Filed: March 29, 2024

Filed on behalf of: Aylo Freesites Ltd

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AYLO FREESITES LTD,
Petitioner

v.

WELLCOMEMAT, LLC,
Patent Owner

IPR2024-00710
U.S. Patent No. 8,307,286

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,307,286

TABLE OF CONTENTS

TABLE OF CONTENTS i

TABLE OF AUTHORITIES vi

EXHIBIT LIST vii

CLAIM LISTING ix

MANDATORY NOTICES xii

A. Real Party-in-Interest Under 37 C.F.R. § 42.8(b)(1) xii

B. Related Matters Under 37 C.F.R. § 42.8(b)(2) xii

C. Lead and Backup Counsel and Service Information Under 37 C.F.R. § 42.8(b)(3)-(4) xii

D. Payment of Fees Under 37 C.F.R. §§ 42.15(a) & 42.103 xiii

I. 37 C.F.R. § 42.104(A) REQUIREMENTS 1

II. 37 C.F.R. § 42.104(B) REQUIREMENTS 1

A. Unpatentability Grounds 1

B. The Challenges Presented Are Not Cumulative 2

C. *Fintiv* Discretionary Denial is Not Appropriate 2

III. TECHNOLOGICAL BACKGROUND 3

IV. ’286 PATENT 4

A. Summary of ’286 Patent 4

B. Prosecution History 9

C. Priority Date 9

V. CLAIM CONSTRUCTION UNDER 37 C.F.R. § 42.104(B)(3) 9

VI. ARGUMENTS 10

A. Level of Ordinary Skill in the Art 10

B. Summary of the Applied References 10

1. Gupta 10

2. Fegan 11

3. Kim 12

4. Vasilevsky 12

5. Logan 13

C. Ground 1: Claims 13-15 and 18-20 are Anticipated by Gupta 14

1. Claim 13 14

a. [13.P] 14

b. [13.1] 15

c. [13.2] 18

d. [13.3] 19

e. [13.4] 21

f. [13.5] 25

g. [13.6] 26

h. [13.7] 28

2. Claim 14 29

3. Claim 15 30

4. Claim 18 31

5. Claim 19 31

6. Claim 20 32

D. Ground 2: Claims 13-15 and 18-20 are Anticipated by Fegan 33

1. Claim 13 33

a. [13.P] 33

b. [13.1] 34

c. [13.2] 35

d. [13.3] 40

e. [13.4] 43

f. [13.5] 46

g. [13.6] 47

h. [13.7] 48

2. Claim 14 49

3. Claim 15 50

4. Claim 18 50

5. Claim 19 51

6. Claim 20 52

E. Ground 3: Claims 13-15 and 18-20 are Obvious over Kim 52

1. Claim 13 52

a. [13.P] 52

b. [13.1] 53

c. [13.2] 56

d. [13.3] 57

e. [13.4] 58

f. [13.5] 62

g. [13.6] 63

h. [13.7] 65

2. Claim 14 65

3. Claim 15 68

4. Claim 18 68

5. Claim 19 69

6. Claim 20 70

F. Ground 4: Claims 13-15 and 18-20 are Obvious over Kim and Gupta 71

1. Claim 13 71

a. [13.4] 71

2. Claims 14-15 and 18-20 72

G. Ground 5: Claims 13-15 and 18-20 are Obvious Over Vasilevsky and Logan 73

1. Claim 13 73

a. [13.P] 73

b. [13.1] 74

c. [13.2] 78

d. [13.3] 79

e. [13.4] 83

f. [13.5] 84

g. [13.6] 84

h. [13.7] 85

2. Claim 14 86

3. Claim 15 87

4. Claim 18 88

5. Claim 19 88

6. Claim 20 89

VII. CONCLUSION 89

TABLE OF AUTHORITIES

Cases

Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH,
IPR2019-01469, Paper 6 (Feb. 13, 2020) (precedential) 2

Becton, Dickinson & Co. v. B. Braun Melsungen AG,
IPR2017-01586, Paper 8 (Dec. 15, 2017) (precedential).....2

Commscope Tech. LLC v. Dali Wireless, Inc.,
IPR2022-01242, Paper 23 (Feb. 27, 2023).....3

Phillips v. AWH Corp.,
415 F.3d 1303 (Fed. Cir. 2005) 9

EXHIBIT LIST

Exhibit	Description
1001 (EX1001)	U.S. Patent No. 8,307,286 ("'286 patent")
1002 (EX1002)	Declaration of Henry Houh, Ph.D.
1003 (EX1003)	*Curriculum Vitae* of Henry Houh, Ph.D.
1004 (EX1004)	U.S. Patent Application Publication No. 2005/0081159 ("Gupta")
1005 (EX1005)	U.S. Patent Application Publication No. 2005/0144305 ("Fegan")
1006 (EX1006)	U.S. Patent Application Publication No. 2005/0210145 ("Kim")
1007 (EX1007)	U.S. Patent Application No. 09/911,293; Publication No. 2002/0069218 ("Sull")
1008 (EX1008)	WO 2003/067594 A1 ("Vasilevsky")
1009 (EX1009)	U.S. Patent Application Publication No. 2003/0093790 ("Logan")
1010 (EX1010)	File wrapper for U.S. Patent No. 8,307,286
1011 (EX1011)	Ulead DVD MovieFactor 2 User Guide
1012 (EX1012)	U.S. Patent Application Publication No. 2004/0230600 ("Devore")
1013 (EX1013)	U.S. Patent Application Publication No. 2003/0231198 ("Janevski")

Exhibit	Description
1014 (EX1014)	U.S. Patent No. 6,637,031 ("Chou")
1015 (EX1015)	U.S. Patent Application Publication No. 2002/0065879 ("Ambrose")
1016 (EX1016)	U.S. Patent Application Publication No. 2001/0020255 ("Hofmann")
1017 (EX1017)	Excerpts from Microsoft Computer Dictionary, 5th Ed. (2002)
1018 (EX1018)	"Signal." Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/signal (accessed March 29, 2024)

CLAIM LISTING

[13.P] 13. A method for handling video cue points, the method comprising:

[13.1] providing a computer system having at least one computer-readable medium comprising a video editing environment, and being disposed at a server side of a public network;

[13.2] receiving a set of video information at the video editing environment using the computer system;

[13.3] receiving a set of cue point information at the video editing environment using the computer system;

[13.4] receiving a cue point editing command over the network from a remote client terminal disposed at a client side of the public network using the computer system;

[13.5] modifying a portion of the cue point information at the server side of the public network according to the cue point editing command received over the public network from the client terminal;

[13.6] receiving a cue point selection over the network from the remote client terminal identifying one of the cue points corresponding to a portion of the video information of one of the video files; and

[13.7] streaming the portion of the video information to the client terminal over the public network in response to receiving the cue point selection.

14. The method of claim 13, further comprising providing a cue point editing mode as part of the video editing environment configured to perform at least one of creating, modifying, deleting, or interpreting at least a portion of the set of cue point information according to the cue point editing command received over the public network from the client terminal.

15. The method of claim 14, further comprising: receiving an edit mode entry signal over the network from the client terminal representing entry into the cue point edit mode, and switching the video editing environment to the cue point editing mode in response to receiving the edit mode entry signal.

18. The method of claim 13, further comprising receiving, over the network, authentication information relating to access authority of the remote client terminal.

19. The method of claim 18, further comprising denying or allowing access to all or part of the video editing environment based at least in part on the access authority of the remote client terminal.

20. The method of claim 13, wherein the server video data is streamed progressively to a video playback environment at the remote client terminal, allowing the video player to begin displaying streamed server video data while remaining server video data continues to be streamed.

MANDATORY NOTICES

A. Real Party-in-Interest Under 37 C.F.R. § 42.8(b)(1)

Petitioner certifies that Aylo Freesites Ltd (f/k/a MG Freesites Ltd), Aylo Premium Ltd (f/k/a MG Premium Ltd), Aylo Holdings S.à r.l. (f/k/a MindGeek S.à r.l.), and 9219-1568 Québec, Inc. are the only real parties-in-interest.

B. Related Matters Under 37 C.F.R. § 42.8(b)(2)

The ’286 patent is currently involved in the following proceeding:

- *WellcomeMat, LLC v. Aylo Holdings Sarl et al*, No. 2:23-cv-00483-JRG (E.D. Tex.) (the “District Court Litigation”).

C. Lead and Backup Counsel and Service Information Under 37 C.F.R. § 42.8(b)(3)-(4)

Petitioner designates the following lead and backup counsel:

Lead Counsel	Backup Counsel
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Service information for lead and backup counsel is provided in the designation of lead and backup counsel, above. Petitioner consents to electronic service by email at the email addresses provided above. A Power of Attorney is filed concurrently herewith under 37 C.F.R. § 42.10(b).

D. Payment of Fees Under 37 C.F.R. §§ 42.15(a) & 42.103

The required fees are submitted herewith in accordance with 37 C.F.R. §§ 42.103(a) and 42.15(a). If any additional fees are due during this proceeding, the Office is authorized to charge such fees to Deposit Account No. 22-0261. Any overpayment or refund of fees may also be deposited in this Deposit Account.

Aylo Freesites Ltd ("Petitioner") requests *inter partes* review ("IPR") of claims 13-15 and 18-20 ("Challenged Claims") of U.S. Patent No. 8,307,286 (EX1001) (the "'286 patent") pursuant to 35 U.S.C. §§ 311-19 and 37 C.F.R. § 42.1 *et seq.* For purposes of this Petition, the '286 patent is being treated under pre-AIA 35 U.S.C. §§ 102 and 103.

I. 37 C.F.R. § 42.104(A) REQUIREMENTS

Petitioner certifies that the '286 patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR challenging the patent claims on the grounds presented herein.

II. 37 C.F.R. § 42.104(B) REQUIREMENTS

A. Unpatentability Grounds

Petitioner requests (i) review of the Challenged Claims of the '286 patent on the following Grounds and (ii) that those claims be found unpatentable.

Ground	Challenged Claims	Reference(s)	Basis
1	13-15 and 18-20	Gupta	Anticipation
2	13-15 and 18-20	Fegan	Anticipation
3	13-15 and 18-20	Kim	Obviousness
4	13-15 and 18-20	Kim and Gupta	Obviousness
5	13-15 and 18-20	Vasilevsky and Logan	Obviousness

B. The Challenges Presented Are Not Cumulative

The Grounds presented herein are neither cumulative nor redundant to prosecution of the ’286 patent. No reference relied upon herein was of record during examination.

The *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (Dec. 15, 2017) (precedential) factors (a), (b), and (d) support institution because the Grounds herein present art not before the Examiner or used in substantive rejections. Factors (c), (e), and (f) also support institution because the Examiner never indicated any substantive evaluation or appreciation of the prior art presented herein—indeed, the Challenged Claims lack the claim language cited in the Examiner’s reasons for allowance (Section IV.B). Petitioner submits there was a material misapprehension or oversight at least in not recognizing that prior art (including that presented herein), anticipates and/or renders obvious the claims. *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 (Feb. 13, 2020) (precedential) (material oversight by Examiner of specific teachings of prior art favors institution). Therefore, this Petition should be instituted.

C. *Fintiv* Discretionary Denial is Not Appropriate

In view of the Director’s recent guidance on *Fintiv*, the time to trial is not a dominating factor in the *Fintiv* analysis. *Memorandum for the Interim Procedure*

for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, at 8 (June 21, 2022). Instead, a "compelling unpatentability challenge" is a more important consideration. *Id.* at 4. Such compelling evidence refers to a high likelihood of success on the merits for at least one claim. *Commscope Tech. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 3-4 (PTAB Feb. 27, 2023) (precedential).

This Petition presents a compelling unpatentability challenge. A Scheduling Conference was held in the District Court Litigation and jury selection is set for July 7, 2025. Should Patent Owner present a *Fintiv* challenge based on developments in the District Court Litigation after the filing of this Petition, Petitioner will seek to address those developments.

III. TECHNOLOGICAL BACKGROUND

By 2002, users could create custom DVDs from home movies using available consumer DVD authoring software (*e.g.*, Ulead DVD MovieFactory) installed on their personal computer. EX1011, p. 1 (dated November 2002), 4. This software allowed users to either add chapter markers to a DVD by selecting the start of each video segment and adding a text description or edit existing chapter markers. *Id.*, pp. 12-13. Viewers could select a chapter marker to navigate to the desired video segment more easily. *Id.*, p. 12.

The ’286 patent extends these known chaptering concepts from DVDs to online video using a typical client-server framework, where the software is installed on a server (as opposed to a personal computer) and users connect to the server from their personal computers to add and edit chapters of online videos. EX1002, ¶¶23-45; EX1013; EX1014; EX1015; EX1016.

IV. <u>’286 PATENT</u>

A. Summary of ’286 Patent

The ’286 patent relates to adding “cue points,” which may be “indexed time positions or tags,” to videos. EX1001, Abstract, 7:50-52. In an exemplary video of a hotel suite, cue points for “the bedroom, bathroom, living room, and kitchenette” are defined at “time positions” “zero, one, two, and three minutes” of the video. *Id.*, 7:49-60. As in chaptered DVDs, cue points “provid[e] chapter markers for the different sections of the video.” *Id.*

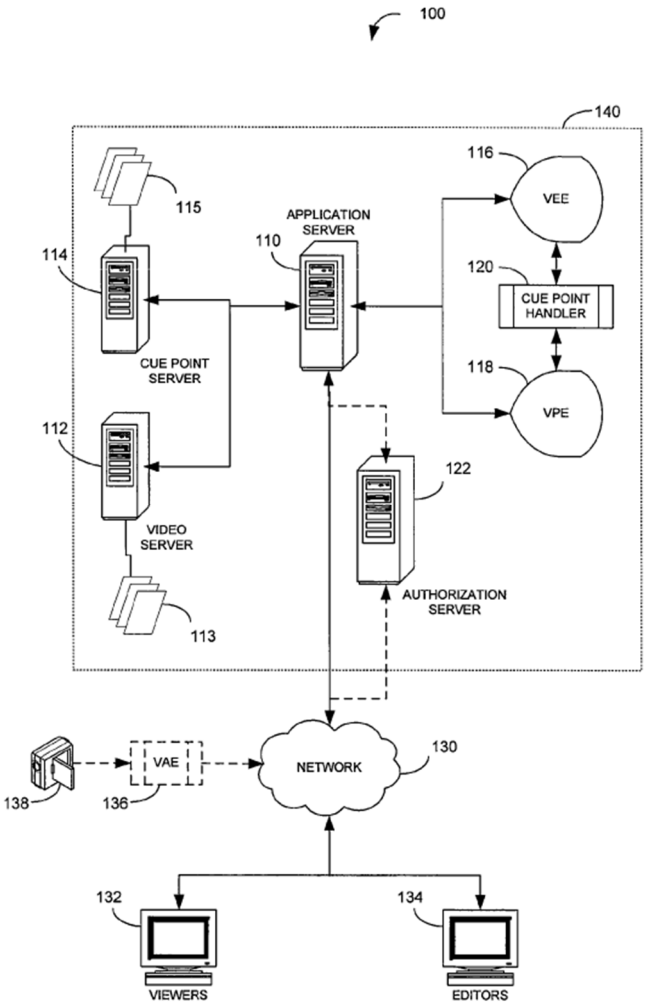
Fig. 1A shows a cue point handling system with application server 110 executing a Video Editing Environment (“VEE”) 116 and/or a Video Playback Environment (“VPE”) 118; video server 112 storing videos; and cue point servers 114 storing and serving cue point information. *Id.* 6:61-7:8, 7:42-45, 9:19-46, 10:4-9. These servers are connected to each other and to clients (*e.g.*, viewer terminals 132 interacting with the VPE; editor terminals 134 interacting with the VEE) via network 130 (*e.g.*, the Internet). *Id.* The servers’ functions may be

either distributed among multiple servers (that are not necessarily collocated) or contained in one server. *Id.*, 9:1-17. The VEE and VPE may be the same application or separate applications. *Id.*, 9:18-28.

A client may access the VEE via a GUI provided "as a webpage on a client's web browser" (*id.*, 13:39-67) or as a "server-level application" (*id.* 12:63-13:6). The VEE is described broadly and "may comprise **<u>any</u>** graphical, textual, audio, or other data which is desirable or necessary **<u>for providing interface capabilities to a client</u>**"[1] and "does not [even] require any graphical interface elements" (*e.g.*, "script"-level interfaces). *Id.*, 13:48-67.

Authorization server 122 "allow[s] or den[ies] access to all or part of the various applications handled by the application server 110." *Id.*, 10:20-26.

[1] All bolded/underlined emphasis in this Petition has been added, unless otherwise noted.



EX1001, Fig. 1A.

A client may load a cue point editor in the VEE to "add[], modify[], or delet[e] cue point information." *Id.*, 19:6-35. Fig. 6 depicts an exemplary VEE cue point editor screen 600 displayed on a client. *Id.*, 25:64-26:60.

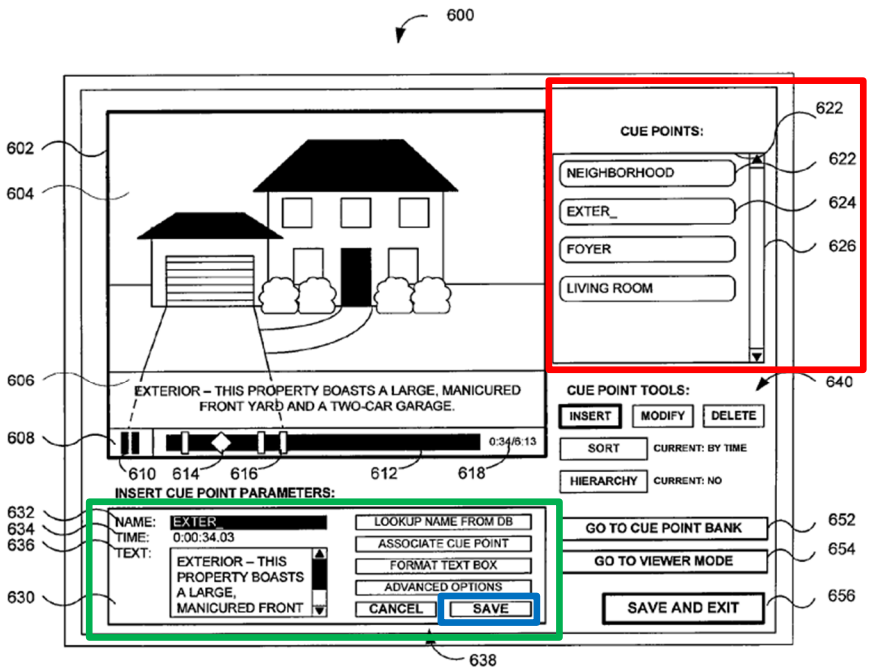


Fig. 6

Id., Fig. 6 (annotated).

The cue point editor screen 600 includes:

- Cue point listing area 620 (annotated above in red; misnumbered as the upper instance of "622") listing cue points (*e.g.*, existing cue point 622 ("NEIGHBORHOOD") and cue point 624 ("EXTER_") that is being inserted). *Id.*, 27:21-31;
- Cue point parameters area 630 (annotated above in green) for inputting cue point information, such as cue point "name," "time position," and "comment text." *Id.*, 27:32-40; and

- "Save" button (annotated above in blue) that "allow[s] a client to save the current cue point editing and possibly submit the cue point information." *Id.*, 27:40-59, 23:24-28.

Fig. 11A depicts the VPE where a client accesses video and cue point information (*id.*, 34:59-35:8), including "cue point control area 1120" and "cue point controls 1122." The client clicks on a cue point control *(e.g.*, 1122-1 through 3) "to navigate to those corresponding locations in the video." *Id.*, 36:9-21.

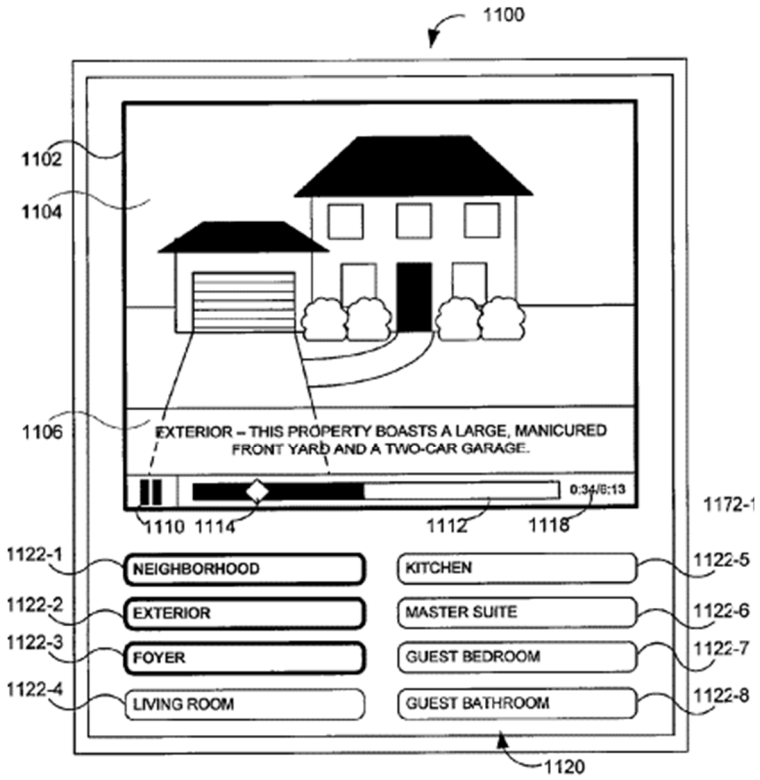


Fig. 11A

Id., Fig. 11A; EX1002, ¶¶46-58.

B. Prosecution History

The Examiner allowed the application, stating "[t]he prior art of record does not teach or fairly suggest the limitations 'receive a cue point selection over the public network from the client terminal identifying one of the cue points corresponding to a portion of the video information of one of the video files; and stream the portion of the video information to the client terminal over the public network in response to receiving the cue point selection **and without storing the video file in its entirety to the client terminal**.'" EX1010, p. 16.

Significantly, while claim 1 recites this emphasized language, Challenged Claim 13 does not.

C. Priority Date

The '286 patent claims the benefit of a provisional application filed May 7, 2006 ("2006 priority date"). WellcomeMat bears the burden of establishing each claim's entitlement to this date. Regardless, all references relied upon herein qualify as prior art even under such date. Petitioner expressly reserves the rights to challenge the priority of any claim, including in other proceedings.

V. CLAIM CONSTRUCTION UNDER 37 C.F.R. § 42.104(B)(3)

Under any reasonable claim interpretation, including the standard under *Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005), the Challenged Claims are met by the prior art.

Petitioner submits that all claim terms of the Challenged Claims should be construed according to their plain and ordinary meanings for the purpose of this Petition. EX1002, ¶¶61-62.

VI. ARGUMENTS

A. Level of Ordinary Skill in the Art

Petitioner submits that a person of ordinary skill in the art ("POSITA") would have had a Bachelor's degree in Electrical Engineering, Computer Engineering, or Computer Science (or equivalent) plus approximately two years of work experience with technologies relating to video annotation/bookmarking and/or video navigation. More education can supplement work experience and vice versa. Nevertheless, Petitioner submits that the Challenged Claims are anticipated/obvious in view of any reasonable POSITA definition. EX1002, ¶¶59-60.

B. Summary of the Applied References

1. Gupta

Gupta (EX1004) is a U.S. patent application published on April 14, 2005, and constitutes prior art at least under pre-AIA 35 U.S.C. §§ 102(a), (b), and (e) even under the alleged 2006 priority date.

Gupta describes a client-server architecture for transmitting "media content as well as annotations corresponding to the media content … from a server(s) to a

client." EX1004, Abstract. Gupta further describes "creating, viewing, and temporally positioning annotations for media content." *Id.*, ¶¶[0003], [0006]-[0007], [0010]. A user may edit the annotations (*id.*, ¶¶[0124]-[0128], [0144]) and select an annotation to seek/navigate to the temporal position of the media content corresponding to the annotation. *Id.*, ¶¶[0007], [0053], [0135]-[0136]; EX1002, ¶¶63-64.

2. <u>Fegan</u>

Fegan (EX1005) is a U.S patent application published on June 30, 2005, and constitutes prior art at least under pre-AIA 35 U.S.C. §§ 102(a) and (e) even under the alleged 2006 priority date.

Fegan describes a "comprehensive server-side system for editing, annotating, managing and presenting multimedia events." EX1005, Abstract. Clients access Fegan's system over the Internet to "generat[e] time-based index points" "for virtual segmentation of a multimedia file" (*e.g.*, streaming video) to "create 'clips' of specified portions" and stream a presentation of selected portions. *Id.*, ¶¶[0078], [0080]-[0085], [0007] ("The application then uses the url/uri and time offsets to play the portion of the digital object that the user has selected"), [0013], [0076]; EX1002, ¶¶141-42.

3. Kim

Kim (EX1006), is a U.S. patent application published on September 22, 2005, and constitutes prior art at least under pre-AIA 35 U.S.C. §§ 102(a) and (e) even under the alleged 2006 priority date.

Kim describes "[a] multimedia bookmark (VMark) bulletin board service (BBS) system" for making and sharing multimedia bookmarks in a client-server architecture. EX1006, Abstract. An administrator client can create and edit multimedia bookmarks. *Id.*, ¶¶[0334]-[0336]. Multimedia bookmarks are used to select where to begin streaming video—for example, "[b]y selecting the play control button 612, the user can watch the video from the bookmarked position." *Id.*, ¶¶[0295], [0112]; EX1002, ¶¶210-11.

4. Vasilevsky

Vasilevsky (EX1008) is an international patent application published on August 14, 2003, and constitutes prior art at least under pre-AIA 35 U.S.C. §§ 102(a), (b), and (e) even under the alleged 2006 priority date.

Vasilevsky describes a centralized Digital Video Recording and reproduction system with centralized media server allowing users to establish bookmarks in television programming via a GUI display. EX1008, Abstract. The centralized media server and clients are connected over a Home Area Network. *Id.*, 10:11-11:15. A user can pause video playback at the receiver to create and/or

modify video bookmarks. *Id.*, 19:12-20:6, 21:9-22:15. Selecting a bookmark resumes playback from the bookmarked point. *Id.*, 20:3-6; EX1002, ¶¶307-08.

5. <u>Logan</u>

Logan (EX1009) is a U.S. patent application published on May 15, 2003, and thus constitutes prior art at least under pre-AIA 35 U.S.C. §§ 102(a), (b), and (e) even under the alleged 2006 priority date.

Logan describes an Internet-based, client-server architecture in which a client user can create and modify television programming metadata, including tags and bookmarks, which is sent to a remote location to be shared with others. EX1009, ¶¶[0015], [0048]-[0057], [0065], [0112], [0124], [0134], [0177]-[0178], [0221]-[0229], [0308], Figs. 1-2. Users can create bookmarks in video to "save a segment" for watching later. *Id.*, ¶¶[0177]-[0179] ; EX1002, ¶¶309-10.

C. Ground 1: Claims 13-15 and 18-20 are Anticipated by Gupta

1. <u>Claim 13</u>

a. [13.P]

To the extent the preamble is limiting, Gupta discloses *a method for handling*[2] (*e.g.*, "creating, viewing, and temporally positioning") *video cue points* (*e.g.*, "annotations" for video). EX1004, ¶¶[0003], [0004].

Gupta describes "a networked client/server system" where "media content as well as annotations corresponding to the media content can be transmitted from a server(s) to a client." *Id.*, Abstract. "Creating new annotations and viewing annotations" is performed by user interface. *Id.*

Gupta's annotation "is data (e.g., audio, text, video, etc.) that corresponds to a multimedia presentation," and "correspond[s] to a particular temporal location in the multimedia presentation." *Id.*, ¶¶[0007], [0006], [0010]. Gupta's annotations are cue points, which the '286 patent describes as "indexed time positions or tags anywhere within a video file" and may include "meta-tags" that "describe the information in the video file." EX1001, 7:50-52, 8:15-20; EX1002, ¶¶65-71.

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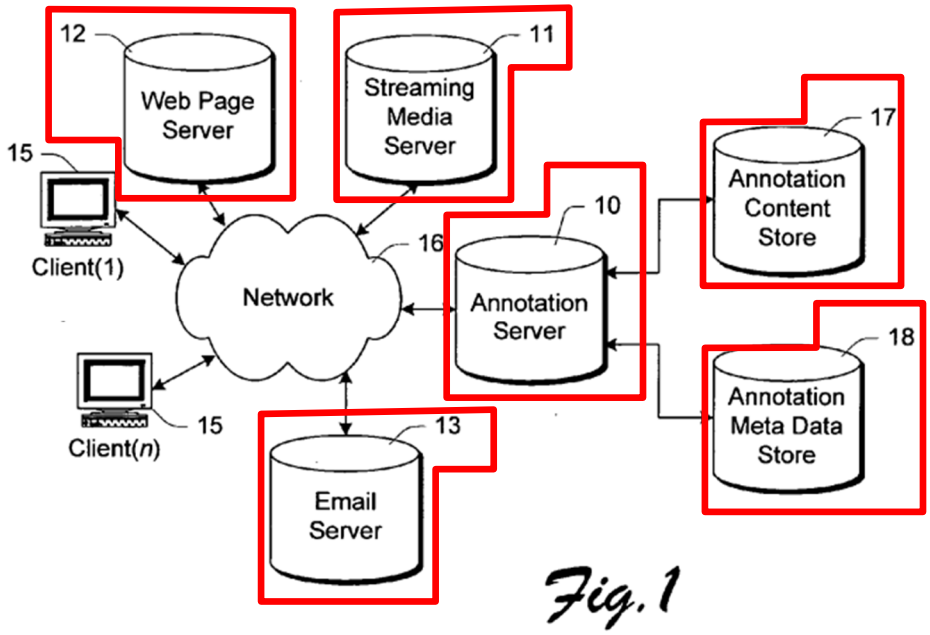
[2] Italics emphasis is used throughout Sections VI.D-H (*i.e.*, arguments for Grounds 1-5) of this Petition when quoting the Challenged Claims.

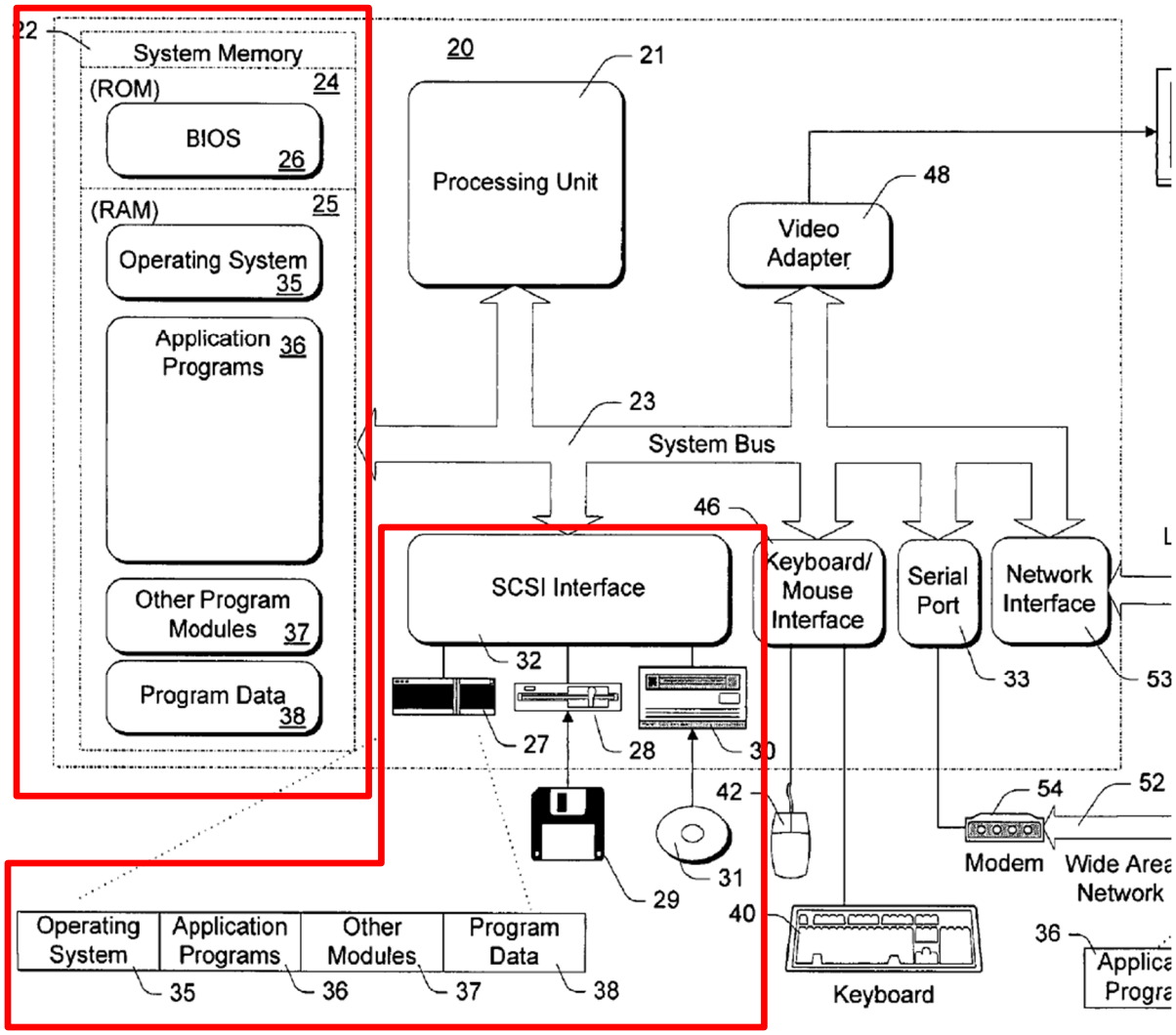
b. [13.1]

Gupta discloses *providing a computer system* (*e.g.*, servers and storage devices at a server side of a public network, including servers 10-13 and stores 17-18). EX1004, ¶¶[0032]-[0034].



Id., Fig. 1 (annotated).

The computer system *having at least one computer-readable medium* (*e.g.*, hard drives, RAM, ROM). Fig. 2 presents an exemplary computer 20 for "perform[ing] the functions of any of server computers 10-13" and having ROM 24, RAM 25, and "computer readable media" (*e.g.*, hard disk drive 27) "provid[ing] nonvolatile storage of computer readable instructions, data structures, program modules and other data for computer 20." *Id.*, ¶¶[0037]-[0039], [0040], [0041]-[0042].

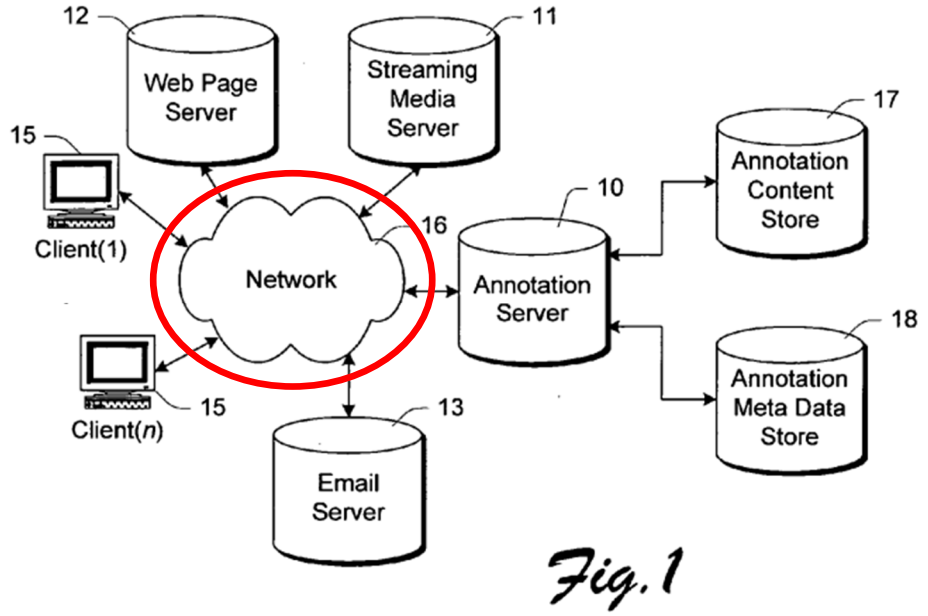


Id., Fig. 2 (excerpted, annotated)

The at least one computer-readable medium *comprising a video editing environment* (*e.g.*, software for both editing annotations and streaming video, executed by servers 10-13 and stores 17-18). Annotation server 10 executes software for editing annotations. *Id.*, ¶¶[0048] ("Annotation server 10 further includes an annotation back end (ABE) module 132, which contains functionality for accessing annotation stores 17 and 18"), [0144] ("Edit annotation dialog **box**

590 is displayed … [and] **[n]ew information can be entered** into the fields, analogous to add annotation dialog box 330 of FIG. 8"), [0100] ("annotation backend 151 [] **sends the new annotation information to annotation server 10**"). Streaming media server 11 executes software for streaming video. *Id.*, ¶¶[0030] ("Streaming media server computer 11 has access to streaming media content"), [0099] ("[M]edia server 11 streams the media segment to client 15"), [0034].

The computer system *being disposed at a server side of a public network* (*e.g.*, public network 16; Internet), in contrast to a client side of network 16 where client 15 is located. *Id.*, ¶[0029] ("**public network** 16 such as the **Internet**."), Fig. 1; EX1002, ¶¶72-79.



EX1004, Fig. 1 (annotated).

c. [13.2]

Gupta discloses *receiving a set of video information* (*e.g.*, receiving a collection of information concerning videos) *at the video editing environment using the computer system* (*e.g.*, at the software for streaming video using servers 10-13 and stores 17-18).

Gupta describes receiving a set of video information as "[s]treaming media server 11 has access to streaming media content" which may be "stored as files in a database or other file storage system" or "supplied to [it] on a 'live' basis from other data source components through dedicated communications channels or through the Internet itself." EX1004, ¶[0030] ("media streams" include "video").

The set of video information is received at the video editing environment using the computer system because streaming media content is received by the software executed by streaming media server 11 such as when retrieving video to stream to client 15. *Id.*, Figs. 22-23, ¶¶[0034] ("The client-based browser also submits requests to the media server 11 for streaming data"), [0030], [0026].

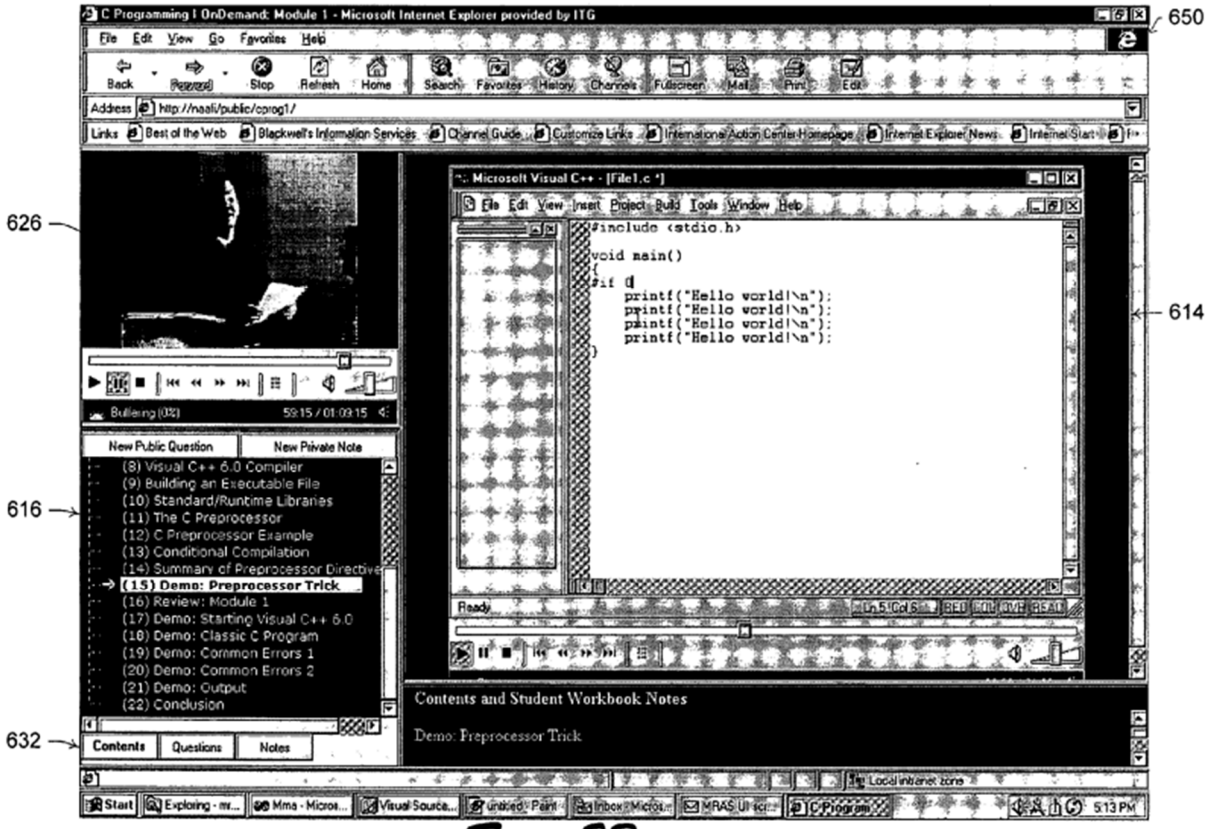


Fig. 23

EX1004, Fig. 23 (video playing in window 626 of browser web page); EX1002, ¶¶80-85.

d. [13.3]

Gupta discloses *receiving a set of cue point information* (*e.g.*, receiving a collection of information concerning annotations) *at the video editing environment using the computer system* (*e.g.*, at the software for editing annotations using servers 10-13 and stores 17-18) in multiple ways. EX1004, ¶¶[0006], [0007] ("[A]nnotation is data (e.g., audio, text, video, etc.) that corresponds to a

multimedia presentation," and "correspond[s] to a particular temporal location in the multimedia presentation."), [0010].

First, annotation server 10 receives a set of cue point information (annotations) from annotation meta data store 18 and annotation content store 17 to provide annotations to client 15. *Id.*, ¶¶[0032], [0048] ("Annotation server 10 … contains functionality for **accessing annotation stores 17 and 18**;" "Annotation content … [is] maintained in annotation content store 17;" "Received meta data (control information) corresponding to the annotation content is maintained in annotation meta data store 18"), Figs. 1, 3.

Second, annotation server 10 receives a set of cue point information (annotations) to be added from client 15. *Id.*, ¶[0048] ("Annotation content authored at client 15, using user interface 152, **is received** by [annotation back end (ABE) module] 132" of annotation server 10).

The set of cue point information is received at the video editing environment using the computer system because annotation information is received by the software executed by annotation server 10 such as when receiving a new annotation from client 15 or retrieving an annotation for client 15 to edit. *Id.*, ¶¶[0032] ("Annotation server 10 controls the storage of annotations and their provision to client computers 15."), [0048], [0100]; EX1002, ¶¶86-91.

e. [13.4]

Gupta discloses *receiving a cue point editing command* (*e.g.*, command to edit an annotation after selecting "OK" in interface of Fig. 21) *over the network* (*e.g.*, network 16) *from a remote client terminal disposed at a client side of the public network* (*e.g.*, client 15) *using the computer system* (*e.g.*, servers 10-13 and stores 17-18).

To edit an annotation, client 15 enters an edit mode by selecting an existing annotation (*e.g.*, displayed in annotation listing box 446) to bring up "a selection box or menu 466" and selecting "edit," which "causes interface module 152 to display another dialog box allowing the user to edit the content of the annotation." EX1004, ¶¶[0124]-[0128].

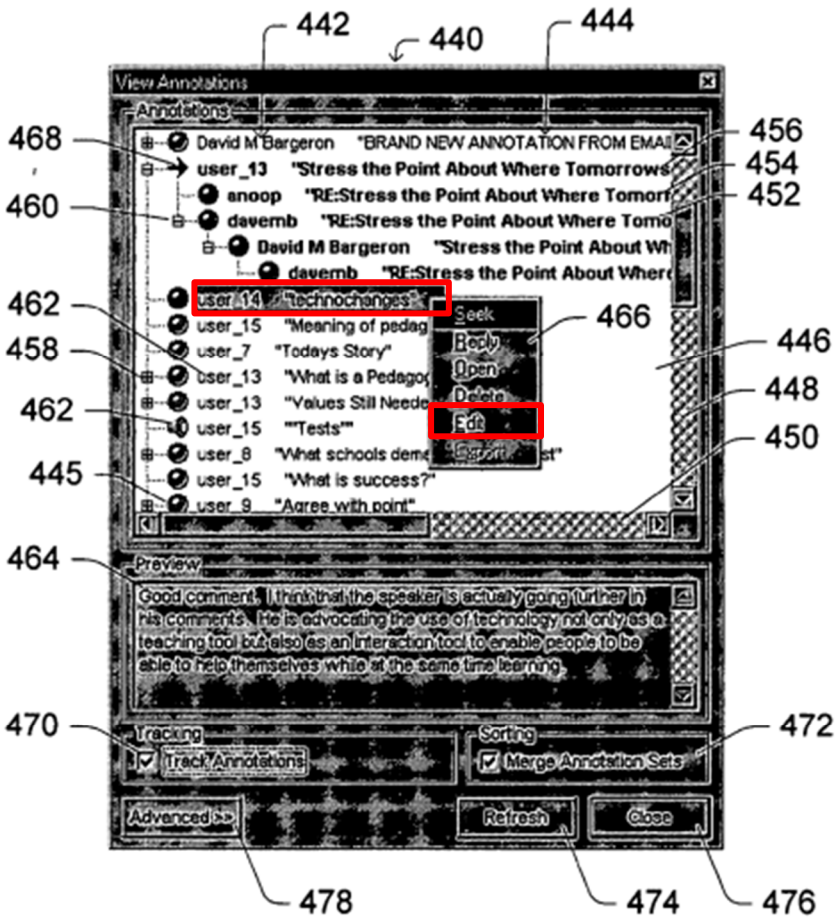


Fig. 15

Id., Fig. 15 (annotated, showing "edit" option for selected annotation).

In the annotation editor interface (*e.g.*, "'edit annotation' dialog box 590"), "**[n]ew information** can be entered into the fields, analogous to add annotation dialog box 330 of FIG. 8." *Id.*, ¶[0144]. After editing the annotation information (*e.g.*, "set," "subject," "text"; additional options available under "Advanced"

button; *id.*, ¶[0143]), the user selects "OK," resulting in a command to edit the annotation being sent from client 15 and received using the computer system's annotation server 10. *Id.*, ¶¶[0100], [0144].

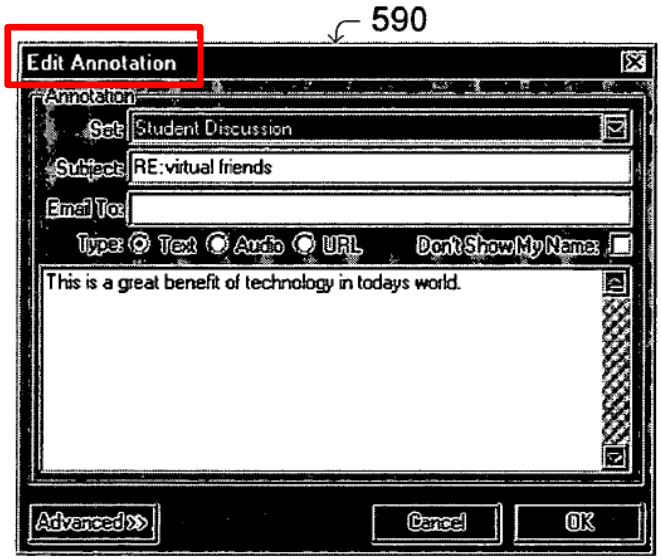


Fig. 21

Id., Fig. 21 (annotated).

Specifically, since Gupta's Fig. 21 editor interface is "analogous" in operation to the Fig. 8 interface (*id.*, ¶[0144]), selecting the "OK" button in Fig. 21 will likewise "forward the information … to annotation backend 151, which **sends the new annotation information to annotation server 10**" (*id.*, ¶[0100]). *Id.*, ¶[0034] ("When a user of a client computer 15 desires to add or retrieve

annotations, **<u>the client computer 15 contacts the annotation server 10 to perform the desired addition</u>**/retrieval.”).

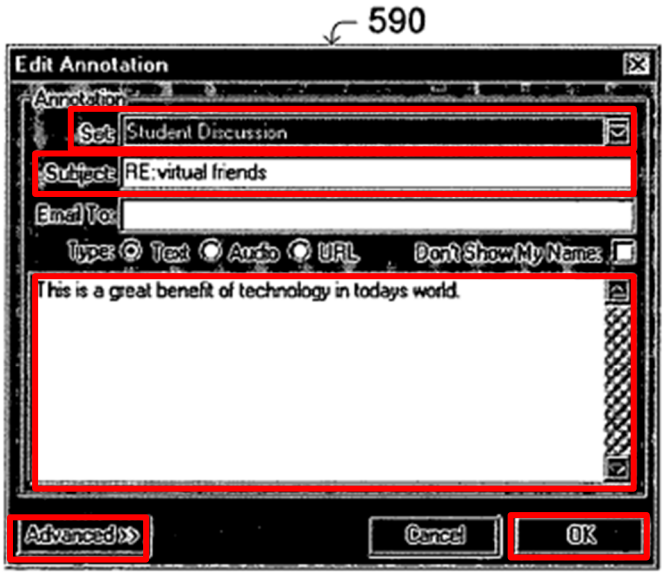


Fig. 21

Id., Fig. 21 (annotated, showing editable fields, “advanced” button for additional editable fields, and an “OK” button for saving changes).

The computer system receives the command over the network (*e.g.*, network 16). *Id.*, ¶[0046], Fig. 1. Client 15 is disposed at a client side of the public network, in contrast to a server side of network 16 where servers 10-13 are located and is therefore also remote from the servers. *Id.*, ¶¶[0029], [0046], Fig. 1; EX1002, ¶¶92-102.

f. [13.5]

Gupta discloses *modifying a portion of the cue point information*[3] (*e.g.*, editing annotation information) *at the server side of the public network* (*e.g.*, at annotation server 10) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

When client 15 makes changes in the "Edit Annotation" dialog box and selects "OK," the edited information is sent over network 16 to modify the annotation at annotation server 10. EX1004, ¶¶[0100]-[0102] ("sends the new annotation information to annotation server 10"), [0144] ("information can be entered into the fields, analogous to add annotation dialog box 330 of FIG. 8"), [0029], [0034], [0048]; [13.4]; EX1002, ¶¶103-06.

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[3] The claim language does not require saving the modified information or replacing the prior cue point information with the newly modified information. EX1001, Claim 13; 19:26-35 (distinguishing "modifying" from "adding" and "deleting"). Therefore, a POSITA would have understood limitation [13.4] as requiring only modifying a portion of the existing cue points in accordance with the received cue point editing command and nothing further. EX1002, ¶104.

g. [13.6]

Gupta discloses *receiving a cue point selection* (*e.g.*, receiving a selected annotation via request to "seek"/"navigate" to that annotation such as in menu 466 of interface module 152) *over the network from the remote client terminal* (*e.g.*, from client 15 over network 16) *identifying one of the cue points corresponding to a portion of the video information of one of the video files* (*e.g.*, selected annotation identifies a video portion). EX1004, ¶¶[0127], [0135]-[0136], [0152] ("double-clicking or 'seeking' to any of the annotations (via the identifiers in annotation identifier portion 616) can be used as a navigational tool as well"), Figs. 15-16, 22-23.

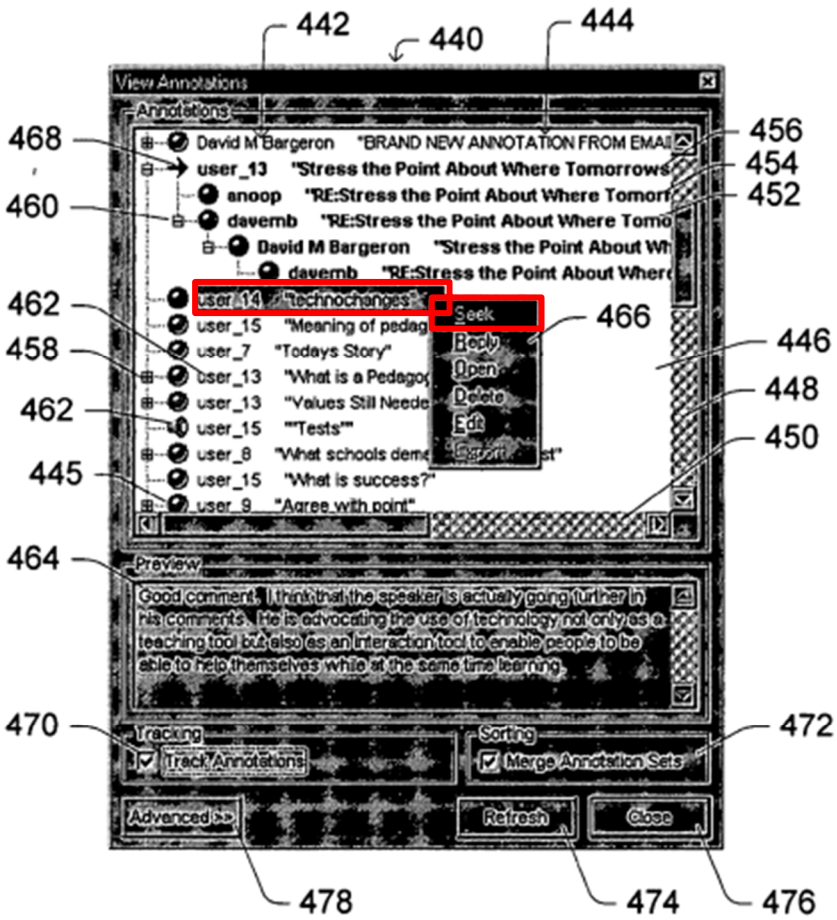


Fig. 15

Id., Fig. 15 (annotated, showing "seek" request for selected annotation).

When client 15 selects the "seek" option, it "causes interface module 152 of Fig. 3 to **initiate presentation** of the media segment **corresponding to the annotation** (**analogous to the play button 316** of FIG. 7 discussed above)." *Id.*, ¶[0127]. Seeking involves "the [client] browser communicat[ing] with media server 11 and request[ing] the identified media segment" and "[i]n response, media

server 11 stream[ing] the media segment to client 15 for presentation to the user." *Id.*, ¶[0099]. Therefore, streaming media server 11 receives the cue point selection.

The cue point selection is received over network 16 (*e.g.*, Internet) as client 15 "access[es] various servers via network 16," including streaming media server 11. *Id.*, ¶[0046], Fig. 1.

Each annotation corresponds to a portion (temporal portion with beginning and end) of video. EX1004, ¶¶[0007], [0053] ("Time range field 184 contains data representing 'begin' and 'end' times defining a segment of media timeline to which annotation entry 180 is associated."), [0030], [0135]; [13.3]; EX1002, ¶¶107-13.

h. [13.7]

Gupta discloses *streaming the portion of the video information to the client terminal* (*e.g.*, streaming the portion of the video corresponding to the selected annotation to client 15) *over the public network* (*e.g.*, network 16; Internet) *in response to receiving the cue point selection* (*e.g.*, selected annotation in seek/navigate request received in limitation [13.6]).

When client 15 selects "seek" for an annotation, it "initiate[s] presentation of the media segment corresponding to the annotation" and is "analogous to the play button 316" (EX1004, ¶[0127]) and "[i]n response, media server 11 **<u>streams the</u>**

media segment to client 15 for presentation to the user." *Id.*, ¶¶[0099], [0006], [0030], [0033]-[0034], [0135] ("seek and play to end" option that **"initiates playback of the multimedia content at the temporal position** corresponding to the **begin time of the annotation** and continuing until the end of the multimedia content;" "seek and play annotation" option that "**plays back only the temporal segment of the multimedia content** identified by the begin and end times of the **annotation**"), [0136]; [13.6]; EX1002, ¶¶114-15.

2. Claim 14

Gupta discloses *providing a cue point editing mode as part of the video editing environment* (*e.g.*, providing interface(s) for editing annotations as part of the software executed by servers 10-13 and stores 17-18) *configured to perform at least one of creating, modifying, deleting, or interpreting at least a portion of the set of cue point information* (*e.g.,* editing annotation information) *according to the cue point editing command received over the public network from the client terminal* (*e.g.,* command received in limitation [13.4]).

A cue point editing mode is entered when client 15 selects "edit" for an annotation (in Fig. 15) to display the "Edit Annotation" interface of Fig. 21. EX1004, ¶¶[0124]-[0128] (client 15 enters an edit mode by selecting an existing annotation (*e.g.*, displayed in annotation listing box 446) to bring up "a selection box or menu 466" having an "edit" option which, when selected, "causes interface

module 152 to display another dialog box allowing the user to edit the content of the annotation."); [13.4].

Annotation server 10 modifies at least a portion of the annotation information according to the editing command received over network 16 from client 15. [13.4]-[13.5] ("Edit Annotation" dialog box has editable fields for selected annotation including: "set," "subject," "text"; and an "OK" button for sending the editing command to annotation server 10 to modify the annotation information); EX1002, ¶¶116-19.

3. <u>Claim 15</u>

Gupta discloses *receiving an edit mode entry signal* (*e.g.*, signal for entry to the interface(s) for editing annotations; from selecting "edit" in menu 466) *over the network from the client terminal* (*e.g.*, from client 15 over network 16) *representing entry into the cue point edit mode* (*e.g.*, representing entry into the interface(s) for editing annotations) *and switching the video editing environment to the cue point editing mode in response to receiving the edit mode entry signal* (*e.g.*, switching the software executed by servers 10-13 and stores 17-18 to display the interface(s) for editing annotations; "Edit Annotation" interface of Fig. 21). EX1004, ¶¶[0127] ("Selection box 466 provides various user-selectable features related to the annotation whose identifier is selected, including … 'edit'."), [0128] ("Selection of the 'edit' feature causes interface module 152 to display another

dialog box allowing the user to edit the content of the annotation"), [0047], [0082], [0044] ("commands are formulated at client computer 15 and forwarded to annotation server 10 **via HTTP requests**"), [0034]; [13.4], claim 14; EX1002, ¶¶120-28.

4. Claim 18

Gupta discloses *receiving, over the network, authentication information* (*e.g.*, "read and write access controls") *relating to access authority of the remote client terminal* (*e.g.*, concerning "which users" of client 15 "are able to read and/or write to the annotation set"). EX1004, ¶[0090].

Authentication information is received over the network as "the creator of the set" (*e.g.*, client 15) provides such "read and write controls" to annotation server 10 over public network 16. *Id.*, ¶¶[0090] ("**annotation server 10** of FIG. 3 supports **read and write access controls**, allowing **the creator of the set to identify** which users are able to read and/or write to the annotation set."), [0007] ("appropriate access rights"), [0109], [0052], [0046], Fig. 1; EX1002, ¶¶129-33.

5. Claim 19

Gupta discloses *denying or allowing access to all or part of the video editing environment* (*e.g.*, denying client 15 access to part of the software executed by servers 10-13 and stores 17-18; denying access to certain annotation sets when adding a new annotation) *based at least in part on the access authority of the*

remote client terminal (*e.g.*, as "**only those [annotation] sets** for which the user has write access can be entered"). EX1004, ¶¶[0090], [0007], [0109]; claim 18; EX1002, ¶¶134-37.

6. Claim 20

Gupta discloses *server video data is streamed progressively to a video playback environment* (*e.g.*, streaming video progressively to media portion 612) *at the remote client terminal* (*e.g.*, client 15), *allowing the video player* (*e.g.*, media screen 626) *to begin displaying streamed server video data while remaining server video data continues to be streamed* (*e.g.*, client 15 renders streamed video data as it is received; video data is provided as-needed). EX1004, ¶¶[0006] ("'streaming' … indicate[s] that the data … is provided over a network to a client computer on a **real-time, as-needed basis**, rather than being pre-delivered in its entirety before playback;" "**client computer renders streaming data as it is received** from a network server, rather than waiting for an entire 'file' to be delivered"), [0099] ("media server 11 streams the media segment to client 15"), [0146], Figs. 22-23; [13.7]; EX1002, ¶¶138-40.

D. Ground 2: Claims 13-15 and 18-20 are Anticipated by Fegan

1. <u>Claim 13</u>

a. [13.P]

To the extent the preamble is limiting, Fegan discloses *a method for handling* (*e.g.*, "editing, annotating, managing") *video cue points* (*e.g.*, "annotations" for video). EX1005, Abstract, ¶¶[0013] (multimedia encompasses "streaming video"), [0077]-[0081].

Fegan describes "a comprehensive server-side system for editing, annotating, managing and presenting multimedia events from a plurality of multimedia sources." *Id.*, Abstract, ¶[0010].

Fegan's annotations, contained in client-created playlists, "compris[e] multimedia file identity and multimedia file start and stop points (i.e., designations of the starting and ending points of the multimedia file to be played in a presentation)." *Id.*, ¶[0012]. The remote server receives "playlist selection information and multimedia file annotation information … and [] combine[s] those multimedia files and annotations into online publications" (*id.*) to "create complex publications and presentations that include multimedia clips and annotations" (*id.*, ¶[0009]). Fegan's annotations are cue points, which the '286 patent describes as "indexed time positions or tags anywhere within a video file" and may include "meta-tags" that "describe the information in the video file." EX1001, 7:50-52, 8:15-20; EX1002, ¶¶143-50.

b. [13.1]

Fegan discloses *providing a computer system* (*e.g.*, servers and storage devices at a server side of a public network, including a remote server and databases). EX1005, ¶¶[0008] (system is "hosted in an entirely server-side environment"), [0010] ("server (host) system manages the appropriate databases (e.g., user information, multimedia file location information, annotations, start and stop points, etc.)"), [0085] (multimedia presentations are "stored entirely on a **remote server**").

The computer system *having at least one computer-readable medium* (*e.g.*, server memory/storage). Fegan's system runs "server-side software" such as MYSQL, PHP, and JavaScript using the remote server's memory/storage. *Id.*, ¶¶[0010], [0076] (describing "software that is stored on a remote server"), [0083] (same), [0024]-[0026] (describing computer readable media), [0037] (describing program run by server to respond to client computer).

The at least one computer-readable medium *comprising a video editing environment* (*e.g.*, software for both editing annotations and streaming video, executed by the remote server and databases). The remote server executes software for editing annotations and streaming media. *Id.*, ¶¶[0071], [0073]-[0074] (describing "software on a remote server" for displaying video search results and loading selected video into player), [0083] ("software that is stored on a remote

server" allows storing "segment and annotative information associated with one or more multimedia files"), [0007] ("The technical tools for carrying out the multimedia presentation are maintained on the server-side"), [0009] ("each user has a personal 'portal' hosted on the system of the present invention that allows the user to edit and organize collected materials and to create complex publications and presentations that include multimedia clips and annotations."), Figs. 1-7.

The computer system *being disposed at a server side of a public network* (*e.g.*, Internet), in contrast to a client side of the network where client computers are located. EX1005, ¶¶[0008] (system "hosted in an entirely server-side environment"), [0071] (client connects to server via "computer network (e.g., the **Internet**)"); EX1002, ¶¶151-57.

c. [13.2]

Fegan discloses *receiving a set of video information* (*e.g.*, receiving a collection of information concerning video) *at the video editing environment using the computer system* (*e.g.*, at the software for streaming video using the remote server and databases) in multiple ways.

First, Fegan describes the remote server receiving a set of video information because "a first user in a first location may create a multimedia presentation that is **stored entirely on a remote server**." EX1005, ¶[0085]. The remote server must receive the video information to store it. *Id*.

Second, Fegan describes the remote server receiving a set of video information from locations on the remote server's network by searching "any **accessible** location on a computer network … for multimedia content." EX1005, ¶¶[0071], [0073]. Information concerning videos stored at other locations are thus received by the remote server. *Id*. Further, information concerning videos is also received by these "accessible locations," which are part of Fegan's system by virtue of being on the remote server's network. *Id.*, ¶¶[0069]-[0071].[4]

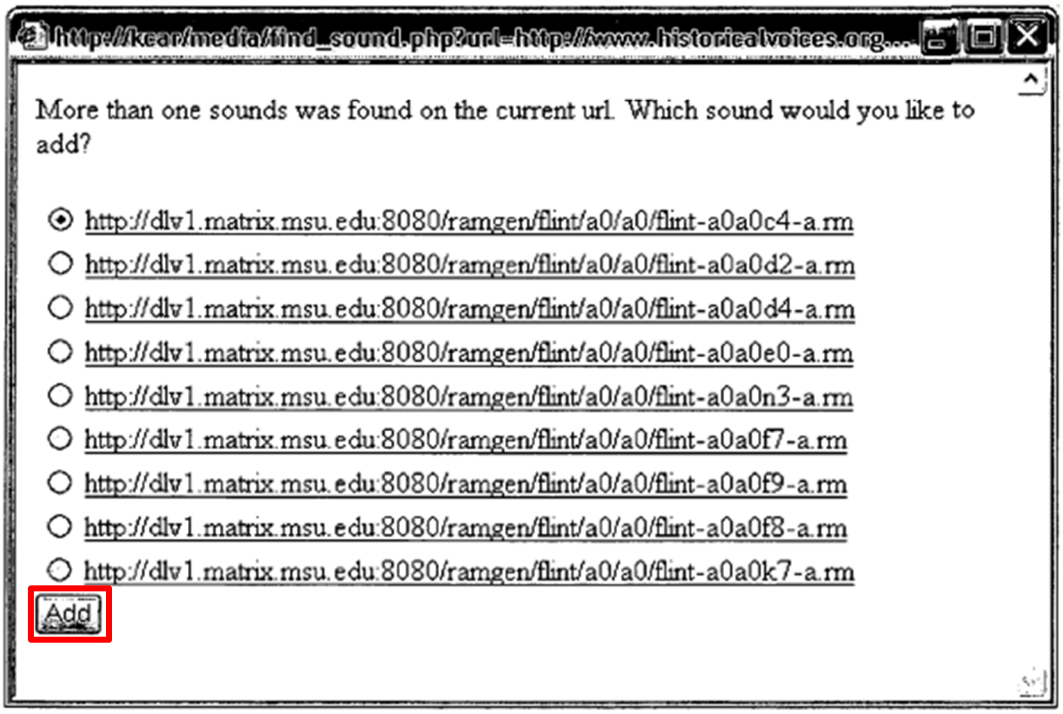
[4] In the '286 patent, remote video servers are part of the computer system because they are networked with the servers comprising the computer system. EX1001, 7:15-17 ("video server 112 may be a … **network of computers**"), 7:24-26 ("**videos may be located … in some other location**, such as at some internet address"), 10:58-60 ("many types of … system and subsystem configurations [] and network arrangements are possible"), 13:45-57.

Third, Fegan discloses the remote server receiving a set of video information by storing videos' URLs.[5] Fegan describes searching locations on the remote server's network for videos and displaying the results of the search, including the video URLs (Fig. 3). EX1005, ¶[0070] ("results of a search for multimedia content on a web page are displayed … the **data comprising the search results may be stored by software on a remote server**."). The remote server must receive the URLs (video information) to store them. *Id*.

[5] In the '286 patent, the video server may store only video URLs instead of the videos themselves. EX1001, 7:22-39 ("**the video server may comprise a list** stored in one or more files which matches video identifiers **with the location of respective videos** … to access a video file 113, a command may be sent to the video server 112 … a relational database may be queried to find an entry … stored in relation to **a list of URL and FTP destinations**.").

FIGURE 3

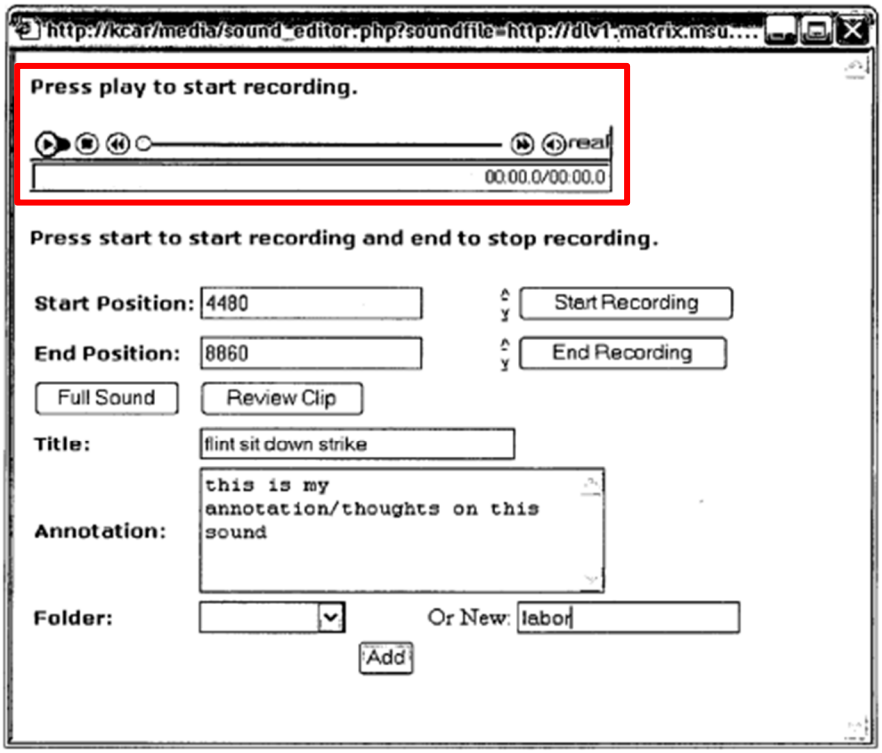
Go to any web page and click the "Search for Sound" bookmark. If the page contains audio, it will load it into the editor. If it contains more than sound, it will list all the sounds and allow you to select the one you want to edit (shown below). If there are no sounds, it will simply tell you that no sounds are available.



Id., Fig. 3 (annotated).

FIGURE 4

The system will load the sound into the editor and allow you to create a segment by pressing start and end recording and then adding a title, annotation, and dictating what folder this annotation should go in on your portal page.



Id., Fig. 4 (annotated).

The set of video information is received at the video editing environment using the computer system because videos and video URLs are received by the software executed by the remote server and by accessible locations on the remote server's network such as when the client computer searches for video to annotate or when retrieving video to stream to the client. *Id.*, ¶¶[0003] ("comprehensive server-side system for editing, annotating, managing and presenting multimedia events from a plurality of multimedia sources"), [0005] ("The present invention

relates to systems and methods for identifying, segmenting, collecting, annotating, and publishing **multimedia materials that are stored on remote servers**."), [0010] ("The server (host) system manages the appropriate databases (e.g., user information, multimedia file location information, annotations, start and stop points, etc.)"), [0069]-[0074], [0085]; EX1002, ¶¶158-64.

d. [13.3]

Fegan discloses *receiving a set of cue point information* (*e.g.*, receiving a collection of information concerning annotations) *at the video editing environment using the computer system* (*e.g.*, at the software for editing annotations using the remote server and databases).

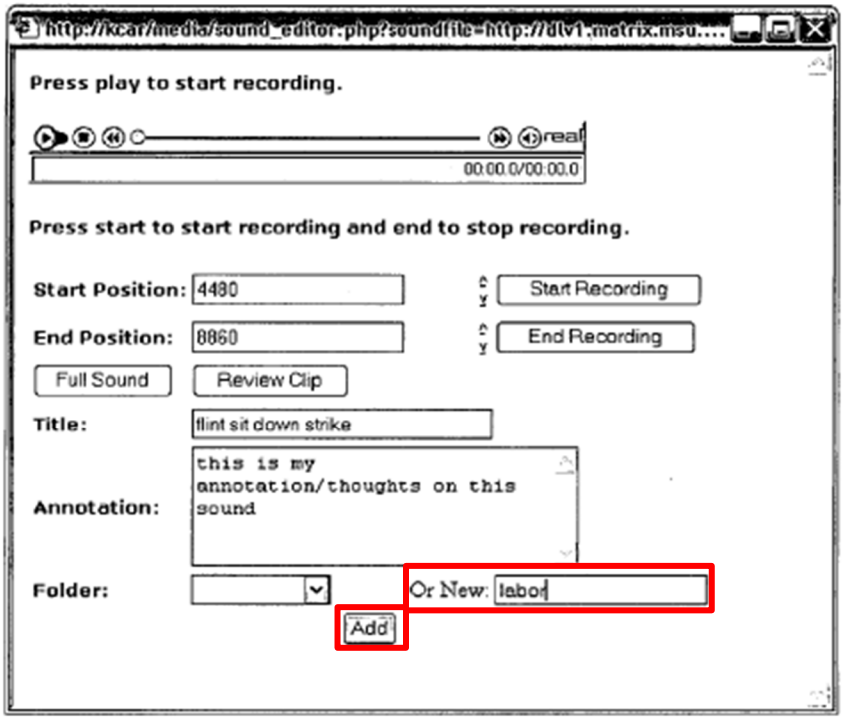
"[T]he annotations" and "start and stop points" added by users are received by the remote server and "stored and managed on the host network." EX1005, ¶¶[0008], [0010] ("server (host) system manages the appropriate databases (e.g., … **annotations**, **start and stop points**, etc."), [0015] ("in a server-side environment … receiving … from the client computer [and] storing the playlist selection information and the multimedia file annotation information"), [0012] ("in a server-side environment" "receive multimedia file annotation information from the client computer"), [0078].

The set of cue point information is received at the video editing environment using the computer system because annotation and start and stop points are

received by the software executed by the remote server such as when receiving a new annotation from the client computer or retrieving an annotation for the client to edit. *Id.*, ¶¶[0003] ("comprehensive server-side system for editing, annotating, managing and presenting multimedia events from a plurality of multimedia sources"), [0015] ("server-side environment … receiving the multimedia file annotation information from the client computer"), [0078] ("The data associated with the time-based index points may be saved and stored on a remote server, and may be retrieved from the remote server and used whenever the associated multimedia file is accessed."), [0080], [0081] ("FIG. 7 shows a saved annotation that has been opened via the directory for further editing."), [0083].

FIGURE 4

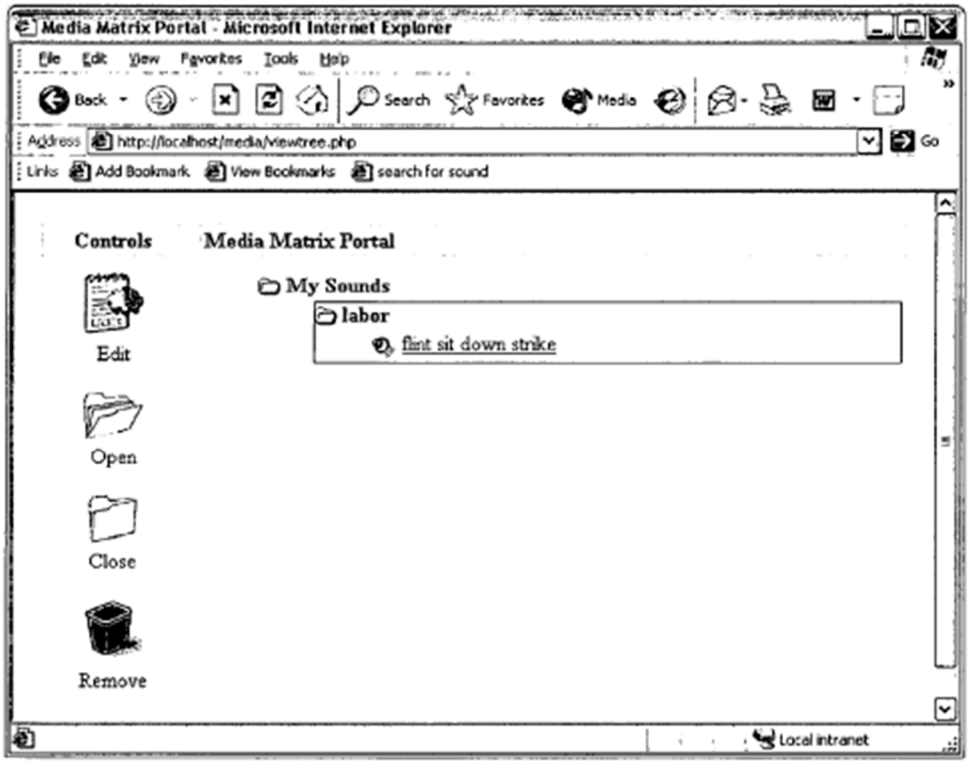
The system will load the sound into the editor and allow you to create a segment by pressing start and end recording and then adding a title, annotation, and dictating what folder this annotation should go in on your portal page.



EX1005, Fig. 4 (annotated, showing adding annotation to user's personal portal on the server in new folder labeled "labor").

FIGURE 5

The folder created that appears on the user's portal page along with the annotation. Clicking on the folder shows the annotations in the folder as well as bringing up the controls to edit the settings of the folder (rename it, move it to another folder, delete it, etc...)



Id., Fig. 5 (showing the newly added annotation "flint sit down strike"); EX1002, ¶¶165-68.

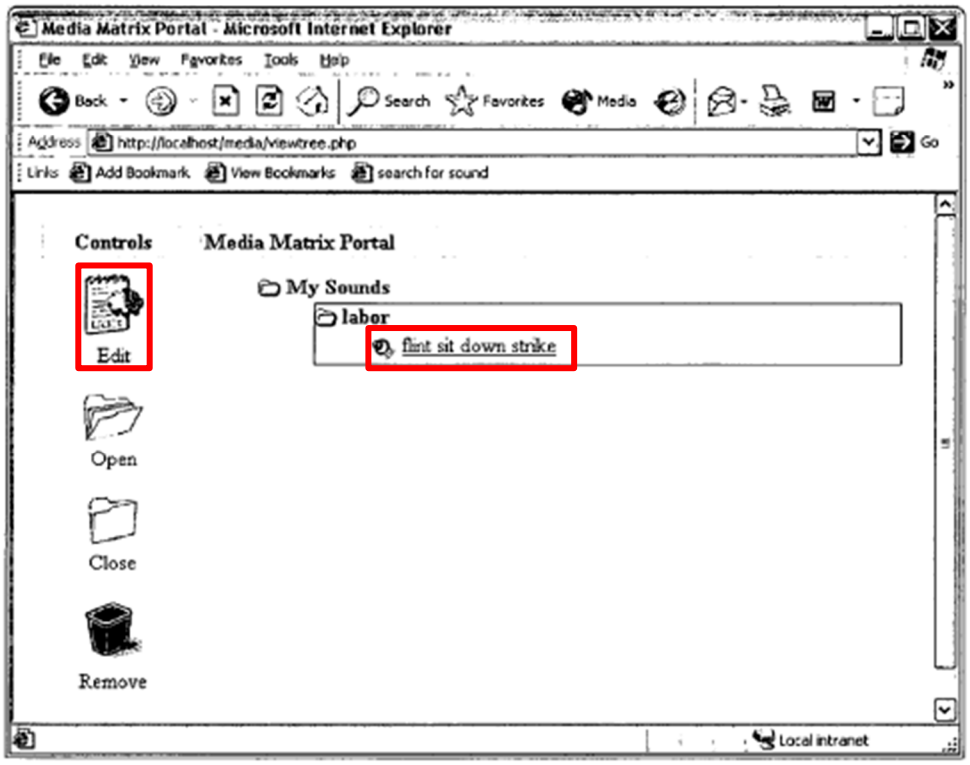
e. [13.4]

Fegan discloses *receiving a cue point editing command* (*e.g.*, command to edit an annotation after selecting "update" in interface of Fig. 7) *over the network* (*e.g.*, Internet) *from a remote client terminal disposed at the client side of the public network* (*e.g.*, client computer) *using the computer system* (*e.g.*, remote server and databases).

To edit an annotation, client computer enters an edit mode by selecting an existing annotation (*e.g.*, "flint sit down strike"), which allows viewing the annotation, and then selects the left-side "Edit" control of Fig. 5, which results in the interface of Fig. 7 "show[ing] a saved annotation that has been opened via the directory for further editing." EX1005, ¶[0081] ("the directory allows a user to select, open, edit, close, or delete the annotative information associated with a multimedia file."), Fig. 5.

FIGURE 5

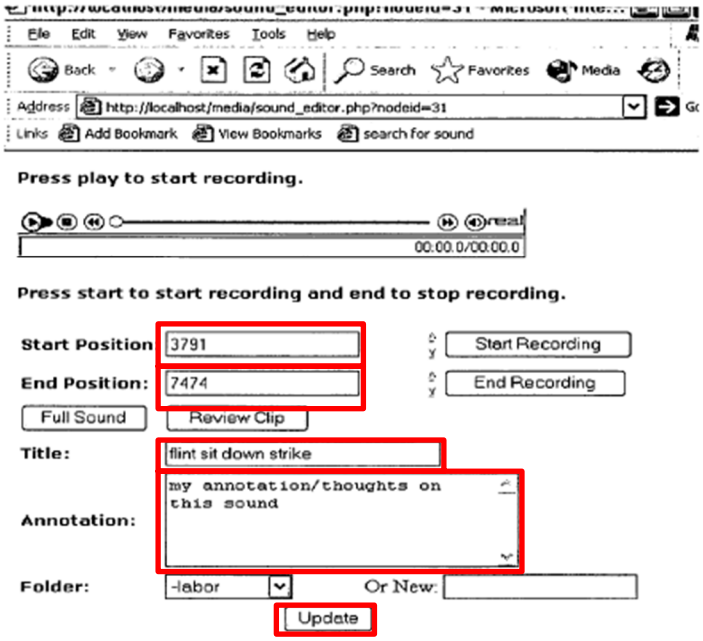
The folder created that appears on the user's portal page along with the annotation. Clicking on the folder shows the annotations in the folder as well as bringing up the controls to edit the settings of the folder (rename it, move it to another folder, delete it, etc...)



Id., Fig. 5 (annotated).

FIGURE 7

by clicking the edit button, a user can edit any of the information for that annotation including re-editing the time-offsets from the source.



Id., FIG. 7 (annotated, showing editable fields and "update" button for saving annotation edits to the server).

Selecting "Update" after editing the text fields shown in Fig. 7 results in a command to edit the annotation being sent from the client computer and received using the computer system's remote server. *Id.*, ¶¶[0081] ("the directory allows a user to select, open, edit, close, or delete the annotative information"), [0083] ("software [] stored on a remote server allows a user to **<u>save and store segment and annotative information</u>** associated with one or more multimedia files"), [0085] (describing users "creat[ing] a multimedia presentation that is stored

entirely on a **remote server**"), [0003] ("the present invention provides a comprehensive server-side system for editing, annotating, managing and presenting multimedia events from a plurality of multimedia sources"), [0009] ("each user has a personal 'portal' hosted on the system" "that allows the user to edit … presentations that include multimedia clips and annotations.").

The computer system receives the command over the network (*e.g.*, Internet). *Id.*, ¶¶[0085] ("additional users in one or more separate and distinct locations **on a computer network**" can "contribute" "segment information" and "annotative information;" "network" includes "**the Internet**"). The client computer is disposed at a client side of the public network, in contrast to a server side of the network where the remote server is located and is therefore also remote from the servers. *Id.*, ¶[0037] (referencing "client-server" model involving "a program at one site send[ing] a request to a program **at another site**"); EX1002, ¶¶169-77.

f. [13.5]

Fegan discloses *modifying a portion of the cue point information* (*e.g.*, editing annotation information) *at the server side of the public network* (*e.g.*, at remote server) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

When the client computer makes changes in the editing interface of Fig. 7 and selects "Update," the edited information is sent over the network to modify the annotation at the remote server. EX1005, ¶¶[0080], [0081] ("FIG. 7 shows a saved annotation that has been opened via the directory for further editing."), [0082]-[0085], Fig. 7; [13.4]; EX1002, ¶¶178-79.

g. [13.6]

Fegan discloses *receiving a cue point selection* (*e.g.*, receiving a selected annotation via a client-generated playlist) over the network from the remote client terminal (*e.g.*, client computer) *identifying one of the cue points corresponding to a portion of the video information of one of the video files* (*e.g.*, selected annotation identifies a video portion).

The remote server "in a server-side environment" "receive[s] playlist selection information … comprising multimedia file identity and multimedia file start and stop points (i.e., designations of the starting and ending points of the multimedia file to be played in a presentation)." EX1005, ¶[0012]. The playlist received from the client computer contains selected annotations to generate a presentation of video clips (*i.e.*, the client selects annotations to create a presentation consisting of multimedia files, from each file's annotated start point to end point). *Id.*, ¶¶[0012], [0007] ("technical tools for carrying out the multimedia

presentation are maintained on the server-side"), [0009] (users can "create complex publications and presentations that include multimedia clips and annotations.").

The cue point selection is received over the network (*e.g.*, Internet) as the client computer connects to the remote server via "computer network (e.g., the Internet)." EX1005, ¶¶[0071], [0008].

Each annotation in the client-generated playlist corresponds to a portion (start and stop point) of video. EX1005, ¶¶[0007], [0008] ("[T]he annotations" and "start and stop points" added by users are "stored and managed on the host network."), [0010], [0012], [0078]; EX1002, ¶¶180-85.

h. [13.7]

Fegan discloses *streaming the portion of the video information to the client terminal* (*e.g.*, streaming the portion of video corresponding to the selected annotation to the client computer) *over the public network* (*e.g.*, Internet) *in response to receiving the cue point selection* (*e.g.*, selected annotation in client-generated playlist received in limitation [13.6]).

The remote server creates a presentation from the playlist it receives from the client computer and streams it to the client. EX1005, ¶¶[0012] ("in a server-side environment" "receive playlist selection information" "comprising multimedia file identity and multimedia file start and stop points" "to be played in a presentation"), [0007] ("application then uses the url/uri and time offsets to play

the portion of the digital object that the user has selected"), [0076] ("selected multimedia file and compatible multimedia player are then displayed in a browser window"), [0082]-[0085], [0010], [0013] ("multimedia files include, but are not limited to, streaming media"), [0033], claim 3; [13.6]; EX1002, ¶¶186-87.

2. <u>Claim 14</u>

Fegan discloses *providing a cue point editing mode as part of the video editing environment* (*e.g.*, providing interface(s) for editing annotations as part of the software executed by remote server and databases) *configured to perform at least one of creating, modifying, deleting, or interpreting at least a portion of the set of cue point information* (*e.g.,* editing annotation information) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

A cue point editing mode is entered when a client computer selects the "Edit" control button for a selected annotation (in Fig. 5) to display the interface of Fig. 7. EX1005, ¶[0081] (Fig. 7 "shows a saved annotation that has been opened via the directory for further editing" allowing user to edit annotation information such as "start position," "end position," "title," and "annotation"); [13.4].

The remote server modifies at least a portion of the annotation information according to the editing command received over the network from the client computer. [13.4]-[13.5]; EX1002, ¶¶188-92.

3. <u>Claim 15</u>

Fegan discloses *receiving an edit mode entry signal* (*e.g.*, signal for entry to the interface(s) for editing annotations; from selecting "Edit" in interface of Figs. 5-6) *over the network from the client terminal* (*e.g.*, from client computer over the network) *representing entry into the cue point edit mode* (*e.g.*, representing entry into the interface(s) for editing annotations) *and switching the video editing environment to the cue point editing mode in response to receiving the edit mode entry signal* (switching the software executed by remote server and databases to display the interface(s) for editing annotations; Fig. 7 interface). EX1005, ¶¶[0081] ("FIG. 5 shows a browser window displaying a user-created directory of annotative information associated with multimedia files … the directory allows a user to select, open, edit, close, or delete the annotative information associated with a multimedia file."), [0044] ("client-server protocol used for the exchange of information (such as HTML documents, and client requests for such documents) between a browser and a Web server"), Figs. 5-7; [13.4], claim 14; EX1002, ¶¶193-99.

4. <u>Claim 18</u>

Fegan discloses *receiving, over the network, authentication information* (*e.g.*, information concerning user's identity) *relating to access authority of the*

remote client terminal (*e.g.*, concerning which "personal portal" client computer can access).

Authentication information is received over the network as "each user has a **personal** 'portal' hosted on the system" and the client provides user identity information to the remote server to control access such as editing. EX1005, ¶¶[0009] (personal portal "allows the user to edit and organize collected materials to create complex publications and presentations"), [0081] ("After a user designates a location for storage and retrieval of the annotative information, the information appears on the user's **personal** portal page."), [0050] (describing security protocol that "locks out one or more functions of a processor until an appropriate password is entered"); EX1002, ¶¶200-03.

5. Claim 19

Fegan discloses *denying or allowing access to all or part of the video editing environment* (*e.g.*, denying client computer access to part of the software executed by servers 10-13 and stores 17-18; denying access to edit annotations on another user's "personal portal") *based at least in part on the access authority of the remote client terminal* (*e.g.*, as "each user has a **personal** 'portal' hosted on the system" and users are denied full access to a "portal" that is not their own). EX1005, ¶¶[0009], [0081] ("After a user designates a location for storage and

retrieval of the annotative information, the information appears on the user's personal portal page."); claim 18; EX1002, ¶¶204-06.

6. Claim 20

Fegan discloses *server video data is streamed progressively to a video playback environment* (*e.g.*, streaming video progressively to web browser) *at the remote client terminal* (*e.g.*, client computer), *allowing the video player* (*e.g.*, video player in client computer's web browser) *to begin displaying streamed server video data while remaining server video data continues to be streamed* (*e.g.*, the client computer renders streamed video as it is received). EX1005, ¶¶[0013] ("multimedia files include … streaming media"), [0007], [0033], [0037] ("client is a "Web browser" (or simply 'browser') that runs on a computer"), [0057]; [13.7]; EX1002, ¶¶207-09.

E. Ground 3: Claims 13-15 and 18-20 are Obvious over Kim

1. Claim 13

a. [13.P]

To the extent the preamble is limiting, Kim discloses *a method for handling* (*e.g.*, "creating," "displaying," "selecting") *video cue points* (*e.g.*, "multimedia bookmark" or "Vmark" for video). EX1006, Abstract, ¶¶[0012], [0207], claims 6, 12.

Kim describes a client-server architecture with "a web host comprising storage for messages … a media host comprising storage for audiovisual (AV) files, and a streaming server … [and] a communication network connecting the web host, the media host and the client … [and] at a first client, making a Vmark indicative of a bookmarked position in an AV program … and playing the program at the second client from the bookmarked position."). *Id.*, Abstract.

Kim's "multimedia bookmark stores the relative time or byte position from the beginning of an AV file along with the file name, and URI" and is used to "allow[] a user to access the content at a later time from the position of the multimedia file that the user or any other people have specified." *Id.* ¶¶[0112], [0207]. Kim's multimedia bookmarks are cue points, which the '286 patent describes as "indexed time positions or tags anywhere within a video file" and may include "meta-tags" that "describe the information in the video file." EX1001, 7:50-52, 8:15-20; EX1002, ¶¶212-19.

b. [13.1]

Kim discloses *providing a computer system* (*e.g.*, servers and storage devices at a server side of a public network, including web host 210 and media host 220). EX1006, ¶[0206], Abstract.

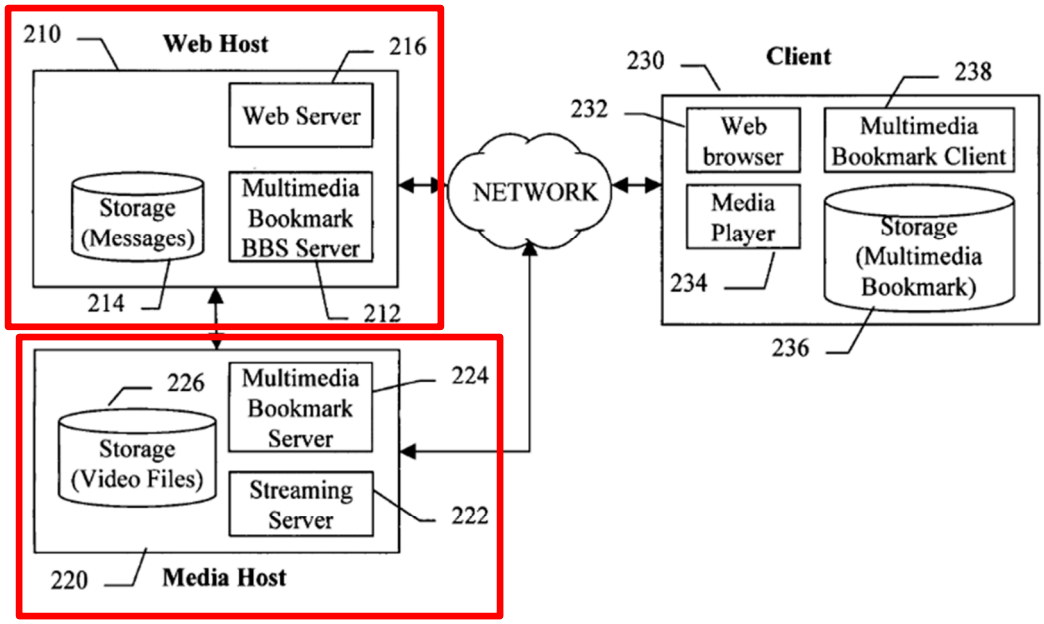


FIG. 2

Id., Fig. 2 (annotated).

The computer system *having at least one computer-readable medium* (*e.g.*, server memory/storage). The servers of web host 210 and media host 220 have memory/storage for storing messages and video files and for executing software to enable the requisite program modules to run. *Id.*, ¶[0326] (describing "multimedia bookmark server 224" as "**running** at media host 220 in FIG. 2"), claim 9, Fig. 1; EX1002, ¶222.

The at least one computer-readable medium *comprising a video editing environment* (*e.g.*, software for both editing bookmarks and streaming video,

executed by web host 210 and media host 220). Multimedia bookmark BBS server 212 executes software for editing bookmarks. EX1006, ¶¶[0288] ("The multimedia bookmark … can be uploaded to multimedia bookmark BBS server 212 of web host 210 and then stored at storage 214"), [0286] ("The multimedia bookmark image … might be obtained by bookmark server 224 of media host 220 and then delivered to multimedia bookmark client 238 of client 230."), [0335] ("The administrator can edit video title or allowable playing duration in information field 1836"). Streaming server 222 executes software for streaming video. *Id.*, ¶¶[0284] ("Media host 220 stores the videos in its local storage 226, and provides them to client 230 when they are requested"), [0289] ("Streaming server 222 is responsible for the request from client 230 to play a video.").

The computer system *being disposed at a server-side of a public network* (*e.g.*, Internet), in contrast to a client side of the network 16 where client 230 is located. *Id.*, ¶¶[0283] ("The web host 210, media host 220 and client 230 are connected by a conventional communication network ('NETWORK')."), [0111] ("Audiovisual (AV) contents are increasingly populated in the **Internet**"), [0264], [0297] ("multimedia bookmark client" "is usually embedded in an **Internet web browser**"), [0349] ("The prior art assumes an environment where videos or video streams are archived at separate sites **connected to the Internet such as media**

host 220 of FIG. 2"), Fig. 2 (showing **web** host 210, **web** server 216, and **web** browser 232); EX1002, ¶¶220-28.

c. [13.2]

Kim discloses *receiving a set of video information* (*e.g.*, receiving a collection of information concerning videos) *at the video editing environment using the computer system* (*e.g.*, at the software for streaming video using web host 210 and media host 220) in multiple ways.

First, Kim describes that streaming server 222 receives videos from storage 226 to stream video data to the client. *Id.* ¶¶[0284] ("Media host 220 stores the videos in its local storage 226, and provides them to client 230 … [C]lient 230 receives the video streamed by streaming server 222 of media host 220."), [0289], [0211].

Second, Kim describes that to make multimedia bookmarks for "DRM packaged video [] stored at storage 2022[,] the packaged videos are accessed by streaming server 2020 and multimedia bookmark server 2024." EX1006, ¶[0344], Fig. 20A.

The set of video information is received at the video editing environment using the computer system because videos are received by the software executed by streaming server 222/2020 such as when retrieving video to stream to client

230. *Id.*, ¶¶[0284], [0275], [0289] ("Streaming server 222 is responsible for the request from client 230 to play a video."); EX1002, ¶¶229-33.

d. [13.3]

Kim discloses *receiving a set of cue point information* (*e.g.*, collection of information concerning multimedia bookmarks) *at the video editing environment using the computer system* (*e.g.*, at the software for editing bookmarks using web host 210 and media host 220) in multiple ways. EX1006, ¶[0012] ("The multimedia bookmark stores the relative time or byte position from the beginning of an AV file along with the file name, and URI").

First, multimedia bookmark BBS server 212 receives a multimedia bookmark created locally at client 230. *Id.*, ¶¶[0288] ("multimedia bookmark … uploaded to multimedia bookmark BBS server 212 of web host 210 and then stored at storage 214 of the web host."), [0205] ("posting and retrieving a multimedia bookmark conveniently to and from the multimedia bookmark BBS."), [0208].

Second, multimedia bookmark BBS server 212 receives a multimedia bookmark from storage for viewing by client 230. *Id.*, ¶¶[0290] ("message list window 300 of the multimedia bookmark BBS … includes multimedia bookmark of the message 310 for each message."), [0288] ("multimedia bookmark … stored at storage 214 of the web host so that other users can share the multimedia bookmark."), [0299], Fig. 3.

The set of cue point information is received at the video editing environment using the computer system because multimedia bookmark information is received by the software executed by multimedia bookmark BBS server 212 such as when receiving a new bookmark from client 230 or retrieving a bookmark for client 230 to edit. *Id.*, ¶¶[0208] ("storing the transferred multimedia bookmark into the storage of the multimedia bookmark BBS server"), [0288], [0299], [0315] ("the modified message is stored into the database of the multimedia bookmark BBS server."); EX1002, ¶¶234-38.

e. [13.4]

Kim discloses *receiving a cue point editing command* (*e.g.*, command to edit a bookmark after clicking "save" button 1850 in Kim's interface of Fig. 18C or selecting "add-bookmark-title" control button 922 in Sull's interface of Fig. 9) *over the network* (*e.g.*, Internet) *from a remote client terminal disposed at the client side of the public network* (*e.g.*, client 230) *using the computer system* (*e.g.*, web host 210, media host 220, and their servers and storages) in multiple ways.

First, to edit a bookmark, an administrator enters an edit mode by selecting advertising multimedia bookmarks in the interface of Fig. 18A and clicking save button 1822 to view selected bookmarks' information and "**edit** video title or allowable playing duration in information field 1836" using the interface of Fig. 18B. *Id.*, ¶¶[0335], [0334]. The administrator can "click[] on **save button 1838**,"

verify the edits in the interface of Fig. 18C, and "click[] the **<u>save button 1850</u>**" resulting in a command to edit the bookmark being sent and received using the computer system's multimedia bookmark BBS server 212. *Id.*, ¶¶[0335] ("advertising multimedia bookmarks are stored on database"), [0336], [0314] (bookmarks posted to the BBS server by clients), [0299], [0315] ("modified message is stored into the database of the multimedia bookmark BBS server"); EX1002, ¶¶239-44.

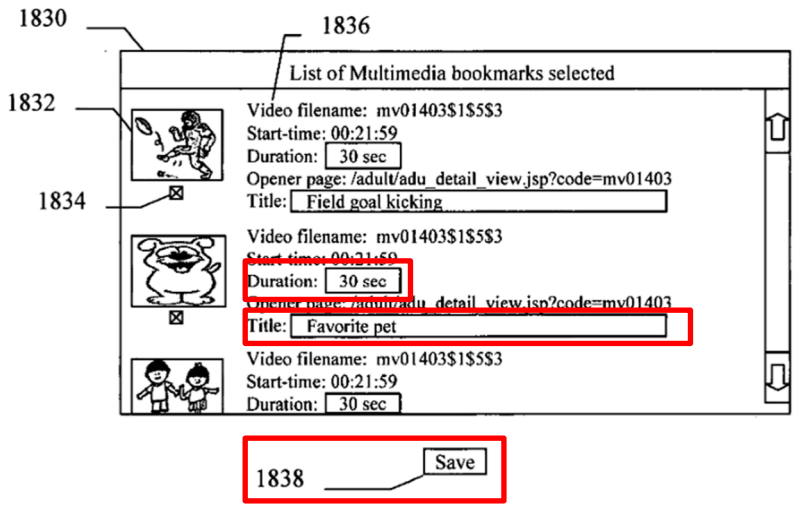


FIG. 18B

Id., Fig. 18B (annotated, showing "save" button and editable fields).

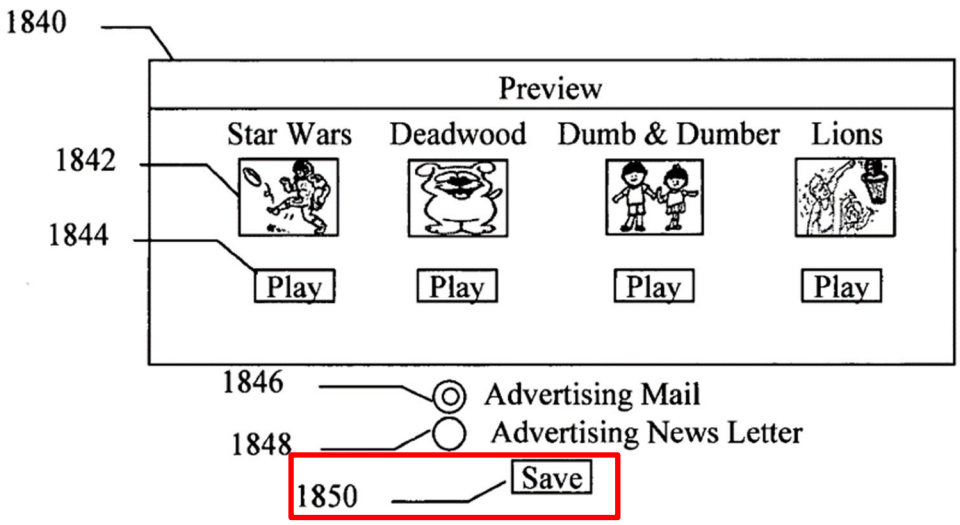


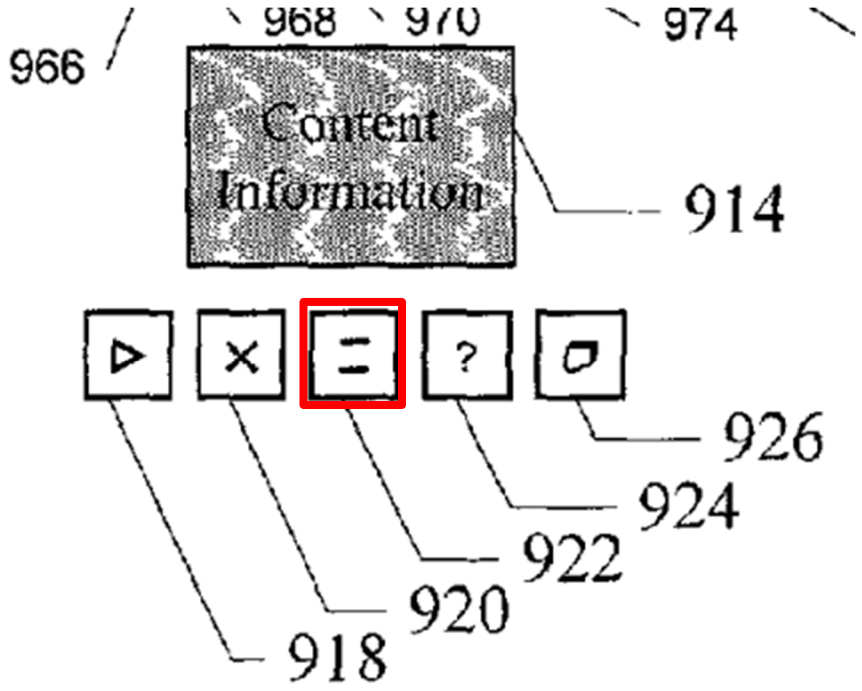
FIG. 18C

Id., Fig. 18C (annotated, showing "save" button for sending editing commands to BBS server).

Second, Kim incorporates Sull by reference,[6] which describes a client-server architecture for multimedia bookmarks. EX1007, ¶¶[0055]; [0051] ("the system includes a multimedia bookmark … having content information about the segment"), [0174]. To edit an existing bookmark, a user enters an edit mode by viewing "bookmark list 916, [where] the saved bookmark is visually displayed with its content information" and selecting the "add-bookmark-title control button 922" "to input a title of bookmark" and thereby edit the title of a bookmark

[6] Sull (EX1007) is a U.S. patent application published on June 6, 2002, which Kim claims priority to and incorporates by reference. EX1006, ¶¶[0001], [0004].

(replacing a "default title"). *Id.*, ¶¶[0205]-[0206], Fig. 9; *see also* "add-bookmark-title control button 122" of Kim's Fig. 1. The user is "prompted to enter a title" and enters a new title, resulting in a command to edit the bookmark being sent to the computer system's server. EX1007, ¶[0213] (new title is saved and bookmarks are "redisplayed with their content information, including the titles"), Fig. 14; EX1002, ¶¶245-51.



Id., Fig. 9 (excerpted and annotated, showing "add-bookmark-title" button for a bookmark).

To the extent Kim does not explicitly disclose receiving the editing command from a remote client terminal, a POSITA would have found it obvious from Kim's (and Sull's) teachings to use client 230 to send the editing command.

A POSITA would have looked at Kim's and Sull's client-server architecture and understood that adding and managing bookmarks is the function of client 230. EX1006, ¶¶[0275], [0277], Figs. 1-2; EX1007, ¶[0055]. Therefore, a POSITA would have found it obvious to place bookmark editing functionality at client 230 as editing bookmarks is similar to functions already handled by client 230. EX1002, ¶252. Further, a POSITA would have appreciated that it was commonplace in bulletin board systems during Kim's timeframe to have administrators be system clients with additional administrative privileges as compared to other clients. Therefore, a POSITA would have found it obvious that the administrator in Kim could use client 230 to send editing commands. EX1002, ¶¶239-53.

f. [13.5]

Kim discloses *modifying a portion of the cue point information* (*e.g.*, editing multimedia bookmark information) *at the server side of the public network* (*e.g.*, at multimedia bookmark BBS server 212) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

When client 230 edits a bookmark's video title and duration or edits a bookmark's title, the edited information is sent over the network to modify the bookmark at multimedia bookmark BBS server 212. EX1006, ¶¶[0336] ("And

then, **by clicking the save button 1850** … the advertising multimedia bookmarks are **stored on database**.”), [0299], [0315] (“When multimedia bookmark message 1004 is transferred to multimedia bookmark BBS server 1014 … **the modified message is stored into the database** of the multimedia bookmark BBS server.”); EX1007, ¶¶[0213] (“user will be prompted to enter a title in step 1402 for the saved multimedia bookmark … list of multimedia bookmarks is redisplayed with their content information, including the titles and bookmark controls.”), [0262]-[0263], Fig. 14; [13.4]; EX1002, ¶¶254-56.

g. [13.6]

Kim discloses *receiving a cue point selection* (*e.g.*, receiving a selected bookmark via play-bookmark control button 118 or play control button 612) *over the network from the remote client terminal* (*e.g.*, from client 230 over the Internet) *identifying one of the cue points corresponding to a portion of the video information of one of the video files* (*e.g.*, selected multimedia bookmark identifies a video portion) in many ways.

First, Kim describes a user interface having a bookmark list 116 for a video where “in the bookmark list 116, the saved bookmark is visually displayed with its content information.” EX1006, ¶[0275]. Under each bookmark is a set of controls, including “play-bookmark control button 118”, which client 230 selects

to "play[] a bookmarked multimedia content from a saved bookmarked position." *Id.*, ¶[0276].

Second, Kim's Fig. 3 shows a "message list window 300 … [that] includes multimedia bookmark of the message 310 for each message" from which client 230 can "easily identify a message in which they are interested." *Id.*, ¶[0290]. Client 230 selects a bookmark and "message window 600 [] is displayed" with a "play control button 612" which client 230 can select to "watch the video from the bookmarked position." *Id.*, ¶[0295].

The cue point selection is received over the network (*e.g.*, Internet) as client 230 sends a bookmark selection to the server over the network. *Id.*, ¶¶[0289] ("Streaming server 222 is responsible for the request from client 230 to play a video."), [0283] ("The web host 210, media host 220 and client 230 are connected by a conventional communication network ("NETWORK")."), [0349].

Each bookmark corresponds to a portion (start time and duration) of video. *Id.*, ¶¶[0287], [0293], [0314] ("FIG. 10 illustrates an exemplary structure of the multimedia bookmark message … includ[ing] multimedia bookmark information such as video URI, title page URI, **start time, duration**, and multimedia bookmark image data 1010."), [0316]-[0319]; EX1002, ¶¶257-62.

h. [13.7]

Kim discloses *streaming the portion of the video information to the client terminal* (*e.g.*, streaming the portion of the video corresponding to the selected bookmark to client 230) *over the public network* (*e.g.*, Internet) *in response to receiving the cue point selection* (*e.g.*, selected bookmark via play-bookmark control button 118 or play control button 612 received in limitation [13.6]).

When client 230 selects a bookmark to playback, video streaming begins from the start point and for the duration indicated by the bookmark. EX1006, ¶¶[0289] ("**Streaming** server 222 is responsible for the request from client 230 to play a video."), [0295] ("By selecting the play control button 612, the user can watch the video from the bookmarked position."), [0284] ("The selection process requests the video to be serviced to media host 220, and client 230 receives the video **streamed by streaming server 222** of media host 220 and displays the video on media player 234."), [0318]-[0319] ("Within the player window, the video starts to play from the bookmarked position of the multimedia bookmark information"); [13.6]; EX1002, ¶¶263-65.

2. Claim 14

Kim discloses *providing a cue point editing mode as part of the video editing environment* (*e.g.*, providing interface(s) for editing bookmarks as part of the software executed by web host 210 and media host 220) *configured to perform*

at least one of creating, modifying, deleting, or interpreting at least a portion of the set of cue point information (*e.g.,* editing multimedia bookmark) *according to the cue point editing command received over the public network from the client terminal* (*e.g.,* command received in limitation [13.4]) in many ways.

First, a cue point editing mode is entered when an administrator at client 230 selects advertising bookmarks to edit and "click[s] on save button 1822" (in Fig. 18A) to display "a GUI screen" interface of Fig. 18B to "edit video title or allowable playing duration in information field 1836." EX1006, ¶¶[0334]-[0336]; [13.4].

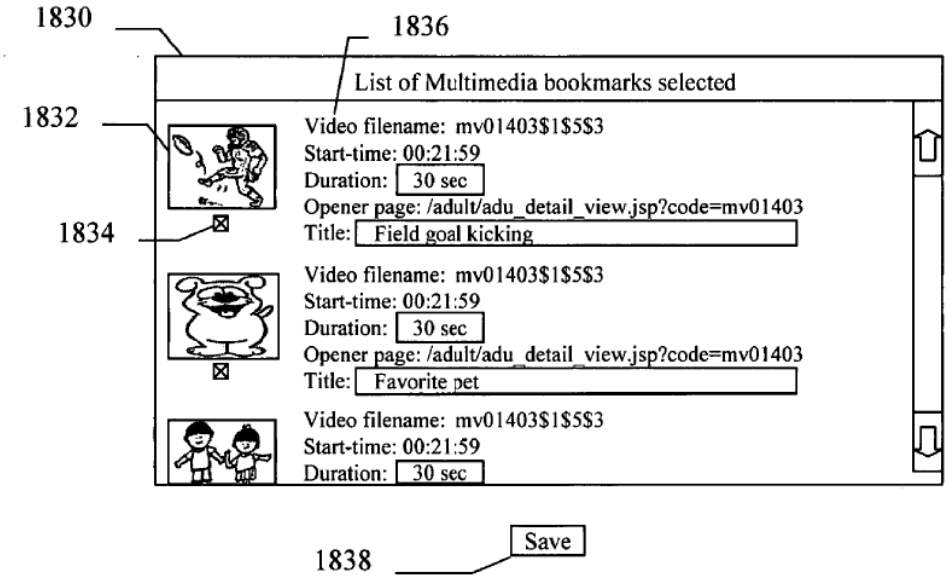
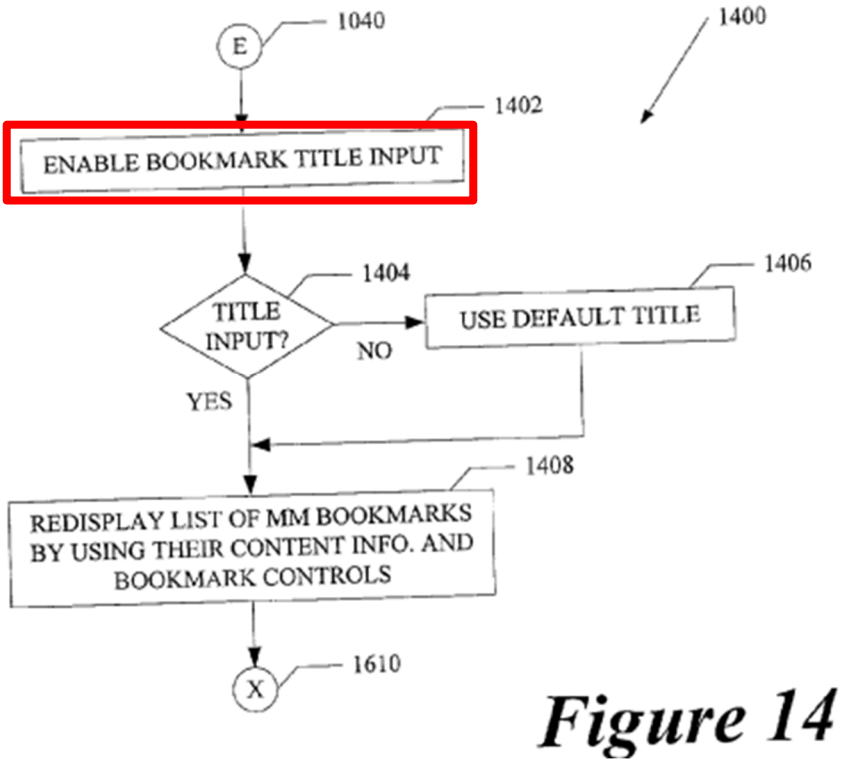


FIG. 18B

EX1006, Fig. 18B.

Second, Sull describes entering a cue point editing mode when client 230 selects "add-bookmark-title control button 922" to display an interface where the "user will be prompted to enter a title" to edit the bookmark. EX1007, ¶[0213], [0206], Fig. 14; [13.4].



EX1007, Fig. 14 (annotated).

Multimedia bookmark BBS server 212 modifies at least a portion of the bookmark information according to the editing command received over the Internet from client 230. EX1006, ¶¶[0335]-[0336]; EX1007, ¶¶[0205]-[0206], [0213]; [13.4]-[13.5]; EX1002, ¶¶266-71.

3. <u>Claim 15</u>

Kim discloses *receiving an edit mode entry signal* (*e.g.*, signal for entry to the interface(s) for editing bookmarks; from selecting bookmark to edit by clicking on Kim's save button 1822 or Sull's add-bookmark-title control button 922) *over the network from the client terminal* (*e.g.*, from client 230 over the Internet) *representing entry into the cue point edit mode* (*e.g.*, representing entry into the interface(s) for editing bookmarks) *and switching the video editing environment to the cue point editing mode in response to receiving the edit mode entry signal* (*e.g.*, switching the software executed by web host 210 and media host 220 to display interface(s) for editing bookmarks; Kim's Fig. 18B interface or Sull's Fig. 14 interface). EX1006, [0334]-[0336] (interface(s) for editing a bookmark's video title or allowable playing duration); EX1007, ¶[0206] ("The add-bookmark-title control button 922 is used to input a title of bookmark given by a user."), [0213] (interface(s) for editing a bookmark's title); [13.4], claim 14. A POSITA would have understood that this change from one interface to another would be based on a request (*e.g.*, HTTP request) from client 230 to the web server. EX1002, ¶¶272-78.

4. <u>Claim 18</u>

Kim discloses *receiving, over the network, authentication information* (*e.g.*, "information on the user" for retrieving user's DRM license key) *relating to access*

authority of the remote client terminal (*e.g.*, concerning whether client 230 can access DRM packaged video).

Bookmark server 2024 receives the authentication information ("information on the user") over the network interconnecting bookmark server 2024 and the client and uses that information to retrieve the user's license key from database 2014 to access DRM packaged video. EX1006, ¶¶[0343]-[0345] (To make a multimedia bookmark "the client requests **remote multimedia bookmark server 2024 to capture** a multimedia bookmark image from the video **with information on the user** … multimedia bookmark server 2024 negotiates with license server 2016 … and requests license server 2016 to **retrieve a license key of the user** from database 2014."), Fig. 20A; EX1002, ¶¶279-81.

5. Claim 19

Kim discloses *denying or allowing access to all or part of the video editing environment* (*e.g.*, denying client 230 access to part of the software executed by web host 210 and media host 220; denying access to bookmark DRM packaged video) *based at least in part on the access authority of the remote client terminal* (*e.g.*, only client with the proper license keys may add/edit bookmarks for DRM packaged video).

"When a user … makes a multimedia bookmark while playing a video [packaged with DRM] … **before** capturing the multimedia bookmark image from

the video, multimedia bookmark server 2024 negotiates with license server 2016 … and requests license server 2016 to **retrieve a license key of the user from database 2014**. The license server will then **return the license key of the user** to the multimedia bookmark server **if it exists**." EX1006, ¶[0345]. A POSITA would have understood that because the license key is required to capture the multimedia bookmark image, the multimedia bookmark server would deny access to all or part of the video editing environment if client 230 lacks a license key (*i.e.*, the purpose of DRM protection is to deny access to clients without the proper license key). *Id.*, ¶[0343]; claim 18; EX1002, ¶¶282-86

6. Claim 20

Kim discloses *server video data is streamed progressively to a video playback environment* (*e.g.*, streaming video progressively to playback area 112) *at the remote client terminal* (*e.g.*, client 230), *allowing the video player* (*e.g.*, multimedia player 104) *to begin displaying streamed server video data while remaining server video data continues to be streamed* (*e.g.*, client 230 renders streamed video data as it is received from streaming server 222). EX1006, ¶¶[0275] ("The user interface of the player window 102 is composed of a playback area 112 … includ[ing] a multimedia player 104."); [0319] ("When the decision to play a bookmark is made … the player window such as a multimedia bookmark player 102 of Fig. 1 is opened …. Within the player window, the video starts to

play from the bookmarked position of the multimedia bookmark information"), [0284] ("client 230 receives the video **streamed by streaming server 222** of media host 220 and displays the video on media player 234."); [13.7]; EX1002, ¶¶287-89.

F. Ground 4: Claims 13-15 and 18-20 are Obvious over Kim and Gupta

1. Claim 13

As explained above in Ground 3, Kim renders obvious all limitations of claim 13.

a. [13.4]

To the extent Kim does not explicitly disclose or render obvious *receiving a cue point editing command over the network from a remote client terminal*, Gupta discloses this aspect. Gupta discloses its client 15 "selecting a particular annotation identifier," which causes "a selection box or menu 466 [to be] provided" (EX1004, ¶[0126]) where "[s]election box 466 provides various **user-selectable** features related to the annotation whose identifier is selected, including … '**edit**'" (*id.*, ¶[0127]). *Id.*, ¶¶[0124]-[0128]. An "**[e]dit annotation** dialog box 590 is displayed" and "**[n]ew information** can be entered into the fields, analogous to add annotation dialog box 330 of FIG. 8." *Id.*, ¶¶[0144], [0100] ("annotation backend 151 [] **sends the new annotation information to annotation server**

10”), [0032], [0034] (“client computer 15 contacts the annotation server 10 to perform the desired **addition**/retrieval.””); Section VI.D.1.e ([13.4]).

A POSITA would have been motivated to implement in Kim’s client 230 the client-side editing functionality disclosed by Gupta and would have appreciated that providing the editing functionality on the client would have offered system users better flexibility by not requiring them to be physically present at the server. A POSITA would have had a reasonable expectation of success with such a combination because (i) Kim and Gupta are drawn to similar systems of adding bookmarks/annotations to portions of video (*compare, e.g.,* EX1004, Abstract, ¶¶[0003], [0006]-[0007] *with* EX1006, Abstract, ¶¶[0205]-[0209]) and (ii) it would have been a simple matter of programming web host 210 and client 230 such that web host 210 receives editing commands from client 230 to enter the existing “editing mode” described by Kim. Such a modification would have been simple and straightforward because Kim already discloses interfaces for an administrator to use to edit bookmarks as well as interfaces for client 230 to use to add bookmarks. EX1006, Figs. 3-6, 18A-18C; EX1002, ¶¶290-93.

2. Claims 14-15 and 18-20

As discussed above in limitation [13.4] and in Ground 3, Kim as modified by Gupta discloses or renders obvious claims 14-15 and 18-20. EX1002, ¶¶294-303.

G. Ground 5: Claims 13-15 and 18-20 are Obvious Over Vasilevsky and Logan

1. <u>Claim 13</u>

a. [13.P]

To the extent the preamble is limiting, Vasilevsky discloses *a method for handling* (*e.g.*, "establish[ing]", "show[ing]", "edit[ing]") *video cue points* ("bookmarks" for recorded television programs (videos)). EX1008, Abstract, claim 4.

Vasilevsky describes a "centralized Digital Video Recording (DVR) and reproduction system" with "centralized media server" that "allows system users … to pause and resume the same programs from the same marker points ('bookmarks') established by any system user." *Id.*, Abstract, claim 4.

Vasilevsky's bookmarks are "electronic marker[s] … placed in memory indicating exactly where the program was paused, along with other particulars such as the identity of the user, and that date and time of the bookmark." *Id.*, 19:13-16. Vasilevsky's bookmarks are cue points, which the '286 patent describes as "indexed time positions or tags anywhere within a video file" and may include "meta-tags" that "describe the information in the video file." EX1001, 7:50-52, 8:15-20; EX1002, ¶¶308-14.

b. [13.1]

Vasilevsky discloses *providing a computer system* (*e.g.*, servers and storage devices at a server side of a public network, including centralized media server, comprising at least Video Decoder 120, Graphics Blender 122, Application Unit 134, Virtual Frame Buffer 136, Application Services Unit 152, and Video Manager 116 and storages Memory 118 and Bookmark Database 162). EX1008, Abstract ("a **centralized media server** [] allows system users (124, 128, 132) to … pause and resume the same programs from the same marker points ('bookmarks')"), 10:11-11:8, 20:11-12 ("[T]he **components 120, 122, 134, 136 and 152 are part of the centralized media server**").

The computer system *having at least one computer-readable medium* (*e.g.*, server memory and hard drives). Bookmark database 162 stores bookmarks and memory 118 stores videos. *Id.*, 19:16-20, 14:3-7 ("memory 118 is a high-capacity hard disk drive … other forms of memory systems are compatible"). Vasilevsky describes keeping processor and memory at the server-side such that the "centralized media server" runs software that "serve[s] 'thin' clients." *Id.*, 20:11-17 ("today's processor and memory prices dictate that the aforementioned components are better incorporated in the centralized media server"), 15:15-20.

The at least one computer-readable medium *comprising a video editing environment* (*e.g.*, software for both editing bookmarks and streaming video,

executed by the centralized media server and storages). *Id.*, Fig. 1, 20:11-17. The centralized media server executes software for editing bookmarks and streaming video. *Id.*, Abstract ("centralized media server (152) allows system users (124, 128, 132)" to "establish[]" and "access" "bookmarks"), 19:16-18 ("Application Unit 134 causes the bookmark to be stored in bookmark database 162"), claim 5 ("**media server is adapted to enable** a particular program **bookmark to be edited**"), claim 11 ("wherein said **bookmark indicia are modifiable by a user**"), 7:13-17 ("The media server is further adapted to allow a user to … **resume reproduction of the program from the program bookmark**.").

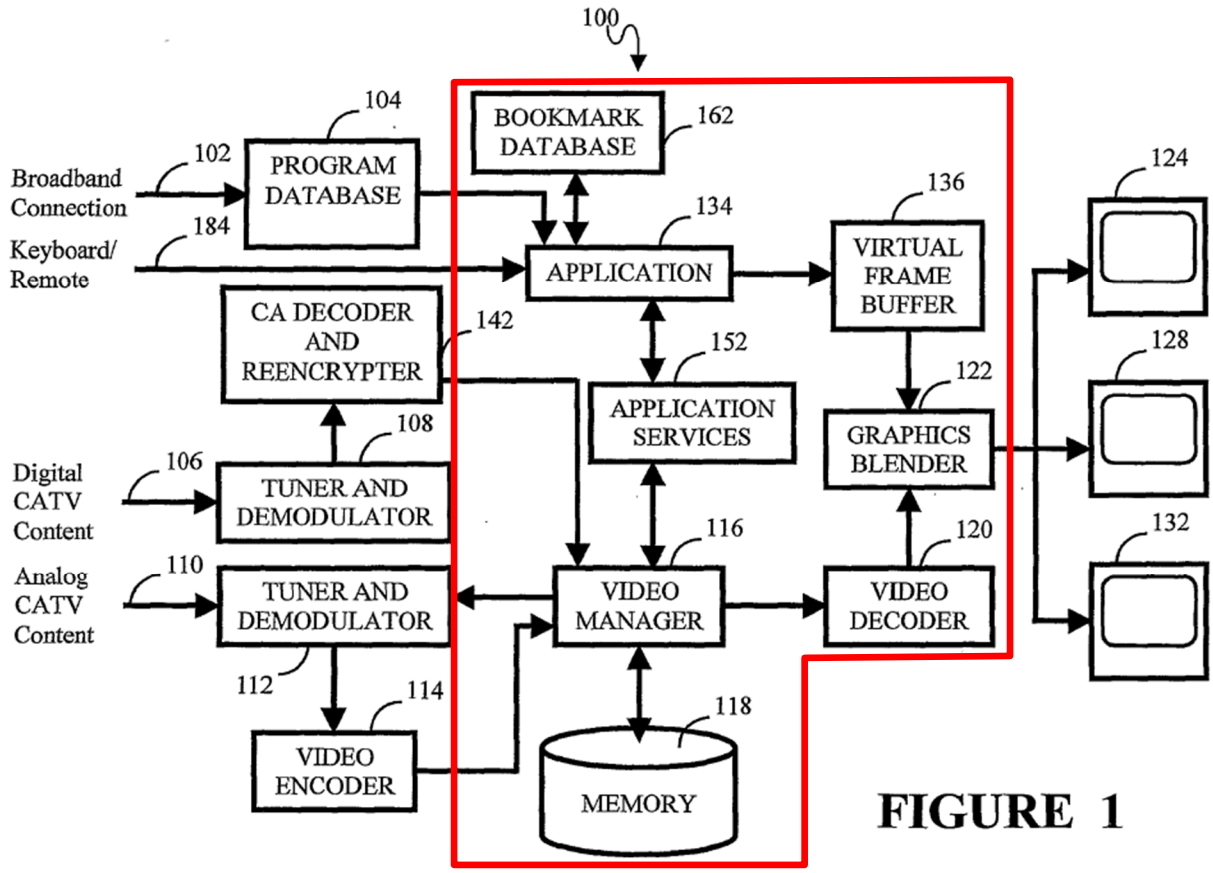


FIGURE 1

Id., Fig. 1 (annotated).

The computer system *being disposed at the server side of a public network* (*e.g.*, [home area network] HAN/Internet), in contrast to a client side of HAN where client 124 is located. *Id.*, Fig. 1, Abstract, 11:9-10, 16:6-12 ("media server … is a centrally located means for storing multiple programs that are readily and contemporaneously accessible by, and readily and contemporaneously controlled by multiple local client devices via a HAN").

To the extent Vasilevsky does not explicitly disclose its network (HAN) is a "public" network, Logan discloses this aspect. Logan discloses a television program bookmarking system using a public network (Internet). EX1009, [0062] ("creation and use of metadata for describing and manipulating programming content of … **<u>television broadcast stations</u>**"), [0223] ("one user could **<u>bookmark</u>** … **<u>a segment of a program</u>**, associate a recommendation or comment with the bookmarked content"), [0224], [0015] ("program segments may be … **<u>Internet</u>** programs"), [0016] ("The communication link used to transmit the metadata to the client may take one of several forms, including **<u>the Internet</u>**"), [0050] ("The communication methods or apparatus used to transport metadata and/or content to the user as illustrated at 130 may take many different forms, including: the **<u>Internet</u>**"), Abstract.

A POSITA would have been motivated to modify Vasilevsky's network (HAN) to be a public network (Internet) as disclosed by Logan. Logan discloses the desirability of implementing its bookmarking system over a public network such as the Internet (EX1009, ¶[0050]) "to permit the public (other viewers) to contribute" to the system (*id.*, ¶[0308]). A POSITA would have recognized that implementing Vasilevsky's system on a public network, as taught by Logan would have beneficially allowed more users in a broader public network to participate in the system to add, modify, and playback video bookmarks. EX1002, ¶¶315-23. A POSITA would have had a reasonable expectation of success with such a combination because (i) Vasilevsky and Logan are drawn to similar systems of adding bookmarks to television programming (*compare, e.g.,* EX1008, Abstract, ¶¶19:12-20:10 *with* EX1009, Abstract, ¶¶[0177]-[0178], [0223]-[0224]) and (ii) it would have been a simple and straightforward modification of substituting one network type with another (*i.e.*, substituting a private network with a public network) to obtain predictable results (*i.e.*, it would not affect the function of Vasilevsky's system). EX1012, ¶[0032]; EX1002, ¶324. It would have at least been "obvious to try" a public network because it involved choosing from a finite number of identified, predictable solutions with a reasonable expectation of success (*i.e.*, the only types of networks to choose from are private or public). Moreover, Vasilevsky's system is already connected to a public network (WAN),

further motivating such modification. EX1008, 12:8-10 ("the program database 104 obtains programming information via a broadband or **wide area network (WAN) connection 102 to a host computer** (not shown)."). EX1002, ¶325. A POSITA would have recognized the difficulties and costs associated with creating and maintaining numerous, private in-home servers and would have recognized the efficiencies and cost-savings in placing Vasilevsky's system on a public network (Internet) with a single centralized server. EX1002, ¶326.

c. [13.2]

Vasilevsky discloses *receiving a set of video information* (*e.g.*, receiving a collection of information concerning video recordings) *at the video editing environment using the computer system* (*e.g.*, at the software for streaming video using the centralized media server and storages).

Vasilevsky describes "a media server for **receiving and storing multiple electronic audio-visual programs**." EX1008, 10:14-17, 11:1-2 ("media server acts as a centralized Digital Video Recorder and Playback device for all receivers connected to the HAN."), 13:19-20 ("television signals and other program signals are stored in memory 118").

The set of video information is received at the video editing environment using the computer system as video recordings are received by the software executed by Application Unit 134, Video Manager 116, and Memory 118 such as

when retrieving video to stream to client 124. *Id.* 15:15-16:5 ("The Application Services Unit 152 controls the recording and playback of programs."), 14:5-7 ("[T]he **reading** of program content information from memory are **controlled by a video manager 116**."), 13:19-14:1 ("television signals and other program signals are stored in memory 118"), 21:1-8.

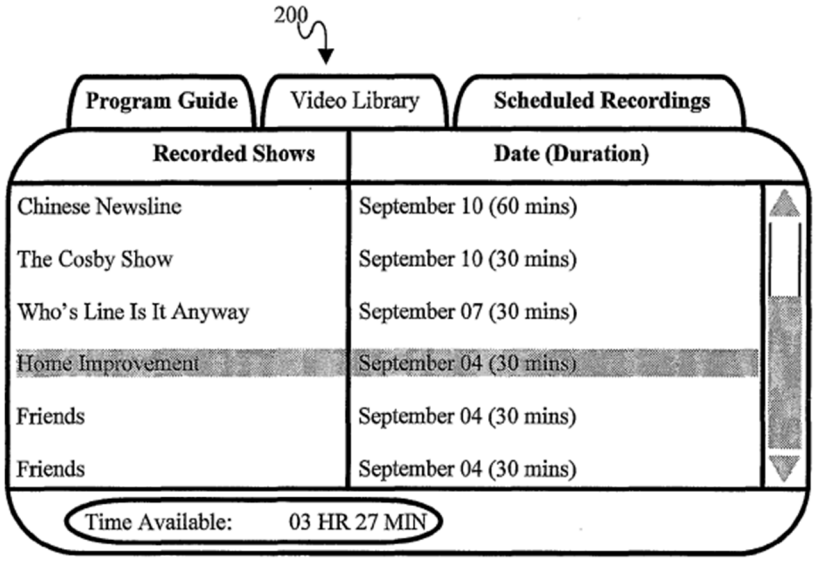


FIGURE 2

EX1008, Fig. 2 (showing previously stored programs on the centralized media server); EX1002, ¶¶327-29.

d. [13.3]

Vasilevsky discloses *receiving a set of cue point information* (*e.g.*, receiving a collection of information concerning bookmarks) *at the video editing environment using the computer system* (*e.g.*, at the software for editing bookmarks using the centralized media server and storages) in multiple ways. EX1008, 19:13-

16 ("bookmark" "is[] an electronic marker … placed in memory indicating exactly where the program was paused").

First, "[t]he media server is further adapted to allow a user" of a client "reproduction device [to] place a program bookmark in a program representing a point in the program where reproduction has stopped." EX1008, 7:14-16, 8:7-9.

Second, "[w]hen a system user pauses the playback of a particular program, he or she can decide whether to 'bookmark' the program" by placing "an electronic marker" "in memory" and "[w]hen a command is received to enter a bookmark, **<u>the Application Unit 134 causes the bookmark to be stored in a bookmark database 162</u>**." *Id.*, 19:12-20, 22:8-15 ("A system user can enter or modify all of the [bookmark] information").

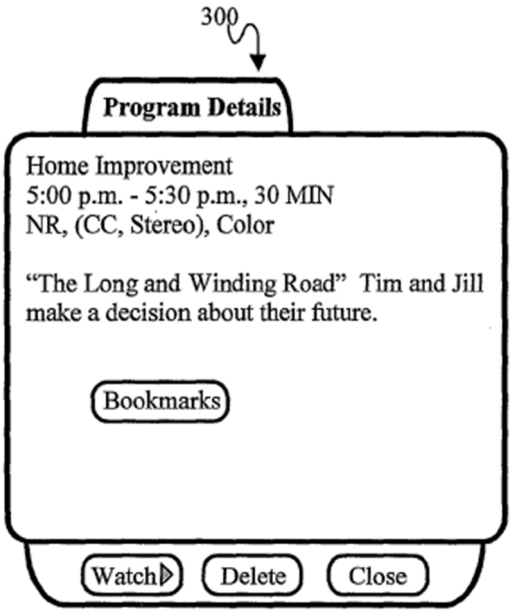


FIGURE 3

Id., Fig. 3.

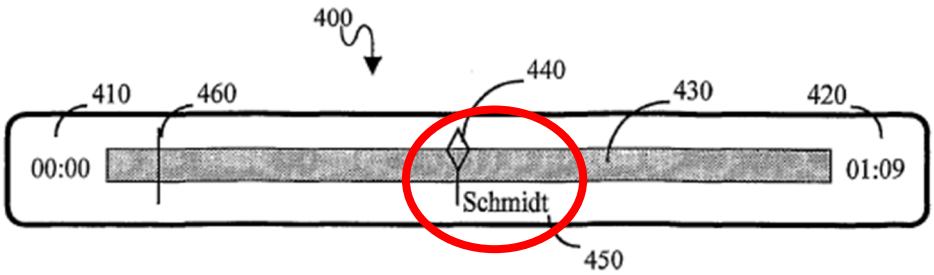


FIGURE 4

Id., Fig. 4 (annotated, showing bookmark).

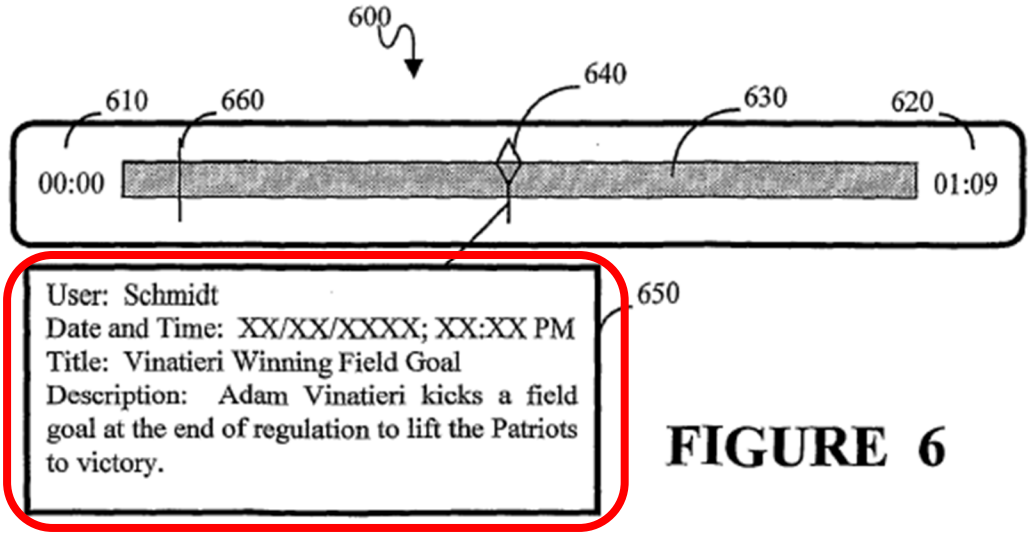


FIGURE 6

Id., Fig. 6 (annotated, showing bookmark details).

700

BOOKMARK LISTING

PROGRAM	USER	LOCATION
Home Improvement	Publius Virgil	0 hrs., 13 min., 15 sec. out of 0 hrs., 30 min., 0 sec.
Home Improvement	Mary Shelley	0 hrs., 20 min., 37 sec. out of 0 hrs., 30 min., 0 sec.
NFL: Raiders v. Patriots	Victor Hugo	3 hrs., 3 min., 12 sec. out 3 hrs., 15 min., 0 sec.
XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXXXX XXXXXXXXXXXXXX
XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXXXX XXXXXXXXXXXXXX

FIGURE 7

Id., Fig. 7 (annotated, showing three different bookmarks).

The set of cue point information is received at the video editing environment using the computer system because bookmarks are received by the software executed by Application Unit 134 and Bookmark Database 162 such as when receiving a new bookmark from client 124 or retrieving a bookmark for client 124 to edit. *Id.*, 15:15-20, 19:12-20; 21:1-8, 22:8-15; EX1002, ¶¶330-34.

e. [13.4]

Vasilevsky discloses *receiving a cue point editing command* (*e.g.*, command to edit a bookmark after modifying bookmark information in interface of Figure 6) over the network (*e.g.*, HAN/Internet) from a remote client terminal disposed at a client side of the public network (*e.g.*, client 124) using the computer system (*e.g.*, the centralized media server and storages).

To edit a bookmark, client 124 enters an edit mode by selecting a bookmark, which displays the interface of Figure 6 showing a text box "includ[ing] such information as the bookmark establisher's name, a title of the bookmark, and a brief description." EX1008, 22:8-15. Client 124 can "modify all of the information," resulting in a command to edit the bookmark being sent from client 124 and received using the centralized media server. EX1008, 22:8-15, claim 4 ("media server is adapted to enable **<u>any program bookmark to be edited by any authorized system user</u>**"), claim 11.

The computer system receives the command over the network (*e.g.*, HAN/Internet). *Id.* Fig. 1, 15:15-17 ("Application Unit 134, which converts user commands to commands compatible with the media server"), 19:16-20 ("when a command is received to enter a bookmark, the Application Unit 134 causes the bookmark to be stored in a bookmark database 162"). Client 124 is disposed at a client side of the network, in contrast to a server side of the network where the

centralized media server and storages are located and is therefore also remote from the servers. *Id.*, 11:1-2, Fig. 1, claims 4-5; EX1002, ¶¶335-43.

f. [13.5]

Vasilevsky discloses *modifying a portion of the cue point information* (*e.g.*, editing bookmark information) at the server side of the public network (*e.g.*, at the centralized media server) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

When client 124 edits existing bookmarks in the interface of Figure 6, the centralized media server modifies the bookmarks and Application Unit 134 stores the modified bookmarks in bookmark database 162. EX1008, 19:16-20, 22:8-15, 21:9-20, 15:15-17, claims 4-5; [13.4], EX1002, ¶¶344-46.

g. [13.6]

Vasilevsky discloses *receiving a cue point selection* (*e.g.*, receiving a selected bookmark via request to resume program from that bookmark) *over the network from the remote client terminal* (*e.g.*, from client 124 over HAN/Internet) *identifying one of the cue points corresponding to a portion of the video information of one of the video files* (*e.g.*, selected bookmark identifies a video portion). EX1008, 6:13-14 ("resumption of playback from an established 'bookmark' can occur from any of the receivers"), 7:14-17 ("allow a user to, from

one reproduction device, place a program bookmark in a program representing a point in the program where reproduction has stopped, and from another reproduction device, **resume reproduction of the program from the program bookmark**."), 23:2-4 ("**clicking on the bookmark** can lead directly to the pause point in the program of the representative bookmark"), 8:7-12, 18:13-14, 18:19-19:2, 20:3-6.

The cue point selection is received over the network (*e.g.*, HAN/Internet) as "the system 100 combines a media server … and several reproduction devices such as digital or analog television sets (124, 128 and 132) via a home area network (HAN)." *Id.*, 10:14-11:2, 15:15-17 ("Application Unit 134, which converts user commands to commands compatible with the media server").

Each bookmark corresponds to a portion (video segment with a start and end time) of video. EX1008, 21:11-13 ("**The bookmark display 400 contains a start time display area 410 and end time display area 420**, indicating the program length"),19:12-16 ("bookmark" "is, **an electronic marker … placed in memory indicating exactly where the program was paused**"), 22:8-15, Figures 4, 6; EX1002, ¶¶347-50.

h. [13.7]

Vasilevsky discloses *streaming the portion of the video information to the client terminal* (*e.g.*, streaming the portion of the video corresponding to the

selected bookmark to client 124) *over the public network* (*e.g.*, HAN/Internet) *in response to receiving the cue point selection* (*e.g.*, selected bookmark in resume program request received in limitation [13.6]).

When client 124 selects a bookmark, the centralized media server streams the program from the start point of the bookmark to the clients. EX1008, 15:5-14 (transfer of video to client "can be via a number of network and streaming protocols, including Real-Time Transport Protocol (RTP); Real-Time Streaming Protocol (RTSP)"), 7:13-17 (describing "resum[ing] reproduction of the program from the program bookmark"), 21:11-13, Abstract; [13.6]; EX1002, ¶¶351-53.

2. <u>Claim 14</u>

Vasilevsky discloses *providing a cue point editing mode as part of the video editing environment* (*e.g.*, providing interface(s) for editing bookmarks as part of the software executed by the centralized media unit and storages) *configured to perform at least one of creating, modifying, deleting, or interpreting at least a portion of the set of cue point information* (*e.g.,* editing bookmark information) *according to the cue point editing command received over the public network from the client terminal* (*e.g.*, command received in limitation [13.4]).

A cue point editing mode is entered when client 124 selects an existing bookmark for editing so that it is displayed in the interface of Figure 6 where a "system user can enter or modify" "such information as the bookmark establisher's

name, a title of the bookmark, and a brief description of what occurred in the program just prior to the pause point." EX1008, 22:8-15, claims 4-5, 11.

Centralized media server modifies at least a portion of the bookmark information according to the editing command received over the network from client 124 and Application Unit 134 stores the modified bookmarks in bookmark database 162. EX1008, 15:15-17, 19:16-20 ("when a command is received to enter a bookmark, the Application Unit 134 causes the bookmark to be stored in a bookmark database 162"), 22:8-15, claims 4-5; [13.4]; EX1002, ¶¶354-58.

3. <u>Claim 15</u>

Vasilevsky discloses *receiving an edit mode entry signal* (*e.g.*, signal for entry to the interface(s) for editing bookmarks; from selecting the Figure 6 interface) *over the network from the client terminal* (*e.g.*, from client 124 over the HAN/Internet) *representing entry into the cue point edit mode* (*e.g.*, representing entry into the interface(s) for editing bookmarks), *and switching the video editing environment to the cue point editing mode in response to receiving the edit mode entry signal* (*e.g.*, switching the software executed by the centralized media server and storages to display the interface(s) for editing bookmarks; editable bookmark fields in the interface of Figure 6). EX1008, 19:16-20, 22:8-15; [13.4], claim 14; EX1002, ¶¶359-64.

4. Claim 18

Vasilevsky discloses *receiving, over the network, authentication information* (*e.g.*, information concerning the user's identity) *relating to access authority of the remote client terminal* (*e.g.*, concerning which client may access or edit a bookmark).

Authentication information is received over the network as "**only a user who established a particular bookmark** can use that particular bookmark for resumption of playback." EX1008, 20:6-8, 21:17-19, claim 5 ("said media server is adapted to enable a particular program bookmark to be **edited only by a user purporting to have established the particular bookmark**."), claim 6. Therefore, the centralized media server must receive information concerning the user's identity of client 124 to ascertain whether that user can access certain bookmarks. EX1002, ¶365-68.

5. Claim 19

Vasilevsky discloses *denying or allowing access to all or part of the video editing environment* (*e.g.*, denying client 124 access to part of the software executed by centralized media server and storages; denying access to certain bookmarks) *based at least in part on the access authority of the remote client terminal* (*e.g.*, only the user who created bookmark can access or edit it). EX1008, 20:7-8 ("**only a user who established a particular bookmark** can use that

particular bookmark for resumption of playback."), 21:17-19, claim 5 (media server "enable[s] a particular program bookmark to be **edited only by a user purporting to have established the particular bookmark**."), claim 6; claim 18; EX1002, ¶¶369-71.

6. Claim 20

Vasilevsky discloses *server video data is streamed progressively to a video playback environment* (*e.g.*, streaming video recordings progressively to a client display) *at the remote client terminal* (*e.g.*, client 124), *allowing the video player* (*e.g.*, client player) *to begin displaying streamed server video data while remaining server video data continues to be streamed* (*e.g.*, client 124 displays the streamed video data as it is received). EX1008, 15:5-14 (transferring video to client "can be via a number of network and streaming protocols, including Real-Time Transport Protocol (RTP); Real-Time Streaming Protocol (RTSP)"), 18:4-5, 20:11-15; [13.7]; EX1002, ¶¶372-76.

VII. CONCLUSION

Claims 13-15 and 18-20 of the '286 patent are unpatentable. Accordingly, Petitioner requests institution of *inter partes* review.

DATED: March 29, 2024

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I hereby certify that the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 8,307,286 contains 13,999 words as measured by the word processing software used to prepare the document, excluding the cover page, signature block, and portions exempted under 37 C.F.R. § 42.24(a).

DATED: March 29, 2024

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CERTIFICATE OF SERVICE

I hereby certify that on this date, true and correct copies of the foregoing Petition for *Inter Partes* Review and accompanying exhibits were served via Federal Express Overnight to the following address:

Correspondence Address of Record for U.S. Patent No. 8,307,286

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