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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/011,577	03/17/2011	Subutai Ahmad	16032-000002/US/RXD	1771

27896 7590 08/10/2011

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EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 08/10/2011

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

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AUG 10 2011
CENTRAL REEXAMINATION UNIT

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. : 90011577
PATENT NO. : 6263507
ART UNIT : 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/011,577	Patent Under Reexamination AHMAD ET AL.	
	Examiner MAJID A. BANANKHAH	Art Unit 3992	

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

a☒ Responsive to the communication(s) filed on *3/17/2011* . b☐ This action is made FINAL.
c☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire *2* month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☒ Claims *20-24,27,28,31,34,37-40,43,63-67,70,71,74,77,80-83 and 86* are subject to reexamination.
1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☒ Claims *20-24, 27, 28, 31, 34, 37-40, 43, 63-67, 70, 71, 74, 77, 80-83 and 86* are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a)☐ approved (7b)☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some* c)☐ None of the certified copies have
   1☐ been received.
   2☐ not been received.
   3☐ been filed in Application No. _____ .
   4☐ been filed in reexamination Control No. _____.
   5☐ been received by the International Bureau in PCT application No. _____.
   * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

DETAILED EX PARTE REEXAMINATION OFFICE ACTION

I. INTRODUCTION

This first Office action on the merit is in response to the *ex parte* Request (03/17/2011) for reexamination of US 6,263,507 to Ahmad (hereafter '507 Ahmad) by a third party requester.

A. Summary

Claims 20-24, 27, 28, 31, 34, 37-40, 43, 63-67, 70, 71, 74, 77, 80-83 and 86 are rejected.

No requested claim is patentable or confirmed.

B. References Cited in this Office Action

1. The references discussed herein are as follows:

   a. "Network Plus", Walter Bender et al., January 12-13, 1988 ("Bender").

   b. "Cluster-Based Text Categorization: A Comparison of Category Search Strategies", Makoto Iwayama, July 9-13, 1995 ("Iwayama").

   c. "The Fishwrap Personalized News System", Pascal R. Chesnais et al., June 1995 ("Chesnais").

   d. "Classifying News Stories using Memory Based Reasoning", Brij Masand, June 1992 ("Masand").

   e. "WebWatcher: Machine Learning and Hypertext", Thorsten Joachims et al., May 29, 1995 ("Joachims").

   f. JP Publication No. H07-114572 to Yuasa ("Yuasa").

   g. "Wire Service Transmission Guidelines Number 84-2", Special Report / American Newspaper Publishers Association, ANPA June 14, 1984 ("WTS Guidelines").

   h. "The Associated Press Stylebook and Libel Manual", The Associated Press, 1994 ("AP Stylebook").

C. *Reexam Prosecution History*

In the original Request (03/17/2011), the above references, alone or in combination were alleged to raise substantial new question of patentability against claims 20-24, 27, 28, 31, 34, 37-40, 43, 63-67, 70, 71, 74, 77, 80-83 and 86 of the '507patent.

In the order (05/06/2011) granting ex *parte* reexamination, it was agreed that the combination of the references identified *above*, raises a substantial new question of patentability against claims 20-24, 27, 28, 31, 34, 37-40, 43, 63-67, 70, 71, 74, 77, 80-83 and 86 of the '507 patent.

II. REJECTIONS

A. *Summary of Proposed Rejections*

In the request the Requester alleges that the following grounds of rejections are applicable against claims 20-24, 27, 28, 31, 34, 37-40, 43, 63-67, 70, 71, 74, 77, 80-83 and 86 of Ahmad '507patent.

Ground #1. Claims 20-22, 24, 27, 31, 34, 37, 38, 63-65, 67, 70, 74, 77, 80, and 81 are anticipated by Bender.

Ground #2. Claims 28, 37, 71, and 80 are obvious over Bender in view of Patent Owner admissions.

Ground #3. Claims 22, 23, 65, and 66 are obvious over Bender in view of Chesnais and further in view of Patent Owner admissions.

Ground #4. Claims 20-24, 27, 31, 34, 37, 38, 63-67, 70, 74, 77, 80, and 81 are obvious over Chesnais in view of AP Stylebook and further in view of Wire Service Transmission Guidelines.

Ground #5. Claims 28 and 71 are obvious over Chesnais in view of AP Stylebook, further in view of Wire Service Transmission Guidelines and further in view of Patent Owner admissions.

Ground #6. Claims 20-24, 27, 31, 34, 37, 38, 63-67, 70, 74, 77, 80, and 81 are obvious over Chesnais in view of Bender.

Ground #7. Claims 28 and 71 are obvious over Chesnais in view of Bender further in view of Patent Owner admissions.

Ground #8. Claims 20-24, 31, 34, 37, 63-67, 74, 77, and 80 are anticipated by Joachims.

Ground #9. Claims 27 and 70 are obvious over Joachims in view of Bender.

Ground #10. Claims 28 and 71 are obvious over Joachims in view of Bender and Patent Owner admissions.

Ground #11. Claims 39, 40, 43, 82, 83, and 86 are anticipated by Masand.

Ground #12. Claims 39, 43, 82, and 86 are anticipated by Iwayama.

Ground #13. Claims 40, 43, 83, and 86 are obvious over Iwayama in view of Masand.

Ground #14. Claims 40 and 83 are obvious over Iwayama in view of Patent Owner admissions.

Ground #15. Claims 39, 43, 82, and 86 are anticipated by Yuasa.

Ground #16. Claims 40 and 83 are obvious over Yuasa in view of Patent Owner admissions.

B. Claim Rejections – Relevant Statutes

a. Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

b. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

C. Detail Analysis

***a.* Ground #1 – Bender**

Claims 20-22, 24, 27, 31, 34, 37, 38, 63-65, 67, 70, 74, 77, 80, and 81 are anticipated by Bender under 35 USC § 102(b).

RE: Claim 20

A method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, the method comprising the steps of:

Bender discloses a method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "a news retrieval system where the news editor has been replaced by the personal computer. A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news"). Bender at pp. 81-82. Bender also discloses that news items in the closed captioned data are delimited with certain characters, such as ">>>." Bender at p. 82.

acquiring data representing the body of information;

Bender discloses acquiring data representing the body of information (*e.g.*, "The embodiment of these media experiments is a news retrieval system where the news editor has been replaced by the personal computer. A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news. Ideally, they are 'broadcatching'; that is to say, watching all broadcast television channels, listening to all radio transmissions, and reading all newspapers, magazines, and journals," "News articles are collected based on a summary of topical events compiled daily by the wire services, in anticipation of the items which will be reported during the evening news telecast.") Bender at pp. 81-82.

Thus, Bender discloses that the system acquires, among other information, broadcast news and the closed caption data associated with the broadcast, in addition to news wire stories. These are exactly the same types of data that the '507 patent describes in its preferred embodiment. '507 patent 9:61-10:16, 20:15-21, 28:5-23.

storing the acquired data;

Bender discloses storing the acquired data, such as news wire stores and broadcast data (*e.g.*, "News articles are collected based on a summary of topical evens compiled daily by the wire services, in anticipation of the items which will be reported during the evening news

telecast.") Bender at pp. 81-82 and 85. Further, Bender explains that the Network Plus system uses software interfaces, called "reporters" that access "both local and remote databases" to perform their news editing and presentation functions (*i.e.*, "data and processing are packaged locally.") Bender at pp. 81 and 84. Bender further explains, with respect to data from the broadcast, Network Plus also stores acquired data from the broadcast (*e.g.*, "The presentation is driven by a processor that scans the closed caption data transmitted along with the broadcast ....Selected frames drawn from the telecast and stored in local memory are also presented as well"). Bender at p. 81 and Fig. 2 (p. 86). Further, Bender discloses that a primed version of annotated broadcast can be provided after the broadcast, which necessarily requires storing the data in order to generate a primed version. Bender at pp. 81 & 84-85 (describing the post-processing used to generate still images). Moreover, one skilled in the art would also understand that Bender's Network Plus system necessarily discloses storing the acquired data because Bender's disclosure of comparing data from the news wire stories and the broadcast via keyword searching would require storing the data so that the keyword searching, comparison and display described in Bender could be performed. Bender at p. 85-86. In short, Bender discloses several different ways in which acquired data is stored.

generating a display of a first segment of the body of information from data that is part of the stored data;

Bender discloses generating a display of a first segment of the body of information from data that is part of the stored data (*e.g.*, "The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety.... A third section, the upper right quadrant is reserved for displaying video stills extracted from the broadcast.") Bender at FIGs. 1 and 2 and pp. 81-82. Thus, the display of the broadcast news (lower right quadrant of Fig. 2) is a display of a first segment from data that is part of the stored data. Alternatively, the video stills (upper right quadrant) may also be considered a first segment. Again, this is exactly the same type of display of broadcast news that is described not just in the claims, but in the preferred embodiment of the '507 patent at 10:14-16 ("Additionally when the use is observing a particular news story in an audiovisual news program, the invention can identify and display a related text news story or stories.")

comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Bender discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related because, for example, Bender compares closed caption data representing the news broadcast (one segment) to news wire text stories (a different segment) via keyword matching to determine, whether according to predetermined criteria (*e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process)("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast."(emphasis added); "The primary function of Network Plus is to correlate news wire stories and live broadcasts ....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related ....A threshold of four words worked well in this experiment...")(emphasis added). Bender further provides a specific example illustrating the process for comparing a news wire story about the nuclear accident at Chernobyl to a television broadcast on "ABC Nightly News" to determine they were related. *Id.* Thus, Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (e.g., four common words), the broadcast and the news wire story are related. Once again, Bender discloses the exact same type of comparison between closed caption data and news wire text that is described not just in the claim, but in the preferred embodiment of the '507 patent wherein closed caption data for the news broadcast is compared to news wire text to determine if they are related by "any appropriate method." '507 patent at 28:5-23, 36-38.

generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of

the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Bender discloses generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related because, for example, Bender discloses displaying the news wire text that has been determined to be related to the television news broadcast, in response to and along with the television news. *See e.g.*, Bender Figs. 1 (p.85) ("Locally Packaged Television. On the top is the original broadcast... On the right, the map is replaced with text from the news wire services") and Fig. 2 (p. 86) (The live broadcast is in the lower right quadrant ....Text from the wire services is on the left); Bender at p. 81 ("Network Plus annotates the television news with articles drawn from a local copy of wire service new material selected and presented along with the video in real time"); Bender at pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories..")(emphasis added). Once again, Bender discloses the same type of display described not just in the claim, but in the preferred embodiment of the '507 patent - the second segment (the news wire text) is displayed in response to and along with the news broadcast and stills. Compare '507 patent FIG. 2B with Bender Figs. 1 and 2; *see* also '507 patent at 14:64-15:3, 18:52-67.

RE: Claim 21

A method as in claim 20, further comprising the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Bender discloses the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment because, for example as shown in Bender Figs. 1 and 2, the news wire text is displayed at the same time as both the broadcast news and stills. *See e.g.*, Bender at Fig. 2 (p. 86) and pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the

news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.") (emphasis added). Again, the Bender disclosure matches not just the claim, but the preferred embodiment described in the '507 patent. Compare '507 patent FIG. 2B with Bender Figs. 1 and 2; *see* also '507 patent at 14:64-15:3, 18:52-67.

RE: Claim 22

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Bender discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data (*e.g.*, "The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast. As the telecast is shown live, stories determined to be related to the telecast are displayed.") Bender at FIG. 2, pp. 81-82 and 86. Further, Bender discloses that a map may also be displayed along with the broadcast. Bender at FIG. 1, p. 85 (showing that a "map has been inserted locally" which is related as shown in the figure because it corresponds to the same general region as the original map, but is annotated). The displayed telecast (a first segment) is audiovisual data and either the image of the news wire story, or graphic such as a map (either of which may be a second segment) are audiovisual data. '507 patent at 9:50-56 ("'audiovisual data' refers to data that includes audio and/or video data, and may include text data"). Moreover, one skilled in the art would understand that the news wire services have long provided photographs by wire service, since at least 1935 when Associated Press introduced its Wirephoto Network (*see e.g.*, http://www.ap.org/pages/history/photos.htm)(describing the development of AP's news wire photo service); thus the news wire data acquired by Bender's Network plus could include photographs. Once again, the display of a television news broadcast

and still images meet what is described not just in the claim, but in the preferred embodiment of the '507 patent. '507 patent at 18:52-64.

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment.

Bender discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment because, for example, the television news broadcast (a first segment) is audiovisual data. *See e.g.*, Bender at Fig.1 (p. 85) and Fig. 2 (p. 86); pp. 81-82. "The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.") (emphasis added).

RE: Claim 24

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information;

Bender discloses the step of acquiring audiovisual data representing at least a portion of the body of information because, for example, the television news broadcast, among other items, is audiovisual data. *See e.g.*, Bender at FIG. 2 (p. 86), pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast. As the telecast is shown live, stories determined to be related to the telecast are displayed.")(emphasis added). The body of information includes a television broadcast and video stills, which are both audiovisual information under the '507 patent's definition of that term. '507 patent at 9:50-56 ("'audiovisual data' refers to data that includes audio and/or video data, and may include text data").

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment; and

Bender discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment because it displays the television news broadcast (a first segment), among other items, which is audiovisual data. *See e.g.*, Bender at FIG. 2 (p.86), pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.")(emphasis added).

the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment.

Bender discloses the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment because, for example, the news wire stories (a second segment) are text. *See e.g.*, Bender at FIG. 2 (p. 86), pp. 81-83 ("The left half of the screen is used to display related news wire stories . . . As the telecast is shown live, stories determined to be related to the telecast are displayed.") The news wire stories in Bender (*i.e.*, the portion or representation of a second segment) are exactly the same type of "text" display described not only in this claim, but in the preferred embodiment of the '507 patent. '507 patent at 18:64-67.

RE: Claim 27

A method as in claim 20, further comprising the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Bender discloses the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different

segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined because for example, Bender discloses comparing keywords lists representing subject matter content of the news wire stories (a second segment) and television broadcasts (a first segment) closed caption data and using a predefined threshold for keyword matching (e.g., four words as an example) to determine whether the segments are related. *See e.g.*, (Bender at pp. 82-83 (describing keyword matching process)("The primary function of Network Plus is to correlate news wire stories and live broadcasts. . . A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related... A threshold of four words worked well in this experiment...")(emphasis added)..

RE: Claim 31

A method as in claim 20, wherein the step of acquiring data further comprises the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network.

Bender discloses the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network (*e.g.*, "A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news. Ideally, they are 'broadcatching'; that is to say, watching all broadcast television channels, listening to all radio transmissions, and reading all newspapers, magazines, and journals.") Bender at pp. 81-82. Bender also explains that the "news gathering agents contact news wire sources." Bender at p. 82. Thus, once again as described in the preferred embodiment of the '507 patent, Bender discloses acquiring the very same type of data, including computer-readable data files for the news wire stories and/or the television broadcast.

RE: Claim 34

A method as in claim 20, further comprising the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Bender discloses the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction. *See e.g.*, Bender at p. 81 ("In response to instructions from both the broadcaster and the reader, this agent selects from incoming data and presents it in a manner suggestive of traditional media.") (emphasis added)..

RE: Claim 37

A method as in claim 20, wherein at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data.

Bender discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data because the closed caption data is digital and the news wires stories are also digital. *See e.g.*, Bender at p. 81 ("broadcast closed caption digital transcription")(emphasis added); 82 ("Prior to the broadcast, news gathering agents contact news wire sources (Dow Jones News Service, X*Press and NEXIS).") These news services send information digitally. *See* OTH-B (e.g., "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream").

RE: Claim 38

A method as in claim 20, wherein at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data.

Bender discloses that at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data (*e.g.*, "Network Plus is designed to work with closed caption news broadcasts (currently ABC, and NBC caption there national news.") Bender at pp. 81-83. Network Plus acquired live NTSC video news broadcasts, which in 1988 inherently comprised analog data. Bender at p. 84. Moreover, Bender also

discloses acquiring "radio transmissions," which in 1988 would also have comprised analog data. Bender at p. 81.

RE: Claim 63

A computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, comprising:

Bender discloses a computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "a news retrieval system where the news editor has been replaced by the personal computer. A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news"). Bender at pp. 81-82. Bender also discloses that news items in the closed captioned data are delimited with certain characters, such as ">>>." Bender at p. 82.

instructions for acquiring data representing the body of information;

Bender discloses instructions for acquiring data representing the body of information (*e.g.*, "The embodiment of these media experiments is a news retrieval system where the news editor has been replaced by the personal computer. A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news. Ideally, they are 'broadcatching'; that is to say, watching all broadcast television channels, listening to all radio transmissions, and reading all newspapers, magazines, and journals";" News articles are collected based on a summary of topical events compiled daily by the wire services, in anticipation of the items which will be reported during the evening news telecast.") Bender at pp. 81-82. Thus, Bender discloses software for acquiring, among other information, broadcast news and the closed caption data associated with the broadcast, in addition to news wire stories. These

are exactly the same types of data that the '507 patent describes in its preferred embodiment. '507 patent 9:61-10:16, 20:15-21, 28:5-23.

instructions for storing the acquired data;

Bender discloses instructions for storing the acquired data, such as news wire stores and broadcast data (*e.g.*, "News articles are collected based on a summary of topical evens compiled daily by the wire services, in anticipation of the items which will be reported during the evening news telecast.") Bender at pp. 81-82 and 85. Further, Bender explains that the Network Plus system uses software interfaces, called "reporters" that access "both local and remote databases" to perform their news editing and presentation functions (*i.e.*, "data and processing are packaged locally.") Bender at pp. 81 and 84. Bender further explains, with respect to data from the broadcast, Network Plus also stores acquired data from the broadcast *(e.g.*, "The presentation is driven by a processor that scans the closed caption data transmitted along with the broadcast ....Selected frames drawn from the telecast and stored in local memory are also presented as well"). Bender at p. 81 and Fig. 2 (p. 86). Further, Bender discloses that a primed version of annotated broadcast can be provided after the broadcast, which necessarily requires storing the data in order to generate a primed version. Bender at pp. 81 & 84-85 (describing the post-processing used to generate still images). Moreover, one skilled in the art would also understand that Bender's Network Plus system necessarily discloses storing the acquired data because Bender's disclosure of comparing data from the news wire stories and the broadcast via keyword searching would require storing the data so that the keyword searching, comparison and display described in Bender could be performed. Bender at p. 85-86. In short, Bender discloses several different ways in which acquired data is stored.

instructions for generating a display of a first segment of the body of information from data that is part of the stored data;

Bender discloses instructions for generating a display of a first segment of the body of information from data that is part of the stored data (*e.g.*, "The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. A third section, the upper right quadrant is reserved for displaying video stills extracted from the broadcast.") Bender at FIGs. 1 and 2 and pp. 81-82. Thus, the display of the broadcast news (lower right quadrant of Fig. 2) is a display of a first segment from data that is part of the stored

data. Alternatively, the video stills (upper right quadrant) may also be considered a first segment. Again, this is exactly the same type of display of broadcast news that is described not just in the claims, but in the preferred embodiment of the '507 patent at 10:14-16 ("Additionally when the use is observing a particular news story in an audiovisual news program, the invention can identify and display a related text news story or stories.")

instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Bender discloses instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related because, for example, Bender compares closed caption data representing the news broadcast (one segment) to news wire text stories (a different segment) via keyword matching to determine, whether according to predetermined criteria (*e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process)("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast", "The primary function of Network Plus is to correlate news wire stories and live broadcasts . . . A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related. A threshold of four words worked well in this experiment. . .")(emphasis added). Bender further provides a specific example illustrating the process for comparing a news wire story about the nuclear accident at Chernobyl to a television broadcast on "ABC Nightly News" to determine they were related. *Id.* Thus, Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (*e.g.*, four common words), the broadcast and the news wire story are related. Once again, Bender discloses the exact same type of comparison between closed caption data and news wire text that is described not

just in the claim, but in the preferred embodiment of the '507 patent wherein closed caption data for the news broadcast is compared to news wire text to determine if they are related by "any appropriate method." '507 patent at 28:5-23, 36-38.

> **instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.**

Bender discloses instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related because, for example, Bender discloses displaying the news wire text that has been determined to be related to the television news broadcast, in response to and along with the television news. *See e.g.*, Bender Figs. 1 (p.85) ("Locally Packaged Television. On the top is the original broadcast... On the right, the map is replaced with text from the news wire services") and Fig. 2 (p. 86) (The live broadcast is in the lower right quadrant ....Text from the wire services is on the left); Bender at p. 81 ("Network Plus annotates the television news with articles drawn from a local copy of wire service new material selected and presented along with the video in real time."); Bender at p. 81- 82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories..")(emphasis added). Once again, Bender discloses the same type of display described not just in the claim, but in the preferred embodiment of the '507 patent - the second segment (the news wire text) is displayed in response to and along with the news broadcast and stills. Compare '507 patent FIG. 2B with Bender Figs. 1 and 2; *see* also '507 patent at 14:64- 15:3, 18:52-67.

RE: Claim 64

> **A computer readable medium as in claim 63, further comprising instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.**

Bender discloses instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment because, for example as shown in Bender Figs. 1 and 2, the news wire text is displayed at the same time as both the broadcast news and stills. *See e.g.*, Bender at Fig. 2 (p. 86) and pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.")(emphasis added). Again, the Bender disclosure matches not just the claim, but the preferred embodiment described in the '507 patent. Compare '507 patent FIG. 2B with Bender Figs. 1 and 2; see also '507 patent at 14:64-15:3, 18:52-67.

RE: Claim 65

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Bender discloses instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data (*e.g.*, "The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast. As the telecast is shown live, stories determined to be related to the telecast are displayed.") Bender at FIG. 2, pp. 81-82 and 86. Further, Bender discloses that a map may also be displayed along with the broadcast. Bender at FIG. 1, p. 85 (showing that a "map has been inserted locally" which is related as shown in the figure because it corresponds to the same region as the original map, but is annotated). The displayed telecast (a first segment) is audiovisual data and either the image of the news wire story, or graphic such as a map (either of which may be a second segment) are audiovisual data. '507 patent at 9:50-56. Moreover, one skilled in the art would understand that the news wire services have long provided photographs by wire service, since at least 1935 when Associated Press introduced its Wirephoto Network

(*see e.g.*, http://www.ap.org/pages/history/photos.htm)(describing the development of AP's news wire photo service); thus the news wire data acquired by Bender's Network plus could include photographs. Once again, the display of a television news broadcast and still images meet what is described not just in the claim, but in the preferred embodiment of the '507 patent. '507 patent at 18:52-64.

the instructions for generating a display of a first segment of the body of information further comprise instruction for generating an audiovisual display of the first segment.

Bender discloses instructions for generating an audiovisual display of the first segment because, for example, the television news broadcast (a first segment) is audiovisual data. See e.g., Bender at Figs. 1 (p. 85) and 2 (p. 86); pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.")(emphasis added)..

RE: Claim 67

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information;

Bender discloses instructions for acquiring audiovisual data representing at least a portion of the body of information because, for example, the television news broadcast, among other items, is audiovisual data. *See e.g.*, Bender at FIG. 2 (p. 86), pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast. As the telecast is shown live, stories determined to be related to the telecast are displayed.")(emphasis added).. The body of information includes a television broadcast and video stills, which are both audiovisual information under the '507 patent's definition of that term. '507 patent at 9:50-56 ("'audiovisual data' refers to data that includes audio and/or video data, and may include text data").

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment; and

Bender discloses instructions for generating an audiovisual display of the first segment because it displays the television news broadcast (a first segment), among other items, which is audiovisual data. *See e.g.*, Bender at FIG. 2 (p.86), pp. 81-82 ("The display is divided into three sections (figure 2). In the lower right quadrant, the news telecast is shown live, in its entirety. The left half of the screen is used to display related news wire stories. A third section, the upper right quadrant, is reserved for displaying video stills extracted from the broadcast.")(emphasis added).

the instructions for generating a display of a portion of, or a representation of, a second segment of the body of information further comprise instructions for generating a text display of the portion or representation of the second segment.

Bender discloses instructions for generating a text display of the portion or representation of the second segment because, for example, the news wire stories (a second segment) are text. *See e.g.*, Bender at FIG. 2 (p. 86), pp. 81-83 ("The left half of the screen is used to display related news wire stories ....As the telecast is shown live, stories determined to be related to the telecast are displayed.") Bender at FIG. 2, pp. 81-83 and 86. The news wire stories in Bender are exactly the same type of "text" display described not only in this claim, but in the preferred embodiment of the '507 patent. '507 patent at 18:64-67.

RE: Claim 70

A computer readable medium as in claim 63, further comprising instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Bender discloses instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with

respect to which the relatedness of the compared segments is determined because for example, Bender discloses comparing keywords lists representing subject matter content of the news wire stories (a second segment) and television broadcasts (a first segment) closed caption data and using a predefined threshold for keyword matching (*e.g.*, four words as an example) to determine whether the segments are related. *See e.g.*, (Bender at pp. 82-83 (describing keyword matching process)("The primary function of Network Plus is to correlate news wire stories and live broadcasts. A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related. A threshold of four words worked well in this experiment .... ")(emphasis added).

RE: Claim 74

A computer readable medium as in claim 63, wherein the instructions for acquiring data further comprise instructions for acquiring computer-readable data files over a computer network from an information providing site that is part of that network.

Bender discloses instructions for acquiring computer-readable data files over a computer network from an information providing site that is part of that network (*e.g.*, "A variety of both local and remote databases which operate passively as well as interactively are accessed by 'reporters.' These 'reporters' are actually software interfaces, which are programmed to gather news. Ideally, they are 'broadcatching'; that is to say, watching all broadcast television channels, listening to all radio transmissions, and reading all newspapers, magazines, and journals.") Bender at pp. 81-82. Bender also explains that the "news gathering agents contact news wire sources." Bender at p. 82. Thus, once again as described in the preferred embodiment of the '507 patent, Bender discloses acquiring the very same type of data, including computer-readable data files for the news wire stories and/or the television broadcast.

RE: Claim 77

A computer readable medium as in claim 63, further comprising instructions for identifying an instruction from a user to begin displaying at least some of the body

of information, wherein the display of a first segment is begun in response to the user instruction.

Bender discloses instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction. *See e.g.*, Bender at p. 81 ("In response to instructions from both the broadcaster and the reader, this agent selects from incoming data and presents it in a manner suggestive of traditional media.") (emphasis added)

RE: Claim 80

A computer readable medium as in claim 63, wherein at least some of the acquired data is digital data, the instructions for acquiring data further comprising instructions for acquiring digital data.

Bender discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data because the closed caption data is digital and the news wires stories are also digital. *See e.g.*, Bender at p. 81 ("broadcast closed caption digital transcription")(emphasis added); p. 82 ("Prior to the broadcast, news gathering agents contact news wire sources (Dow Jones News Service, X'Press and NEXIS).") These news services send information digitally. *See* OTH-B (*e.g.*, "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream").

RE: Claim 81

A computer readable medium as in claim 63, wherein at least some of the acquired data is analog data, the instructions for acquiring data further comprising instructions for acquiring analog data.

Bender discloses that at least some of the acquired data is analog data, the instruction for acquiring data further comprising instructions for acquiring analog data (*e.g.*, "Network Plus is designed to work with closed caption news broadcasts (currently ABC, and NBC caption there national news.") Bender at pp. 81-83. Network Plus acquired live NTSC news broadcasts, which in 1988 inherently comprised analog data. Bender at p. 84. Moreover, Bender also discloses acquiring "radio transmissions," which in 1988 would also have comprised analog data. Bender at p. 81.

***b.* Ground #2 – Bender and Patent Owner Admissions**

Claims 28, 37, 71 and 80 are obvious over Bender in view of patent Owner admissions under 35 USC § 103(a).

RE: Claim 28

A method as in claim 27, wherein the step of determining the similarity of the subject matter of segments further comprises the step of performing a relevance feedback method.

Claim 28 depends from and further limits independent claim 20. The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III). Per MPEP § 2617, admissions, which include admitted prior art, can also be used during the examination phase of reexamination, *i.e.*, in claim rejections. Section 2617 refers the reader to MPEP § 2258. MPEP § 2258(I)(F)(2) states, "*In Seiko, [Ex parte Seiko Koko Kabushiki Kaisha*, 225 USPQ 1260 (Bd. Pat. App. & Inter. 2984)] the Board relied on In re Nomiya, 509 F.2d 566, 184 USPQ 607 (CCPA 1975) holding an admission of prior art in the specification of the parent undergoing reexamination is considered prior art which may be considered as evidence of obviousness under 35 U.S.C. 103."

Note: the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 28 obvious.

Thus, claim 28 would have been obvious to a person of ordinary skill in the art in view of Bender alone or in combination with the admissions made by the Patent Owner.

Reasons to Combine Bender with Patent Owner Admissions

Bender is directed toward "combining news wire services with network television news" based on their similarities Bender at p. 81. Similarly, the '507 patent is directed toward identifying and displaying news stories that are related to a television news program. '507 patent at Abstract. Both Bender and the '507 patent describe comparing closed caption data and news wire stories, both of which are text based. The '507 patent discloses that relevance feedback was well known for use in determining the similarities between two sets of information, particularly text (*e.g.*, "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). '507 patent at 28:55-29:3.

> **Note:** the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 28 obvious.

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, particularly two text sources, such as the articles and closed captioning disclosed in Bender, would have been motivated to use the relevance feedback method of the prior art as discussed in the '507 patent for at least the advantages disclosed the prior art which the '507 patent incorporates by reference. Thus, it would have been obvious to use a relevance feedback method to compare information in Bender since Bender and the admissions relate to well-known methods of comparing information. Moreover, the combination of Bender and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 37

> **A method as in claim 20, wherein at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data.**

Claim 37 depends from and further limits independent claim 20. As discussed *above*, Bender discloses that at least some of the acquired data is digital data, the step of acquiring data

further comprising the step of acquiring digital data because the closed caption data is digital and the news wires stories are also digital. *See e.g.*, Bender at p. 81 ("broadcast closed caption digital transcription")(emphasis added); 82 ("Prior to the broadcast, news gathering agents contact news wire sources (Dow Jones News Service, X'Press and NEXIS).") These news services send information digitally. *See* OTH-B *(e.g.*, "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream").

To the extent that it is viewed that Bender does not expressly disclose acquiring digital data, the '507 patent includes admissions that data acquired from news sources must be digital to process it as taught by Bender: "As will be apparent from the description below, the processing of the data representing the primary and secondary information generally requires that the data be in digital form. Text data acquired from online text sources, for example, is acquired in digital form and so can be used directly in such processing." *See e.g.*, '507 paten at 12:3-8. These admissions can be used in combination with prior patens and primed publications in rejecting claims during reexamination. *See*: MPEP § 2617(III). Thus, claim 37 would have been obvious to a person of ordinary skill in the art in view of Bender alone or in combination with the admissions made by the Patent Owner.

RE: Claim 71

> **A computer readable medium as in claim 70, wherein the instructions for determining the similarity of the subject matter of segments further comprise instructions for performing a relevance feedback method.**

Claim 71 depends from claim 70 and recites the same additional limitation as in claim 28 that the degree of similarity is determined by "a relevance feedback method." Thus, for the same reasons explained above in connection with claim 28, claim 70 would have been obvious in view of Bender alone or in combination with the Patent Owner's admissions (regarding the use of relevance feedback as well known in the art for comparing text segments), which describe the benefits of using relevance feedback.

Note: that Patent owner also admits that Salton and Buckley, prior art references, disclose using relevance feedback in a similar manner.

Note: the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 71 obvious.

For reasons to combine Bender with the Patent Owner admissions, *see* the rejection of claim 28, *supra*.

RE: Claim 80

A computer readable medium as in claim 63, wherein at least some of the acquired data is digital data, the instructions for acquiring data further comprising instructions for acquiring digital data.

Claim 80 depends from claim 62 and recites the same additional limitation as in claim 37 regarding the acquired data being digital data. Thus, for the same reasons explained *above* in connection with claim 37, claim 80 would have been obvious to a person of ordinary skill in the art in view of Bender alone or in combination with the admissions made by the Patent Owner.

***c*. Ground #3 – Bender, Chesnais and Patent Owner Admissions**

Claims 22, 23, 65 and 66 are obvious over Bender in view of Chesnais and further in view of patent Owner admissions under 35 USC § 103(a).

RE: claim 22

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Claim 22 depends from and further limit independent claim 20. Bender in view of Chesnais discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data because,

for example, Chesnais discloses that an article (a first segment) may include images (as shown below) and the related photos (thumbnails below) (a second segment) are also audiovisual data. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]").

Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. Chesnais at p. 278 ("Our current Fishwrap news server uses a media-independent representation that allows it to accept items with graphics, audio, text, and motion pictures.") *See* also Chesnais at p. 278 ("The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story.")

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment.

Chesnais discloses generating a display of a first segment that comprises generating an audiovisual display of the first segment because the articles in Chesnais (a first segment) include photos and/or graphics. *See e.g.*, Chesnais at Figs. 2 and 13; p. 277 ("The article is then rendered by the from end application with hires given by the signatures.") Further, Figs. 2 and 13 illustrate an article, such as the "New Evidence About Bombing Suspect Emerges," is displayed and includes images (either the center or right panel in Fig. 2 or Fig. 13), which are audiovisual data. '507 patent at 9:50-56 ("'audiovisual data' refers to data that includes audio and/or video data, and may include text data")

Reasons to Combine Bender with Chesnais and Patent Owner Admissions

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chesnais with Bender to have a second segment that was "represented by audiovisual data" (claims 22 and 65) and to enable selection of a representation of a second segment to cause the display of the selected second segment to be produced (claims 23 and 66), both of which are disclosed by Chesnais. Specifically, both Bender and Chesnais relate to systems and methods for collecting and reviewing information from a variety of

sources, comparing data representing that information to identify related information and presenting the related information to a user in a computer based interface. For example, Chesnais describes that when a user selects an article, the user is presented with related photo and audio content as well as the selected article. *See e.g.*, Chesnais Fig. 2 and p. 277 ("The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks is photo and audio databases to see if there are photos and sound recordings that match the story.") As described in Chesnais, this would allow a viewer of the first segment of information to view additional useful information (*e.g.*, related photos). In addition, both the Bender Network Plus article and the Chesnais article arise out of work at the MIT Media Laboratory and Pascal Chesnais is a listed author on both references. One skilled in the art would certainly be motivated to consider the Chesnais article given the common subject matter and overlapping authorship with the Bender article and the improvements made possible by web browsers.

RE: claim 23

> **A method as in claim 22, further comprising the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.**

Claim 23 depends from and further limit claim 22. Bender, in view of Chesnais, discloses identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced, because, for example, Chesnais explains that it uses a web browser and, as shown for example in Fig. 2, a user may select an article from a list of related articles and have that article displayed or select a photo. *See e.g.*, Chesnais Fig. 2; at p. 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation"; "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles and is used to immediately add the news topic to their profile"). Further, as discussed above, Chesnais displays an article and photos (thumbnails) that have been identified as related, and this display uses

hypertext approach with a web browser, which allows a user to navigate through the "presentation" of information. *See* Chesnais at p. 279. ("[Hypertext] allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper ....HTML also provides a uniform mechanism for accepting input from the reader.") Figs. 2 and 13 in Chesnais also illustrate how a Fishwrap user can select items for further display. *Id.* at pp 276 and 282. "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles and is used to immediately add the news topic to their profile"). *Id.* at p. 276. Thus, Chesnais discloses the ability to accept a user selection of a representation or portion of the second segment and display an audiovisual (*e.g.*, images, graphics, *etc.*) of that segment. Moreover, as discussed above, the Patent Owner has contended that images, such as those disclosed in Chesnais, constitute the recited audiovisual information within the scope of the '507 patent.

RE: claim 65

> **A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and**
> **the instructions for generating a display of a first segment of the body of information further comprise instruction for generating an audiovisual display of the first segment.**

Claim 65 depends and further limit independent claim 63. Claim 65 depends from claim 63 and contains the parallel of the additional limitation of claim 22 regarding the first and second segments being represented by "audiovisual data." Thus, for the same reasons set forth with respect to claim 22, claim 65 would have been obvious to one of ordinary skill in the art based on Bender in view of Chesnais. For the Reasons to combine Bender with Chesnais and Patent Owner admissions, *see* rejection of claim 22 *above*.

RE: claim 66

A computer readable medium as in claim 65, further comprising instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Claim 66 depends from claim 65 and contains the parallel of the additional limitation of claim 23 regarding the selection of a portion or representation of the second segment that causes an audiovisual display of the second segment to be produced. Thus, for the same reasons set forth with respect to claim 23, claim 66 would have been obvious to one of ordinary skill in the art based on Bender in view of Chesnais.

***d.* Ground #4 – Chesnais, AP Stylebook and Wire Service Transmission**

Claims 20-24, 27, 31, 34, 38, 63-67, 70, 74, 77, 80 and 81 are obvious over Chesnais and further in view of AP Stylebook and further in view of Wire Service Transmission Guidelines under 35 USC § 103(a).

RE: claim 20

A method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, the method comprising the steps of:

Chesnais discloses a method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "Fishwrap is an experimental electronic newspaper system available at MIT." (p. 275); "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (*Id.*); "All items coming into the system are analyzed for geographic and topical relevancy." (*Id.*) (emphasis added); "Access to Fishwrap's personalized news system appears as a World Wide Web (WWW) hypertext link" (*Id.*); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line. Each supplier program does three things: First it translates all news items into an internal, wire- independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to

each item. The signature represents an inference made from the data. Finally each article is supplied to the Fishwrap news database server." (p. 277) (emphasis added);

> **Note:** in the quotation cited *above*, Chesnais uses the word "article" in some aspects to refer to "all news items," not just news items that are articles. Further, references in quotes to Chesnais in the form of [number] appear this way in the Chesnais publication and refer to the references listed at the end of the article.

"A Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." (p. 276).) Further as shown in Fig. 6 the "News Server" receives many different types of data, including news wire feeds, evening news stills and video, and audio files. (Fig. 6, at 278). As described *above*, each of these different data items represent distinct segments that Fishwrap analyzes and creates a "signature" for.

acquiring data representing the body of information;

Chesnais discloses acquiring data representing the body of information (*e.g.*, "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (p. 275); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." (p. 277); "Suppliers and Servers - Fishwrap receives news from a variety of sources and formats. The traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats'" (p. 278)). Further, as shown above with respect to Fig. 6, the "NEWS SERVER" acquires information from a variety of sources, including text, video, images and audio. (Id.). Chesnais also explains that "[o]ur current Fishwrap news server uses a media-independent representation that allows it to accept items with graphics, audio, text, and motion pictures. It is up to the presentation application to determine the appropriate medium to provide." (p. 279.) As exemplified by the above citations, Chesnais discloses acquiring a variety of different types of data that make up a body of information.

storing the acquired data;

Chesnais discloses storing the acquired data, including for example news wire stories, photos and audio files in databases. *See e.g.*, Chesnais at p. 277 ("[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic ....Finally each article is supplied to the Fishwrap news database server [4] where it will remain for the next 48 hours."); and Chesnais at p. 278 ("Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story."); *see* also *id.* at Fig. 6. Thus, Chesnais describes that it stores all incoming items.

generating a display of a first segment of the body of information from data that is part of the stored data;

Chesnais discloses generating a display of a first segment of the body of information from data that is part of the stored data because, for example, it discloses generating a display of an article. *See e.g.*, Chesnais at 277 (*e.g.*, "When a reader generates a newspaper through Fishwrap, an article is retrieved if it matches one of the reader's global topics of interest ....[and an "article is then rendered by the from end application"); *see* also Figs. 2 and 13. Chesnais further explains that it uses a web browser to provide the display. *See e.g.*, Chesnais at p. 275 ("World Wide Web browser access allows for easy traversing of the information space (*see* Figure 2)."). Chesnais further explains how the user navigates to display an article--"[a] Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." Chesnais at p. 276. Figs. 2 and 13, further illustrate how a user of Fishwrap can navigate to a particular news item, such as the article "New Evidence About Bombing Suspect Emerges," which represents an example of the display of a first segment generated from the stored data.

comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Chesnais discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. As explained below,

Chesnais discloses that all incoming items are provided with a signature which is used for searching, and that when an article is rendered Fishwrap also searches the photo and audio databases for items that "match the story" (i.e., related items). *See e.g.*, Chesnais at 277 ("When a reader generates a newspaper through Fishwrap ....The article is then rendered by the frontend application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story_.") (emphasis added); and Chesnais at p. 281 ("One blind student appreciated the . . . audio segments for illustrations."). As discussed in more detail below, Chesnais discloses the "comparing" as identifying "photos and sound recordings that match the story." Chesnais makes this possible because, as addressed immediately below, the Fishwrap system stores the incoming items (e.g., stories, audio files, and photos) with "signatures" ("data representing" a segment).

For example, Chesnais explains that the "signatures," which are derived from the incoming data are applied to all items coming into the system. Chesnais at p. 275 ("All items coming into the system are analyzed for geographic and topical relevancy."). These signatures are created along with a particular data structure ("Dtype") and provides "inferences" about the item:

> within Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic...
> ...First it translates all news items into an internal, wire-independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data.
>
> Chesnais at p. 277.

Further, as shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data representing the item (i.e., an inference made from the data), such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword," and a "summary."

Note that the Dtype data structure is described in Chesnais by example, but also by citation to reference [3] Abramson, Nathan S. The dtype library or, how to write a server in less time that it takes to read this manual, Technical Report, Electronic Publishing Group, MIT Media Laboratory, Cambridge, MA, 1992.

See Chesnais at pg. 279

Chesnais further explains that the signatures are used in searches ("because they significantly speed up the searches") used to build a paper to present to the user, which presentation, as described above and shown for example by the photo thumbnails in Figs. 2 and 13, also includes "photos and sound recordings that match the story." *See e.g.*, Chesnais at Figs. 2 and 13 and p. 277 (matching) & 279 (using signatures to "significantly speed up the searches."). Thus, the signatures, which include data representing the segments (i.e., a headline and a summary like those shown in the third portion of Fig. 9), include predetermined criteria used to determine whether particular segments are related.

Chesnais discloses "comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related." However, even if the Examiner determines that Chesnais did not expressly disclose comparing signatures of two items to determine if they are related, it would have been obvious to one of ordinary skill in the art to perform the recited comparison step based on Chesnais's disclosure in view of the WST Guidelines and AP Stylebook.

Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. These guidelines specify the content and format of headers applied to newswire items, including a field for keywords. WST Guidelines at 1 & 2. The Associated Press ("AP") used these headers. *Id.* at 1. The AP Stylebook indicates that stories, photos, and graphics follow the same coding requirements for wire transmission. AP Stylebook at p. 297-299. "Every news item in the AP report has a keyword slug line." *Id.* at 299. Further, AP photos had associated text captions. Id. at p. 293-296. Chesnais states that the signature added to an item is "derived from the ANPA format coding." Chesnais, p. 279. As shown in Fig. 9, the signature of an item included, for example, a "slugword" field with keywords. In short, the ANPA format coding for stories and photo captions from the AP provided the same type of information. Thus, to the extent it is not inherently disclosed, it would have been obvious to one of ordinary skill in the art that Chesnais's disclosure of "signatures" (described above) and checking Fishwrap's databases for "photos . . .

that match the story" would include comparing the signature for a news story with the signatures for photos, including the text captions, (or audio files) to identify photos that are related to the news story using predetermined criteria, such as matching one or more fields from the signatures (*e.g.*, a slugword, headline, or summary). In fact, this is one of the well- known functions that databases are designed to perform, using coded fields to make identification of information stored in the database easier. Comparing signatures of items to determine whether two items are related is applying a known technique to a known method to yield predictable results.

generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Chesnais discloses generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related. Specifically, Chesnais discloses that the Fishwrap system, in the following order, (1) renders an article, (2) then checks for photos or audio that match the article, and (3) then displays the related photos or audio. *See e.g.*, Chesnais at p. 277 ("The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story. For most Fishwrap readers, articles are rendered in hypertext markup language (HTML) for a WWW browser."; and Chesnais at p. 281 ("One blind student appreciated the.., audio segments for illustrations."). Chesnais further explains "On Demand Publishing: Fishwrap's use of the WWW is different from existing servers. Rather than be an archive of documents, Fishwrap contructs [sic] its personalized news documents on the fly. Building documents on demand allows Fishwrap to provide the most recent news." (*Id.* at 280). Finally, as shown in Figs. 2 and 13, Fishwrap presents a user with photos (thumbnails shown below) and audio (display of a portion or representation of a second segment) that "match" or are related to the article being displayed (the first segment).

Reasons to Combine Chesnais with AP Stylebook and WST Guidelines

Chesnais is directed toward an electronic newspaper that builds a presentation on the fly and combines for users a variety of data types (*e.g.*, newswire stories, photos and audio, video etc.) based on their similarity. Chesnais, p. 275. For example, Chesnais explains that "[w]hen a reader generates a newspaper through Fishwrap ....The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story." Chesnais at p. 277 (emphasis added).

Chesnais also discloses receiving news feeds from the Associated Press ("AP"). Chesnais, p. 278; Fig. 6. Further, one skilled in the art would understand that news wire services have long provided photographs by wire service, since at least 1935 when the AP introduced its Wirephoto Network (*see e.g.*, http://www.ap.org/pages/history/photos.htm) (describing the development of AP's news wire photo service). Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. These guidelines specify the content and format of headers applied to newswire items, including a field for keywords. WST Guidelines at 1 & 2. The AP used these headers. *Id.* at 1. The AP Stylebook indicates that stories, photos, and graphics follow the same coding requirements for wire transmission. AP Stylebook at p. 297-299. "Every news item in the AP report has a keyword slug line." *Id.* at 299. Further, AP photos had associated text captions. *Id.* at p. 293-296. Chesnais states that the signature added to an item is "derived from the ANPA format coding." Chesnais, p. 279. A person of ordinary skill in the art, looking for a method of determining similarities between two information sources such as the articles and other content disclosed in Chesnais would have been motivated to compare the signatures for the news stories and photos (or sound recordings). Because Chesnais discloses that each item in the system is assigned a "signature" that includes keywords and discloses identifying photos and audio that "match" a news article, and the AP Stylebook discloses that all news items transmitted over the news wire have a slugword containing keywords, one of skill in the art would have been motivated to combine the teachings of the WST Guidelines and the AP Stylebook regarding the slugword keywords with the disclosure of Chesnais to identify matching photos and sound recordings. Because Chesnais explicitly discloses receiving news wire items from the AP, it would have been obvious to use the keyword slugline of an AP news item as a

basis to compare information in Chesnais because the "signatures" contain keywords. Moreover, the combination of Chesnais, the WST Guidelines, and the AP Stylebook yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 21

A method as in claim 20, further comprising the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Chesnais discloses the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (*e.g.*,."[i]f an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Further, as shown in particular in Fig. 13 *above*, the display of the photos (thumbnails) (a second segment) is substantially coextensive in time with the display of the article.

RE: Claim 22

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Chesnais discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. (p. 278) ("Our current Fishwrap news server uses a media-independent representation that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the

underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment.

Chesnais discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment. For example, Figs. 2 and 13 of Chesnais plainly show that the underlying article includes audiovisual data (*e.g.*, images). '507 patent at 9:50-56 ("video data.., includ[es] images" and "'audiovisual data' refers to data that includes audio and/or video data, and may include text data"). This is possible because Fishwrap is able to "accept items with graphics, audio, text and motion pictures." (p. 279.)

RE: Claim 23

A method as in claim 22, further comprising the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Chesnais discloses the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced. For example, Chesnais explains that it uses a web browser and, as shown in Fig. 2, a user may select an article from a list of related articles and have that article displayed or select a photo (*e.g.*, thumbnail). *See e.g.*, Fig. 2; at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation"; "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.") Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify

some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.") (emphasis added). Thus, Chesnais discloses the ability to accept a user selection of a representation or portion of the second segment (thumbnail) and display an audiovisual (*e.g.*, images, graphics, *etc.*) of that segment. Alternatively, it is inherent in Chesnais's disclosure of using a web browser to render the Fishwrap paper to a user that the user could select a thumbnail to display the photo.

RE: Claim 24

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information;

Chesnais discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. Chesnais, p. 278 ("Our current Fishwrap news server uses a media-independent representation that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment; and

Chesnais discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment. As explained immediately above, the articles in Chesnais may include a variety of data types, including graphics, photos and audio data. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article

summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.").

the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment.

Chesnais discloses the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment. For example, as shown in Fig. 2 a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.") Also, Chesnais discloses displaying news topics that match each article so that readers may directly view similar articles. *See e.g.*, Chesnais at 276 ("In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.")

RE: Claim 27

A method as in claim 20, further comprising the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Chesnais discloses the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined. For example, as discussed above in connection with claim 20 (comparing step), in Chesnais all incoming items are provided with a signature. As shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data regarding the subject matter of the

underlying item, such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword" that contains keywords, and a "summary."

To the extent it is not inherently disclosed, it would have been obvious to one of ordinary skill in the art that Chesnais's disclosure of "signatures" (described *above*) and checking Fishwrap's databases for "photos . . . that match the story" would include comparing the signature for a news story with the signatures for photos, including the text captions, (or audio files) to identify photos that are related to the news story by determining a degree of similarity between the news story and photos using predefined degree of similarity, such as matching one or more fields from the signatures (*e.g.*, a slugword, headline, or summary) in view of the AP Stylebook's disclosure of the coding requirement for news wire items. In fact, this is one of the well-known functions that databases are designed to perform, using coded fields to make identification of information stored in the database easier. Comparing signatures of items to determine whether two items are related is applying a known technique to a known method to yield predictable results.

RE: Claim 31

A method as in claim 20, wherein the step of acquiring data further comprises the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network.

Chesnais discloses the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network. As shown for example in Fig. 6, the News Server in Chesnais receives a variety of file types. FIG. 6 also shows that the News Server receives files from the ClariNet online news service, which is one of the information sources identified in the '507 patent at 10:1-3. Chesnais further explains that "[t]he traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats." Thus, Chesnais discloses multiple types of computer-readable files being acquired by Fishwrap.

RE: Claim 34

A method as in claim 20, further comprising the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Chesnais discloses the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction because, for example, using Chesnais's web browser a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.")(emphasis added).

RE: Claim 37

A method as in claim 20, wherein at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data.

Chesnais discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data. For example, Chesnais discloses that incoming items "come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Email is necessarily digital data. Moreover, the news wire services typically provided the information in digital form. *See* OTH-B (e.g., "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream.") Moreover, the Patent Owner admitted that text from news wire services is digital data. *See, e.g.*, '507 at 12:6-8 ("Text data acquired from

online text sources, for example, is acquired in digital form and so can be used directly in such processing.") FIG. 6 of Chesnais shows that the News Server receives files from the ClariNet online text source (news service), which is one of the information sources identified in the '507 patent at 10:1-3.

RE: Claim 38

A method as in claim 20, wherein at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data.

Chesnais discloses that at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data. For example, Chesnais discloses information "come[s] to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Radio frequency reception from the timeframe in which Chesnais was published would include the acquisition of analog data.

RE: Claim 63

A computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, comprising:

Chesnais discloses a computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (e.g., "Fishwrap is an experimental electronic newspaper system available at MIT." (p. 275); "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (*Id.*); "All items coming into the system are analyzed for geographic and topical relevancy." (*Id.*) (emphasis added); "Access to Fishwrap's personalized news system appears as a World Wide Web (WWW) hypertext link" (*Id.*); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to

Fishwrap in many formats: over satellite, radio frequencies, email, and phone line. Each supplier program does three things: First it translates all news items into an internal, wire- independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data. Finally each article is supplied to the Fishwrap news database server." (p. 277) (emphasis added);

> **Note:** in this quotation, Chesnais uses the word "article" in some aspects to refer to "all news items," not just news items that are articles. Further, references in quotes to Chesnais in the form of [number] appear this way in the Chesnais publication and refer to the references listed at the end of the article.

"A Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." (p. 276).) Further as shown in Fig. 6 the "News Server" receives many different types of data, including news wire feeds, evening news stills and video, and audio files. (Fig. 6, at 278). As described above, each of these different data items represent distinct segments that Fishwrap analyzes and creates a "signature" for.

The Fishwrap electronic newspaper system includes multiple servers that contain computer readable medium comprising instructions for performing the functions disclosed by Chesnais (*e.g.*, "Glue provides a standard 'plug and play' set of tools for servers, knowledge representations modules, user profiling systems, and presentation modules." (p. 278)). Further, Chesnais also describes multiple modules interacting as part of Glue, including the News Server acquiring the news items (pp. 278-79), the supplier programs adding signatures (pp. 277 & 278) and the From End Application rendering presentation to a user (p. 277). Certain module names are shown in boldface in Fig. 7 (p. 278).

instructions for acquiring data representing the body of information;

Chesnais discloses instructions for acquiring data representing the body of information (*e.g.*, "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (p. 275); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming

traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." (p. 277); "Suppliers and Servers - Fishwrap receives news from a variety of sources and formats. The traditional news wires (Associated Press, Reuters, Knight- Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats'" (p. 278)). Further, as shown above with respect to Fig. 6, the "NEWS SERVER" acquires information from a variety of sources, including text, video, images and audio. (*Id.*). Chesnais also explains that "[o]ur current Fishwrap news server uses a media- independent representation, that allows it to accept items with graphics, audio, text, and motion pictures. It is up to the presentation application to determine the appropriate medium to provide." (p. 279.) As exemplified by the above citations, Chesnais discloses acquiring a variety of different types of data that make up a body of information.

instructions for storing the acquired data;

Chesnais discloses instructions for storing the acquired data, including for example news wire stories, photos and audio files in databases. *See e.g.*, Chesnais at p. 277 ("[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic ....
Finally each article is supplied to the Fishwrap news database server [4] where it will remain for the next 48 hours."); and Chesnais at p. 278 ("Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story."); see also id. at Fig. 6. Thus, Chesnais describes that it stores all incoming items.

instructions for generating a display of a first segment of the body of information from data that is part of the stored data;

Chesnais discloses instructions for generating a display of a first segment of the body of information from data that is part of the stored data. For example, it discloses generating a display of an article. *See e.g.*, Chesnais at 277 (*e.g.*, "When a reader generates a newspaper through Fishwrap, an article is retrieved if it matches one of the reader's global topics of

interest....[and an "article is then rendered by the from end application"); *see* also Figs. 2 and 13. Chesnais further explains that it uses a web browser to provide the display. *See e.g.*, Chesnais at p. 275 ("World Wide Web browser access allows for easy traversing of the information space (see Figure 2)."). Chesnais further explains how the user navigates to display an article "[a] Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." Chesnais at p. 276. Figs. 2 and 13, further illustrate how a user of Fishwrap can navigate to a particular news item, such as the article "New Evidence About Bombing Suspect Emerges," which represents an example of the display of a first segment generated from the stored data. Further, Fig. 7 shows the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions to display the aforementioned fist segment.

See Chesnais at FIGS. 2 and 13

instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Chesnais discloses instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. As explained below, Chesnais discloses that all incoming items are provided with a signature, which is used for searching, and that when an article is rendered Fishwrap also searches the photo and audio databases for items that "match the story" (*i.e.*, related items). *See e.g.*, Chesnais at 277 ("When a reader generates a newspaper through Fishwrap ....The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story.") (emphasis added); and Chesnais at p. 281 ("One blind student appreciated the . . . audio segments for illustrations."). As discussed in more detail below, Chesnais discloses the "comparing" as identifying "photos and sound recordings that match the story." Chesnais makes this possible

because, as addressed immediately below, the Fishwrap system stores the incoming items (*e.g.*, stories, audio files, and photos) with "signatures" ("data representing" a segment).

For example, Chesnais explains that the "signatures," which are derived from the incoming data are applied to all items coming into the system. Chesnais at p. 275 ("All items coming into the system are analyzed for geographic and topical relevancy."). These signatures are created along with a particular data structure ("Dtype") and provides "inferences" about the item:

> within Fishwrap an article begins when it appears on any incoming data stream.
> Each data stream has its own supplier program which monitors incoming traffic..
> First it translates all news items into an internal, wire-independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item.
> The signature represents an inference made from the data.
> Chesnais at p. 277.

Further, as shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data representing the item (i.e., an inference made from the data), such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword," and a "summary."

> **Note:** the Dtype data structure is described in Chesnais by example, but also by citation to reference [3] Abramson, Nathan S. The dtype library or, how to write a server in less time that it takes to read this manual, Technical Report, Electronic Publishing Group, MIT Media Laboratory, Cambridge, MA, 1992.
>
> See Chesnais at p. 279.

Chesnais further explains that the signatures are used in searches ("because they significant speed up the searches") used to build a paper to present to the user, which presentation, as described above and shown for example by the photo thumbnails in Figs. 2 and 13, also includes "photos and sound recordings that match the story." See e.g., Chesnais at Figs. 2 and 13 and p. 277 (matching) & 279 (using signatures to "significantly speed up the searches."). Thus, the signatures, which include data representing the segments (i.e., a headline

and a summary like those shown in the third portion of Fig. 9), include predetermined criteria used to determine whether particular segments are related.

Chesnais discloses "comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related." However, even if the Examiner determines that Chesnais did not expressly disclose comparing signatures of two items to determine if they are related, it would have been obvious to one of ordinary skill in the art to perform the recited comparison step based on Chesnais's disclosure in view of the AP Stylebook.

Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. Chesnais states that the signature added to an item is "derived from the ANPA format coding." Chesnais, p. 279. As shown in Fig. 9, the signature of an item included, for example, a "slugword" field with keywords. In short, the ANPA format coding for stories and photo captions from the AP provided the same type of information. Thus, to the extent it is not inherently disclosed, it would have been obvious to one of ordinary skill in the art that Chesnais's disclosure of "signatures" (described above) and checking Fishwrap's databases for "photos... that match the story" would include comparing the signature for a news story with the signatures for photos, including the text captions, (or audio files) to identify photos that are related to the news story using predetermined criteria, such as matching one or more fields from the signatures (*e.g.*, a slugword, headline, or summary). In fact, this is one of the well-known functions that databases are designed to perform, using coded fields to make identification of information stored in the database easier. Comparing signatures of items to determine whether two items are related is applying a known technique to a known method to yield predictable results.

instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Chesnais discloses instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related. Specifically, Chesnais discloses that the Fishwrap system, in the following order, (1) renders an article, (2) then checks for photos or audio that match the article, and (3) then displays the related photos or audio. *See e.g.*, Chesnais at p. 277 ("The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story. For most Fishwrap readers, articles are rendered in hypertext markup language (HTML) for a WWW browser."; and Chesnais at p. 281 ("One blind student appreciated the.., audio segments for illustrations."). Chesnais further explains "On Demand Publishing: Fishwrap's use of the WWW is different from existing servers. Rather than be an archive of documents, Fishwrap contructs [sic] its personalized news documents on the fly. Building documents on demand allows Fishwrap to provide the most recent news." (*Id.* at 280). Finally, as shown in Figs. 2 and 13, Fishwrap presents a user with photos (thumbnails shown below) and audio (display of a portion or representation of a second segment) that ""match" or are related to the article being displayed (the first segment).

See Fishwrap at Figs. 2 and 13.

RE: Claim 64

A computer readable medium as in claim 63, further comprising instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Chesnais discloses instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (*e.g.*,."[i]f an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Further, as shown in particular in Fig. 13 above, the display of the photos (thumbnails) (a second segment) is substantially coextensive in time with the display of the article.

RE: Claim 65

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Chesnais discloses instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data because as explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. (p. 278) ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio). Thus Chesnais discloses that Fishwrap has instructions for acquiring audiovisual data.

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment.

Chesnais discloses instructions for generating an audiovisual display of the first segment. For example, Figs. 2 and 13 of Chesnais plainly show that the underlying article includes audiovisual data (*e.g.*, images). '507 patent at 9:50-56 ("video data.., includ[es] images" and "'audiovisual data' refers to data that includes audio and/or video data, and may include text data"). This is possible because Fishwrap is able to "accept items with graphics, audio, text and motion pictures." (p. 279.) Thus, Chesnais discloses that Fishwrap has instructions for generating

an audiovisual display.

RE: Claim 66

A computer readable medium as in claim 65, further comprising instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Chesnais discloses instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced. For example, Chesnais explains that it uses a web browser and, as shown in Fig. 2, a user may select an article from a list of related articles and have that article displayed or select a photo (*e.g.*, thumbnail). *See e.g.*, Fig. 2; at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation"; "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.") Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.") (emphasis added). Thus, Chesnais discloses the ability to accept a user selection of a representation or portion of the second segment (thumbnail) and display an audiovisual (*e.g.*, images, graphics, etc.) of that segment. Alternatively, it is inherent in Chesnais's disclosure of using a web browser to render the Fishwrap paper to a user that the user could select a thumbnail to display the photo. As exemplified by the above citations, Chesnais discloses that Fishwrap includes instructions for identifying a second segment for which a portion or representation is displayed.

RE: Claim 67

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for

acquiring audiovisual data representing at least a portion of the body of information;

Chesnais discloses instructions for acquiring audiovisual data representing at least a portion of the body of information because as explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. Chesnais, p. 278 ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment; and

Chesnais discloses instructions for generating an audiovisual display of the first segment. As explained immediately above, the articles in Chesnais may include a variety of data types, including graphics, photos and audio data. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Fig. 7 shows the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions for generating an audiovisual display.

the instructions for generating a display of a portion of, or a representation of, a second segment of the body of information further comprise instructions for generating a text display of the portion or representation of the second segment.

Chesnais discloses instructions for generating a text display of the portion or representation of the second segment. For example, as shown in Fig. 2 a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais

at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.") Also, Chesnais discloses displaying news topics that match each article so that readers may directly view similar articles. *See e.g.*, Chesnais at 276 ("In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.") Fig. 7 shows the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions for generating a text display.

RE: Claim 70

> **A computer readable medium as in claim 63, further comprising instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.**

Chesnais discloses instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined. For example, as discussed above in connection with claim 20 (comparing step), in Chesnais all incoming items are provided with a signature. As shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data regarding the subject matter of the underlying item, such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword" that contains keywords, and a "summary."

To the extent it is not inherently disclosed, it would have been obvious to one of ordinary skill in the art that Chesnais's disclosure of "signatures" (described above) and checking Fishwrap's databases for "photos . . . that match the story" would include comparing the signature for a news story with the signatures for photos, including the text captions, (or audio files) to identify photos that are related to the news story by determining a degree of similarity

between the news story and photos using predefined degree of similarity, such as matching one or more fields from the signatures (*e.g.*, a slugword, headline, or summary) in view of the AP Stylebook's disclosure of the coding requirement for news wire items. In fact, this is one of the well-known functions that databases are designed to perform, using coded fields to make identification of information stored in the database easier. Comparing signatures of items to determine whether two items are related is applying a known technique to a known method to yield predictable results.

RE: Claim 74

A computer readable medium as in claim 63, wherein the instructions for acquiring data further comprise instructions for acquiring computer- readable data files over a computer network from an information providing site that is part of that network.

Chesnais discloses instructions for acquiring computer-readable data files over a computer network from an information providing site that is part of that network. As shown for example in Fig. 6, the News Server in Chesnais receives a variety of file types. FIG. 6 also shows that the News Server receives files from the ClariNet online news service, which is one of the information sources identified in the '507 patent at 10:1-3. Chesnais further explains that "[t]he traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats." Thus, Chesnais discloses multiple types of computer-readable files being acquired by Fishwrap, and discloses that Fishwrap has instructions for acquiring computer readable data files over a computer network.

RE: Claim 77

A computer readable medium as in claim 63, further comprising instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Chesnais discloses instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is

begun in response to the user instruction, because, for example, using Chesnais' web browser a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. See Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.")(emphasis added). As exemplified by the above citations, Chesnais discloses that Fishwrap includes instructions for identifying an instruction from a user to begin displaying a first segment.

RE: Claim 80

A computer readable medium as in claim 63, wherein at least some of the acquired data is digital data, the instructions for acquiring data further comprising instructions for acquiring digital data.

Chesnais discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data. For example, Chesnais discloses that incoming items "come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Email is necessarily digital data. Moreover, the news wire services typically provided the information in digital form. *See* OTH-B (*e.g.*, "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream.") Moreover, the Patent Owner admitted that text from news wire services is digital data. *See, e.g.*, '507 at 12:6-8 ("Text data acquired from online text sources, for example, is acquired in digital form and so can be used directly in such processing.") FIG. 6 of Chesnais shows that the News Server receives files from the ClariNet online text source (news service), which is one of the information sources identified in the '507

patent at 10:1-3. Thus Chesnais discloses that Fishwrap has instructions for acquiring digital data.

RE: Claim 81

A computer readable medium as in claim 63, wherein at least some of the acquired data is analog data, the instructions for acquiring data further comprising instructions for acquiring analog data.

Chesnais discloses that at least some of the acquired data is analog data, the instruction for acquiring data further comprising instructions for acquiring analog data. For example, Chesnais discloses information "come[s] to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Radio frequency reception from the timeframe in which Chesnais was published would include the acquisition of analog data. Thus Chesnais discloses that Fishwrap has instructions for acquiring analog data.

***e.* Ground #5 – Chesnais, AP Stylebook, Wire Service Transmission Guidelines and Patent Owner Admissions**

Claims 28 and 71 are obvious over Chesnais and further in view of AP Stylebook, Wire Service Transmission and further in view of Patent Owner Admissions under 35 USC § 103(a).

RE: Claim 28

A method as in claim 27, wherein the step of determining the similarity of the subject matter of segments further comprises the step of performing a relevance feedback method.

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III). Per MPEP § 2617, admissions, which include admitted prior art, can also be used during the

examination phase of reexamination, i.e., in claim rejections. Section 2617 refers the reader to MPEP § 2258. MPEP § 2258(I)(F)(2) states, "In Seiko, [Ex parte Seiko Koko Kabushiki Kaisha, 225 USPQ 1260 (Bd. Pat. App. & Inter. 2984)] the Board relied on In re Nomiya, 509 F.2d 566, 184 USPQ 607 (CCPA 1975) holding an admission of prior art in the specification of the parent undergoing reexamination is considered prior art which may be considered as evidence of obviousness under 35 U.S.C. 103."

Reasons to Combine Chesnais, AP Stylebook, Wire Service Transmission Guidelines with Patent Owner Admissions

Chesnais is directed toward an electronic newspaper that builds a presentation on the fly and combines for users a variety of data types (*e.g.*, newswire stories, photos and audio, video etc.) based on their similarity. Chesnais, p. 275. Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. These guidelines specify the content and format of headers applied to newswire items, including a field for keywords. WST Guidelines at 1 & 2. The AP used these headers. *Id.* at 1. The AP Stylebook discloses coding requirements for newswire transmission of news items, including photos. AP Stylebook, p. 293-302. Further, the '507 patent is also directed toward identifying and displaying news stories that are related to a television news program. '507 patent at Abstract. Chesnais and the '507 patent both describe comparing data representing news items, including text news items. The '507 patent discloses that relevance feedback was well known for use in determining the similarities between two sets of information, particularly text (*e.g.*, "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). '507 patent at 28:55-29:3.

> **Note:** the Patent owner also admits that the prior art incorporated by reference into the '507 patent touts the benefits of using relevance feedback. See, e.g., "Improving Retrieval Performance by Relevance Feedback," Salton, G., Journal of the American Society for Information Science, vol. 41, no. 4, pp. 288-297 ("Salton"); *see* also "The Effect of Adding Relevance Information in a Relevance Feedback Environment," Buckley, C., et al., Proceedings of 17th International Conference on Research and Development in

Information Retrieval, DIGIR 94, Springer-verlag (Germany), 1994, pp. 292-300 ("Buckley").

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, particularly two text sources, such as the articles and other content disclosed in Chesnais, would have been motivated to use the relevance feedback method of the prior art as discussed in the '507 patent. Thus, it would have been obvious to use a relevance feedback method to compare information in Chesnais since this reference and the admissions relate to well-known methods of comparing information. Moreover, the combination of Chesnais, the AP Stylebook, the WST Guidelines, and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

Note: that the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 28 obvious.

RE: Claim 71

A computer readable medium as in claim 70, wherein the instructions for determining the similarity of the subject matter of segments further comprise instructions for performing a relevance feedback method.

Claim 71 depends from claim 70 and recites the same additional limitation as in claim 28 that the degree of similarity is determined by "a relevance feedback method." Thus, for the same reasons explained above in connection with claim 28, claim 70 would have been obvious in view of Chesnais or Bender, alone or in combination with the Patent Owner's admissions (regarding the use of relevance feedback as well known in the art for comparing text segments).

Note: that the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 71 obvious.

***f.* Ground #6 – Chesnais and Bender**

Claims 20-24, 27, 31, 34, 37, 38, 63-67, 70, 74, 77, 80, and 81 are obvious over Chesnais in view of Bender under 35 USC § 103(a).

RE: Claim 20

A method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, the method comprising the steps of:

Chesnais discloses a method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "Fishwrap is an experimental electronic newspaper system available at MIT." (p. 275); "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (*Id.*); "All items coming into the system are analyzed for geographic and topical relevancy." (Id.) (emphasis added); "Access to Fishwrap's personalized news system appears as a World Wide Web (WWW) hypertext link" (*Id.*); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line. Each supplier program does three things: First it translates all news items into an internal, wire- independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data. Finally each article is supplied to the Fishwrap news database server." (p. 277) (emphasis added);

> **Note:** in this quotation, Chesnais uses the word "article" in some aspects to refer to "all news items," not just news items that are articles. Further, references in quotes to Chesnais in the form of [number] appear this way in the Chesnais publication and refer to the references listed at the end of the article.

"A Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." (p.

276).) Further as shown in Fig. 6 the "News Server" receives many different types of data, including news wire feeds, evening news stills and video, and audio files. (Fig. 6, at 278). As described above, each of these different data items represent distinct segments that Fishwrap analyzes and creates a "signature" for.

Reasons to Combine Chesnais and Bender

Chesnais is directed toward an electronic newspaper that builds a presentation on the fly and combines for users a variety of data types (*e.g.*, newswire stories, photos and audio, video etc.) based on their similarity. Chesnais, p. 275. Similarly, Bender is directed to presenting news broadcasts and related news articles to users. Bender, p. 81. Both the Network Plus system of Bender and the Fishwrap system of Chesnais were developed at the MIT Media Laboratory, and Dr. Chesnais is a co-author of both publications. A person of ordinary skill in the art, looking for a method of determining similarities between two information sources such as the articles and other content disclosed in Chesnais would have been motivated to use the keyword matching scheme of Bender. Because Chesnais discloses that each item in the system is assigned a "signature" that includes keywords and discloses identifying photos and audio that "match" a news article, and Bender discloses using a keyword matching scheme to "match" news stories to a broadcast, one of skill in the art would have been motivated to combine Bender's keyword matching scheme with the disclosure of Chesnais to identify matching photos and sound recordings. Bender discloses that the Network Plus system's use of a threshold of four matching keywords to identify related items was "computationally inexpensive" and "worked well." Bender, p. 82. Thus, it would have been obvious to use the keyword matching scheme of Bender to compare information in Chesnais because the "signatures" contain keywords and the keyword matching scheme of Bender was "computationally inexpensive" yet also "worked well." Moreover, the combination of Chesnais and Bender yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

acquiring data representing the body of information;

Chesnais discloses acquiring data representing the body of information (*e.g.*, "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (p. 275); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." (p. 277); "Suppliers and Servers - Fishwrap receives news from a variety of sources and formats. The traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats'" (p. 278)). Further, as shown above with respect to Fig. 6, the "NEWS SERVER" acquires information from a variety of sources, including text, video, images and audio. (*Id.*). Chesnais also explains that "[o]ur current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures. It is up to the presentation application to determine the appropriate medium to provide." (p. 279.) As exemplified by the above citations, Chesnais discloses acquiring a variety of different types of data that make up a body of information.

storing the acquired data;

Chesnais discloses storing the acquired data, including for example news wire stories, photos and audio files in databases. *See e.g.*, Chesnais at p. 277 ("[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic ....Finally each article is supplied to the Fishwrap news database server [4] where it will remain for the next 48 hours."); and Chesnais at p. 278 ("Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story."); *see* also *id.* at Fig. 6. Thus, Chesnais describes that it stores all incoming items.

generating a display of a first segment of the body of information from data that is part of the stored data;

Chesnais discloses generating a display of a first segment of the body of information from data that is part of the stored data. For example, it discloses generating a display of an

article. *See e.g.*, Chesnais at 277 (*e.g.*, "When a reader generates a newspaper through Fishwrap, an article is retrieved if it matches one of the reader's global topics of interest .... [and an "article is then rendered by the front end application"); *see* also Figs. 2 and 13. Chesnais further explains that it uses a web browser to provide the display. *See e.g.*, Chesnais at p. 275 ("World Wide Web browser access allows for easy traversing of the information space (see Figure 2)."). Chesnais further explains how the user navigates to display an article "[a] Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." Chesnais at p. 276. Figs. 2 and 13, further illustrate how a user of Fishwrap can navigate to a particular news item, such as the article "New Evidence About Bombing Suspect Emerges," which represents an example of the display of a first segment generated from the stored data.

See Chesnais at FIGS. 2 and 13

comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Chesnais discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. As explained below, Chesnais discloses that all incoming items are provided with a signature, which is used for searching, and that when an article is rendered Fishwrap also searches the photo and audio databases for items that "match the story" (*i.e.*, related items). *See e.g.*, Chesnais at 277 ("When a reader generates a newspaper through Fishwrap ....The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story.") (emphasis added); and Chesnais at p. 281 ("One blind student appreciated the . . . audio segments for illustrations."). As discussed in more detail below, Chesnais discloses the "comparing" as identifying "photos and sound recordings that match the story." Chesnais makes this possible

because, as addressed immediately below, the Fishwrap system stores the incoming items (*e.g.*, stories, audio files, and photos) with "signatures" ("data representing" a segment).

For example, Chesnais explains that the "signatures," which are derived from the incoming data are applied to all items coming into the system. Chesnais at p. 275 ("All items coming into the system are analyzed for geographic and topical relevancy."). These signatures are created along with a particular data structure ("Dtype") and provides "inferences" about the item:

> within Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic..
> First it translates all news items into an internal, wire-independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data.
> Chesnais at p. 277.

> **Note:** the Dtype data structure is described in Chesnais by example, but also by citation to reference [3] Abramson, Nathan S. The dtype library or, how to write a server in less time that it takes to read this manual, Technical Report, Electronic Publishing Group, MIT Media Laboratory, Cambridge, MA, 1992.

Further, as shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data representing the item (i.e., an inference made from the data), such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword," and a "summary."

See Chesnais at p. 279.

Chesnais further explains that the signatures are used in searches ("because they significantly speed up the searches") used to build a paper to present to the user, which presentation, as described above and shown for example by the photo thumbnails in Figs. 2 and 13, also includes "photos and sound recordings that match the story." *See e.g.*, Chesnais at Figs. 2 and 13 and p. 277 (matching) & 279 (using signatures to "significantly speed up the searches."). Thus, the signatures, which include data representing the segments (*i.e.*, a headline and a summary like those shown in the third portion of Fig. 9), include predetermined criteria used to determine whether particular segments are related.

Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. Chesnais states that the signature added to an item is "derived from the ANPA format coding." Chesnais, p. 279. As shown in Fig. 9, the signature of an item included a "slugword" field with keywords. Therefore, one of ordinary skill in the art would understand that the signature for photos stored in the Fishwrap database included a slugword field containing keywords associated with the photos.

Chesnais discloses "comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related." However, even if the Examiner determined that Chesnais did not expressly or inherently disclose comparing signatures of two items to determine if they are related, it would have been obvious to one of ordinary skill in the art to perform the recited comparison step on Chesnais's signatures using the comparison technique disclosed in Bender. Bender discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. For example, Bender compares closed caption data representing a news broadcast (one segment) to news wire text stories (different segments) via keyword matching to determine, whether according to predetermined criteria (*e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process) ("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast."(emphasis added); "The primary function of Network Plus is to correlate news wire stories and live broadcasts ....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related ....A threshold of four words worked well in this experiment...") (emphasis added). Bender further provides a specific example illustrating the process for comparing a news wire story about the nuclear accident at Chernobyl to a television broadcast on "ABC Nightly News" to determine they were related. Id. Thus,

Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (*e.g.*, four common words), the broadcast and the news wire story are related.

One of skill in the art would have been motivated to combine Bender's keyword matching scheme with the disclosure of Chesnais to identify matching photos and sound recording at least because Chesnais discloses that all items in the Fishwrap system are assigned a "signature" that includes keywords, and further discloses identifying photos and audio files in its database that "match" a news article, and Bender discloses using a keyword matching scheme to "match" news stories to a broadcast. Thus, to the extent that Chesnais does not expressly or inherently disclose using predetermined criteria to "compar[e] data representing a segment of the body of information to data representing a different segment of the body of information to determine whether.., the compared segments are related," using a predefined threshold for a number of keywords that match as disclosed in Bender would have been obvious to one of ordinary skill in the art based upon Chesnais in view of Bender.

generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Chesnais discloses generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related. Specifically, Chesnais discloses that the Fishwrap system, in the following order, (1) renders an article, (2) then checks for photos or audio that match the article, and (3) then displays the related photos or audio. *See e.g.*, Chesnais at p. 277 ("The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story. For most Fishwrap readers, articles are rendered in hypertext markup language (HTML) for a WWW browser."; and Chesnais at p. 281 ("One blind student appreciated the . . . audio segments for illustrations."). Chesnais further explains "On

Demand Publishing: Fishwrap's use of the WWW is different from existing servers. Rather than be an archive of documents, Fishwrap contructs [sic] its personalized news documents on the fly. Building documents on demand allows Fishwrap to provide the most recent news." (*Id.* at 280). Finally, as shown in Figs. 2 and 13, Fishwrap presents a user with photos (thumbnails shown below) and audio (display of a portion or representation of a second segment) that "match" or are related to the article being displayed (the first segment).

See Figs. 2 and 13

RE: Claim 21

A method as in claim 20, further comprising the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Chesnais discloses the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (*e.g.*,."[i]f an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Further, as shown in particular in Fig. 13 above, the display of the photos (thumbnails) (a second segment) is substantially coextensive in time with the display of the article.

RE: Claim 22

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Chesnais discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or

video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. (p. 278) ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment.

Chesnais discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment. For example, Figs. 2 and 13 of Chesnais plainly show that the underlying article includes audiovisual data (*e.g.*, images). '507 patent at 9:50-56 ("video data.., includ[es] images" and "'audiovisual data' refers to data that includes audio and/or video data, and may include text data"). This is possible because Fishwrap is able to "accept items with graphics, audio, text and motion pictures." (p. 279.)

RE: Claim 23

A method as in claim 22, further comprising the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Chesnais discloses the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced. For example, Chesnais explains that it uses a web browser and, as shown in Fig. 2, a user may select an article from a list of related articles and have that article displayed or select a photo (*e.g.*, thumbnail). *See e.g.*, Fig. 2; at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation"; "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.")

Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.") (emphasis added). Thus, Chesnais discloses the ability to accept a user selection of a representation or portion of the second segment (thumbnail) and display an audiovisual (*e.g.*, images, graphics, *etc.*) of that segment. Alternatively, it is inherent in Chesnais's disclosure of using a web browser to render the Fishwrap paper to a user that the user could select a thumbnail to display the photo.

RE: Claim 24

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information;

Chesnais discloses the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. Chesnais, p. 278 ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment; and

Chesnais discloses the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment. As explained immediately above, the articles in Chesnais may include a variety of data types, including graphics, photos and audio data. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.").

the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment.

Chesnais discloses the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment. For example, as shown in Fig. 2 a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.") Also, Chesnais discloses displaying news topics that match each article so that readers may directly view similar articles. *See e.g.*, Chesnais at 276 ("In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.")

RE: Claim 27

A method as in claim 20, further comprising the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Chesnais in view of Bender discloses the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of

similarity with respect to which the relatedness of the compared segments is determined. For example, as discussed above in connection with claim 20 (comparing step), in Chesnais all incoming items are provided with a signature. As shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data regarding the subject matter of the underlying item, such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword" that contains keywords, and a "summary."

Further, as discussed above in connection with claim 20 (comparing step) Bender discloses comparing closed caption data representing a news broadcast (one segment) to news wire text stories (different segments) via keyword matching to determine, whether according to predetermined criteria including a predefined degree of similarity (*e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process) ("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast."(emphasis added); "The primary function of Network Plus is to correlate news wire stories and live broadcasts ....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related . . . A threshold of four words worked well in this experiment. . .") (emphasis added). Thus, Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (*e.g.*, four common words), the broadcast and the news wire story are related. Keywords indicate the subject matter content of a broadcast and a news story, and the threshold of four matching keywords disclosed in Bender is a predefined degree of similarity with respect to which the relatedness of compared segments is determined.

As explained *above*, one of skill in the art would have been motivated to combine Bender's keyword matching scheme with the disclosure of Chesnais to identify matching photos and sound recordings at least because Chesnais discloses that all items in the Fishwrap system are assigned a "signature" that includes keywords, and further discloses identifying photos and audio files in its database that "match" a news article, and Bender discloses using a keyword

matching scheme to "match" news stories to a broadcast. Thus, to the extent that Chesnais does not expressly or inherently disclose "determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined," using a predefined threshold for a number of keywords that match as disclosed in Bender would have been obvious to one of ordinary skill in the art based upon Chesnais in view of Bender.

RE: Claim 31

A method as in claim 20, wherein the step of acquiring data further comprises the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network.

Chesnais discloses the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network. As shown for example in Fig. 6, the News Server in Chesnais receives a variety of file types. FIG. 6 also shows that the News Server receives files from the ClariNet online news service, which is one of the information sources identified in the '507 patent at 10:1-3. Chesnais further explains that "[t]he traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats." Thus, Chesnais discloses multiple types of computer-readable files being acquired by Fishwrap.

RE: Claim 34

A method as in claim 20, further comprising the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Chesnais discloses the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction because, for example, using Chesnais's web browser a user may select an

article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.")(emphasis added).

RE: Claim 37

A method as in claim 20, wherein at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data.

Chesnais discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data. For example, Chesnais discloses that incoming items "come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Email is necessarily digital data. Moreover, the news wire services typically provided the information in digital form. *See* OTH-B (*e.g.*, "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream.") Moreover, the Patent Owner admitted that text from news wire services is digital data. *See, e.g.*, '507 at 12:6-8 ("Text data acquired from online text sources, for example, is acquired in digital form and so can be used directly in such processing.") FIG. 6 of Chesnais shows that the News Server receives files from the ClariNet online text source (news service), which is one of the information sources identified in the '507 patent at 10:1-3.

RE: Claim 38

A method as in claim 20, wherein at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data.

Chesnais discloses that at least some of the acquired data is analog data, the step of acquiring data further comprising the step of acquiring analog data. For example, Chesnais discloses information "come[s] to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Radio frequency reception from the timeframe in which Chesnais was published would include the acquisition of analog data.

RE: Claim 63

A computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, comprising:

Chesnais discloses a computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "Fishwrap is an experimental electronic newspaper system available at MIT." (p. 275); "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (*Id.*); "All items coming into the system are analyzed for geographic and topical relevancy." (*Id.*) (emphasis added); "Access to Fishwrap's personalized news system appears as a World Wide Web (WWW) hypertext link" (*Id.*); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line. Each supplier program does three things: First it translates all news items into an internal, wire- independent representation using Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data. Finally each article is supplied to the Fishwrap news database server." (p. 277) (emphasis added); "A Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." (p. 276).)

> **Note:** as shown in this quotation, Chesnais uses the word "article" in some aspects to refer to "all news items," not just news items that are articles. Further, references in quotes to Chesnais in the form of [number] appear this way in the Chesnais publication and refer to the references listed at the end of the article.

Further as shown in Fig. 6 the "News Server" receives many different types of data, including news wire feeds, evening news stills and video, and audio files. (Fig. 6, at 278). As described above, each of these different data items represent distinct segments that Fishwrap analyzes and creates a "signature" for.

The Fishwrap electronic newspaper system includes multiple servers that contain computer readable medium comprising instructions for performing the functions disclosed by Chesnais (e.g., "Glue provides a standard 'plug and play' set of tools for servers, knowledge representations modules, user profiling systems, and presentation modules." (p. 278)). Further, Chesnais also describes multiple modules interacting as part of Glue, including the News Server acquiring the news items (pp. 278-79), the supplier programs adding signatures (pp. 277 & 278) and the From End Application rendering presentation to a user (p. 277). Certain module names are shown in boldface in Fig. 7 (p. 278).

instructions for acquiring data representing the body of information;

Chesnais discloses instructions for acquiring data representing the body of information (*e.g.*, "The Fishwrap design readily accepts traditional news wire stories and direct contributions from the community." (p. 275); "[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic. Articles come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." (p. 277); "Suppliers and Servers - Fishwrap receives news from a variety of sources and formats. The traditional news wires (Associated Press, Reuters, Knight- Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats'" (p. 278)). Further, as shown above with respect to Fig. 6, the "NEWS SERVER" acquires information from a variety of sources, including text, video, images and audio. (*Id.*). Chesnais also explains that "[o]ur current Fishwrap news server uses a media- independent representation,

that allows it to accept items with graphics, audio, text, and motion pictures. It is up to the presentation application to determine the appropriate medium to provide." (p. 279.) As exemplified by the above citations, Chesnais discloses that Fishwrap includes instructions for acquiring a variety of different types of data that would make up a body of information.

instructions for storing the acquired data;

Chesnais discloses instructions for storing the acquired data, including for example news wire stories, photos and audio files in databases. *See e.g.*, Chesnais at p. 277 ("[W]ithin Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic ....Finally each article is supplied to the Fishwrap news database server [4] where it will remain for the next 48 hours."); and Chesnais at p. 278 ("Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story."); *see* also *id.* at Fig. 6. Thus, Chesnais describes that it stores all incoming items.

instructions for generating a display of a first segment of the body of information from data that is part of the stored data;

Chesnais discloses instructions for generating a display of a first segment of the body of information from data that is part of the stored data. For example, it discloses generating a display of an article. *See e.g.*, Chesnais at 277 (*e.g.*, "When a reader generates a newspaper through Fishwrap, an article is retrieved if it matches one of the reader's global topics of interest. . . .[and an "article is then rendered by the front end application"); see also Figs. 2 and 13. Chesnais further explains that it uses a web browser to provide the display. *See e.g.*, Chesnais at p. 275 ("World Wide Web browser access allows for easy traversing of the information space (*see* Figure 2)."). Chesnais further explains how the user navigates to display an article--"[a] Fishwrap reader starts with their edition's table of contents, then focuses on a particular news topic and, ultimately, articles that are illustrated with graphics and audio." Chesnais at p. 276. Figs. 2 and 13, further illustrate how a user of Fishwrap can navigate to a particular news item, such as the article "New Evidence About Bombing Suspect Emerges," which represents an example of the display of a first segment generated from the stored data. Further, Fig. 7 shows

the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions to display the aforementioned fist segment.

See Chesnais at FIGS. 2 and 13

instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

Chesnais discloses instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. As explained below, Chesnais discloses that all incoming items are provided with a signature, which is used for searching, and that when an article is rendered Fishwrap also searches the photo and audio databases for items that "match the story" (i.e., related items). *See e.g.*, Chesnais at 277 ("When a reader generates a newspaper through Fishwrap ....The article is then rendered by the front end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story.") (emphasis added); and Chesnais at p. 281 ("One blind student appreciated the . . . audio segments for illustrations."). As discussed in more detail below, Chesnais discloses the "comparing" as identifying "photos and sound recordings that match the story." Chesnais makes this possible because, as addressed immediately below, the Fishwrap system stores the incoming items (*e.g.*, stories, audio files, and photos) with "signatures" ("data representing" a segment).

For example, Chesnais explains that the "signatures," which are derived from the incoming data are applied to all items coming into the system. Chesnais at p. 275 ("All items coming into the system are analyzed for geographic and topical relevancy."). These signatures are created along with a particular data structure ("Dtype") and provides "inferences" about the item:

> within Fishwrap an article begins when it appears on any incoming data stream. Each data stream has its own supplier program which monitors incoming traffic.. First it translates all news items into an internal, wire-independent representation using

> Dtype [3] expandable data structure. Second the supplier adds a signature to each item. The signature represents an inference made from the data. Chesnais at p. 277.
>
> **Note:** as shown in this quotation, Chesnais uses the word "article" in some aspects to refer to "all news items," not just news items that are articles. Further, references in quotes to Chesnais in the form of [number] appear this way in the Chesnais publication and refer to the references listed at the end of the article.

Further, as shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data representing the item (*i.e.*, an inference made from the data), such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword," and a "summary." *See* Chesnais at p. 279.

Chesnais further explains that the signatures are used in searches ("because they significantly speed up the searches") used to build a paper to present to the user, which presentation, as described above and shown for example by the photo thumbnails in Figs. 2 and 13, also includes "photos and sound recordings that match the story." *See e.g.*, Chesnais at Figs. 2 and 13 and p. 277 (matching) & 279 (using signatures to "significantly speed up the searches."). Thus, the signatures, which include data representing the segments (i.e., a headline and a summary like those shown in the third portion of Fig. 9), include predetermined criteria used to determine whether particular segments are related.

Chesnais references the Wire Service Transmission Guidelines Special Report No. 84-2, from the American Newspaper Publishers Association (ANPA). Chesnais at p. 278 & 282. Chesnais states that the signature added to an item is "derived from the ANPA format coding." Chesnais, p. 279. As shown in Fig. 9, the signature of an item included a "slugword" field with keywords. Therefore, one of ordinary skill in the art would understand that the signature for photos stored in the Fishwrap database included a slugword field containing keywords associated with the photos.

Chesnais discloses "comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related." However, even if the

Examiner determined that Chesnais did not expressly or inherently disclose comparing signatures of two items to determine if they are related, it would have been obvious to one of ordinary skill in the art to perform the recited comparison step on Chesnais's signatures using the comparison technique disclosed in Bender. Bender discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related. For example, Bender compares closed caption data representing a news broadcast (one segment) to news wire text stories (different segments) via keyword matching to determine, whether according to predetermined criteria *(e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process) ("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast."(emphasis added); "The primary function of Network Plus is to correlate news wire stories and live broadcasts ....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related ....A threshold of four words worked well in this experiment...") (emphasis added). Bender further provides a specific example illustrating the process for comparing a news wire story about the nuclear accident at Chernobyl to a television broadcast on "ABC Nightly News" to determine they were related. *Id.* Thus, Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (*e.g.*, four common words), the broadcast and the news wire story are related.

One of skill in the art would have been motivated to combine Bender's keyword matching scheme with the disclosure of Chesnais to identify matching photos and sound recording at least because Chesnais discloses that all items in the Fishwrap system are assigned a "signature" that includes keywords, and further discloses identifying photos and audio files in its database that "match" a news article, and Bender discloses using a keyword matching scheme to "match" news stories to a broadcast. Thus, to the extent that Chesnais does not expressly or inherently disclose

using predetermined criteria to "compar[e] data representing a segment of the body of information to data representing a different segment of the body of information to determine whether.., the compared segments are related," using a predefined threshold for a number of keywords that match as disclosed in Bender would have been obvious to one of ordinary skill in the art based upon Chesnais in view of Bender.

instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Chesnais discloses instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related. Specifically, Chesnais discloses that the Fishwrap system, in the following order, (1) renders an article, (2) then checks for photos or audio that match the article, and (3) then displays the related photos or audio. *See e.g.*, Chesnais at p. 277 ("The article is then rendered by the from end application with hints given by the signatures. Fishwrap also checks its photo and audio databases to see if there are photos and sound recordings that match the story. For most Fishwrap readers, articles are rendered in hypertext markup language (HTML) for a WWW browser."; and Chesnais at p. 281 ("One blind student appreciated the.., audio segments for illustrations."). Chesnais further explains "On Demand Publishing: Fishwrap's use of the WWW is different from existing servers. Rather than be an archive of documents, Fishwrap contructs [sic] its personalized news documents on the fly. Building documents on demand allows Fishwrap to provide the most recent news." (*Id.* at 280). Finally, as shown in Figs. 2 and 13, Fishwrap presents a user with photos (thumbnails shown below) and audio (display of a portion or representation of a second segment) that "match" or are related to the article being displayed (the first segment).

See Figs. 2 and 13

RE: Claim 64

A computer readable medium as in claim 63, further comprising instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Chesnais discloses instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (e.g.,."[i]f an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Further, as shown in particular in Fig. 13 above, the display of the photos (thumbnails) (a second segment) is substantially coextensive in time with the display of the article.

RE: Claim 65

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

Chesnais discloses instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data because as explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. See '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. (p. 278) ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio). Thus Chesnais discloses that Fishwrap has instructions for acquiring audiovisual data.

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment.

Chesnais discloses instructions for generating an audiovisual display of the first segment. For example, Figs. 2 and 13 of Chesnais plainly show that the underlying article includes audiovisual data (*e.g.*, images). '507 patent at 9:50-56 ("video data.., includ[es] images" and "'audiovisual data' refers to data that includes audio and/or video data, and may include text data"). This is possible because Fishwrap is able to "accept items with graphics, audio, text and motion pictures." (p. 279.) Thus, Chesnais discloses that Fishwrap has instructions for generating an audiovisual display.

RE: Claim 66

A computer readable medium as in claim 65, further comprising instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Chesnais discloses instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced. For example, Chesnais explains that it uses a web browser and, as shown in Fig. 2, a user may select an article from a list of related articles and have that article displayed or select a photo (*e.g.*, thumbnail). *See e.g.*, Fig. 2; at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation"; "In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.") Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides

a uniform mechanism for accepting input from the reader.") (emphasis added). Thus, Chesnais discloses the ability to accept a user selection of a representation or portion of the second segment (thumbnail) and display an audiovisual (*e.g.*, images, graphics, etc.) of that segment. Alternatively, it is inherent in Chesnais's disclosure of using a web browser to render the Fishwrap paper to a user that the user could select a thumbnail to display the photo. As exemplified by the above citations, Chesnais discloses that Fishwrap includes instructions for identifying a second segment for which a portion or representation is displayed.

RE: Claim 67

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information;

Chesnais discloses instructions for acquiring audiovisual data representing at least a portion of the body of information because as explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. As explained and shown above, the first segment may include images and the "related" segments include photos and/or audio. *See* '507 patent at 9:47-60 (audiovisual data includes "audio and/or video data [which includes images]"). Further, Chesnais explains that the data used to build the Fishwrap newspaper comes in all forms, including video and graphics files. Chesnais, p. 278 ("Our current Fishwrap news server uses a media-independent representation, that allows it to accept items with graphics, audio, text, and motion pictures.") Finally, as shown in Fig. 13, both the underlying article and the photos that are displayed include images. *See* also Chesnais Fig. 6 (News Server acquires multiple types of data, including text, video, images and audio).

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment; and

Chesnais discloses instructions for generating an audiovisual display of the first segment. As explained immediately above, the articles in Chesnais may include a variety of data types,

including graphics, photos and audio data. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Fig. 7 shows the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions for generating an audiovisual display.

the instructions for generating a display of a portion of, or a representation of, a second segment of the body of information further comprise instructions for generating a text display of the portion or representation of the second segment.

Chesnais discloses instructions for generating a text display of the portion or representation of the second segment. For example, as shown in Fig. 2 a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation.") Also, Chesnais discloses displaying news topics that match each article so that readers may directly view similar articles. *See e.g.*, Chesnais at 276 ("In addition, each article displays the news topics which it matches. This enables the readers to directly view similar articles.") Fig. 7 shows the "appRender" module that renders the articles (p. 278). Thus, Chesnais discloses that Fishwrap has instructions for generating a text display.

RE: Claim 70

A computer readable medium as in claim 63, further comprising instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Chesnais discloses instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with

respect to which the relatedness of the compared segments is determined. For example, as discussed above in connection with claim 20 (comparing step), in Chesnais all incoming items are provided with a signature. As shown in Fig. 9 of Chesnais, the signature process (which adds the content labeled 1 and 3 to the item) provides additional data regarding the subject matter of the underlying item, such as a headline ("Survivors of Crash Victim Sue USAir"), a "slugword" that contains keywords, and a "summary."

Further, as discussed above in connection with claim 20 (comparing step) Bender discloses comparing closed caption data representing a news broadcast (one segment) to news wire text stories (different segments) via keyword matching to determine, whether according to predetermined criteria including a predefined degree of similarity (*e.g.*, a threshold number of matched keywords), the segments are related. *See e.g.*, Bender at pp. 82-83 (describing keyword matching process) ("Network Plus is comprised of two procedural components. One gathers information prior to the broadcast. The other matches stories during the broadcast."(emphasis added); "The primary function of Network Plus is to correlate news wire stories and live broadcasts ....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related ....A threshold of four words worked well in this experiment. .") (emphasis added). Thus, Bender discloses at least comparing the closed caption data for the news broadcast with the news wire text via keyword matching to determine whether according to a predetermined threshold for keyword matching (e.g., four common words), the broadcast and the news wire story are related. Keywords indicate the subject matter content of a broadcast and a news story, and the threshold of four matching keywords disclosed in Bender is a predefined degree of similarity with respect to which the relatedness of compared segments is determined.

As explained above, one of skill in the art would have been motivated to combine Bender's keyword matching scheme with the disclosure of Chesnais to identify matching photos and sound recordings at least because Chesnais discloses that all items in the Fishwrap system are assigned a "signature" that includes keywords, and further discloses identifying photos and audio files in its database that "match" a news article, and Bender discloses using a keyword

matching scheme to "match" news stories to a broadcast. Thus, to the extent that Chesnais does not expressly or inherently disclose "determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined," using a predefined threshold for a number of keywords that match as disclosed in Bender would have been obvious to one of ordinary skill in the art based upon Chesnais in view of Bender.

RE: Claim 74

A computer readable medium as in claim 63, wherein the instructions for acquiring data further comprise instructions for acquiring computer- readable data files over a computer network from an information providing site that is part of that network.

Chesnais discloses instructions for acquiring computer-readable data files over a computer network from an information providing site that is part of that network. As shown for example in Fig. 6, the News Server in Chesnais receives a variety of file types. FIG. 6 also shows that the News Server receives files from the ClariNet online news service, which is one of the information sources identified in the '507 patent at 10:1-3. Chesnais further explains that "[t]he traditional news wires (Associated Press, Reuters, Knight-Ridder/Tribune, and BPI Entertainment all are providing their news feeds to Fishwrap) come in ANPA [7] format. Fishwrap also receives submissions via electronic mail and a number of 'homebrew' formats." Thus, Chesnais discloses multiple types of computer-readable files being acquired by Fishwrap, and discloses that Fishwrap has instructions for acquiring computer readable data files over a computer network.

RE: Claim 77

A computer readable medium as in claim 63, further comprising instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Chesnais discloses instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is

begun in response to the user instruction, because, for example, using Chesnais' web browser a user may select an article from a list of related articles and have that article displayed. *See e.g.*, Fig. 2 and Chesnais at 276 ("If an article summary seems interesting, the reader can expand on it - getting the full text and relevant graphics or audio augmentation."). Chesnais also explains that the use of HTML format allows the user to navigate through the presentation. *See* Chesnais at 279 ("Fishwrap uses hypertext as means of structuring the presentation. It allows the individual to follow links along the Fishwrap table of contents akin to the way one would flip through pages of a traditional newspaper. HTML allows us to specify some of the visual attributes of the documents we present to the individual. HTML also provides a uniform mechanism for accepting input from the reader.")(emphasis added). As exemplified by the above citations, Chesnais discloses that Fishwrap includes instructions for identifying an instruction from a user to begin displaying a first segment.

RE: Claim 80

A computer readable medium as in claim 63, wherein at least some of the acquired data is digital data, the instructions for acquiring data further comprising instructions for acquiring digital data.

Chesnais discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data. For example, Chesnais discloses that incoming items "come to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Email is necessarily digital data. Moreover, the news wire services typically provided the information in digital form. *See* OTH-B (e.g., "The product, called Newshedge [...] gives users access to "live" news from [...] Dow Jones News Service. [...] Newshedge funnels downloaded data into a stream.") Moreover, the Patent Owner admitted that text from news wire services is digital data. *See, e.g.*, '507 at 12:6-8 ("Text data acquired from online text sources, for example, is acquired in digital form and so can be used directly in such processing.") FIG. 6 of Chesnais shows that the News Server receives files from the ClariNet online text source (news service), which is one of the information sources identified in the '507 patent at 10:1-3. Thus Chesnais discloses that Fishwrap has instructions for acquiring digital data.

RE: Claim 81

A computer readable medium as in claim 63, wherein at least some of the acquired data is analog data, the instructions for acquiring data further comprising instructions for acquiring analog data.

Chesnais discloses that at least some of the acquired data is analog data, the instruction for acquiring data further comprising instructions for acquiring analog data. For example, Chesnais discloses information "come[s] to Fishwrap in many formats: over satellite, radio frequencies, email, and phone line." Radio frequency reception from the timeframe in which Chesnais was published would include the acquisition of analog data. Thus Chesnais discloses that Fishwrap has instructions for acquiring analog data.

***g.* Ground #7 – Chesnais, Bender and Patent Owner Admissions**

Claims 28 and 71 are obvious over Chesnais in view of Bender and further in view of Patent Owner Admissions under 35 USC § 103(a).

RE: Claim 28

A method as in claim 27, wherein the step of determining the similarity of the subject matter of segments further comprises the step of performing a relevance feedback method.

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III). Per MPEP § 2617, admissions, which include admitted prior art, can also be used during the examination phase of reexamination, i.e., in claim rejections. Section 2617 refers the reader to MPEP § 2258. MPEP § 2258(I)(F)(2) states, "In Seiko, [Ex parte Seiko Koko Kabushiki Kaisha, 225 USPQ 1260 (Bd. Pat. App. & Inter. 2984)] the Board relied on In re Nomiya, 509 F.2d 566, 184 USPQ 607 (CCPA 1975) holding an admission of prior art in the specification of the parent

undergoing reexamination is considered prior art which may be considered as evidence of obviousness under 35 U.S.C. 103." As such, Chesnais in combination with Benderand the Patent Owner's admissions regarding relevance feedback and the incorporated prior art references renders claim 28 obvious.

> **Note:** the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 28 obvious.

Reasons to Combine Chesnais, Bender and Patent Owner Admissions

Chesnais is directed toward an electronic newspaper that builds a presentation on the fly and combines for users a variety of data types (*e.g.*, newswire stories, photos and audio, video etc.) based on their similarity. Chesnais, p. 275. Similarly, Bender is directed to presenting news broadcasts and related news articles to users. Bender, p. 81. Further, the '507 patent is also directed toward identifying and displaying news stories that are related to a television news program. '507 patent at Abstract. Chesnais, Bender, and the '507 patent all describe comparing data representing news items, including text news items. The '507 patent discloses that relevance feedback was well known for use in determining the similarities between two sets of information, particularly text (e.g., "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). '507 patent at 28:55-29:3.

> **Note:** the Patent Owner also admits that the prior art incorporated by reference into the '507 patent touts the benefits of using relevance feedback. *See, e.g.*, "Improving Retrieval Performance by Relevance Feedback," Salton, G., Journal of the American Society for Information Science, vol. 41, no. 4, pp. 288-297 ("Salton"); *see* also "The Effect of Adding Relevance Information in a Relevance Feedback Environment," Buckley, C., et al., Proceedings of 17th International Conference on Research and Development in Information Retrieval, DIGIR 94, Springer-verlag (Germany), 1994, pp. 292-300 ("Buckley").

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, particularly two text sources, such as the articles and other

content disclosed in Chesnais and/or the news broadcast and news articles disclosed in Bender, would have been motivated to use the relevance feedback method of the prior art as discussed in the '507 patent for at least the advantages disclosed in the prior art which the '507 patent incorporates by reference. Thus, it would have been obvious to use a relevance feedback method to compare information in Chesnais and/or Bender since these references and the admissions relate to well-known methods of comparing information. Moreover, the combination of Chesnais, Bender, and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 71

> **A computer readable medium as in claim 70, wherein the instructions for determining the similarity of the subject matter of segments further comprise instructions for performing a relevance feedback method.**

Claim 71 depends from claim 70 and recites the same additional limitation as in claim 28 that the degree of similarity is determined by "a relevance feedback method." Thus, for the same reasons explained above in connection with claim 28, claim 70 would have been obvious in view of Chesnais or Bender, alone or in combination with the Patent Owner's admissions (regarding the use of relevance feedback as well known in the art for comparing text segments and the incorporated prior art references, which describe the benefits of using relevance feedback).

> **Note:** the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 71 obvious.

***h.* Ground #8 – Joachims**

Claims 20-24, 31, 34, 37, 63-67, 74, 77, and 80 are anticipated by Joachims under 35 USC § 102(b).

RE: Claim 20

A method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, the method comprising the steps of:

Joachims discloses a method for acquiring and reviewing a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims at p. 1. Thus, Joachims discloses a method for helping a user review and find [acquire] information, such as webpages [segments] on the World Wide Web [a body of information], that is determined to be of interest to the user or that is related to a webpage the user is currently viewing. Joachims at Abstract and p. 1.

acquiring data representing the body of information;

Joachims discloses acquiring data representing the body of information (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "an algorithm which identifies pages that are related to a given page using only hypertext structure.") Joachims at p. 1 and Abstract. One skilled in the art would understand that Joachims' WebWatcher system necessarily discloses acquiring webpage data [data representing the body of information] because acquiring the data would be a necessary step before the data can be displayed and analyzed. *See* Joachims at p. 1-3. Thus, Joachims discloses acquiring webpage data [data representing the body of information].

storing the acquired data;

Joachims discloses storing the acquired data (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "an algorithm which identifies pages that are related to a given page using only hypertext structure.") Joachims at p. 1 and Abstract. One skilled in the art would understand that Joachims' WebWatcher system necessarily discloses storing the webpage data [acquired data] because storing the data would be a necessary step

before the data can be displayed and analyzed. *See* Joachims at p. 1-3. Thus, Joachims discloses storing webpage data [data representing the body of information].

generating a display of a first segment of the body of information from data that is part of the stored data;

Joachims discloses generating a display of a first segment of the body of information from data that is part of the stored data (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4.'; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)') Joachims at pp. 1-3 and FIGS. 3-5.

Thus, Joachims discloses generating a display of the "ILPNET" page [first segment]. See Joachims at FIG. 5.

comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

There are two ways that Joachims discloses comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related.

First, Joachims discloses: (1) two hyperlinks - "data representing" two different "segment[s] of the body of information," i.e., two separate webpages; (2) comparing the hyperlinks to see if they both have a particular attribute such as "appears on webpage X (the predetermined criterion); and (3) if so, concluding that the linked-to webpages are related, *i.e.*, "of similar interest." *See* Joachims at p. 3. Specifically, Joachims discloses that "two webpages are of similar interest if some third page points to them both." Joachims at p. 3.

Second, Joachims discloses using the "nearest neighbor" method to generate a matrix showing the relationship between webpages, where the columns of the matrix could correspond to "data representing a segment of the body of information" - each column, after all, provides a "fingerprint" of a given webpage in that it identifies where hyperlinks to that given webpage are located. Those columns are then compared to the column for a webpage of interest (*e.g.*, the WWatcher page) to "find the ones most similar to the [of-interest webpage's] column." To the extent some number n of so-related webpages are returned by the grouping (the predetermined criteria), the webpage is considered to be related. Joachims at FIG. 6 and pp. 3 and 4.

generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Joachims discloses generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "*Mark this page as interesting*" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5.

Similar to the '507 patent's description of a text story being displayed "in response to" a television news story (" . . . a representation of the related information can be displayed in response to... the original information display. For instance.., one or more text news stories... that are related.., to a television news story being displayed can be automatically identified and a portion of the related text news story or stories displayed so that the story or stories can be reviewed for additional information .... " The '507 patent at column 3:45-54.), Joachims describes identifying and displaying "a list of 10 pages which WebWatcher estimates to be

closely related [to the ILPNET webpage]" together with the ILPNET webpage. Joachims at p. 3. Thus, as described above and shown in Figure 5, Joachims discloses displaying "a list of 10 pages which WebWatcher estimates to be closely related [to the ILPNET webpage]" [second segment] in response to the "ILPNET" webpage [first segment] being displayed. Joachims at p. 3.

RE: Claim 21

A method as in claim 20, further comprising the step of causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Joachims discloses causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (e.g., "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)")• Joachims at p. 1-3 and FIG. 5.

Thus, as shown in Figure 5, the "list of 10 pages which WebWatcher estimates to be closely related" [second segment] is together with the "ILPNET" webpage [first segment]. Joachims at p. 3 and FIG. 5.

RE: Claim 22

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

The Joachims reference dates from 1995. In that time period, webpages were becoming more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can

be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment.

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

RE: Claim 23

A method as in claim 22, further comprising the step of identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Joachims discloses identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5.

Thus, Joachims discloses that selecting a hyperlink, such as those provided in the "list of

10 pages which WebWatcher estimates to be closely related (figure 5)," causes the webpage associated with the selected hyperlink to be displayed.

RE: Claim 24

A method as in claim 20, wherein: the step of acquiring data representing the body of information further comprises the step of acquiring audiovisual data representing at least a portion of the body of information;

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. *See*, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the step of generating a display of a first segment of the body of information further comprises the step of generating an audiovisual display of the first segment; and

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. *See*, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the step of generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment.

Joachims discloses generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment (e.g., "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5. As can be seen in Figure 5, the "list of 10 pages which WebWatcher estimates to be closely related (figure 5)" is displayed as text.

RE: Claim 31

A method as in claim 20, wherein the step of acquiring data further comprises the step of acquiring computer-readable data files over a computer network from an information providing site that is part of that network.

Joachims discloses acquiring computer-readable data files over a computer network from an information providing site that is part of that network (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims p. 1. In particular, the WebWatcher program disclosed by Joachims is something that facilitates the gathering of information, such as webpages, from the Internet [network]. *See* Joachims at Abstract. Whether it is hyperlinks or the webpages themselves, the data is inherently computer-readable and is acquired over a computer network from an information providing site.

RE: Claim 34

A method as in claim 20, further comprising the step of identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Joachims discloses identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to

the user instruction (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)") Joachims at pp. 1-3 and FIGS. 3-5. Thus, the display of the "ILPNET" webpage [first segment] is displayed in response to a user selecting the suggested hyperlink shown in Figure 3.

RE: Claim 37

A method as in claim 20, wherein at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data.

Joachims discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims p. 1. The WebWatcher program is something that facilitates the gathering of information using the Internet. Joachims at p. 1. Whether it is hyperlinks or the webpages themselves, it is inherent that the data is computer-readable and in digital form.

RE: Claim 63

A computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information, comprising:

Joachims discloses computer readable medium encoded with one or more computer programs for enabling acquisition and review of a body of information, wherein the body of information includes a plurality of segments, each segment representing a defined set of information in the body of information (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims at p. 1.

Thus, Joachims discloses a method for helping a user review and find [acquire] information, such as webpages [segments] on the World Wide Web [a body of information], that is determined to be of interest to the user or that is related to a webpage the user is currently viewing. Joachims at Abstract and p. 1.

The WebWatcher program disclosed by Joachims is something that facilitates the gathering of information, such as webpages, from the Internet [network]. *See* Joachims at Abstract. Thus, it is inherent that computer-readable media implemented on a computer is used.

instructions for acquiring data representing the body of information;

Joachims discloses instructions for acquiring data representing the body of information (e.g., "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "an algorithm which identifies pages that are related to a given page using only hypertext structure.") Joachims at p. 1 and Abstract. One skilled in the art would understand that Joachims' WebWatcher system necessarily discloses acquiring webpage data [data representing the body of information] because acquiring the data would be a necessary step before the data can be displayed and analyzed. See Joachims at p. 1-3. Thus, Joachims discloses instructions for acquiring webpage data [data representing the body of information].

instructions for storing the acquired data;

Joachims discloses instructions for storing the acquired data (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "an algorithm which identifies pages that are related to a given page using only hypertext structure.") Joachims at p. 1 and Abstract. One skilled in the art would understand that Joachims' WebWatcher system necessarily discloses storing the webpage data [acquired data] because storing the data would be a necessary step before the data can be displayed and analyzed. *See* Joachims at p. 1-3. Thus, Joachims discloses instructions for storing webpage data [data representing the body of information].

instructions for generating a display of a first segment of the body of information from data that is part of the stored data;

Joachims discloses instructions for generating a display of a first segment of the body of information from data that is part of the stored data (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)") Joachims at pp. 1-3 and FIGS. 3-5.

Thus, Joachims discloses generating a display of the "ILPNet" page [first segment]. *See* Joachims at FIG. 5.

instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related; and

There are two ways that Joachims discloses instructions for comparing data representing a segment of the body of information to data representing a different segment of the body of information to determine whether, according to one or more predetermined criteria, the compared segments are related.

First, Joachims discloses: (1)two hyperlinks - "data representing" two different "segment[s] of the body of information," *i.e.*, two separate webpages; (2) comparing the hyperlinks to see if they both have a particular attribute such as "appears on webpage X (the predetermined criterion); and (3) if so, concluding that the linked-to webpages are related, i.e., "of similar interest." *See* Joachims at p. 3. Specifically, Joachims discloses that "two webpages are of similar interest if some third page points to them both." Joachims at p. 3.

Second, Joachims discloses using the "nearest neighbor" method to generate a matrix showing the relationship between webpages, where the columns of the matrix could correspond to "data representing a segment of the body of information" - each column, after all, provides a

"fingerprint" of a given webpage in that it identifies where hyperlinks to that given webpage are located. Those columns are then compared to the column for a webpage of interest (*e.g.*, the WWatcher page) to "find the ones most similar to the [of-interest webpage's] column." To the extent some number n of so-related webpages are returned by the grouping (the predetermined criteria), the webpage is considered to be related. Joachims at FIG. 6 and pp. 3 and 4.

instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related.

Joachims discloses instructions for generating a display of a portion of, or a representation of, a second segment of the body of information from data that is part of the stored data, wherein the display of the portion or representation of the second segment is generated in response to the display of a first segment to which the second segment is related (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5.

Similar to the '507 patent's description of a text story being displayed "in response to" a television news story (" . . . a representation of the related information can be displayed in response to... the original information display. For instance.., one or more text news stories.. . that are related.., to a television news story being displayed can be automatically identified and a portion of the related text news story or stories displayed so that the story or stories can be reviewed for additional information ...." The '507 patent at column 3:45-54.), Joachims describes identifying and displaying "a list of 10 pages which WebWatcher estimates to be closely related [to the ILPNET webpage]" together with the ILPNET webpage. Joachims at p. 3.

Thus, as described above and shown in Figure 5, Joachims discloses instructions for displaying "a list of 10 pages which WebWatcher estimates to be closely related [to the ILPNET

webpage]" [second segment] in response to the "ILPNET" webpage [first segment] being displayed. Joachims at p. 3.

RE: Claim 64

A computer readable medium as in claim 63, further comprising instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment.

Joachims discloses instructions for causing the display of the portion or representation of the second segment to occur substantially coextensive in time with the display of the related first segment (*e.g.*, "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at p. 1-3 and FIG. 5.

Thus, as shown in Figure 5, the "list of 10 pages which WebWatcher estimates to be closely related" [second segment] is displayed together with the "ILPNET" webpage [first segment]. Joachims at p. 3 and FIG. 5.

RE: Claim 65

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information, wherein the first and second segments are represented by audiovisual data; and

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and

second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the instructions for generating a display of a first segment of the body of information further comprise instruction for generating an audiovisual display of the first segment.

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

RE: Claim 66

A computer readable medium as in claim 65, further comprising instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced.

Joachims discloses instructions for identifying the selection of a second segment for which a portion or representation is being displayed, wherein selection of such second segment causes an audiovisual display of the selected second segment to be produced (e.g., "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5.

Thus, Joachims discloses that selecting a hyperlink, such as those provided in the "list of 10 pages which WebWatcher estimates to be closely related (figure 5)," causes the selected webpage to be displayed.

RE: Claim 67

A computer readable medium as in claim 63, wherein: the instructions for acquiring data representing the body of information further comprise instructions for acquiring audiovisual data representing at least a portion of the body of information;

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the instructions for generating a display of a first segment of the body of information further comprise instructions for generating an audiovisual display of the first segment; and

The Joachims reference dates from 1995. In that time period, webpages were becoming more and more graphics-oriented, and it has been observed that that graphics capability was in part responsible for the explosive growth of Internet/Worldwide Web usage. See, for example, OTH-C, which describes the Mosaic Internet browser and illustrates how images from the Internet can be downloaded and displayed. OTH-C at p. 58. Therefore, having the first and second segments be audiovisual in nature was inherent in the use of the Mosaic browser as disclosed by Joachims.

the instructions for generating a display of a portion of, or a representation of, a

second segment of the body of information further comprise instructions for generating a text display of the portion or representation of the second segment.

Joachims discloses instructions for generating a display of a portion of, or a representation of, a second segment of the body of information further comprises the step of generating a text display of the portion or representation of the second segment (*e.g.*, "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)"). Joachims at pp. 1-3 and FIGS. 3-5. As can be seen in Figure 5, the "list of 10 pages which WebWatcher estimates to be closely related (figure 5)" is displayed as text.

RE: Claim 74

A computer readable medium as in claim 63, wherein the instructions for acquiring data further comprise instructions for acquiring computer- readable data files over a computer network from an information providing site that is part of that network.

Joachims discloses instructions for acquiring computer-readable data files over a computer network from an information providing site that is part of that network (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims p. 1. In particular, the WebWatcher program disclosed by Joachims is something that facilitates the gathering of information, such as webpages, from the Internet [network]. *See* Joachims at Abstract. Whether it is hyperlinks or the webpages themselves, the data is inherently computer-readable and is acquired over a computer network from an information providing site.

RE: Claim 77

A computer readable medium as in claim 63, further comprising instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction.

Joachims discloses instructions for identifying an instruction from a user to begin displaying at least some of the body of information, wherein the display of a first segment is begun in response to the user instruction (e.g., "Figures 1 to 5 illustrate the sequence of web pages a user visits in a typical example."; "In our example the user follows WebWatcher's advice and takes the "ILPNET" hyperlink. She arrives at the page shown in figure 4."; "In our scenario the user is particularly interested in the "ILPNet" page. So she clicks on the button "Mark this page as interesting" in the menu bar. WebWatcher stores this information and returns a list of 10 pages which WebWatcher estimates to be closely related (figure 5)") Joachims at pp. 1-3 and FIGS. 3-5. Thus, the display of the "ILPNET" webpage [first segment] is displayed in response to a user selecting the suggested hyperlink shown in Figure 3.

RE: Claim 80

A computer readable medium as in claim 63, wherein at least some of the acquired data is digital data, the instructions for acquiring data further comprising instructions for acquiring digital data.

Joachims discloses that at least some of the acquired data is digital data, the step of acquiring data further comprising the step of acquiring digital data (*e.g.*, "WebWatcher [], an agent which assists users in locating information on the WWW or searches autonomously on their behalf.") Joachims p. 1. The WebWatcher program is something that facilitates the gathering of information using the Internet. Joachims at p. 1. Whether it is hyperlinks or the webpages themselves, it is inherent that the data is computer-readable and in digital form.

***i.* Ground #9 – Joachims and Bender**

Claims 27, and 70 are obvious over Joachims in view of Bender under 35 USC § 103(a).

RE: Claim 27

A method as in claim 20, further comprising the step of identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Joachims in view of Bender discloses identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

For example, Bender discloses comparing keywords lists representing subject matter content of the news wire stories (a second segment) and television broadcasts (a first segment) closed caption data and using a predefined threshold for keyword matching (e.g., four words as an example) to determine whether the segments are related. *See e.g.*, (Bender at pp. 82-83 (describing keyword matching process)("The primary function of Network Plus is to correlate news wire stories and live broadcasts....A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related ....A threshold of four words worked well in this experiment ....")(emphasis added).

It would have been obvious to a person of ordinary skill in the art to use the keyword matching method, as taught by Bender, to similarly compare subject matter content of webpages in Joachims since Joachims and Bender relate to similar methods and systems for identifying and presenting related information to a user. Moreover, the combination of Joachims and Bender yields a predictable result, and one of ordinary skill in the art would have been capable of combining these systems to achieve the expected result of determining subject matter content similarities between webpages using a keyword matching method.

Reasons to Combine Joachims with Bender

Both Joachims and Bender relate to systems and methods for collecting and reviewing information, comparing data representing that information to identify related information, and presenting the related information to a user in a computer based interface. At the time of the alleged invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Bender with Joachims to identify and compare subject matter content of segments of a body of information (claims 23 and 70), which is disclosed by Bender. For example, Bender describes comparing keywords lists representing subject matter content of the news wire stories (a second segment) and television broadcasts (a first segment) closed caption data and using a predefined threshold for keyword matching (*e.g.*, four words as an example) to determine whether the segments are related. *See e.g.*, (Bender at pp. 82-83 (describing keyword matching process)("The primary function of Network Plus is to correlate news wire stories and live broadcasts... A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related. A threshold of four words worked well in this experiment ....")(emphasis added).

It would have been obvious to a person of ordinary skill in the art to use the keyword matching method, as taught by Bender, to similarly compare subject matter content of webpages in Joachims since Joachims and Bender relate to similar methods and systems for identifying and presenting related information to a user. Moreover, the combination of Joachims and Bender yields a predictable result, and one of ordinary skill in the art would have been capable of combining these systems to achieve the expected result of determining subject matter content similarities between webpages using a keyword matching method.

RE: Claim 70

A computer readable medium as in claim 63, further comprising instructions for identifying the subject matter content of a segment of the body of information, wherein the instructions for comparing further comprise instructions for determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a

predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

Joachims in view of Bender discloses instructions for identifying the subject matter content of a segment of the body of information, wherein the step of comparing further comprises the step of determining the similarity of the subject matter content of a segment to the subject matter content of a different segment, the predetermined criteria including a predefined degree of similarity with respect to which the relatedness of the compared segments is determined.

For example, Bender discloses comparing keywords lists representing subject matter content of the news wire stories (a second segment) and television broadcasts (a first segment) closed caption data and using a predefined threshold for keyword matching (*e.g.*, four words as an example) to determine whether the segments are related. *See e.g.*, (Bender at pp. 82-83 (describing keyword matching process)("The primary function of Network Plus is to correlate news wire stories and live broadcasts...A keyword matching scheme was chosen, based upon empirical evidence that there exists a sufficient correspondence between words found in the transcript and words found in the wire service stories. If the number of words common to both the transcript and a trial story exceeded some threshold, the two were designated as related... A threshold of four words worked well in this experiment ....")(emphasis added).

It would have been obvious to a person of ordinary skill in the art to use the keyword matching method, as taught by Bender, to similarly compare subject matter content of webpages in Joachims since Joachims and Bender relate to similar methods and systems for identifying and presenting related information to a user. Moreover, the combination of Joachims and Bender yields a predictable result, and one of ordinary skill in the art would have been capable of combining these systems to achieve the expected result of determining subject matter content similarities between webpages using a keyword matching method.

***j.* Ground #10 – Joachims, Bender and Patent Owner Admissions**

Claims 28, and 71 are obvious over Joachims in view of Bender and further in view of patent Owner admissions under 35 USC § 103(a).

RE: Claim 28

> **A method as in claim 27, wherein the step of determining the similarity of the subject matter of segments further comprises the step of performing a relevance feedback method.**

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III).

> **Note:** the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 28 obvious.

Moreover, it would have been an obvious choice to use a relevance feedback method - as one of multiple methods that could be used just as well - to compare information in Joachims since Joachims and the admissions relate to well known methods of comparing information. Additionally, the combination of Joachims and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information

sources.

Reasons to Combine Joachims with Bender and Patent Owner Admissions

As discussed above, one of skill in the art would have had reason to combine Joachims with the teachings of Bender. For the reasons that follow, one of skill in the art would also have had reason to combine Joachims with the teachings of the admitted prior art from the '507 patent. Joachims is directed towards a method of identifying related information and presenting such information to the user (*e.g.*, "an algorithm which identifies pages that are related to a given page using only hypertext structure"). Joachims at Abstract and p. 1. Similarly, the '507 patent is directed toward identifying and displaying news stories that are related to a television news program. '507 patent at Abstract. The '507 patent discloses that relevance feedback can be used to determine similarities between two sets of information (*e.g.*, "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. '507 patent at 28:55-29:3.

> **Note:** the Patent owner also admits that the prior art incorporated by reference into the '507 patent touts the benefits of using relevance feedback. *See, e.g.*, "Improving Retrieval Performance by Relevance Feedback," Salton, G., Journal of the American Society for Information Science, vol. 41, no. 4, pp. 288-297 ("Salton"); see also "The Effect of Adding Relevance Information in a Relevance Feedback Environment," Buckley, C., et al., Proceedings of 17th International Conference on Research and Development in Information Retrieval, DIGIR 94, Springer-verlag (Germany), 1994, pp. 292-300 ("Buckley").

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, such as the webpages disclosed in Joachims, could have used the relevance feedback method of the prior art as discussed in the '507 patent. Thus, it would

have been an obvious choice to use a relevance feedback method - as one of multiple methods that could be used just as well - to compare information in Joachims since Joachims and the admissions relate to well known methods of comparing information. Moreover, the combination of Joachims with Bender and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 71

> **A computer readable medium as in claim 70, wherein the instructions for determining the similarity of the subject matter of segments further comprise instructions for performing a relevance feedback method.**

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III).

> **Note** that, the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 71 obvious.

Moreover, it would have been an obvious choice to use a relevance feedback method - as one of multiple methods that could be used just as well - to compare information in Joachims since Joachims and the admissions relate to well known methods of comparing information. Additionally, the combination of Joachims and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would clearly be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

***k.* Ground #11 – Masand**

Claims 39, 40, 43, 82, 83, and 86 are anticipated by Masand under 35 USC § 102(b).

RE: Claim 39

A method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, the method comprising the steps of:

Masand teaches a method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Masand discloses a body of information comprising a plurality of segments, such as news articles from the Dow Jones Press Release News Wire, that includes uncategorized documents ("[e]ach day editors at Dow Jones assign codes to hundreds of stories originating from diverse sources such as newspapers, magazines, newswires, and press releases") and previously categorized documents that have been assigned to one or more of 350 category codes ("Using an already coded training database of about 50,000 stories from the Dow Jones Press

Release News Wire ...." (Masand at Abstract); "The coding task consists of assigning one or more codes to a text document, from a possible set of about 350 codes." (Masand at p. 59)).

Masand further discloses a method for categorizing the uncategorized stories by subject matter by assigning to each story "distinct codes, grouped into seven [sic] categories: industry, market sector, product, subject, government agency, and region•" Masand at p. 59. (emphasis added•) The category codes are assigned based on codes of related previously categorized documents ("Using an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire, and SEEKER [Stanfill] (a text retrieval system that supports relevance feedback) as the underlying match engine, codes are assigned to new, unseen stories.. • .") Masand at p. 59.

Thus, Masand discloses categorizing by subject matter the uncategorized news stories of a body of information based on category codes assigned to previously categorized news stories of the body of information.

determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Masand discloses determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments.

For example, Masand discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. The MBR method includes "find[ing] the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. Thus, Masand discloses using a relevance feedback query constructed from the text of a new document to search against the documents contained in the database of previously categorized stories. *Id.* at 61

Masand further discloses determining similarity scores (i.e., a degree of similarity) between the new story and each of the previously categorized stories. Masand at p. 61 ("[c]odes

are assigned weights by summing similarity scores from the near matches.") (emphasis added). Fig. 4 shows the determined degree of similarity ("score") between an uncategorized news story and each of the eleven "nèarest neighbors" in the previously categorized documents.

See Masand at p. 61.

Thus, Masand discloses determining similarity scores between the subject matter of an uncategorized document (*e.g.*, news story) and the subject matter of each document of a set of previously categorized documents (*e.g.*, previously categorized news stories) based on the contents of the documents ("constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs") Masand at p. 61.

identifying one or more of the previously categorized segments as relevant to the categorized segment based upon the determined degrees of similarity of subject matter content between the categorized segment and the previously categorized segments; and

Masand discloses identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments.

For example, as discussed above, Masand discloses determining a degree of similarity ("score") between an uncategorized news story and each of the previously categorized documents by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. (emphasis added.) Additionally, "Fig. 4 shows the headlines and the normalized scores for the example used in Fig. 2 and the first few near matches from the relevance feedback search." Masand at p. 61 (emphasis added); *see* also, Fig. 4 which shows an uncategorized news story and the eleven "nearest neighbors" in the previously categorized documents).

Based on the results of the relevance feedback query, Masand discloses identifying the k-nearest matches and "assign[ing] codes to the unknown document by combining the codes assigned to the k nearest matches; for these experiments, we used up to 11 nearest neighbors." Masand at p. 61. (emphasis added.)

Thus, Masand discloses identifying *k* previously categorized documents as being relevant to the uncategorized document based on the determined similarity scores between the uncategorized document and the previously categorized documents.

selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Masand teaches selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

For example, as discussed *above*, Masand discloses determining a degree of similarity ("score") between an uncategorized news story and each of the previously categorized documents by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. Masand further discloses that the "[c]odes are assigned weights by summing similarity scores from the near matches. Finally we choose the best codes based on a score threshold. Fig. 4 shows the headlines and the normalized scores for the example used in Fig. 2 and the first few near matches from the relevance feedback search." Masand at p. 61 (emphasis added); see also, Fig. 4. In one particular example, Masand discloses "assign[ing] codes to the unknown document by combining the codes assigned to the k nearest matches; for these experiments, we used up to 11 nearest neighbors." Masand at p. 61. (emphasis added.) The codes may be "grouped into seven [sic] categories: industry, market sector, product, subject, government agency, and region." Masand at p. 59 (emphasis added).

Thus, Masand discloses selecting one or more subject matter category codes for an uncategorized document based on the category codes assigned to the K-nearest (*i.e.*, relevant) documents.

RE: Claim 40

A method as in claim 39, wherein the step of determining the degree of similarity is accomplished using a relevance feedback method.

Masand explicitly discloses wherein the step of determining the degree of similarity is accomplished using a relevance feedback method. For example, Masand discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. Masand further discloses that "[f]ollowing the general approach of MBR, we find the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. (emphasis added.)

Thus, Masand discloses determining similarity scores between the subject matter of an uncategorized document (*e.g.*, news story) and the subject matter of each document of a set of previously categorized documents (*e.g.*, previously categorized news stories) by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs." Masand at p. 61. (emphasis added.)

RE: Claim 43

A method as in claim 39, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Masand discloses wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

For example, Masand discloses a body of information including a plurality of segments, such as news articles from the Dow Jones Press Release News Wire, that includes uncategorized documents ("[e]ach day editors at Dow Jones assign codes to hundreds of stories originating from diverse sources such as newspapers, magazines, newswires, and press releases") (Masand at p. 59) and previously categorized documents that have been assigned to one or more of 350 category codes ("Using an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire ....") (Masand at Abstract). Thus, Masand discloses that

previously categorized documents may be acquired from the Dow Jones Press Release News Wire.

Masand further discloses that the uncategorized stories from the Dow Jones Press Release News Wire may include "stories originating from diverse sources such as newspapers, magazines, newswires, and press releases." Masand at p. 59. Additionally, Masand discloses that "[t]he application of MBR may also be relevant to other domains (such as OCR, patient records, financial assessments) where such coded free text databases are already available." Masand at p. 64.

Thus, Masand discloses a method in which an uncategorized document was acquired from a first data source, such as a newspaper, magazine, newswire, press release, or other text database, and the previously categorized documents were acquired from a different data source, such as a newspaper, magazine, newswire, press release, other text database, or from the existing Dow Jones Database.

RE: Claim 82

A computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, comprising:

Masand discloses a computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Masand discloses a body of information comprising a plurality of segments, such as news articles from the Dow Jones Press Release News Wire, that includes uncategorized documents ("[e]ach day editors at Dow Jones assign codes to hundreds of stories originating

from diverse sources such as newspapers, magazines, newswires, and press releases") and previously categorized documents that have been assigned to one or more of 350 category codes ("Using an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire ...." (Masand at Abstract); "The coding tasks consists of assigning one or more codes to a text document, from a possible set of about 350 codes." (Masand at p. 59)).

Masand further discloses a method for categorizing the uncategorized stories by subject matter by assigning to each story "distinct codes, grouped into seven [sic] categories: industry, market sector, product, subject, government agency, and region." Masand at p. 59 (emphasis added.) The category codes are assigned based on codes of related previously categorized documents ("Using an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire, and SEEKER [Stanfill] (a text retrieval system that supports relevance feedback) as the underlying match engine, codes are assigned to new, unseen stories...") Masand at p. 59.

With respect to being embodied as a computer program stored on a computer readable medium, Masand discloses that the "method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)[] does not require manual topic definitions." Masand at Abstract (emphasis added). Masand further discloses that the SEEKER text retrieval system that was used as the underlying match engine was executed on a "4k CM-2 Connection Machine System." Masand at p. 62. As such, it is inherent that the method disclosed by Masand is embodied as a computer program stored on a computer readable medium.

Thus, Masand discloses a computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter the uncategorized news stories of a body of information based on category codes assigned to previously categorized news stories of the body of information.

instructions for determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Masand discloses instructions for determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments.

For example, Masand discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. The MBR method includes "find[ing] the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (see Fig. 4)." Masand at p. 61. Thus, Masand discloses using a relevance feedback query constructed from the text of a new document to search against the documents contained in the database of previously categorized stories. *Id.* at 61.

Masand further discloses determining similarity scores (*i.e.*, a degree of similarity) between the new story and each of the previously categorized stories. Masand at p. 61 ("[c]odes are assigned weights by summing similarity scores from the near matches.") (emphasis added). Fig. 4 shows the determined degree of similarity ("score") between an uncategorized news story and each of the eleven "nearest neighbors" in the previously categorized documents.

See Masand at p. 61.

Thus, Masand discloses instructions for determining similarity scores between the subject matter of an uncategorized document (*e.g.*, news story) and the subject matter of each document of a set of previously categorized documents (*e.g.*, previously categorized news stories) by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs." Masand at p. 61.

instructions for identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments; and

Masand discloses instructions for identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of

similarity of subject matter content between the uncategorized segment and the previously categorized segments.

For example, as discussed above, Masand discloses determining a degree of similarity ("score") between an uncategorized news story and each of the previously categorized documents by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. (emphasis added.) Additionally, "Fig. 4 shows the headlines and the normalized scores for the example used in Fig. 2 and the first few near matches from the relevance feedback search." Masand at p. 61 (emphasis added); *see* also, Fig. 4 which shows an uncategorized news story and the eleven "nearest neighbors" in the previously categorized documents).

Based on the results of the relevance feedback query, Masand discloses identifying the k-nearest matches and "assign[ing] codes to the unknown document by combining the codes assigned to the k nearest matches; for these experiments, we used up to 11 nearest neighbors." Masand at p. 61 (emphasis added.)

Thus, Masand discloses instructions for identifying k previously categorized documents as being relevant to the uncategorized document based on the determined similarity score between the uncategorized document and the previously categorized documents.

instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Masand discloses instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

For example, as discussed above, Masand discloses determining a degree of similarity ("score") between an uncategorized news story and each of the previously categorized documents by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. Masand further discloses that the "[c]odes are assigned weights by

summing similarity scores from the near matches. Finally we choose the best codes based on a score threshold. Fig. 4 shows the headlines and the normalized scores for the example used in Fig. 2 and the first few near matches from the relevance feedback search." Masand at p. 61 (emphasis added); *see* also, Fig. 4. In one particular example, Masand discloses "assign[ing] codes to the unknown document by combining the codes assigned to the k nearest matches; for these experiments, we used up to 11 nearest neighbors." Masand at p. 61 (emphasis added). The codes may be "grouped into seven [sic] categories: industry, market sector, product, subject, government agency, and region." Masand at p. 59 (emphasis added).

Thus, Masand discloses instructions for selecting one or more subject matter category codes for assigning to an uncategorized document based on the category codes assigned to the K-nearest (i.e., relevant) documents.

RE: Claim 83

A computer readable medium as in claim 82, wherein the instructions for determining the degree of similarity further comprise instructions for performing a relevance feedback method.

Masand explicitly discloses wherein the instructions for determining the degree of similarity further comprise instructions for performing a relevance feedback method. For example, Masand discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. Masand further discloses that "[f]ollowing the general approach of MBR, we find the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61 (emphasis added).

Thus, Masand discloses instructions for determining similarity scores between the subject matter of an uncategorized document (*e.g.*, news story) and the subject matter of each document of a set of previously categorized documents (*e.g.*, previously categorized news stories) by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs." Masand at p. 61 (emphasis added).

RE: Claim 86

A computer readable medium as in claim 82, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Masand explicitly discloses wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

For example, Masand discloses a body of information including a plurality of segments, such as news articles from the Dow Jones Press Release News Wire, that includes uncategorized documents ("[e]ach day editors at Dow Jones assign codes to hundreds of stories originating from diverse sources such as newspapers, magazines, newswires, and press releases") (Masand at p. 59) and previously categorized documents that have been assigned to one or more of 350 category codes ("Using an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire ....") (Masand at Abstract). Thus, Masand discloses that both uncategorized and previously categorized documents may be acquired from the Dow Jones Press Release News Wire. Thus, Masand discloses that previously categorized documents may be acquired from the Dow Jones Press Release News Wire.

Masand further discloses that the uncategorized stories from the Dow Jones Press Release News Wire may include "stories originating from diverse sources such as newspapers, magazines, newswires, and press releases." Masand at p. 59. Additionally, Masand discloses that "[t]he application of MBR may also be relevant to other domains (such as OCR, patient records, financial assessments) where such coded free text databases are already available." Masand at p. 64.

Thus, Masand discloses an uncategorized document that was acquired from a first data source, such as a newspaper, magazine, newswire, press release, or other text database, and previously categorized documents that were acquired from a different data source, such as a

newspaper, magazine, newswire, press release, other text database, or from the existing Dow Jones Database.

l. Ground #12 – Iwayama

Claims 39, 43, 82 and 86 are anticipated by Iwayama under 35 USC § 102(b).

RE: Claim 39

A method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, the method comprising the steps of:

Iwayama discloses a method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Iwayama discloses a body of information comprising a plurality of segments, such as a collection of Wall Street Journal articles, that includes uncategorized documents ("For WSJ, . . . all stories from '89/10/2 to '89/11/2 went into a test set of 3,087 documents") and previously categorized documents that have been assigned to one or more of 78 categories ("For WSJ, all stories that appeared from '89/7/25 to '89/9/29 went into a training set of 5,820 documents" (Iwayama at p. 276.); "Each of the articles is assigned some of 78 categories." (Iwayama at p. 275.)).

Iwayama further discloses assigning subject matter categories to the uncategorized documents based on categories of similar previously categorized documents ("one or more categories for a test document are searched for by using given training documents with known categories.") Iwayama at Abstract. Specifically, Iwayama discloses a categorization method comprising four steps: "1. Construct clusters C . . . 2. Calculate the posterior probability $P(c_i/d_{test})$ [*i.e.*, degree of similarity] for a test document d_{test} and every cluster c_i . . . 3. Sort the

posterior probabilities and extract the K-nearest training documents . . . 4. Assign to the test document categories based on the extracted *K*-nearest documents." Iwayama at p. 273.
In one particular embodiment disclosed by Iwayama, the method may be used to perform a full search, such as "MBR (Memory Based Reasoning) . . . for calculating a measure of similarity between a test document and every training document." Iwayama at p. 273.

> **Note:** Iwayama discloses multiple embodiments. A second embodiment, not addressed herein uses clusters of documents having similar categories and works in much the same way as the embodiment discussed herein because, as noted by Iwayama, clusters could be single documents and the methods, except for the clustering step, would be the same. In such case, "each training document belongs to a singleton cluster whose only member is the document itself. Iwayama at pp. 273-74. The first method and system, which is addressed herein is referred to as the "full search" in Iwayama.

In this example, "each training document belongs to a singleton cluster whose only member is the document itself." Iwayama at p. 274. Thus, the method categorizes the uncategorized documents (*i.e.*, test documents) according to subject matter and involves "calculating a measure of similarity between a test document and every training document." Iwayama at p. 273.

Thus, Iwayama discloses categorizing the uncategorized test documents of a body of information based on subject matter categories assigned to previously categorized training documents of the body of information.

determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Iwayama discloses determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments.

For example, Iwayama discloses "MBR (Memory Based Reasoning)... for calculating a measure of similarity between a test document and every training document." Iwayama at p. 273

(emphasis added.) This method involves "search[ing] the K-nearest training documents to the test document and us[ing] the categories assigned to those training documents." Iwayama at p. 273. To determine the K-nearest training documents, Iwayama discloses "2. [c]alculat[ing] the posterior probability $P(c_i/d_{test})$ [*i.e.*, degree of similarity] for a test document d_{test} and every cluster c_i." Iwayama at p. 273. The posterior probability is the measure of similarity calculated based on the contents [*i.e.*, subject matter] of the documents (*e.g.*, using the "relative frequency of a term t in a test document," "relative frequency of a term t in a cluster," and "relative frequency of a term t in the entire set of training documents"). Iwayama at p. 274. Iwayama further discloses that "[f]or full search (MBR or K-NN), no clustering algorithm is used here. It follows that each training document belongs to a singleton cluster whose only member is the document itself." Iwayama at pp. 273-274. Thus, Iwayama discloses determining the posterior probabilities [*i.e.*, degree of similarity] between a test document and each of the previously categorized documents.

Thus, Iwayama discloses determining a measure of similarity between the subject matter of an uncategorized test document and each document of a set of previously categorized training documents.

identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments; and

Iwayama discloses identifying one or more of the previously categorized segments ("training documents") as relevant to the uncategorized segment ("test document") based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments.

For example, Iwayama discloses "3. [s]ort[ing] the posterior probabilities and extract[ing] the K-nearest training documents." Iwayama at p. 273. As discussed above, the degree of similarity ("posterior probability") between the uncategorized document ("test document") and each of the previously categorized documents ("training document") is determined by the MBR method. *See* Iwayama at pp. 273-275. "The training documents in the nearest clusters [which

comprise single documents under the MBR method] become the nearest training documents." Iwayama at p. 274.

Thus, Iwayama discloses identifying K previously categorized training documents as being relevant to the uncategorized test document based on the determined measures of similarity between the uncategorized test document and the previously categorized training documents.

selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Iwayama discloses selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

For example, Iwayama discloses "4. [a]ssign[ing] to the test document categories based on the extracted K-nearest documents." Iwayama at p. 273. Iwayama further discloses that this step includes generating a "category ranking for each test document .... According to the category ranking, one or more categories are assigned to each test document using one of the following category assignment strategies. [k-per-doc] . . . [probability threshold] . . . [proportional assignment[." Iwayama at p. 274.

Thus, Iwayama discloses selecting one or more categories for a test document [uncategorized segment[based on the categories assigned to the K-nearest training documents]previously categorized segments].

RE: Claim 43

A method as in claim 39, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Iwayama discloses that the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments has/have been acquired from a second data source that is different than the first data source (*e.g.*, "To divide each data set into

two sets, one for training and the other for evaluation .... For WSJ, all stories that appeared from '89/7/25 to '89/9/29 went into a training set of 5,820 documents, and all stories from '89/10/2 to '89/11/2 went into a test set of 3,087 documents"; "a variety of news stories written by various writers"). Iwayama at p. 276.

Thus, Iwayama discloses that the uncategorized test documents have been acquired from a first data source (e.g., Wall Street Journal from '89/10/2 to '89/11/2.) and that the previously categorized training documents have been acquired from a second data source (*e.g.*, Wall Street Journal from'89/7/25 to '89/9/29.)

RE: Claim 82

> **A computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, comprising:**

Iwayama discloses a computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Iwayama discloses a body of information comprising a plurality of segments, such as a collection of Wall Street Journal articles, that includes uncategorized documents ("For WSJ, . . . all stories from '89/10/2 to '89/11/2 went into a test set of 3,087 documents") and previously categorized documents that have been assigned to one or more of 78 categories ("For WSJ, all stories that appeared from '89/7/25 to '89/9/29 went into a training set of 5,820 documents" (Iwayama at p. 276.); "Each of the articles is assigned some of 78 categories." (Iwayama at p. 275.)).

Iwayama further discloses assigning subject matter categories to the uncategorized documents based on categories of similar previously categorized documents ("one or more

categories for a test document are searched for by using given training documents with known categories.") Iwayama at Abstract. Specifically, Iwayama discloses a categorization method comprising four steps: "1. Construct clusters C . . . 2. Calculate the posterior probability $P(c_i/d_{test})$ [*i.e.*, degree of similarity] for a test document d_{test} and every cluster c_i . . . 3. Sort the posterior probabilities and extract the K-nearest training documents . . . 4. Assign to the test document categories based on the extracted K-nearest documents." Iwayama at p. 273.

In one particular embodiment disclosed by Iwayama, the method may be used to perform a full search, such as "MBR (Memory Based Reasoning) . . . for calculating a measure of similarity between a test document and every training document." Iwayama at p. 273.

> **Note:** Iwayama discloses multiple embodiments. A second embodiment, not addressed herein uses clusters of documents having similar categories and works in much the same way as the embodiment discussed herein because, as noted by Iwayama, clusters could be single documents and the methods, except for the clustering step, would be the same. In such case, "each training document belongs to a singleton cluster whose only member is the document itself. Iwayama at pp. 273-74. The first method and system, which is addressed herein is referred to as the "full search" in Iwayama.

In this example, "each training document belongs to a singleton cluster whose only member is the document itself." Iwayama at p. 274. Thus, the method categorizes the uncategorized documents (*i.e.*, test documents) according to subject matter and involves "calculating a measure of similarity between a test document and every training document." Iwayama at p. 273.

With respect to being embodied as a computer program stored on a computer readable medium, Iwayama describes the categorization as being performed by a "program search[ing] for one or more categories that a test document is assumed to have." Iwayama at p. 273 (emphasis added.) *See* also, program instructions on pp. 279-280. The use of a "program" implicates the use of a computer, and accordingly, instructions encoded on a computer readable medium.

Thus, Iwayama discloses instructions for categorizing the uncategorized test documents of a body of information based on categories assigned to previously categorized training documents of the body of information.

instructions for determining the degree of similarity between the subject matter

content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Iwayama discloses instructions for determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments.

For example, Iwayama discloses "MBR (Memory Based Reasoning)... for calculating a measure of similarly between a test document and every training document." Iwayama at p. 273 (emphasis added.) This method involves "search[ing] the K-nearest training documents to the test document and us[ing] the categories assigned to those training documents." Iwayama at p. 273. To determine the K-nearest training documents, Iwayama discloses "2. [c]alculat[ing] the posterior probability $P(c_i/d_{test})$ [*i.e.*, degree of similarity] for a test document d_{test} and every cluster c_i." Iwayama at p. 273. The posterior probability is the measure of similarity calculated based on the contents [i.e., subject matter] of the documents (*e.g.*, using the "relative frequency of a term t in a test document," "relative frequency of a term t in a cluster," and "relative frequency of a term t in the entire set of training documents"). Iwayama at p. 274. Iwayama further discloses that "[f]or full search (MBR or K-NN), no clustering algorithm is used here. It follows that each training document belongs to a singleton cluster whose only member is the document itself." Iwayama at pp. 273-274. Thus, Iwayama discloses determining the posterior probabilities [i.e., degree of similarity] between a test document and each of the previously categorized documents.

Thus, Iwayama discloses instructions for determining a measure of similarity between the contents (subject matter) of an uncategorized test document and each document of a set of previously categorized training documents.

instructions for identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments; and

Iwayama discloses instructions for identifying one or more of the previously categorized segments ("training documents") as relevant to the uncategorized segment ("test document")

based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments.

For example, Iwayama discloses "3. [s]ort[ing] the posterior probabilities and extract[ing] the K-nearest training documents." Iwayama at p. 273. As discussed above, the degree of similarity ("posterior probability") between the uncategorized document ("test document") and each of the previously categorized documents ("training document") is determined by the MBR method. See Iwayama at pp. 273-275. "The training documents in the nearest clusters [which comprise single documents under the MBR method] become the nearest training documents." Iwayama at p. 274.

Thus, Iwayama discloses instructions for identifying K previously categorized training documents as being relevant to the uncategorized test document based on the determined measures of similarity between the uncategorized test document and the previously categorized training documents.

instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Iwayama discloses instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

For example, Iwayama discloses "4. [a]ssign[ing] to the test document categories based on the extracted K-nearest documents." Iwayama at p. 273. Iwayama further discloses that this step includes generating a "category ranking for each test document . . . According to the category ranking, one or more categories are assigned to each test document using one of the following category assignment strategies. [k-per-doc] . [probability threshold] . . . [proportional assignment]." Iwayama at p. 274.

Thus, Iwayama discloses instructions for selecting one or more categories for a test document [uncategorized segment] based on the categories assigned to the K-nearest training documents [previously categorized segments].

RE: Claim 86

A computer readable medium as in claim 82, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Iwayama discloses that the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source (*e.g.*, "To divide each data set into two sets, one for training and the other for evaluation .... For WSJ, all stories that appeared from '89/7/25 to '89/9/29 went into a training set of 5,820 documents, and all stories from '89/10/2 to '89/11/2 went into a test set of 3,087 documents"; "a variety of news stories written by various writers"). Iwayama at p. 276. *See* also, program code on pp. 279-280.

Thus, Iwayama discloses that the uncategorized test documents have been acquired from a first data source (*e.g.*, Wall Street Journal from '89/10/2 to '89/11/2) and that the previously categorized training documents have been acquired from a second data source (*e.g.*, Wall Street Journal from'89/7/25 to '89/9/29).

m. Ground #13 – Iwayama and Masand

Claims 40, 43, 83, and 86 are obvious over Iwayama in view of Masand under 35 USC § 103(a).

RE: Claim 40

A method as in claim 39, wherein the step of determining the degree of similarity is accomplished using a relevance feedback method.

Iwayama, in view of Masand, discloses that the step of determining the degree of similarity is accomplished using a relevance feedback method as recited in claim 40. For example, as discussed above, Iwayama discloses "MBR (Memory Based Reasoning) for calculating a measure of similarity between a test document and every training document." Iwayama at p. 273 (emphasis added.) To determine the K-nearest training

documents, Iwayama discloses "2. [c]alculat[ing] the posterior probability $P(c_i/d_{test})$ [i.e., degree of similarity] for a test document d_{test} and every cluster c_i." Iwayama at p. 273. Iwayama further discloses that "[f]or full search (MBR or K-NN)" each document is its own cluster. Iwayama at 273-74. ("each training document belongs to a singleton cluster whose only member is the document itself").

Masand similarly discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. The MBR method includes "find[ing] the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. Masand discloses determining similarity scores between the subject matter of an uncategorized document (e.g., news story) and the subject matter of each document of a set of previously categorized documents (e.g., previously categorized news stories) by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs." Masand at p. 61. (emphasis added.)

A person of ordinary skill in the art, applying the "Memory Based Reasoning" method to compare and categorize documents, would have been motivated to use the relevance feedback methods, as taught by Masand. Thus, it would have been obvious to use relevance feedback as disclosed in Masand to determine the similarity of different segments in Iwayama, particularly since Iwayama and Masand relate to the same method of comparing information. Moreover, the combination of Iwayama and Masand yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between documents using a relevance feedback method.

Reasons to Combine Iwayama with Masand

Iwayama is directed to a method of categorizing documents, such as articles from the Wall Street Journal, based on similarities between the documents. *See* Iwayama at pp. 273 and 276. Iwayama discloses one particular embodiment using the "Memory Based Reasoning" method to categorize the documents. *See* Iwayama at pp. 273-274. Similarly, Masand is directed to categorizing news stories by also using the "Memory Based Reasoning" method. See Masand

at p. 59. In particular, Masand discloses categorizing a news story acquired from a first source ("stories originating from diverse sources such as newspapers, magazines, newswires, and press releases") (Masand at p. 59.) by comparing the document to a set of previously categorized documents acquired from a second source that is different from the first ("[u]sing an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire... ") (Masand at p. 59.).

A person of ordinary skill in the art, applying the "Memory Based Reasoning" method to compare and categorize documents, would have been motivated to apply the method to documents acquired from different sources, as taught by Masand. Thus, it would have been obvious to use the "Memory Based Reasoning" method to compare information from different sources in Iwayama since Iwayama and Masand relate to the same method of comparing information. Moreover, the combination of Iwayama and Masand yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between documents acquired from different sources. Further, Masand discloses determining the degree of similarity between two segments using a relevance feedback method. For example, Masand discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. Masand further discloses that "[f]ollowing the general approach of MBR, we find the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. (emphasis added.) A person of ordinary skill in the art, applying the "Memory Based Reasoning" method to compare and categorize documents, would have been motivated to use the relevance feedback methods, as taught by Masand.

Thus, it would have been obvious to use relevance feedback to determine the similarity of different segments in Iwayama, particularly since Iwayama and Masand relate to the same method of comparing information. Moreover, the combination of Iwayama and Masand yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between documents using a relevance feedback method.

RE: Claim 43

A method as in claim 39, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Iwayama, in view of Masand, discloses that the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments has/have been acquired from a second data source that is different than the first data source, because, for example, Masand discloses applying the "Memory Based Reasoning" method to documents acquired from different sources. *See* Masand at p. 59. Specifically, Masand discloses categorizing a news story acquired from a first source ("stories originating from diverse sources such as newspapers, magazines, newswires, and press releases") (Masand at p. 59) by comparing the document to a set of previously categorized documents acquired from a second source that is different from the first ("[u]sing an already coded training database of about 50,000 stories from the Dow Jones Press Release News Wire ....") (Masand at p. 59). Thus, Masand discloses the ability to apply the "Memory Based Reasoning" method to documents acquired from different sources.

A person of ordinary skill in the art, applying the "Memory Based Reasoning" method to compare and categorize documents, would have been motivated to apply the method to documents acquired from different sources, as taught by Masand. Thus, it would have been obvious to use the "Memory Based Reasoning" method to compare information from different sources in Iwayama since Iwayama and Masand relate to the same method of comparing information. Moreover, the combination of Iwayama and Masand yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between documents acquired from different sources.

RE: Claim 83

A computer readable medium as in claim 82, wherein the instructions for determining the degree of similarity further comprise instructions for performing a relevance feedback method.

Iwayama, in view of Masand, discloses that the step of determining the degree of similarity is accomplished using a relevance feedback method as recited in claim 83. For example, as discussed *above*, Iwayama discloses "MBR (Memory Based Reasoning) for calculating a measure of similarity between a test document and every training document." Iwayama at p. 273 (emphasis added.) To determine the K-nearest training documents, Iwayama discloses "2. [c]alculat[ing] the posterior probability $P(c_i/d_{test})$ [i.e., degree of similarity] for a test document d_{test} and every cluster c_i." Iwayama at p. 273. Iwayama further discloses that "[f]or full search (MBR or K-NN)" each document is its own cluster. Iwayama at 273-74 ("each training document belongs to a singleton cluster whose only member is the document itself'). Masand similarly discloses "a method for classifying news stories using Memory Based Reasoning (MBR) (a k-nearest neighbor method)." Masand at p. 59. The MBR method includes "find[ing] the near matches for each document to be classified. This is done by constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs. This query returns a weighted list of near matches (*see* Fig. 4)." Masand at p. 61. Masand discloses determining similarity scores between the subject matter of an uncategorized document (e.g., news story) and the subject matter of each document of a set of previously categorized documents (e.g., previously categorized news stories) by "constructing a relevance feedback query out of the text of the document, including both words and capitalized pairs." Masand at p. 61 (emphasis added.)

A person of ordinary skill in the art, applying the "Memory Based Reasoning" method to compare and categorize documents, would have been motivated to use the relevance feedback methods, as taught by Masand. Thus, it would have been obvious to use relevance feedback disclosed in Masand to determine the similarity of different segments in Iwayama, particularly since Iwayama and Masand relate to the same method of comparing information. Moreover, the combination of Iwayama and Masand yields a predictable result, and one of ordinary skill in the

art would be capable of combining these systems to achieve the expected result of determining similarities between documents using a relevance feedback method.

RE: Claim 86

A computer readable medium as in claim 82, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

For the same reasons set forth with respect to claim 43, claim 86 would have been obvious to one of ordinary skill in the art based on Iwayama in view of Masand.

n. Ground #14 – Iwayama and Patent Owner Admissions

Claims 40 and 83 are obvious over Iwayama in view of Masand under 35 USC § 103(a).

RE: Claim 40

A method as in claim 39, wherein the step of determining the degree of similarity is accomplished using a relevance feedback method.

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any_ appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See* MPEP § 2617(III).

Note: the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 40 obvious.

Thus, it would have been obvious to use the known relevance feedback method to compare information in Iwayama since Iwayama and the admissions relate to well-known methods of comparing information. Moreover, the combination of Iwayama and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

Reasons to Combine Iwayama with Patent Owner Admissions

Iwayama is directed to a method of categorizing documents, such as articles from the Wall Street Journal, based on similarities between the documents. See Iwayama at pp. 273 and 276. Similarly, the '507 patent is directed toward identifying and displaying text-based news stories that are related to a television news program. '507 patent at Abstract. Both Iwayama and the '507 patent describe comparing data representing news items, including text news items. The '507 patent discloses that relevance feedback was well known for use in determining the similarities between two sets of information, particularly text (e.g., "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). '507 patent at 28:55-29:3.

Note: the Patent owner also admits that the prior art incorporated by reference into the '507 patent touts the benefits of using relevance feedback. See, e.g., "Improving Retrieval Performance by Relevance Feedback," Salton, G., Journal of the American Society for Information Science, vol. 41, no. 4, pp. 288-297 ("Salton"); see also "The Effect of Adding Relevance Information in a Relevance Feedback Environment," Buckley, C., et al., Proceedings of 17th International Conference on Research and Development in Information Retrieval, DIGIR 94, Springer-verlag (Germany), 1994, pp. 292-300 ("Buckley").

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, particularly two text sources, such as the articles disclosed in Iwayama, would have been motivated to use the relevance feedback method of the prior art as discussed in the '507 patent for at least the advantages disclosed in the prior art, which the '507 patent incorporates by reference. Thus, it would have been obvious to use a relevance feedback method to compare information in Iwayama since Iwayama and the admissions relate to well-known methods of comparing information. Moreover, the combination of Iwayama and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 83

A computer readable medium as in claim 82, wherein the instructions for determining the degree of similarity further comprise instructions for performing a relevance feedback method.

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III).

> **Note** that, the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 83 obvious.

Thus, it would have been obvious to use the known relevance feedback method to compare information in Iwayama since Iwayama and the admissions relate to well-known methods of comparing information. Moreover, the combination of Iwayama and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

o. Ground #15 – Yuasa

Claims 39, 43, 82, and 86 are anticipated by Yuasa under 35 USC § 102(b).

RE: Claim 39

> **A method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, the method comprising the steps of:**

Yuasa discloses a method for categorizing according to subject matter an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments of the body of information having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Yuasa discloses a system that performs a method of automatically classifying large volume documents. (Yuasa at [0001], [0008].) The documents are a body of information and each document is a segment of information. Yuasa discloses that one or more of the documents (i.e., segments) have been previously categorized. (Id. at [0017]-[0018].) The

categories include subject matter categories, such as "politics", "Diet", and "international". (*Id.* at [0058].)

determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Yuasa discloses determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments (e.g., "a classifier for classifying documents using degrees of similarity between characteristic vectors of documents"). Yuasa at ¶¶ [0005], [0009], [0011], [0013], [0018], [0030], [0032], [0046], [0048], [0055], and [0058]-[0060].

Yuasa describes an exemplary process by which a sentence is categorized according to a plurality of predetermined classification groups. *Id.* at [0031]-[0046]. The classification groups include subject matter categories, such as "politics", "Diet", and "international". (*Id.* at [0058].) The classification groups are determined from previously categorized documents, and a representative vector is generated for each classification group. In one example, a representative document is chosen for each classification group, and a document characteristic vector is created for each representative document. *Id.* at [0018]. In another example, a clustering technique is used in which "documents for which the distances between document characteristics are close [are placed] in the same field [*i.e.* classification]". *Id.* at [0017]. Yuasa determines similarity by comparing the characteristic vector of the classification group to the characteristic vector of the sample sentence. *Id.* at [0031]-[0046]. "[T]he inner products of both [the characteristic vector of the sample sentence and the characteristic vector of the classification groups] are computed, and that producing the highest value is assumed to exhibit the highest degree of similarity..." *Id.* at [0032].

identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments; and

Yuasa discloses identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments. (*e.g.*, "a classifier for classifying documents using degrees of similarity between characteristic vectors of documents" and "it will be possible to classify a document read in from the document memory 301 in a classification group corresponding to the representative vector that most resembles the characteristic vector(s) for that document"). Yuasa at ¶¶ [0005], [0009], [0011], [0013], [0018], [0030], [0032], [0046], [0048], [0055], and [0058]-[0060].

For example, the Yuasa system measures the similarity between the example sentence and the previously determined classification groups by computing an inner product of the characteristic vector of the example sentence the characteristic vector of each of the classification groups. (*Id.* at [0031]-[0046].) "[T]he inner products of both [the characteristic vector of the sample sentence and the characteristic vector of the classification groups] are computed, and that producing the highest value is assumed to exhibit the highest degree of similarity..." (*Id.* at [0032].)

selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Yuasa discloses selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments (e.g., "it is seen that the characteristic vector for example sentence C is closest to the representative vector for classification group 3, so example sentence C is classified in classification group 3.") Yuasa at ¶¶ [0011], [0018], [0046] and [0058]-[0060].

RE: Claim 43

A method as in claim 39, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Yuasa discloses a method as in claim 39, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.
Yuasa discloses that the classification system described therein can be utilized for "classifying electronic mail or electronic news". Yuasa at Abstract, and ¶¶ [0001], [0003]- [0004] and [0061]. Inherently, electronic news and electronic mail will originate from multiple sources.

RE: Claim 82

A computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories, comprising:

Yuasa discloses a computer readable medium encoded with one or more computer programs for enabling categorization according to subject matter of an uncategorized segment of a body of information that includes a plurality of segments, each segment representing a defined set of information in the body of information, one or more segments having previously been categorized by identifying each of the one or more segments with one or more subject matter categories.

For example, Yuasa discloses a system that performs a method of automatically classifying large volume documents. (Yuasa at [0001], [0008].) The documents are a body of information and each document is a segment of information. Yuasa discloses that one or more of the documents (i.e., segments) have been previously categorized. (*Id.* at [0017]-[0018].) The categories include subject matter categories, such as "politics", "Diet", and "international". (*Id.* at [0058].) The system is "for use in an automatic classifying machine, word processor, or filing system or the like which stores and/or automatically classifies documents." (*Id.* at [0001].) The system is also used to classify electronic mail and/or news. (*Id.* at [0061].) It is inherent that such systems would require computer programs, instructions, and/or code encoded on a computer readable medium to perform such a task.

instructions for determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments;

Yuasa discloses instructions for determining the degree of similarity between the subject matter content of the uncategorized segment and the subject matter content of each of the previously categorized segments (e.g., "a classifier for classifying documents using degrees of similarity between characteristic vectors of documents". Yuasa at ¶¶ [0005], [0009], [0011], [0013], [0018], [0030], [0032], [0046], [0048], [0055], and [0058]-[0060].

For example, Yuasa describes a process by which an example sentence is categorized according to a plurality of predetermined classification groups. (Id. at [0031]-[0046].) The classification groups include subject matter categories, such as "politics", "Diet", and "international". (*Id.* at [0058].) The classification groups are determined from previously categorized documents, and a representative vector is generated for each classification group. In one example, a representative document is chosen for each classification group, and a document characteristic vector is created for each representative document. (*Id.* at [0018].) In another example, a clustering technique is used in which "documents for which the distances between document characteristics are close [are placed] in the same field [*i.e.* category]". (*Id.* at [0017].) Yuasa determines similarity by comparing the characteristic vector of the classification group to the characteristic vector of the sample sentence. (*Id.* at [0031]-[0046].) "[T]he inner products of both [the characteristic vector of the sample sentence and the characteristic vector of the classification groups] are computed, and that producing the highest value is assumed to exhibit the highest degree of similarity..." (*Id.* at [0032].)

instructions for identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously categorized segments; and

Yuasa discloses instructions for identifying one or more of the previously categorized segments as relevant to the uncategorized segment based upon the determined degrees of similarity of subject matter content between the uncategorized segment and the previously

categorized segments. (*e.g.*, "a classifier for classifying documents using degrees of similarity between characteristic vectors of documents" and "it will be possible to classify a document read in from the document memory 301 in a classification group corresponding to the representative vector that most resembles the characteristic vector(s) for that document"). Yuasa at ¶¶ [0005], [0009], [0011], [0013], [0018], [0030], [0032], [0046], [0048], [0055], and [0058]-[0060].

For example, the Yuasa system measures the similarity between the example sentence and the previously determined classification groups by computing an inner product of the characteristic vector of the example sentence the characteristic vector of each of the classification groups. (*Id.* at [0031]-[0046].) "[T]he inner products of both [the characteristic vector of the sample sentence and the characteristic vector of the classification groups] are computed, and that producing the highest value is assumed to exhibit the highest degree of similarity..." (*Id.* at [0032].)

instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments.

Yuasa discloses instructions for selecting one or more subject matter categories with which to identify the uncategorized segment based upon the subject matter categories used to identify the relevant previously categorized segments (e.g., "it is seen that the characteristic vector for example sentence C is closest to the representative vector for classification group 3, so example sentence C is classified in classification group 3.") Yuasa at ¶¶ [0011], [0018], [0046] and [0058]-[0060].

RE: Claim 86

A computer readable medium as in claim 82, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source.

Yuasa discloses a computer readable medium as in claim 82, wherein the uncategorized segment has been acquired from a first data source and the previously categorized segment or segments have been acquired from a second data source that is different than the first data source. For example, Yuasa discloses that the classification system described therein can be utilized for "classifying electronic mail or electronic news". Yuasa at Abstract, and ¶¶ [0001], [0003]-[0004] and [0061]. Inherently, a certain amount of electronic news and electronic mail will originates from multiple sources.

p. Ground #16 – Yuasa with Patent Owner Admissions

Claims 40 and 83 are obvious over Yuasa in view of Patent Owner admissions under 35 USC § 103(a).

RE: Claim 40

A method as in claim 39, wherein the step of determining the degree of similarity is accomplished using a relevance feedback method.

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using any appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. *See*: MPEP § 2617(III).

Note: the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide

a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 40 obvious.

Thus, it would have been obvious to use the known relevance feedback method to compare information in Yuasa since Yuasa and the admissions relate to well-known methods of comparing information. Moreover, the combination of Yuasa and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

Reasons to Combine Yuasa with Patent Owner Admissions

Yuasa is directed to a method of categorizing documents, such as documents, electronic mail, and electronic news. Yuasa at ¶¶ [0001] and [0061]. The '507 patent is directed toward identifying and displaying text-based news stories that are related to a television news program. '507 patent at Abstract. Both Yuasa and the '507 patent describe comparing data representing news items, including text news items. The '507 patent discloses that relevance feedback was well known for use in determining the similarities between two sets of information, particularly text (*e.g.*, "The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). '507 patent at 28:55-29:3.

Note: The Patent Owner also admits that the prior art incorporated by reference into the '507 patent touts the benefits of using relevance feedback. *See, e.g.*, "Improving Retrieval Performance by Relevance Feedback," Salton, G., Journal of the American Society for Information Science, vol. 41, no. 4, pp. 288-297 ("Salton"); *see* also "The Effect of Adding Relevance Information in a Relevance Feedback Environment," Buckley, C., et al., Proceedings of 17th International Conference on Research and Development in Information Retrieval, DIGIR 94, Springer-verlag (Germany), 1994, pp. 292-300 ("Buckley").

A person of ordinary skill in the art, looking for a method of determining similarities between two information sources, particularly two text sources, such as the documents disclosed in Yuasa, would have been motivated to use the relevance feedback method of the prior art as

discussed in the '507 patent for at least the advantages disclosed in the prior art, which the '507 patent incorporates by reference. Thus, it would have been obvious to use a relevance feedback method to compare information in Iwayama since Iwayama and the admissions relate to well-known methods of comparing information. Moreover, the combination of Iwayama and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

RE: Claim 83

> **A computer readable medium as in claim 82, wherein the instructions for determining the degree of similarity further comprise instructions for performing a relevance feedback method.**

The '507 patent includes admissions that the use of relevance feedback methods to compare text was well known in the art. *See e.g.*, '507 patent at 28:55-29:3 ("The use of relevance feedback to determine the similarity between two text segments is well-known, and is described in more detail in [the prior art]. Relevance feedback is also described in detail in [the prior art]"). Notably, the '507 patent states (emphasis added) at 28:36-38, that "[t]he degree of similarity can be determined using appropriate method, such as, for example, relevance feedback." In other words, the '507 patent itself makes clear that there is nothing particularly significant or important - in terms of imparting patentability (either novelty or nonobviousness) to a claim - about using relevance feedback to determine similarity, and it is just one of multiple techniques that could be used. These admissions can be used in combination with prior patents and printed publications as a basis in rejecting claims during reexamination. See: MPEP § 2617(III).

> **Note:** the '507 Patent also discloses that the degree of similarity can be determined using any appropriate method, thus further confirming that relevance feedback does not provide a basis to distinguish the claimed invention. As such, Bender either alone or in combination with the Patent Owner's admissions and/or the incorporated Salton and Buckley references renders claim 83 obvious.

Thus, it would have been obvious to use the known relevance feedback method to compare information in Yuasa since Yuasa and the admissions relate to well-known methods of comparing information. Moreover, the combination of Yuasa and the admissions by the Patent Owner yields a predictable result, and one of ordinary skill in the art would be capable of combining these systems to achieve the expected result of determining similarities between two information sources.

III. CONCLUSION

AMENDMENT IN REEXMAINATION PROCEEDING

The Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced. See MPEP § 2250(IV) for examples to assist in the preparation of proper proposed amendments in reexamination proceedings.

SERVICE OF PAPERS

After filing of a request for ex parte reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

EXTENSION OF TIME

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will

be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

LITIGATION REMINDER

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 6,263,507throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Contact Information

All correspondence relating to this ex *parte* reexamination proceeding should be directed:

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Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html. EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.
Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

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