

U.S. PATENT NO. 10,425,697 CLAIM LISTING

No.	Limitation
1.0	A system for providing a first plurality of copies of a first broadcaster's live stream of digital content including first live sporting event video-based commentary from a first broadcaster client device to a first plurality of viewer client devices, and for providing a second plurality of copies of a second broadcaster's live stream of digital content including second live sporting event video-based commentary from a second broadcaster client device to a second plurality of viewer client devices, the system comprising:
1.1	A) a plurality of media sources to:
1.2	receive the first broadcaster's live stream of digital content and the second broadcaster's live stream of digital content;
1.3	provide a first copy of the first plurality of copies to a first viewer client device of the first plurality of viewer client devices via a first video Internet communication channel between the plurality of media sources and the first viewer client device of the first plurality of viewer client devices; and
1.4	provide a first copy of the second plurality of copies to a first viewer client device of the second plurality of viewer client devices via a second video Internet communication channel between the plurality of media sources and the first viewer client device of the second plurality of viewer client devices;
1.5	B) a control server to periodically retrieve, via the Internet and from an event information provider, first event information germane to a first live sporting event, wherein the first event information includes first score information for the first live sporting event; and
1.6	C) at least one socket server communicatively coupled to the control server to:
1.7	receive from the control server at least the first score information; and
1.8	transmit the first score information to at least the first viewer client device of the first plurality of viewer client devices via a first event information Internet communication channel between at least one first event socket of the at least one socket server and the first viewer client device of the first plurality of viewer devices, wherein the at least one first event socket corresponds to the first event information germane to the first live sporting event
2.0	The system of claim 1, wherein:

2.1	the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content from the first broadcaster client device, and the second live sporting event video-based commentary included in the second broadcaster's live stream of digital content from the second broadcaster client device, both relate to the first live sporting event;
2.2	in C), the at least one socket server further transmits the first score information for the first live sporting event to at least the first viewer client device of the second plurality of viewer client devices via a second event information Internet communication channel between the at least one first event socket of the at least one socket server and the first viewer client device of the second plurality of viewer devices.
3.0	The system of claim 2, wherein:
3.1	none of the first score information of the first event information is included in the first copy of the first plurality of copies of the first broadcaster's live stream of digital content provided to the first viewer client device of the first plurality of viewer client devices via the first video Internet communication channel; and
3.2	none of the first score information of the first event information is included in the first copy of the second plurality of copies of the second broadcaster's live stream of digital content provided to the first viewer client device of the second plurality of viewer client devices via the second video Internet communication channel.
4.0	The system of claim 2, wherein:
4.1	in A), the plurality of media sources:
4.2	provide a second copy of the first plurality of copies to a second viewer client device of the first plurality of viewer client devices via a third video Internet communication channel between the plurality of media sources and the second viewer client device of the first plurality of viewer client devices; and
4.3	provide a second copy of the second plurality of copies to a second viewer client device of the second plurality of viewer client devices via a fourth video Internet communication channel between the plurality of media sources and the second viewer client device of the second plurality of viewer client devices; and
4.4	in C), the at least one socket server:

4.5	transmits at least the first score information of the first event information to the second viewer client device of the first plurality of viewer client devices via a third event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the first plurality of viewer devices; and
4.6	transmits at least the first score information of the first event information to the second viewer client device of the second plurality of viewer client devices via a fourth event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the second plurality of viewer devices.
5.0	The system of claim 2, wherein in C), the at least one socket server further:
5.1	transmits and receives first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one first chat/system event Internet communication channel between at least one first chat/system event socket of the at least one socket server and the first viewer client device of the first plurality of viewer client devices, wherein the at least one first chat/system event socket corresponds to the first chat information regarding the first live sporting event video-based commentary; and
5.2	transmits and receives second chat information regarding the second live sporting event video-based commentary included in the second broadcaster's live stream of digital content via at least one second chat/system event Internet communication channel between at least one second chat/system event socket of the at least one socket server and the first viewer client device of the second plurality of viewer client devices, wherein the at least one second chat/system event socket corresponds to the second chat information regarding the second live sporting event video-based commentary.
6.0	The system of claim 5, wherein:
6.1	in A), the plurality of media sources:
6.2	provide a second copy of the first plurality of copies to a second viewer client device of the first plurality of viewer client devices via a third video Internet communication channel between the plurality of media sources and the second viewer client device of the first plurality of viewer client devices; and

6.3	provide a second copy of the second plurality of copies to a second viewer client device of the second plurality of viewer client devices via a fourth video Internet communication channel between the plurality of media sources and the second viewer client device of the second plurality of viewer client devices; and
6.4	in C), the at least one socket server:
6.5	transmits at least the first score information of the first event information to the second viewer client device of the first plurality of viewer client devices via a third event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the first plurality of viewer devices;
6.6	transmits and receives the first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one third chat/system event Internet communication channel between the at least one first chat/system event socket of the at least one socket server and the second viewer client device of the first plurality of viewer client devices;
6.7	transmits at least the first score information of the first event information to the second viewer client device of the second plurality of viewer client devices via a fourth event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the second plurality of viewer devices; and
6.8	transmits and receives the second chat information regarding the second live sporting event video-based commentary included in the second broadcaster's live stream of digital content via at least one fourth chat/system event Internet communication channel between the at least one second chat/system event socket of the at least one socket server and the second viewer client device of the second plurality of viewer client devices.
7.0	The system of claim 1, further comprising a memory system communicatively coupled to the control server, the memory system including a database, wherein in B) the control server:
7.1	retrieves from the event information provider first event data for the first live sporting event, the first event data including at least one of:
7.2	the type of the first live sporting event;
7.3	an event identifier (EventID) for the first live sporting event;

7.4	a status of the first live sporting event;
7.5	progress details for the first live sporting event;
7.6	a date and/or time of the first live sporting event; and
7.7	event participant data regarding participants in the first live sporting event;
7.8	normalizes at least the date and/or time of the first live sporting event to a reference standard time to provide a normalized date and/or time; and
7.9	stores the first event data and the normalized date and/or time in the database.
8.0	The system of claim 7, wherein in B), the control server further:
8.1	normalizes at least one of the progress details for the first live sporting event and the event participant data regarding participants in the first live sporting event; and
8.2	stores the normalized at least one of the progress details and the event participant data in the database.
9.0	The system of claim 7, wherein:
9.1	the progress details include the first score information;
9.2	the control server periodically retrieves the progress details from the event information provider and updates the first score information; and
9.3	for each update of the first score information, the control server queues an asynchronous message including the updated first score information for transmission to the at least one first event socket of the at least one socket server.
19.0	A system for providing a first plurality of copies of a first broadcaster's live stream of digital content including first video-based commentary about a first live sporting event from a first broadcaster client device to a first plurality of viewer client devices, and for providing a second plurality of copies of a second broadcaster's live stream of digital content including second video-based commentary about a second live sporting event from a second broadcaster client device to a second plurality of viewer client devices, the system comprising:
19.1	A) a plurality of media sources to:
19.2	receive the first broadcaster's live stream of digital content and the second broadcaster's live stream of digital content;
19.3	provide a first copy of the first plurality of copies to a first viewer client device of the first plurality of viewer client devices via a first Internet communication channel between the plurality of media sources and the first viewer client device of the first plurality of viewer client devices; and

19.4	provide a first copy of the second plurality of copies to a first viewer client device of the second plurality of viewer client devices via a second Internet communication channel between the plurality of media sources and the first viewer client device of the second plurality of viewer client devices;
19.5	B) a control server to periodically retrieve, via the Internet and from an event information provider, first event information germane to the first live sporting event and second event information germane to the second live sporting event; and
19.6	C) at least one socket server communicatively coupled to the control server to:
19.7	receive from the control server at least some of the first event information and at least some of the second event information, wherein:
19.8	the at least some of the first event information includes first score information for the first sporting event; and
19.9	the at least some of the second event information includes second score information for the second sporting event; and
19.10	transmit at least the first score information the at least some of the first event information to the first viewer client device of the first plurality of viewer client devices via a third Internet communication channel between at least one first event socket of the at least one socket server and the first viewer client device of the first plurality of viewer devices; and
19.11	transmit at least the second score information of the at least some of the second event information to the first viewer client device of the second plurality of viewer client devices via a fourth Internet communication channel between at least one second event socket of the at least one socket server and the first viewer client device of the second plurality of viewer devices.
20.0	The system of claim 19, wherein:
20.1	in A), the plurality of media sources:
20.2	provide a second copy of the first plurality of copies to a second viewer client device of the first plurality of viewer client devices via a third video Internet communication channel between the plurality of media sources and the second viewer client device of the first plurality of viewer client devices; and
20.3	provide a second copy of the second plurality of copies to a second viewer client device of the second plurality of viewer client devices via a fourth video Internet communication channel between the plurality of media sources and the second viewer client device of the second plurality of viewer client devices; and
20.4	in C), the at least one socket server:

20.5	transmits at least the first score information of the first event information to the second viewer client device of the first plurality of viewer client devices via a third event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the first plurality of viewer devices; and
20.6	transmits at least the second score information of the second event information to the second viewer client device of the second plurality of viewer client devices via a fourth event information Internet communication channel between the at least one second event socket of the at least one socket server and the second viewer client device of the second plurality of viewer devices.
21.0	The system of claim 19, wherein in C), the at least one socket server further:
21.1	transmits and receives first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one first chat/system event Internet communication channel between at least one first chat/system event socket of the at least one socket server and the first viewer client device of the first plurality of viewer client devices, wherein the at least one first chat/system event socket corresponds to the first chat information regarding the first live sporting event video-based commentary; and
21.2	transmits and receives second chat information regarding the second live sporting event video-based commentary included in the second broadcaster's live stream of digital content via at least one second chat/system event Internet communication channel between at least one second chat/system event socket of the at least one socket server and the first viewer client device of the second plurality of viewer client devices, wherein the at least one second chat/system event socket corresponds to the second chat information regarding the second live sporting event video-based commentary.
22.0	The system of claim 21, wherein:
22.1	in A), the plurality of media sources:
22.2	provide a second copy of the first plurality of copies to a second viewer client device of the first plurality of viewer client devices via a third video Internet communication channel between the plurality of media sources and the second viewer client device of the first plurality of viewer client devices; and
22.3	provide a second copy of the second plurality of copies to a second viewer client device of the second plurality of viewer client devices via a fourth video Internet communication channel between the plurality of media sources and the second viewer client device of the second plurality of viewer client devices; and
22.4	in C), the at least one socket server:

22.5	transmits at least the first score information of the first event information to the second viewer client device of the first plurality of viewer client devices via a third event information Internet communication channel between the at least one first event socket of the at least one socket server and the second viewer client device of the first plurality of viewer devices;
22.6	transmits and receives the first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one third chat/system event Internet communication channel between the at least one first chat/system event socket of the at least one socket server and the second viewer client device of the first plurality of viewer client devices;
22.7	transmits at least the second score information of the second event information to the second viewer client device of the second plurality of viewer client devices via a fourth event information Internet communication channel between the at least one second event socket of the at least one socket server and the second viewer client device of the second plurality of viewer devices; and
22.8	transmits and receives the second chat information regarding the second live sporting event video-based commentary included in the second broadcaster's live stream of digital content via at least one fourth chat/system event Internet communication channel between the at least one second chat/system event socket of the at least one socket server and the second viewer client device of the second plurality of viewer client devices.
23.0	A method for providing a first copy of a first broadcaster's live stream of digital content including first live sporting event video-based commentary from a first broadcaster client device to a first viewer client device, the method comprising:
23.1	A) providing the first copy to the first viewer client device via a first video communication channel between a plurality of media sources and the first viewer client device;
23.2	B) periodically retrieving, via the Internet and from an event information provider, first event information germane to a first live sporting event, wherein the first event information includes first score information for the first live sporting event; and
23.3	C) transmitting the first score information to at least the first viewer client device via a first event information communication channel between at least one first event socket of at least one socket server and the first viewer client device of the first plurality of viewer devices, wherein the at least one first event socket corresponds to the first event information germane to the first live sporting event.
24.0	The method of claim 23, further comprising:

24.1	D) transmitting and receiving first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one first chat/system event Internet communication channel between at least one first chat/system event socket of the at least one socket server and the first viewer client device of the first plurality of viewer client devices, wherein the at least one first chat/system event socket corresponds to the first chat information regarding the first live sporting event video-based commentary.
25.0	The method of claim 23, wherein B) comprises:
25.1	B1) periodically updating the first score information; and
25.2	B2) for each updating of the first score information, queueing an asynchronous message including the updated first score information for transmission to the at least one first event socket of the at least one socket server.
27.0	A system for providing a first copy of a first broadcaster's live stream of digital content including first live sporting event video-based commentary from a first broadcaster client device to a first viewer client device, the system comprising:
27.1	means for providing the first copy to the first viewer client device via a first video communication channel;
27.2	means for periodically retrieving, via the Internet and from an event information provider, first event information germane to a first live sporting event, wherein the first event information includes first score information for the first live sporting event; and
27.3	means for transmitting the first score information to at least the first viewer client device via a first event information communication channel that is different from the first video communication channel.
28.0	The system of claim 27, further comprising:
28.1	means for transmitting and receiving first chat information regarding the first live sporting event video-based commentary included in the first broadcaster's live stream of digital content via at least one first chat/system event Internet communication channel that is different from the first video communication channel and the first event information communication channel.
29.0	The system of claim 27, wherein the means for periodically retrieving includes means for updating the first score information and queueing an asynchronous message including the updated first score information for transmission on the first event information communication channel.
30.0	The system of claim 27, wherein the means for providing the first copy to the first viewer client device via a first video communication channel comprises:
30.1	an HTTP live streaming (HLS) mother server to receive a first HLS file suite representing the first broadcaster's live stream of digital content; and

30.2	a plurality of HLS child servers, communicatively coupled to the HLS mother server and an HLS content delivery network (HLS CDN), to provide the first copy to the first viewer client device via the first video communication channel between the HLS CDN and the first viewer client device, wherein the first copy is based on the first HLS file suite received by the HLS mother server.
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