

Petition for *Inter Partes* Review of
U.S. Patent No. 7,155,451 B1

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC and YOUTUBE, LLC,
Petitioner

v.

ROBOCAST, INC.,
Patent Owner

Case IPR2023-00591
U.S. Patent No. 7,155,451 B1
Issue Date: December 26, 2006

Title: AUTOMATED BROWSING SYSTEM FOR PUBLISHERS AND USERS
ON NETWORKS SERVING INTERNET AND REMOTE DEVICES

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,155,451 B1**

(PETITION 2 OF 2)

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List of Exhibits

Exhibit No.	Description of Document
1101	U.S. Patent No. 7,155,451 B1 to Damon C. Torres (filed Sep. 1, 1998, issued Dec. 26, 2006) (“451” or “451 patent”)
1102	Declaration of Christopher M. Schmandt (“Schmandt”)
1103	U.S. Patent No. 5,634,062 to Takeshi Shimizu et al. (filed October 20, 1994, issued May 27, 1997) (“Shimizu”)
1104	Excerpts from Robert C. Benedict, Jr., <i>Using Harvard Graphics 2 for Windows</i> (1993) (“Benedict”)
1105	Excerpts from David Fox & Troy Downing, <i>HTML Web Publisher’s Construction Kit</i> (1995) (“Fox”)
1106	Excerpts from Stephen W. Sagman, <i>Running Microsoft PowerPoint 4 for Windows</i> (1994) (“Sagman”)
1107	U.S. Patent No. 5,347,632 to Robert Filepp et al. (filed July 28, 1989, issued September 13, 1994) (“Filepp”)
1108	Catherine Guinan et al., <i>Information Retrieval from Hypertext Using Dynamically Planned Guided Tours</i> , Proceedings of the ACM Conference on Hypertext (Nov. 1992), pp.122-130 (“Guinan”)
1109	U.S. Patent No. 6,486,895 B1 to George G. Robertson et al. (filed September 8, 1995, issued November 26, 2002) (“Robertson”)
1110	Excerpts from Michael Miller, <i>Using CompuServe</i> (2d ed. 1994) (“Miller”)
1111	U.S. Patent No. 5,706,507 to Robert J. Schloss (filed July 5, 1995, issued January 6, 1998) (“Schloss”)
1112	Excerpts from Ernest Ackermann et al., <i>Using Unix</i> (1994) (“Ackermann”)

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1113	Excerpts from Microsoft Press, <i>Microsoft Office for Windows 95 Resource Kit</i> (1995) (“Resource Kit”)
1114-1119	<i>Reserved</i>
1120	Excerpts from <i>Microsoft Press Computer Dictionary</i> (2d ed. 1994)
1121	Declaration of James L. Mullins, PhD (“Mullins”)
1122	Declaration of David Fox (“Fox Decl.”)
1123	Claim Construction Order issued in <i>Robocast, Inc. v. Microsoft Corp.</i> , No. 1:10-cv-01055 RGA (D. Del.) and <i>Robocast, Inc. v. Apple Inc.</i> , No. 1:11-cv 00235 RGA (D. Del.), dated June 28, 2013
1124	Prosecution history of U.S. Patent No. 7,155,451 B1
1125	Prosecution history of U.S. Patent No. 8,606,819 B2
1126	Prosecution history of U.S. Patent No. 8,965,932 B2
1127	Prosecution history for U.S. Patent Appl. Serial No. 08/922,063
1128	Prosecution history for U.S. Provisional Patent Appl. Serial No. 60/025,360
1129	Complaint filed in <i>Robocast, Inc. v. YouTube, LLC and Google LLC</i> , No. 1:22-00304 RGA (D. Del. filed March 7, 2022)
1130	Proof of Service of Complaint (Google LLC), <i>Robocast, Inc. v. YouTube, LLC et al.</i> , Case No. 1-22-cv-00304 (D. Del.)
1131	Proof of Service of Complaint (YouTube, LLC), <i>Robocast, Inc. v. YouTube, LLC et al.</i> , Case No. 1-22-cv-00304 (D. Del.)

I. MANDATORY NOTICES UNDER §42.8(A)(1)

A. Real Party-In-Interest under §42.8(b)(1)

Google LLC and YouTube, LLC (collectively “Petitioner”) are the real parties-in-interest to this IPR petition.

B. Related Matters under §42.8(b)(2)

The ’451 patent is the subject of the following currently-pending litigations: *Robocast, Inc. v. YouTube, LLC et al.*, Case No. 1-22-cv-00304 (D. Del., filed March 7, 2022), which involves Petitioner, and *Robocast, Inc. v. Netflix, Inc.*, Case No. 1-22-cv-00305 (D. Del., filed March 7, 2022). The ’451 patent was also the subject of *Robocast Inc. v. Apple Inc.*, Case No. 1-11-cv-00235 (D. Del.) and *Robocast Inc. v. Microsoft Corp.*, Case No. 1-10-cv-01055 (D. Del.), which terminated in 2014.

The ’451 patent is currently the subject of a pending IPR petition, *Netflix, Inc. v. Robocast, Inc.*, Case No. IPR2023-00081, in which an institution decision is expected by May 23, 2023. Petitioner had no involvement in the *Netflix* petition.

This is the second of two petitions filed by Petitioner with respect to the ’451 patent. The first petition (IPR2023-00590) challenges another set of claims of the ’451 patent that does not overlap with the claims challenged herein. (See Petitioner’s Explanation of Multiple Petitions, filed herewith.)

Petitioner is also filing IPR petitions with respect to two related patents in the same family: *Google LLC et al. v. Robocast, Inc.*, Case No. IPR2023-00594 (U.S.

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Patent No. 8,606,819 B2) and *Google LLC et al. v. Robocast, Inc.*, Case Nos.
IPR2023-00592 and IPR2023-00593 (U.S. Patent No. 8,965,932 B2).

C. Lead and Back-Up Counsel under §42.8(b)(3)

Petitioner provides the following designation of counsel.

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D. Service Information

This Petition is being served by Federal Express to the correspondence address of record for the '451 patent, 135621 - IPSILON USA, 110 W 40th Street, Suite 2001, New York, NY 10018. Petitioner consents to electronic service at the addresses provided above for lead and back-up counsel.

II. FEE PAYMENT

Petitioner requests review of 22 claims, with a \$43,750 payment.

III. REQUIREMENTS UNDER §§ 42.104 AND 42.108 AND CONSIDERATIONS UNDER §§ 314(A) AND 325(D)

A. Grounds for Standing

Petitioner certifies that the '451 patent is available for IPR and that Petitioner is not barred or otherwise estopped.

B. Identification of Challenge and Statement of Precise Relief Requested

Petitioner requests IPR institution of claims 22-36 and 39-45 based on:

Ground	Claims	Basis for Challenge under §103
1	22-25	Shimizu, Benedict, Fox, Guinan
2	26-32, 35-36	Shimizu, Benedict, Fox, Guinan, Filepp
3	39-44	Shimizu, Benedict, Fox, Guinan, Miller

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Ground	Claims	Basis for Challenge under §103
4	33-34	Ground 2 Prior Art, with Robertson and Sagman
5	40	Ground 3 Prior Art, with Schloss
6	45	Ground 3 Prior Art, with Ackerman and Resource Kit

Submitted with this Petition is the Declaration of Christopher M. Schmandt (EX1102) (“Schmandt”), a qualified expert. (Schmandt, EX1102, ¶¶1-10, Ex. A.)

C. Considerations Under §§ 314(a) and 325(d)

§314(a): Petitioner has not previously filed an IPR petition with respect to the ’451 patent. As noted in **Part I.A**, the patent is the subject of an IPR petition filed by Netflix (IPR2023-00081), with an institution decision expected by May 23, 2023. The *Netflix* petition does not favor discretionary denial because (1) Petitioner had no role in its preparation or filing, (2) it challenges considerably fewer claims than the present Petition (*i.e.* only claims 1-2 and 37-38), and (3) there is no overlap between the prior art in the *Netflix* petition and the prior art relied upon here. Petitioner also filed the present Petition before any Patent Owner Preliminary Response in the *Netflix* proceeding.

Petitioner is filing two IPR petitions against the ’451 patent to account for the number of claims being challenged, the present Petition challenging claims 22-36 and 39-45, and the other challenging claims 1-22 and 37-38 (IPR2023-00590). *See* Petitioner’s Explanation of Multiple Petitions, filed herewith.

With respect to the pending litigation identified in **Part I.A**, it is in early stages with no discovery having occurred. No claim construction or other substantive rulings have issued from the district court. Petitioner intends to move to stay the pending litigation in the event of institution.

§325(d): This Petition does not raise §325(d) issues because it relies on new prior art references that were not considered during prosecution of the '451 patent.

IV. OVERVIEW OF THE CHALLENGED PATENT

A. Level of Ordinary Skill in the Art

A person of ordinary skill as of September 3, 1996 (the earliest application to which the '451 patent claims priority)¹ would have possessed a bachelor's in electrical engineering, computer science, or similar field, with at least two years of experience developing and implementing network-based computer systems, such as systems for storing and retrieving information over the Internet or communicating using the Web. Such a person could also have qualified with more formal education and less technical experience, or vice versa. (Schmandt, ¶¶13-18.)

B. Specification Overview

The '451 patent states that it “relates generally to computer networks, and

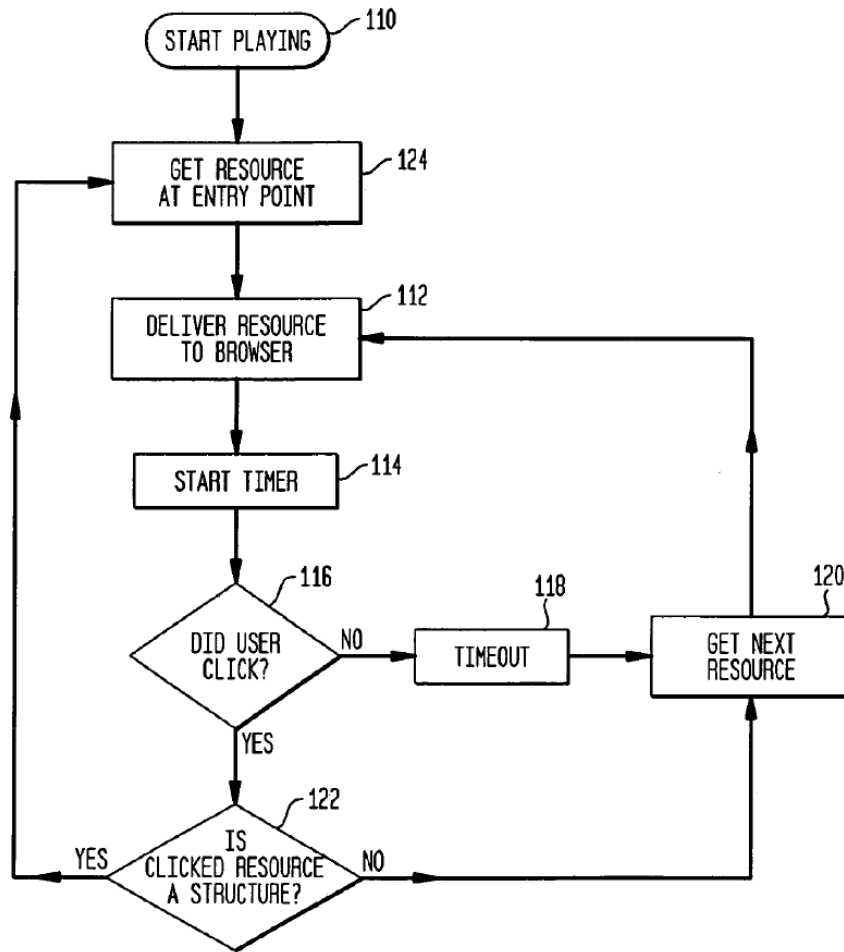
¹ Petitioner does not concede that the challenged claims are entitled to the filing date of the September 3, 1996 provisional application to which they claim priority (60/025,360), but the prior art here predates that date. Petitioner reserves the right to respond if Patent Owner later attempts to argue for an earlier date of invention.

specifically to a method of sequencing and scheduling web pages, via a suite of software applications.” (’451, 1:16-18.) The ’451 patent acknowledges that the Internet was already well-known and had “grown tremendously” with the popularization of the World Wide Web. (’451, 1:22-25.)

The ’451 patent describes methods for a user to be automatically presented with content of a series of resources, such as web pages, using what the patent calls a “show structure.” (’451, 2:53-57.) A “show structure” contains a set of nodes, each node “represent[ing] a resource such as a web page, an executable file, or a data file stored at a predetermined location and accessed via its corresponding address.” (’451, 2:55-60.) “Each node in the structure includes both an address from which the content may be accessed and an indication of the duration for which the content will be presented.” (’451, 3:26-31.) “A show structure is defined by one or more paths that are spanned through these nodes.” (’451, 3:4-6.)

Figure 4 below outlines how a user may either “on-the-fly” interactively navigate the arrangement of resources specified by the show structure (*e.g.*, steps 116 and 122) or, much like traditional broadcast television or an automatic slideshow, “simply watch[] a series of pre-edited resources” (*e.g.*, steps 114-118):

FIG. 4
RoboSurf



(’451, Fig. 4; see also *id.*, 3:13-16, 11:8-40.) The ’451 patent explains that a show structure itself can be generated in a number of ways, including manually by a user collecting URLs, or automatically in connection with providing results to a user’s search query. (’451, 8:27-31, 11:66-12:8.)

V. CLAIM CONSTRUCTION

Petitioner does not believe express claim construction is necessary at this time. As discussed in **Part VI** below, a district court in prior litigation not involving

Petitioner issued a claim construction order with respect to certain terms and phrases recited in challenged claims. (EX1123.) The Board, in denying institution of IPR involving closely-related U.S. Patent No. 8,965,932 B2 in *Unified Patents, LLC v. Robocast, Inc.*, Case No. IPR2022-01125, expressly adopted those constructions. (Paper 13, at 13-15.) The prior art cited herein, as demonstrated below, renders the challenged claims obvious under the district court’s constructions or under any other reasonable construction.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Overview of Grounds

The challenged claims attempt to lay claim over techniques for presenting a series of content resources in a sequenced and/or organized fashion. But these techniques were well-known long before the patent, as demonstrated by Shimizu (EX1103), Benedict (EX1104), and Fox (EX1105), which disclose techniques for linking a set of hypertext nodes so they can be automatically displayed in a particular order and at specified intervals. All grounds also rely on Guinan (EX1108), which discloses searching and locating hypertext nodes and using them to create a sequenced “guided tour” of hypertext nodes for presentation to the user.

Grounds 2 cites Filepp (EX1107), for known targeted advertising and display techniques recited in certain dependent claims, and **Ground 3** cites Miller

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(EX1110), for known category-based search features recited in claim 39. **Grounds 4-6** address ancillary features in dependent claims 33-34, 40, and 45.

Each reference cited in this Petition qualifies as prior art. Shimizu, Filepp, Robertson and Schloss qualify as prior art under at least § 102(e) (pre-AIA) because they were filed before the earliest filing date of the '451 patent. The other references qualify under at least § 102(a)/(b) (pre-AIA) because they were published prior to the patent filing date, as evidenced by their availability in public libraries and being otherwise accessible to the public. (EX1021 (Mullins), ¶¶32-55 (Benedict), 56-75 (Fox), 76-99 (Sagman), 100-113 (Guinan), 114-137 (Miller), 138-161 (Ackermann), 162-185 (Resource Kit); EX1122 (Fox Decl.), ¶¶3-9.)

B. Ground 1: Claims 22-25 Are Obvious Over Shimizu in View of Benedict, Fox and Guinan

1. Claim 22

The preamble recites “[a] **method for transmitting in a sequential arrangement to a user’s computer, content derived via a communications network from a plurality of resources....**” It is unnecessary to determine whether the preamble recites a claim limitation because, even if it does, it is obvious.

Shimizu, entitled “System for Managing Hypertext Node Information and Link Information,” discloses a method of displaying content such as text, pictures, and motion pictures:

When the entity information (character string, image, sounds, motion

pictures) is acquired from the node information entity management part **8**, the content of the acquired information is reproduced and displayed in the node content display area **81** of the window **80** by applying the program which is associated with the pointer in the display procedure slot **62** of the node information structure **9**.

(Shimizu, 8:52-59; *see also id.*, Fig. 8 (showing user interface for presenting node content), 8:11-25, 8:49-59.)²

The content is also derived from “**a plurality of resources**,” *e.g.*, stored information (*e.g.* in data files) containing the character string, image, motion picture, etc., content. (Schmandt, ¶109; Shimizu, 6:39-42, 6:57-59, 8:52-59.) And as explained in more detail below, based on the further combination with Fox, it would have been obvious that the content would have been derived from resources on the Web (*e.g.*, web pages, images) identified by Uniform Resource Locators (URLs) and accessible via the Internet (“**via a communications network**”). (Schmandt, ¶¶109, 127-135; Fox, 0049 (“A *URL* (or *Universal Resource Locator*) is the address of a document, file, or other Internet resource.”) (*italics in original*).) Because the user’s computer received these resources via the Internet, they were “**transmitt[ed]... to a user’s computer**.” (Schmandt, ¶224.)

The proposed combination also renders obvious transmitting and displaying

² Except as otherwise noted, all underlining has been added for emphasis.

content “**in a sequential arrangement**,” because the content of each node would have been presented in a particular sequence. (Shimizu, *e.g.*, 9:1-4 (“The processing above is carried out so that the node C is displayed followed by node B and node D, in accordance with the order of the link information.”), 9:60-66, 5:10-14.) As explained in more detail below, the organization and sequencing of nodes is determined by link information in Shimizu.

(a) “**performing an on-line search, in response to which a plurality of search results and their corresponding URL resources are received;**” (22[a])

In the prior litigation, the district court construed “**on-line search**” as “*an Internet search.*” (EX1123, 0021.) This limitation would have been obvious based on the disclosures in **Fox** and **Guinan**, which together confirm that searches of hypertext resources were well-known. (Fox, 0046-0047.) For example, with respect to Internet search engines, Fox identifies more than 10 Internet search indexes that existed as of 1995, including Lycos, WebCrawler and Yahoo which were popular by the mid-1990s. (Schmandt, ¶226; Fox, 0047-0048, Table 1-1, 00204.)

But Fox does not describe how results from an on-line search are used beyond being displayed by the user. Petitioner has therefore cited Fox in combination with **Guinan**, which discloses a technique for (a) allowing a user to enter a natural language search query and then (b) searching hypertext nodes in response to the query to create a “guided tour” for the user. (Guinan, 008, §1, 124-125.)

Guinan explains that hypertext systems had problems such as “disorientation and the quality of the information retrieved by the user from the hypertext.” (Guinan, 007, §1.) This problem with hypertext was well-known and, as acknowledged in Fox, one of the key reasons the industry adopted on-line searching for the Web as discussed above. (Fox, 0046-0047; Schmandt ¶227.) Guinan discloses a proposed method of creating a “guided tour” to address these shortcomings.

The first step of Guinan’s proposed method is for the user to enter a “natural language” search query. (Guinan, 009, §3.) Hypertext nodes are then searched for keywords matching the query, which are scored using a weighting algorithm. (*Id.*; *see also id.*, 0014, §6 (“*Finding information:* When the user enters a search query in the form of a natural language statement it is matched to the nodes in the hypertext using standard information retrieval techniques.”) (*italics in original.*)) The weighting algorithm takes into account the frequency of terms within the nodes, as well as their connections to other nodes. (*Id.*) Nodes that satisfy a threshold weight value are added to the tour. (Guinan, 0010; Schmandt, ¶229.)

Once matching nodes have been identified, a guided tour is assembled. “At this stage, the nodes for the guided tour have been dynamically chosen in response to a user’s query and some form of logical ordering has to be imposed on the selected tour nodes.” (Guinan, 0010, §3.) Guinan discloses an ordering procedure that takes

into account linking relationships between the matching nodes. (*Id.*) “This procedure is followed until every node selected for inclusion in the tour has been positioned correctly relative to each other node in the tour.” (*Id.*)

Rationale and Motivation to Combine (Shimizu, Benedict and Fox with Guinan): It would have been obvious to combine Shimizu and Benedict with Fox and Guinan. This would have predictably resulted in the Shimizu-Benedict-Fox hypertext system (described in detail for 22[b] below), adapted to use an “**on-line search**” to identify a series of hypertext nodes. (Schmandt, ¶231.) These nodes will then be used to create the claimed “**show structure of nodes**” as described for 22[b], under the proposed combination.

Guinan does not expressly disclose that the hypertext nodes in the guided tour are located using an “**on-line search**,” *i.e.*, Internet search, or that search results are accompanied with “**corresponding URL resources**.” But those details would have been trivial and obvious in view of Fox which, as mentioned above, expressly discloses the use of Internet search indexes. It would have also been obvious to adapt the proposed combination such that search results obtained by Guinan would have been hypertext nodes accompanied by their URLs. (Schmandt, ¶233.) This is because, as was elementary knowledge to ordinarily skilled artisans, resources on the Web were identified using URLs. (Fox, 0049 (“A *URL* (or *Universal Resource Locator*) is the address of a document, file, or other Internet resource... The World

Wide Web gives every article, newsgroup, database, computer, file, or other Internet fragment its very own URL.”).) It thus would have been obvious to adapt the hypertext searching and guided tour techniques of Guinan to provide an “**on-line search**” that returns hypertext nodes on the Web as search results with their corresponding “**URL resources**,” which include at least their URLs. (Schmandt, ¶233.) Guinan and Fox are analogous references in the same field of providing organized or sequenced presentation of hypertext content, and would have been pertinent to problems facing the inventor. (Schmandt, ¶¶234, 131.)

Guinan provides an express motivation to apply her techniques by explaining that, by creating a guided tour based on a search, “[u]sers don’t need to worry about getting lost or confused in the hypertext as all they need to do is follow the tour which is generated in response to their query.” (Guinan, 0014, §6.) This motivation is echoed in Fox, which also explains that searching techniques help users locate specific information. (Fox, 0046-0047 (“Hypertext makes it easy to get lost... [W]hat if you want to find pages dealing with a specific topic? Luckily, the Web is full of indexes.”).) An ordinarily skilled artisan would thus also been motivated to use an online search to easily identify relevant hypertext nodes, which can then be used to create a show structure for display to the user. (Schmandt, ¶¶237, 240-241.) As a further motivation to combine, the “guided tour” of hypertext nodes in Guinan is directly analogous to the show structure of nodes under the proposed combination.

(Schmandt, ¶237.) It therefore would have been obvious to use the search results provided – placed into an ordered/sequenced guided tour – as the basis for creating the claimed show structure of nodes. (*Id.*)

A skilled artisan would also have been motivated to adapt Guinan to identify hypertext nodes in the form of Web resources identified by URLs. This would have been a natural adaptation considering that, as Fox confirms, the Web is an example of a hypertext-based system. (Fox, 0045 (“The World Wide Web uses hypertext to link all of its pages together.”).) An ordinarily skilled artisan would have desired to take advantage of the commercial growth and growing popularity of the Web and thereby increase the number of users who would use the guided tour. (Schmandt, ¶¶238, 132.) As explained for 22[b] below, the ability to access content identified by URLs would also have expanded the universe of content that could have been incorporated into a tour. (Schmandt, ¶¶238, 133.) A skilled artisan would have had at least a reasonable expectation of success and could have implemented the proposed combination using conventional techniques. (Schmandt, ¶239.)

- (b) **“automatically creating and storing a show structure of nodes, each node identifying a resource from a plurality of accessible resources via said communications network wherein said show structure is created in response to said search results received in response to said on-line search;” (22[b])**

The “**show structure of nodes**” in the proposed combination corresponds to a set of nodes and their links or connections to other nodes. Those nodes take the

form of hypertext nodes under the proposed combination.

Shimizu discloses a system for defining a set of hypertext nodes and their relationships to other nodes. (Shimizu, 6:30-35, Fig. 10; Schmandt, ¶¶240, 44-48, 111.) Figure 9 shows a “conceptual” example of a set of nodes (7:49-51):

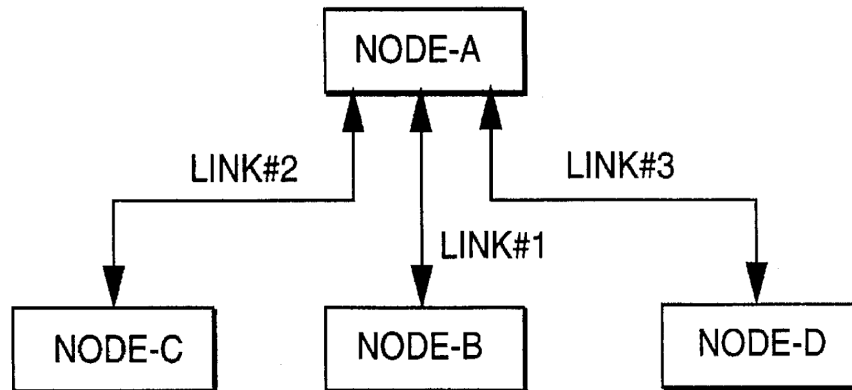


FIG. 9

(Shimizu, Fig. 9.) In this example, NODE-B, NODE-C, and NODE-D are linked to NODE-A by LINK#1, LINK#2, and LINK#3, respectively. (Shimizu, 7:51-54.) In this example, as Shimizu explains, NODE-A would be displayed first followed by NODE-C, NODE-B, and NODE-D. (Shimizu, 7:54-65.) Figure 10 shows a different representation of the nodes from Figure 9:

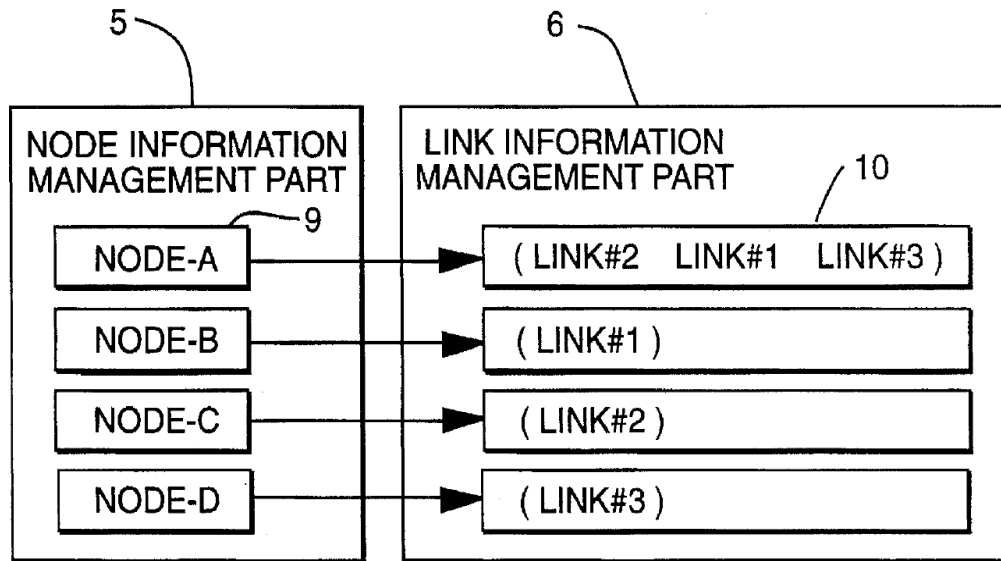


FIG. 10

(Shimizu, Fig. 10, 7:67-8:5.) Node information management part **5**, shown on the left, “manages a plurality of node information structures holding the information about each node.” (Shimizu, 6:31-33.) Link information management part **6**, on the right, “manages a plurality of link information structures defining the relations between the nodes.” (Shimizu, 6:33-35.) In the example above, as noted, “the node A is linked to the node C, node B and node D, in that order.” (Shimizu, 8:4-5.)

Shimizu thus discloses “**a show structure of nodes**,” which corresponds in Shimizu to an arrangement or set of nodes, which identify their associated content resources and their links to other nodes. With respect to the step of “**storing**” the claimed show structure, the node and link information in Shimizu, as well as the content resources themselves, are stored. (Shimizu, *e.g.*, 7:66-8:10, 6:39-43.) And with respect to both “**creating**” and “**storing**” the claimed show structure, it would

have been obvious that the show structure in Shimizu was created and stored, as it must have been brought into existence and stored in memory to perform the node display and other functions described in Shimizu. (Schmandt, ¶240.) As further explained below, the show structure would have been created and stored “**automatically**” under the further combination with Guinan. (Schmandt, ¶241.)

Shimizu further discloses “**each node identifying a resource from a plurality of accessible resources.**” As noted, node information is stored in a “node information structure” for each node, as shown in Figure 6:

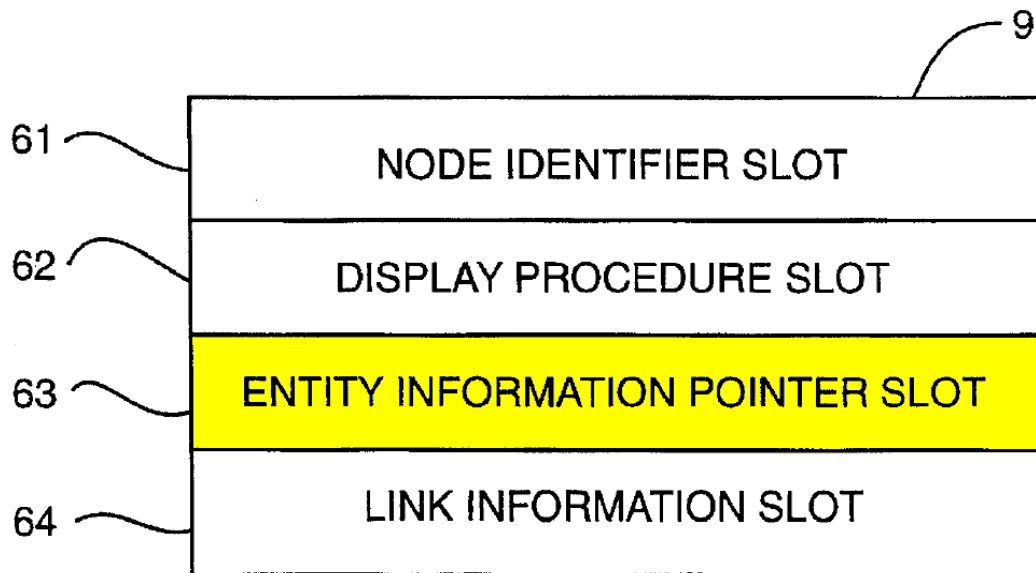


FIG. 6

(Shimizu, Fig. 6 (highlighting added), 6:44-45 (“FIG. 6 is a view showing members of a node information structure held by the node information management part 5.”).)

Node identifier slot **61** in Figure 6 “is used to uniquely identify this node information

structure within the system.” (Shimizu, 7:1-3.)

The key slot here is entity information pointer slot **63** in yellow, which holds a pointer to the content resource associated with the node:

The entity information pointer slot **63** retains the pointer pointing to the entity information to be displayed by the node in question. The entity information thus pointed to may be a character string, image information, motion pictures or sounds.

(Shimizu, 5:55-59.) As explained for 22[c]-[d] below, Shimizu uses the entity information pointer to identify, retrieve and display content associated with the node.

(Shimizu, 8:49-59.) The nodes in Shimizu thus “**identify[] a resource from a plurality of accessible resources,**” because each node points to and therefore identifies a particular resource (*e.g.*, text, image, motion picture, sound, etc.) from the plurality of resources accessible to the system.

The node information structure shown in Figure 6 also includes link information slot **64**, which stores “the pointer pointing to the link information structure for holding the link information attached to the node in question.”

(Shimizu, 6:59-62.) The link information structure for a current node, in turn, points to the node information structure for the next node to which the current node is linked. (Shimizu, 6:63-7:9, Fig. 7.)

This mapping of Shimizu is consistent with claim construction rulings in the prior litigation, in which the district court construed “**show structure of nodes**” as

“a structure that is arranged for the display of content by specifying one or more paths through a plurality of nodes,” which must also *“specify the duration of any display.”* (EX1123, 002.) The court further defined **“node”** as *“an identifier of a resource that includes an address to the resource and the duration for which the resource's content is to be presented by default.”* (EX1123, 0016.) The proposed combination satisfies these constructions.

With respect to **“a show structure of nodes,”** as explained, the node and link information in Shimizu define a structure that specifies a set of nodes, the content associated with the nodes, and links that specify the path through the nodes. With respect to **“node,”** it would have been obvious that entity information pointer slot **63** stores *“an identifier of a resource that includes an address to the resource,”* because it provides a pointer identifying the location of the content resource associated with the node. (Schmandt, ¶114.) Under the further combination with Fox, explained below, such resource would have been identified using a Uniform Resource Locator (URL) that provides an address to a Web content resource (*e.g.* web page, image, etc.) on the Internet. (Schmandt, ¶¶127-135.)

Petitioner notes that the '451 patent does not require any particular format or organization for the claimed **“show structure,”** but rather, describes it as an arrangement containing a set of nodes. ('451, 2:55-60.) The proposed combination similarly renders obvious a set of nodes whose characteristics (including their

associated content resources and connections with other nodes) are defined by their node and link information as explained. (Schmandt, ¶115.)

Show Structure Specifying Duration of Display

The prior litigation constructions above state that a show structure of nodes “*specifies the duration of any display,*” and that a node includes “*the duration for which the resource’s content is to be presented by default.*” These concepts are related to dependent claim 23, separately addressed below. Petitioner will provide a separate discussion at the end of the discussion of 22[b] below explaining how the further requirements imposed by the district court, if adopted here, are rendered obvious under the proposed combination.

Resources Accessible “Via Said Communications Network”

Shimizu discloses that resources could have been stored in “secondary storage” (e.g., Shimizu, 6:39-43, 2:49-53), which would have been understood as encompassing storage accessible through a network. (Schmandt, ¶127.) But Shimizu does not expressly disclose an example in which the resources are “**accessible via said communications network,**” but this would have been obvious in view of Fox, which confirms that the Web is yet another example of a hypertext system. (Schmandt, ¶¶58, 128; Fox, 0044-0046.) Each resource on the Web was identified by a Uniform Resource Locator (URL) identifying its location on the Internet. (Fox, 0049; *see also id.*, 00332-00333 (describing IMG tag identifying

location of image resource).) As was well-known, one of the components of a URL is the domain name of the server where the resource is located (*e.g.* “uspto.gov”), so it would also have been obvious that each resource could have been associated with a different website at a unique domain. (Schmandt, ¶130.)

Fox also confirms that it was known to use URLs to identify content resources over the Internet in the same use case as Shimizu and Benedict, *i.e.*, to display them automatically and sequentially. For example, Fox discloses a technique in which a web page, after a specified amount of time, can cause a web browser to automatically load another web page after 60 seconds, which Fox states could be used to “create an automatic slide show of many Web pages.” (Schmandt, ¶129 (quoting Fox, 00324).) It was thus known to use URLs to identify resources for a hypertext presentation system such as Shimizu in which the content resources associated with a series of nodes could be downloaded and presented to the user in a particular sequence and for a specified duration. (Schmandt, ¶129.)

Rationale and Motivation to Combine (Shimizu with Fox): Petitioner already explained the rationale for combining Guinan and Fox for 22[a]. For 22[b], it would have been obvious to combine Shimizu with Fox, predictably resulting in each node in the claimed show structure being associated with a Web resource identified by a URL, such a web page or image. This would have resulted in each resource being “**accessible via said communications network,**” *i.e.*, the Internet.

This would have been a straightforward adaptation; for example, entity information pointer slot **63** of Shimizu discussed above could have been readily adapted to hold one or more URLs identifying Web resources on the Internet (web pages, images, etc.) associated with the node. (Schmandt, ¶130 (citing Fox, 0049 (“The World Wide Web gives every article, newsgroup, database, computer, file or other Internet fragment its own URL.”), 00332-00333 (describing how to embed graphic files on a web page using IMG tags identifying the URL of images for display on the page)).) A URL would have been a natural way to implement entity information pointer slot **63** because a URL provides a standardized way of identifying a file stored on the Internet. (Schmandt, ¶130.) Shimizu, like Fox above, is an analogous reference in the same field of techniques for providing organized or sequenced presentation of content, and would have been reasonably pertinent to a number of problems facing the inventor. (Schmandt, ¶¶123, 131.)

A skilled artisan would have been motivated to combine Shimizu with Fox to take advantage of the growing popularity of the Web. The Background of the ’451 patent, in fact, concedes that the web was “popularized in 1993.” (’451, 1:22-25.) The patent further concedes that companies such as Cisco and Boeing were already conducting “web-based sales in excess of one billion dollars,” with Dell having “sales in excess of \$1 million per day via their website.” (’451, 2:38-43.) Fox similarly describes the enormous commercial potential of the Web and its ability to

reach millions of users. (Schmandt, ¶132; Fox, 00253; *see also id.*, 00224 (“Money makes the world go round, and the same can be said for the World Wide Web. A huge chunk of the Web’s growth is due to large corporations and enterprising entrepreneurs hoping to turn the Web into tomorrow’s most lucrative medium.”).)

As a related motivation to combine, because nodes could have referenced any content on the Internet accessible through a URL, the Shimizu system would have benefitted from the ability to draw from a broader universe of available Web content. (Schmandt, ¶134.) An ordinarily skilled artisan would have had a reasonable expectation of success and could have implemented the combination using conventional techniques. (Schmandt, ¶135.)

Show structure being created and stored “automatically” and “in response to said search results received in response to said on-line search”

It would also have been obvious to create and store the show structure “**automatically**” and “**in response to said search results received in response to said on-line search.**” As explained for 22[a], Guinan discloses automatically constructing a guided tour of hypertext nodes in response to a search query. It would have been obvious that this occurs “**automatically**” because Guinan requires no user action to build the guided tour based on the search results. It therefore would have been obvious that to provide the guided tour created by Guinan, which identifies the hypertext nodes and specifies the order in which they will be presented, to the system

of Shimizu to use as node and link information for the claimed “**show structure.**” (Schmandt, ¶241.) Although the user enters an initial search query, this is a separate and unclaimed act that precedes the claimed step of creating of a show structure. The ’451 patent similarly discloses user action for initiating searches used to create show structures. (’451, 11:67-12:3.) Because the hypertext nodes and their links were identified via the guided tour in Guinan, under the proposed combination, the user would not need to take any action beyond entry of the initial search query.

Under the proposed combination with Shimizu and Fox, therefore, the results obtained from “**said on-line search**” would have been used to identify the nodes used to automatically create and store the “**show structure of nodes**” of Shimizu. The search results, in other words, would have been used as the “**nodes**” in the claimed show structure. (Schmandt, ¶241.) The rationale and motivation to combine as to Guinan was provided for 22[a]. A skilled artisan would have been motivated to adapt the on-line search feature, as explained for 22[a], because it provides a useful technique for identifying and sequencing the nodes for the claimed show structure. (Schmandt, ¶237; Guinan, 0014, §6.)

“Duration Information” Requirement

The prior litigation constructions above state that a show structure of nodes “*specifies the duration of any display,*” and that a node includes “*the duration for which the resource’s content is to be presented by default.*” Shimizu discloses a

default display time, *i.e.*, a “predetermined” time or interval in which node content is displayed before proceeding to the next node. (Shimizu, 3:9-16, 5:11-14 (“This makes it possible to build with ease an application program illustratively causing the display of the nodes to be switched in a specific order and at predetermined intervals.”).) But Shimizu does not appear to disclose whether the predetermined intervals are default values that can be changed by a user. But this would have been obvious in further view of **Benedict**.

Benedict describes Harvard Graphics software that, similar to Microsoft PowerPoint, allowed users to create computer-based slide presentations. (Benedict, 0019, 0041; Schmandt, ¶¶52-55, 119.) A user can view a presentation (a “ScreenShow”) that displays slides in a specified sequential order, similar to the sequential display of nodes in Shimizu. (Benedict, 0037.) Benedict discloses an additional feature (known as “HyperShows”) that allowed slides to include hypertext links to jump to other slides. (Benedict, 00123-00134; Schmandt, ¶¶119, 273.)

As relevant to the durational requirement, Benedict discloses “ScreenShow Effects that allow the user to customize the display of the presentation.” (Benedict, 00119-00123.) As shown in Figure 17.1 below, one of those features allows the user to specify how long a slide will be displayed before moving to the next slide:

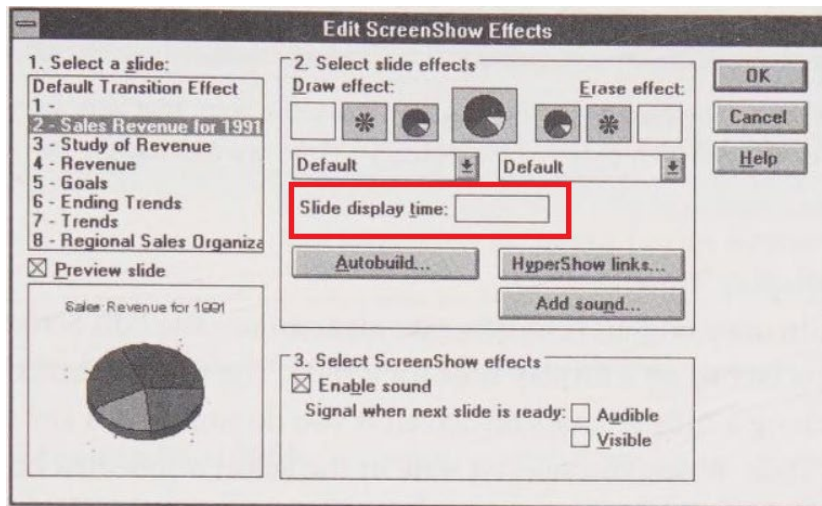


Fig. 17.1
The Edit
ScreenShow
Effects dialog box.

(Benedict, 00120, Fig. 17.1 (red box added).) Figure 17.1 shows an example of editing the ScreenShow Effects for a selected slide (“Sales Revenue for 1991”). The text box shown in **red** allows the user to specify how long (in seconds) to display the selected slide before automatically advancing to the next slide. (Benedict, 00121 (“The display time determines how long a slide remains on-screen if you do not press a key to move to the next slide....”).) In addition to assigning display time on a slide-by-slide basis (as shown in Fig. 17.1 above), the user can set a display time for all slides. (Benedict, 00122-00123, ¶4; Schmandt, ¶¶120-121.) Either way, the display time allows the user to create “self-running” presentations that advance to the next slide after a specified period. (Benedict, 00134 (“Self-running presentations automate your ScreenShow by displaying the slides for a specified length of time before the next slide appears—pressing a key is not necessary.”).)

Manner, Rationale and Motivation to Combine (Shimizu, Guinan, and Fox with Benedict): It would have been obvious to combine Shimizu and Fox with

Benedict, predictably resulting in the system having the further ability to provide a default duration that can be changed by the user. (Schmandt, ¶122.) Accordingly, the “**node**” in Shimizu would have further included information specifying “*the duration for which the resource's content is to be presented by default.*” (EX1123.) Under the proposed combination, the content resources of a node would have been displayed for a “predetermined” (default) interval as disclosed in Shimizu, which the user could have changed as described in Benedict. Shimizu and Benedict are analogous references in the same field of organized and sequenced presentation of content and would have been reasonably pertinent to problems facing the inventor. (Schmandt, ¶123.)

As noted, Shimizu itself already discloses displaying node content for a “predetermined” time or interval before switching to the next node. (Shimizu, 3:9-16, 5:11-14.) Shimizu also suggests the ability to vary the display duration between nodes by explaining that “[i]t is also possible to build with ease a system for arranging information that emphasizes temporal relations between nodes (e.g. chronological tables).” (Shimizu, 9:66-10:2.) It would have been obvious to enhance Shimizu to allow the user to further adjust the default interval as described in Benedict, which would have improved user experience by providing greater customization and flexibility. (Schmandt, ¶¶124-125.) For example, some nodes may have had content that was more complex than other nodes, thus justifying a

longer display time to provide the user with more time to view and digest their content. (Schmandt, ¶125.) An ordinarily skilled artisan would have had at least a reasonable expectation of success and could have implemented the proposed combination using conventional programming techniques. (Schmandt, ¶126.)

- (c) **“without requiring user input accessing each of said resources identified by each of said nodes;” (22[c])**
- (d) **“retrieving a content corresponding to each of said accessed resources; and;” (22[d])**
- (e) **“automatically delivering said content to said user for display on said user’s computer in accordance with said show structure.” (22[e])**

All three of these limitations are closely-related and thus will be addressed together. Shimizu discloses automatically accessing and retrieving the content resources identified by the nodes in order to display them to the user:

This processing is started using the mouse to click the “PLAY” button in the operation designating area **82** of the window **80** in FIG. 8. The contents of the linked nodes are displayed in the order set by the link information.

(Shimizu, 8:13-16.) In order to display the node contents, the entity information pointer slot **63** discussed in the previous limitation is used to identify the location of the content resources, and then to access and retrieve them. (Shimizu, 8:49-59.) The content is also delivered to the user for display **“in accordance with said show structure,”** because it is presented in the sequence specified for the nodes.

As also explained, because each resource would have been a Web resource identified by a URL, the resources would have been accessed and retrieved by the user computer from the Internet. (Schmandt, ¶¶114, 127-135.) It would also have been obvious that, in order to display the content, it would have been accessed and retrieved (*e.g.*, downloaded) from the Internet. (Schmandt, ¶¶154, 162.)

The proposed combination also renders obvious that the claimed steps of accessing, retrieving, and displaying recited in 22[c]-[e] occur **automatically** and **without requiring user input**, because under the proposed combination, the access, retrieval, and display of nodes in the show structure would have proceeded from node-to-node without user intervention. (Shimizu, Fig. 11 (Steps 104-109), 8:67-9:4 (“In step **105**, the next node information is reproduced in accordance with the next link information. The processing above is carried out so that the node C is displayed followed by node B and node D, in accordance with the order of the link information.”), 5:11-14 (“This makes it possible to build with ease an application program illustratively causing the display of the nodes to be switched in a specific order and at predetermined intervals.”).) Shimizu does not disclose (let alone require) any user controls (*e.g.* a “Next” button) to advance to the next node.

Benedict similarly discloses the “**automatically**” and “**without requiring user input**” limitations because ScreenShows can run automatically. (Benedict,

00134 (“Self-running presentations automate your ScreenShow by displaying the slides for a specified length of time before the next slide appears—pressing a key is not necessary.”).) And Fox, as noted, also discloses automatically retrieving the next page URL after a specified period of time. (Fox, 00323 (“The server waits and automatically gives the Web page the new information.”).)

Under the proposed Shimizu-Benedict-Fox combination, the user commences the automatic display of node content by initially pressing “PLAY” or other control button. (Shimizu, 8:17-19, Fig. 11 (Step **101**).) This presents no obstacle to obviousness because the actual steps of **“accessing each of said resources identified by each of said nodes,” “retrieving a content corresponding to each of said accessed resources,” and “automatically delivering said content to said user for display on said user’s computer,”** are separate from user activation of a PLAY button. (Schmandt, ¶¶140-141, 242.) The district court’s claim construction order, in fact, expressly adopted Patent Owner’s argument that **“without requiring user input”** does not exclude a triggering event by a user that causes commencement of the show. (EX1123, 0026-0027.) In adopting Patent Owner’s argument, the district court relied on the specification which explains that “[a] triggering event, such as a mouse click on a single ‘link’ commences the presentation of a series of resources instead of one resource at a time.” (EX1123, 0026 (quoting ’451, 2:53-56).) The use of a play button is thus an unclaimed prerequisite user step that does

not perform the actual claimed steps of accessing, retrieving, and displaying.³ The proposed combination thus renders obvious performing these steps “**automatically**” and “**without requiring user input.**”

2. **Claim 23: “The method in accordance with claim 22, wherein said step of storing further comprises the step of providing a duration information, representing the duration within which a corresponding content to said resource is being displayed.”**

As fully explained for 22[a] above, the proposed combination renders obvious providing duration information, *e.g.*, a display time that represents the duration within which a corresponding content (*i.e.*, the content corresponding to the resource associated with the node) is displayed. (Schmandt, ¶¶117-125, 145-147.)

3. **Claim 24: “The method in accordance with claim 22, wherein said step of accessing further comprises the step of downloading a file from a server residing within said communications network.”**

Under the proposed combination, the accessing step would also have included downloading a file from a server over the Internet (*i.e.*, the server identified in the URL), for display by the user’s computer. (Schmandt, ¶¶192, 154, 162.)

³ This is also consistent with Patent Owner’s infringement theory against Petitioner in the pending litigation as to this limitation, which alleges that videos in YouTube playlists proceeded “in continuous sequential fashion one after the other, all without requiring input from the computer user beyond (at most) just a single initial click that served to commence a playlist.” (EX1129, 0014, ¶26.)

4. Claim 25: “The method in accordance with claim 24 further comprising the step of transmitting to said user a dynamic content.”

It was well-known that web servers could generate and transmit new and dynamic content to users. Fox describes a well-known process known as the Common Gateway Interface (CGI) in which web servers generated Web content on-the-fly in response to requests from browsers. (Fox, 00382, 00411 (“CGI scripts are used for doing all of the ‘cool’ stuff on the Net. There are... sites that create graphic images on-the-fly.”).) For example, Fox shows an example of a CGI script that generates a new image for a web page showing an image currently captured by a camera. (Fox, 00412, Fig. 15-2.) It was also well-known to use CGI techniques to generate HTML on-the-fly in response to a user request, as discussed in Fox. (Fox, 00409-00411.) It would have been obvious to generate new content for a wide variety of purposes, such as financial, weather, or other topics where information changes. (Schmandt, ¶¶156, 158, 193.)

Under the proposed combination with Fox, therefore, it would have been obvious to “**transmit[] to said user a dynamic content**” which could have included generating new content (*e.g.* an HTML web page, an image, etc.) in response to the request from the web browser on the user computer. It therefore would have been obvious under the proposed combination that a web server would have transmitted “**to said user a dynamic content,**” *i.e.*, content generated in response to a URL

request from the web browser. (Schmandt, ¶¶193, 248.) This qualifies as “**dynamic content**” because it was generated at the time it was requested, as opposed to static content generated before the request was received. (Schmandt, ¶193.)

The use of CGI to generate content on-the-fly for users was well-known and a skilled artisan would have been motivated to use this technique to provide customized and tailored content to the requesting user. (Schmandt, ¶158.) Fox supports this motivation by explaining that “CGI scripts are used for doing all of the ‘cool’ stuff on the Net,” such as creating graphic images on-the-fly, accessing live video feeds, accessing large databases, etc. (Fox, 00411.) An ordinarily skilled artisan would have been motivated to provide dynamic content because it is more likely to be relevant and interesting to the user than preexisting or “stock” content. (Schmandt, ¶¶158, 193.) An ordinarily skilled artisan would have had at least a reasonable expectation of success and could have implemented this feature using conventional techniques. (Schmandt, ¶202.)

C. Ground 2: Claims 26-32 Are Obvious Over Shimizu in View of Benedict, Fox, Guinan, and Filepp

- 1. Claim 26: “The method in accordance with claim 25 further comprising the step of formatting said dynamic content for displaying within a persistent content window on said user’s terminal.”**

The ’451 patent does not define “**formatting**” but generally describes “utilizing formatting parameters,” such as “restraining page size to a default screen

size,” among several others. (’451, 14:10-23.) The claimed step of “**formatting said dynamic content**” recites nothing more than the built-in capabilities of conventional web browsers.

Fox explains web browsers could resize or reposition content on the screen (*e.g.*, text, images, etc.) using standard HTML formatting elements. (Schmandt, ¶¶252, 163.) These HTML elements could specify the desired size, location and alignment of the Web content resources for display to the user. (Fox, 00290 (“Perhaps the most typically used style of text alignment is centering. Centered text is flashy, professional, and easy to read.”), 00300 (“If you want, you can determine the exact width [of a line] in pixels... Or even more easily, you can just determine what percentage of the screen the line should take up.”); *see also id.*, 00353, 00339, 00341 (“If you don’t feel like calculating out the exact size of a scaled image’s height and width in pixels, you can have Netscape do the work for you. Simply specify the HEIGHT or WIDTH as a percentage of the available screen. This way, the image always appears relative to the rest of the Netscape page.”), 00334-00336 (discussing image alignment techniques).)

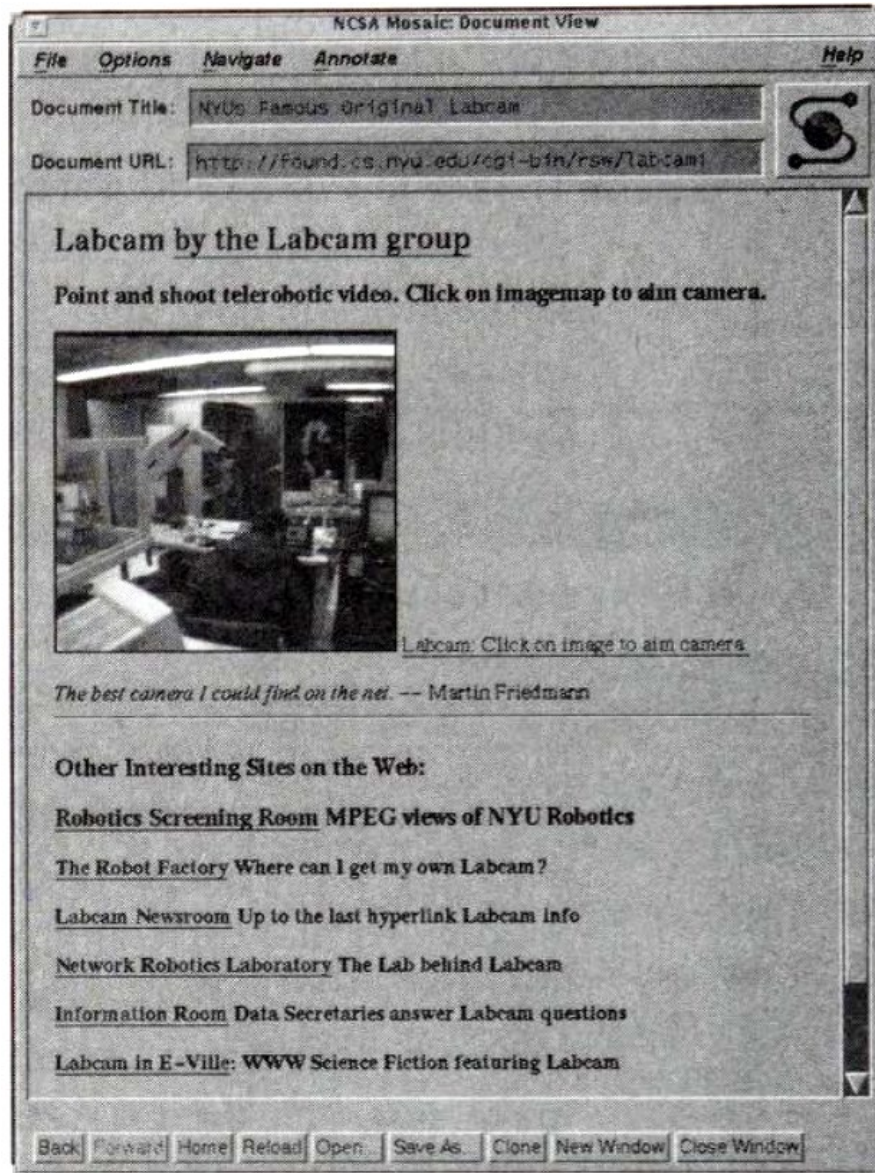
Under the proposed combination, therefore, the “**dynamic content**” of claim 25 could have been **formatted** for display on the user’s terminal using these techniques. (Schmandt, ¶¶252, 164.) The claimed “**formatting**” would thus have

included at least positioning text and sizing and/or scaling images for display on the page. (Schmandt, ¶¶252, 164.)

It would also have been obvious to format the dynamic content “**for display[] within a persistent content window on said user’s terminal.**” The ’451 patent does not expressly define “**persistent content window**,” but provides examples such as “a small window on the user’s screen” that can display content “such as advertising or user specific messages.” (’451, 8:44-46.) The court in the previous litigation construed “**persistent content window**” as “*a designated window for displaying content to a user.*” (EX1123, 0025.)

As explained, Fox provides an example in which a CGI script dynamically generates an image for a web page representing the current image captured by a camera. (Fox, 00412, Fig. 15-2.) Figure 15-2 shows that this dynamic image is presented in a fixed portion of the screen:

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(Fox, 00412, Fig. 15-2.) In this example, the current image from the camera (*e.g.*, the inside of a room) is presented within a designated region of the web browser window. Fox thus discloses and renders obvious the receipt of dynamic content within a “**persistent content window.**” (Schmandt, ¶¶204, 251.)

Patent Owner may argue that “**persistent content window**” requires a physically separated or partitioned area of the display. But a person of ordinary skill

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in the art would have understood “**window**” to merely refer to an area or portion of the display screen that can contain specific information. (See Schmandt, ¶205; *Microsoft Press Computer Dictionary* (2d ed. 1994), EX1120, 0012 (“**window** In applications and graphical interfaces, a portion of the screen that can contain its own document or message.”).)

But even if the claim were interpreted to impose a physical separation requirement, this would also have been obvious in view of **Filepp**, which discloses an interactive system that displays “pages” to the user, with each page divided into a series of partitions as shown in Figure 3a:

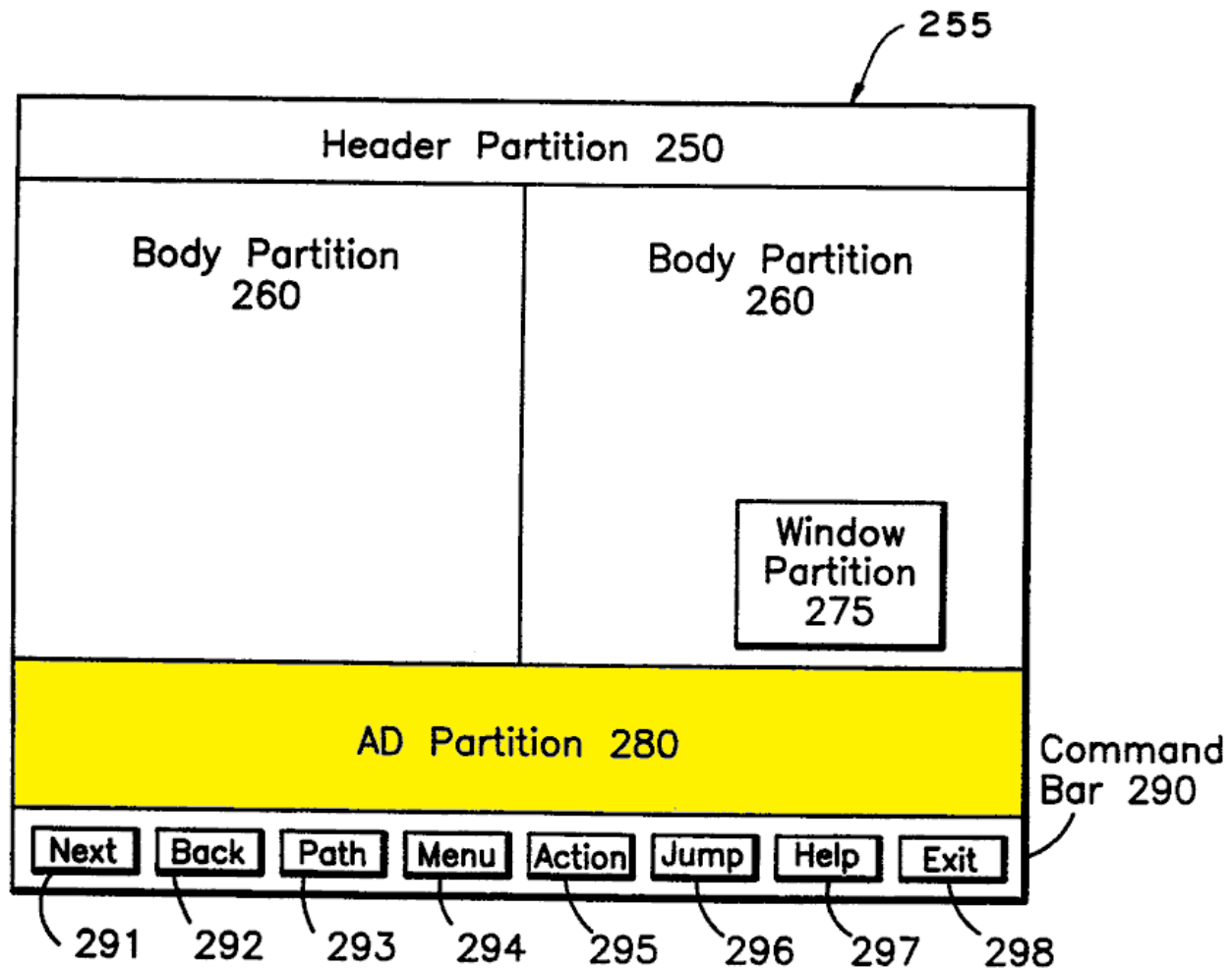


FIG. 3a

(Filepp, Fig. 3a (highlighting added).) AD partition **280**, as its name implies, displays advertisements provided over the network. (Filepp, 9:27-30, 9:30-34 (“Advertisements **280** may be presented to the user on an individual basis from queues of advertisements that are constructed off-line by business system **130**, and sent to file server **205** where they are accessible to each RS **400**.”), 12:64-66.) For our purposes here, AD partition **280** provides “a persistent content window”

because it provides a designated window on the screen devoted to the display of a particular type of content (*i.e.* advertising).

AD partition **280** is “**persistent**” because it appears in a designated location on the screen and its contents are separate and independent of the contents of other partitions. (Filepp, *e.g.*, 9:27-47, 10:30-36.) For example, each partition in Filepp also has a particular program associated with it (a “TBOL program”) that has access to the partition’s data – but not the data of other partitions. (Filepp, 39:23-36, 44:59-45:4.) It therefore would have been obvious that the content of AD partition **280** in Filepp could have remained on the screen even as the content of other partitions on the screen changed. (Schmandt, ¶207.)

Rationale and Motivation to Combine (with Filepp): It would have been obvious to combine the **Ground 1** prior art with Filepp, in the manner described above, predictably resulting in the proposed combination with the further ability to format and display dynamic content within a “**persistent content window.**” Under the proposed combination, therefore, the dynamic content received from a server would have been formatted and displayed in a fixed and dedicated window on the user’s display device. (Schmandt, ¶208.) Filepp is an analogous reference in the field of interactive services for displaying content to users, and would have been reasonably pertinent to several problems facing the inventor. (Schmandt, ¶199.)

An ordinarily skilled artisan would have been motivated to provide a persistent content window in order to improve user experience. (Schmandt, ¶¶208-209.) It was well-known that displaying specific types of information in designated locations on the screen allowed the user to more quickly locate information of interest. (Schmandt, ¶209.) Using the example in Filepp, AD partition 280 provides a consistent location for advertising information on the screen, allowing the user to quickly identify such information and distinguish it from other types of information presented on the screen. (Schmandt, ¶¶208-208.) A skilled artisan would thus have been motivated to adapt the proposed combination to format and display the dynamic content in a “**persistent content window**” to obtain the benefit of greater consistency and uniformity in the user interface. (*Id.*)

2. Claim 27: “The method in accordance with claim 26 further comprising the step of inserting resource identifiers interspersed within said show structure relating to said dynamic content.”

Claim 26 adds nothing of patentable significance as it merely identifies built-in functionality of using URLs (“**resource identifiers**”) to identify Web resources. Fox explains that “[a] *URL (or Universal Resource Locator)* is the address of a document, file, or other Internet resource... The World Wide Web gives every article, newsgroup, database, computer, file, or other Internet fragment its very own URL.” (Fox, 0049 (*italics in original*).)

Insertion of resource identifiers to identify Web resources was basic knowledge of skilled artisans. Under the proposed combination, therefore, it would have been obvious to **“insert[] resource identifiers interspersed within said show structure relating to said dynamic content.”** (Schmandt, ¶¶211-212.) As explained for 22[b], the show structure corresponds to a set of nodes and their links or connections to other nodes, and in a web-based implementation, content associated with these nodes (*e.g.*, pages, images, etc.) would have been identified by URLs. It therefore would have been obvious to insert (**“intersperse”**) URLs relating to the dynamic content within the show structure. (*Id.*)

3. Claim 28: “The method in accordance with claim 27 wherein said dynamic content is an advertising message.”

As explained for claim 26, it would have been obvious based on Filepp that the dynamic content could have been an advertising message. An ordinarily skilled artisan would have been motivated to provide an advertising message to make money, as the revenue earned from such advertisements could have been used to defray the costs of the system or for other purposes. (Schmandt, ¶200.)

4. Claim 29: “The method in accordance with claim 28 further comprising the step of providing said dynamic content in accordance with said user’s profile.”

Filepp also renders obvious that the advertising message of claim 28 (**“said dynamic content”**) is provided in accordance with the user’s profile. For example, Filepp discloses the ability to select advertisements for a user based on specific

information about the user such as its past activities, demographic information, ZIP code and other targeting criteria. (Filepp, 9:35-47.) This renders obvious **“providing said dynamic content in accordance with said user’s profile,”** because the targeted advertisement would have been provided in accordance with the user’s interests (based on the previous information they accessed) and characteristics (such as demographics, ZIP code, and other criteria). The ’451 patent identifies similar information as examples of user profile information. (’451, 8:58-62.) A skilled artisan would also have been motivated to provide the dynamic content, in this case advertisements, in accordance with the user’s profile because targeted advertising based on user characteristics is more likely to be interesting to the user. (Schmandt, ¶201.)

5. Claim 30: “The method in accordance with claim 29 further comprising the step of storing said content for each resource accessed.”

The claimed storage is a built-in feature of conventional web browser software, which stored all web content downloaded by and displayed by the web browser including web pages and graphic images (**“each resource accessed”**). (Schmandt, ¶161; Fox, *e.g.*, 00114 (“Once you retrieve a Web page, SkipKnot saves it on your hard disk—graphics and all—for as long as you want to keep it.”).) More fundamentally, it would have been obvious (and basic knowledge to skilled artisans) that storing would have occurred at least (1) by the server on the Internet that stores

“**said content**” in order to make that file available to the user computer for download, and (2) by the user computer after it downloads that content from the server in order to access and display it to the user. (Schmandt, ¶160.) It would have been apparent that the content would have been stored in both temporary (volatile) and permanent (non-volatile) storage, at both the server and user computer. (*Id.*)

6. Claim 31: “The method in accordance with claim 30 wherein said step of delivering further comprises the step of reformatting said content in accordance with a predetermined arrangement.”

The '451 patent does not define “**reformatting**” but provides a number of examples such as “utilizing formatting parameters” and “restraining page size to a default screen size,” among others. ('451, 14:10-23.) Claim 31 would have been obvious in view of Fox. As explained for claim 26, Fox discloses that a web browser can resize or reposition the content in the data files (such as text or image files) using standard HTML formatting elements. (Schmandt, ¶¶252, 163.) These HTML elements specify, as explained for claim 26, the desired size, location and alignment of the Web resource for display. (*Id.*)

Under the proposed combination, therefore, the claimed reformatting would have occurred during ordinary operation of the web browser interpreting HTML elements in the web page that instruct the browser how to format the data for display on the page. (Schmandt, ¶163.) The claimed “**reformatting**” would thus have included at least repositioning text and resizing and/or scaling images for display on

the page based on the instructions in the HTML (“**in accordance with a predetermined arrangement**”), as noted. A skilled artisan would have been motivated to include these reformatting features to ensure consistent appearance across different web browsers. (Schmandt, ¶164.)

7. Claim 32: “The method in accordance with claim 31 further comprising the step of transmitting information to said user for displaying control buttons for controlling the display of said contents.”

Each of the references in the proposed combination discloses this. Shimizu, for example, discloses on-screen buttons **84**, including the PLAY button for initiating display of the data files under the proposed combination. (Shimizu, Fig. 8, 7:24-28.) With respect to Benedict, during presentation of a HyperShow, on-screen control buttons can control display of content, such as by navigating to different slides in the presentation:

Table 17.3 HyperShow Destinations	
Destination	Result
Next slide	Moves to the next slide in the presentation
Previous slide	Moves to the previous slide in the presentation
First slide	Moves to the first slide in the presentation
Last slide	Moves to the last slide in the presentation
Back up	Moves to the last slide shown on-screen
Ignore	Ignores the key so that nothing happens when you press a key
Launch application	Starts a Windows application from within the ScreenShow
Play sound file	Plays a sound file within the ScreenShow
Stop sound files	Stops sound files which were started from a previous HyperShow link

(Benedict, 00124.) Users can also define their own HyperShow links to jump to other parts of the presentation. (Benedict, 00125-00130.) These links take the form of buttons. (Benedict, 00127 (“You create HyperShow buttons in the Slide Editor.”).) Fox also discloses similar buttons for controlling the display of web pages. (Fox, 00262 (disclosing “[Home],” [Next],” and [Previous]” buttons for navigating within a sequence of web pages); Schmandt, ¶167.)

It would therefore have been obvious, under the proposed combination, to transmit information to the user for displaying control buttons to control the display of content resources associated with nodes (“**said contents**”), such as “previous” or “next” buttons as described. A skilled artisan would have been motivated to include

control buttons to allow the user to exercise control over display of nodes. For example, a “previous” control button would have been useful to allow the user to go back and revisit a previously viewed node, and a “next” control button useful for allowing the user to skip to later nodes (without having to wait for the automatic advancement after the display time). (Schmandt, ¶168.)

8. Claim 35: “The method in accordance with claim 32 further comprising the step of inserting advertisement displays between display of said contents corresponding to each of said nodes.”

Claim 35 depends (through several other intermediate claims) on claim 28, covered above, which recites that **“said dynamic content is an advertising message.”** As explained above for claim 26, under the proposed combination, advertisements would have been displayed in a **“persistent content window”** on the screen. Figure 3a of Filepp shows an example of a persistent content window in the form of AD partition **280** that displays advertisements to the user:

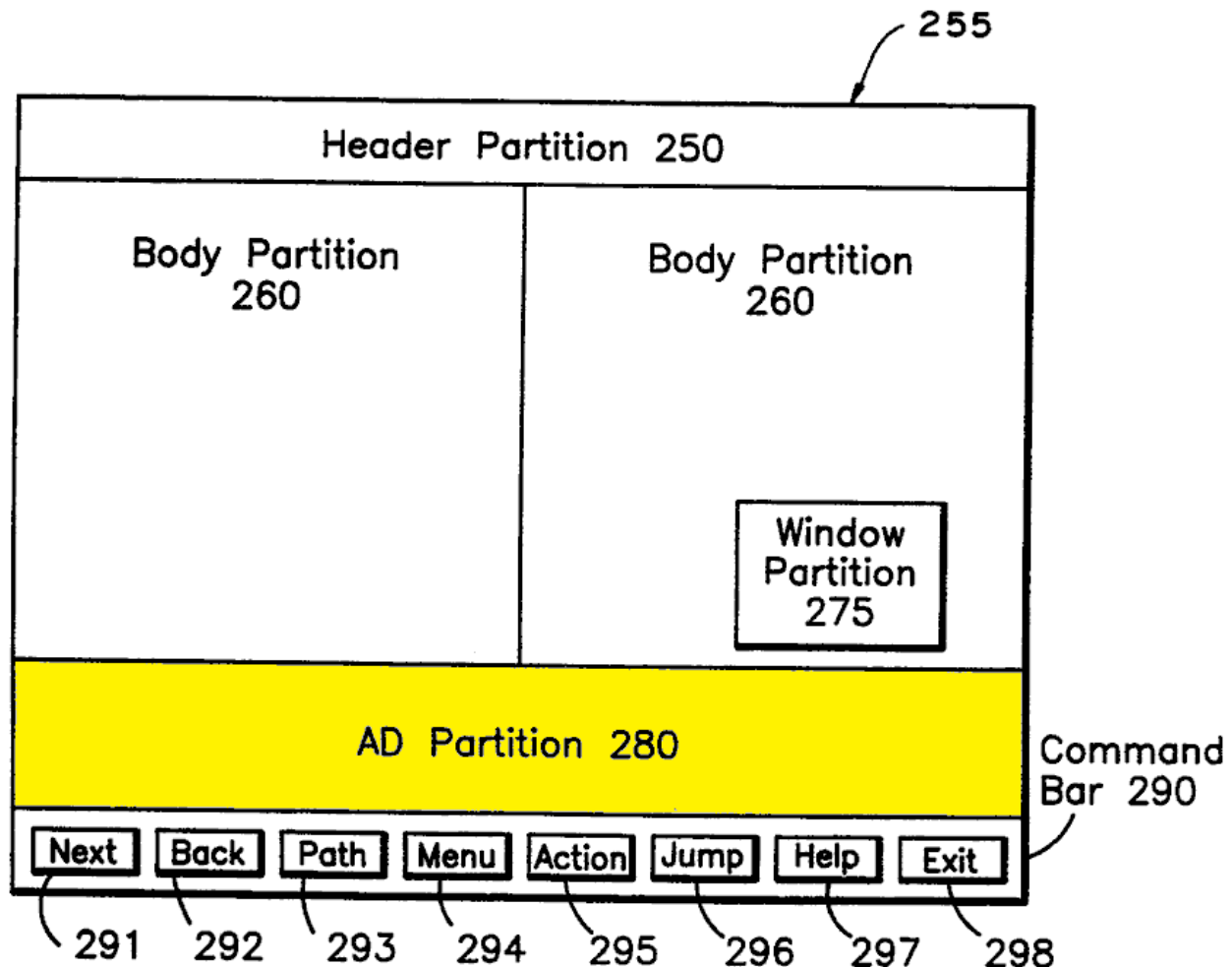


FIG. 3a

(Filepp, Fig. 3a (highlighting added).) As explained above, Filepp discloses that AD partition **280** can display advertisements based on a queue of advertisements assembled based on information about the user. (Filepp, 9:30-47.) It therefore would have been obvious to insert “**advertisement displays between display of said contents corresponding to each of said nodes,**” by displaying advertising alongside the contents of the nodes (displayed, for example, in body partition **260** above). Under the proposed combination, as the system moves from one node to the

next, advertisement displays would have been inserted on the screen between the display of the node content as shown in Figure 3a. (Schmandt, ¶265.)

9. Claim 36: “The method in accordance with claim 35 further comprising the step of selecting said advertisement displays based on said users’ profiles.”

As explained for claim 29, it would have been obvious based on Filepp to select the advertisement displays based on a user profile. Petitioner notes that claim 36 recites “**users’ profiles**” (plural), which appears to be a typographical error as the antecedent basis for user (in claim 22) merely refers to “**a user**” (singular). Claim 36 is nevertheless obvious because targeted advertising, under the proposed combination, could also have been delivered to multiple users who accessed the system based on their respective user profiles. (Schmandt, ¶266.)

D. Ground 3: Claims 39-44 are Obvious Over Shimizu in View of Benedict, Fox, Guinan, and Miller

1. Independent Claim 39

Independent claim 39 is substantially similar to claim 22 except that it adds “**selecting a category from a predefined list of categories,**” and further requires an on-line search “**related to said category.**” The category-based limitations added by claim 39 are obvious based on the further disclosures in Miller. With respect to the other limitations, as shown below, the analysis from claim 22 applies.

(a) “selecting a category from a predefined list of categories;” (39[a])

As explained for 22[a], Fox describes various on-line search facilities available by the mid-1990s, including Yahoo – “the mother of all Web indexes.” (Fox, 00204.) Fox explains that “Yahoo has hundreds of links to pages in all of the following categories,” and then lists 19 categories including Art, Business, Computers, Society and Culture, among many others. (Fox, 00204.) Figure 8-2 of Fox shows a screen capture from Yahoo showing a list of subcategories within the “Society and Culture” category, each category containing documents:

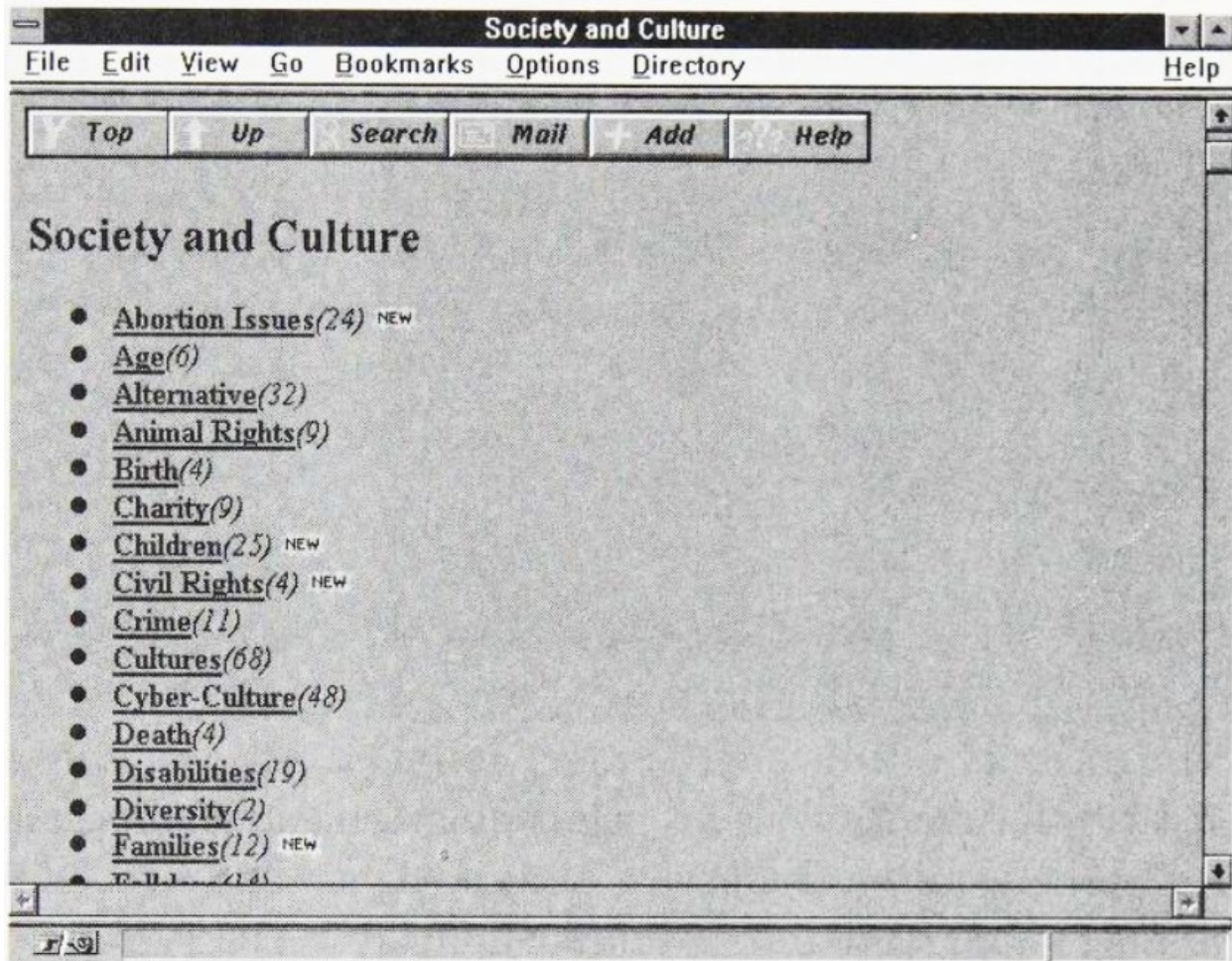


Figure 8-2 Yahoo

(Fox, 00205, Fig. 8-2.) But Fox does not disclose further details about Yahoo, such as the mechanism by which categories are selected for searching. Petitioner has therefore also cited to **Miller** here. As shown below, Miller discloses a technique for selecting categories (referred to in Miller as “sections”) within a predefined list of categories, which are then used to conduct a search.

Miller describes various features of a commercial on-line service known as CompuServe which was popular in the mid-1990s. (Miller, 0020.) CompuServe provided a feature known as “forums,” which were on-line communities where

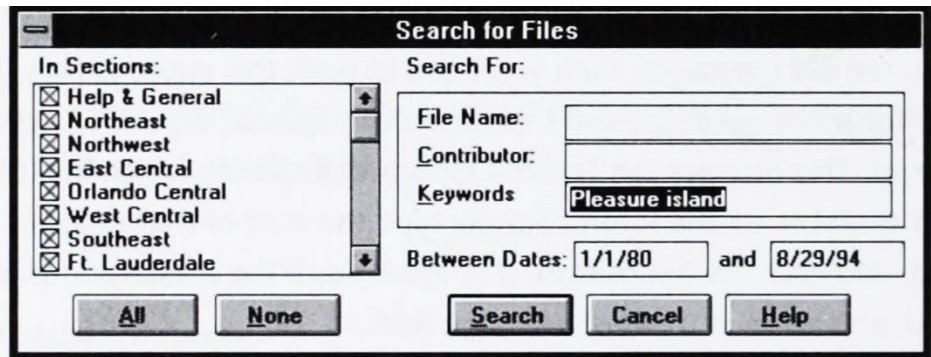
members could exchange information and messages about particular topics of interest. (Miller, 0038-0039.) Forums included a message section, “where forum members exchange messages with each other,” and a file library, “where forum files are stored.” (Miller, 0043.)

Miller further discloses that, “[i]n addition, every forum’s message sections and file libraries are comprised of multiple *sections*. Each section represents a more focused area of interest within the forum topic.” (Miller, 0044 (*italics in original*).)

Miller discloses a feature allowing users to search based on sections:

Fig. 3.9

Use the Search for Files dialog box to search for specific forum files.



(Miller, 0051, Fig. 3.9.) The dialog box in Figure 3.9 includes an “**In Sections:**” area that allows the user to select one or more sections to search. (Miller, 0051 (“Select the sections you wish to search.”).) “When you click the Search button, the forum’s libraries are searched for any and all files that match your search criteria.” (Miller, 0052; *see also id.*, 0062 (showing similar example).)

Miller thus discloses “**selecting a category from a predefined list of categories,**” *i.e.*, selecting at least one section (“**category**”) from a predefined list of

sections as shown in Figure 3.9 above. A section in Miller qualifies as a “**category**” because it represents a class of items that have particular characteristics, *e.g.*, that relate to a particular topic of interest. (Schmandt, ¶307.)

Rationale and Motivation to Combine (with Miller): Petitioner already provided an explanation of the rationale and motivation to combine Shimizu, Benedict, Fox, and Guinan for claim 22 above. It would have been obvious to adapt in the proposed combination, based on Miller, to provide the further ability to select a category from a predefined list of categories. (Schmandt, ¶308.) Miller is an analogous reference in the same field of techniques for organizing, presenting and searching for content, and would have been pertinent to a number of problems facing the inventor. (Schmandt, ¶309.)

A skilled artisan would have been motivated to combine in the manner described above, as the ability to specify categories for a search would have allowed the user to focus the search on particular topics of interest – thus resulting in search results more relevant to the user. This would have been particularly useful for searches that return a large number of results. (Schmandt, ¶310.) A skilled artisan would have had at least a reasonable expectation of success and could have implemented these features using conventional techniques. (Schmandt, ¶311.)

- (b) **“performing an on-line search related to said selected category, in response to which a plurality of search results and their corresponding URL resources are received;” (39[b])**

This limitation is substantially identical to 22[a], except that 39[b] requires an on-line search **“related to said selected category.”** All other aspects of 39[b] are obvious based on the proposed combination of Shimizu, Benedict, Fox, and Guinan as explained for 22[a].

With respect to requiring that the on-line search **“relate to said selected category,”** this would have been obvious in further view of the disclosures in Miller of limiting a search to selected categories. Under the proposed combination, therefore, the on-line search performed under the proposed combination as disclosed in Guinan and Fox (as explained for 22[a]) would have been further enhanced to search for hypertext nodes within category selected in 39[a]. As explained, this would have provided a distinct advantage of focusing the search on items more relevant to the user. (Schmandt, ¶¶310, 313.)

- (c) **automatically creating and storing a show structure of nodes, each node identifying a resource from a plurality of accessible resources via said communications network wherein said show structure is created in response to said search results received in response to said on-line search;” (39[c])**

This limitation is identical to 22[b], and is thus obvious for the reasons stated previously. (Schmandt, ¶¶240-241.)

- (d) **“without requiring user input retrieving each of said resources identified by each of said nodes; and;” (39[d])**
- (e) **“automatically delivering said content to said user for display on said user’s computer in accordance with said show structure;” (39[e])**

These limitations are substantially similar to limitations already discussed for 22, above, and the analysis for 22[c]-[e] above applies here. As explained, under the proposed combination, the content resources identified by each of the nodes would have been automatically retrieved and delivered to the user for display. Delivery of the content would also have occurred **“in accordance with said show structure,”** because it would have been delivered in the sequence specified by the corresponding link information for the nodes. (Shimizu, 8:67-9:4, 5:11-14; Schmandt, ¶315.)

- 2. **Claim 40: “The method in accordance with claim 39, wherein prior to said step of automatically delivering the method further comprises the step of filtering the retrieved plurality of said resources to determine which of the retrieved resources are to be displayed.”**

This limitation is disclosed by Guinan and suggested by Miller. Guinan, as explained above, assigns a weight to each matching hypertext node and then filters out nodes that fall below a minimum cut-off or threshold value. (Guinan, 0010 (“All nodes whose weight is greater than or equal to this cut-off or threshold value would be selected for inclusion in the tour.”).) This discloses the step of, prior to automatically delivering to the user, **“filtering the retrieved plurality of said resources.”** This is because Guinan restricts (filters) the resources that will be

included in the tour that will be delivered to the user. This capability is also further suggested by Miller which, as explained, discloses the ability to limit a search to one or more selected categories. It would have been obvious, under the proposed combination, to filter the retrieved plurality of resources to determine which ones will be delivered to the user, which would have occurred **“prior to said step of automatically delivering.”** (Schmandt, ¶¶318-319.)

3. **Claim 41: “The method in accordance with claim 39, further comprises the step of automatically replacing each of said displayed content to said user with a following retrieved resource, after a specified period of time.”**

This limitation was covered in the discussion of claim 22, above. Under the proposed combination, the displayed content is automatically replaced **“with a following retrieved resource”** when the system advances to the next node in the show structure after the specified particular duration and displays content resources associated with the next node. (Shimizu, 8:67-9:4, 5:11-14; Schmandt, ¶320.)

4. **Claim 42: “The method in accordance with claim 39, further comprising the step of allowing an option to bookmark each of the resources being displayed for later viewing.”**

Claim 42 merely recites well-known bookmarking features of web browsers. Fox confirms that web browsers allowed users to bookmark each web page displayed for later viewing. (Schmandt, ¶321; Fox, 00167 (“Whenever you find a page you’re likely to use again, Netscape makes it easy to place a bookmark. Simply select Bookmarks, Add Bookmark, or press CTRL-A.”), 0097-0098 (discussing similar

option for Lynx browser), 00127-00128 (same; SkipKnot).) Under the proposed combination, therefore, an option would have been available to bookmark each Web resource (*e.g.* each web page) for later viewing. (Schmandt, ¶322.)

5. Claim 43: “The method in accordance with claim 39, further comprising the step of allowing an option to bookmark each of the resources being displayed for printing a selected subset of said retrieved resources.”

Conventional web browsers also allowed a user, when viewing a selected web page, to print out a copy. (Fox, *e.g.*, 00174 (“If you have a printer attached to your computer, you can easily generate a hard copy of the current Web page.”), 00146-00147.) It thus would have been obvious that a user could bookmark pages and then later select a bookmarked page for viewing and printing. (Schmandt, ¶323.)

6. Claim 44: “The method in accordance with claim 39, wherein each of said retrieved resources is a World Wide Web page.”

Under the proposed combination, as explained, it would have been obvious for each of the retrieved resources to have been a webpage. (Schmandt, ¶130.)

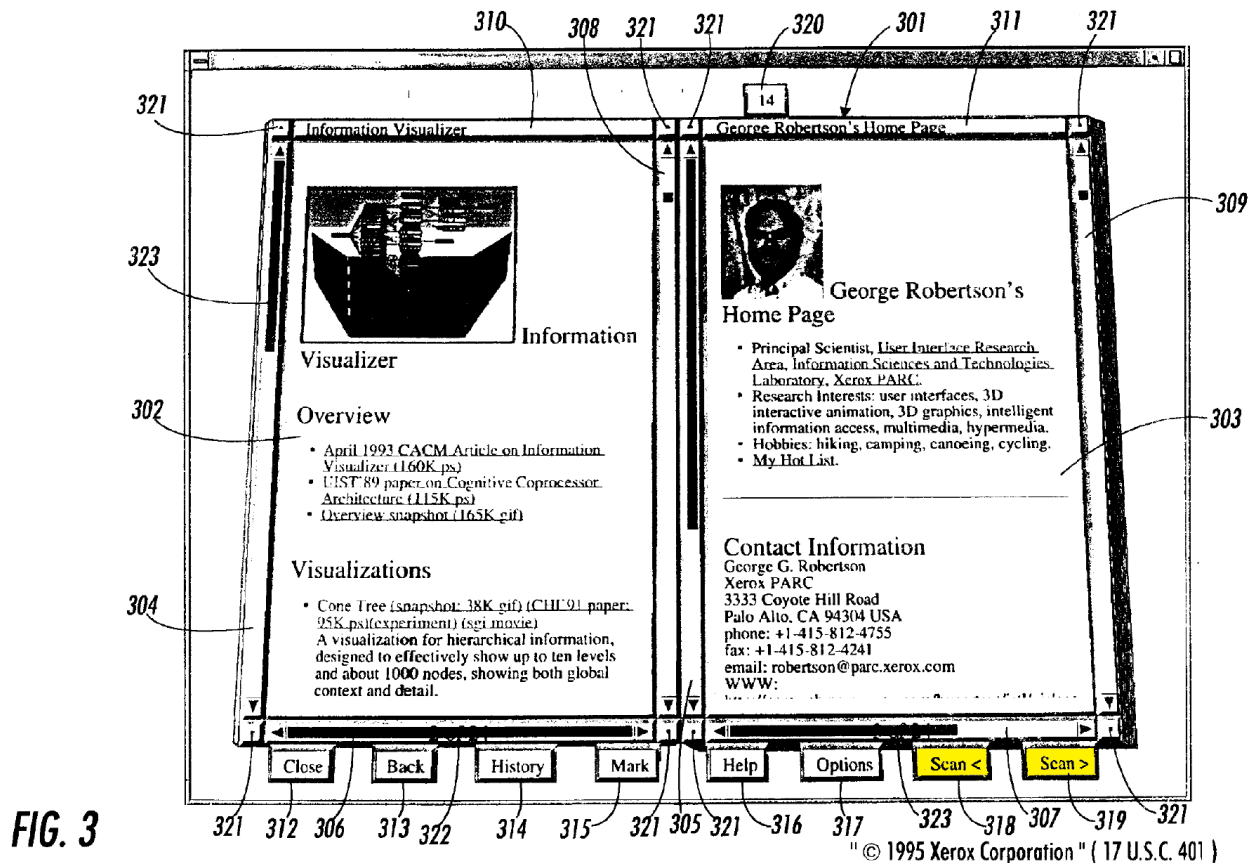
E. Ground 4: Claims 33-34 Are Obvious Over Shimizu in View of Benedict, Fox, Guinan, Filepp, in Further View of Robertson and Sagman

Claim 33 depends from claim 32 and further recites “**the step of receiving control button commands for pausing said display of said content, and for reversing the said display of said content and for fast forwarding said display of said content.**” Claim 34 likewise depends from 32 and recites “**the step of**

monitoring said user's instructions corresponding to interruption of said show structure within said duration.” The prior art cited in **Ground 2** (for claim 32) renders obvious control buttons for controlling the display of data files, but does not appear to disclose the more specific functionalities in claims 33-34. But these claims would have been obvious in further view of Robertson and Sagman. Petitioner will address each of these separately and explain how they apply to the combination:

Robertson:

Robertson discloses a system for displaying lists of linked documents, such as web pages in a hypertext system. (Robertson, 3:24-39.) In one embodiment, Robertson presents a list of web pages by displaying each web page in the list as a “page” of a virtual book (WebBook). (Robertson, Abstract, 2:14-25.) Figure 3 of Robertson shows an exemplary WebBook view:



(Robertson, Fig. 3 (highlighting added).)

The key features of Robertson relevant for **Ground 3** relate to the buttons on the bottom of Figure 3 that allow the user to control display of web pages. (Robertson, 6:30-57.) More specifically, the two buttons on the far right, “Scan <” **318** and “Scan >” **319**, allow the user to automatically advance backward or forward, respectively, through the pages of a WebBook. “The button **318** labeled ‘Scan <’ provides for automatic scanning of pages to the lower numbered pages. The button **319** labeled ‘Scan >’ provides for automatic scanning of pages to the higher numbered pages.” (Robertson, 6:43-46.) “The scan operation

will cause the pages to turn at a predetermined rate.” (Robertson, 9:5-6.)

Robertson also makes clear that the rate at which the pages will advance using the automatic scan operation can be adjusted by the user. Figure 13 discloses a pop-up window **1300** user interface for adjusting this rate. (Robertson, 9:45-46.)

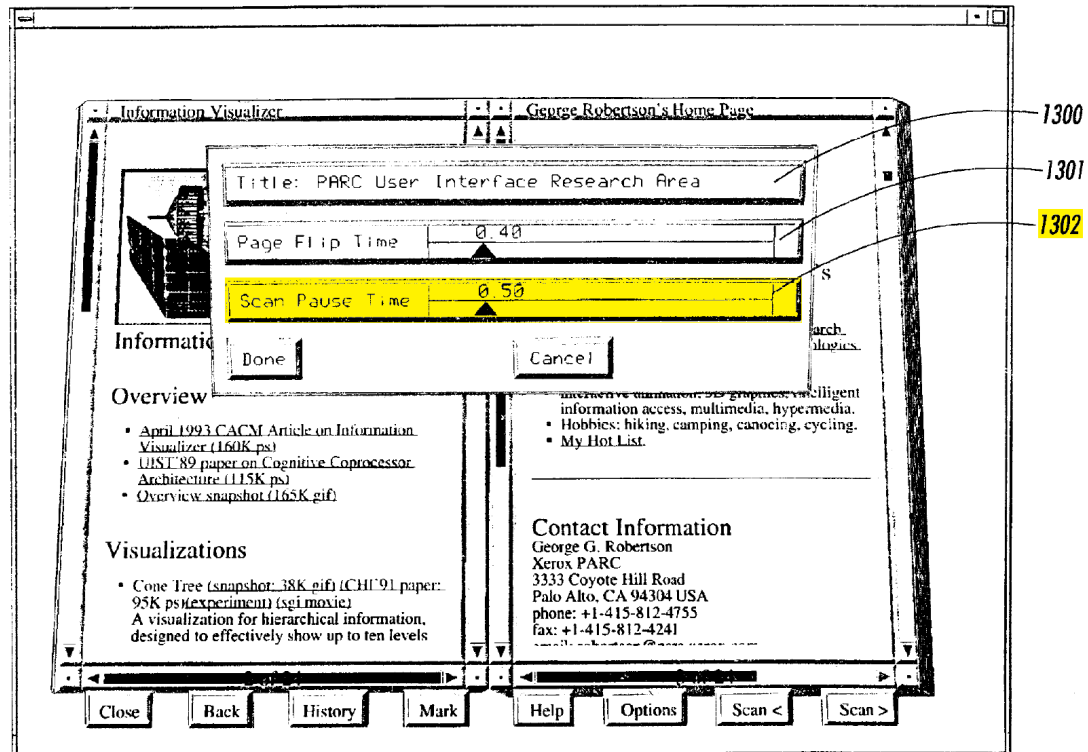


FIG. 13

" © 1995 Xerox Corporation" (17 U.S.C. 401)

(Robertson, Fig. 13 (highlighting added).) User interface bar **1302** allows the user to vary the scan pause time, in this case currently 0.50. (Robertson, 9:49-50, 9:57-58.) “The scan pause time refers to a pause in between page turns during a scan operation.” (Robertson, 9:50-51.) The user can decrease or increase the time by moving the indicator left or right using a dragging operation. (Robertson, 9:53-58.)

Rationale and Motivation to Combine (Ground 2 Prior Art with Robertson):

It would have been obvious to combine the prior art cited for **Ground 2** with Robertson, predictably resulting in the proposed combination further adapted to receive control button commands “**for [1] reversing the said display of said content and for [2] fast forwarding said display of said content.**” (Schmandt, ¶329.) Robertson is an analogous reference in the same field of techniques for providing organized or sequenced presentation of content, and would have been reasonably pertinent to problems facing the inventor. (Schmandt, ¶287.)

With respect to **reversing** the display of content, “**Scan <**” **318**, as noted, causes the WebBook to automatically present web pages in reverse order. (Robertson, 6:43-45.) As applied to the proposed combination, it would have been obvious to receive a control button command that reverses the sequence of automatic display of content. An ordinarily skilled artisan would have been motivated to provide this feature to allow a user to reverse the order of presentation in the event the user wishes to revisit previously-viewed content. (Schmandt, ¶330.)

With respect to **fast forwarding**, “**Scan >**” **319**, as noted, causes the WebBook to automatically present the web pages in forward order. (Robertson, 6:45-46.) Benedict and Fox disclose similar functionality of automatically advancing to the next slide or web page after a particular duration selected by the user, as explained for claims 22 and 23. (Schmandt, ¶¶146, 166-168, 331.) But Robertson provides

the *further* ability to shorten that duration using “scan pause time” control in Figure 13 above.

It therefore would have been obvious to adapt the proposed combination to receive a control button command that reduces the amount of time a node is displayed before advancing to the next node, predictably resulting in “**fast forwarding said display of said data files.**” A skilled artisan would have been motivated to provide this feature to allow a user to speed up automatic advancement to subsequent nodes, for example, if the user already has familiarity with the node content and thus can review more quickly. (Schmandt, ¶332.)

For purposes of the fast forward limitation, the “**button**” corresponds in Robertson to the user interface bar **1302** in Figure 13 that allows the user to vary the scan time, on which the user has to click to change the setting. (Robertson, 5:21-24, 9:53-57.) Alternatively, the control “**button**” could also correspond to the “Done” button in Figure 13 that accepts and applies the newly-specified scan time. In any case, it would have been obvious to include a control button on the user interface to carry out the fast forward function. (Schmandt, ¶333.) An ordinarily skilled artisan would have had a reasonable expectation of success and could have implemented these features using conventional programming techniques. (Schmandt, ¶336.)

Sagman:

Claim 33 also recites receipt of control button commands for “**pausing said**

display of said data files,” and claim 34 relatedly recites “**the step of monitoring said user’s instructions corresponding to interruption of said show structure within said duration.**” These features would have been obvious in further view of Sagman, which discloses features of PowerPoint. (Schmandt, ¶¶61-63.)

Similar to Benedict, Fox, and Robertson, Sagman discloses the ability to automatically advance to and display the next item after a specified duration. (Sagman, 0068 & Fig. 16-2.) But Sagman discloses a further ability to pause the automatic advancement to the next slide. (Sagman, 0072, Table 16-1 (disclosing keyboard shortcut to: “Pause/resume automatic show”).)

Rationale and Motivation to Combine (Ground 2 Prior Art with Sagman): It would have been obvious to combine the prior art cited for **Ground 2** with Sagman, predictably resulting in the proposed combination further adapted to receive control button commands for pausing automatic display of content. (Schmandt, ¶334.) This feature also satisfies “**user’s instructions corresponding to interruption of said show structure,**” in claim 34, because the user activating the pause control would have been an instruction to interrupt display of the show structure.

Sagman is an analogous reference in the same field of techniques for providing organized or sequenced presentation of content, and would have been reasonably pertinent to a number of problems facing the inventor. (Schmandt, ¶184.) An ordinarily skilled artisan would have been motivated to provide this feature in order

to allow the user to pause the automatic display of content. (Schmandt, ¶334.)

The pause feature in Sagman is activated via a keyboard shortcut rather than an on-screen control button, but on-screen control buttons were common and obvious substitutes for keyboard shortcuts. An on-screen button would have offered the advantage of being visible on the screen, and thus giving the user a clear visual cue of the availability of the feature. (Schmandt, ¶335.) A skilled artisan would have had at least a reasonable expectation of success. (Schmandt, ¶336.)

F. Ground 5: Claim 40 Is Obvious Over Shimizu in View of Benedict, Fox, Sagman, Miller, in Further View of Schloss

Claim 40 is obvious based on the analysis provided for **Ground 3**. Schloss provides a further theory of obviousness for the filtering feature of claim 40.

Schloss explains that, because of the growth of the Web, “millions of users began to have access to millions of documents through the World Wide Web,” including documents “contain[ing] text, graphics, audio, video, etc.” (Schloss, 1:30-35.) But this access to large amounts of information created a challenge – which continues to this day – of how to prevent users from seeing content deemed undesirable or inappropriate content. “In surfing the Web,” for example, “children may have easy access to inappropriate videos, graphical data and other related information.” (Schloss, 1:57-59.)

Schloss purports to address this problem through a technique that allows the client system to filter content downloaded from the Web to determine which content

to display. A client system running a web browser requests and downloads content from a content server on the Web. (Schloss, 4:30-33 (“More specifically, a client system running a Web Browser request content from a content server **6** using a Hypertext Transfer Protocol (HTTP) request and receiving the content in a HTTP response.”).) The client can then communicate with an advisory server **20** that transmits “characterization data” about the content to the client, which the client uses to make a filtering decision. (Schloss, 4:59-5:5.) The characterization data provided by advisory server **20** can indicate, for example, that the content is inappropriate for minors. (Schloss, 7:6-8 (“For example, the return code may indicate that the URL contains sexually explicit material not suitable for minors.”), 10:17-29 (“Not Appropriate for minors – violent”).)

Schloss discloses an alternative “advisory mode” in which the web browser inhibits downloading of the content until after it receives the corresponding characterization data from advisory server **20**. (Schloss, 5:24-33.) In a still further embodiment, the filtering functions of the browser are performed by a proxy server sitting between the client and advisory server **20**. (Schloss, 11:58-12:1.) Under this embodiment, the proxy server requests the characterization data from advisory server **20** about the content transmitted by content server, and uses the characterization data to determine whether to transmit the content to the client. (Schloss, 11:61-12:4.) “Upon receiving the characterization data, the proxy server

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utilizes the characterization data to determine whether to filter the content data transmitted by the content server 6.” (Schloss, 12:1-4.)

Manner, Rationale and Motivation to Combine (Ground 3 Prior Art with Schloss): It would have been obvious to combine the prior art cited for **Ground 3** with Schloss, predictably resulting in “**filtering the received the retrieved plurality of said resources to determine which of the retrieved resources are to be displayed.**” (Schmandt, ¶348.) This filtering would also have occurred “**prior to said step of automatically delivering.**” Petitioner notes the delivering step of claim 39 requires “**delivering said content to said user,**” and under the proposed combination, the filtering would have taken place “**prior to**” the resources being delivered (*i.e.*, displayed) to the user. (*Id.*)

Moreover, even if the claim required the filtering to take place before *physical transmission* of the resources to the user computer, this would have been obvious based on the proxy server embodiment in Schloss. This is because the resources would have been retrieved and filtered at the proxy server *before* being transmitted to the user’s computer over the network. Under either theory, claim 40 is obvious. (Schmandt, ¶348.) Schloss is an analogous reference in the field of presentation of content over the Internet, and would have been reasonably pertinent to problems facing the inventor. (Schmandt, ¶349.)

A skilled artisan would have been motivated to provide the filtering feature of

Schloss to gain a further level of control over the content display. As was well-known and confirmed in Schloss, the Internet can contain a wide variety of content including content (such as adult-oriented or violent content) that may have been undesirable and/or unsuitable for the viewer. (Schmandt, ¶350.) A skilled artisan would have had at least a reasonable expectation of success. (Schmandt, ¶351.)

G. Ground 6: Claim 45 Is Obvious Over Shimizu in View of Benedict, Fox, Sagman, Miller, in Further View of Ackermann and Resource Kit

Claim 45 depends from claim 44, and further recites “**the method in accordance with claim 44, further comprising the step of displaying a schedule window, for displaying a set of chosen line-up of show structures and time of their display, each corresponding to one of said categories.**” Claim 44 is obvious based on the prior art for **Ground 3**. The additional limitations of claim 45 are obvious in further view of **Resource Kit** and **Ackermann**.

Ackermann describes features of the popular UNIX operating system. (Ackermann, 0040-0041; Schmandt, ¶¶93-95.) Ackermann describes a functionality of UNIX known as “cron” (short for chronograph) and “crontab” that allowed users to create schedules for performing tasks at certain times. (Ackermann, 0061-0062.)

As further explained in Ackermann:

Use the crontab command to install a list of commands that will be executed on a regular schedule. The commands are scheduled to run at a specified time (such as once a month, once an hour, once a day, and

so on). The list of commands to be performed on the specified scheduled must be included in the crontab file, which is installed with the crontab command. Once you install the crontab file, cron reads and executes the listed commands at the specified times.

(Ackermann, 0062.) A crontab file follows a straightforward structure. Each line of a crontab file specifies time information for a particular command:

Following is the syntax for the commands you enter in a file to be used by crontab. The first five fields are time-option fields (you must specify all five of these fields; use an asterisk * in a field if you want to ignore that field). Table 11.3 lists the time-field options available with crontab.

```
minute hour day-of-month month-of-year day-of-week command
```

(Ackermann, 0063.) Ackermann provides the following concrete example:

To sort a file named /usr/wwr/sales/weekly and mail the output to a user named twool at 7:30 each Monday, use the following entry in a file:

```
30 07 * * 01 sort /usr/wwr/sales/weekly |mailx -s"Weekly Sales" twool
```

This commands specifies the *minute* as 30, the *hour* as 07, any day of month with the *, any month of year with another *, and the *day-of-week* as 01 (which represents Monday).

(Ackermann, 0063.) In the exemplary crontab list entry above, the first five pieces of information (“30 07 * * 01”) specify timing information for a particular command, and everything on that line after and including “**sort**” is the complete command line string of the command to be executed at 7:30AM each Monday.

(Schmandt, ¶356.) Ackermann explains that, to create a crontab file, the user can simply a standard text editor such as “the graphical Text Editor that comes with

UnixWare.” (Ackermann, 0062; *see also id.*, 0064 (explaining how to edit crontab files using a text editor).)

It would have been obvious that, when creating or editing a crontab file using a graphical text editor, the file – and its corresponding crontab entries – would have been displayed within a window to the user. (Schmandt, ¶356.) Ackermann therefore discloses and renders obvious “**displaying a schedule window, for displaying a set of chosen line-up of [commands] and time of their [execution].**” Ackermann does not expressly disclose a schedule for display of “**show structures,**” but this was obvious in further view of Resource Kit.

Resource Kit describes features of the Microsoft Office suite of applications, including PowerPoint. (Schmandt, ¶¶96-99.) Resource Kit explains that, like Harvard Graphics discussed in Benedict, PowerPoint supported self-running slide presentations that could advance automatically from slide-to-slide without user intervention. (Resource Kit, 0042-0043.) Resource Kit confirms that, as was well-known, Microsoft Office applications could be instructed to launch in a particular way using command line switches. Resource Kit provides an example of a command line string that instructs PowerPoint to launch and automatically begin displaying a particular presentation:

```
C:\MsOffice\PowerPnt\Powerpnt.exe /s c:\My Documents\MyKiosk.ppt
```

(Resource Kit, 0044, ¶5.) This command line string has three components: (1) the

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file path for the executable program for PowerPoint (Powerpnt.exe), (2) a command line switch (/s) that tells PowerPoint to automatically begin displaying a particular presentation, and (3) the name and path of the file of the presentation to display (MyKiosk.ppt). (Resource Kit, 0044; *see also id.*, 0045 (“**PowerPoint Command-Line Startup Switches.... /s** Starts PowerPoint in Slide Show view and runs the specification presentation or presentations”) (boldface in original).) The command line above, therefore, would have instructed PowerPoint to start and display to the user the presentation whose file is named “MyKiosk.ppt.” (Schmandt, ¶358.)

Manner, Rationale and Motivation to Combine (Ground 3 Prior Art with Ackermann and Resource Kit): It would have been obvious to combine the prior art cited for **Ground 3** with Ackermann and Resource Kit. (Schmandt, ¶359.) The proposed combination would have predictably resulted in performing a further step of “**displaying a schedule window,**” *i.e.*, a window of a graphical text editor for editing a schedule such as a crontab file, “**for displaying a set of chosen line-up of show structures and time of their display,**” *i.e.*, a list of entries for specifying times when the software program for presenting node content would be executed, and identifying the show structure to display. Take the following crontab file that Petitioner’s expert created for illustration that contains three entries based on the proposed Ackermann-Resource Kit combination:

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```
00 07 * * * C:\MsOffice\PowerPnt\Powerpnt.exe /s c:\My Documents\Bill.PPT
00 10 * * * C:\MsOffice\PowerPnt\Powerpnt.exe /s c:\My Documents\Sally.PPT
00 13 * * * C:\MsOffice\PowerPnt\Powerpnt.exe /s c:\My Documents\Lucy.PPT
```

(Schmandt, ¶359.)

This example shows a crontab file with three entries specifying how and when PowerPoint (Powerpnt.exe) will be executed: (1) at 7:00AM each day to automatically display a presentation named Bill.PPT, (2) at 10:00AM to automatically display Sally.PPT, and (3) at 1:00PM to automatically display Lucy.PPT. (*Id.*) This crontab file would have been displayed to the user in a window, for example, when creating or editing it using a graphical text editor. The example above merely provides an illustration to visualize the straightforward way in which these references can be combined. Under the proposed combination, of course, “Powerpnt.exe” would have been replaced with the name of the software application that displays the show structure of nodes. (Shimizu, 9:63-66.) A PowerPoint presentation file (.PPT) is directly analogous to a show structure of nodes because it identifies a series of nodes and their content for display in a sequential manner. Under the proposed combination, this would have been replaced in the crontab file above with the name of the computer file(s) identifying the show structure that will be automatically displayed. (Schmandt, ¶359.)

Finally, each of these show structures would “**each [have] correspond[ed] to one of said categories,**” as claimed. As explained for claim 39, it would have been

obvious under the proposed combination with Miller to create a show structure of nodes related to a selected category. (Schmandt, ¶313.) Because show structures were created under the proposed combination based on category-based searches, in the first instance, it would have been obvious that each of the show structures would have corresponded to at least one category. (Schmandt, ¶360.) Resource Kit and Ackermann are analogous resources that would have been reasonably pertinent to a number of problems facing the inventor. (Schmandt, ¶361.)

A skilled artisan would have been motivated to combine in the manner discussed above. (Schmandt, ¶362.) Resource Kit characterizes the ability to automatically launch PowerPoint to display a particular presentation as a useful feature, particularly for self-running presentations that may run in a public or unattended setting. (Resource Kit, 0042-0043.) A skilled artisan would have been motivated to combine in order to obtain the flexibility and benefit of being able to schedule a line-up of show structures of nodes to be displayed at desired times, thus obviating the need for a human operator to manually commence the display at the appropriate times. (Schmandt, ¶362.) An ordinarily skilled artisan would have had at least a reasonable expectation of success, and could have implemented these features using conventional programming techniques. (Schmandt, ¶363.)

VII. CONCLUSION

Petitioner respectfully requests IPR institution.

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Dated: February 21, 2023

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CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), I certify that this petition complies with the type-volume limits of 37 C.F.R. § 42.24(a)(1)(i) because it contains 13,983 words, according to the word-processing system used to prepare this petition, excluding the parts of this petition that are exempted by 37 C.F.R. § 42.24(a) (including the table of contents, a table of authorities, mandatory notices, a certificate of service or this certificate word count, appendix of exhibits, and claim listings).

DATED: February 21, 2023

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Sections 42.6 and 42.105, that a complete copy of the attached **PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 7,155,451 B1**, including all exhibits (**Nos. 1101-1113, 1120-1131**) and related documents, are being served via Federal Express on the 21st day of February, 2023, the same day as the filing of the above-identified document in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon Patent Owner by serving the correspondence address of record with the USPTO as follows:

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And, via Federal Express upon counsel of record for Patent Owner in the litigation pending before the U.S. District Court for the District of Delaware entitled *Robocast, Inc. v. YouTube, LLC*, Case No. 1-22-cv-00304 (D. Del.) as follows:

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