 and allows the user to retain the call at the cellular telephone 10 or alternatively to transfer it to either of the other devices 12 and 14. If the user chooses the fixed telephone 12 then the call is rerouted in one of a number of ways explained below to the fixed telephone 12 where the call may be taken in the usual way. If the user chooses the computer monitor 14 then assuming the presence of speakers and a

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microphone the call may be taken again in the normal way. In addition, software may be provided, either at the cellular telephone 10 or at the computer 14 to convert the voice signal into text.

It is noted that in the case of a cellular telephone, the telephone communication is a bi-directional type of communication, and any rerouting should preferably support a return path for the communication.

In addition, using the above rerouting, a call can be set up to support a game session. The call can be set up using a cellular telephone, and then one or both users reroutes the call to a game console.

The above may be achieved by sending rerouting control data along with the rerouted communication, which control data includes a return address. The return address may be a final return address for single stage rerouting, or may be an intermediated return address in the case of multi-stage rerouting. In the latter case, the intermediate return address can be used in an intermediate rerouting device to find a further rerouting address.

Reference is now made to Fig. 2, which is a simplified block diagram showing in schematic form the elements of a modification to be applied to a communication device for use in call rerouting of the kind described in Fig. 1. It will be appreciated that the elements are not restricted to a cellular telephone but may be applicable to any electronic device and more particularly but not exclusively to communication-enabled devices. Depending on the device type, some functionality may be disabled. For example, a land/fixed line phone might not need an outgoing multi-channel multi-media transmitter component. A device not enabled for external communication may not be able to receive originating communications from an external communication network but may be able to route data to other devices and be the target for data and communication rerouting.

The device comprises an incoming multi-media receiver 20 which is responsible for capturing media content and passing it to one of the other components in the device, depending on the circumstances, as will be explained below. One of these other components is outgoing multi-channel multi-media transmitter 22. Transmitter 22 is responsible for transmitting (directly) media streams to external devices which are specified to it. Transmitter 22 comprises a multi-channel port which is able to transmit several media types to several devices at the same time.

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A media transformer 24 is responsible for transforming its input (incoming media) into a required media type, or types, and outputting the resulting media stream(s), or file(s). It too preferably has a multi-channel Output. The media types required as output are preferably specified externally. A preferred embodiment of a media transformer includes a voice to text transformer as discussed above. The voice to text transformer may be augmented by a text to fax transformer. Further transformations include image transformations such as color to black and white, resolution reductions, and image format transformations. Similar transformations may be provided for video, and to the extent applicable for sound formats.

Media cloner 26 is responsible for duplication of its input channel content, preferably received from the incoming multi-media receiver 20 (input media) into as many output channels as indicated to it externally. Each output stream, or file, is routed, as indicated to it externally, to either the media transformer 24 or the outgoing multi-media transmitter 26.

Controller 28 is responsible for managing all the other components and monitoring their activities. In particular, any media (packaged or streamed) transfer between components, input and output, is performed under the controller's supervision.

In operation, content is received at incoming multimedia receiver 20. As will be explained in detail below, one or more destinations for the data as well as media type transformations are selected. In the case of straightforward rerouting of the media to another device, the content is sent directly to outgoing multi-media transmitter 22 for simple media routing to a similar content type device. In other circumstances, transforming from one media to another may be required prior to rerouting. In such a case, content is directed to media transformer 24 prior to rerouting, where transforming is carried out. The transformed content is then directed to the outgoing multi-media transmitter 22 as before. Content is directed to media cloner 26 in cases where it is intended to route the content to more than one device, or if for any reason it is intended to send multiple copies to the same device. From the media cloner the content may then be sent directly to the outgoing multi-media transmitter 22 for direct output, or one or more of the copies may be sent to the media transformer for transformation prior to output. Routing of the content and operation of the above-mentioned components is preferably controlled by controller 28.

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In order to make decisions about selecting destinations and media types and in order to allow other devices to receive availability information, three more components are preferably provided, an announcer device 30, a scout device 32 and a device library 34.

The announcer device 30 is responsible for announcing to the environment the availability of a current device for accepting routed media. It may also indicate device type and use conditions, preferably including any usage charges, thus enabling surrounding devices to avoid say sending video data to a fax machine, or enabling security conscious users to avoid receiving non-trusted data at their device. When the device becomes busy (for example, a phone that is handling a call), it announces this to the environment, typically via transmissions. Similarly, it announces its becoming available. Announcements may be periodically repeated. As an alternative the announcer device 30 may signal only when available or only when unavailable. Another (optional) function of the announcer 30 is that of informing the environment, typically a user, that media content has been routed to it and is now usable (for example, to announce that a rerouted call is now available on this telephone). The latter kind of announcement, that is to say to persons rather than to electronic equipment, may typically comprise light flashes, rings, a loudspeaker sound or even a smell.

Typically, the announcer device 30 may be active (transmitting) or passive (reacting, or reflecting). A simple example of a passive announcer device is a sticker attached to a phone and supplying say device type and conditions of use information using a barcode. The sticker may be scanned and comprehended by the scout devices 32. In addition to a sticker, a passive announcer may be provided using an LCD screen displaying a barcode. The LCD or like screen is advantageous in that, since its display can change, the barcode can indicate current status information. An alternative way of providing status information along with a barcode is by providing a color display alongside the barcode. The color display may be changed electronically or mechanically by the device to indicate different states, and can be read optically along with the barcode.

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The scout device 32 is responsible for scanning the environment to find other devices therein and to determine their status, typically free or busy. The scout is also responsible for obtaining any specific use conditions from announcers 30 of the devices being detected. The scout may be activated periodically and/or upon demand.

Device library 34 contains information needed for communicating with various devices. Such information may typically include usage related information as well as technical information regarding expected media formats and transmission technology specifications, including protocols, used by the device type. It may also contains pre-defined user preferences if defined, including default user preferences.

The controller 28 is responsible for integrating knowledge accumulated by the scout, and for directing operation of the announcer 30. The controller uses either pre-defined user preferences from the device library 34 or it may obtain preferences over a network, or it may simply capture user preferences using menus or like user interaction. The controller preferably follows the appropriate receiving/transmitting protocol including hand shake, identification, authentication, encryption procedures and the like.

The apparatus described in respect of Fig. 2 may be physically packaged, for example as a card, a chip or an attached stand-alone unit. The apparatus may also be realized as software within another apparatus, host device - for example, on a personal computer (PC), cell phone, a personal digital assistant (PDA) or other standard electronic devices. In any case, the host apparatus preferably possesses its own transmission and receiving capabilities, or is connected, perhaps via a network, to another device that does have such capabilities.

For example, a host cellular telephone may use already installed IR for scouting and announcing or any of the previously described technologies. A PC may use an existing peripheral digital camera for scouting and local network devices for transmission.

In many situations, as briefly described in previous examples, certain apparatus activities may be initiated via user interaction, and preferred ways of enabling user interaction comprise displaying menus, or using voice menus, or conceivably even using feel or smell menus. Certain actions are preferably taken automatically, that is to say without user interaction. Such automation may be based on profiles, terms, and conditions. Conditions may for example be associated with the device that performs the routing, as well as with a device to which media is routed.

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Profiles may be stored with the modification apparatus of Fig. 2 or obtained from remote sources.

Menus may be activated in the following modes:

a) Automatic pop-up menu upon event (incoming call, message etc.)

b) Manual (menu) activation ("always on".)

To protect against hostile or non-trusted parties, the modification preferably provides some level of firewall protection for both receiving and transmitting components. Such protection may comprise identification and/or authentication, and may comprise restrictions on routing or receiving information to devices whose owners are not trusted. In addition, to protect privacy, transmitted information may be encrypted.

Considering the outgoing multi-media transmitter 22 in greater detail, the transmitter may incorporate one or more of the following transmission technologies for transmitting media to a nearby device:

- Infra-red (IR)
- Microwave
- Radio (any suitable frequency)
- Sound waves
- Ultrasound
- Wire (and cable) transmission technologies
- Light (visible)
- Laser
- Chemical (mainly smell)
- Quantum techniques

and other technologies that will occur to the skilled person. The choice of technology may depend on general and specific circumstances, such as the type of data to be transmitted, the environment of the transmission, safety and like considerations, and compatibility with as many as possible other devices.

As described above, rerouting may be direct, that is device to device. Direct (local) routing between devices uses one or more of the technologies specified above but does not usually use any external service provider services, network, or infrastructure. Such routing may however use a local computer network, for example

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cable or radio-based, or simple end-to-end communication (for example, IR communication between two or more devices).

In addition, rerouting may be indirect. Indirect non-local routing relies on external service provider services, network and infrastructure. Indirect routing still requires the device initially receiving the communication to detect available receiving devices and determine their capability and availability and also requires potential rerouting recipients to announce their capabilities to the environment. The device initially receiving the communication then makes a decision, typically with the help of user interaction, to determine whether to reroute the message and if so to what device, just as before. However the rerouting information is then sent to the external provider who carries out the rerouting of the communication by switching at the exchange. Such a switching method can take advantage of higher data rates over land lines as opposed to wireless connections.

A third rerouting mode uses local network infrastructure to carry out the rerouting. The communication is routed through a local area network (LAN), or a wide area network (WAN) infrastructure with information to indicate to the network which device has been selected for rerouting. However the network has to interpret the information to decide how to route the information. Either kind of rerouting through the available network infrastructure may be useful, for example for rerouting of an incoming phone call from a cellular telephone to a colleague in another room within the same organization.

There are many ways to exploit the capability to route different content (media) types between different devices. Using only rerouting, one may route one form of content (for example audio) only to devices that handle audio (for example, routing an audio stream to nearby speakers). Using rerouting combined with a media type transformation capability, one may route content transformed specifically for a receiving device. Thus for example voice may be transformed into text and then routed to a fax machine. It may also be possible to transform color images to smell and reroute them to a device able to output smell. Finally, cloning allows the same content to be sent to several devices, and combinations of different transformations for different devices may allow additional dimensions to incoming multi-media. Thus, for example an incoming signal comprising music and voice could be cloned. One of the clones could be transformed into text and transmitted to a monitor able to display text. The other clone could be transmitted to speakers to give high quality

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reproduction of the music. As a further variation, if the incoming music signal is initially directed at a mobile device, it could first of all be rerouted at the service provider level to a land device so as to support a better data rate and then cloned and redirected for text output as described above. Thus high quality audio play of the music can be combined with a display of the words of the song.

The list below describes typical device/media type combinations for rerouting capability. It is noted that not all the devices are typical external-communication-enabled devices. As mentioned above, non-external-communication enabled devices may not receive original incoming communications but they can route data to other devices and receive data as rerouting targets.

1. Audio and Voice

Audio, and voice type media may be routed from devices including cellular telephones and other cellular or mobile devices including voice enabled PDA's, two-way radios etc., land or fixed line telephones, voice mail boxes (voice messages), Hi-Fi sets, both mobile and non-mobile including radio receivers, MP3 players, Cassette, CD, DVD and VCR players, and the like, and TV sets.

Audio and voice-type media may typically be routed to land or fixed line telephones, cellular telephones and like cellular mobile devices, Hi-Fi sets (mobile and non mobile), car audio systems, TV sets, speakers, and LAN/WAN servers and like infrastructure.

2. Video

Video media may be routed from cellular telephones, especially 2.5G and 3G devices, and other similar hand held devices, DVD and VCR players – both mobile and non-mobile, video cameras and recorders, monitors (screens) including those of TV sets, computer monitors, etc. mobile game devices (for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure.

Video media may typically be routed to cellular telephones and especially 2.5G and 3G devices, other cellular hand held devices, monitors (screens) including those of TV sets, computer monitors, etc. DVD and VCR players – including both mobile and non-mobile devices, video cameras and recorders, mobile game devices

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(for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure etc.

3. Text

Text type data may be routed from cellular telephones where they may be in the form of SMS, email messages and the like, other hand-held devices, unified messaging mail boxes, electronic books, standard computers, and the like.

Such text type data may be routed to monitors (screens) – including TV sets, computer screens, etc. printers, facsimile machines, cellular telephones and other hand held devices, unified messaging mail boxes and LAN/WAN servers and like infrastructure, etc.

4. Images

Image data may typically be routed from digital cameras, facsimile machines, monitors (screens) including TV sets, computer screens, etc., digital vision-oriented equipment such as microscopes, telescopes, binoculars, etc.

Such image data may be routed to cellular telephones, especially 2.5G and 3G devices, other hand held devices, monitors (screens) - including TV sets, computer screens, etc. digital cameras, facsimile machines, printers, unified messaging mail boxes, and LAN/WAN servers and like infrastructure.

As stated earlier, combining the routing capability with the media transformation capability in principle enables routing of any media between any pair of devices appearing in the lists above. Furthermore, combined with cloning, media may be used in different ways at different devices. Such different ways may even be carried out concurrently, thus enabling the simultaneous routing of any media type to any number of devices.

The following is a series of procedure flows for different scenarios.

In the scenarios, appropriate combinations of Routing, Transforming and Cloning an incoming communication are selected to fit the circumstances.

Scenario 1

1. A person carrying a mobile phone enters his colleague's office

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2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the person's cell phone

4. The cell phone detects the said land/fixed line phone and monitor

5. A pop up menu appears on the cell phone display and after the person acknowledges, the phone call is routed to the land/fixed line phone

6. The land/fixed line phone flashes to indicate an incoming call

7. The person receives the call on the land/fixed line phone

8. The person wishes his colleague to be aware of what's being said on the other side of the line

9. He activates a menu on the cell phone display and chooses the "Clone to Monitor" option

10. The monitor shows the conversation text as it is carried out, enabling the colleague to monitor the conversation's content in text form

Scenario 2

This scenario is similar to scenario A. The difference is:

5. The phone call is automatically routed to the land/fixed line phone (based on the person's preferences and environment scanning and detection)

Scenario 3

1. A person, say Smith, carrying a cell phone is sitting in a hotel lobby

2. In the lobby there are four land/fixed line phones

3. A phone call arrives at the person's cell phone

4. Option A:

a. The person points his phone at one of the land/fixed line phones

b. The cell phone detects the said phone as busy

c. The person points his phone at another land/fixed line phones

d. The phone call is routed to that, available, land/fixed phone

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e. The chosen land/fixed phone rings, or flashes to indicate the rerouted call

5. Option B:

a. While ringing, the cell phone indicates on its display that a nearby phone is available

b. The person approves the routing of the call to that nearby phone

c. The nearby phone rings, or flashes to indicate the rerouted call

6. Option C:

a. The call is automatically routed to an available nearby phone

b. The person is notified of the routing on the cell phone display

c. In parallel, the nearby phone uses a loudspeaker to announce the call by calling out Smith's name

d. The nearby phone rings, or flashes to indicate the rerouted call

7. The person receives the call on the available/chosen land/fixed line phone

Scenario 4

1. A hearing impaired person carrying a cell phone enters his colleague's office

2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the colleague's land (fixed) line phone

4. The colleague receives the call and at some point wishes his friend (the hearing impaired person) to participate in the conversation

5. The colleague then clones the voice conversation to both:

i) His monitor (the voice is then transformed to text and appears, as it is spoken, on the monitor)

ii) The hearing impaired person's cell phone

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6. The hearing impaired person "hears" the conversation by reading the text appearing on the monitor

7. The hearing impaired person speaks to his cell phone microphone and can thereby participate in the conversation

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Unless otherwise defined, all technical and scientific terms used herein have the same meanings as are commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods are described herein.

All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the patent specification, including definitions, will prevail. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described hereinabove. Rather the scope of the present invention is defined by the appended claims and includes both combinations and subcombinations of the various features described hereinabove as well as variations and modifications thereof which would occur to persons skilled in the art upon reading the foregoing description.

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Claims

1. Data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

2. Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. Apparatus according to claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

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7. Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.
Apparatus according to claim 1, wherein said data originates at the device embedding the apparatus.

16. Apparatus according to claim 1, wherein said data is unidirectional.

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17. Apparatus according to claim 1, wherein said data is multidirectional.

18. Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. Data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. A method of rerouting data comprising:

receiving said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

21. The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

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25. The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

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1/1

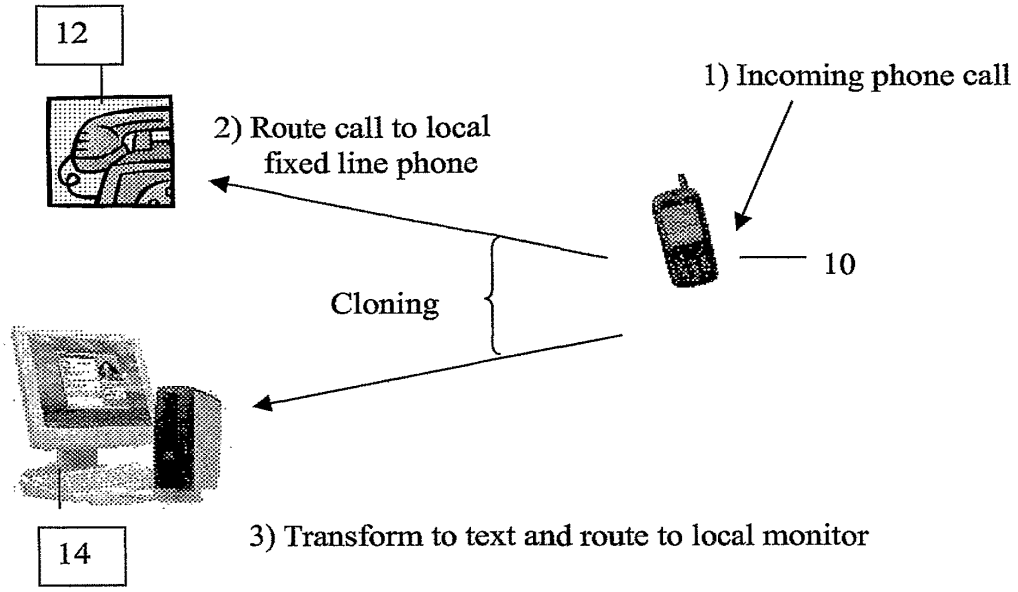

12
1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

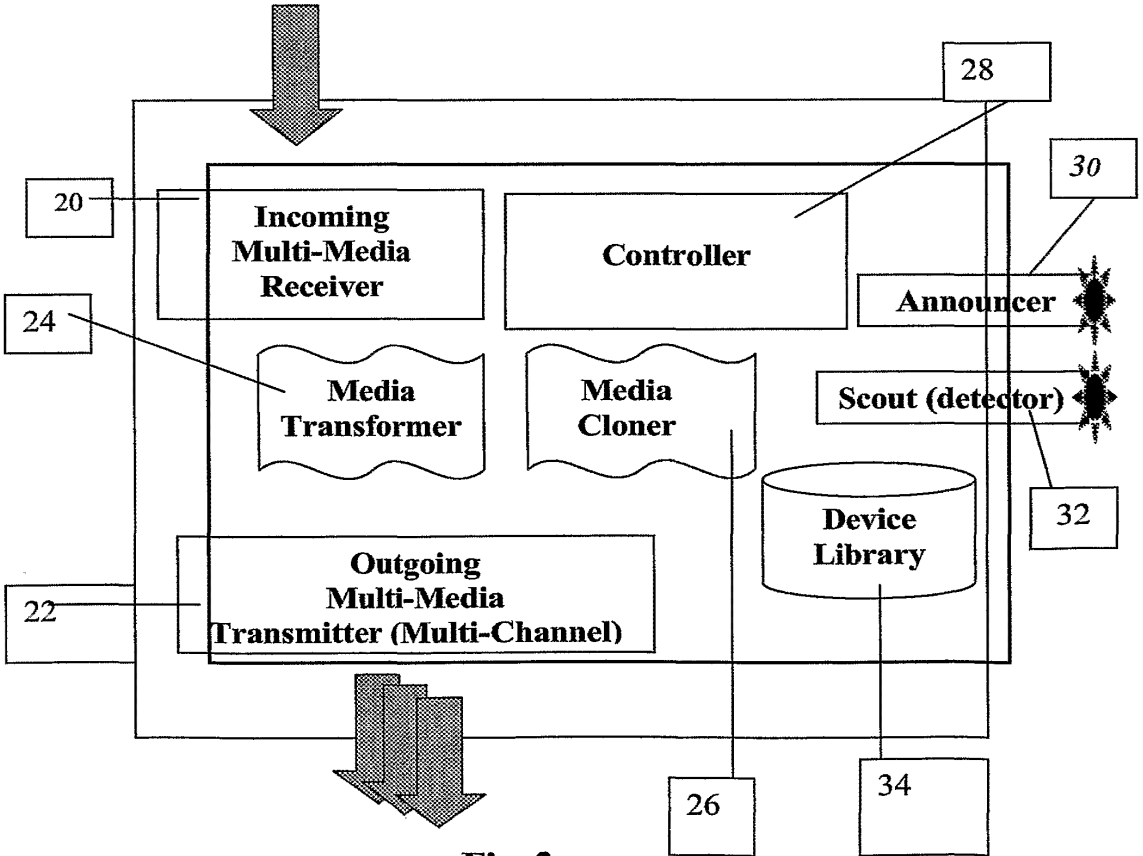

28
30
20
Incoming Multi-Media Receiver
Controller
Announcer
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
Outgoing Multi-Media Transmitter (Multi-Channel)
22
26
34

Fig. 2

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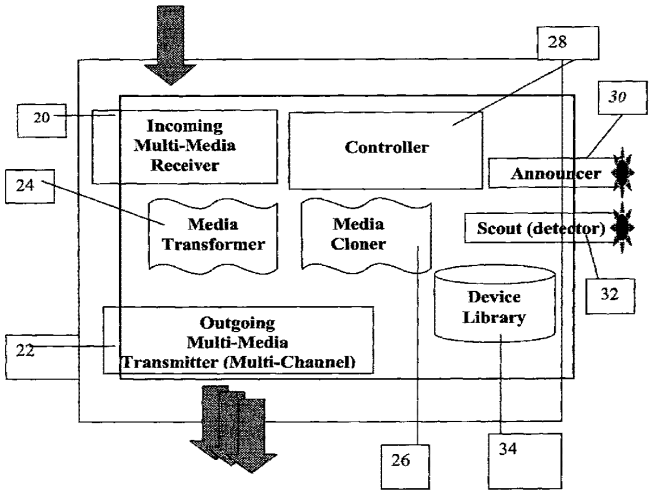
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(54) Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES



(57) Abstract: Rerouting apparatus (Fig.2) for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device (30) for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device (32) for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

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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)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	GB 2,370,451 A (SYDANMAA, et al) 26 June 2002 (26.06.2002), see entire document.	1-27
Y	WO 0141317 (USHER MARTIN PHILIP) 07 June 2001 (07.06.2001), see entire document.	1-27
Y	US 6,134,433 A (JOONG et al) 17 October 2000 (17.10.2000), see entire document.	1-27
Y	US 6,144,671 A (PERINPANATHAN et al) 07 November 2000 (07.11.2000), see entire document.	1-27
Y	US 6,333,919 B2 (GAFFNEY) 25 December 2001 (25.12.2001), see entire document.	1-27

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 December 2003 (12.12.2003)	29 DEC 2003
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. (703)305-3230	Authorized officer Chi Pham Telephone No. 703-305-4750

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1	Information Disclosure Statement (IDS) Form (SB08)	_form1449.pdf	46879 79c160c09e268e6ee7adf849951eee18e2540d80	no	2
Warnings:					
Information:					

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2	Transmittal Letter	_USPTOltr.pdf	21931 83776f9e72cc5ffdfddabd8c15696f5de8f473d6	no	2
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3	Foreign Reference	20-30681.pdf	827174 2d74667a4394f52cd382d7774766780dca998892	no	21
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4	Foreign Reference	21-30682.pdf	2425587 a0a1a16f71c3a9d69d7a5a712376f089b919a7ba	no	59
Warnings:					
Information:					
5	Foreign Reference	22-30680.pdf	1522488 97d1491af07db621173d7820562f0d3b2cc839ff	no	26
Warnings:					
Information:					
6	Non Patent Literature	23-131662.pdf	403270 ad9afddf062c5486ec1d1e4828617b7a83b85f84	no	8
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7	Non Patent Literature	24-191085.pdf	1107250 c892dceb0faf91ba71417f92bf4de91a153e4c3c	no	5
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9	Non Patent Literature	26-58822.pdf	489009 c0cb84686246902e74d836166be55ae507db4d5e	no	19
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Information:					
10	Non Patent Literature	27-93462.pdf	488554 b20c7a8f4a89575c289224c27c58e222a562e2e3	no	19

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11	Non Patent Literature	28-118622.pdf	1029087 76f8bb77059794a1a046691e33167007dd749521	no	37
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12	Non Patent Literature	29-97874.pdf	824490 990507c6b323bc86459039c648fd9ebb66c1e8bf	no	30
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13	Non Patent Literature	30-93943.pdf	349515 e76c5b31b99e8fcbe08f6c6789a369ab465b7c48	no	12
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14	Non Patent Literature	31-108038.pdf	856800 beb90b6b7a1dc6aa7cc43b9bca43c521c217a003	no	32
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15	Non Patent Literature	32-176905.pdf	945394 463de1b2657f6c6bc1930760a0937e40d8ed6ef0	no	23
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Information:					
16	Non Patent Literature	33-90439.pdf	675709 9e3a2e7c62883dcb0fc61e5934e62214eadc124c	no	25
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17	Non Patent Literature	34-83187.pdf	675729 afa370e48923573f8c73bbc6ea9f7e626ad2e1eb	no	25
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18	Non Patent Literature	35-90438.pdf	529119 751dc7fb9446f541eb76ca376b10d97d09f6d08b	no	19
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19	Non Patent Literature	36-83188.pdf	529119 9a9cf2b099fc35527d325fb8e734f5c8d50b66ae	no	19

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20	Non Patent Literature	37-127053.pdf	108971 3ea6affd63c46c4cc66d7ecf8362c79bed75766b	no	15
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21	Non Patent Literature	38-114864.pdf	156382 50af05f0a0c2e815548398431d81ceadce27bf0f	no	12
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22	Non Patent Literature	39-133632.pdf	168620 90a0e9584e8822582abfbf04557b55a5d3ccf3d3	no	4
Warnings:					
Information:					
			Total Files Size (in bytes):	19478946	

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<u>New Applications Under 35 U.S.C. 111</u>
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.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
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.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 14/201,870

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	21 minus 20 =	* 1	x 40 =	40	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*	x 210 =	0.00			
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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	770		TOTAL	

APPLICATION AS AMENDED - PART II

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

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/201,870	03/09/2014	2465	770	58710	21	2

CONFIRMATION NO. 4442

67801
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

FILING RECEIPT

OC000000067391295

Date Mailed: 03/27/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat-Gan, ISRAEL;

Applicant(s)

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat-Gan, ISRAEL;

Power of Attorney: The patent practitioners associated with Customer Number 67801

Domestic Priority data as claimed by applicant

This application is a CON of 13/118,503 05/30/2011
which is a CON of 10/347,388 01/21/2003 PAT 7969990
which claims benefit of 60/398,077 07/25/2002

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 03/26/2014
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/201,870**
Projected Publication Date: 07/03/2014

IPR2024-01047
Apple EX1002 Page 160

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

Preliminary Class

370

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/201,870	03/09/2014	Oded Shmueli	58710

CONFIRMATION NO. 4442

67801
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

PUBLICATION NOTICE

OC000000069404111

Title:ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

Publication No.US-2014-0189149-A1
Publication Date:07/03/2014

NOTICE OF PUBLICATION OF APPLICATION

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.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

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IPR2024-01047
Apple EX1002 Page 163

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:		§	
		§	
	Oded SHMUELI et al	§	
		§	Confirmation No.: 4442
Serial No.:	14/201,870	§	
		§	
		§	
Filed:	March 9, 2014	§	Group Art Unit: 2465
		§	
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	
		§	
		§	Attorney
		§	Docket: **58710**
		§	
Examiner:	Kwang Bin YAO	§	

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

PRELIMINARY AMENDMENT

Sir:

Prior to examination, please amend the above-identified application as follows:

IPR2024-01047
Apple EX1002 Page 164

In the Claims:

1-21. (Cancelled).

22. (New) A method of routing data via a mobile apparatus, comprising:

wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a stream of media content;

scanning said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network;

selecting, based on a user interaction made with said mobile device and while said stream is received at said mobile device from said external source, one of said plurality of compatible devices;

setting up a wireless communication link with said selected compatible device via said local wireless communication network;

routing said media content via said wireless communication link for presentation of said media content by said selected compatible device.

23. (New) The method of claim 22, wherein said media content is video and audio.

24. (New) The method of claim 22, wherein said media content is a content of a mobile phone call sent while said mobile phone call is ongoing.

25. (New) The method of claim 22, wherein said stream is at least one of bi-directional and multidirectional.

26. (New) The method of claim 22, wherein said wireless communication link is a direct communication link.

27. (New) The method of claim 22, wherein said selecting comprises displaying a menu at said mobile device to allow a user to perform said user interaction.

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28. (New) The method of claim 22, wherein said setting up is performed using data describing said selected compatible device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected compatible device.

29. (New) The method of claim 22, further comprising transmitting said media content to a plurality of copies so as to perform said routing to a number of said plurality of compatible devices.

30. (New) The method of claim 22, wherein said setting up comprising transforming said media content into a form that accords with a media type requirement of said selected compatible device.

31. (New) A mobile apparatus of routing data via a mobile apparatus, comprising:

a receiver wirelessly adapted to receive a stream of media content from an external source via a local wireless communication network;

a scouting detector adapted to scan a local wireless communication network to identify a plurality of compatible devices which wirelessly announce an availability for accepting routed media via said local wireless communication network;

a controller adapted to select, based on a user interaction made with said mobile device, one of said plurality of compatible devices and to instruct a setting up of a wireless communication link between with said selected compatible device via said local wireless communication network;

wherein said controller is adapted to instruct the routing of said media content via said wireless communication link for presentation of said media content by said selected compatible device.

32. (New) The mobile apparatus of claim 31, wherein said mobile apparatus is a member of the group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA).

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33. (New) The mobile apparatus of claim 31, further comprising a user interface associated with said scouting detector for allowing a user to select between available compatible media handling devices to reroute data thereto.

34. (New) The mobile apparatus of claim 31, wherein said controller further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable a communication service provider to reroute said stream.

35. (New) The mobile apparatus of claim 31, wherein said controller further comprising

control functionality operable to carry out said rerouting through locally available infrastructure.

36. (New) The mobile apparatus of claim 31, wherein said media content comprises a member of the group consisting of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data.

37. (New) The mobile apparatus of claim 31, wherein said scouting detector is operable to determine media type requirements of each of said plurality of compatible devices.

38. (New) The mobile apparatus of claim 31, further comprises transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected compatible device; wherein said controller is adapted to instruct the routing of said transformed copy.

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39. (New) A computer program product for routing data via a mobile apparatus, said computer program product comprising:

a computer readable storage medium having stored thereon:

first program instructions executable by a processor to wirelessly receive at a mobile device, from an external source via a local wireless communication network, a stream of media content;

second program instructions executable by the processor to scan said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network;

third program instructions executable by the processor to select, based on a user interaction made with said mobile device and while said stream is received at said mobile device from said external source, one of said plurality of compatible devices;

fourth program instructions executable by the processor to set up a wireless communication link with said selected compatible device via said local wireless communication network; and

fifth program instructions executable by the processor to route said media content via said wireless communication link for presentation of said media content by said selected compatible device.

40. (New) The computer program product of claim 39, wherein said media content is a content of a mobile phone call.

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REMARKS

Claims 1-21 have been cancelled herewith, and New claims 22-40 have been add herewith.

An early and favorable action is respectfully requested.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56,437
Telephone: 718.930.5399

Date: August 7, 2014

IPR2024-01047
Apple EX1002 Page 169

Electronic Acknowledgement Receipt	
EFS ID:	19808417
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum/Robert Shein
Filer Authorized By:	Jason Harris Rosenblum
Attorney Docket Number:	58710
Receipt Date:	07-AUG-2014
Filing Date:	09-MAR-2014
Time Stamp:	17:32:53
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		58710PreliminaryAmendment.pdf	31413 59989036267c9ba16dd0b253bd156c91c19950a7	yes	6

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Preliminary Amendment	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	6
Warnings:			
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 14/201,870

APPLICATION AS FILED - PART I

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BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	21 minus 20 =	* 1	x 40 =	40	OR		
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MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	770		TOTAL	

APPLICATION AS AMENDED - PART II

08-07-14

AMENDMENT A		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
	Total (37 CFR 1.16(i))	* 19	Minus	** 21	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 03/09/2016

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
03/09/2016	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):

usptomail@ipatent.co.il

Office Action Summary	Application No. 14/201,870	Applicant(s) SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	Art Unit 2473	AIA (First Inventor to File) 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 *08/07/2014*.

☐ 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) *22-40* 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) *22-40* 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 *03/09/2014* 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: _____.

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DETAILED ACTION

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

Claim Objections

2. Claim 31 is objected to because of the following informalities:

Claim 31, line 9 recites “a wireless communication link **between with**”.

Appropriate correction is required.

Double Patenting

3. 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 claims at issue 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); and *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 a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this 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 §§ 706.02(l)(1) - 706.02(l)(3) 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/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 http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

4. Claims 22, 25, 28-31, 33-35, and 37-39 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 7, 9, 10, 10, 21, 31, 32 of U.S. Patent No. US 7969990 B2 in view of Mousseau et al (US 20010005864 A1, hereinafter referred to as Mousseau).

Re claim 22,

Instant Application	US Patent 7969990
wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a stream of media content;	said data is an incoming multimedia communication received from a cellular communication network (Claim 10)
scanning said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network;	scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device, through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device via a bidirectional link set up between said mobile device and said target device, said bidirectional link having a first data streaming direction from said
selecting, based on a user interaction made with said mobile device and while said stream is received at said mobile device from said external source, one of said plurality of compatible devices	

	mobile device to said target device and a second data streaming direction from said target device to said mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and media type of said communication data, the method further comprising streaming data in both of said first direction and said second direction (Claim 31)
setting up a wireless communication link with said selected compatible device via said local wireless communication network;	routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device (Claim 32) (US Patent 7969990 does not recite to set up a wireless communication link to route the data).
routing said media content via said wireless communication link for presentation of said media content by said selected compatible device	

The difference between claim 22 of the instant application and US Patent 7969990 is that the instant application sets up a wireless communication link to route the data/media.

Mousseau discloses to set up a wireless communication link to route the data/media (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify US Patent 7969990 by including the step to set up a wireless communication link to route the data/media for the purpose of efficiently redirecting large data/attachments to the appropriate device, as taught by Mousseau (Par 0003-0004).

Re Claim 25, US Patent 7969990 recites that said stream is at least one of bidirectional and multidirectional (Claim 31).

Re Claim 28, US Patent 7969990 recites that said setting up is performed using data describing said selected compatible device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected compatible device (Claim 31).

Re Claim 29, US Patent 7969990 recites that transmitting said media content to a plurality of copies so as to perform said routing to a number of said plurality of compatible devices (Claim 31).

Re Claim 30, US Patent 7969990 recites that setting up comprising transforming said media content into a form that accords with a media type requirement of said selected compatible device (Claim 31).

Re claim 31, US Patent 7969990 recites

a receiver wirelessly adapted to receive a stream of media content from an external source via a local wireless communication network (Claim 10);

a scouting detector adapted to scan a local wireless communication network to identify a plurality of compatible devices which wirelessly announce an availability for accepting routed media via said local wireless communication network (Claim 1);

a controller adapted to select, based on a user interaction made with said mobile device, one of said plurality of compatible devices and to instruct a setting up of a wireless communication link between with said selected compatible device via said local wireless communication network (Claim 1--US Patent 7969990 does not recite to set up a wireless communication link to route the data);

wherein said controller is adapted to instruct the routing of said media content via said wireless communication link for presentation of said media content by said selected compatible device (Claim 1, Claim 7---US Patent 7969990 does not recite to set up a wireless communication link to route the data).

Mousseau discloses to set up a wireless communication link to route the data/media (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify US Patent 7969990 by including the step to set up a wireless communication link to route the data/media for the purpose of efficiently redirecting large data/attachments to the appropriate device, as taught by Mousseau (Par 0003-0004).

Re claim 33, US Patent 7969990 recites a user interface associated with said scouting detector for allowing a user to select between available compatible media handling devices to reroute data thereto (Claim 1, Claim 7).

Re claim 34, US Patent 7969990 recites that said controller further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable a communication service provider to reroute said stream (Claim 1, Claim 7).

Re claim 35, US Patent 7969990 recites that control functionality operable to carry out said rerouting through locally available infrastructure (Claim 7, Claim 9, Claim 21).

Re claim 37, US Patent 7969990 recites that said scouting detector is operable to determine media type requirements of each of said plurality of compatible devices (Claim 1).

Re claim 38, US Patent 7969990 recites that transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected compatible device;

wherein said controller is adapted to instruct the routing of said transformed copy (Claim 1).

Re claim 39, the differences between claim 39 of the instant application and US Patent 7969990 (Claims 1, 7, 10) are that US Patent 7969990 does not recite to establish a wireless communication link to route the data/media and a computer readable storage medium.

Mousseau discloses a computer readable storage medium (Par 0003) and also discloses to set up a wireless communication link to route the data/media (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify US Patent 7969990 by including the steps to set up a wireless communication link to route the data/media, a computer readable storage medium, for the purpose of efficiently redirecting large data/attachments to the appropriate device, as taught by Mousseau (Par 0003-0004).

5. Claims 22, 23, 25, 28-31, 33-39 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-9, 15, 19, 21 of U.S. Patent No. US 8711866 B2 in view of Ortiz et al (US 20020058499 A1, hereinafter referred to as Ortiz).

Re claim 22, U.S. Patent No. US 8711866 recites all the limitations (Claim 19) except wirelessly receiving a stream of media content at the mobile device (streaming device as recited in the U.S. Patent No. US 8711866).

Ortiz discloses to wirelessly receive a stream of media content at a mobile device (WD 6 receives multimedia content from database 8 to be transferred to DRD 7) (Fig. 1, Par 0004, Par 0047).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify U.S. Patent No. US 8711866 by including the step to wirelessly receive a stream of media content at a mobile device, as taught by Ortiz for the purpose of transferring data to the rendering devices to overcome the shortcomings of the mobile/wireless devices, as taught by Ortiz (Par 0002, Par 0012-0013).

Re claim 31, U.S. Patent No. US 8711866 recites all the limitations (Claim 21) except wirelessly receiving a stream of media content at the mobile device (streaming device as recited in the U.S. Patent No. US 8711866).

Ortiz discloses to wirelessly receive a stream of media content at a mobile device (WD 6 receives multimedia content from database 8 to be transferred to DRD 7) (Fig. 1, Par 0004, Par 0047).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify U.S. Patent No. US 8711866 by including the step to wirelessly receive a stream of media content at a mobile device, as taught by Ortiz for the purpose of transferring data to the rendering devices to overcome the shortcomings of the mobile/wireless devices, as taught by Ortiz (Par 0002, Par 0012-0013).

Re claim 39, U.S. Patent No. US 8711866 recites all the limitations (Claim 21) except wirelessly receiving a stream of media content at the mobile device (streaming device as recited in the U.S. Patent No. US 8711866) and a computer readable storage medium.

Ortiz discloses to wirelessly receive a stream of media content at a mobile device (WD 6 receives multimedia content from database 8 to be transferred to DRD 7) (Fig. 1, Par 0004, Par 0047) and a computer readable storage medium (memory 36) (Fig. 3, Par 0050).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify U.S. Patent No. US 8711866 by including (i) the step to wirelessly receive a stream of media content at a mobile device, (ii) a computer readable storage medium, as taught by Ortiz for the purpose of transferring data to the rendering devices to overcome the shortcomings of the mobile/wireless devices, as taught by Ortiz (Par 0002, Par 0012-0013).

U.S. Patent No. US 8711866 recites the limitations regarding claims 23, 25, 28-30 (Claim 1-6, Claim 19).

U.S. Patent No. US 8711866 recites the limitations regarding claims 33-38 (Claims 1-9, Claim 15, Claim 19).

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 39-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 39 recites a computer readable storage medium but does not specify that the claimed medium is non-transitory. So the claimed computer readable medium covers both the non-transitory tangible media and transitory propagating signals per se. Hence, claim 39 is rejected for covering non-statutory subject matter.

Claim 40 is dependent on claim 39 and thereby rejected for the reasons discussed above.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 22-40 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 22 recites “scanning said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network”. According to the claim limitation, the compatible devices announce their availability to accept the said media (the media received by the mobile device). The compatible devices do not know the type of media the mobile device received and without knowing the type of media, how can a compatible device announce its availability to accept the said media. For example, if the mobile device received a video stream, a compatible device such as a fax machine can not announce that it is available to accept a video stream (said media). Specification discloses that the compatible devices announce their availability and the type of media they support. From the availability and media type information, the mobile device selects one or more compatible devices to reroute the received/said media (g. 10, Line 13-34, Pg. 11, Line 1-20). Therefore, the specification does not provide guidance to one of ordinary skill in the art as to how the compatible devices announce their availability to accept said media without even knowing the type of media. Claim 22 contains subject matter which fails to comply with the enablement requirement.

Independent claims 31 and 39 recite similar limitations as claim 22 and thereby rejected for the reasons discussed above.

Claims 23-30, 32-38, and 40 are dependent on claims 22, 31, and 39 respectively and thereby rejected for the reasons discussed above.

10. Claims 22-40 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 22 recites “scanning said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network”. According to the claim limitation, the compatible devices announce their availability to accept the said media (the media received by the mobile device). Specification discloses that the compatible devices announce their availability and the type of media they support. From the availability and media type information, the mobile device selects one or more compatible devices to reroute the received/said media (g. 10, Line 13-34, Pg. 11, Line 1-20). Therefore, the specification does not disclose that the compatible devices announce their availability to accept the said media (the media received

by the mobile device). The claim contains subject matter that fails to comply with the written description requirement.

Independent claims 31 and 39 recite similar limitations as claim 22 and thereby rejected for the reasons discussed above.

Claims 23-30, 32-38, and 40 are dependent on claims 22, 31, and 39 respectively and thereby rejected for the reasons discussed above.

Claim 32 recites “said mobile apparatus is a member of the group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA)”. Specification does not disclose to form a group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA). Therefore, claim 32 fails to comply with the written description requirement.

Claim 36 recites “said media content comprises a member of the group consisting of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data”. Specification does not disclose to form a group consisting of voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data. Therefore, claim 36 fails to comply with the written description requirement.

11. 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.

12. Claims 31-38 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 pre-AIA the applicant regards as the invention.

Claim 31 recites “a local wireless communication network” in line 3 and again “a local wireless communication network” in line 4. It is not clear whether the two local wireless communication network are the same network or different network. Moreover, when the claim recites “said local wireless communication network”, it is not clear which one of the two local wireless communication networks, the claim is referring to.

13. Claim 31 recites the limitation "said mobile device" in line 7. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 32 recites the limitation "the group consisting of" in line 2. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 36 recites the limitation "the group consisting of" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 22, 23, 25-28, and 30-39 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Mousseau et al (US 20010005864 A1, hereinafter referred to as Mousseau).

Re claim 22, Mousseau teaches a method of routing data via a mobile apparatus (Abstract), comprising:

(i) wirelessly receiving at a mobile device (Mobile device 214 B), from an external source (host 202) via a local wireless communication network (wireless network 212), a stream of media content (datagram, attachment, partial/trimmed attachment) (Fig. 6-9, Par 0016, Par 0071-0073, Par 0082);

(ii) scanning said local wireless communication network (wireless network) using said mobile device (Mobile device 214 B) to identify a plurality of compatible devices (attachment displayer 216) which wirelessly announce an availability for accepting said media (type of attachment supported the attachment displayer) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

(iii) selecting, based on a user interaction made with said mobile device (input from the user of the mobile device) and while said stream (datagram, attachment, partial/trimmed attachment) is received at said mobile device (mobile device 214B) from said external source (host 202), one of said plurality of compatible

devices (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082);

(iv) setting up a wireless communication link (linking the attachment displayer with wireless network) with said selected compatible device (attachment displayer 216) via said local wireless communication network (wireless network 212) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082);

(v) routing said media content (attachment) via said wireless communication link (link with attachment displayer) for presentation of said media content (displaying the attachment) by said selected compatible device (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 23, Mousseau teaches that said media content is video and audio (Par 0035).

Re claim 25, Mousseau teaches that said stream is at least one of bi-directional and multidirectional (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 26, Mousseau teaches that said wireless communication link is a direct communication link (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 27, Mousseau teaches that said selecting comprises displaying a menu at said mobile device to allow a user to perform said user interaction (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 28, Mousseau teaches that said setting up is performed using data (supporting attachment type, location, security, electronic address) describing said selected compatible device (attachment displayer) which is extracted from a device library (list of attachment displayer) of said mobile device, said data includes technical information regarding expected media formats (supporting attachment type) and transmission technology specification (security, electronic address) of said selected compatible device (attachment displayer) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0056, Par 0069-0077, Par 0082).

Re claim 30, Mousseau teaches that setting up comprising transforming said media content into a form that accords with a media type requirement of said selected compatible device (converting the attachment to a suitable format) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 31, Mousseau teaches a mobile apparatus of routing data via a mobile apparatus (Abstract) comprising:

(i) a receiver (Mobile device 214 B) wirelessly adapted to receive a stream of media content (datagram, attachment, partial/trimmed attachment) from an external source (host 202) via a local wireless communication network (wireless network 212), (Fig. 6-9, Par 0016, Par 0071-0073, Par 0082);

(ii) a scouting detector (Mobile device 214 B) adapted to scan a local wireless communication network (wireless network) to identify a plurality of compatible devices (attachment displayer 216) which wirelessly announce an availability for

accepting routed media (type of attachment supported the attachment displayer, attachment) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

(iii) a controller (Mobile device 214 B) adapted to select, based on a user interaction made with said mobile device (input from the user of the mobile device), one of said plurality of compatible devices (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082) and to instruct a setting up a wireless communication link (linking the attachment displayer with wireless network) between with said selected compatible device (attachment displayer 216) via said local wireless communication network (wireless network 212) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082);

(v) wherein said controller (Mobile device 214 B) is adapted to instruct the routing of said media content (attachment) via said wireless communication link (link with attachment displayer) for presentation of said media content (displaying the attachment) by said selected compatible device (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 32, Mousseau teaches that said mobile apparatus is a member of the group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA) (Par 0004, Par 0036).

Re claim 33, Mousseau teaches that user interface associated with said scouting detector for allowing a user to select between available compatible

media handling devices to reroute data thereto (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 34, Mousseau teaches that aid controller further comprising control functionality operable to inform a communication service provider (host 202) of a desired rerouting (selected attachment displayer), thereby to enable a communication service provider (host 202) to reroute said stream (attachment) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 35, Mousseau teaches that said controller further comprising control functionality operable to carry out said rerouting through locally available infrastructure (wireless network 212) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 36, Mousseau teaches that said media content comprises a member of the group consisting of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 37, Mousseau teaches that said scouting detector is operable to determine media type requirements (supporting attachment type) of each of said plurality of compatible devices (attachment displayer) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 38, Mousseau teaches that transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected compatible device; wherein said controller is adapted to instruct the routing of said transformed copy (converting the attachment to a suitable format) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

Re claim 39, Mousseau teaches a computer program product for routing data via a mobile apparatus (Abstract), said computer program product comprising:

(i) a computer readable storage medium having stored thereon (Par 0036 discloses that the mobile device 24 has software program to perform the functions associated with the mobile device. Therefore, it is evident that the mobile device has memory to store the software program to be executed as required):

(ii) first program instructions (software program) executable by a processor (processing capability of the mobile device, 24/214B) to wirelessly receive at a mobile device (Mobile device 214 B), from an external source (host 202) via a local wireless communication network (wireless network 212), a stream of media content (datagram, attachment, partial/trimmed attachment) (Fig. 6-9, Par 0016, Par 0071-0073, Par 0082);

(iii) second program instructions (software program) executable by the processor (processing capability of the mobile device, 24/214B) to scan said local wireless

communication network (wireless network) using said mobile device (Mobile device 214 B) to identify a plurality of compatible devices (attachment displayer 216) which wirelessly announce an availability for accepting said media (type of attachment supported the attachment displayer) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

(iv) third program instructions (software program) executable by the processor (processing capability of the mobile device, 24/214B) to select, based on a user interaction made with said mobile device (input from the user of the mobile device) and while said stream (datagram, attachment, partial/trimmed attachment) is received at said mobile device (mobile device 214B) from said external source (host 202), one of said plurality of compatible devices (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082);

(v) fourth program instructions (software program) executable by the processor (processing capability of the mobile device, 24/214B) to set up a wireless communication link (linking the attachment displayer with wireless network) with said selected compatible device (attachment displayer 216) via said local wireless communication network (wireless network 212) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082);

(vi) fifth program instructions (software program) executable by the processor (processing capability of the mobile device, 24/214B) to route said media content

(attachment) via said wireless communication link (link with attachment displayer) for presentation of said media content (displaying the attachment) by said selected compatible device (attachment displayer) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0077, Par 0082).

Claim Rejections - 35 USC § 103

18. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 24 and 40 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mousseau as applied to claim 22, 31, and 39 above respectively and further in view of Chow et al (US 6961559 B1, hereinafter referred to as Chow).

Re claims 24 and 40, Mousseau does not explicitly disclose that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing.

Chow teaches that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing (Fig. 19-20, Col 42, Line 39-67, Col 45, Line 37-67, Col 46, Line 1-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Mousseau by including the step that that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing,

as taught by Chow for the purpose of transferring call from one telephone to another to access voice mail message/talk with someone else, as taught by Chow (Col 42, Line 40-47).

20. Claim 29 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mousseau as applied to claim 22, 31, and 39 respectively above and further in view of Thanh et al (The Device Management Service, hereinafter referred to as Thanh).

Re claim 29, Mousseau does not explicitly disclose to transmit said media content to a plurality of copies so as to perform said routing to a number of said plurality of compatible devices.

Thanh teaches to transmit said media content to a plurality of copies so as to perform said routing to a number of said plurality of compatible devices (Fig. 4, Fig. 10, Fig. 11, Pg. 205, Col 2, Line 22-38, Pg. 206, Col 1-18).

When multiple participants share the same material such as class lectures in distance learning, multimedia presentation in a training, remote training, video conferencing etc. then it is needed to make the same content be available to all the participants. In that case, multiple copies of the same media content have to be made and distribute/transmit to all the participants.

Thanh teaches to transmit the same media/content to plurality of devices.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Mousseau by including the step to transmit said media content to a plurality of copies so as to perform said routing to a number of said plurality of compatible devices, as taught by Thanh for the purpose of

distributing the same material/media content to the plurality of participants of a program.

Alternate Rejection

21. Claims 22, 31, and 39 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Ortiz et al (US 20020058499 A1, hereinafter referred to as Ortiz) in view of Mousseau et al (US 20010005864 A1, hereinafter referred to as Mousseau).

Re claim 22, Ortiz teaches a method of routing data via a mobile apparatus (Abstract), comprising:

(i) wirelessly receiving at a mobile device (WD 6), from an external source (database 8) via a local wireless communication network (wireless network), a stream of media content (multimedia data such as video, voice, graphics etc.) (Fig. 1, Par 0046-0047, Par 0055);

(ii) selecting, based on a user interaction made with said mobile device (selecting data at WD for transfer) and while said stream is received at said mobile device (data retrieved by the WD 6) from said external source (database 8), one of said plurality of compatible devices (DRD 7) (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064);

(iii) setting up a wireless communication link (IR link, RF cellular link) with said selected compatible device (selected DRD) via said local wireless communication network (wireless network/cellular network) (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064);

(iv) routing said media content (retrieved data from the database 8) via said wireless communication link (IR link, RF cellular link) for presentation (displaying/rendering) of said media content by said selected compatible device (selected DRD 7) (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064).

Ortiz does not explicitly disclose (v) to scan said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network;

Mousseau teaches (v) to scan said local wireless communication network (wireless network) using said mobile device (Mobile device 214 B) to identify a plurality of compatible devices (attachment displayer 216) which wirelessly announce an availability for accepting said media (type of attachment supported the attachment displayer) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Ortiz by including the step to scan said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network, as taught by Mousseau for the purpose of efficiently determining the suitable attachment displayer to provide

flexibility of processing message attachments, as taught by Mousseau (Par 0012-0013, Par 0020).

Re claim 31, Ortiz teaches a mobile apparatus of routing data via a mobile apparatus (Abstract), comprising:

(i) a receiver wirelessly adapted to receive a stream of media content from an external source via a local wireless communication network (Fig. 1, Par 0046-0047, Par 0055);

(iii) a controller adapted to select, based on a user interaction made with said mobile device, one of said plurality of compatible devices and to instruct a setting up of a wireless communication link between with said selected compatible device via said local wireless communication network (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064);

(iv) wherein said controller is adapted to instruct the routing of said media content via said wireless communication link for presentation of said media content by said selected compatible device (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064).

Ortiz does not explicitly disclose

(ii) a scouting detector adapted to scan a local wireless communication network to identify a plurality of compatible devices which wirelessly announce an availability for accepting routed media via said local wireless communication network;

Mousseau teaches (ii) a scouting detector (Mobile device 214 B) adapted to scan a local wireless communication network (wireless network) to identify a plurality of compatible devices (attachment displayer 216) which wirelessly announce an availability for accepting routed media (type of attachment supported the attachment displayer, attachment) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Ortiz by including (ii) a scouting detector adapted to scan a local wireless communication network to identify a plurality of compatible devices which wirelessly announce an availability for accepting routed media via said local wireless communication network, as taught by Mousseau for the purpose of efficiently determining the suitable attachment displayer to provide flexibility of processing message attachments, as taught by Mousseau (Par 0012-0013, Par 0020).

Re claim 39, Ortiz teaches a computer program product for routing data via a mobile apparatus (Abstract), said computer program product comprising:
(i) a computer readable storage medium having stored (memory 36) (Fig. 3, Par 0050-0057) thereon:
(ii) first program instructions executable by a processor to wirelessly receive at a mobile device, from an external source via a local wireless communication network, a stream of media content (Fig. 1, Par 0046-0047, Par 0055);

(iv) third program instructions executable by the processor to select, based on a user interaction made with said mobile device and while said stream is received at said mobile device from said external source, one of said plurality of compatible devices (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064);

(v) fourth program instructions executable by the processor to set up a wireless communication link with said selected compatible device via said local wireless communication network (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064); and

(vi) fifth program instructions executable by the processor to route said media content via said wireless communication link for presentation of said media content by said selected compatible device (Fig. 1-2, Fig. 5-9, Par 0046-0049, Par 0055, Par 0057-0061, Par 0063-0064).

Ortiz does not explicitly disclose that (ii) second program instructions executable by the processor to scan said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network;

Mousseau teaches (ii)) second program instructions (software program) executable by the processor (processing capability of the mobile device, 24/214B) to scan said local wireless communication network (wireless network) using said mobile device (Mobile device 214 B) to identify a plurality of

compatible devices (attachment displayer 216) which wirelessly announce an availability for accepting said media (type of attachment supported the attachment displayer) via said local wireless communication network (Wireless network) (Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077, Par 0082);

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Ortiz by including (ii) second program instructions executable by the processor to scan said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network, as taught by Mousseau for the purpose of efficiently determining the suitable attachment displayer to provide flexibility of processing message attachments, as taught by Mousseau (Par 0012-0013, Par 0020).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HARUN CHOWDHURY whose telephone number is (571)270-3895. The examiner can normally be reached on Monday - Friday, 9:00AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harun Chowdhury/
Examiner, Art Unit 2473

/KWANG B YAO/
Supervisory Patent Examiner, Art Unit 2473

Notice of References Cited	Application/Control No. 14/201,870	Applicant(s)/Patent Under Reexamination SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	Art Unit 2473	Page 1 of 1

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
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*	B	US-2002/0058499 A1	05-2002	Ortiz, Luis M.	H04L63/083	455/412.1
*	C	US-6,961,559 B1	11-2005	Chow; Albert	H04M3/42314	455/414.1
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

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*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Do van Thanh, The Device Management Service, 2001, IEEE
	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.

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BIB DATA SHEET

CONFIRMATION NO. 4442

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/201,870	03/09/2014 RULE	370	2473	58710

APPLICANTS

INVENTORS

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat-Gan, ISRAEL;

**** CONTINUING DATA **************************

This application is a CON of 13/118,503 05/30/2011 PAT 8711866
which is a CON of 10/347,388 01/21/2003 PAT 7969990
which claims benefit of 60/398,077 07/25/2002

**** FOREIGN APPLICATIONS **************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/26/2014

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /HARUN UR R CHOWDHURY/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		ISRAEL	1	21	2

ADDRESS

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UNITED STATES

TITLE

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
770	No._____ to charge/credit DEPOSIT ACCOUNT	☐ 1.16 Fees (Filing)
	No._____ for following:	☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	Complete if Known
Application Number	14/201,870
Filing Date	March 09, 2014
First Named Inventor	SHMUELI Oded et al
Art Unit	
Examiner Name	
Attorney Docket Number	58710

Sheet 1 of 2

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2002/0058499	16-May-2002	Ortiz	
	2	2002/0133545	19-Sep-2002	Fano et al.	
	3	2002/0161862	31-Oct-2002	Horvitz	
	4	2003/0073412	17-Apr-2003	Meade II	
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Examiner Initials*	Cite No. [1]	Foreign Patent Documents Country Code[3] Number[4] Kind Code[5] (*if known*)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [6]
	20	GB 2370451	26-Jun-2002	Sydanmaa et al.		
	21	WO 01/41317	07-Jun-2001	Allaway et al.		
	22	WO 2004/012026	05-Feb-2004	Shmueli et al.		

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First Named Inventor	SHMUELI Oded et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	58710

Sheet 2 Of 2

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	23	Notice of Allowance Dated 18 February 2011 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	24	Notice of Allowance of 14 January 2014 From the US Patent and Trademark Office Re. Application No. 13/118,503.	
	25	Official Action Dated 04 November 2013 From the US Patent and Trademark Office Re. Application No. 13/118,503.	
	26	Official Action Dated 05 July 2007 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	27	Official Action Dated 05 July 2007 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	28	Official Action Dated 07 July 2010 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	29	Official Action Dated 09 June 2009 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
	30	Official Action Dated 17 April 2008 From the US Patent and Trademark Office Re.: Application No. 11/146,130.	
	31	Official Action Dated 23 December 2009 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
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	37	Response Dated 06 December 2010 to Official Action of 07 July 2010 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	
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	39	Supplemental Notice of Allowability Dated 13 April 2011 From the US Patent and Trademark Office Re.: Application No. 10/347,388.	

Examiner Signature	/Harun Chowdhury/	Date Considered	03/01/2016

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/01/2016								
	22	✓								
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	37	✓								
	38	✓								
	39	✓								
	40	✓								

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	5	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 12:34
S2	45	((divert$3 rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video)) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 12:35
S3	300	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 12:37
S5	173	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 13:21
S6	13	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video) same bluetooth	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 13:37
S7	41	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video media audio) same bluetooth	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 13:51
S9	340	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video media audio call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 14:30
S10	159	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 14:43
S11	216	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet (device adj device))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 14:43
S12	226	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer	US-PGPUB; USPAT; EPO; JPO;	OR	ON	2016/02/25 14:52

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		near2 peer) manet (device adj device))	DERWENT			
S13	226	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet (device adj device))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 14:53
S14	383	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) with (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet (device adj device))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 14:53
S15	37	("20020058499" | "20020133545" | "20020161862" | "20030073412" | "20030172121" | "20040017788" | "20040080779" | "20060013254" | "20070285504" | "20080043693" | "20090055707" | "5854834" | "5913038" | "6134433" | "6144671" | "6333919" | "6594699" | "6961754" | "7969990").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 16:12
S17	654	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same wireless same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 16:29
S18	102	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music) same wireless same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 16:29
S19	937	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 16:30
S20	155	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 16:41
S21	28	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music) same wireless same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 17:04
S22	93	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 17:06
S24	770	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 18:48

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S25	34	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 18:49
S26	66	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet bluetooth) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 18:52
S27	92	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 18:52
S28	11	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (low near3 battery)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 19:39
S29	26	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet bluetooth) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 19:55
S30	202	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 image multimedia movie video media audio music) same ((neighbor$3 adjacent proximat$2 neighbour$3) near4 (monitor display printer (mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:22
S31	80	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 image multimedia movie video media audio music) same ((neighbor$3 adjacent proximat$2 neighbour$3) near4 (monitor display printer (mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:22
S32	891	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 image multimedia movie video media audio music) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:29
S33	535	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:29
S34	305	@py<"2006" and (shar$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same ((mobile near3 station)	US-PGPUB; USPAT;	OR	ON	2016/02/25 20:30

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		ue (user near2 equipment) (mobile near2 (terminal device))) not medium	EPO; JPO; DERWENT			
S35	35	@py<"2006" and (shar$3 transfer$4) near4 (download$3 receiv$3) near4 (stream$3 multimedia movie video media audio music) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:45
S36	35	@py<"2006" and (shar$3 transfer$4 rerout$3 re-rout$3 redirect$3 retarget$3 retransfer$4 re-transfer$4 divert$3) near4 (download$3 receiv$3) near4 (stream$3 multimedia movie video media audio music) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/25 20:46
S37	373	@py<"2006" and (shar$3 transfer$4 distribut$3) near4 (stream$3 multimedia movie video media audio music) same server same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 11:19
S40	39	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 ((phone near2 call) (ongoing near2 call) call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:28
S41	613	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 ((phone near2 call) (ongoing near2 call) call) same (peripheral monitor screen)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:35
S42	388	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 ((phone near2 call) (ongoing near2 call) call) same (peripheral monitor)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:35
S44	269	@py<"2006" and (divert$3) near4 ((phone near2 call) (ongoing near2 call) call) same (mobile cellular cell)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:40
S45	4	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 ((ongoing near2 call)) same (mobile cellular)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:48
S46	53	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (((progressing received ongoing) near2 call)) same (mobile cellular)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 16:52
S47	7	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (((progressing received ongoing) near2 call)) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:01
S48	1	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (call) with (bluetooth near3 headset)	US-PGPUB; USPAT; EPO; JPO;	OR	ON	2016/02/26 17:08

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			DERWENT			
S49	0	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (onging near3 call)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:10
S50	11	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (ongoing near3 call)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:10
S51	266	@py<"2006" and (divert$3) near4 (((progress$3 in-progress) near2 call) (ongoing near2 call) call) same (mobile cellular cell)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:18
S52	113	@py<"2006" and (divert$3 forwarding transfer$4) near4 (((progress$3 in-progress) near2 call) (ongoing near2 call)) same (mobile cellular cell)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:18
S53	162	@py<"2006" and (divert$3 forwarding transfer$4) near4 (((progress$3 in-progress active) near2 call) (ongoing near2 call)) same (mobile cellular cell)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:27
S54	50	@py<"2006" and (divert$3 forwarding transfer$4) near4 (((progress$3 in-progress active) near2 call) (ongoing near2 call)) same (mobile cellular cell) not (handover handoff hand-off)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/26 17:28
S60	283	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:26
S62	455	@py<"2003" and (rerout$3 re-rout$3 redirect$3 retarget$3 transfer$4 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:27
S63	10	@py<"2003" and (rerout$3 re-rout$3 redirect$3 retarget$3 transfer$4 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3) same (replicat$3 copy$3 copy)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:28
S64	2	@py<"2008" and (transfer$4 divert$3 shar$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) train$3) same (replicat$3 copy$3 copy)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:29
S65	4	@py<"2008" and (transfer$4 divert$3 shar$3 forward$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) train$3) same (replicat$3 copy$3 copy duplicat$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:30
S67	127	@py<"20084" and (transfer$4 divert$3 shar$3 forward$3) near4 (stream$3 multimedia movie video music) same	US-PGPUB; USPAT;	OR	ON	2016/02/29 18:31

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		((class near3 room) training) same (student participant)	EPO; JPO; DERWENT			
S68	585	@py<"2008" and (transfer$4 divert$3 shar$3 forward$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) train$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:32
S69	36	@py<"2008" and (transfer$4 divert$3 shar$3 forward$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) training) same (student participant)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:32
S70	721	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:34
S71	20	@py<"2008" and (simultaneous$2 together) with (transfer$4 divert$3 transmit$4 forward$3) near4 (stream$3 multimedia movie video music) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:35
S73	45	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (multiple plurality) near4 (stream$3 multimedia movie video music) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:39
S74	9	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (sam$1) near4 (stream$3 multimedia movie video music) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:44
S75	10	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (sam$1) near4 (stream$3 multimedia movie video music content material) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:45
S76	641	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (multimedia video content material) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:46
S79	26	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (multimedia video) same ((class near3 room) training) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:47
S80	5	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3 sending) near4 (multimedia video content (live near3 lecture) (class near2 presentation)) same ((plurality multiple) near4 (student participant attend$2)) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:52
S81	47	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3 sending) near4 (multimedia video content (live near3 lecture) (class near2 presentation)) same ((plurality multiple) near4 (student participant attend$2)) and wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/02/29 18:56
S82	0	370/335.ccls. and (rerout$3 re-rout$3	US-	OR	ON	2016/03/01

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		redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	PGPUB; USPAT; EPO; JPO; DERWENT			12:24
S83	256	370/335.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:25
S84	4	370/466.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:25
S86	1	370/342.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:26
S87	11	455/412.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:26
S88	11	455/414.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:27
S90	9	719/318.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:27
S91	132	H04L65/1069.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:29
S92	29	H04L65/60.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:29
S93	79	H04L67/04.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:30
S94	20	H04L67/303.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3)	US-PGPUB;	OR	ON	2016/03/01 12:30

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		near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	USPAT; EPO; JPO; DERWENT			
S95	3	H04M3/543.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:30
S96	94	H04L29/06.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:31
S97	30	H04L63/083.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/03/01 12:32

3/1/2016 12:44:39 PM
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

CPC- SEARCHED		
Symbol	Date	Examiner
H04L63/083, H04L29/06, H04L65/60, H04L65/1069, H04L67/04, H04L67/303, H04M3/543	3/1/2016	HC

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	335, 342, 466	3/1/2016	HC
455	412.1, 414.1	3/1/2016	HC
719	318	3/1/2016	HC

SEARCH NOTES		
Search Notes	Date	Examiner
Conducted Inventor search	3/1/2016	HC
CPC symbol and USPC class/subclass search limited by text	3/1/2016	HC
EAST text search	3/1/2016	HC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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2473	

NOTIFICATION DATE	DELIVERY MODE
03/23/2016	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):

usptomail@ipatent.co.il

Applicant-Initiated Interview Summary	**Application No.** 14/201,870	**Applicant(s)** SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	**Art Unit** 2473	

All participants (applicant, applicant's representative, PTO personnel):

(1) *HARUN CHOWDHURY*.

(2) _____.

(3) *MARTIN MOYNIHAN (REG. NO. 40338)*.

(4) *ROY MELZER*.

Date of Interview: *15 March 2016*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☒102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1*.

Identification of prior art discussed: *MOUSSEAU, ORTIZ*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The applicant's representative and the examiner discussed the claimed invention in view of Mousseau and Ortiz. It has been discussed that "a stream of media content" as claimed originally does not clearly indicate streaming media as the applicant intended to claim. Applicant may amend the claim to clarify the streaming media. During the interview, examiner pointed out that Mousseau discloses to scan the local wireless network to identify the compatible devices to be selected for redirecting attachment. Applicant may amend the claim to further clarify the scanning process.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/KWANG B YAO/
Supervisory Patent Examiner, Art Unit 2473

IPR2024-01047
Apple EX1002 Page 221

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded Shmueli et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

RESPONSE

Sir:

This is in response to the United States Patent and Trademark Office Action mailed March 9, 2016, which response is being made on June 9, 2016 and for which no extension of time fees are due.

Applicants submit this response for entry into the record, in which:

Amendments to the Claims begin on page 2.

Remarks begin on page 7.

Please amend the above-identified application as follows:

In the Claims:

1-21. (Cancelled)

22. (Currently Amended) A method of routing data via a mobile apparatus, comprising:

wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a data stream of media content;

scanning said local wireless communication network using said mobile device to identify a plurality of ~~compatible~~ devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and ~~which~~ wirelessly announce an availability for accepting ~~said~~ a routed media via said local wireless communication network;

selecting, based on a user interaction made with said mobile device and while said data stream is received at said mobile device from said external source, one of said plurality of ~~compatible~~ devices;

setting up a wireless communication link with said selected compatible device via said local wireless communication network;

causing a routing of said data stream of media content to said selected device via said wireless communication link for presentation of said media content by said selected ~~compatible~~ device.

23. (Previously Presented) The method of claim 22, wherein said media content is video and audio.

24. (Previously Presented) The method of claim 22, wherein said media content is a content of a mobile phone call sent while said mobile phone call is ongoing.

25. (Currently Amended) The method of claim 22, wherein said data stream is at least one of bi-directional and multidirectional.

26. (Previously Presented) The method of claim 22, wherein said wireless communication link is a direct communication link.

27. (Previously Presented) The method of claim 22, wherein said selecting comprises displaying a menu at said mobile device to allow a user to perform said user interaction.

28. (Currently Amended) The method of claim 22, wherein said setting up is performed using data describing said selected ~~compatible~~ device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected ~~compatible~~ device.

29. (Currently Amended) The method of claim 22, further comprising transmitting said media content to a plurality of copies so as to perform said routing to a number of said plurality of ~~compatible~~ devices.

30. (Currently Amended) The method of claim 22, wherein said setting up comprising transforming said media content into a form that accords with a media type requirement of said selected ~~compatible~~ device.

31. (Currently Amended) A mobile apparatus of routing data via a mobile apparatus, comprising:

a receiver wirelessly adapted to receive a data stream of media content from an external source via a local wireless communication network;

a scouting detector adapted to scan ~~a~~ said local wireless communication network to identify a plurality of ~~compatible~~ devices, identified as compatible to handle said media content, ~~which~~ said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

a controller adapted to select, based on a user interaction made with said mobile ~~device~~apparatus, one of said plurality of ~~compatible~~ devices and to instruct a setting up of a wireless communication link ~~between~~ with said selected ~~compatible~~ device via said local wireless communication network;

wherein said controller is adapted to instruct the routing of said data stream of media content to said selected device via said wireless communication link for presentation of said media content by said selected ~~compatible~~ device.

32. (Currently Amended) The mobile apparatus of claim 31, wherein said mobile apparatus is ~~a member of the group consisting~~one of a cell phone, a handheld device, and a personal digital assistant (PDA).

33. (Previously Presented) The mobile apparatus of claim 31, further comprising a user interface associated with said scouting detector for allowing a user to select between available compatible media handling devices to reroute data thereto.

34. (Currently Amended) The mobile apparatus of claim 31, wherein said controller further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable a communication service provider to reroute said data stream.

35. (Previously Presented) The mobile apparatus of claim 31, wherein said controller further comprising control functionality operable to carry out said rerouting through locally available infrastructure.

36. (Currently Amended) The mobile apparatus of claim 31, wherein said media content ~~comprises a member of the group consisting~~is one of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data.

37. (Currently Amended) The mobile apparatus of claim 31, wherein said scouting detector is operable to determine media type requirements of each of said plurality of ~~compatible~~ devices.

38. (Currently Amended) The mobile apparatus of claim 31, further comprises transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected ~~compatible~~ device; wherein said controller is adapted to instruct the routing of said transformed copy.

39. (Currently Amended) A computer program product for routing data via a mobile apparatus, said computer program product comprising:

a non-transitory computer readable storage medium having stored thereon:

first program instructions executable by a processor to wirelessly receive at a mobile device, from an external source via a local wireless communication network, a data stream of media content;

second program instructions executable by the processor to scan said local wireless communication network using said mobile device to identify a plurality of ~~compatible~~ devices, identified as compatible to handle said media content, ~~which~~ said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting ~~said~~ a routed media via said local wireless communication network;

third program instructions executable by the processor to select, based on a user interaction made with said mobile device and while said data stream is received at said mobile device from said external source, one of said plurality of ~~compatible~~ devices;

fourth program instructions executable by the processor to set up a wireless communication link with said selected ~~compatible~~ device via said local wireless communication network; and

fifth program instructions executable by the processor to cause a ~~route~~ routing of said data stream of media content to said selected device via said wireless communication link for presentation of said media content by said selected ~~compatible~~ device.

40. (Previously Presented) The computer program product of claim 39, wherein said media content is a content of a mobile phone call.

41. (New) The method of claim 22, wherein said selecting comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

42. (New) The method of claim 22, further comprising encrypting said data stream of media content before routing to said selected device.

43. (New) The method of claim 22, wherein said wirelessly announce is wirelessly announce an availability for accepting a routed media and an availability for accepting a type of said routed media.

44. (New) The method of claim 22, wherein said routing of said data stream of media content is directly from said external source to said selected device via said wireless communication link.

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 22-40 are in this Application. Claim 31 has been objected to. Claims 22, 23, 25, 28-31, and 33-39 have been rejected on the ground of double patenting. Claims 39-40 have been rejected under 35 U.S.C § 101. Claims 22-40 have been rejected under U.S.C § 112. Claims 22, 23, 25-28 and 30-39 have been rejected under U.S.C § 102. Claims 24, 29 and 40 have been rejected under 35 U.S.C § 103. Claims 22, 25, 28-32, 34 and 36-39 have been amended herewith. New claims 41-44 have been added herewith. Basis can be found, *inter alia*, on page 4 lines 8-9 and 27-28, page 10 lines 13-27, page 12 lines 14-15 and page 13 lines 7-11.

Interview Recordation according to MPEP Section 713.04

Applicants thank the Examiner for the interview held on March 15th 2016.

The Applicants' representative explained the inventive concept of the application, and proposed amending the independent claims, to distinguish from the cited prior art.

Applicants further amended independent Claims 22, 31 and 39. An explanation and support to the amendment is provided in the following sections of the instance response to the Office Action.

Claim Objections

The Examiner asserted that Claim 31 has been objected to because of informality - Claim 31, line 9 recites "a wireless communication link **between with**", and that an appropriate correction is required.

Applicants amended Claim 31 appropriately.

Double Patenting

The Examiner has rejected claims 22, 25, 28-31, 33-35, and 37-39 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 7, 9, 10, 10, 21, 31, 32 of U.S. Patent No. 7,969,990.

Further, the Examiner has rejected claims 22, 23, 25, 28-31, 33-39 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9, 15, 19, 21 of U.S. Patent No. 8,711,866.

Without acquiescing to the Examiner's basis for the rejections, Applicants provide herewith a terminal disclaimer, which disclaims any excess term relative to U.S. Patent No. 7,969,990 and U.S. Patent No. 8,711,866. It is respectfully submitted that "filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither a presumption nor estoppel on the merits of the rejection." Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870 (Fed. Cir. 1991).

35 U.S.C. § 101 Rejections

Claims 39-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The Examiner asserted that Claim 39 recites a computer readable storage medium but does not specify that the claimed medium is non-transitory. So the claimed computer readable medium covers both the non-transitory tangible media and transitory propagating signals per se. Hence, claim 39 is rejected for covering non-statutory subject matter.

Claim 40 is dependent on claim 39 and thereby rejected for the reasons discussed above.

Applicants amended Claim 39 to claim “a non-transitory computer readable storage medium”, thus submitting that the amended Claims 39 and 40 are allowable under 35 U.S.C. § 101 as the claimed invention in the amended claim is not directed to a non-statutory subject matter.

35 U.S.C. § 112 Rejections

Claims 22-40 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 22-40 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

As for Claim 22:

The Examiner asserted that Claim 22 recites "scanning said local wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce an availability for accepting said media via said local wireless communication network", that according to the claim limitation, the compatible devices announce their availability to accept the said media (the media received by the mobile device) the compatible devices do not know the type of media the mobile device received and without knowing the type of media, how can a compatible device announce its availability to accept the said media. Further, the Examiner stated that the specification discloses that the compatible devices announce their availability and the type of media they support and that from the availability and media type information, the mobile device selects one or more compatible devices to reroute the received/said media.

The Examiner concluded that Claim 22 contains subject matter which fails to comply with the enablement requirement, and that the claim contains subject matter that fails to comply with the written description requirement.

Applicants amended the above limitation of Claim 22 as follows (underlining added by Applicants):

> *scanning said local wireless communication network using said mobile device to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local*

wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

Applicants respectfully submit that the amended Claim 22 now clearly does not claim that the compatibility to handle the media content by the identified devices is announced by the identified devices. The identified devices announce that they are available to accept a routed media, not necessarily the media content received at the mobile device.

Basis for the amendment can be found, *inter alia*, on page 3 lines 12-20, page 7 lines 20-21, page 9 lines 7-27, page 10 lines 9-34, page 11 lines 1-20 and page 13 lines 9-11 and 26-29.

It is therefore submitted by the Applicants that amended Claim 22 does not contain subject matter which fails to comply with the enablement requirement or the written description requirement, and should be allowed.

As for Claims 31 and 39:

The Examiner asserted that independent claims 31 and 39 recite similar limitations as claim 22 and thereby rejected for the reasons discussed above.

Applicants applied the amendment to Claim 22 to Claims 31 and 39, *mutatis mutandis*, and respectfully submit that the amended Claims 31 and 39 do not contain subject matter which fails to comply with the enablement requirement, and therefore should be allowed.

As for Claim 32:

The Examiner asserted that Claim 32 recites "said mobile apparatus is a member of the group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA)", that the specification does not disclose to form a group consisting of a cell phone, a handheld device, and a personal digital assistant (PDA) and therefore, claim 32 fails to comply with the written description requirement.

Applicants amended Claim 32 as follows (underlining added by Applicants):

32. The mobile apparatus of claim 31, wherein said mobile apparatus is one of a cell phone, a handheld device, and a personal digital assistant (PDA).

Basis for the amendment can be found, *inter alia*, on page 11 lines 21-25, page 14 lines 17-21 and 27-34 and on page 15 lines 9-11.

The amended Claim 32 now clearly claims that the mobile apparatus is a cell phone, a handheld device or a PDA.

It is respectfully submitted by the Applicants that amended Claim 32 does not contain subject matter which fails to comply with the written description requirement, and therefore should be allowed.

As for Claim 36:

The Examiner asserted that Claim 36 recites "said media content comprises a member of the group consisting of: voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data", that the specification does not disclose to form a group consisting of voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data, and therefore, claim 36 fails to comply with the written description requirement.

Applicants amended Claim 36 as follows (underlining added by Applicants):

> *36. The mobile apparatus of claim 31, wherein said media content <u>is one</u> of voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data.*

Basis for the amendment can be found, *inter alia*, on page 6 lines 26-34, page 7 lines 19-26, page 8 lines 14-19, page 14 lines 16-25 and page 15 lines 1-15.

The amended Claim 36 now clearly claims that the media content is voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, or text data.

It is respectfully submitted by the Applicants that amended Claim 36 does not contain subject matter which fails to comply with the written description requirement, and therefore should be allowed.

Claims 31-38 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 pre-AIA the applicant regards as the invention.

As for Claim 31:

The Examiner asserted that Claim 31 recites "a local wireless communication network" in line 3 and again "a local wireless communication network" in line 4, that it is not clear whether the two local wireless communication network are the same network or different network. Moreover, when the claim recites "said local wireless communication network", it is not clear which one of the two local wireless communication networks, the claim is referring to.

Additionally the Examiner asserted that Claim 31 recites the limitation "said mobile device" in line 7 and that there is insufficient antecedent basis for this limitation in the claim.

Applicants amended Claim 31 to overcome the above rejections, and respectfully submit that amended Claim 31 particularly points out and distinctly claims the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention, and therefore should be allowed.

As for Claim 32:

The Examiner asserted that Claim 32 recites the limitation "the group consisting of" in line 2 and there is insufficient antecedent basis for this limitation in the claim.

Applicants amended Claim 32 as described above, and respectfully submitting that there is sufficient antecedent basis in the amended claim, thus it is respectfully submitted by the Applicants that amended Claim 32 particularly points out and distinctly claims the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention, and therefore should be allowed.

As for Claim 36:

The Examiner asserted that Claim 36 recites the limitation "the group consisting of" in line 2 and there is insufficient antecedent basis for this limitation in the claim.

Applicants amended Claim 36 as described above, and respectfully submitting that there is sufficient antecedent basis in the amended claim, thus it is respectfully submitted by the Applicants that amended Claim 32 particularly points out and distinctly claims the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention, and therefore should be allowed.

35 U.S.C. § 102 Rejections

Claims 22, 23, 25-28, and 30-39 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Mousseau et al (US 20010005864 A1, hereinafter referred to as *Mousseau*)

As for Claims 22, 31 and 39:

Applicants respectfully disagree with the rejection of Claims 22, 31 and 39.

The Examiner based the rejection on *Mousseau* that teaches how to push information, such as email files from a host system to a mobile data communication device. *Mousseau* does not teach or imply any streaming of media data. The meaning that the term "streaming of media" would have to a person of ordinary skill in the art in question at the time of the invention is clear from Wikipedia, see the term "streaming": https://en.wikipedia.org/wiki/Streaming_media:

"*Streaming media is multimedia that is constantly received by and presented to an end-user while being delivered by a provider.*"

Moreover, *Mousseau* does not teach routing of stream data over a local wireless communication network but rather redirection of files. Furthermore, *Mousseau* teaches that the mobile device may search for a displayer device by interrogating, or querying devices, but not by scanning the WLAN to identify devices that announce their availability.

In paragraph [0073], for example, *Mousseau* teaches as follows (underlining added by Applicants):

> *"[0073] In a preferred embodiment, after the datagram 200A (minus the attachment 200B) is received at the mobile device 214B, the mobile device 214B will receive a command either from the host system 202 or from the user of the mobile device to find an attachment displayer 216 to within its vicinity to process the attachment 200B. Alternatively, the mobile device 214B or user*

may automatically attempt to find an attachment displayer when the datagram 200A is received. Preferably through short range wireless communication 215A, 215B, the mobile device 214B will query 215A attachment displayers 216 in the local area of the mobile device 214B to determine whether they can process the attachment 200B. The attachment displayers 216 will is then send back 215B to the mobile device 214B information pertaining to their location, electronic address, and the type of attachment files they can handle. The mobile device then processes this information regarding the attachment displayers 216, and sends the host system 202 an attachment displayer choice to use with the attachment 200B. The attachment component 202C of the host system receives the attachment displayer choice from the mobile device 214B, and will then send the attachment 200B to the chosen attachment displayer either through the wireless network 212, directly through the Internet 208, via a LAN connection, via a telephone or cellular connection, or via any other type of connection as specified by the information provided from the chosen attachment displayer 216."

The above citation clearly showing these additional differences between the claimed invention and the teachings of *Mousseau* as:

1. In *Mousseau* the method is for re-direction of file attachments, in contrast to the claimed invention that is for re-routing of streaming data.
2. In *Mousseau* the attachment is redirected to the displayers from the server, in contrast to the claimed invention of Claims 22, 31 and 39, according to which the streaming data is re-routed through the mobile device to the selected device.
3. In *Mousseau* the mobile device initiates a query and communicates with possible displayers to identify potential displayers to receive the forwarded attachment, in contrast to the method of the claimed invention, according to which devices announce their availability, and the mobile device scans the WLAN to identify those announcers.

Examiner also presented an alternate rejection (under 35 U.S.C. § 103 Rejections section) based on the combination of *Ortiz* and *Mousseau*. In the rejection, the Examiner agreed that *Ortiz* does not explicitly disclose (v) to scan said local

wireless communication network using said mobile device to identify a plurality of compatible devices which wirelessly announce availability for accepting said media via said local wireless communication network. Examiner contends that Fig. 6-9, Par 0016, Par 0034-0035, Par 0069-0074, Par 0077 and Par 0082 of *Mousseau* teach this limitation.

Applicants respectfully disagree. As explained above, Applicants argue that neither *Ortiz* nor *Mousseau* teach or imply that the mobile device receiving the streaming data for re-routing scans the WLAN to identify devices which announce their availability and media types handling capabilities. As such, if an attempt to combine the methods of *Ortiz* and *Mousseau* is done, there will still be missing in any combination the feature of the mobile device, receiving the streaming data for re-routing, that scans the WLAN to identify devices which announce their availability.

However, in order to promote the examination, Applicants amended Claim 22 as follows (underlining added by Applicants):

22. A method of routing data via a mobile apparatus, comprising:

wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a data stream of media content;

scanning said local wireless communication network using said mobile device to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

selecting, based on a user interaction made with said mobile device and while said data stream is received at said mobile device from said external source, one of said plurality of devices;

setting up a wireless communication link with said selected compatible device via said local wireless communication network;

causing a routing of said data stream of media content to said selected device via said wireless communication link for presentation of said media content by said selected device.

Amended Claim 22 now clearly claims the distinct feature of routing streaming data of media content, which is different than other types of data such as

used for mail attachments, and the distinct feature of scanning a wireless communication network by the mobile device receiving the steaming data for re-routing, to identify devices connected to the wireless network, are identified as capable to handle the routed media content, and that announce over the wireless local network that they are available to accept routed media.

Basis for the amendment can be found, *inter alia*, on page 3 lines 12-20, page 7 lines 20-21, page 9 lines 7-27, page 10 lines 9-34, page 11 lines 1-20 and page 13 lines 9-11 and 26-29.

As argued above, none of the teachings of *Ortiz* and *Mousseau* teaches or implies the claimed limitations claimed in the amended Claim 22. Any feasible combination of the methods of *Ortiz* and *Mousseau* will not have the feature of the claimed invention of scanning the local wireless communication network using the mobile device to identify a plurality of devices, that are identified as compatible to handle the media content, where the plurality of devices are wirelessly connected to the local wireless communication network and wirelessly announce their availability for accepting a routed media via the local wireless communication network.

Applicants applied the amendment to Claim 22 *mutatis mutandis* to Claims 31 and 39.

For clarity, Applicants are describing the teachings of *Ortiz* and *Mousseau* individually but are traversing the rejections with respect to the combination of these references, *supra*. That is, the Applicants are not attacking the references individually, rather addressing the combinations of references as set forth in the instant Office Action.

It is thus respectfully submitted by Applicants that amended independent Claims 22, 31 and 39 are allowable as being novel and non-obvious in view of *Ortiz* and *Mousseau*, alone or in any feasible combination.

As for Claims 23, 25-30 and 32-38:

Applicants respectfully submit that dependent Claims 23 and 25-30 are allowable at least as being dependent on allowed amended independent Claim 22, and that Claims 32-38 are allowable at least as being dependent on allowed amended independent Claim 31.

35 U.S.C. § 103 Rejections

Claims 24 and 40 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over *Mousseau* as applied to claim 22, 31, and 39 above respectively and further in view of Chow et al (US 6961559 B1, hereinafter referred to as *Chow*).

Claim 29 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over *Mousseau* as applied to claim 22, 31, and 39 respectively above and further in view of Thanh et al (The Device Management Service, hereinafter referred to as *Thanh*).

Alternate rejection: Claims 22, 31, and 39 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Ortiz et al (US 20020058499 A1, hereinafter referred to as *Ortiz*) in view of Mousseau et al (US 20010005864 A1, hereinafter referred to as *Mousseau*).

As for Claims 24 and 40:

Applicants disagree with the rejection of Claims 24 and 40.

The Examiner asserted that *Chow* allegedly teaching that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing and that it would have been obvious to one of ordinary skill in the art at the time of invention to modify *Mousseau* by including the step that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing, as taught by *Chow* for the purpose of transferring call from one telephone to another to access voice mail message/talk with someone else, as taught by *Chow* (Col 42, Line 40-47).

Applicants respectfully contend that the transferring of a call, according to *Chow* is not routing streaming data as per the instance invention. Additionally, transferring the call establishes a direct connection between the source of the call and the device receiving the transferred call, while the transferring device is disconnected after transferring the call. In the routing operation of Claims 24 and 40, the mobile apparatus through which the routing is performed is kept operating during the time the streaming being routed, and is not disconnected.

Furthermore, Applicants argue that the combination of the teaching of *Mousseau* and the teaching of *Chow* is technically not possible. As described above,

Mousseau teaches a method for forwarding an attachment. This method cannot support transferring call while it is being conducted, as described by *Chow*. Therefore there would be no reason for one of ordinary skill in the art at the time of invention to attempt to apply the method of *Chow* and combine it with the attachment forwarding method of *Mousseau*.

It is thus submitted by the Applicants that such combination is not feasible, and the attempt to present a combination of the method of *Mousseau* with the method of *Chow* as allegedly disclosing the claimed invention of Claims 24 and 40, is improper, the rejection should therefore be withdrawn and Claims 24 and 40 should be allowed as being novel and non-obvious in view of *Chow* and *Mousseau*, at least as being dependent on allowed amended independent Claims 22 and 39.

As for Claim 29:

Applicants respectfully submit that dependent Claim 29 is allowable at least as being dependent on allowed amended independent Claim 22.

As for the alternate rejection of Claims 22, 31, and 39:

Applicants have addressed the rejection of Claims 22, 31 and 39 under 35 U.S.C. § 103 in the discussion on the rejection of these claims in the section of 35 U.S.C. § 102 Rejections, *supra*.

Conclusion

No Disclaimers or Disavowals

Although the present response may include amendments to the application or claims, or characterizations of claim scope or referenced art, Applicants do not concede that previously pending claims in this application are not patentable over the cited references. Rather, any amendments or characterizations are being made to expedite the issuance. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that relate to subject matter supported by the instant application, including subject matter specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this application, or any parent, child or related prosecution history should not infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the instant application.

In view of the above amendments and remarks it is respectfully submitted that Claims 22-44 are now in condition for allowance (Claims 41-44 are new). A prompt notice of allowance is respectfully and earnestly solicited.

Should the Examiner have any questions or comments as to the form, content, or entry of this paper, the Examiner is requested to contact the undersigned at the telephone number below prior to mailing the next Official Action. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Any fees associated with this paper, for its entry into the record, may be charged to Deposit Account No. 50-1407.

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17, or credit any overpayment, to Deposit Account No. 50-1407.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me and any other practitioner of record under 37 CFR § 1.33 and 37 CFR § 1.34 concerning any subject matter of this application via electronic mail or instant messaging. I understand that a copy of these communications may be made of record in the application file (MPEP § 502.03).

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: June 9, 2016

Enclosures:

- Additional Claims Transmittal Fee
- Terminal Disclaimer (RE: U.S. Patent Nos. 7,969,990 and 8,711,866)

Electronic Patent Application Fee Transmittal

Application Number:	14201870
Filing Date:	09-Mar-2014
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Martin Dennis Moynihan
Attorney Docket Number:	58710

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	2	40	80
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**80**

Electronic Acknowledgement Receipt	
EFS ID:	26011801
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	09-JUN-2016
Filing Date:	09-MAR-2014
Time Stamp:	07:38:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$80
RAM confirmation Number	9177
Deposit Account	501407
Authorized User	MOYNIHAN, MARTIN D.
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 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		58710R.pdf	140694 0592b236d8886f86f21b29c8fc25ad48f2a83c4e	yes	21

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Amendment/Req. Reconsideration-After Non-Final Reject	2	2
	Claims	3	7
	Applicant Arguments/Remarks Made in an Amendment	8	21

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30257 b66a6213a3dfe34ab17705f9f7ccf2a15bb5ba31	no	2

Warnings:

Information:

Total Files Size (in bytes):	170951

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded Shmueli et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

AMENDMENT TRANSMITTAL

Sir:

(1) Applicant is a:
_X_ small entity
___ other than small entity

(2) The fee for claims 37 C.F.R. §1.16(b)-(d) has been calculated as shown below:

For	Claims after Amendment	Highest Claims Previously Paid
Total Claims	23	21
Indep. Claims	3	3

Small Entity	
Rate	**Fee**
2 x $ 40.00	$ 80.00
0 x $210.00	$ 0.00
TOTAL:	**$ 80.00**

(3) A response to the Office Action dated March 9, 2016 _X_ is filed herewith
____ has been filed

(4) Please charge the additional claim fee and any other amount required to Deposit Account No. **50-1407**.

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: June 9, 2016

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	14201870
Filing Date	09-Mar-2014
First Named Inventor	Oded Shmueli
Attorney Docket Number	58710
Title of Invention	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

☒ 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
Oded SHMUELI	50 %
Benny YEHEZKEL	50 %

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)

7969990

8711866

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 40338

○ 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	/Martin D. Moynihan/
Name	Martin D. Moynihan

*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.

Electronic Patent Application Fee Transmittal

Application Number:	14201870
Filing Date:	09-Mar-2014
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Martin Dennis Moynihan
Attorney Docket Number:	58710

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	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**160**

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

Application No.: 14201870

Filing Date: 09-Mar-2014

Applicant/Patent under Reexamination: Shmueli et al.

Electronic Terminal Disclaimer filed on June 9, 2016

☒ 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 Acknowledgement Receipt	
EFS ID:	26014523
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	09-JUN-2016
Filing Date:	09-MAR-2014
Time Stamp:	12:03:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$160
RAM confirmation Number	11369
Deposit Account	501407
Authorized User	MOYNIHAN, MARTIN D.
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 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	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	35147 8fac92028e89e076a08f364653b6672a364ebaec	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30195 b52f33af6f16b4a457ea36371a68e874e89532dc	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	65342		

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/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 14/201,870	Filing Date 03/09/2014	☐ 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 $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ 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

AMENDMENT **06/09/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $210 =	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

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
/ANTJUAN RIVERA/

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 08/11/2016

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
08/11/2016	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):

usptomail@ipatent.co.il

Office Action Summary	Application No. 14/201,870	Applicant(s) SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	Art Unit 2473	AIA (First Inventor to File) 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 *06/09/2016*.

☐ 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) *22-44* 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) *22-44* 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 *03/09/2014* 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: _____.

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DETAILED ACTION

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

Status of Claims

2. Claims 22-44 are pending wherein claims 22, 31, and 39 are in independent form. Claims 41-44 have been added newly.

3. Claims 22, 25, 28-32, 34, 36-39 have been amended. In view of the amendment, the 35 U.S.C. 101 rejections are withdrawn.

4. In view of amendment, 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph and 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph rejections are withdrawn.

5. Double patenting rejections are postponed/withhold in view of the submission of terminal disclaimer and will be withdrawn upon acceptance of the terminal disclaimer.

Response to Arguments

6. Applicant's arguments with respect to claims 22-44 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Claim Rejections - 35 USC § 103

7. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the

time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 22, 23, 25-39, and 41-44 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Hamberg et al (US 7340214 B1, hereinafter referred to as Hamberg) in view of Mousseau et al (US 20010005864 A1, hereinafter referred to as Mousseau).

Re claim 22, Hamberg teaches a method of routing data via a mobile apparatus (wireless device 100) (abstract, Fig. 1 E, F, 2A), comprising:

(i) wirelessly receiving at a mobile device (100), from an external source (Wall server 150) via a local wireless communication network (Bluetooth network/personal area network (PAN) as shown in Fig. 1-2, Fig. 12), a data stream of media content (Tag 130, 132, 134) (Fig. 1A, 1B, 2A, Col 1, Line 40-52, Col 4, Line 1-34, Col 5, Line 31-56, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55);

(ii) scanning (using service discovery protocol (SDP), Generic Access Profile (GAP) to discover Bluetooth enabled devices as disclosed in Col 1, Line 40-52, Col 2, Line 1-23) said local wireless communication network (Bluetooth network/personal area network (PAN)) using said mobile device (100) to identify a plurality of devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless device 100' in the vicinity of device 100), identified as compatible to handle said media content (Bluetooth enabled devices in the vicinity of device 100 are compatible to handle the tag (media content) as the tag can only be transferred over a short-range wireless link/Bluetooth link), said plurality of

devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless device 100' in the Bluetooth network/personal area network (PAN)) are wirelessly connected to said local wireless communication network (Bluetooth network/personal area network (PAN)) and wirelessly announce an availability for accepting a routed media via said local wireless communication network (as the tag can only be transferred over a short-range wireless link/Bluetooth link, the wireless device's Bluetooth capability is the announcement of availability to accept tag/routed media. Moreover, wireless devices request to transfer tag as shown in Fig. 1E, 1F, 2A and therefore, the request is also being considered as an announcement of availability to accept tag/routed media. Keeping "tag worm" activated as disclosed in Col 20, Line 54-67, Col 21, line 1-3, is also being considered as an announcement of availability to accept tag/routed media) (Fig. 1, Fig. 1E-F, Fig. 2A, Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 5, Line 31-56, Col 6, Line 42-57, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3 --- Col 1, Line 40-42 discloses that a Bluetooth network/PAN can accommodate eight devices operating together. Therefore, it is evident that the Bluetooth network/personal area network (PAN) shown in Fig. 1-2, Fig. 6-7, 12 multiple/plurality of Bluetooth enabled devices);

(iii) selecting, based on a user interaction made with said mobile device (selection of tag delivery/tag give away mode) and while said data stream is received at said mobile device from said external source (downloading tag 134

from wall server), one device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(iv) setting up a wireless communication link (short range wireless link/Bluetooth link) with said selected compatible device (wireless device 100') via said local wireless communication network (Bluetooth network/personal area network (PAN)) (Fig. 1, Fig. 1E-F, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(v) causing a routing of said data stream of media content (tag 134) to said selected device (wireless device 100') via said wireless communication link (Bluetooth link) for presentation of said media content by said selected device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Hamberg discloses that PAN/Bluetooth network includes multiple/plurality of wireless devices (Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 10, Line 6-33) and a wireless device discovers the presence of other Bluetooth enabled wireless device by using SDP, GAP etc. (Col 1, Line 40-52, Col 2, Line 1-23). It is evident from Hamberg's disclosure that the wireless device 100' is

selected from the multiple/plurality of wireless devices included/present in the PAN/Bluetooth network.

Although it is evident from Hamberg's disclosure that one device (wireless device 100') is selected from plurality of Bluetooth enabled wireless devices, Hamberg does not explicitly disclose to select one device from plurality of devices.

Mousseau teaches to select one device from plurality of devices in a Bluetooth network (Fig. 6-8, Par 0069-0074, Par 0077).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step to select one device from plurality of devices in a Bluetooth network, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 23, Hamberg does not explicitly disclose that said media content is video and audio.

Mousseau teaches that said media content is video and audio (Par 0035).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that said media content is video and audio, as taught by Mousseau for the purpose of enabling to transfer more tag content from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 25, Hamberg teaches that said data stream is at least one of bi-directional and multidirectional (Tag downloaded from server and forwarded to another user device) (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 26, Hamberg teaches that said wireless communication link is a direct communication link (Bluetooth link between wireless device 100 and 100') (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 27, Hamberg teaches that said selecting comprises displaying a menu at said mobile device to allow a user to perform said user interaction (selecting Tag transfer mode such as "Tag delivery" or "tag give away") (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 28, Hamberg does not explicitly disclose that said setting up is performed using data describing said selected device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected device.

Mousseau teaches that said setting up is performed using data (supporting attachment type, location, security, electronic address) describing said selected device (attachment displayer) which is extracted from a device library (list of attachment displayer) of said mobile device, said data includes technical information regarding expected media formats (supporting attachment type) and transmission technology specification (security, electronic address) of said selected device (attachment displayer) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0056, Par 0069-0077, Par 0082).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that said setting up is performed using data describing said selected device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected device, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 29, Hamberg teaches to transmit said media content to a plurality of copies so as to perform said routing to a number of said plurality of devices (tag transmitted to wall server as well as other Bluetooth enabled wireless devices) (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line

1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 30, Hamberg does not explicitly disclose that setting up comprising transforming said media content into a form that accords with a media type requirement of said selected device.

Mousseau teaches that setting up comprising transforming said media content into a form that accords with a media type requirement of said selected device (converting the attachment to a suitable format) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that setting up comprising transforming said media content into a form that accords with a media type requirement of said selected device, as taught by Mousseau for the purpose of efficiently transferring data from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 31, Hamberg teaches a mobile apparatus of routing data via a mobile apparatus (wireless device 100) (abstract, Fig. 1 E, F, 2A), comprising: (i) a receiver wirelessly adapted to receive (Bluetooth radio of the wireless device 100) a data stream of media content (Tag 130, 132, 134) from an external source (Wall server 150) via a local wireless communication network (Bluetooth network/personal area network (PAN) as shown in Fig. 1-2, Fig. 12), (Fig. 1A, 1B,

2, 2A, Col 1, Line 40-52, Col 4, Line 1-34, Col 5, Line 31-56, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55);

(ii) a scouting detector (protocol group in device 100) adapted to scan (using service discovery protocol (SDP), Generic Access Profile (GAP) to discover Bluetooth enabled devices as disclosed in Col 1, Line 40-52, Col 2, Line 1-23) said local wireless communication network (Bluetooth network/personal area network (PAN)) to identify a plurality of devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless devices 100' in the vicinity of device 100), identified as compatible to handle said media content (Bluetooth enabled devices in the vicinity of device 100 are compatible to handle the tag (media content) as the tag can only be transferred over a short-range wireless link/Bluetooth link), said plurality of devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless devices 100' in the Bluetooth network/personal area network (PAN)) are wirelessly connected to said local wireless communication network (Bluetooth network/personal area network (PAN)) and wirelessly announce an availability for accepting a routed media via said local wireless communication network (as the tag can only be transferred over a short-range wireless link/Bluetooth link, the wireless device's Bluetooth capability is the announcement of availability to accept tag/routed media. Moreover, wireless devices request to transfer tag as shown in Fig. 1E, 1F, 2A and therefore, the request is also being considered as an announcement of availability to accept tag/routed media. Keeping "tag worm" activated as

disclosed in Col 20, Line 54-67, Col 21, line 1-3, is also being considered as an announcement of availability to accept tag/routed media) (Fig. 1, Fig. 1E-F, Fig. 2, Fig 2A, Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 5, Line 31-56, Col 6, Line 42-57, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3 --- Col 1, Line 40-42 discloses that a Bluetooth network/PAN can accommodate eight devices operating together. Therefore, it is evident that the Bluetooth network/personal area network (PAN) shown in Fig. 1-2, Fig. 6-7, 12 includes multiple/plurality of Bluetooth enabled devices such as devices 100');

(iii) a controller (central processor) adapted to select, based on a user interaction made with said mobile apparatus (selection of tag delivery/tag give away mode), one device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(iv) to instruct a setting up a wireless communication link (short range wireless link/Bluetooth link) with said selected device (wireless device 100') via said local wireless communication network (Bluetooth network/personal area network (PAN)) (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col

16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(v) wherein said controller is adapted to instruct the routing of said data stream of media content (tag 134) to said selected device (wireless device 100') via said wireless communication link (Bluetooth link) for presentation of said media content by said selected device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Hamberg discloses that PAN/Bluetooth network includes multiple/plurality of wireless devices (Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 10, Line 6-33) and a wireless device discovers the presence of other Bluetooth enabled wireless device by using SDP, GAP etc. (Col 1, Line 40-52, Col 2, Line 1-23). It is evident from Hamberg's disclosure that the wireless device 100' is selected from the multiple/plurality of wireless devices included/present in the PAN/Bluetooth network.

Although it is evident from Hamberg's disclosure that one device (wireless device 100') is selected from plurality of Bluetooth enabled wireless devices, Hamberg does not explicitly disclose to select one device from plurality of devices.

Mousseau teaches to select one device from plurality of devices in a Bluetooth network (Fig. 6-8, Par 0069-0074, Par 0077).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step to select one device from plurality of devices in a Bluetooth network, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 32, Hamberg teaches that said mobile apparatus is one a cell phone, a handheld device, and a personal digital assistant (PDA) (wireless devices 100, 100' having GSM, GPRS capability) (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 33, Hamberg teaches a user interface associated with said scouting detector for allowing a user to select between available compatible media handling devices to reroute data thereto (transferring data to device 100') (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 34, Hamberg teaches that said controller further comprising control functionality operable to inform a communication service provider (GSM network) of a desired rerouting, thereby to enable a communication service provider to reroute said data stream (transferring tag content using GSM

network, performing billing and security operation) (Fig. 1G-H, Fig. 2A, Fig. 8, Fig. 10, Col 16, Line 6-25, Col 16, Line 57-67, Col 17, Line 1-22, Col 18, Line 59-67, Col 19, Line 1-61).

Re claim 35, Hamberg teaches that said controller further comprising control functionality operable to carry out said rerouting through locally available infrastructure (Bluetooth network/personal area network) (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 36, Hamberg teaches that said media content is one of voice data, bidirectional voice data, audio data, bidirectional audio data, video data, bidirectional video data, a game session, an interactive game session, a television broadcast, a radio broadcast, and text data (voice clip, text) (Fig. 1, Fig. 1E-F, Fig. 2, Fig. 2A, Fig. 12, Abstract, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 37, Hamberg does not explicitly disclose that said scouting detector is operable to determine media type requirements of each of said plurality of devices.

Mousseau teaches that said scouting detector is operable to determine media type requirements (supporting attachment type) of each of said plurality of

devices (attachment displayer) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that said scouting detector is operable to determine media type requirements of each of said plurality of devices, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 38, Hamberg does not explicitly disclose that transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected device; wherein said controller is adapted to instruct the routing of said transformed copy.

Mousseau teaches that transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected device; wherein said controller is adapted to instruct the routing of said transformed copy (converting the attachment to a suitable format) (Fig. 6-9, Par 0016, Par 0019, Par 0034-0035, Par 0069-0077, Par 0082).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected device; wherein said

controller is adapted to instruct the routing of said transformed copy, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 39, Hamberg teaches a computer program product for routing data via a mobile apparatus (Abstract), said computer program product comprising:

(i) a non-transitory computer readable storage medium (memory 202) (Fig. 2, Col 16, Line 26-56) having stored thereon:

(ii) first program instructions executable by a processor (central processor) to wirelessly receive at a mobile device (100), from an external source (Wall server 150) via a local wireless communication network (Bluetooth network/personal area network (PAN) as shown in Fig. 1-2, Fig. 12), a data stream of media content (Tag 130, 132, 134) (Fig. 1A, 1B, 2, 2A, Col 1, Line 40-52, Col 4, Line 1-34, Col 5, Line 31-56, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55, Col 16, Line 26-56);

(iii) second program instructions executable by the processor (central processor) to scan (using service discovery protocol (SDP), Generic Access Profile (GAP) to discover Bluetooth enabled devices as disclosed in Col 1, Line 40-52, Col 2, Line 1-23) said local wireless communication network (Bluetooth network/personal area network (PAN)) using said mobile device (100) to identify a plurality of devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless device 100' in the vicinity of device 100), identified as compatible to handle said

media content (Bluetooth enabled devices in the vicinity of device 100 are compatible to handle the tag (media content) as the tag can only be transferred over a short-range wireless link/Bluetooth link), said plurality of devices (Bluetooth enabled devices such as Bluetooth access point 140, wireless device 100' in the Bluetooth network/personal area network (PAN)) are wirelessly connected to said local wireless communication network (Bluetooth network/personal area network (PAN)) and wirelessly announce an availability for accepting a routed media via said local wireless communication network (as the tag can only be transferred over a short-range wireless link/Bluetooth link, the wireless device's Bluetooth capability is the announcement of availability to accept tag/routed media. Moreover, wireless devices request to transfer tag as shown in Fig. 1E, 1F, 2A and therefore, the request is also being considered as an announcement of availability to accept tag/routed media. Keeping "tag worm" activated as disclosed in Col 20, Line 54-67, Col 21, line 1-3, is also being considered as an announcement of availability to accept tag/routed media) (Fig. 1, Fig. 1E-F, Fig. 2-2A, Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 5, Line 31-56, Col 6, Line 42-57, Col 10, Line 6-33, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3 --- Col 1, Line 40-42 discloses that a Bluetooth network/PAN can accommodate eight devices operating together. Therefore, it is evident that the Bluetooth network/personal area network (PAN) shown in Fig. 1-2, Fig. 6-7, 12 multiple/plurality of Bluetooth enabled devices);

(iv) third program instructions executable by the processor (central processor) to select, based on a user interaction made with said mobile device (selection of tag delivery/tag give away mode) and while said data stream is received at said mobile device from said external source (downloading tag 134 from wall server), one device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(v) fourth program instructions executable by the processor (central processor) to set up a wireless communication link (short range wireless link/Bluetooth link) with said selected compatible device (wireless device 100') via said local wireless communication network (Bluetooth network/personal area network (PAN)) (Fig. 1, Fig. 1E-F, Fig. 2A, Col 1, Line 40-52, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 54-67, Col 21, line 1-3);

(vi) fifth program instructions executable by the processor (central processor) to cause a routing of said data stream of media content (tag 134) to said selected device (wireless device 100') via said wireless communication link (Bluetooth link) for presentation of said media content by said selected device (wireless device 100') (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col

16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Hamberg discloses that PAN/Bluetooth network includes multiple/plurality of wireless devices (Col 1, Line 40-52, Col 2, Line 1-23, Col 4, Line 1-34, Col 10, Line 6-33) and a wireless device discovers the presence of other Bluetooth enabled wireless device by using SDP, GAP etc. (Col 1, Line 40-52, Col 2, Line 1-23). It is evident from Hamberg's disclosure that the wireless device 100' is selected from the multiple/plurality of wireless devices included/present in the PAN/Bluetooth network.

Although it is evident from Hamberg's disclosure that one device (wireless device 100') is selected from plurality of Bluetooth enabled wireless devices, Hamberg does not explicitly disclose to select one device from plurality of devices.

Mousseau teaches to select one device from plurality of devices in a Bluetooth network (Fig. 6-8, Par 0069-0074, Par 0077).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step to select one device from plurality of devices in a Bluetooth network, as taught by Mousseau for the purpose of efficiently transferring tag from one Bluetooth enabled device to another Bluetooth enabled device.

Re claim 41, Hamberg teaches that said selecting comprises carrying out a selection between devices found to be available, based on a predetermined

user profile (user request for Tag, keeping “tag worm” activated) (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 42, Hamberg teaches to encrypt said data stream of media content before routing to said selected device (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 18-30, Col 13, Line 51-64, Col 19, Line 5-46, Col 20, Line 3-42).

Re claim 43, Hamberg teaches that said wirelessly announce is wirelessly announce an availability for accepting a routed media (Bluetooth capability announces the availability to accept a tag/routed media) and an availability for accepting a type of said routed media (tag request is the announcement to accept the multimedia content of the tag (type of routed media)) (Fig. 1, Fig. 1E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3).

Re claim 44, Hamberg does not explicitly disclose that said routing of said data stream of media content is directly from said external source to said selected device via said wireless communication link.

Mousseau teaches that said routing of said data stream of media content is directly from said external source to said selected device via said wireless communication link (Fig. 6-8, Par 0069-0074, Par 0077).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step said routing of said data stream of media content is directly from said external source to said selected device via said wireless communication link, as taught by Mousseau for the purpose of efficiently redirecting messages to another receiver in a wireless network, as taught by Mousseau (Par 0003-0004).

9. Claims 24 and 40 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Hamberg and Mousseau as applied to claim 22, 31, and 39 above respectively and further in view of Chow et al (US 6961559 B1, hereinafter referred to as Chow).

Re claims 24 and 40, Hamberg does not explicitly disclose that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing.

Chow teaches that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing (Fig. 19-20, Col 42, Line 39-67, Col 45, Line 37-67, Col 46, Line 1-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Hamberg by including the step that that said media content is a content of a mobile phone call sent while said mobile phone call is ongoing, as taught by Chow for the purpose of transferring call from one telephone to another to access voice mail message/talk with someone else, as taught by Chow (Col 42, Line 40-47).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HARUN CHOWDHURY whose telephone number is (571)270-3895. The examiner can normally be reached on Monday - Friday, 9:00AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harun Chowdhury/
Examiner, Art Unit 2473

/KWANG B YAO/

Supervisory Patent Examiner, Art Unit 2473

Notice of References Cited	Application/Control No. 14/201,870	Applicant(s)/Patent Under Reexamination SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	Art Unit 2473	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-7,340,214 B1	03-2008	Hamberg; Max	H04L12/5895	455/41.2
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

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.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

CPC- SEARCHED		
Symbol	Date	Examiner
H04L12/5895, H04L63/083, H04L29/06, H04L65/60, H04L65/1069, H04L67/04, H04L67/303, H04M3/543	7/29/2016	HC

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	335, 342, 466	7/29/2016	HC
455	41.2, 412.1, 414.1	7/29/2016	HC
719	318	7/29/2016	HC

SEARCH NOTES		
Search Notes	Date	Examiner
Conducted Inventor search	7/29/2016	HC
CPC symbol and USPC class/subclass search limited by text	7/29/2016	HC
EAST text search	7/29/2016	HC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S100	2540	(rerout$3 re-rout$3 redirect$3 retarget$3 rout$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 14:05
S101	437	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 14:07
S102	82	@py<"2004" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 14:08
S103	841	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 ("p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 15:12
S104	170	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 ("p2p" (peer near2 peer) manet "d2d") same (stream$3 multimedia video media audio music)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 15:12
S105	4	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 ("p2p" (peer near2 peer) manet "d2d") same ((stream$3 multimedia video media audio music) with (display$3 view$3 present$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 15:13
S106	84	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 ("p2p" (peer near2 peer) manet "d2d") same (display$3 view$3 present$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 15:14
S107	10098	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) with ((stream$3 multimedia video media audio music) with (display$3 view$3 present$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 16:49
S108	1990	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 ((stream$3 multimedia video media audio music) with (display$3 view$3 present$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 16:49
S109	2619	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3)	US-PGPUB;	OR	ON	2016/07/25 16:50

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		near4 ((stream$3 multimedia video media audio music) near4 (display$3 view$3 present$5))	USPAT; EPO; JPO; DERWENT			
S110	2194	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 16:51
S111	780	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) and wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 16:52
S112	72	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/25 16:52
S113	72	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/26 11:33
S114	162	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3 transfer$4) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/26 11:54
S115	0	@ad<"2003" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3 transfer$4) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/26 11:57
S116	93	@ad<"20020627" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3 transfer$4) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/26 12:00
S117	162	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3 forward$3 transfer$4) near4 (stream$3 multimedia video audio music) near4 (display$3 view$3 present$5 monitor tv) same wireless$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/26 13:22
S123	27	H04L12/5895.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:34
S124	36	455/41.2.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:35
S125	140	H04L65/1069.cpc. and (rerout$3 re-	US-	OR	ON	2016/07/29

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		rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	PGPUB; USPAT; EPO; JPO; DERWENT			18:35
S126	31	H04L65/60.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:36
S127	96	H04L29/06.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:36
S128	79	H04L67/04.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:37
S129	20	H04L67/303.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:37
S130	5	H04M3/543.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:37
S131	34	H04L63/083.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:38
S132	4	370/335.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:38
S133	1	370/342.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:38
S134	4	370/466.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:39
S135	11	455/412.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3	US-PGPUB;	OR	ON	2016/07/29 18:39

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		forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	USPAT; EPO; JPO; DERWENT			
S136	11	455/414.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:39
S137	9	719/318.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2016/07/29 18:39

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/29/2016								
	22	✓								
	23	✓								
	24	✓								
	25	✓								
	26	✓								
	27	✓								
	28	✓								
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	41	✓								
	42	✓								
	43	✓								
	44	✓								

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 10/19/2016

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
10/19/2016	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):

usptomail@ipatent.co.il

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	14/201,870	SHMUELI ET AL.	
	Examiner	Art Unit	
	HARUN CHOWDHURY	2473	

All participants (applicant, applicant's representative, PTO personnel):

(1) *HARUN CHOWDHURY*.

(2) _____.

(3) *MARTIN D. MOYNIHAN (REG. NO. 40338)*.

(4) *ROY MELZER*.

Date of Interview: *05 October 2016*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *22*.

Identification of prior art discussed: *Hamberg*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The applicant's representative and the examiner discussed the claimed invention in view of Hamberg, arguing that Hamberg discloses a data stream of media content. Applicant may amend the claim to further clarify the stream of media content..

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/KWANG B YAO/
Supervisory Patent Examiner, Art Unit 2473

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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
57810	14/201,870	March 9, 2014
First Named Inventor:	**Title:**	
Oded SHMUELI	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
   - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
   - The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
     - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
     - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
       - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
       - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/Martin D. Moynihan/	November 10, 2016
Name (Print/Typed) Martin D. Moynihan	**Practitioner Registration No.** 40338

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

☐ * Total of 1 forms are submitted.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 22-44 are in this Application. Claims 22-44 have been rejected under U.S.C § 103. Claims 1-21 have been cancelled in a previous response. Claim 23 is cancelled herewith without prejudice. Applicant added a new claim 45 based on the common definition of a media stream, see for example: https://en.wikipedia.org/wiki/Streaming_media.

Interview

Applicants thank the Examiner for the interview held on October 5th 2016.

The applicant's representative and the examiner discussed the claimed invention in view of *Hamberg*. Examiner was arguing that *Hamberg* discloses a data stream of media content. Examiner suggested that the Applicant will amend the claim to further clarify the stream of media content.

Applicants further amended independent Claims 22, 31 and 39 according to the interview. An explanation and support to the amendment is provided in the following sections of the instance response to the Office Action.

35 U.S.C. § 103 Rejections

Claims 22, 23, 25-39, and 41-44 are rejected under pre-AIA 35 U.S.C. 1 03(a) as being unpatentable over Hamberg et al (US 7340214, hereinafter referred to as *Hamberg*) in view of Mousseau et al (US 20010005864, hereinafter referred to as *Mousseau*). Claims 24 and 40 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over *Hamberg* and *Mousseau* as applied to claim 22, 31, and 39 above respectively and further in view of Chow et al (US 6961559, hereinafter referred to as *Chow*). Claim 23 is cancelled without prejudice.

Examiner bases the rejection on the argument that *Hamberg* teaches "causing a routing of said data stream of media content (tag 134) to said selected device (wireless device 1 00') via said wireless communication link (Bluetooth link) for presentation of said media content by said selected device". Applicant respectfully disagrees. *Hamberg* only teaches forwarding of user tag via a connection such as a Bluetooth connection and has nothing to do with managing the routing of media

streams, see Fig. 1, Fig. 1 E-F, Fig. 2A, Fig. 12, Col 5, Line 31-56, Col 6, Line 42-57, Col 11, Line 1-9, Col 12, Line 33-55, Col 15, Line 24-67, Col 16, Line 1-5, Col 16, Line 57-67, Col 17, Line 1-22, Col 20, Line 3-42, Col 20, Line 54-67, Col 21, line 1-3. Main claim explicitly recites how a data stream of media content is wirelessly received at a mobile device and how a wireless communication link is established with selected compatible device via a local wireless communication network for causing a routing of the data stream of media content to the selected device via the wireless communication link for presentation of the media content by said selected device. Neither *Hamberg* nor *Mousseau* teach or imply any streaming of media data and the combination of *Hamberg* in view of *Mousseau* is not suitable for streaming media content as *Hamberg* only teaches tag data (e.g. a file) transfer and not routing of media streams and *Mousseau* only teaches a selection of one device other another, see Page 6 of the pending rejection.

It should be noted, again, that the meaning that the term "streaming of media" would have to a person of ordinary skill in the art in question at the time of the invention is clear from Wikipedia, see the term "streaming": https://en.wikipedia.org/wiki/Streaming_media: "*Streaming media is multimedia that is constantly received by and presented to an end-user while being delivered by a provider.*"

In light of the interview and in order to promote the examination, Applicants amended Claim 22 as follows (underlining added by Applicants):

22. (Currently Amended) A method of routing data via a mobile apparatus, comprising:

wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a media data stream transmitted according to a streaming protocol and comprising media content selected from a group consisting of: audio content and video content;

scanning said local wireless communication network using said mobile device to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

selecting, based on a user interaction made with said mobile device and while said media data stream is streamed to said mobile device from said external source according to said streaming protocol, one of said plurality of devices;

setting up a wireless communication link with said selected compatible device via said local wireless communication network;

causing a routing of said media data stream of media content to said selected device via said wireless communication link for streaming said media data stream according to said streaming protocol for presentation of said media content by a media player of said selected device.

Basis is found, *inter alia*, in Claim 23 and in page 14, line 16- page 15, line 9 and in page 11, lines 12-23. See also page 3 lines 12-20, page 7 lines 20-21, page 9 lines 7-27, page 10 lines 9-34, page 11 lines 1-20 and page 13 lines 9-11 and 26-29.

Amended Claim 22 now clearly claims the distinct feature of routing streaming video or audio stream based on a streaming protocol and the distinct features of receiving a steaming data in a streaming protocol, identifying devices connected to the wireless network which are capable to handle the media streams, and causing a routing of said media data stream for streaming the media data stream according to a streaming protocol for presentation of the media content by a media player of the selected device.

As argued above, none of the references or the combination thereof teaches or implies the claimed limitations claimed in the amended Claim 22. Any feasible combination of the methods of *Hamberg* and *Mousseau* will not have the feature of the claimed invention of scanning the local wireless communication network using the mobile device to identify a plurality of devices, that are identified as compatible to handle the media content, where the plurality of devices are wirelessly connected to the local wireless communication network and wirelessly announce their availability for accepting a routed media via the local wireless communication network.

It should be noted that Examiner rejected Claim 23 based on the teaching of para. 35 of *Mousseau*. This paragraph only teaches sending audio or video data as email attachments and has nothing do to with the claimed invention or any process of rerouting streams.

Applicants applied the amendment to Claim 22 *mutatis mutandis* to Claims 31 and 39.

For clarity, Applicants are describing the teachings of *Hamberg* and *Mousseau* individually but are traversing the rejections with respect to the combination of these references, *supra*. That is, the Applicants are not attacking the references individually, rather addressing the combinations of references as set forth in the instant Office Action.

It is thus respectfully submitted by Applicants that amended independent Claims 22, 31 and 39 are allowable as being novel and non-obvious in view of *Hamberg* and *Mousseau*, alone or in any feasible combination.

As for Claims 23, 25-30 and 32-38:

Applicants respectfully submit that dependent Claims 23 and 25-30 are allowable at least as being dependent on allowed amended independent Claim 22, and that Claims 32-38 are allowable at least as being dependent on allowed amended independent Claim 31.

Conclusion

No Disclaimers or Disavowals

Although the present response may include amendments to the application or claims, or characterizations of claim scope or referenced art, Applicants do not concede that previously pending claims in this application are not patentable over the cited references. Rather, any amendments or characterizations are being made to expedite the issuance. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that relate to subject matter supported by the instant application, including subject matter specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this application, or any parent, child or related prosecution history should not infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the instant application.

In view of the above amendments and remarks it is respectfully submitted that the claims are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Should the Examiner have any questions or comments as to the form, content, or entry of this paper, the Examiner is requested to contact the undersigned at the telephone number below prior to mailing the next Official Action. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Any fees associated with this paper, for its entry into the record, may be charged to Deposit Account No. 50-1407.

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17, or credit any overpayment, to Deposit Account No. 50-1407.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me and any other practitioner of record under 37 CFR § 1.33 and 37 CFR § 1.34 concerning any subject matter of this application via electronic mail or instant messaging. I understand that a copy of these communications may be made of record in the application file (MPEP § 502.03).

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: November 10, 2016

Enclosed:

- After Final Pilot Program Request

In the Claims:

1-21. (Cancelled)

22. (Currently Amended) A method of routing media data ~~stream via a mobile apparatus~~, comprising:

wirelessly receiving at a mobile device, from an external source via a local wireless communication network, a media data stream transmitted according to a streaming protocol and comprising ~~of~~ media content selected from a group consisting of: audio content and video content;

scanning said local wireless communication network using said mobile device to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

selecting, based on a user interaction made with said mobile device and while said media data stream is ~~received streamed at~~ to said mobile device from said external source according to said streaming protocol, one of said plurality of devices;

setting up a wireless communication link with said selected compatible device via said local wireless communication network;

causing a routing of said media data stream of media content to said selected device via said wireless communication link for streaming said media data stream according to said streaming protocol for presentation of said media content by a media player of said selected device.

23. (Cancelled)

24. (Previously Presented) The method of claim 22, wherein said media content is a content of a mobile phone call sent while said mobile phone call is ongoing.

25. (Currently Amended) The method of claim 22, wherein said media data stream is at least one of bi-directional and multidirectional.

26. (Previously Presented) The method of claim 22, wherein said wireless communication link is a direct communication link.

27. (Previously Presented) The method of claim 22, wherein said selecting comprises displaying a menu at said mobile device to allow a user to perform said user interaction.

28. (Previously Presented) The method of claim 22, wherein said setting up is performed using data describing said selected device which is extracted from a device library of said mobile device, said data includes technical information regarding expected media formats and transmission technology specification of said selected device.

29. (Previously Presented) The method of claim 22, further comprising transmitting said media content to a plurality of copies so as to perform said routing to a number of said plurality of devices.

30. (Previously Presented) The method of claim 22, wherein said setting up comprising transforming said media content into a form that accords with a media type requirement of said selected device.

31. (Currently Amended) A mobile apparatus of routing media data ~~stream via a mobile apparatus~~, comprising:

a receiver wirelessly adapted to receive a media data stream transmitted according to a streaming protocol and comprising of media content from an external source via a local wireless communication network, said media content is selected from a group consisting of: audio content and video content;

a scouting detector adapted to scan said local wireless communication network to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

a controller adapted to select, based on a user interaction made with said mobile apparatus, one of said plurality of devices and to instruct a setting up of a

wireless communication link with said selected device via said local wireless communication network;

wherein said controller is adapted to instruct the routing of said media data stream of media content to said selected device via said wireless communication link for streaming said media data stream according to said streaming protocol for presentation of said media content by a media player of said selected device.

32. (Previously Presented) The mobile apparatus of claim 31, wherein said mobile apparatus is one of a cell phone, a handheld device, and a personal digital assistant (PDA).

33. (Currently Amended) The mobile apparatus of claim 31, further comprising a user interface associated with said scouting detector for allowing a user to select between available compatible media handling devices to reroute said media data stream thereto.

34. (Currently Amended) The mobile apparatus of claim 31, wherein said controller further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable a communication service provider to reroute said media data ~~stream~~.

35. (Previously Presented) The mobile apparatus of claim 31, wherein said controller further comprising control functionality operable to carry out said rerouting through locally available infrastructure.

36. (Currently Amended) The mobile apparatus of claim 31, wherein said media content is one of voice data, bidirectional voice data, ~~audio data,~~ bidirectional audio data, ~~video data,~~ bidirectional video data, a game session, an interactive game session, a television broadcast, and a radio broadcast~~, and text data~~.

37. (Previously Presented) The mobile apparatus of claim 31, wherein said scouting detector is operable to determine media type requirements of each of said plurality of devices.

38. (Previously Presented) The mobile apparatus of claim 31, further comprises transformer adapted to receive a copy of said media content and to transform said copy into a form that accords with a media type requirement of said selected device; wherein said controller is adapted to instruct the routing of said transformed copy.

39. (Currently Amended) A computer program product for routing media data ~~stream via a mobile apparatus~~, said computer program product comprising:

a non-transitory computer readable storage medium having stored thereon:

first program instructions executable by a processor to wirelessly receive at a mobile device, from an external source via a local wireless communication network, a media data stream transmitted according to a streaming protocol and comprising ~~of~~ media content selected from a group consisting of: audio content and video content;

second program instructions executable by the processor to scan said local wireless communication network using said mobile device to identify a plurality of devices, identified as compatible to handle said media content, said plurality of devices are wirelessly connected to said local wireless communication network and wirelessly announce an availability for accepting a routed media via said local wireless communication network;

third program instructions executable by the processor to select, based on a user interaction made with said mobile device and while said media data stream is streamed to ~~received at~~ said mobile device from said external source according to said streaming protocol, one of said plurality of devices;

fourth program instructions executable by the processor to set up a wireless communication link with said selected device via said local wireless communication network; and

fifth program instructions executable by the processor to cause a routing of said media data stream of media content to said selected device via said wireless communication link streaming said data stream of media content according to said streaming protocol for presentation of said media content by a media player of said selected device.

40. (Previously Presented) The computer program product of claim 39, wherein said media content is a content of a mobile phone call.

41. (Previously Presented) The method of claim 22, wherein said selecting comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

42. (Currently Amended) The method of claim 22, further comprising encrypting said media data stream of media content before routing to said selected device.

43. (Previously Presented) The method of claim 22, wherein said wirelessly announce is wirelessly announce an availability for accepting a routed media and an availability for accepting a type of said routed media.

44. (Currently Amended) The method of claim 22, wherein said routing of said media data stream of media content is directly from said external source to said selected device via said wireless communication link.

45. (New) The method of claim 22, wherein before said causing said media data stream is constantly received and presented by said mobile device while being delivered by said external source before said scanning is performed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

REPLY UNDER 37 CFR 1.116 - EXPEDITED PROCEDURE - TECHNOLOGY CENTER 2473

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed August 11, 2016, which response is being made on or before November 11, 2016 and for which no extension of time fees are due.

Applicants submit this response for entry into the record, in which:

Amendments to the Claims begin on page 2.
Remarks begin on page 7.

Please amend the above-identified application as follows:

Electronic Acknowledgement Receipt	
EFS ID:	27470126
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	10-NOV-2016
Filing Date:	09-MAR-2014
Time Stamp:	11:13:51
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		58710Response.pdf	279951 fcdd9b07d3539c79e604fa77bfebf90efe44e571	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	After Final Consideration Program Request	12	13
	Applicant Arguments/Remarks Made in an Amendment	7	11
	Claims	2	6
	Response After Final Action	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	279951	

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/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 14/201,870	Filing Date 03/09/2014	☐ 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 $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ 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

AMENDMENT **11/10/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $210 =	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

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
/JACQUELYN WILLIAMS/

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 11/30/2016

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
11/30/2016	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):

usptomail@ipatent.co.il

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 14/201,870	**Applicant(s)** SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	**Art Unit** 2473	**AIA (First Inventor to File) Status** No

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

THE REPLY FILED 10 November 2016 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance;

(2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See continuation sheet*. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

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

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

14. ☒ Other: PTO-2323.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: .
Claim(s) objected to: .
Claim(s) rejected: 22-44.
Claim(s) withdrawn from consideration: .

/KWANG B YAO/ Supervisory Patent Examiner, Art Unit 2473	/Harun Chowdhury/ Examiner, Art Unit 2473

IPR2024-01047
Apple EX1002 Page 308

The proposed amendment(s) including the limitations "a media data stream transmitted according to a streaming protocol and comprising media content selected from a group consisting of audio content and video content, said media data stream is streamed to said mobile device from said external source according to said streaming protocol, causing a routing of said media data stream of media content to said selected device via said wireless communication link for streaming said media data stream according to said streaming protocol for presentation of said media content by a media player of said selected device" raises new issues that require further search and/or consideration.

Applicant's request for entry into AFCP 2.0 is acknowledged, but is denied because the response cannot be reviewed and a search conducted in the limited amount of time authorized for this pilot program. Therefore, the response is being reviewed under pre-pilot practice.

IPR2024-01047
Apple EX1002 Page 309

DO NOT ENTER: /H.C./
11/21/2016

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

REPLY UNDER 37 CFR 1.116 - EXPEDITED PROCEDURE - TECHNOLOGY CENTER 2473

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed August 11, 2016, which response is being made on or before November 11, 2016 and for which no extension of time fees are due.

Applicants submit this response for entry into the record, in which:

Amendments to the Claims begin on page 2.
Remarks begin on page 7.

Please amend the above-identified application as follows:

AFCP 2.0 Decision	Application No.	Applicant(s)
	14/201,870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

This is in response to the After Final Consideration Pilot request filed 10 November 2016.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

☐ A non-broadening amendment to at least one independent claim was not submitted.

☐ A proper AFCP 2.0 request was submitted in response to the most recent final rejection.

☐ Other:

2. **Proper Request**

A. After final amendment submitted with the request will not be treated under AFCP 2.0.
The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

☒ The after final amendment will be treated under pre-pilot procedure.

B. Updated search and/or completed additional consideration.
The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

☐ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.

☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

☐ 5. Other:

Examiner Note: Please attach an interview summary when necessary as described above.

IPR2024-01047
Apple EX1002 Page 311

PTO/SB/30 (08-00)
Approved for use through 10/31/2002. 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 displays a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**14/201,870**
Filing Date	**March 9, 2014**
Examiner Name	**Harun Ur R. CHOWDHURY**
First Named Inventor	**Oded SHMUELI**
Group Art Unit	**2473**
Confirmation No.:	**4442**
Attorney Docket Number	**58710**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA.* See *Changes to Application Examination and Provisional Application Practice*, Final Rule, 65 *Fed. Reg.* 50092 (Aug. 16, 2000); Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**
   - a. ☐ Previously submitted
     - i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____ (Any unentered amendment(s) referred to above will be entered).
     - ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   - b. ☒ **Enclosed**
     - **i. ☒ Amendment/Reply**
     - ii. ☐ Affidavit(s)/Declaration(s)
     - iii. ☐ Information Disclosure Statement (IDS)
     - **iv. ☒ Other <u>One (1) Month Extension fee</u>**
     - v. ☐ Other
2. **Miscellaneous**
   - a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. §1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) **required**)
   - b. ☐ Other _____
3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.
4. ☒ **Provisional extension of time if needed**. Applicants authorize any charge of additional fees (except issue fee) that may be required in connection with this application to Deposit Account No. 50-1407.

☒ Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27

For:	*Claims after Amendment*	*Highest Claims Previously Paid*	*SMALL ENTITY* RATE	FEE	OTHER THAN A SMALL ENTITY RATE	FEE
Request for Continued Examination (RCE)			**1**	**$600.00**		**$0**
Multiple Dependent Claims			**0 x $390.00**	**$0.00**		**$0**
Total Claims*	**23**	**23**	**0 x $40.00**	**$0.00**		**$0**
Independent Claims*	**3**	**3**	**0 x $210.00**	**$0.00**		**$0**
*** (If the difference in Column 1 is less than "0", enter "0" in Column 2)**			***TOTAL***	**<u>$600.00</u>**	***TOTAL***	***<u>$0</u>***

☒ The Commissioner is hereby authorized to charge $600.00- filing fees to Deposit Account No. 50-1407. In the event additional fees are required, please charge these additional fees to Deposit Account No. 50-1407. In the event of overpayment, please credit Deposit Account No. 50-1407.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Martin D. Moynihan	*Registration No. (Attorney/Agent*	40338
Signature	**/Martin D. Moynihan/**	*Date*	**December 8, 2016**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

PETITION AND FEE FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136(a)

Sir:

(1) This is a petition for an extension of time to respond to the Final Office Action mailed **August 11, 2016** and Advisory Action mailed **November 30, 2016**, for a period of **one (1) month**.

(2) Applicant is a:
__X__ small entity
___ verified statement attached
___ verified statement filed

(3)

Extensions (months)	Fees for small entity	Fee for other than small entity
☑ **one month**	**$ 100.00**	$ 200.00
☐ two months	$ 300.00	$ 600.00
☐ three months	$ 700.00	$ 1,400.00
☐ four months	$ 1,100.00	$ 2,200.00
☐ five months	$ 1,500.00	$ 3,000.00

(4) An amendment __X__ is filed herewith
___ has been filed

(5) Please charge the extension fee and any other amount required to Deposit Account No. **50-1407**.

(6) The Commissioner is hereby authorized and requested to charge any additional fees which may be required in connection with this application or credit any overpayment to Deposit Account No. **50-1407**. This authorization and request is not limited to payment of all fees associated with this communication, including any Extension of Time fee, not covered by check or specific authorization, but is also intended to include all fees for the presentation of extra claims under 37 CFR §1.16 and all patent processing fees under 37 CFR §1.17 throughout the prosecution of the case. This blanket authorization does not include patent issue fees under 37 CFR §1.18.

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: December 8, 2016

Electronic Patent Application Fee Transmittal	
Application Number:	14201870
Filing Date:	09-Mar-2014
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Martin Dennis Moynihan
Attorney Docket Number:	58710
Filed as Small Entity	
Filing Fees for Utility under 35 USC 111(a)	

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	2251	1	100	100
Miscellaneous:				
RCE- 1st Request	2801	1	600	600
		Total in USD ($)		**700**

Electronic Acknowledgement Receipt	
EFS ID:	27730402
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	08-DEC-2016
Filing Date:	09-MAR-2014
Time Stamp:	09:33:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$700
RAM confirmation Number	120816INTEFSW00012083501407
Deposit Account	501407
Authorized User	Martin Moynihan
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		58710RCE.pdf	94292 c79618229c8e3c2baf073e649a37144b8dce7130	yes	2
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Request for Continued Examination (RCE)		2	2	
	Extension of Time		1	1	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32165 15dd642689f4320954fc09644c6bcfcc9c1c52de	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	126457		

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/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 14/201,870	Filing Date 03/09/2014	☐ 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 $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ 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

AMENDMENT **12/08/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $210 =	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

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
PARTHENIA D. MERRILL

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

67801 7590 04/26/2017

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER
CHOWDHURY, HARUN UR R

ART UNIT	PAPER NUMBER
2473	

DATE MAILED: 04/26/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	07/26/2017

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

67801 7590 04/26/2017
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	07/26/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOWDHURY, HARUN UR R	2473	370-310000

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/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form 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.
1 _____
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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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 _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 04/26/2017

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	
ART UNIT	**PAPER NUMBER**
2473	

DATE MAILED: 04/26/2017

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.

PTOL-85 (Rev. 02/11)

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OMB Clearance and PRA Burden Statement for PTOL-85 Part B

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 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, 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.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

Notice of Allowability	Application No. 14/201,870	Applicant(s) SHMUELI ET AL.	
	Examiner HARUN CHOWDHURY	Art Unit 2473	AIA (First Inventor to File) 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 *12/08/2016*.
   ☐ 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 *22 and 24-45*. 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 _____
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 _____.

/Harun Chowdhury/
Examiner, Art Unit 2473

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

REASONS FOR ALLOWANCE

2. Claims 22, 24-45 are allowed.

3. The present invention is directed to transferring media stream from a receiving device to another device. Each independent claim identifies the uniquely distinct features: regarding claims 21, 31, and 39, ""causing a routing of said media data stream of media content to said selected device via said wireless communication link for streaming said media data stream according to said streaming protocol for presentation of said media content by a media player of said selected device".

The closest prior art, Hamberg et al (US 7340214 B1), discloses to create multimedia file and transfer the file to other users. The multimedia file can be transferred by using cellular network or Bluetooth link. After creating the file, it is stored in a server and other users can access the file from the server. A user who downloaded the file from the server can send a copy of the file to another user (Fig. 1A, 1B, 2A, Col 1, Line 40-52, Col 4, Line 1-34, Col 5, Line 31-56, Col 10, Line 6-33, Col 11, Line 1-9).

Hamberg discloses to transfer multimedia file from one user to another user but does not disclose to stream the media content according to a streaming protocol to be played by a media player.

Mousseau et al (US 20010005864 A1) discloses to redirect attachment to a displayer in the vicinity of a mobile device. When a mobile device receives a

datagram (200A) indicating an attachment associated with the datagram, the mobile device then locates attachment displayer in the vicinity of the mobile device and informs the host system to send the attachment to the attachment displayer (Fig. 6, Par 0069-0074).

Mousseau discloses to send an attachment (multimedia content) directly to an attachment displayer. Mousseau does not disclose that the mobile device receives the attachment (multimedia content) and transfers the attachment (multimedia content) to another device according to a streaming protocol to be played by a media player.

Ortiz et al (US 20020058499 A1) discloses to data brokering between wireless devices and data rendering devices (DRD). A wireless device selects a data rendering device and forwards data to the selected rendering device (Abstract, Par 0046-0049, Par 0064). Ortiz does not disclose to stream the media content according to a streaming protocol to be played by a media player.

The cited prior arts of Hamberg, Mousseau, and Ortiz, either singularly or in combination, fail to anticipate or render the above features obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HARUN CHOWDHURY whose telephone number is (571)270-3895. The examiner can normally be reached on Monday - Friday, 9:00AM - 5:00PM 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, Kwang Bin Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harun Chowdhury/
Examiner, Art Unit 2473

/KWANG B YAO/
Supervisory Patent Examiner, Art Unit 2473

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	**Art Unit**
	HARUN CHOWDHURY	2473

CPC						
Symbol					**Type**	**Version**
H04L		65	/	1069	F	2013-01-01
H04L		29	/	06027	A	2013-01-01
H04M		2201	/	60	A	2013-01-01
H04M		2203	/	1091	A	2013-01-01
H04M		2203	/	2066	A	2013-01-01
H04M		2242	/	30	A	2013-01-01
H04L		67	/	303	I	2013-01-01
H04L		67	/	04	I	2013-01-01
H04M		3	/	42263	I	2013-01-01
H04M		3	/	543	I	2013-01-01
H04M		2203	/	2094	A	2013-01-01
H04L		65	/	60	I	2013-01-01
			/			
			/			
			/			

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

/HARUN CHOWDHURY/ Examiner.Art Unit 2473	04/14/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	23	
/KWANG B YAO/ Supervisory Patent Examiner.Art Unit 2473	04/15/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	22	Fig. 1

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Apple EX1002 Page 328

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	**Art Unit**
	HARUN CHOWDHURY	2473

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
370	338	H	0	4	W	4 / 00 (2009.01.01)						

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
370	335				
455	41.2	412.1			
709	231				

/HARUN CHOWDHURY/ Examiner.Art Unit 2473	04/14/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	23	
/KWANG B YAO/ Supervisory Patent Examiner.Art Unit 2473	04/15/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	22	Fig. 1

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Apple EX1002 Page 329

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	**Art Unit**
	HARUN CHOWDHURY	2473

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
x	1	x	17	16	33										
x	2	x	18	17	34										
x	3	x	19	18	35										
x	4	x	20	19	36										
x	5	x	21	20	37										
x	6	1	22	21	38										
x	7	x	23	22	39										
x	8	2	24	23	40										
x	9	3	25	9	41										
x	10	4	26	10	42										
x	11	5	27	11	43										
x	12	6	28	12	44										
x	13	7	29	13	45										
x	14	8	30												
x	15	14	31												
x	16	15	32												

/HARUN CHOWDHURY/ Examiner.Art Unit 2473	04/14/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	23	
/KWANG B YAO/ Supervisory Patent Examiner.Art Unit 2473	04/15/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	22	Fig. 1

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

CPC- SEARCHED		
Symbol	Date	Examiner
H04L12/5895, H04L29/06, H04L29/06027, H04L63/083, H04L65/60, H04L65/1069, H04L67/04, H04L67/303, H04M3/543, H04M3/42263	4/14/2017	HC

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	338, 335, 342, 466	4/14/2017	HC
455	41.2, 412.1, 414.1	4/14/2017	HC
709	231	4/14/2017	HC

SEARCH NOTES		
Search Notes	Date	Examiner
Conducted Inventor search	4/14/2017	HC
Consulted Kwang Bin Yao	4/14/2017	HC
EAST text search	4/14/2017	HC
CPC symbol and USPC class/subclass search limited by text	4/14/2017	HC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	335, 338, 342, 466	4/14/2017	HC
455	41.2, 412.1, 414.1	4/14/2017	HC
709	231	4/14/2017	HC
H04L	12/5895, 29/06, 29/06027, 63/083, 65/60, 65/1069, 67/04, 67/303	4/14/2017	HC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
H04M	3/543, 3/42263	4/14/2017	HC

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BIB DATA SHEET

CONFIRMATION NO. 4442

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/201,870	03/09/2014 RULE	370	2473	58710

APPLICANTS

INVENTORS

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat-Gan, ISRAEL;

**** CONTINUING DATA **************************

This application is a CON of 13/118,503 05/30/2011 PAT 8711866
which is a CON of 10/347,388 01/21/2003 PAT 7969990
which claims benefit of 60/398,077 07/25/2002

**** FOREIGN APPLICATIONS **************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/26/2014

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No		ISRAEL	1	~~21~~ 23	~~2~~ 3
Verified and Acknowledged	/HARUN UR R CHOWDHURY/ Examiner's Signature	Initials				

ADDRESS

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215
UNITED STATES

TITLE

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

FILING FEE RECEIVED		
850	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S179	0	H04L12/5895.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:34
S180	3	H04L63/083.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:34
S181	4	H04L29/06.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:35
S182	2	H04L65/60.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:35
S183	6	H04L65/1069.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 transfer$4 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:35
S184	0	H04L67/04.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:36
S185	0	H04L67/303.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:36
S186	0	H04M3/543.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:36
S187	0	H04M3/42263.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3)	USPAT	OR	ON	2017/04/14 12:37

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		near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.				
S188	3	H04L29/06027.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:38
S189	3	370/335.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (wireless bluetooth "p2p" "d2d" (peer adj2 peer)).clm.	USPAT	OR	ON	2017/04/14 12:38
S190	0	370/342.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:39
S191	1	455/414.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:39
S192	0	370/466.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:39
S193	3	455/41.2.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:40
S194	1	455/412.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:40
S195	3	709/231.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet).clm.	USPAT	OR	ON	2017/04/14 12:40
S197	21	370/338.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (wireless bluetooth "p2p" "d2d" (peer adj2 peer)).clm.	USPAT	OR	ON	2017/04/14 12:44

4/14/2017 1:20:31 PM
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S139	110	(rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 (stream$3 multimedia movie video media audio music) same wireless same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 16:38
S140	46	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video media audio) same bluetooth	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 16:53
S141	4131	@py<"2003" and (rerout$3 re-rout$3 redirect$3 retarget$3 transfer$4 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (replicat$3 copy$3 copy duplicat$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 16:54
S142	28	@py<"2003" and (rerout$3 re-rout$3 redirect$3 retarget$3 transfer$4 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (replicat$3 copy$3 copy duplicat$3) same (wireless bluetooth "p2p" "d2d" (peer near2 peer))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 16:55
S143	202	@py<"2008" and (shar$3 transfer$4 rerout$3) near4 (stream$3 image multimedia movie video media audio music) same ((neighbor$3 adjacent proximat$2 neighbour$3) near4 (monitor display printer (mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 17:02
S144	82	@py<"2004" and (rerout$3 re-rout$3 redirect$3 retarget$3 rout$3) near4 (stream$3 multimedia video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 17:12
S145	5	(rerout$3 re-rout$3 redirect$3 retarget$3) near4 (stream$3 multimedia video) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 17:19
S146	43	@py<"2006" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3) near4 ((phone near2 call) (ongoing near2 call) call video audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 17:25
S148	770	@py<"2008" and (rerout$3 re-rout$3	US-	OR	ON	2017/04/12

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		redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	PGPUB; USPAT; EPO; JPO; DERWENT			17:36
S149	92	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 17:36
S151	283	@py<"2008" and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 shar$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 19:30
S152	8854	@py<"2008" and (transfer$4 shar$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3 group friend)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 19:31
S153	8008	@py<"2008" and (transfer$4 forward$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3 group friend)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 19:32
S154	76	@py<"2008" and (transfer$4 forward$3) near4 (stream$3 multimedia movie video media audio music) same ((class near3 room) train$3 group friend) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet "d2d")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 19:33
S155	641	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (multimedia video content material) same ((class near3 room) training)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 22:19
S156	26	@py<"2008" and (transfer$4 divert$3 transmit$4 forward$3) near4 (multimedia video) same ((class near3 room) training) same wireless	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/12 22:19
S157	436	H04L65/1069.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 transfer$4 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 11:09
S158	181	H04L65/1069.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 transfer$4 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 11:12
S159	114	H04L65/60.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 11:16

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S160	81	H04L67/04.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 11:21
S161	98	H04L29/06.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 11:35
S162	80	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 image multimedia movie video media audio music) same ((neighbor$3 adjacent proximat$2 neighbour$3) near4 (monitor display printer (mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device)))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 12:02
S163	26	@py<"2008" and (shar$3 transfer$4) near4 (stream$3 multimedia movie video media audio music) same (ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet bluetooth) same ((mobile near3 station) ue (user near2 equipment) (mobile near2 (terminal device))) not medium	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 12:23
S164	20	H04L67/303.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/13 13:41
S165	5	H04M3/543.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:24
S166	19	H04M3/42263.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:24
S168	108	H04L29/06027.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:26
S169	25	H04L12/5895.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:28
S170	45	H04L63/083.cpc. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video	US-PGPUB; USPAT;	OR	ON	2017/04/14 12:28

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		media audio music call data) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	EPO; JPO; DERWENT			
S171	30	370/335.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (wireless bluetooth "p2p" "d2d" (peer adj2 peer))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:30
S172	1	370/342.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music call) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:31
S173	4	370/466.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:31
S174	36	455/41.2.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:32
S175	11	455/412.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:32
S176	11	455/414.1.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:32
S177	69	709/231.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (bluetooth ad-hoc adhoc (ad adj hoc) "p2p" (peer near2 peer) manet)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:33
S178	154	370/338.ccls. and (rerout$3 re-rout$3 redirect$3 retarget$3 divert$3 forward$3) near4 (stream$3 multimedia movie video media audio music) same (wireless bluetooth "p2p" "d2d" (peer adj2 peer))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2017/04/14 12:44

4/14/2017 1:20:06 PM
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Apple EX1002 Page 340

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	04/14/2017								
-	1	-								
-	2	-								
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-	5	-								
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17	34	=								
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14201870	SHMUELI ET AL.
	Examiner	Art Unit
	HARUN CHOWDHURY	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	04/14/2017								
20	37	=								
21	38	=								
22	39	=								
23	40	=								
9	41	=								
10	42	=								
11	43	=								
12	44	=								
13	45	=								

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 05/18/2017

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EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
05/18/2017	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):

usptomail@ipatent.co.il

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 14201870
Applicant : Shmueli
Filing Date : 03/09/2014
Date Mailed : 05/18/2017

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The informalities requiring correction are indicated in the attachment(s). If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to respond within the above-identified time period will result in the application being ABANDONED.

See attachment(s).

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Stephanie Chesla/
Publication Branch
Office of Data Management
(571) 272-4200

Application No. 14201870 **Drawings filed: 03/09/2014**

IDENTIFICATION OF DRAWING DEFICIENCIES

- [ ] There is a hole or the image thereof within the illustration. FIG(s)
- [ ] The illustration is penetrated or traversed by a solid or broken line that is not intended to be part of the drawing, such as a dark line caused by a flaw in the copying process. FIG(s)
- [ ] An ink stamp or the image thereof obscures part of the illustration. FIG(s)
- [ ] The drawing is marred by black smudges, obliterations, or fax/copier marks (for example, speckles or dots in a substantial portion of the drawing). FIG(s)
- [ ] Figure numbers are duplicated or missing. FIG(s)
- [ ] Drawing sheet or figure is missing. FIG(s)
- [ ] Numbers, letters, or reference characters in the drawing have been crossed out or are illegibly handwritten. FIG(s)
- [ ] The character of the lines, numbers, and letters is poor. FIG(s)
- [ ] The drawing's background shows that the original drawing was made on graph paper or other paper with a pattern or decoration. FIG(s)
- [ ] The FIG. number label is placed in a location that causes the drawing to be read upside down. FIG(s)
- [X] Data, a reference number, or part of the drawing is truncated or missing, or a lead line has no reference number. FIG(s) 1
- [ ] The drawing and/or the FIG. label contain(s) foreign language. FIG(s)
- [ ] This utility application contains a photograph of a view that is capable of being illustrated as a line drawing. FIG(s)
- [ ] A petition under 37 CFR 1.84(a)(2) to accept color drawings has been granted, but the brief description of the drawings in the specification does not contain (or has not been amended to contain) the paragraph required by 37 CFR 1.84(a)(2)(iii).
- [ ] This reissue application contains added and/or amended drawings that are not labeled as “New” or “Amended” or “Canceled” as required by 37 CFR 1.173(b)(3). FIG(s)
- [ ] This Design reissue application contains a drawing that is labeled as “Canceled” but is not surrounded by brackets, or a drawing that is surrounded by brackets but is not labeled as “Canceled.” See 37 CFR 1.173(b)(3). FIG(s)
- [ ] OTHER:
- [ ] COMMENTS:

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

67801 7590 05/18/2017
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
CHOWDHURY, HARUN UR R	

ART UNIT	PAPER NUMBER
2473	

NOTIFICATION DATE	DELIVERY MODE
05/18/2017	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):

usptomail@ipatent.co.il

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 14201870
Applicant : Shmueli
Filing Date : 03/09/2014
Date Mailed : 05/18/2017

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The informalities requiring correction are indicated in the attachment(s). If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to respond within the above-identified time period will result in the application being ABANDONED.

See attachment(s).

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Stephanie Chesla/
Publication Branch
Office of Data Management
(571) 272-4200

Application No. 14201870 **Drawings filed: 03/09/2014**

IDENTIFICATION OF DRAWING DEFICIENCIES

- [ ] There is a hole or the image thereof within the illustration. FIG(s)
- [ ] The illustration is penetrated or traversed by a solid or broken line that is not intended to be part of the drawing, such as a dark line caused by a flaw in the copying process. FIG(s)
- [ ] An ink stamp or the image thereof obscures part of the illustration. FIG(s)
- [ ] The drawing is marred by black smudges, obliterations, or fax/copier marks (for example, speckles or dots in a substantial portion of the drawing). FIG(s)
- [ ] Figure numbers are duplicated or missing. FIG(s)
- [ ] Drawing sheet or figure is missing. FIG(s)
- [ ] Numbers, letters, or reference characters in the drawing have been crossed out or are illegibly handwritten. FIG(s)
- [ ] The character of the lines, numbers, and letters is poor. FIG(s)
- [ ] The drawing's background shows that the original drawing was made on graph paper or other paper with a pattern or decoration. FIG(s)
- [ ] The FIG. number label is placed in a location that causes the drawing to be read upside down. FIG(s)
- [X] Data, a reference number, or part of the drawing is truncated or missing, or a lead line has no reference number. FIG(s) 1
- [ ] The drawing and/or the FIG. label contain(s) foreign language. FIG(s)
- [ ] This utility application contains a photograph of a view that is capable of being illustrated as a line drawing. FIG(s)
- [ ] A petition under 37 CFR 1.84(a)(2) to accept color drawings has been granted, but the brief description of the drawings in the specification does not contain (or has not been amended to contain) the paragraph required by 37 CFR 1.84(a)(2)(iii).
- [ ] This reissue application contains added and/or amended drawings that are not labeled as "New" or "Amended" or "Canceled" as required by 37 CFR 1.173(b)(3). FIG(s)
- [ ] This Design reissue application contains a drawing that is labeled as "Canceled" but is not surrounded by brackets, or a drawing that is surrounded by brackets but is not labeled as "Canceled." See 37 CFR 1.173(b)(3). FIG(s)
- [ ] OTHER:
- [ ] COMMENTS:

Electronic Acknowledgement Receipt	
EFS ID:	29334048
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	30-MAY-2017
Filing Date:	09-MAR-2014
Time Stamp:	07:03:20
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		58710RESAM.pdf	397209 054ce4655f81cd98d19891c6ee324ccccb2ac5e3	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Post Allowance Communication - Incoming	1	1
	Transmittal Letter	2	2
	Drawings-other than black and white line drawings	3	3
	Transmittal Letter	4	4
	Drawings-only black and white line drawings	5	5
	Miscellaneous Incoming Letter	6	8
Warnings:			
Information:			
	Total Files Size (in bytes):	397209	

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

Sir:

This is in response to the attached Notice to File Corrected Application Papers dated May 18, 2017, which response is being made on or before July 18, 2017.

By said Action, the drawing sheet was deemed as not meeting USPTO requirements.

By this response, Applicant is submitting one (1) Replacement Formal Drawing sheet to correct the informality noted by the Publication Branch.

Statement

The content of the replacement drawings includes no new matter.

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338

Date: May 30, 2017

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

	Oded SHMUELI et al.	§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
Filed:	March 9, 2014	§	Group Art Unit:	2473
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

LETTER TO CHIEF DRAFTSMAN

Sir:

Permission is requested to correct Figure 1 as shown in red ink on the attached photocopy.

Since the foregoing are all relative minor changes and do not include new matter, the formal drawings, which are being submitted herewith in an accompanying letter, include the above-requested changes.

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: May 30, 2017

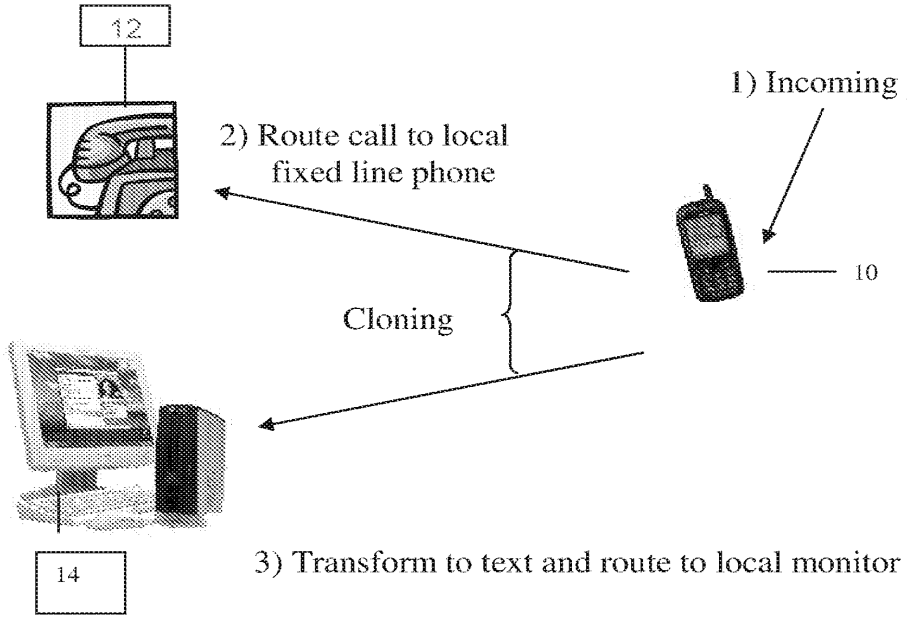

12
1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

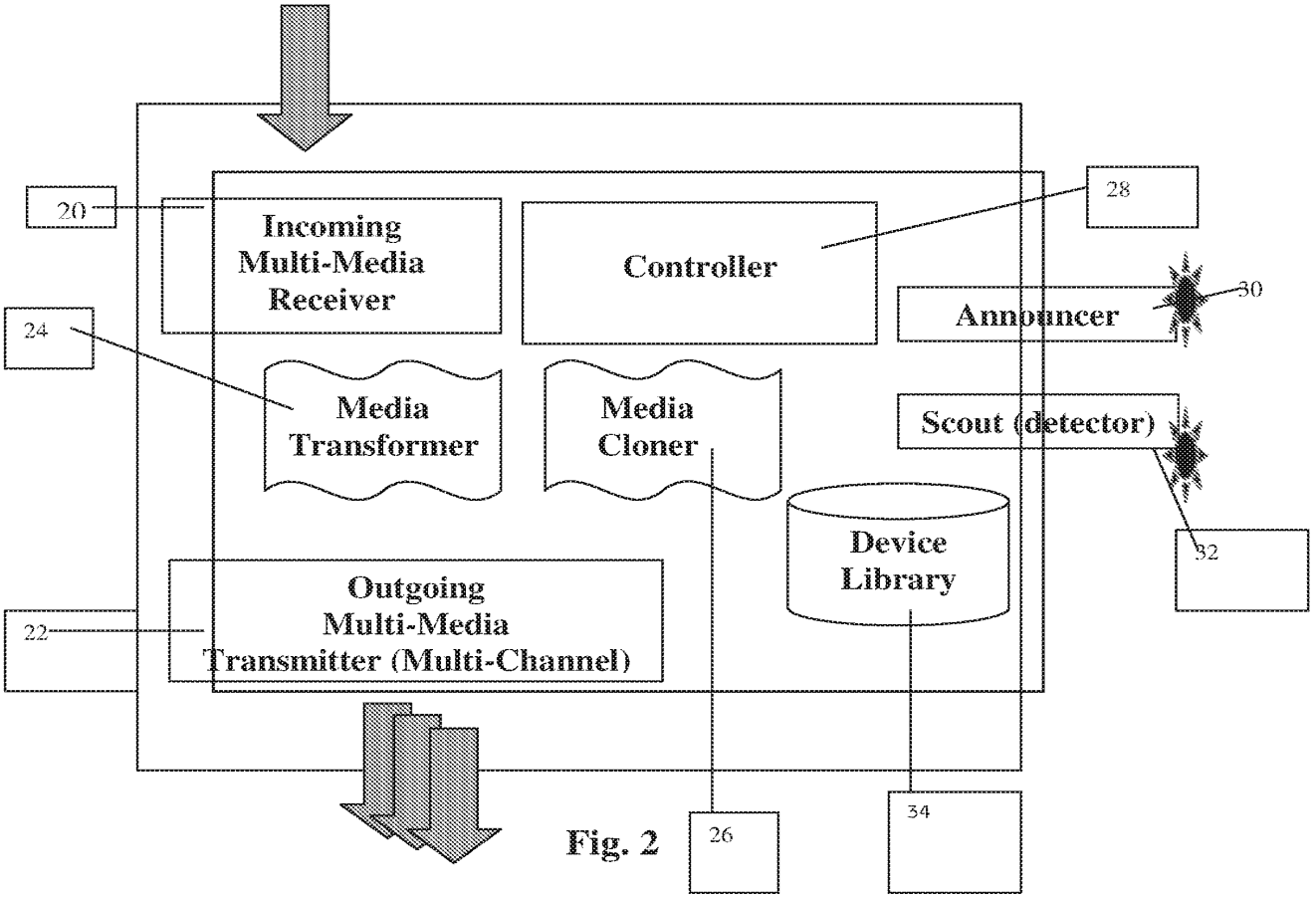

20
Incoming Multi-Media Receiver
Controller
28
Announcer
30
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
Outgoing Multi-Media Transmitter (Multi-Channel)
22
26
34

Fig. 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al.	§		
		§		
Serial No.:	14/201,870	§	Confirmation No.:	4442
		§		
Filed:	March 9, 2014	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§		
Examiner:	Harun Ur R. CHOWDHURY	§	Attorney Docket:	**58710**

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

FORMAL DRAWINGS

Sir:

Applicant encloses herewith a new set of formal drawings, one (1) sheet, for the above-identified patent application.

Statement

The content of the replacement drawings includes no new matter.

Respectfully submitted,

/Martin D. Moynihan/

Martin D. Moynihan
Registration No. 40338
Telephone: (703) 859-9634

Date: May 30, 2017

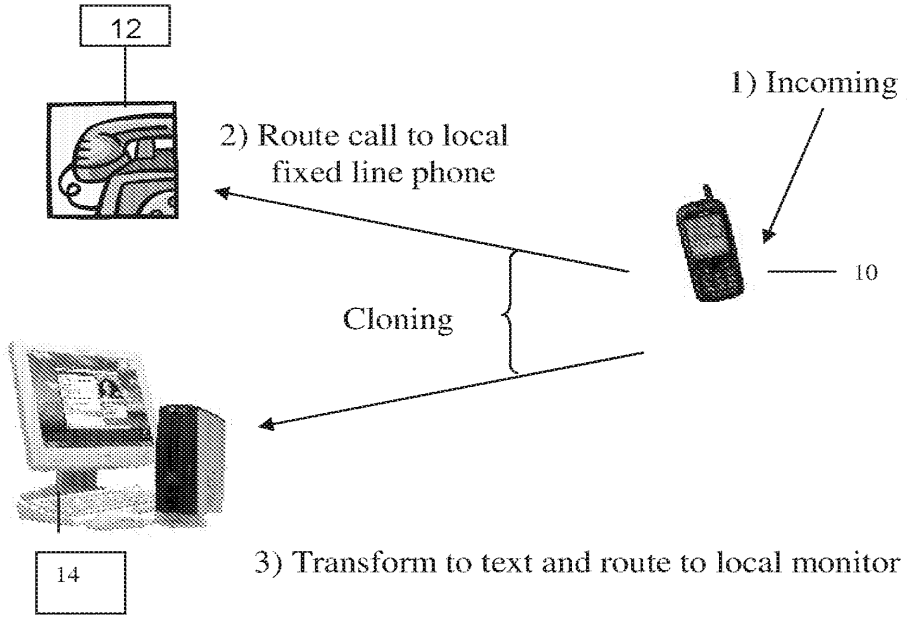

12
1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

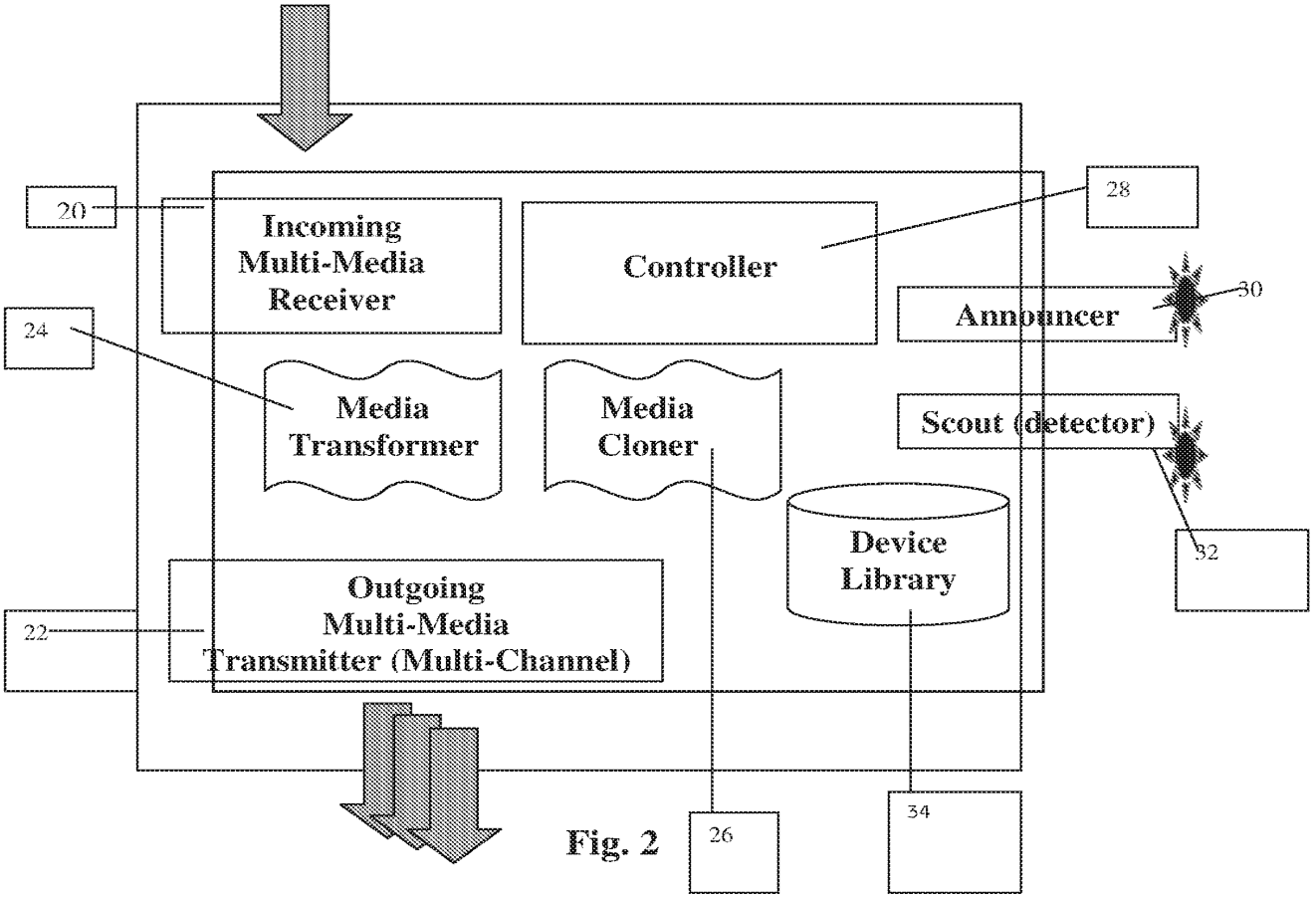

20
Incoming Multi-Media Receiver
Controller
28
Announcer
30
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
Outgoing Multi-Media Transmitter (Multi-Channel)
22
26
34

Fig. 2

DocCode – SCORE

SCORE Placeholder Sheet for IFW Content

Application Number: 14201870 Document Date: 05/30/2017

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via eDAN using the Supplemental Content tab, or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.

Form Revision Date: August 26, 2013

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

67801 7590 04/26/2017
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	03/09/2014	Oded Shmueli	58710	4442

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	07/26/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOWDHURY, HARUN UR R	2473	370-310000

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/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form 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.
1 _____
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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- [x] Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- [x] The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number **50-1407** (enclose an extra copy of this form).

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 **/Martin D. Moynihan/** Date **May 30, 2017**

Typed or printed name **Martin D. Moynihan** Registration No. **40338**

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

IPR2024-01047
Apple EX1002 Page 357

Electronic Patent Application Fee Transmittal

Application Number:	14201870
Filing Date:	09-Mar-2014
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Martin Dennis Moynihan
Attorney Docket Number:	58710

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**480**

Electronic Acknowledgement Receipt	
EFS ID:	29334359
Application Number:	14201870
International Application Number:	
Confirmation Number:	4442
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Martin Dennis Moynihan
Filer Authorized By:	
Attorney Docket Number:	58710
Receipt Date:	30-MAY-2017
Filing Date:	09-MAR-2014
Time Stamp:	09:09:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$480
RAM confirmation Number	053017INTEFSW00010166501407
Deposit Account	501407
Authorized User	Martin Moynihan
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	Issue Fee Payment (PTO-85B)	58710IssueFee.pdf	174681 3fe6d04077f3e699f7ba26436ef064f7cf4a74c9	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30248 571e87277f55b9da727449db9ce328afe95c0eb8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	204929		

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.

DocCode - SCORE

SCORE Placeholder Sheet for IFW Content

Application Number: 14201870 Document Date: 05/30/2017

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions below.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://Score.uspto.gov/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: September 30, 2013

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/201,870	07/04/2017	9699223	58710	4442

67801 7590 06/14/2017

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 263 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 Application Information Retrieval (PAIR) WEB site (http://pair.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 Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat-Gan, ISRAEL;

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.

AO 120 (Rev. 08/10)

TO:	**Mail Stop 8** **Director of the U.S. Patent and Trademark Office** **P.O. Box 1450** **Alexandria, VA 22313-1450**	**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
4:20-cv-641	8/25/2020	for the Eastern District of Texas

PLAINTIFF	DEFENDANT
S.M.R. Innovations LTD and Y.M.R. Tech LTD	Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,699,223	7/4/2017	S.M.R. Innovations LTD and Y.M.R. Tech LTD
2	10,547,648	1/28/2020	S.M.R. Innovations LTD and Y.M.R. Tech LTD
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO:	**Mail Stop 8** **Director of the U.S. Patent and Trademark Office** **P.O. Box 1450** **Alexandria, VA 22313-1450**	**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Western District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:21-cv-386	4/21/2021	for the Western District of Texas

PLAINTIFF	DEFENDANT
S.M.R Innovations LTD and Y.M.R Tech LTD	LG Electronics, Inc. and LG Electronics U.S.A., Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,699,223	7/4/2017	S.M.R Innovations LTD and Y.M.R Tech LTD
2	10,547,648	1/28/2020	S.M.R Innovations LTD and Y.M.R Tech LTD
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Western District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:21-cv-386	4/21/2021	for the Western District of Texas

PLAINTIFF	DEFENDANT
S.M.R Innovations LTD and Y.M.R Tech LTD	LG Electronics, Inc. and LG Electronics U.S.A., Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,699,223	7/4/2017	S.M.R Innovations LTD and Y.M.R Tech LTD
2	10,547,648	1/28/2020	S.M.R Innovations LTD and Y.M.R Tech LTD
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT
11/05/2021 - Voluntary Dismissal

CLERK	(BY) DEPUTY CLERK	DATE
Jeannette J. Clack	Jennifer Clark	11/05/2021

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO:	**Mail Stop 8** **Director of the U.S. Patent and Trademark Office** **P.O. Box 1450** **Alexandria, VA 22313-1450**	**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	5/2/2022	for the District of Delaware

PLAINTIFF	DEFENDANT
S.M.R Innovations LTD and Y.M.R Tech LTD	Motorola Mobility LLC

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 9,699,223 B2	7/4/2017	S.M.R Innovations LTD and Y.M.R Tech LTD
2	US 10,547,648 B2	1/28/2020	S.M.R Innovations LTD and Y.M.R Tech LTD
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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	REQUEST ID
14/201,870	03/09/2014	Oded Shmueli	58710	177547

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 11/03/2022 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

X Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Martin D. Moynihan/
Name:	Martin D. Moynihan
Registration Number:	40338