

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF NEW YORK

DIGIMEDIA TECH, LLC,

Plaintiff,

v.

VIACOMCBS INC.,  
CBS INTERACTIVE INC.,  
VIACOM INTERNATIONAL INC.,  
SHOWTIME NETWORKS INC., and  
JOHN DOE CORPORATIONS 1-50,

Defendants.

CIVIL ACTION

NO. 1:21-cv-1831-JGK

**Jury Trial Demanded**

**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff DigiMedia Tech, LLC (“Plaintiff”) files its First Amended Complaint for Patent Infringement against the above-named Defendants, and states as follows:

**THE PARTIES**

1. Plaintiff is a limited liability company organized and existing under the laws of the State of Georgia, having its principal office at 44 Milton Avenue, Suite 254, Alpharetta, GA 30009. By acquiring and licensing patents, Plaintiff provides a valuable service to inventors and patent owners, and those who wish to use their inventions. The law recognizes that inventors and patent owners, for many possible reasons, are not always willing or able to develop and market products embodying their patented inventions and might otherwise prefer to sell their patent rights to others. As a result, the law allows, and has always allowed, inventors and patent owners to sell for valuable consideration the rights to their patents to others, such as Plaintiff, who may be better positioned to license those patents to individuals and entities that may wish to use (or are already using) the patented inventions.

2. Defendant VIACOMCBS INC. (“ViacomCBS”) is a corporation organized under the laws of the State of Delaware, having a principal place of business at 1515 Broadway, New York, NY 10036 (see Form 10-K – Annual Report filed by ViacomCBS Inc for period ending 2021-12-31 submitted 2022-03-24, <https://sec.report/Document/0000813828-21-000005/> (accessed June 10, 2021)). ViacomCBS may be served with process through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808. Upon information and belief, ViacomCBS sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, directly and/or indirectly through its many subsidiaries and divisions, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States. ViacomCBS and its affiliated entities are serial patent infringers, having been sued for patent infringement at least forty three (43) times over the last thirteen (13) years.

3. Defendant CBS INTERACTIVE INC. (“CBS Interactive”) is a corporation organized under the laws of the State of Delaware having a “Principal Executive Office” at 51 W. 52<sup>nd</sup> Street, New York, NY 10019. CBS Interactive may be served with process through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808. Upon information and belief, CBS Interactive sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States including by the offering of streaming programming via the cbs.com website, which is directed and available to residents of this judicial district. Specifically, CBS Interactive is the registered owner of the SSL Certificate

for the cbs.com website. CBS Interactive and its affiliated entities are serial patent infringers, having been sued for patent infringement at least forty five (45) times over the last twelve (12) years.

4. Defendant VIACOM INTERNATIONAL INC. (“Viacom International”) is a corporation organized under the laws of the State of Delaware having a principal place of business at 1515 Broadway, New York, NY 10036. Viacom International may be served with process through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808. Upon information and belief, Viacom International sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States including by the offering of streaming programming via numerous streaming platforms and websites, which offerings are directed and available to residents of this judicial district.

5. Defendant SHOWTIME NETWORKS INC. (“Showtime”) is a corporation organized under the laws of the State of Delaware having a “Principal Executive Office” at 51 W. 52<sup>nd</sup> Street, New York, NY 10019. Showtime may be served with process through its registered agent, United States Corporation Company, 251 Little Falls Drive, Wilmington, Delaware 19808. Upon information and belief, Showtime sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States. Showtime and its affiliated entities are serial patent infringers, having been sued for patent infringement at least six (6) times over the last three (3) years.

6. Defendants JOHN DOE CORPORATIONS 1-50 (“Doe Corporations”) are legal entities, currently unknown to Plaintiff, involved in the provision and/or operation of Defendants’ infringing activities, products, and/or services. Upon information and belief, the Doe Corporations sell, offer to sell, and/or use products and services throughout the United States, including in this judicial district, and introduce infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States.

### **JURISDICTION AND VENUE**

7. This Court has exclusive subject matter jurisdiction over this case pursuant to 28 U.S.C. §§ 1331 and 1338(a) on the grounds that this action arises under the Patent Laws of the United States, 35 U.S.C. § 1 et seq., including, without limitation, 35 U.S.C. §§ 271, 281, 284, and 285.

8. This Court has general and specific personal jurisdiction over Defendants, consistent with due process. Defendants are registered to do business in the State of New York. Defendants also have principal places of business in the State of New York. Further, Defendants have minimum contacts with the State of New York, and Defendants have purposefully availed themselves of the privileges of conducting business in the State of New York, including through the sale and offer for sale of the accused products and services as alleged herein throughout the State of New York and this judicial district.

9. Venue is proper in this Court as to Defendants pursuant to 28 U.S.C. § 1400(b) on the grounds that Defendants reside in this judicial district, and/or or have committed acts of infringement and have a regular and established place of business in this judicial district.

**FACTUAL BACKGROUND**

***The '532 Patent***

10. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,473,532, entitled “Method and Apparatus for Visual Lossless Image Syntactic Encoding” (“the '532 patent”), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

11. A true and correct copy of the '532 patent is attached hereto as Exhibit A. The '532 patent is incorporated herein by reference.

12. The application that became the '532 patent was filed on March 14, 2000.

13. The '532 patent issued on October 29, 2002, after a full and fair examination by the USPTO.

14. A true and correct copy of the prosecution history for the '532 patent is attached hereto as Exhibit B, and is incorporated herein by reference.

15. The '532 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

16. The elements recited in the asserted claims of the '532 patent were not well-understood, routine, or conventional when the application that became the '532 patent was filed.

17. The claims of the '532 patent are directed to technical solutions to the technical problem of providing a visually lossless video compression method and apparatus. One of the reasons this is important is for storing video in a compressed format, where the compression does not reduce the quality of the video in a visually detectable manner. Since recording video programs onto Blu-ray disks must balance the competing features of both high quality video and limited or practical video file sizes, the problem calls for technical solutions. The '532 patent discloses and claims such technical solutions.

18. For example, the '532 patent recognized that video encoding can compress the source video input in a manner that is visually lossless. The '532 patent discloses and claims a number of techniques which include defining visual perception thresholds and classifying picture elements into subclasses using the visual perception thresholds. The picture elements can be transformed according to the subclass. Consequently, the technology in the '532 patent enables both visually lossless encoding and efficient compression of recorded video.

19. Specifically, the asserted claim 6 of the '532 patent claims:

6. A method of visual lossless encoding of frames of a video signal, the method comprising steps of:

spatially and temporally separating and analyzing details of said frames;

estimating parameters of said details;

defining a visual perception threshold for each of said details in accordance with said estimated detail parameters;

classifying said frame picture details into subclasses in accordance with said visual perception thresholds and said detail parameters; and

transforming each said frame detail in accordance with its associate subclass.

20. The sequence of steps set forth in asserted claim 6 of the '532 patent provides a technical solution to the technical problem of providing a visually lossless video compression method.

21. The claimed sequence of steps set forth in asserted claim 6 constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the competing goals of video compression and visually lossless video encoding.

22. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

***The '818 Patent***

23. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,744,818 entitled “Method and Apparatus for Visual Perception Encoding” (“the '818 patent”), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

24. A true and correct copy of the '818 patent is attached hereto as Exhibit C. The '818 patent is incorporated herein by reference.

25. The application that became the '818 patent was filed on December 27, 2000.

26. The '818 patent issued on June 1, 2004, after a full and fair examination by the USPTO.

27. A true and correct copy of the prosecution history for the '818 patent is attached hereto as Exhibit D, and is incorporated herein by reference.

28. The '818 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

29. The elements recited in the asserted claims of the '818 patent were not well-understood, routine, or conventional when the application that became the '818 patent was filed.

30. The claims of the '818 patent are directed to technical solutions to the technical problem of reducing perceptual redundancy independent of other video compression techniques. One of the reasons this is important is for storing video in a compressed format, where the compression should also support subsequent viewing of the video at high quality. Since video streaming services must balance the competing features of both high-quality video and limited or

practical video file sizes, the problem calls for technical solutions. The '818 patent discloses and claims such technical solutions. For example, the '818 patent recognized that video encoding can compress the source video input with a visual perception estimator and a perception threshold. The '818 patent discloses a number of techniques which include (i) a compression dependent threshold estimator using the perception threshold and (ii) a filter for pixels using the compression dependent threshold. Consequently, the technology in the '818 patent enables smaller video file sizes for a specified level of video quality.

31. Specifically, the asserted claims 1, 2, and 5 of the '818 patent claim:

1. A video encoding system comprising:

a visual perception estimator adapted to estimate a perception threshold for a pixel of a current frame of a videostream;

an encoder adapted to encode said current frame;

a compression dependent threshold estimator adapted to estimate a compression dependent threshold for said pixel at least from said perception threshold and information from said encoder; and

a filter unit adapted to filter said pixel at least according to said compression dependent threshold.

2. A system according to claim 1 and wherein said compression dependent threshold estimator also estimates at least one parameter from the following group of parameters:

whether or not a new frame  $NwFr$  has been defined by said encoder as an I frame;

whether an  $ith$  pixel is in the foreground  $FG$  or the background  $BG$  of a picture;

whether an  $ith$  pixel forms part of an edge  $Ed$  around an object in the picture;

whether or not the  $ith$  pixel forms part of a single detail  $SD$ ;



whether or not the  $i$ th pixel is part of a group  $Gr$  of generally periodic details;

the contrast level  $L_v$  of the detail for the  $i$ th pixel;

the duration  $\tau$  of a detail within a picture;

how full said encoder is; and the distance  $DP$  of the  $i$ th pixel from the center of the frame.

5. A system according to claim 1 and wherein said filter unit is a non-linear filter.

32. The sequence of steps set forth in asserted claims of the '818 patent provide a technical solution to the technical problem of providing a visually lossless video compression method.

33. The claimed sequence of steps set forth in the asserted claims constitute patent-eligible subject matter, are not directed to an abstract idea, law of nature, or natural phenomenon, and contain one or more inventive concepts for accomplishing the competing goals of video compression and visually lossless video encoding.

34. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

### ***The '399 Patent***

35. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 7,743,399 entitled "Network-Based Service To Provide On-Demand Video Summaries Of Television Programs" ("the '399 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

36. A true and correct copy of the '399 patent is attached hereto as Exhibit E. The '399 patent is incorporated herein by reference.

37. The application that became the '399 patent was filed on April 14, 2004.

38. The '399 patent issued on June 22, 2010, after a full and fair examination by the USPTO.

39. A true and correct copy of the prosecution history for the '399 patent is attached hereto as Exhibit F, and is incorporated herein by reference.

40. The '399 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

41. The elements recited in the asserted claims of the '399 patent were not well-understood, routine, or conventional when the application that became the '399 patent was filed.

42. The claims for the '399 patent are directed to technical solutions to the technical problem of streaming video summaries and corresponding programs to client devices. One of the reasons this is important is to support subscribers selecting and viewing desired summaries and programs from many options. Since streaming services can include a large library of video programs for subscribers, the problem calls for technical solutions supporting efficient navigation through the video library. The '399 patent discloses and claims such technical solutions. For example, the '399 patent discloses (i) generating metadata files for delimiting summary segments and program segments, (ii) streaming requested summaries in a first channel, and (iii) streaming corresponding requested programs in a second channel. Consequently, the technology in the '399 patent enables video streaming services to deliver desired programs to subscribers.

43. Specifically, asserted claims 1-3, 11, and 15 of the '399 patent claim:

1. A computer-implemented method of providing summaries of programming to a recipient, the method comprising, at a network node:

dividing a received program into program segments;

summarizing and storing each program segment into a corresponding summary segment, wherein each summary segment includes audio, full-motion video, and at least one still picture;

generating metadata files for delimiting a beginning and an end of summary segments and program segments; and

upon a request from a user from a client device, supplying the summary segments in lieu of program segments, the summary segments being streamed in a first channel to the client device and the program segments being streamed in a second channel to the client device.

2. The computer-implemented method of claim 1, further comprising generating indexing information for facilitating links between the programming segments and the summary segments.

3. The computer-implemented method of claim 1, wherein the program is received via a broadband wired access link.

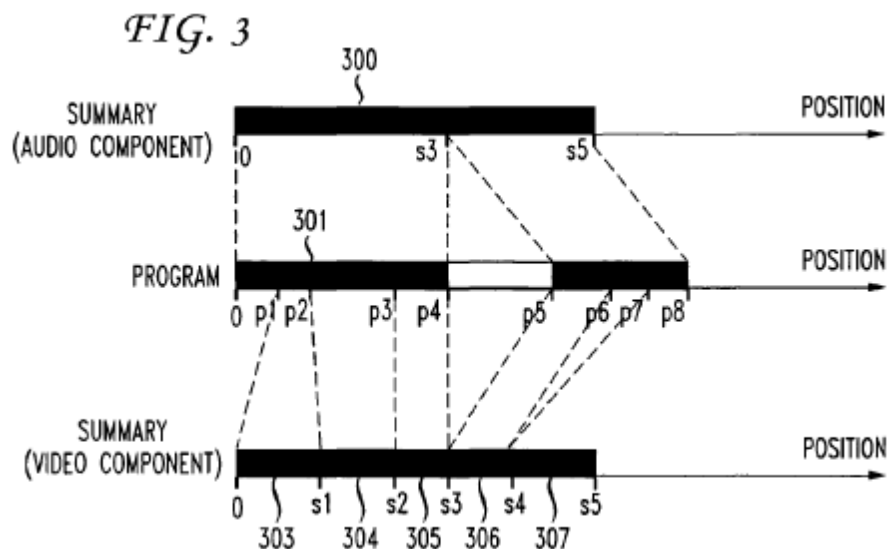
11. The computer-implemented method of claim 1, wherein storing the summary segments uses a storage medium located at a user location.

15. The computer-implemented method of claim 1, further comprising interrupting delivery of a program in response to an interrupt command delivered over an interrupt channel I.

44. The sequence of steps set forth in the asserted claims of the '399 patent provide a technical solution to the technical problem of efficiently providing users of streaming services with summaries of programming to allow users to select programs more efficiently from among the wide array of potential program offerings available.

45. The asserted independent claim of the '399 patent accomplishes this result with a specific, novel sequence of steps. First, the program is divided into program segments, and a

separate summary segment is generated that consists of audio, full-motion video, and at least one still picture, as illustrated in Fig. 3 and as described in its accompanying text in the specification:



The use of still images and full motion images may be interspersed as desired. This option is illustrated in FIG. 3 where the video summaries 303, 304, 305, 306 and 307 comprise still images and full motion images of the basic programming 301. Full motion images are interspersed with still images. An audio summary component 300 is also shown.

'399 patent, 3:67 – 4:6 (column 3, line 67 through column 4, line 6).

46. Next, metadata files are generated identifying the beginning and end of both the summary segments and the program segments. An example of a metadata file as claimed is described and illustrated in the '399 patent's written description in columns 4-6:

The relationship between program and summary segments may be established and controlled through use of a metadata file or files. In the illustrative embodiment, metadata is used to identify program and summary segments. It also establishes the flags useful for two-way and one-way connecting links for use in changing from a program to a summary or vice versa. A one way link allows a user to switch from a summary segment to a corresponding program segment or switch from a program segment to a corresponding summary segment. A two-way link allows the user to view a summary segment and switch to a corresponding program segment with an automatic return to the next

summary segment when the corresponding program segment completes. Two-way links also permit switching from a program segment to a corresponding summary segment with an automatic return to the next program segment.

The metadata file may also provide key words for each summary segment. Start and end positions for each summary segment may be established and correlated with start and stop positions for each program segment. Summary metadata may be expressed in XML (eXtensible Markup Language) or a suitable equivalent. XML is well known and need not be discussed in detail. An illustrative XML summary file may assume the following form, to select specific subject matter from, a program.

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<summary>
  <summary_id>726746425</summary_id> 1:
  <program_id>399868815</program_id>
  <links>two-way</links> <summary_segment>
  <index>0</index>
  <keywords>Federal Reserve, Interest Rates</keywords>
  <start>0</start> 2:
  <end>1000</end>
  <summary_segment>
  ████████████████████
  <program_segment>
  <index>0</index>
  <start>0</start> 2:
  <end>1000</end> <program_segment>
  ████████████████████
  </summary>
  etc.

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The foregoing illustrative metadata file indicates that there is a summary of parts of a program relating to the federal reserve and interest rates. The metadata file is generated by the content provider. It permits the system to select the desired summary information if available. Transmission of the signal in accord with the MPEG-2 standard allows the interaction with the programming file by means of this metadata file.

The sections of this metadata file are now described. First the <summary> tag indicates the start of the file. Second the <summary id> tag provides a globally unique id for this summary. Third, the <program id> tag provides a globally unique id for the corresponding program. Fourth, the <links> tag indicates that the links between the program and summary segments operate as two-way links. Fifth, the <summary segment> tag indicates the start of a summary segment definition. One metadata file can define multiple summary segments. Sixth, the <program segment> tag indicates the start of a program segment definition. One metadata file can define multiple program segments.

Each <summary segment> contains four tags. The <index> tag assigns a unique index to that segment. The segments in a summary are assigned indexes that begin at zero and increase sequentially. The <keywords> tag

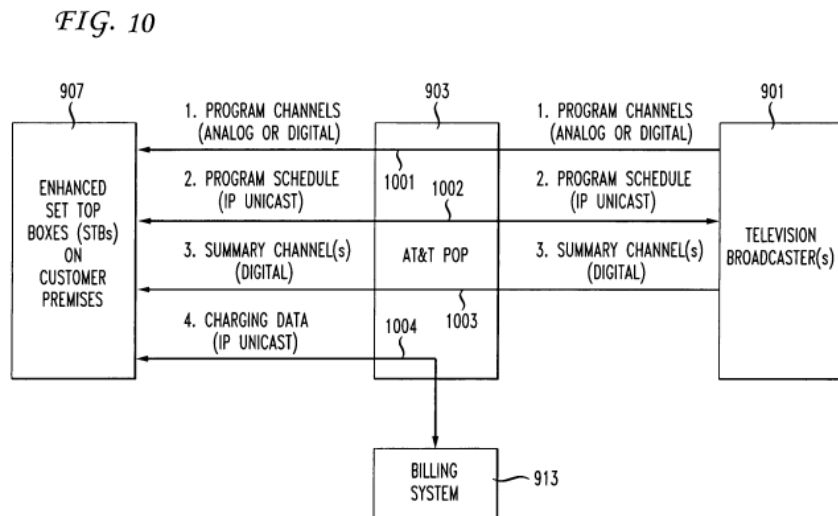
associates several keywords with this summary segment. Software can use these keywords to identify segments that are most likely to be of interest to a particular viewer. The <start> tag indicates the position in the summary that marks the beginning of this segment. Position can be specified as a frame number. The <end> tag indicates the position in the summary that marks the end of this segment.

Each <program segment> contains three tags. The <index> tag assigns a unique index to that segment. The segments in a program are assigned indexes that begin at zero and increase sequentially. The <start> tag indicates the position in the program that marks the beginning of this segment. Position can be specified as a frame number. The <end> tag indicates the position in the program that marks the end of this segment.

Each summary is sequence of summary segments. The segments are contiguous and non-overlapping. Similarly, each program is a sequence of program segments. The segments are contiguous and non-overlapping.

'399 patent, 4:55 – 6:4.

47. Finally, the summary segments are streamed in a first channel to the client device, while the program segments are streamed in a second channel to the client device, as illustrated in Figure 10 of the '399 patent:



48. The asserted dependent claims add additional steps, including generating indexing information for linking the programming and summary segments (claim 2), transmitting the

program via a broadband wired access link (claim 3), storing the summary segments in a storage medium at the user's location (claim 11), and interrupting delivery of a program in response to an interrupt command delivered over an interrupt channel (claim 15).

49. These steps set forth in the asserted claims, including their claimed sequence, constitute patent-eligible subject matter, are not directed to an abstract idea, law of nature, or natural phenomenon, and contain one or more technical, inventive concepts for accomplishing the goal of efficiently creating and providing summaries of streaming video programs to users to facilitate efficient user selection of desired programs.

50. The claimed sequence of steps set forth in the asserted claims of the '399 patent was not well-understood, routine, or conventional at the time of the invention.

### ***The '049 Patent***

51. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 8,087,049 entitled "Network-Based Service To Provide On-Demand Video Summaries Of Television Programs" ("the '049 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

52. A true and correct copy of the '049 patent is attached hereto as Exhibit G. The '049 patent is incorporated herein by reference.

53. The application that became the '049 patent was filed on June 4, 2010, and was a continuation of the '399 patent's application, meaning the '049 patent and the '399 patent share the same written description/specification.

54. The '049 patent issued on December 27, 2011, after a full and fair examination by the USPTO.

55. A true and correct copy of the prosecution history for the '049 patent is attached hereto as Exhibit H, and is incorporated herein by reference.

56. The '049 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

57. The elements recited in the asserted claims of the '049 patent were not well-understood, routine, or conventional when the application that became the '049 patent was filed.

58. The claims for the '049 patent are directed to technical solutions to the technical problem of streaming video summaries and corresponding programs to client devices. One of the reasons this is important is to support subscribers selecting and viewing desired summaries and programs from many options. Since streaming services can include a large library of video programs for subscribers, the problem calls for technical solutions supporting efficient navigation through the video library. The '049 patent discloses and claims such technical solutions. For example, the '049 patent discloses (i) generating indexing information for facilitating links between summaries and the corresponding programs, (ii) streaming requested summaries in a first channel, and (iii) streaming corresponding requested programs in a second channel. Consequently, the technology in the '049 patent enables video streaming services to deliver desired programs to subscribers.

59. Specifically, asserted claims 1, 3, 4, 10, 11, 13, and 16 of the '049 patent claim:

1. A method of generating programming summaries, the method comprising:

summarizing each program segment of a plurality of program segments of a program to yield a corresponding summary segment and storing the corresponding summary segment, wherein the corresponding summary segment comprises audio, video, and at least one image;

generating indexing information for facilitating links between each of



the plurality of program segments and the corresponding summary segment; and

in response to a user request for a requested program segment comprising a subset of the program and based on the indexing information, streaming a requested summary segment for the requested program segment in a first channel to a client device of the user and streaming the requested program segment in a second channel to the client device.

3. The method of claim 1, further comprising accessing the corresponding summary segment by setting timing marks in the program to define summary boundaries.

4. The method of claim 1, further comprising accessing by linking via a hyperlink.

10. The method of claim 1, further comprising accessing the corresponding summary segment by setting position marks in the program to define summaries.

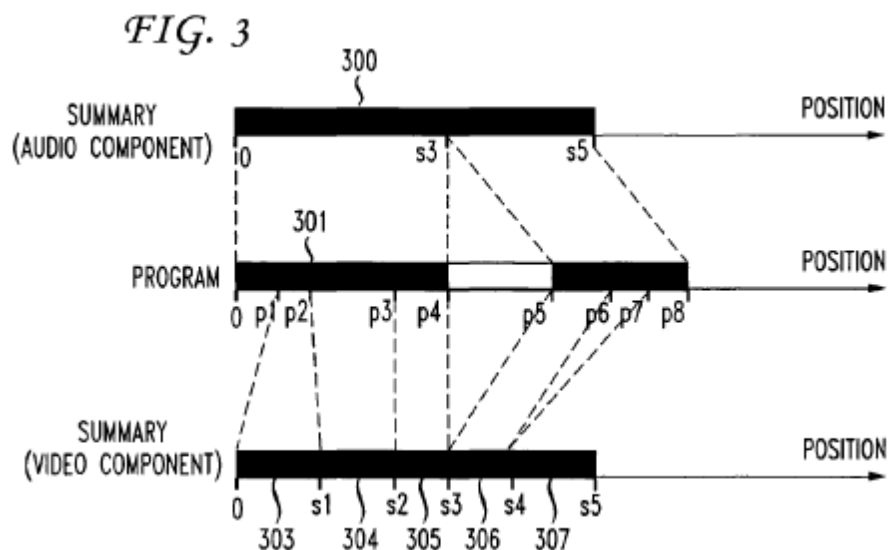
11. The method of claim 1, wherein the corresponding summary segment is stored on a storage medium at a location local to the user.

13. The method of claim 1, further comprising interrupting delivery of a program in response to an interrupt command delivered over an interrupt channel I.

16. The method of claim 1, further comprising providing programming control, via a program channel P, including a screen display responsive to an interactive control of the user.

60. The sequence of steps set forth in the asserted claims of the '049 patent provide a technical solution to the technical problem of efficiently providing users of streaming services with summaries of programming to allow users to select programs more efficiently from among the wide array of potential program offerings available.

61. The asserted independent claim of the '049 patent accomplishes this result with a specific, novel sequence of steps. First, program segments are summarized to yield a corresponding summary segment that includes audio, video, and at least one image, as illustrated in Fig. 3 and as described in its accompanying text in the specification:



The use of still images and full motion images may be interspersed as desired. This option is illustrated in FIG. 3 where the video summaries 303, 304, 305, 306 and 307 comprise still images and full motion images of the basic programming 301. Full motion images are interspersed with still images. An audio summary component 300 is also shown.

'049 patent, 4:9-15.

62. Next, indexing information is generated for facilitating links between each of the plurality of program segments and the corresponding summary segment. An example of a such indexing information is found in the '049 patent's written description in columns 4-6:

The relationship between program and summary segments may be established and controlled through use of a metadata file or files. In the illustrative embodiment, metadata is used to identify program and summary segments. It also establishes the flags useful for two-way and one-way connecting links for use in changing from a program to a summary or vice versa. A one way link allows a user to switch from a

summary segment to a corresponding program segment or switch from a program segment to a corresponding summary segment. A two-way link allows the user to view a summary segment and switch to a corresponding program segment with an automatic return to the next summary segment when the corresponding program segment completes. Two-way links also permit switching from a program segment to a corresponding summary segment with an automatic return to the next program segment.

The metadata file may also provide key words for each summary segment. Start and end positions for each summary segment may be established and correlated with start and stop positions for each program segment. Summary metadata may be expressed in XML (eXtensible Markup Language) or a suitable equivalent. XML is well known and need not be discussed in detail. An illustrative XML summary file may assume the following form, to select specific subject matter from, a program.

```
<summary>
<summary_id>726746425</summary_id>
<program_id>399868815</program_id>
<links>two-way</links> <summary_segment>
<index>0</index>
<keywords>Federal Reserve, Interest Rates</keywords>
<start>0</start>
<end>1000</end>
<summary_segment>
████████████████████
<program_segment>
<index>0</index>
<start>0</start>
<end>1000</end> <program_segment>
████████████████████
</summary>
etc.
```

The foregoing illustrative metadata file indicates that there is a summary of parts of a program relating to the federal reserve and interest rates. The metadata file is generated by the content provider. It permits the system to select the desired summary information if available. Transmission of the signal in accord with the MPEG-2 standard allows the interaction with the programming file by means of this metadata file.

The sections of this metadata file are now described. First the <summary> tag indicates the start of the file. Second the <summary id> tag provides a globally unique id for this summary. Third, the <program id> tag provides a globally unique id for the corresponding program. Fourth, the <links> tag indicates that the links between the program and summary segments operate as two-way links. Fifth, the <summary segment> tag indicates the start of a summary segment definition. One metadata file can define multiple summary segments. Sixth, the <program segment> tag indicates the start of a program segment definition. One metadata file can define multiple program segments.

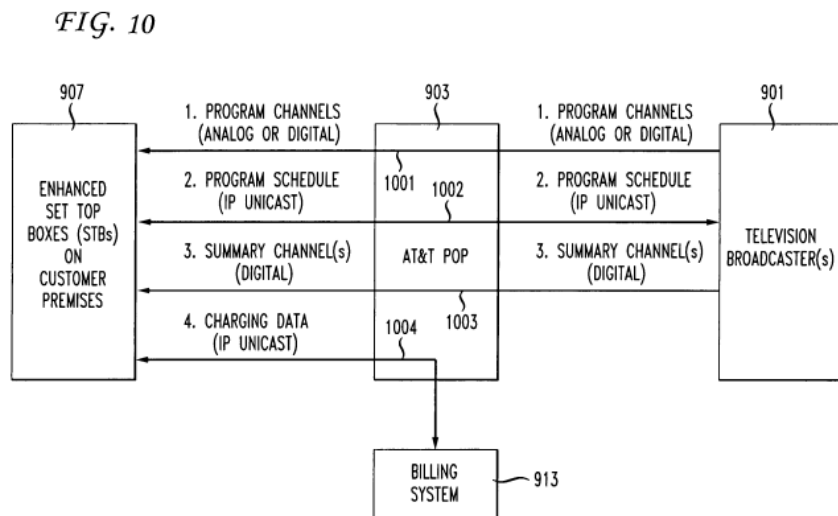
Each <summary segment> contains four tags. The <index> tag assigns a unique index to that segment. The segments in a summary are assigned indexes that begin at zero and increase sequentially. The <keywords> tag associates several keywords with this summary segment. Software can use these keywords to identify segments that are most likely to be of interest to a particular viewer. The <start> tag indicates the position in the summary that marks the beginning of this segment. Position can be specified as a frame number. The <end> tag indicates the position in the summary that marks the end of this segment.

Each <program segment> contains three tags. The <index> tag assigns a unique index to that segment. The segments in a program are assigned indexes that begin at zero and increase sequentially. The <start> tag indicates the position in the program that marks the beginning of this segment. Position can be specified as a frame number. The <end> tag indicates the position in the program that marks the end of this segment.

Each summary is sequence of summary segments. The segments are contiguous and non-overlapping. Similarly, each program is a sequence of program segments. The segments are contiguous and non-overlapping.

'049 patent, 4:55 – 6:6.

63. Finally, a summary segment is streamed to the user's client device in a first channel, and the requested program segment is streamed to the user's client device in a second channel, as illustrated in Fig. 10 of the '049 patent:



64. The asserted dependent claims add additional limitations as set forth in the asserted claims, including: accessing the corresponding summary segment by setting timing marks in the program to define summary boundaries (claim 3); accessing by linking via a hyperlink (claim 4); accessing the corresponding summary segment by setting position marks in the program to define summaries (claim 10); storing the summary segments on a storage medium at a location local to the user (claim 11); interrupting delivery of a program in response to an interrupt command delivered over an interrupt channel (claim 13); and providing programming control via a program channel including a screen display responsive to an interactive control of the user (claim 16).

65. These steps set forth in the asserted claims, including their claimed sequence, constitute patent-eligible subject matter, are not directed to an abstract idea, law of nature, or natural phenomenon, and contain one or more technical, inventive concepts for accomplishing the goal of efficiently creating and providing summaries of streaming video programs to users to facilitate efficient user selection of desired programs.

66. The claimed sequence of steps set forth in the asserted claims of the '049 patent was not well-understood, routine, or conventional at the time of the invention.

### ***The '328 Patent***

67. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 9,055,328 entitled "Network-Based Service To Provide On-Demand Video Summaries Of Television Programs" ("the '328 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

68. A true and correct copy of the '328 patent is attached hereto as Exhibit I. The '328 patent is incorporated herein by reference.

69. The application that became the '328 patent was filed on November 23, 2011, and was a continuation of both the '049 patent's application and the '399 patent's application, meaning the '328 patent, the '049 patent, and the '399 patent all share the same written description/specification.

70. The '328 patent issued on June 9, 2015, after a full and fair examination by the USPTO.

71. A true and correct copy of the prosecution history for the '328 patent is attached hereto as Exhibit J, and is incorporated herein by reference.

72. The '328 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

73. The elements recited in the asserted claims of the '328 patent were not well-understood, routine, or conventional when the application that became the '328 patent was filed.

74. The claims for the '328 patent are directed to technical solutions to the technical problem of streaming video summaries and related programs to client devices. One of the reasons this is important is to support subscribers selecting and viewing desired programs from many options. Since streaming services can include a large library of video programs for subscribers, the problem calls for technical solutions supporting efficient navigation through the video library. The '328 patent discloses and claims such technical solutions. For example, the '328 patent discloses (i) information for the display of links to navigate between a summary segment and a corresponding first program, (ii) a user profile that includes both the first program and a second program, and (iii) after the first program, selecting and displaying the second program from the user profile. Consequently, the technology in the '328 patent enables video streaming services to deliver desired programs to users.

75. Specifically, asserted claims 1-3, 6-7, and 11 of the '328 patent claim:

1. A method, comprising:

transmitting to a client device, by a computer-based device, information that facilitates a display of a link, wherein the link is selectable by a user to navigate between a summary segment of a first program and the first program, wherein the summary segment includes a summary of a particular portion of the first program, and wherein the summary segment comprises at least one of the following: a video, an audio, or an image;

in response to detecting a selection of the link by the user, the computer-based device transmitting to the client device at least a portion of the first program;

subsequent to transmitting at least the portion of the first program to the client device, the computer-based device selecting, based on a user profile that includes the first program, a second program; and

the computer-based device causing a display of at least a portion of the second program on the client device.

2. The method of claim 1, wherein the user profile includes demographic information associated with the user.

3. The method of claim 1, further comprising the computer-based device implementing at least one timing mark in the first program, wherein the at least one timing mark is indicative of a boundary of a particular summary segment.

6. The method of claim 1, wherein a boundary of the summary segment is identifiable based on at least one position marks included in the first program.

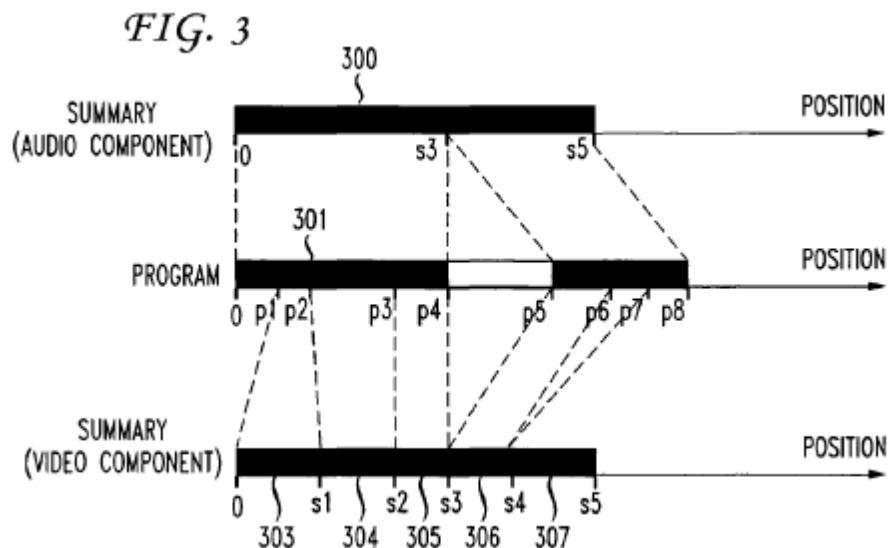
7. The method of claim 1, wherein the summary segment is stored on a storage device that is included in a communication network associated with the computer-based device.

11. The method of claim 1, further comprising the computer-based device interrupting a transmission of the first program in response to the computer-based device receiving interruption information from the

user indicating that an interrupt command has been delivered over an interrupt channel.

76. The sequence of steps set forth in the asserted claims of the '328 patent provide a technical solution to the technical problem of efficiently providing users of streaming services with summaries of programming to allow users to select programs more efficiently from among the wide array of potential program offerings available.

77. The asserted independent claim of the '328 patent accomplishes this result with a specific, novel sequence of steps. First, transmitting information that facilitates a display of a link, selectable by a user to navigate between a summary segment of a first program and the first program itself, where the summary segment includes at least one of the following: an audio, a video, or an image. This is illustrated in Fig. 3 and is described in its accompanying text in the specification:

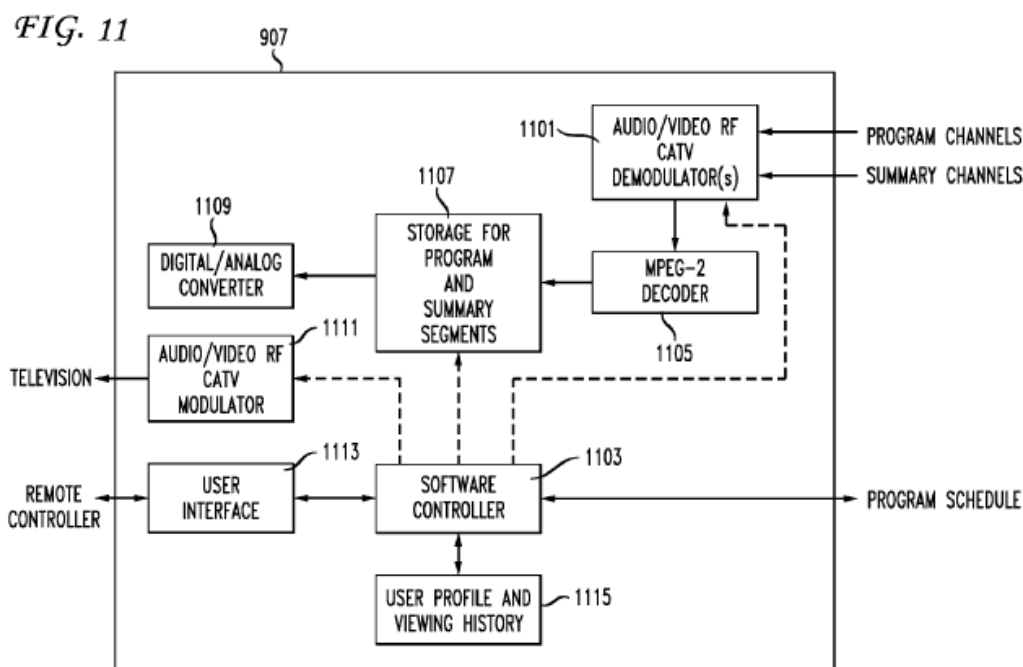


The use of still images and full motion images may be interspersed as desired. This option is illustrated in FIG. 3 where the video summaries 303, 304, 305, 306 and 307 comprise still images and full motion images of the basic programming 301. Full motion images are interspersed with still images. An audio summary component 300 is also shown.



'328 patent, 4:9-15.

78. Next, the system transmits at least a portion of the first program selected by the user as well as at least a portion of a second program selected by the system based on a user profile that includes the first program and displaying at least a portion of the second program on the client device. An example of a such indexing information is illustrated and described in '328 patent's Figure 11 and its accompanying written description:



The user/recipient exercises control of program summary selection by input to a user interface 1113 which commands are coupled to the software controller 1103. Commands of the software controller 1103 are coupled to control the Modulator 1111, the storage element 1107 and the Demodulator 1101. *A user Profile and Viewing history 1115 input is also connected the Software controller 1103.* Its input allows automatic selection of programming material to suit viewer desires and preferences. It may base these selections of stored demographic and prior selected subject matter. The software controller uses this information to self decide which summaries to store in order to effectively utilize the storage capacity of the storage medium 1107. The user may transmit commands via the user interface 1113 to view or delete stored programs and summaries in the storage medium 1107. Control by the user may be

exercised by using dialog boxes that are displayed on the screen of the receiver. Examples of dialog displays are shown in the FIGS. 7 and 8. Various types of dialog boxes are discussed below in the description of the controlling flow process of the software controller. The user may communicate with the interface by a remote controller.

In systems xDSL, for video delivery (FIG. 12), the STB is replaced by a Video Summary Server (VSS) 1203 included in the DSL network. The programming is supplied to the user from the VSS 1203, via a POP 1205 to a modem 1207, via a xDSL Access Link 1211, to the customer premises 1209. The VSS 1203 has capabilities and processes similar to that of the STB and can autonomously decide which summaries to receive and store based on a user profile and past usage history stored in the VSS. A billing system 1213 is connected to the VSS via the POP 1205. The VSS may be integrated within the POP if desired or be embodied as a separate unit within the network.

'328 patent, 7:31-63 (emphasis added).

79. The asserted dependent claims add additional limitations as set forth in the asserted claims, such as: including demographic information associated with the user in the user profile (claim 2); implementing at least one timing mark in the first program indicative of a boundary of a particular summary segment (claim 3); making a boundary of the summary segment identifiable based on at least one position mark included in the first program (claim 6); storing the summary segment on a storage device that is included in a communication network associated with the computer-based device (claim 7); and the computer-based device interrupting a transmission of the first program in response to receiving interruption information from the user indicating that an interrupt command has been delivered over an interrupt channel (claim 11).

80. These steps and limitations set forth in the asserted claims, including their claimed sequence, constitute patent-eligible subject matter, are not directed to an abstract idea, law of nature, or natural phenomenon, and contain one or more technical, inventive concepts for

accomplishing the goal of efficiently creating and providing summaries of streaming video programs to users to facilitate efficient user selection of desired programs.

81. The claimed sequence of steps set forth in the asserted claims of the '049 patent was not well-understood, routine, or conventional at the time of the invention.

***The '980 Patent***

82. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 8,160,980 entitled "Information System Based on Time, Space and Relevance" ("the '980 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

83. A true and correct copy of the '980 patent is attached hereto as Exhibit K. The '980 patent is incorporated herein by reference.

84. The application that became the '980 patent was filed on July 11, 2008.

85. The '980 patent issued on April 17, 2012, after a full and fair examination by the USPTO.

86. A true and correct copy of the prosecution history for the '980 patent is attached hereto as Exhibit L, and is incorporated herein by reference.

87. The '980 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

88. The elements recited in the asserted claims of the '980 patent were not well-understood, routine, or conventional when the application that became the '980 patent was filed.

89. The claims for the '980 patent are directed to technical solutions to the technical problems of both (i) reducing the wait time between requesting common, everyday information and displaying such information to a user and (ii) intelligently generating suggested content for

the user from the potentially extensive information based on a user profile. The claimed invention consists of a new concept, function, and format of delivery that provides a level of ease in accessing common information that prior art systems could not provide, including by providing a proxy that handles the collection and parsing of data, a server that gathers usage data from the client, a data mining cluster that allows for user profiling and time, space and relevance analysis, and a set of channels which are periodically updated and upon which automatic suggestions are given based on the user profile.

90. Specifically, asserted claims 1 and 4 of the '980 claim:

1. An information system based on time, space and relevance, said system comprising: a client that displays information in a user-friendly manner; a proxy that handles the collection and parsing of data; a server that gathers usage data from the client; a data mining cluster that allows for user profiling and time, space and relevance analysis; a set of information channels, which are periodically updated, and upon which automatic suggestions are given based on a user profile.

4. The system according to claim 1, wherein the data handled by the proxy is in extensible markup language (XML) format.

91. The system of asserted claim 1 provides a technical solution to the technical problem of quickly and efficiently providing common information to users. For example, in one embodiment the “system relies on a local client and a proxy, which can be fully located on the client itself, or rather on a separate server. Basic data such as weather forecasts, temperature, news etc. can be displayed to the user. By the user's choice of display, a profile can be constructed which suggests to the user alternative channels that match the user's profile but not the user's current selection” ('980 patent 1:60-67).

92. The specification of the '980 patent goes on to explain:

The system is a quality of life solution developed in view of residential housing complexes, for supplying information based on time, space and

relevance therein. The system is made up of several interdependent subsystems, the client and the supporting infrastructure. The client includes a user-friendly interface and a proxy. The user interface is based in a touch screen placed inside the home to provide quick and easy access to a range of services including the information listed in the former paragraph, and also other functions such as digital photo frame. The proxy pre-fetches information for rapid access. The information provided to the user is based on the user's location and profile. Information is based in channels catalogued in a directory with levels of information and related-location. The usage of the system determines the suggestion of new services to the user.

The supporting infrastructure involves a database collecting information related to the users' usage of the system, a web portal for system administration, and a statistics analyzer to study the information and perform channel suggestions for each user. Additionally, the server can also pre-fetch client information, allowing thin clients with reduced processing power to be used within the proposed system. The database allows analysis of users' usage and to perform profiles leading to suggesting information channels that best fit their profiles.

A portal for system administration is also included allowing the addition, modification or removal of services to/from the system, along with system related parameters, emergency contacts, and location-based events relevant to the user.

The proxy module requests extensible markup language (XML)-based services and converts the provided information to the system format. This allows for seamless integration of different content providers for different information channels. The proxy also registers users' preferences, performs updates of the application and sends statistics to the database. In case of thin clients, the content can be pre-fetched into a server module, named a Content Server, and afterwards requested by the thin client.

The content within the proxy is time, location and user tagged. Information in the information channel is time tagged; the last information retrieved is the most relevant for the moment. When applied, the proxy is also able to fetch information within an information channel related to the client location. Configuration files are used to select the correct parameters to select relevant information within the XML-based service.

Besides XML-based information, the system is also able to fetch and navigate within maps to visualize location based content. The location-based content appears through the usage of a collection of layers that the user can select based in his or her interests.

The system also incorporates automatic updates to seamlessly integrate new functionalities during the course of the system life cycle. Periodically, the proxy checks the web administration portal for updates and system-related information according to the functionalities integrated within the system.

Statistics are collected within the user interface and sent to the proxy. By this tiered process, the system guarantees that statistical information is not lost due to network failure.

The proxy also integrates contacts, to-do lists and calendar functionalities.

For different processing loads, the proxy may reside entirely on the client, or run partially on a server.

The client has a hierarchical way to access information through different depths of information also reflected in Catalogue Directory stored within the Web Administration Portal. In the first information level, the user can find, for example access to information, services, SOS and Maintenance functionalities. SOS allows for fast access to emergency contacts, and maintenance allows for system customization, namely related location, approval of system services suggestions, themes customization, user identification and screensaver parameters.

Location based information is customized through introduction of the user's location-based reference, namely a landline phone number, a zip code or selection of district, municipality and parish. Moreover, when the screensaver is customized, the system automatically updates media content that will be shown, through the usage of personalized media content service. Upon user's approval of new information channels to be added to the client, the interface is automatically updated to incorporate the suggestions.

For statistical usage, each interaction between the user and the interface is reported to the proxy as an event.

The architecture of the user also uses XML to seamlessly configure the interface and supply relevant information within the interface. This allows for a fast modification of the interface when messages within the platform need to be accommodated.

The Database stores statistics (active/inactive clients, services unavailability, errors, etc).

The database stores users' registrations.

The Web Administration Portal enables addition, modification and removal of new services to be fetched by the proxy and incorporated within the user's interface.

By default, a set of services is integrated within the interface. Afterwards, based in the user's usage of the system further suggestions are performed by the system to the client and submitted for his or her approval.

Emergency contacts and relevant events are also inserted within the Web Administration Portal in order to be fetched by the proxy and shown within the user interface.

Administration statistics are also visualized within the web administration portal.

In the Web Administration Portal, along with the addition, modification and removal of services, the administrator is also able to catalogue each service in a directory, named Catalogue Directory, with levels of information, information related time, user's reference and location-related information. The Catalogue Directory is used within the Statistics Analyzer to suggest the information channels that best fit the user's profile.

Events performed by the user and stored within the database are analyzed. After analysis, new service suggestions for each user are made and stored within the database for future proxy retrieval.

The process by which the user profile is built and suggestions are made is hereinafter described:

The organization of information in each information channel ("channel") shall be executed based on Interaction Time in each information level. Most used items shall be displayed in greater focus, causing the remaining items to be in lesser focus.

E.g., if Economy News are the most accessed in the News Channel then such item will appear in greater focus than the Neighborhood News, as well as the remainder.

The update of the channel disposition shall be done by a content server when the application is updated.

In the Intelligent Suggestions Channel there are suggestions of content according to the user's profile. The user's profile is defined based on every click of the user in the channels.

The Intelligent Suggestions Channel is defined by the following process:

#### 1—Previous Information Cataloguing

All information related to the user, channels and associated hyperlinks is categorized in a hierarchical way.

The user have access to several categories or associated category hierarchy. Geography is a good example. E.g. a user in “Lisbon”, shall implicitly be under “Portugal”, which on its hand is under “Europe”.

The categorization of the channels and associated hyperlinks can be exemplified again by the News Channel. The user can click on “News” and then click on one of the sub-level, which for example can include “Economics” and “International”.

Categorization shall also employ time variables, such as the day of the week on which the click occurred (1-7), if it is a working day, weekend or holiday. It will also employ the date on which the click took place, decomposing the date in the categories “year”, “month”, “day”, “hour” and “minute”.

#### 2—User Profile Definition

The user profile is obtained resorting to Data Mining Clustering Techniques applied to the interaction records and their categories. Clustering is the partitioning of a data set into subsets (clusters), so that the data in each subset is similar within a parameterized distance. Each cluster that is obtained shall stand for a user profile.

As an example, consider a list of records from 3 users whose identifiers (ID) are 174, 175 and 176. The first record in FIG. 4 is from user 175 and was recorded at Jan. 1, 2007 at 10:12 in the path “News”→“Economics”→“Microeconomics”. This hierarchy is represented by the columns “Pag. Level 1”=1=“News”, “Pag. Level 2”=2=“Economics”, and “Pag. Level 3”=1=“Microeconomics”.

The geographic location of the user is represented in a hierarchical way by “User Space 1”=“Africa”, “User Space 2”=“Angola”, “User Space 3”=“Luanda”. When possible, the information in the channel the user accessed is also geographically categorized; in this example it is done by “Content Space 1”=“Africa”, “Content Space 2”=“Angola”, “Content Space 3”=“Luanda”.

#### 3—Intelligent Suggestions Channel



After defining the Cluster (profile) to which the user belongs, the channels to be suggested to the user are determined by analysis of all the “Pag. Level” categories and Interaction Time.

For each channel path in the cluster a sequence of probabilities is defined in regard to the user being likely to go full depth on a path or not. This allows for a prediction of the probability of the user following a determined hyperlink.

The set of paths for final hyperlinks in a cluster can be represented via a hypergraph. Each cluster record being a hyperedge of the hypergraph. A hypergraph  $H=(V,E)$  is a set of vertexes  $V$  and a set of hyperedges  $E$ , representing a graph extension in which each edge can connect to more than two vertexes.

For example, if  $\{p1=“News”, p2=“Economics”, p3 “Microeconomics”\}$  is a record in the cluster, then the hypergraph will include the hyperedge which connects  $p1$  to  $p2$  and  $p3$ . Next, a determined weight will be linked to each hyperedge, calculated from the Page Levels probability, and weighted with Interaction Time.

Finally, to determine the suggestion to be submitted to the user, first the cluster to which the user belongs is identified and then the hyperlink (hyperedge) with the greatest relevance (weight) is suggested. If this hyperlink was already one of the most visited by the user, then the next most relevant hyperlink is selected until it is not one of the most relevant to the user.

Suppose that the bold records in FIG. 4 form a cluster. In order to determine the weights, we first calculate the probability of each hyperedge in the cluster and then multiply it by the average of its interaction times, as presented in FIG. 5.

The hyperedge with higher weight is the suggestion to the user.

In this example, the hyperlink suggested to the user is 2-3-1.

The specific element that determines geo-referenced information may vary from provider to provider. For instance, a good implementation can be achieved through zone codes in some areas. The method by which location is provided can vary.

The exemplary embodiments of the present invention, including the processes described above, can be written as computer programs and can be implemented in general-use digital computers that execute the programs using a computer readable recording medium and other types of

transmission media. Examples of the computer readable recording medium include magnetic storage media (e.g., ROM, floppy disks, hard disks, etc.), and optical recording media (e.g., CD-ROMs, or DVDs). Other types of transmission media can include carrier waves (e.g., transmission through the Internet).

The foregoing embodiments are merely exemplary and are not to be construed as limiting the present invention. The present teaching can be readily applied to other types of apparatuses.

'980 patent, 2:30-5:59.

93. Figure 4 of the '980 patent, described in the passage above, shows:

Year	Month	Day	Hour	Minutes	Useid	Pag. Level 1	Pag. Level 2	Pag. Level 3	Interaction Time	User Space 1	User Space 2	User Space 3	Content Space 1	Content Space 2	Content Space 3
2007	1	1	10	12	175	1	2	1	1	Africa	Angola	Luanda	Africa	Angola	Luanda
2007	1	1	15	10	176	1	2	3	2	Europe	England	London	Europe	England	London
2007	1	2	16	0	174	2	0	0	1	Europe	Portugal	Lisbon	Europe	Portugal	Lisbon
2007	3	10	11	5	176	2	3	0	1	Europe	England	London			
2007	3	10	16	50	174	2	3	1	3	Europe	Portugal	Lisbon	Europe	Portugal	Lisbon
2007	2	15	20	41	175	2	3	1	2	Africa	Angola	Luanda			
2007	3	10	12	15	176	2	3	1	2	Europe	Portugal	Lisbon	Europe	England	London
2007	4	5	13	10	175	2	3	3	3	Europe	Portugal	Porto			
2007	4	10	12	0	176	2	3	3	1	Europe	Portugal	Lisbon			
2007	3	10	17	15	174	2	3	4	2	Europe	Portugal	Lisbon	Europe	Portugal	Lisbon
2007	3	10	17	20	174	2	3	5	3	Europe	Portugal	Lisbon			
2007	4	5	13	12	175	3	3	2	1	Europe	England	London	Europe	England	London

Figure 4

94. Figure 5 of the '980 patent, described in the passage above, shows:

Pag. Level 1	Pag. Level 2	Pag. Level 3	Probability	average interaction time	Weight
2	3	0	10%	1	10%
2	3	1	30%	2.33	70%
3	3	2	1%	1	1%
2	3	3	20%	2	40%
2	3	4	10%	2	20%
2	3	5	10%	3	30%

Figure 5

95. This combination of functional components and limitations set forth in the asserted claims constitute patent-eligible subject matter, are not directed to an abstract idea, law of nature, or natural phenomenon, and contain one or more technical, inventive concepts for accomplishing the goal of quickly and efficiently providing common information to users

without unnecessary delay, and providing suggested additional information based on a user's profile.

96. The combination of functional components and limitations set forth in the asserted claims of the '980 patent was not well-understood, routine, or conventional at the time of the invention.

### ***Defendants and Their Infringing Streaming Platforms***

97. According to the ViacomCBS website, "ViacomCBS Streaming, a division of ViacomCBS, Inc., oversees the company's streaming technology and is comprised of world-renowned direct-to-consumer services across free, premium and pay including, Pluto TV, the leading free streaming television service in America with 250+ live and original channels, and Paramount+, a subscription service that combines breaking news, live sports, and premium entertainment. The ViacomCBS Streaming ecosystem also includes award-winning news services such as CBSN, CBS News'24/7 digital streaming news service; CBS Sports HQ, the 24/7 streaming sports network; and eT Live, a free 24/7 direct-to-consumer streaming network dedicated to all things entertainment." See <https://www.viacomcbs.com/brand/viacomcbs-streaming> (accessed June 9, 2020), attached as Exhibit M.

98. The ViacomCBS website goes on to specifically identify its "Featured Brands" as "Paramount+", "Pluto TV", "CBS Sports HQ", "CBSN", and "ET Live." See *id.*

99. ViacomCBS claims ownership of the content of the cbs.com, viacomcbs.com, paramountplus.com, by placing a copyright notice on each of these websites stating:  
"© ViacomCBS Inc."

100. ViacomCBS's most recent annual report to the Securities and Exchange Commission lists more than 23 pages subsidiaries (*see* Exhibit N). ViacomCBS's list of subsidiaries does not include "ViacomCBS Streaming."

101. Upon information and belief, ViacomCBS Streaming is not a separate legal entity and instead is a division and brand used by ViacomCBS to oversee and operate all of ViacomCBS's many streaming platforms, whether offered directly by ViacomCBS or indirectly through subsidiaries.

102. Undersigned counsel for Plaintiff specifically requested that counsel for ViacomCBS assist in identifying the appropriate legal entities operating ViacomCBS's many streaming platforms if ViacomCBS was not a proper party as Defendants' counsel asserted, but without providing any supporting documentation. Rather than cooperate in identifying the proper legal entities offering the accused products and services given the apparently large and multiple number of changes to ViacomCBS's internal corporate structure in recent months and years, Defendants' counsel refused.

103. By refusing to cooperate in identifying the proper legal entities offering the accused products and services in this case, Defendants appear to be attempting to hide the identities of the legal entities responsible for the infringing activity at issue in this case.

104. ViacomCBS, through its ViacomCBS Streaming division and/or through various subsidiaries that it operates and oversees including, but not limited to, CBS Interactive, Viacom International, and Showtime, operates numerous streaming platforms and related businesses that infringe Plaintiff's patents.

105. CBS Interactive is the registered owner of the digital secure socket layer ("SSL") certificate for the cbs.com and paramountplus.com domains and websites (*see* Exhibit O).

106. Upon information and belief, CBS Interactive, in coordination with ViacomCBS, operates the streaming services offered through the cbs.com and paramountplus.com websites and related platforms.

107. CBS Interactive is a subsidiary of ViacomCBS.

108. Viacom International is the registered owner of the digital secure socket layer (“SSL”) certificate for numerous ViacomCBS domains and websites, including bet.com, cmt.com, mtv.com, nick.com, nickjr.com, paramountnetwork.com, tvland.com, vh1.com, viacom.com, among numerous others (*see* Exhibit P).

109. Upon information and belief, Viacom International, in coordination with ViacomCBS, operates the streaming services offered through bet.com, cmt.com, mtv.com, nick.com, nickjr.com, paramountnetwork.com, tvland.com, vh1.com, viacom.com, among numerous others.

110. Viacom International is a subsidiary of ViacomCBS.

111. Showtime, in coordination with ViacomCBS, operates the Showtime Networks streaming service, and is a subsidiary of ViacomCBS.

112. Plaintiff first contacted Showtime on or about May 27, 2020, about the possibility of licensing Plaintiff’s portfolio of more than 100 patents, but Showtime did not respond to that correspondence.

113. Plaintiff again contacted Showtime on or about August 7, 2020, about licensing its patent portfolio, and provided detailed preliminary claim charts showing infringement of the ’532 patent, the ’818 patent, the ’399 patent, and the ’049 patent.

114. Showtime responded on or about September 16, 2020, denying infringement of the charted patents.

115. On December 2, 2020, Plaintiff responded to Showtime's correspondence and provided additional information further showing infringement of the charted patents.

116. Despite additional communications between Plaintiff's and Showtime's representatives, the parties were unable to agree to a license for Plaintiff's patent portfolio. This lawsuit followed.

117. All Defendants, individually, collectively, separately, and/or in some combination, have infringed and continue to infringe DigiMedia's patents as set forth below.

**COUNT I – INFRINGEMENT OF THE '532 PATENT**

118. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

119. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '532 patent.

120. For example, Defendants infringe at least claim 6 of the '532 patent, either literally or under the doctrine of equivalents, in connection with Defendants' AVC Video Encoding, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibits Q and R, and incorporated herein by reference.

121. Upon information and belief, one or more of each Defendant's products utilize AVC Video Encoding or similar encoding systems that infringe claim 6 of the '532 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibits Q and R.

122. Defendants' infringing activities are and have been without authority or license under the '532 patent.

123. Plaintiff has been damaged by Defendants' infringement of the '532 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

**COUNT II – INFRINGEMENT OF THE '818 PATENT**

124. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

125. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '818 patent.

126. For example, Defendants infringe at least claims 1, 2, and 5 of the '818 patent, either literally or under the doctrine of equivalents, in connection with Defendants' AVC Video Encoding, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibits S, T, and U, and incorporated herein by reference.

127. Upon information and belief, one or more of each Defendant's products and/or services utilize AVC Video Encoding or similar encoding systems that infringe claim 6 of the '532 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibits S, T, and U.

128. Defendants' infringing activities are and have been without authority or license under the '818 patent.

129. Plaintiff has been, and continues to be, damaged by Defendants' infringement of the '818 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

130. Defendants' infringement of the '818 patent has been and continues to be willful.

**COUNT III – INFRINGEMENT OF THE '399 PATENT**

131. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

132. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '399 patent.

133. For example, Defendants infringe at least claims 1-3, 11, and 15 of the '399 patent, either literally or under the doctrine of equivalents, in connection with Defendants' Streaming Video Platforms, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibits V and W, and incorporated herein by reference.

134. Upon information and belief, one or more of each Defendant's Streaming Video Platforms infringe the asserted claims of the '399 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibits V and W.

135. Defendants' infringing activities are and have been without authority or license under the '399 patent.

136. Plaintiff has been damaged by Defendants' infringement of the '399 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

**COUNT IV – INFRINGEMENT OF THE '049 PATENT**

137. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.



138. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '049 patent.

139. For example, Defendants infringe at least claims 1, 3, 4, 10, 11, 13, and 16 of the '049 patent, either literally or under the doctrine of equivalents, in connection with Defendants' Streaming Video Platforms, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibit X, and incorporated herein by reference.

140. Upon information and belief, one or more of each Defendant's Streaming Video Platforms infringe the asserted claims of the '049 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibit X.

141. Defendants infringing activities are and have been without authority or license under the '049 patent.

142. Plaintiff has been damaged by Defendants' infringement of the '049 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

#### **COUNT V – INFRINGEMENT OF THE '328 PATENT**

143. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

144. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '328 patent.

145. For example, Defendants infringe at least claims 1-3, 6-7, and 11 of the '328 patent, either literally or under the doctrine of equivalents, in connection with Defendants'

Streaming Video Platforms, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibit Y and incorporated herein by reference.

146. Upon information and belief, one or more of each Defendant's Streaming Video Platforms infringe the asserted claims of the '328 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibit Y.

147. Defendants infringing activities are and have been without authority or license under the '328 patent.

148. Plaintiff has been damaged by Defendants' infringement of the '328 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

#### **COUNT VI – INFRINGEMENT OF THE '980 PATENT**

149. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

150. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '980 patent.

151. For example, Defendants infringe at least claims 1 and 4 of the '980 patent, either literally or under the doctrine of equivalents, in connection with Defendants' Showtime Smartphone Apps and similar products, as detailed in the preliminary and exemplary claim charts attached hereto as Exhibit Z and incorporated herein by reference.

152. Upon information and belief, one or more of each Defendant's Smartphone Apps infringe the asserted claims of the '980 patent in the same or similar manner as detailed in preliminary and exemplary claim charts attached hereto as Exhibit Z.

153. Defendants infringing activities are and have been without authority or license under the '980 patent.

154. Plaintiff has been damaged by Defendants' infringement of the '980 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

**JURY DEMAND**

Plaintiff demands a trial by jury of all issues so triable.

**PRAYER FOR RELIEF**

Plaintiff respectfully requests that the Court find in its favor and against Defendants, and that the Court grant Plaintiff the following relief:

- A. Entry of judgment that Defendants have infringed one or more claims of the '532 patent,
- B. Entry of judgment that Defendants have infringed one or more claims of the '818 patent,
- C. Entry of judgment that Defendants have infringed one or more claims of the '399 patent,
- D. Entry of judgment that Defendants have infringed one or more claims of the '049 patent,
- E. Entry of judgment that Defendants have infringed one or more claims of the '328 patent,
- F. Entry of judgment that Defendants have infringed one or more claims of the '980 patent,

- G. Damages in an amount to be determined at trial for Defendants' infringement, which amount cannot be less than a reasonable royalty,
- H. A determination that this case is exceptional, and an award of enhanced damages and attorney's fees,
- I. All costs of this action,
- J. Pre-judgment and post-judgment interest on the damages assessed, and
- K. Such other and further relief, both at law and in equity, to which Plaintiff may be entitled and which the Court deems just and proper.

This 14<sup>th</sup> day of June, 2021.

*/s/Daniel A. Kent*

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Daniel A. Kent

dankent@kentrисley.com

Tel: (404) 585-4214

Fax: (404) 829-2412

Stephen R. Risley

steverisley@kentrисley.com

Tel: (404) 585-2101

Fax: (404) 389-9402

Cortney S. Alexander

cortneyalexander@kentrисley.com

Tel: (404) 855-3867

Fax: (770) 462-3299

KENT & RISLEY LLC

5755 N Point Pkwy Ste 57

Alpharetta, GA 30022

Attorneys for Plaintiff

DigiMedia Tech, LLC