Aylo Freesites Ltd and fuboTV Media Inc.
v.
DISH Technologies L.L.C.

Petitioner Aylo's Demonstratives

Case Nos. IPR2024-00043, -00044, -00045, -00046, -00146

Before Judges Thu A. Dang, John A. Hudalla, Juliet Mitchell Dirba

VENABLE LLP

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Aylo Exhibit 1036
Aylo Freesites v. DISH Technologies
IPR2024-00045

Summary of Key Disputes

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

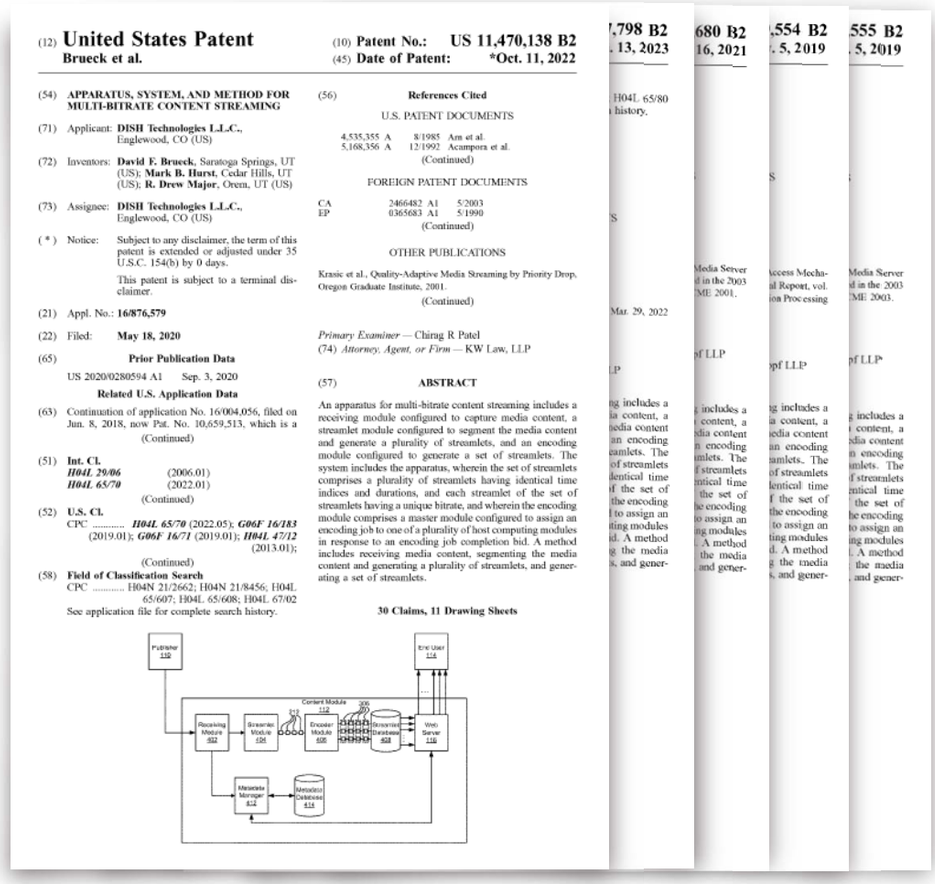
Summary of Key Disputes

1. Whether video streaming was well-known during the 1997-2004 timeframe. **YES.**
2. Whether Ogdon teaches encoding the same video at different qualities. **YES.** Even if not, whether a POSITA would have been motivated to combine Ogdon + Allen (which indisputably teaches encoding the same video at different qualities). **YES.**
3. Whether Ogdon teaches streamlets of the same duration. **YES.** Even if not, whether SMIL 2.0 teaches streamlets of the same duration (DISH does not dispute the motivation to combine SMIL 2.0 with Ogdon). **YES.**
4. Whether the limitation "a streamlet request" requires a client to place a single request to a server for a single streamlet, as argued by DISH. **NO.** Even if so, whether Ogdon teaches this. **YES.**
5. Whether claim 6 of the '138 Patent requires that the claimed "plurality of web servers" must retrieve streamlets from the "same" storage device, as argued by DISH. **NO.** Even if so, whether Ogdon teaches this. **YES.**
6. Whether Ogdon teaches "receiv[ing] at least one virtual timeline request" as recited in claim 9 of the '138 Patent. **YES.**
7. Whether Ogdon teaches "live event video" as recited in claim 18 of the '555 Patent. **YES.**
8. Whether Ogdon teaches storing streamlets as "separate files" as recited in claim 16 of the '798 Patent. **YES.** Even if not, whether Shteyn teaches streamlets stored as "separate files" and whether a POSITA would have been motivated to combine Ogdon + Shteyn. **YES.**
9. Whether DISH shows a nexus for secondary considerations. **NO.** Even if so, whether DISH's evidence of secondary considerations can overcome Petitioner's strong evidence of obviousness. **NO.**

Overview of Challenged DISH Patents

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Overview of Challenged DISH Patents



(12) **United States Patent**
Brueck et al.

(10) **Patent No.: US 11,470,138 B2**
(45) **Date of Patent: *Oct. 11, 2022**

(54) **APPARATUS, SYSTEM, AND METHOD FOR MULTI-BITRATE CONTENT STREAMING**

(71) Applicant: **DISH Technologies L.L.C.**, Englewood, CO (US)

(72) Inventors: **David F. Brueck**, Saratoga Springs, UT (US); **Mark B. Hurst**, Cedar Hills, UT (US); **R. Drew Major**, Orem, UT (US)

(73) Assignee: **DISH Technologies L.L.C.**, Englewood, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/876,579**

(22) Filed: **May 18, 2020**

(65) **Prior Publication Data**
US 2020/0280594 A1 Sep. 3, 2020

Related U.S. Application Data

(63) Continuation of application No. 16/004,056, filed on Jun. 8, 2018, now Pat. No. 10,659,513, which is a
(Continued)

(51) **Int. Cl.**
H04L 29/06 (2006.01)
H04L 65/70 (2022.01)
(Continued)

(52) **U.S. Cl.**
CPC ***H04L 65/70*** (2022.05); ***G06F 16/183*** (2019.01); ***G06F 16/71*** (2019.01); ***H04L 47/12*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04N 21/2662; H04N 21/8456; H04L 65/607; H04L 65/608; H04L 67/02
See application file for complete search history.

(56) **References Cited**

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(Continued)

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(Continued)

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(Continued)

Primary Examiner — Chirag R Patel
(74) *Attorney, Agent, or Firm* — KW Law, LLP

(57) **ABSTRACT**

An apparatus for multi-bitrate content streaming includes a receiving module configured to capture media content, a streamlet module configured to segment the media content and generate a plurality of streamlets, and an encoding module configured to generate a set of streamlets. The system includes the apparatus, wherein the set of streamlets comprises a plurality of streamlets having identical time indices and durations, and each streamlet of the set of streamlets having a unique bitrate, and wherein the encoding module comprises a master module configured to assign an encoding job to one of a plurality of host computing modules in response to an encoding job completion bid. A method includes receiving media content, segmenting the media content and generating a plurality of streamlets, and generating a set of streamlets.

30 Claims, 11 Drawing Sheets

- U.S. Patent Nos.:
  - 11,470,138
  - 11,677,798
  - 10,951,680
  - 10,469,554
  - 10,469,555
- All share a common specification
- All name the same inventors (David F. Brueck, Mark B. Hurst, R. Drew Major)
- Earliest possible priority date is April 30, 2004
- Directed to adaptive-bitrate (“ABR”) streaming over the Internet (EX1001, 1:31-34)*

* Citations are to IPR2024-00044 (’138 Patent) unless otherwise noted

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Video Stored as Sets of Segments or "Streamlets" with Varying Bitrates

- "The architecture included using a web server hosting sets of content files where each set represented segments ('streamlets') of a larger media presentation encoded in the same format but at a particular streaming bit-rate." EX2006 (Jeffay Decl.) ¶ 46.
- A "set" of streamlets is a "group of streamlets having identical time indices and durations but varying bitrates." EX1001 ('138 Patent) at 7:57-59.
- "The set 306a includes encoded streamlets 304 having **low**, **medium**, and **high** 204, 206, 208 bitrates." EX1001 ('138 Patent) at 7:61-62.

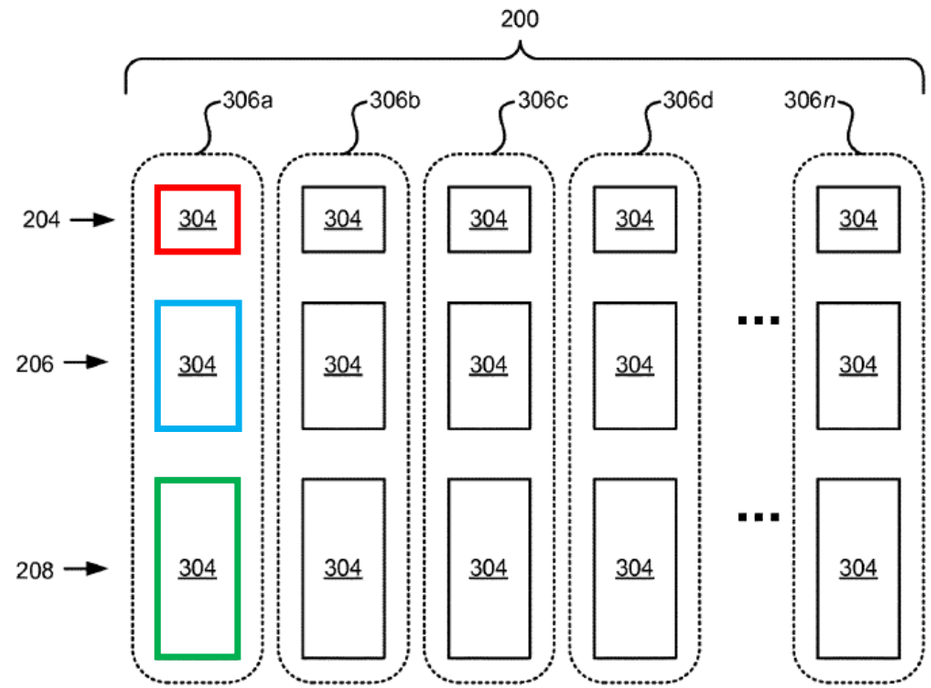

FIG. 3b

EX1001 ('138 Patent) at FIG. 3b (annotated)

A Client Requests Lower or Higher Quality Streamlets From a Server Based On Bandwidth

- Client **114** makes requests for streamlets **304** from web server(s) **116**. EX1001 ('138 Patent) at 9:1-40.
- Client **114** makes such requests for "lower or higher quality streams based upon continuous observation of time intervals between successive receive times of each requested streamlet." EX1001 ('138 Patent) at 13:20-28.
- "[T]he agent controller module **702** requests streamlets **304** from the streamlet cache module **704** and arranges the received streamlets **304** in a staging module 709. EX1001 ('138 Patent) at 13:32-35.

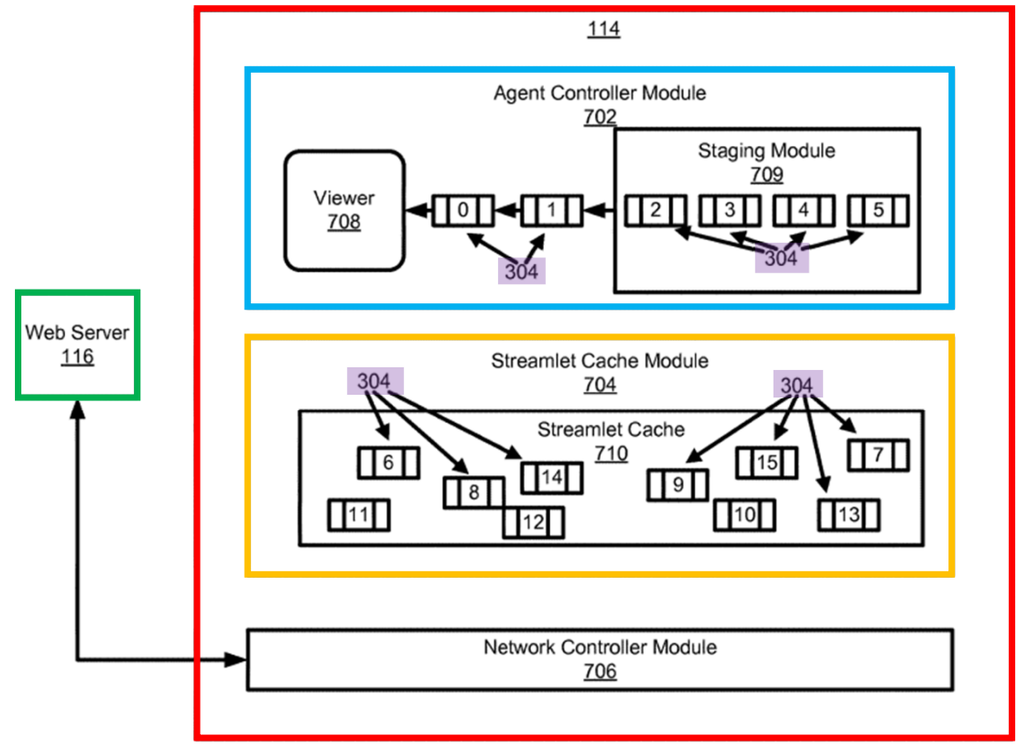

FIG. 7

EX1001 ('138 Patent) at FIG. 3b (annotated)

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches The “Heart” of the Invention According to DISH

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The “Heart” of the Invention According to DISH is:

(1) “adaptive rate” content streaming

(2) with “streamlets”

(3) “of varying quality” levels

Paper 19 (POR) at 1 (“adaptive rate video ‘streamlets’ of varying quality” is “the heart of the claimed invention”)

See Paper 37 (Reply) at 1

Ogdon Discloses the "Heart"

Ogdon's Exemplary Disclosures		
"adaptive rate" content streaming	✓	EX1004 (Ogdon) at 3:38-41 ("dynamically and ***adaptively*** switch between . . . versions of the presentation according to network transmission characteristics at each client network node"); *see also id*. at Claim 9.
with "streamlets"		EX1004 (Ogdon) at 2:36-45 ("Note that each of the one or more presentation versions includes one or more presentation ***segments*** (hereinafter also denoted simply 'segments') that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation 'elements' in that each such subcollection is intended to be an indivisible portion of a presentation performance"); *see also* EX2006 (Jeffay Dec.) at ¶ 46 (describing challenged patents as "using a web server hosting sets of content files where each set represented ***segments*** ("***streamlets***") of a larger media presentation")
"of varying quality" levels		EX1004 (Ogdon) at 22:44-47 ("***better presentation quality*** presentation elements may be retrieved (e.g., the presentation ***quality*** may be ***enhanced*** from limited or no animation to full animation)"), 13:47-49 ("several variations of presentation content can be provided to clients based on the available bandwidth")

See Paper 1 (Petition) at 16-17, 20-21

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Discloses the "Heart"

Ogdon's Exemplary Disclosures		
"adaptive rate" content streaming	✓	EX1004 (Ogdon) at 3:38-41 ("dynamically and ***adaptively*** switch between . . . versions of the presentation according to network transmission characteristics at each client network node"); *see also id*. at Claim 9.
with "streamlets"	✓	EX1004 (Ogdon) at 2:36-45 ("Note that each of the one or more presentation versions includes one or more presentation ***segments*** (hereinafter also denoted simply 'segments') that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation 'elements' in that each such subcollection is intended to be an indivisible portion of a presentation performance"); *see also* EX2006 (Jeffay Dec.) at ¶ 46 (describing challenged patents as "using a web server hosting sets of content files where each set represented ***segments*** ("***streamlets***") of a larger media presentation")
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See Paper 1 (Petition) at 17, 20-21

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Discloses the “Heart”

Ogdon’s Exemplary Disclosures		
“adaptive rate” content streaming	✓	EX1004 (Ogdon) at 3:38-41 (“dynamically and ***adaptively*** switch between . . . versions of the presentation according to network transmission characteristics at each client network node”); *see also id*. at Claim 9.
with “streamlets”	✓	EX1004 (Ogdon) at 2:36-45 (“Note that each of the one or more presentation versions includes one or more presentation ***segments*** (hereinafter also denoted simply ‘segments’) that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation ‘elements’ in that each such subcollection is intended to be an indivisible portion of a presentation performance”); *see also* EX2006 (Jeffay Dec.) at ¶ 46 (describing challenged patents as “using a web server hosting sets of content files where each set represented ***segments*** (“***streamlets***”) of a larger media presentation”)
“of varying quality” levels	✓	EX1004 (Ogdon) at 22:44-47 (“***better presentation quality*** presentation elements may be retrieved (e.g., the presentation ***quality*** may be ***enhanced*** from limited or no animation to full animation)”), 13:47-49 (“several variations of presentation content can be provided to clients based on the available bandwidth”)

See Paper 1 (Petition) at 17, 20-21

As for Encoding Different Versions of the Same Video – DISH Admitted It Was Known and the ITC Found the Same

to only when objective evidence is tied to supposedly 'new' feature(s)"). There, the ITC found that a reference called "Carmel" failed to invalidate certain Challenged Claims, even though it found that the Carmel reference disclosed "multiple different copies of [a] video encoded at different bitrates" and stored as "multiple sets of files." EX1009, 181-182. None of Petitioner's references disclose a streaming

Paper 47 (Sur-reply) at 25

DISH argues that claim 11 is directed to an embodiment of Carmel which does not disclose storing different copies of a video encoded as multiple sets of files on a server. *See* Compls. Br. at 190 (citing CX-0008C (Jeffay RWS) at Q/A 104). However, claim 1 of Carmel recites, in part, "uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate." RX-0221 (Carmel) at claim 1. Uploading the sequence such that one or more client computers could download the sequence necessarily requires storing different copies of the video encoded as multiple sets of files on a server. *See* RX-0001C (Richardson DWS) at Q/A 180. Claim 11 specifically discloses plural files being created for each slice. *See id.* at Q/A 155. Each of the plural files has a data size for each of the quality levels. *Id.*

EX1009 (ITC ID) at 181

See Paper 1 (Petition) at 11

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Unpatentability Grounds

Unpatentability Grounds

IPR2024-00043	
’798 Patent Claims	**Grounds**
1, 3-12, 14-20, 22-25, 27-29	Ogdon, Allen (§103)
1-9, 11-19, 21-24	Ogdon, Allen, SMIL 2.0 (§103)
16	Ogdon, Allen, Shteyn (§103)

IPR2024-00044	
’138 Patent Claims	**Grounds**
1, 3-12, 14-20, 22-25, 27-29	Ogdon, Allen (§103)
1, 3-12, 14-20, 22-25, 27-29	Ogdon, Allen, SMIL 2.0 (§103)

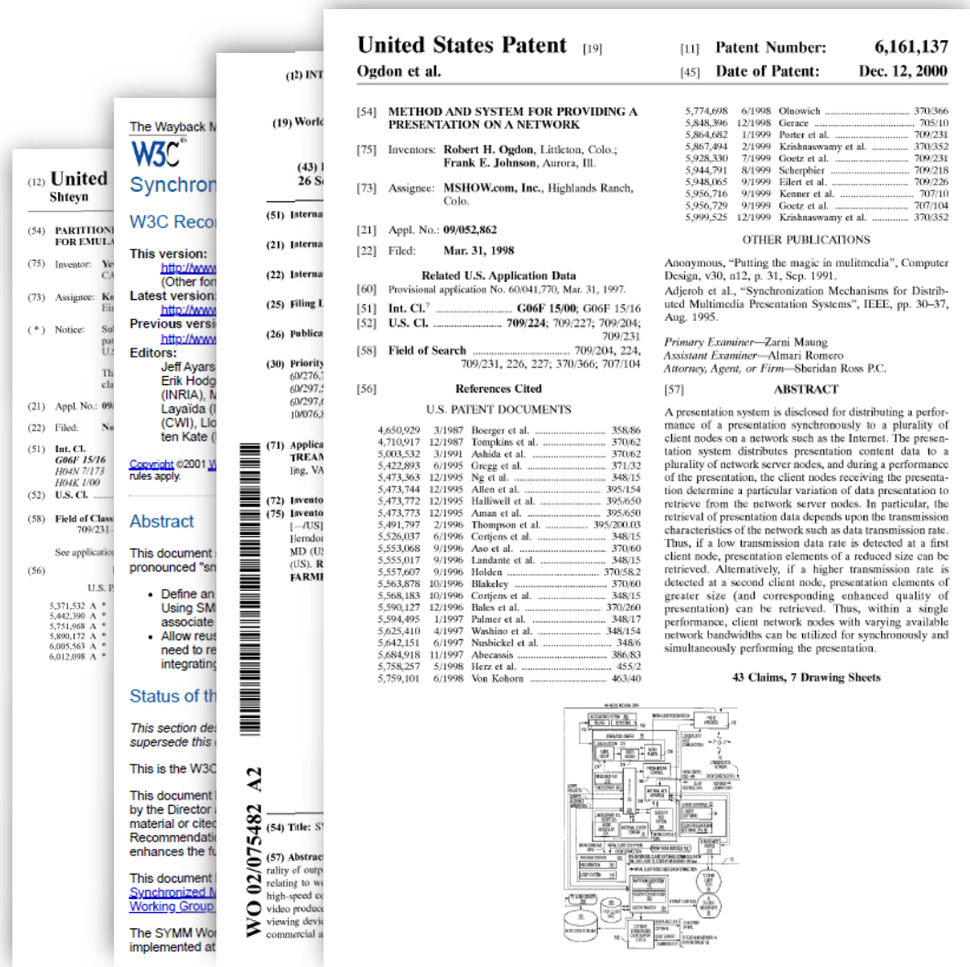
IPR2024-00045	
’554 Patent Claims	**Grounds**
1-5, 7, 8, 10-14, 16-20, 22-28, 30	Ogdon, Allen (§103)
1-5, 7, 8, 10-14, 16-20, 22-28, 30	Ogdon, Allen, SMIL 2.0 (§103)

IPR2024-00046	
’680 Patent Claims	**Grounds**
1, 2, 4-12, 14-19, 21-25, 27-29	Ogdon, Allen (§103)
1, 2, 4-12, 14-19, 21-25, 27-29	Ogdon, Allen, SMIL 2.0 (§103)

IPR2024-00146	
’555 Patent Claims	**Grounds**
1, 3-5, 7-11, 13-20, 22-27	Ogdon, Allen (§103)
1, 3-5, 7-11, 13-20, 22-27	Ogdon, Allen, SMIL 2.0 (§103)
18-19	Ogdon (§102)

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Prior Art References



Ogdon

US Patent No. 6,161,137
Issued: Dec. 12, 2000

Allen

Int'l Pub. No. WO 02/075482
Published: Sept. 26, 2002

SMIL 2.0

World Wide Web Consortium
Available: Nov. 9, 2001

Shteyn

US Patent No. 7,529,806
Filed: Nov. 4, 1999
Issued: May 5, 2009

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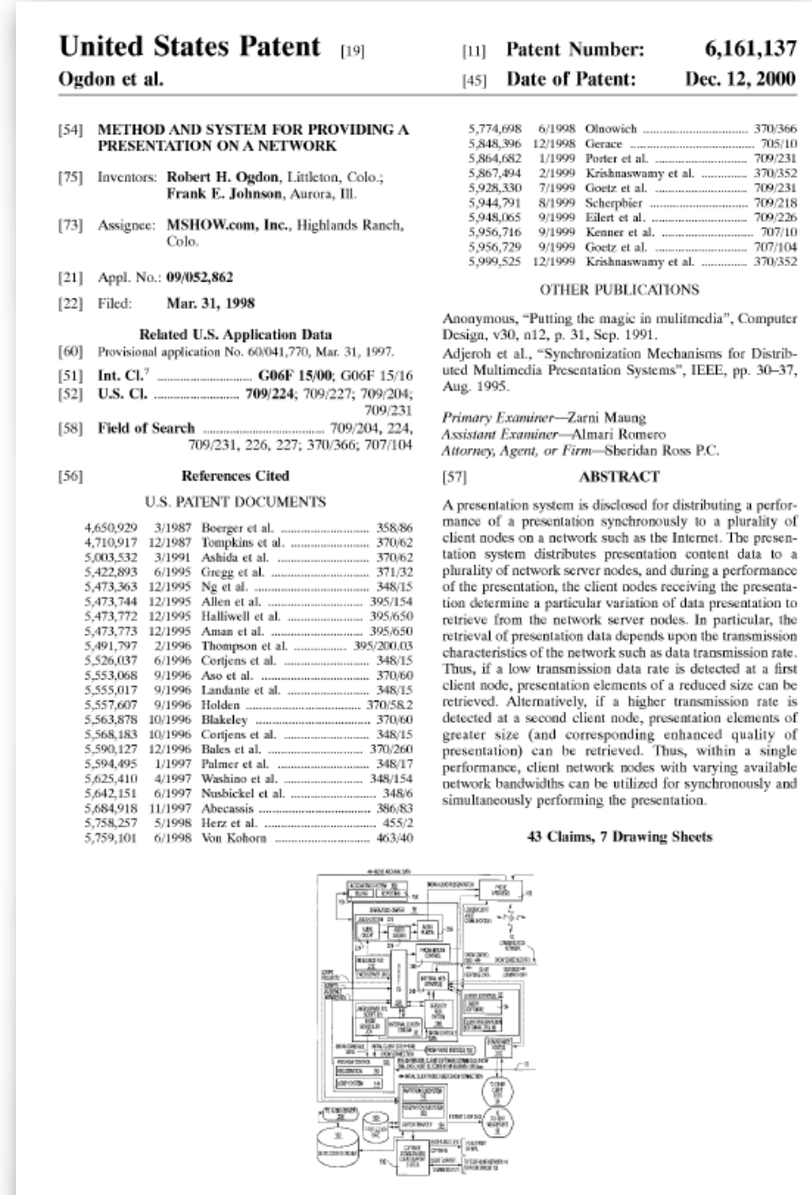
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon

- Distributes "a presentation synchronously" to clients over the Internet where clients "determine a particular variation of data presentation to retrieve . . . depend[ing] upon . . . ***data transmission rate***" *e.g.*, if "a ***low*** transmission rate is detected" requesting "elements of a ***reduced size***" but if "a ***higher*** transmission rate is detected" requesting "elements of ***greater size***" and "corresponding ***enhanced quality***." EX1004 (Ogdon) at Abstract (emphases added).

- "[P]resentation versions include[] one or more presentation segments" where "corresponding alternative segments . . . have substantially different network transmission requirements so that such corresponding segments … can be substituted for one another depending on [network] performance." EX1004 (Ogdon) at 2:36-61.



United States Patent [19]
Ogdon et al.

[11] **Patent Number: 6,161,137**
[45] **Date of Patent: Dec. 12, 2000**

[54] **METHOD AND SYSTEM FOR PROVIDING A PRESENTATION ON A NETWORK**

[75] Inventors: **Robert H. Ogdon**, Littleton, Colo.; **Frank E. Johnson**, Aurora, Ill.

[73] Assignee: **MSHOW.com, Inc.**, Highlands Ranch, Colo.

[21] Appl. No.: **09/052,862**

[22] Filed: **Mar. 31, 1998**

Related U.S. Application Data

[60] Provisional application No. 60/041,770, Mar. 31, 1997.

[51] **Int. Cl.**[7] **G06F 15/00**; G06F 15/16

[52] **U.S. Cl.** **709/224**; 709/227; 709/204; 709/231

[58] **Field of Search** 709/204, 224, 709/231, 226, 227; 370/366; 707/104

[56] **References Cited**

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Anonymous, "Putting the magic in mulitmedia", Computer Design, v30, n12, p. 31, Sep. 1991.

Adjeroh et al., "Synchronization Mechanisms for Distributed Multimedia Presentation Systems", IEEE, pp. 30–37, Aug. 1995.

Primary Examiner—Zarni Maung
Assistant Examiner—Almari Romero
Attorney, Agent, or Firm—Sheridan Ross P.C.

[57] **ABSTRACT**

A presentation system is disclosed for distributing a performance of a presentation synchronously to a plurality of client nodes on a network such as the Internet. The presentation system distributes presentation content data to a plurality of network server nodes, and during a performance of the presentation, the client nodes receiving the presentation determine a particular variation of data presentation to retrieve from the network server nodes. In particular, the retrieval of presentation data depends upon the transmission characteristics of the network such as data transmission rate. Thus, if a low transmission data rate is detected at a first client node, presentation elements of a reduced size can be retrieved. Alternatively, if a higher transmission rate is detected at a second client node, presentation elements of greater size (and corresponding enhanced quality of presentation) can be retrieved. Thus, within a single performance, client network nodes with varying available network bandwidths can be utilized for synchronously and simultaneously performing the presentation.

43 Claims, 7 Drawing Sheets

EX1004 (Ogdon)

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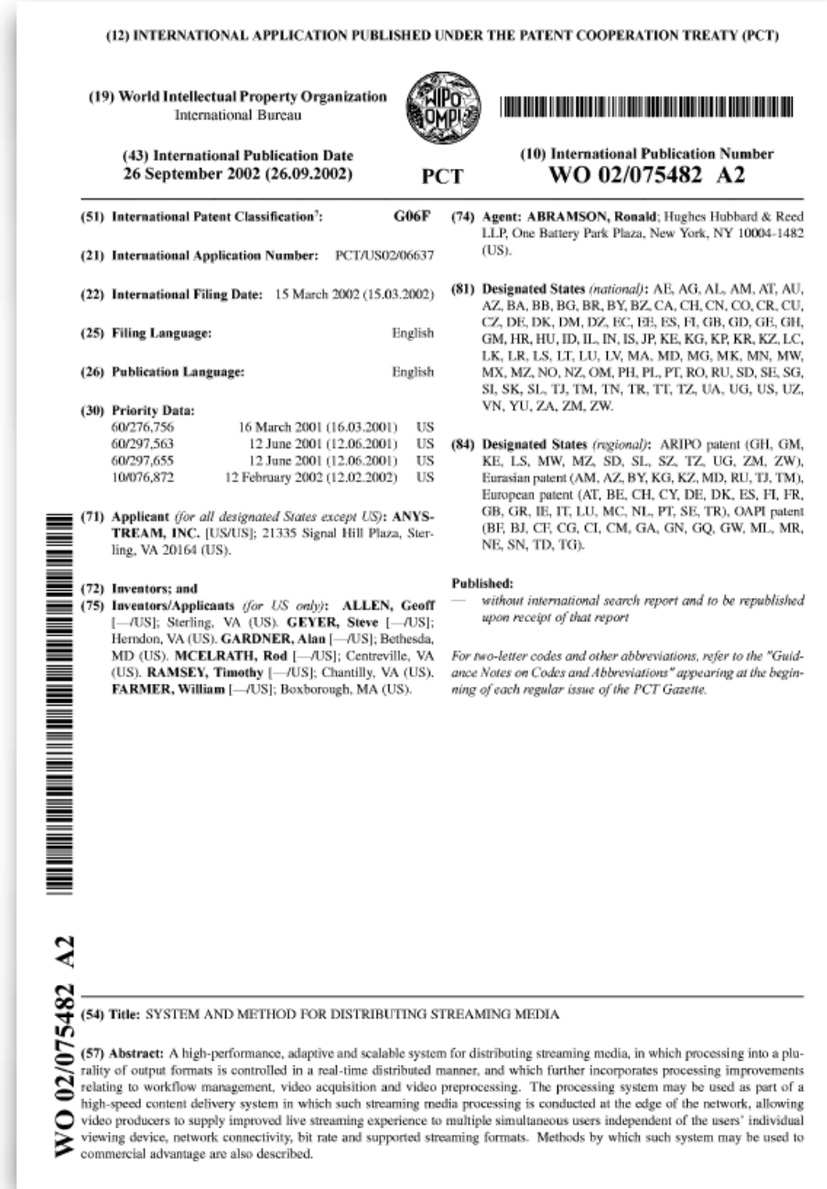
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Allen

- Discloses well-known prior art method of "[s]treaming media . . . for transmission of video and audio over networks such as the Internet." EX1005 (Allen) at 2:14-15.
- Known "sophisticated prior art" systems include "simultaneously process[ing video] in a plurality of encoders" that "output in a particular popular format and bit rate," where "content could be pre-stored in a variety of formats and bit rates." EX1005 (Allen) at 8:16-9:3; *see also id*. at 11:20-12:5 (describing sophisticated and well-known architecture for encoding to "three different bit rates, 56Kbps, 300Kbps, and 600 Kbps").



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 September 2002 (26.09.2002)

PCT

(10) International Publication Number
WO 02/075482 A2

(51) International Patent Classification[7]: G06F

(21) International Application Number: PCT/US02/06637

(22) International Filing Date: 15 March 2002 (15.03.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/276,756	16 March 2001 (16.03.2001)	US
60/297,563	12 June 2001 (12.06.2001)	US
60/297,655	12 June 2001 (12.06.2001)	US
10/076,872	12 February 2002 (12.02.2002)	US

(71) Applicant *(for all designated States except US)*: **ANYSTREAM, INC.** [US/US]; 21335 Signal Hill Plaza, Sterling, VA 20164 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **ALLEN, Geoff** [—/US]; Sterling, VA (US). **GEYER, Steve** [—/US]; Herndon, VA (US). **GARDNER, Alan** [—/US]; Bethesda, MD (US). **MCELRATH, Rod** [—/US]; Centreville, VA (US). **RAMSEY, Timothy** [—/US]; Chantilly, VA (US). **FARMER, William** [—/US]; Boxborough, MA (US).

(74) Agent: **ABRAMSON, Ronald**; Hughes Hubbard & Reed LLP, One Battery Park Plaza, New York, NY 10004-1482 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 02/075482 A2

(54) Title: SYSTEM AND METHOD FOR DISTRIBUTING STREAMING MEDIA

(57) Abstract: A high-performance, adaptive and scalable system for distributing streaming media, in which processing into a plurality of output formats is controlled in a real-time distributed manner, and which further incorporates processing improvements relating to workflow management, video acquisition and video preprocessing. The processing system may be used as part of a high-speed content delivery system in which such streaming media processing is conducted at the edge of the network, allowing video producers to supply improved live streaming experience to multiple simultaneous users independent of the users' individual viewing device, network connectivity, bit rate and supported streaming formats. Methods by which such system may be used to commercial advantage are also described.

EX1005 (Allen)

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

SMIL 2.0

- SMIL 2.0 is “an XML-based language that allows authors to write interactive multimedia presentations” including “describ[ing] the temporal behavior of a multimedia presentation.” EX1006 (SMIL 2.0) at 1.
- Discloses “switch” function that “allows an author to specify a set of alternative elements from which only the first acceptable element is chosen”; “seq” function that “defines a sequence of elements” to “play one after the other”; and a “systembitrate” attribute that permits “evaluat[ing] each of the elements within a switch” to find “an acceptable bitrate value.” EX1006 (SMIL 2.0) at 61, 62, 158.
- Discloses a “dur” function that “specifies the simple duration” of media. EX1006 (SMIL 2.0) at 129.

The Wayback Machine - https://web.archive.org/web/20011109111837/http://www.w3.org:80/TR/2001/R...

W3C

Synchronized Multimedia Integration Language (SMIL 2.0)

W3C Recommendation 07 August 2001

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Abstract

This document specifies the second version of the Synchronized Multimedia Integration Language (SMIL, pronounced "smile"). SMIL 2.0 has the following two design goals:

- Define an XML-based language that allows authors to write interactive multimedia presentations. Using SMIL 2.0, an author can describe the temporal behavior of a multimedia presentation, associate hyperlinks with media objects and describe the layout of the presentation on a screen.
- Allow reusing of SMIL syntax and semantics in other XML-based languages, in particular those who need to represent timing and synchronization. For example, SMIL 2.0 components are used for integrating timing into XHTML [XHTML10] and into SVG [SVG].

Status of this document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. The latest status of this document series is maintained at the W3C.

This is the W3C Recommendation of the Synchronized Multimedia Integration Language (SMIL) 2.0.

This document has been reviewed by W3C Members and other interested parties and has been endorsed by the Director as a W3C Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. W3C's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability of the Web.

This document has been produced by the SYMM Working Group *[members only]* as part of the W3C Synchronized Multimedia Activity. The goals of the SYMM Working Group are discussed in the SYMM Working Group charter *[members only]*.

The SYMM Working Group considers that all features in the SMIL 2.0 Recommendation have been implemented at least twice in an interoperable way. The SYMM Working Group Charter defines this as the

EX1006 (SMIL 2.0)

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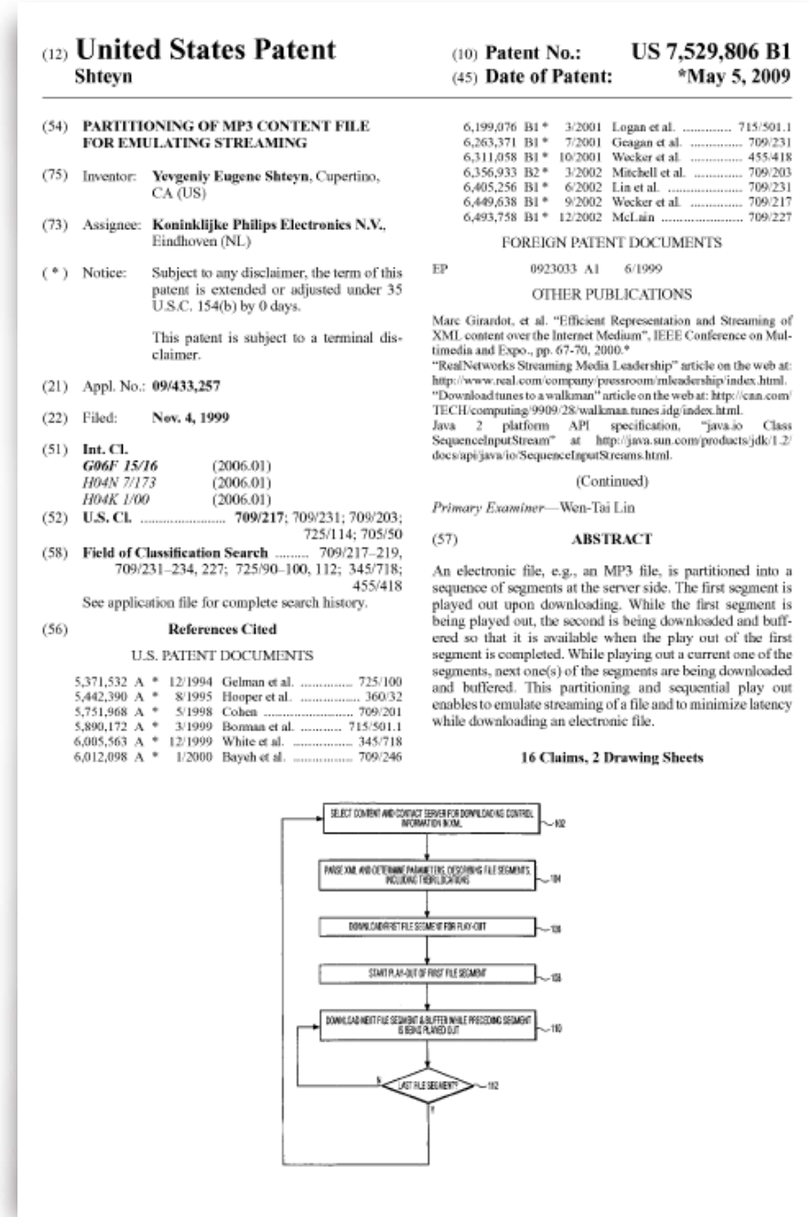
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Shteyn

- Discloses partitioning media “into a sequence of segments at a server” where “alternative” segments may have “different minimum bandwidth requirement[s], and [be stored in] a different location.” EX1016* (Shteyn) at Abstract, 3:44-53, FIGs. 1-2, claims 1, 9, 11.
- Discloses that “the client application could select a next segment in a different format for the same content to adapt to changing circumstances, e.g. lower bandwidth due to network congestion.” EX1016 (Shteyn) at 4:20-23, FIG. 2, claim 1.

* References to EX1016 (Shteyn) refer to IPR2024-00043



(12) **United States Patent**
Shteyn

(10) **Patent No.: US 7,529,806 B1**
(45) **Date of Patent: *May 5, 2009**

(54) **PARTITIONING OF MP3 CONTENT FILE FOR EMULATING STREAMING**

(75) Inventor: **Yevgeniy Eugene Shteyn**, Cupertino, CA (US)

(73) Assignee: **Koninklijke Philips Electronics N.V.**, Eindhoven (NL)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/433,257**

(22) Filed: **Nov. 4, 1999**

(51) **Int. Cl.**
G06F 15/16 (2006.01)
H04N 7/173 (2006.01)
H04K 1/00 (2006.01)

(52) **U.S. Cl.** **709/217**; 709/231; 709/203; 725/114; 705/50

(58) **Field of Classification Search** 709/217–219, 709/231–234, 227; 725/90–100, 112; 345/718; 455/418
See application file for complete search history.

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“RealNetworks Streaming Media Leadership” article on the web at: http://www.real.com/company/pressroom/mleadership/index.html.
“Download tunes to a walkman” article on the web at: http://cnn.com/TECH/computing/9909/28/walkman.tunes.idg/index.html.
Java 2 platform API specification, “java.io Class SequenceInputStream” at http://java.sun.com/products/jdk/1.2/docs/api/java/io/SequenceInputStream.html.

(Continued)

Primary Examiner—Wen-Tai Lin

(57) **ABSTRACT**

An electronic file, e.g., an MP3 file, is partitioned into a sequence of segments at the server side. The first segment is played out upon downloading. While the first segment is being played out, the second is being downloaded and buffered so that it is available when the play out of the first segment is completed. While playing out a current one of the segments, next one(s) of the segments are being downloaded and buffered. This partitioning and sequential play out enables to emulate streaming of a file and to minimize latency while downloading an electronic file.

16 Claims, 2 Drawing Sheets

EX1016 (Shteyn)

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

State of the Art:

Video Streaming Was Well-known During the 1997 Timeframe

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH Cites Dr. Jeffay to Argue that Streaming was "Extremely Rare" Between 1997-2004 and This Would "Inform [a POSITA's] Reading of Ogdon"

Ogdon actually teaches away from video streaming. EX2006, ¶¶[53-65]. Video streaming was ***extremely rare*** during the 1997 time frame of Ogdon's earliest purported priority date up through the '138 Patent's 2004 priority date, and out of reach for most. *Id.*, ¶[55]. A POSITA at the relevant time would have understood this and it would inform their reading of Ogdon. *Id.*

Paper 19 (POR) at 26 (citing Jeffay Decl.)

Second, as noted, a POSITA would have appreciated the limited availability of video streaming in the 1997-2004 timeframe and Ogdon's desire to avoid the "drawbacks" associated with it. EX2006, ¶[59]. Thus, a POSITA would have

Paper 19 (POR) at 28 (citing Jeffay Decl.)

"Indeed, a POSITA would have understood that video conference telepresentations or video streaming would have been extremely rare and expensive in 1997, particularly in typical home or even office settings where network bandwidth and access to videoconferencing hardware was extremely limited."

EX2006 (Jeffay Decl.) ¶ 55 n.3

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

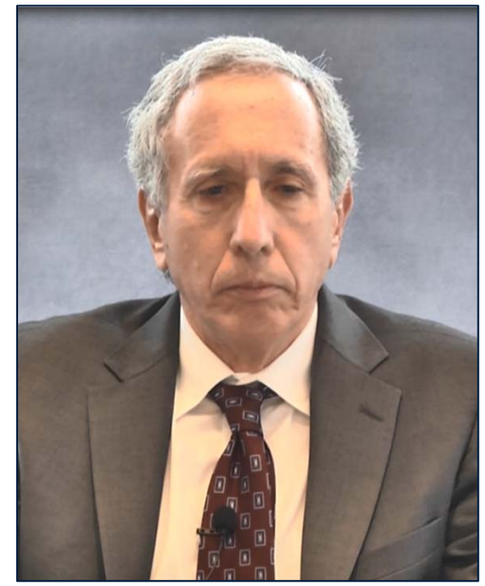
But on Behalf of Amazon and Samsung, Dr. Jeffay Testified That Streaming Was "Conventional" and "Regularly Used" At the Time Ogdon was Filed

implemented and deployed both internally at IBM and externally" by 1998. *Id.* In addition, Willebeek recognizes that it was conventional by 1998 to stream audio and video from "both stored and live sources on the Web." *Id.*

EX1020 (Jeffay Amazon Decl.) ¶ 75

In the mid to late 1990s my research group participated in the MBONE (Multicast Backbone) research initiative and regularly used the MBONE to watch and listen to live programming streamed over the Internet.

EX1029 (Jeffay Samsung Decl.) ¶ 15



Dr. Kevin Jeffay

See Paper 37 (Reply) at 1-4

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

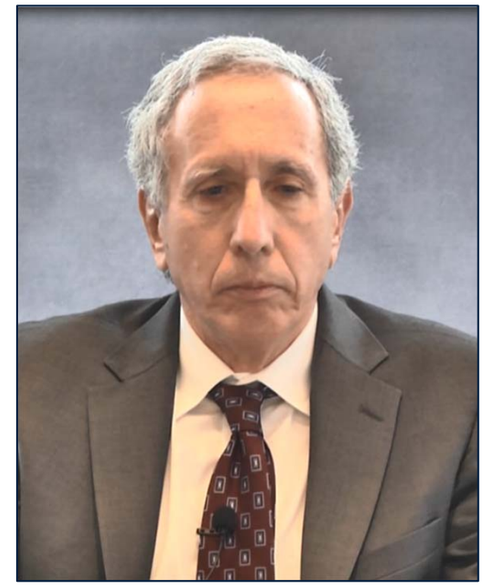
On Behalf of Facebook, Dr. Jeffay Testified that Streaming was "Widespread" and "Common in the Industry"

the recipient device can simultaneously render the media from both sources. But such functionality was widespread long before the priority date of the '557 patent. For instance, the International Telecommunication Union (ITU) first published a version of the standards-series H.323 recommendation in November 1996 with an emphasis on enabling videoconferencing capabilities over a local area network (LAN). In 1998, the ITU published a revised version of H.323 that describes a

* * *

(H.323). By the late 1990s, server-based video conferencing systems enabling users to receive and display real-time video feeds from multiple senders were common in the industry. As described in the 1998 H.323 recommendation, to

EX1023 (Jeffay Facebook Decl.) ¶ 63



Dr. Kevin Jeffay

See Paper 37 (Reply) at 1-4

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Dr. Jeffay Admitted at his Deposition That RealPlayer's Video Streaming Player Was Well Known in 1997

Q. Now, prior to your work in these IPRs, you were aware of a company called Real Network. Is that correct?

A. Yes.

Q. And you are aware that Real Network made one of the early commercial video streaming players on the market; correct?

A. Players. Yes.

...

Q. Real Network was a recognized early pioneer in the development of multimedia players; correct?

A. I believe that's a fair statement.

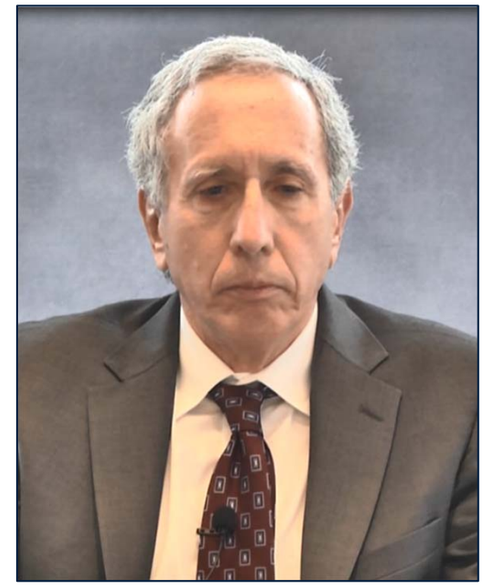
Q. It was a recognized leader in that space; fair?

A. In 1997, yes.

Q. You would agree that in the late 1997s, Real Network's video streaming player was well known to people in the video streaming community; correct?

A. Yes.

EX1030 (Jeffay Tr.) at 63:23-66:3



Dr. Kevin Jeffay

See Paper 37 (Reply) at 1-4, 8

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Dr. Jeffay Used the Same Language to Credit DISH for Technology He Credited to RealNetworks and Microsoft In the Facebook IPR

On behalf of DISH in these IPRs:

Q. One of the reasons you were so impressed by Dish's ABR patents is that they disclosed encoding a video stream at various bit rates and selecting an appropriate stream for delivery to the end user based on current bandwidth availability on the network; right?

A. Yeah. I mean, the initial reason to be impressed was, as I say, its similarity to DASH, and that's certainly a big part of it.

EX1030 (Jeffay Tr.) at 150:21-151:4

On behalf of Facebook in IPR2021-00112:

51. Another means of adapting video streams to account for variable bandwidth conditions involved encoding a video stream at various bitrates and selecting an appropriate stream for delivery to the end user based on current bandwidth availability on the network to the receiving device. This was the idea behind RealNetworks' *SureStream* technology, and Microsoft's *Intelligent Streaming* technology—both available commercially years before the alleged invention of the '557 patent. *See* Ex-1011 (Kozamernic) at 12-13; Ex-1012 (Austerberry) at 170-71; Ex-1013 (BIBS) at 8 (2001 publication describing use of *SureStream* technology in UC Berkeley lecture webcasting system; "The Real

EX1023 (Jeffay Facebook Decl.) ¶ 51

See Paper 37 (Reply) at 3

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Exemplary Claims and Disputed Limitations

Exemplary Claims and Disputed Limitations*

’138 Patent Independent Claim 1	
1[Pre]	A system for **adaptive-rate content streaming of a video** that is playable on one or more end user stations over the internet, the system comprising:
1[A]	at least one storage device storing the video,
1[B]	wherein **the video is digitally encoded at a plurality of different bitrates** creating a plurality of streams including a low quality stream, a medium quality stream, and a high quality stream,
1[C]	the low quality stream, the medium quality stream, and the high quality stream **each comprising a group of streamlets**, wherein each streamlet corresponds to a portion of the video, and wherein each streamlet in each group of streamlets is encoded at a respective one of the plurality of different bitrates, and wherein each group of streamlets comprises at least first and second streamlets;
1[D]	wherein at least one of the low quality stream, the medium quality stream, and the high quality stream is encoded at a bitrate of no less than 600 kbps; and
1[E]	wherein the first streamlet of each of the groups of streamlets has **the same first duration** and encodes the same first portion of the video in each of the low quality stream, the medium quality stream, and the high quality stream, and wherein the first streamlet of the low quality stream encodes the same first portion of the video at a lower bitrate than the first streamlet of the high quality stream and the first streamlet of the medium quality stream.

*DISH makes the same arguments for analogous limitations across all challenged patents.

Exemplary Claims and Disputed Limitations*

’138 Patent Independent Claim 23	
14[E]	place **a streamlet request** to the server over the internet connection for the first streamlet of the selected stream;

’138 Patent Dependent Claim 6	
6[A]	The system of claim 1, further comprising: **a plurality of web servers** located at different locations across the internet, each web server configured to:
6[B]	receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein the at least one streamlet request from the respective one of the one or more end user stations includes a request for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams;
6[C]	retrieve from **the at least one storage device** the requested first streamlet from the currently selected one of the low quality stream, the medium quality stream, and the high quality stream; and
6[D]	send the retrieved first streamlet to the respective one of the one or more end user stations over the one or more internet connections.

*DISH makes the same arguments for analogous limitations across all challenged patents.

Exemplary Claims and Disputed Limitations*

’138 Patent Dependent Claim 9	
9	The system of claim 8, wherein the first web server is further configured to: **receive at least one virtual timeline request** over the one or more internet connections **from the one or more end user stations to retrieve a virtual timeline**; and send the virtual timeline to the requesting one of the end user stations over the one or more network connections.

’555 Patent Independent Claim 18	
18[A]	at least one storage device configured to store **live event video**,

’798 Patent Dependent Claim 16	
16	The end user station of claim 11, wherein at least a plurality of streamlets are **separate files** stored by the at least one server.

*DISH makes the same arguments for analogous limitations across all challenged patents.

Ogdon and Ogdon + Allen Teach Adaptive-Rate Content Streaming

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon and Ogdon + Allen Teach Adaptive-Rate Content Streaming

’138 Patent Independent Claim 1	
1[Pre]	A system for **adaptive-rate content streaming of a video** that is playable on one or more end user stations over the internet, the system comprising:
1[A]	at least one storage device storing the video,
1[B]	wherein **the video is digitally encoded at a plurality of different bitrates** creating a plurality of streams including a low quality stream, a medium quality stream, and a high quality stream,

Not in Dispute:

- Ogdon teaches content at different qualities.
- Ogdon teaches content including video.
- Ogdon teaches adaptive switching.
- Allen’s Background teaches encoding the same video at different qualities.

The Dispute:

- Whether Ogdon teaches encoding the same video at different qualities. **YES.**
- Even if not, whether a POSITA would have been motivated to combine Ogdon + Allen. **YES**

The Board Is Not Bound By Findings Made in Institution Decisions and Can Change Its View if Convinced Its Initial Inclinations Were Wrong

> "Contrary to TriVascular's assertions, the Board is not bound by any findings made in its Institution Decision. At that point, the Board is considering the matter preliminarily without the benefit of a full record. The Board is free to change its view of the merits after further development of the record, and ***should do so*** if convinced its initial inclinations were wrong."

Trivascular, Inc. v. Samuels, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (emphasis original)

- DISH relies heavily on the Board's finding in other IPR institution decisions that Ogdon allegedly does not disclose storing multiple copies of the same video. *E.g.*, Paper 19 (POR) at 5, 24 n.4, 25. But on a full record, those findings are respectfully incorrect.

Ogdon Teaches Different Versions of Segments That Are Corresponding, Replaceable, and Substitutable

ordered according to their presentation sequence. Moreover, substantially every segment (or subcollections thereof) in one version corresponds with a segment (or subcollections thereof) having the same presentation order, in each of the other versions. Thus, assuming corresponding segments (or subcollections thereof) in different versions have approximately the same presentation duration, any of the corresponding alternative segments (or subcollections thereof) from different versions can be presented as a replacement for another such corresponding segment (or subcollection) during the presentation. Thus, it is an aspect of the present invention to provide corresponding alternative segments (or subcollections thereof) having substantially different network transmission requirements so that such corresponding alternative segments (or subcollections thereof) can be substituted for one another depending on the performance of the communications network. For example, the segments

EX1004 (Ogdon) at 2:45-61

sions. Thus, it is an aspect of the present invention to dynamically and adaptively switch between content web-servers and/or versions of the presentation according to network transmission characteristics at each client network node so that the clients at the client nodes have presented to them simultaneously, synchronously and in real time, corresponding (in content) segments of the presentation. For

EX1004 (Ogdon) at 3:38-44

See Paper 1 (Petition) at 24; -043 Paper 1 (Petition) at 50

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches Switching Between Different Video Versions

communications network. For example, the segments (subcollections) of a first version of a presentation may require a network transmission rate sufficient for real time or animated video and the segments for another version of the presentation may only require a transmission rate sufficient

EX1004 (Ogdon) at 2:61-66

Note that as the expected amount of time for retrieving one or more presentation elements lengthens, larger groups of presentation elements may be retrieved and/or better presentation quality presentation elements may be retrieved (e.g., the presentation quality may be enhanced from limited or no animation to full animation).

EX1004 (Ogdon) at 22:42-47

6. A system as claimed in claim 1, wherein (a) and (b) following:

(a) said first subcollection includes video with motion, and said second subcollection includes video with one of: (i) reduced motion, and (ii) no motion, and

(b) said first subcollection is presented to the first user at said first client node simultaneously with said second subcollection being presented to a second user at a second client node.

EX1004 (Ogdon) at Claim 6

See Paper 1 (Petition) at 21-22; Paper 37 (Reply) at 4-9; -043 Paper 1 (Petition) at 16, 50-52

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches that the Different Video Versions can be the Same Video

Subsequently, in step **504**, the host **200** accesses the resource file **212** for resolving virtual webserver names in the accessed segment collection for thereby providing actual content webserver network **70** addresses having at least the video versions of the presentation. Additionally, note that it

EX1004 (Ogdon) at 21:30-34

sions. Thus, it is an aspect of the present invention to dynamically and adaptively switch between content web-servers and/or versions of the presentation according to network transmission characteristics at each client network node so that the clients at the client nodes have presented to them simultaneously, synchronously and in real time, corresponding (in content) segments of the presentation. For

EX1004 (Ogdon) at 3:38-44

client node, wherein said first and second segment selectors each select, without user selection input, one of said first and second subcollections for simultaneous presenting of a same corresponding portion of the presentation.

EX1004 (Ogdon) at 30:19-22

- Ogdon teaches multiple video versions of **the** presentation, i.e. the *same* presentation.
- Further, claim 9 of Ogdon confirms multiple video versions that correspond in content.

9. A network presentation distribution system as claimed in claim **1**, wherein said first subcollection includes a first video portion, and said second subcollection includes a different second video portion that corresponds in content with said first video portion, and wherein said first and second video portions have substantially different expected data transmission rates for being transmitted to said first client node, and wherein said first segment selector uses said different expected data transmission rates in selecting one of said first and second subcollections.

EX1004 (Ogdon) at Claim 9

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See Paper 1 (Petition) at 21-22; Paper 37 (Reply) at 4-9; -043 Paper 1 (Petition) at 16, 50-52

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH Erroneously Argues That Ogdon's "Slide Show Format" and "Slide Show Alternative" Refer to PowerPoint Slides

None of Petitioner's references teach or suggest subdividing the ***same video content*** into time-aligned portions of different bitrates. EX2006, ¶¶[70-82, 100-102]. Ogdon describes a presentation with different "segments" and specifies these segments correspond to slides in a presentation slide show (*e.g.*, a PowerPoint presentation). EX1004, 2:62-66, 3:51-64, 6:61-62; 22:8-9. Ogdon's segments have

Paper 19 (POR) at 8

- DISH erroneously cites to Ogdon's disclosure of a client switching to a "slide show format" (also referred to as a "corresponding slide show alternative") to mean switching to a "PowerPoint presentation." Paper 19 (POR) at 8. But Ogdon does not mention PowerPoint. Plus, a "slide show format" was considered a very low frame rate video.

second content webserver. Moreover, synchronously with the presentation to the first client, a second client (at a second client node) may experience the presentation in a slide show format from a third content webserver, wherein the initial two segments presented are corresponding alternative segments to the first and second segments presented to the first client. Additionally, a third client may synchronously experience the first segment of the presentation via network transmissions from the first content webserver but subsequently experience the corresponding slide show alternative to the second segment from the third content webserver due to, for example, network transmission slowdowns.

EX1004 (Ogdon) at 3:51-64

See Paper 37 (Reply) at 7-9; *see also* -043 Paper 1 (Petition) 29, 50-52

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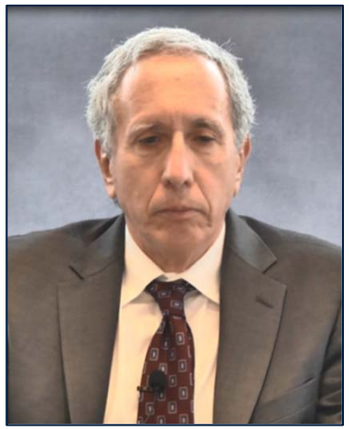
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Both Experts Agree That a Low Frame Rate Video is a Slide Show Type Video

Dr. Henry Houh

"[A] POSITA in the late 1990s would have understood Ogdon's disclosure of 'slide show format' and 'slide show alternative' (EX1004, 3:51-63) to mean a very low frame rate video—such as at about 1 frame per second (fps). This type of low-quality video streaming where a single frame of video was displayed for relatively much longer (e.g., 1 second) than a frame of a traditional 30 frame per second video (33 ms) was commonly referred to as a 'slide show' type video."

EX1028 (Houh Decl.) ¶ 34



Dr. Kevin Jeffay

Q. Okay. Going back to my example of the car race, a user watching a car race at 30 frames per second and the frame rate drops to one frame per second, would you agree that the user is still watching the same car race.

ATTORNEY WILSON: Objection. Form.

THE WITNESS: Well, they're certainly watching the same race. They are essentially seeing like a slide show of the race.

EX1030 (Jeffay Tr.) at 140:22-141:7

See Paper 37 (Reply) at 8

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH's Own Internal Technical Documents Refer to a Low Frame Rate Video as a "Slideshow" Mode

communication issues discussed above—i.e., packet loss, latency, and congestion. During video streaming the client is constantly communicating the status and health of the communication link. The client will forward statistics on such things as packet loss and latency. With this information, the media server makes decisions concerning whether to throttle the bit rate up, down, or drop into emergency "slideshow" mode. In practice, these mechanisms do not work well because the client-server communication overhead creates additional latency problems

EX2059 (Internal Move Document) at 11

Effective Bit Rate (percent of possible, averaged over 5 test runs)
800 kbps home DSL with client-side added latency (in milliseconds), packet loss

Protocol		No added	50ms 0%	50ms 3%	50ms 5%	100ms 0%	100ms 3%	100ms 5%
RTP/RTSP (UDP)								
RTP/RTSP (TCP)*		100%	78%	66%	39%	63%	38%	29%
Progressive (TCP)	Vividas	98%	80%	41%	35%	82%	30%	19%
	Apple	92%	63%	31%	26%	57%	22%	16%
	CBS	93%	68%	31%	26%	39%	29%	19%
Move Adaptive Stream (TCP)**		100%	91%	83%	68%	82%	60%	49%

*On several of the test runs, the protocol went to 80 kbps slideshow mode.
**On several of the test runs the protocol stayed around 320 kbps.

EX2059 (Internal Move Document) at App. A

move networks, inc.

The Next Generation Video Publishing System

Move Networks provides a new standard for online video distribution

EX2059 (Move Internal Doc.)

See Paper 37 (Reply) at 8

VENABLE LLP

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Prior Art Consistently Refers to a Slide Show Format As a Very Low Frame Rate Video

With your RealVideo encoding tool, you can choose to encode a large video for low bandwidths as a "slide show," which streams approximately one frame per second.

EX1031 (RealNetworks) at 56

network connection bandwidth. StreamWorks, Vosaic, and InterVu are based on MPEG** [11], while Vivo uses H.263 [12]. In general, these systems are designed to work over higher-bandwidth LAN connections and not at modem speeds. At modem speeds, the MPEG-based systems revert to slide-show-type video.

EX1019 (Willebeek) at 270

Valid Values:	**normal**, smooth motion, sharp image, slide show
Function:	This tag is used to control the trade-off between spatial image quality and the number of frames. How does this relate to the MS `<video-quality>` measurement

EX1005 (Allen) at 63:13-16

See Paper 37 (Reply) at 7-9; *see also* -043 Paper 1 (Petition) 29, 50-52

Ogdon Does Not Teach Switching Between Videos Having Different Languages

- DISH focuses on Ogdon's disclosure of content "for Japanese speaking audience members" to argue that Ogdon switches between different content and not versions of the same video. Paper 47 (Sur-reply) at 6.
- But Ogdon does not teach switching between Japanese versions and English versions. This would be nonsensical. The English speaking clients and Japanese speaking clients each have their own content webservers, and switching only occurs between versions of the same language. EX1004 (Ogdon) at Fig. 1B.

See Paper 9 (ID) at 22 ("[W]e do not read Ogdon to indicate that its presentation versions *must be* wholly different types of presentation materials, i.e., presentations in different languages") (emphasis in original)

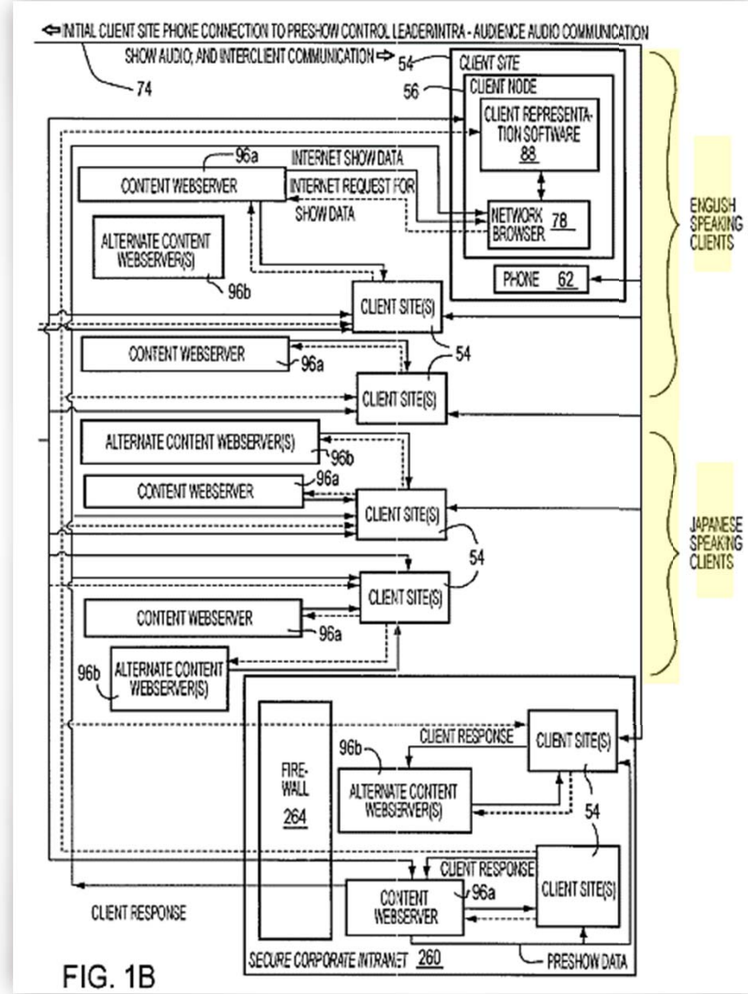

FIG. 1B

EX1004 (Ogdon) at Fig. 1B

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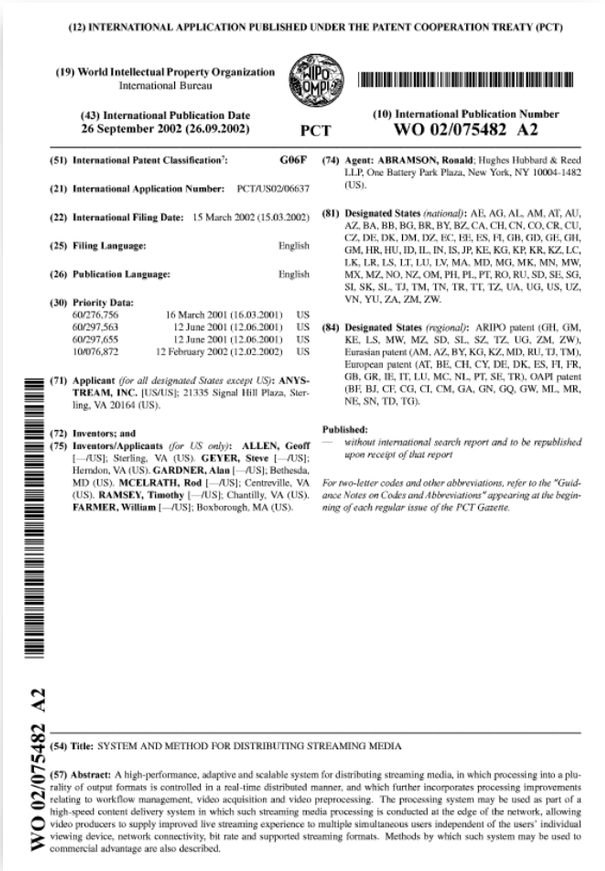
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Even If Ogdon Does Not Teach a "video . . . digitally encoded at a plurality of different bitrates," Allen Teaches It



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WO 02/075482 A2

(54) Title: SYSTEM AND METHOD FOR DISTRIBUTING STREAMING MEDIA

(57) Abstract: A high-performance, adaptive and scalable system for distributing streaming media, in which processing into a plurality of output formats is controlled in a real-time distributed manner, and which further incorporates processing improvements relating to workflow management, video acquisition and video preprocessing. The processing system may be used as part of a high-speed content delivery system in which such streaming media processing is conducted at the edge of the network, allowing video producers to supply improved live streaming experience to multiple simultaneous users independent of the users' individual viewing device, network connectivity, bit rate and supported streaming formats. Methods by which such system may be used to commercial advantage are also described.

EX1005 (Allen)

in A-D converter (**108**). The redigitized video is then simultaneously processed in a plurality of encoders (**110 – 118**), which each provide output in a particular popular format and bit rate. (In a video on demand environment, the encoding would occur at the time requested, or the content could be pre-stored in a variety of formats and bit rates.) Alternately, as shown in **Fig. 1B**, the analog video from **106** may be routed to

EX1005 (Allen) at 3:16-20

In the currently existing model as shown in **Fig. 10**, content is produced and encoded by the Content Producer (1002) at the point of origination. This example assumes it is pre-processed and encoded in RealSystem, Microsoft Windows Media, and Apple QuickTime formats, and that each format is encoded in three different bit rates, 56Kbps, 300Kbps, and 600Kbps. Already, nine individual streams (1004) have

EX1005 (Allen) at 12:1-5

See Paper 1 (Petition) at 22-26

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

A POSITA Would Have Been Motivated to Combine Ogdon and Allen

Dr. Henry Houh

"A POSITA would have been motivated to encode the video presentation of Ogdon, including each sequential segment of the video, into each of a low quality, medium quality, and high quality level bitrate stream, as taught by Allen . . . . A POSITA would have had a reasonable expectation of success with such a combination because both Ogdon and Allen are drawn to similar systems of client-server based streaming and because simply encoding another copy at an additional quality level would have been a simple and straightforward modification for a POSITA."

EX1003 (Houh Decl.) ¶ 67; *see also id.* ¶¶ 65-66

"Based on the present record, we are persuaded that Petitioner has a reasonable likelihood of prevailing in showing that an ordinarily skilled artisan would have been motivated to combine Ogdon and Allen to yield this limitation. Ogdon teaches different quality versions of a presentation that may include video (see, e.g., Ex. 1004, 2:8–10, 2:30–66, 13:47–49, 22:44–47, 24:55), and Allen expressly teaches encoding the same content at bitrates of 56 kbps, 300 kbps, and 600 kbps (see, e.g., Ex. 1005, 12:1–5)."

Paper 9 (Institution Decision) at 21

See Paper 1 (Petition) at 22-26

VENABLE LLP

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Allen Does Not Teach Away

- DISH erroneously argues that Allen teaches away. But Petitioner relies on teachings from Allen's Background, which describes the well-known and "sophisticated" method of encoding the same video into different bit rate versions (i.e., 600 kbps, 300 kbps, 56 kbps). EX1005 (Allen) at 8-12.
- Moreover, contrary to DISH's assertions, Allen does not teach "a single-bitrate approach." *See* Paper 19 (POR) at 31. Allen simply moves the encoding process to multiple edge servers. EX1005 (Allen) at 24:19-25:23. The multiple edge encoders convert the video stream into formats and bitrates matched to each viewer. *Id.*

Another aspect of the present invention is a distribution system and method which allows video producers to supply improved live streaming experience to multiple simultaneous users independent of the users' individual viewing device, network connectivity, bit rate and supported streaming formats by generating and distributing a single live Internet stream to multiple edge encoders that convert this stream into formats and bit rates matched to that for each viewer. This method places the responsibility for encoding the video and audio stream at the edge of the network where the encoder knows the viewer's viewing device, format, bit rate and network connectivity, rather than placing the burden of encoding at the source where they know little about the end user and must therefore generate a few formats that are perceived to be the "lowest common denominator".

EX1005 (Allen) at 24:19-25:4

See Paper 37 (Reply) at 17-19

Teaching Away Requires a High Bar; Even Describing Methods as "Markedly Inferior" Does Not Teach Away

> "In view of the foregoing, the Board reasonably found that a skilled artisan would understand Stopper C is an acceptable alternative to Stopper B1 even though it is categorized as 'markedly inferior' to Stopper B1."

Novartis Pharma AG v. Regeneron Pharms., Inc.,2024 WL 4258368, at *3 (Fed. Cir. 2024) (cleaned up)

- The Federal Circuit has held that categorizing a method as "markedly inferior" does not teach away. Petitioner relies on Allen's teachings of methods that were "generally regarded as the most sophisticated methods currently available" and "the most efficient way to deliver streaming media today."

Fig. 10 represents the existing architecture for encoding and distribution of streaming media across the Internet, one using a terrestrial Content Delivery Network (CDN), the other using a satellite CDN. While these are generally regarded as the most sophisticated methods currently available for delivering streaming media to broadband customers, a closer examination exposes important drawbacks.

EX1005 (Allen) at 11:22-25

The process illustrated in **Fig. 10** is the most efficient way to deliver streaming media today, and meets the needs of *narrowband* consumers who are willing to accept spotty quality in exchange for free access to content. However, in any successful

EX1005 (Allen) at 13:1-3

See Paper 37 (Reply) at 17-19

Dr. Jeffay Confirmed at His Deposition That Allen Still Teaches Encoding Into Multiple Bitrates

Q. So assuming the characteristics of each viewer's device are not identical, the multiple EDGE encoders in Allen will convert the internet stream into different formats and different bit rates. Agree?

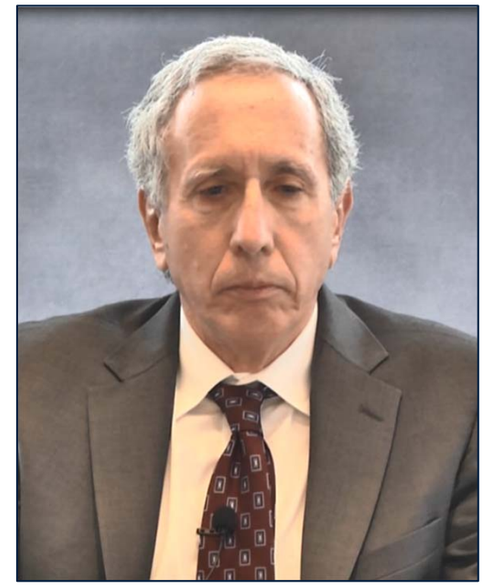
A. As a collection that's true, but, again, each encoder is only generating one format and bit rate.

...

Q. So assuming the characteristics of each viewer's device are not identical, you would end up with streams that are in different formats and different bit rates. Agree?

A. At different parts of the network, yes.

EX1030 (Jeffay Tr.) at 240:10-241:2



Dr. Kevin Jeffay

See Paper 37 (Reply) at 18-19

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Does Not Teach Away from Video Streaming

- DISH erroneously argues that Ogdon teaches away from video streaming because its background discusses "drawbacks" and "expensive" and "specialized" computers and equipment. Paper 47 (Sur-reply) at 2. But Ogdon is clearly describing "dedicated" "corporat[e]" "telepresentation centers" where participants are "required to travel to these centers." EX1004 (Ogdon) at 1:19-42.
- The purpose of Ogdon is thus to provide "a system that alleviates these drawbacks," where anyone can "access and/or participate in a presentation using standard telephony and Internet network connections found in most offices and many homes." EX1004 (Ogdon) at 1:43-48.

Thus, due to the expense of provisioning and maintaining such networked conferencing systems, corporations typically have only a small number of such conferencing systems at strategically located telepresentation centers for conducting such telepresentations. However, there are numerous drawbacks to this approach, such as:

(1.1) The dedicated telepresentation centers are expensive to maintain;

(1.2) Presentation participants are still required to travel to these centers; and

(1.3) Potential members of such a presentation who are not able to access such a center are excluded from the presentation.

Accordingly, it would be advantageous to have a network presentation distribution system that alleviates these drawbacks, wherein such a system would allow individuals to access and/or participate in a presentation using standard telephony and Internet network connections found in most offices and many homes.

EX1004 (Ogdon) at 1:19-48

See Paper 37 (Reply) at 17-18

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon and Ogdon + SMIL 2.0 Disclose Streamlets of the Same Duration

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon and Ogdon + SMIL 2.0 Teach Streamlets of the Same Duration

’138 Patent Independent Claim 1

Not in Dispute:

- Ogdon teaches corresponding segments having “approximately the same” duration.
- The motivation to combine SMIL 2.0 with Ogdon.

The Dispute:

- Whether Ogdon teaches streamlets of the same duration. **YES.**
- Even if not, whether SMIL 2.0 teaches streamlets of the same duration. **YES.**

1[D]	wherein at least one of the low quality stream, the medium quality stream, and the high quality stream is encoded at a bitrate of no less than 600 kbps; and
1[E]	wherein the first streamlet of each of the groups of streamlets has **the same first duration** and encodes the same first portion of the video in each of the low quality stream, the medium quality stream, and the high quality stream, and wherein the first streamlet of the low quality stream encodes the same first portion of the video at a lower bitrate than the first streamlet of the high quality stream and the first streamlet of the medium quality stream.

Ogdon Teaches Segments, i.e., Streamlets

- DISH erroneously argues that "each of Ogdon's 'segments' is a distinct, stand-alone piece of content" and not the same video "divided into smaller portions." *See* Paper 19 (POR) at 16-17.
- Yet, Ogdon's teaching are clear:

Note that each of the one or more presentation versions includes one or more presentation segments (hereinafter also denoted simply "segments") that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation "elements" in that each such subcollection is intended to be an indivisible portion of a presentation performance. Moreover, each version of a presentation typically has its subcollections of segments (i.e, presentation elements) ordered according to their presentation sequence. Moreover,

EX1004 (Ogdon) at 2:36-45

responding (in content) segments of the presentation. For example, a first client (at a first client node) may experience the presentation as an ordered series of presentation segments, wherein the first and second ordered segments are presented in full animation, wherein the first of the ordered segments is obtained from a first content webserver and the second segment of the ordered segments is obtained from a

EX1004 (Ogdon) at 3:44-50

33. A presentation system for presenting a multimedia presentation having video and audio portions that correspond in content, comprising:

one or more video supplying network nodes for communicating one or more video portions of the multimedia presentation to one or more networked client nodes;

EX1004 (Ogdon) at Claim 33

See Paper 1 (Petition) at 17, 20-21, 25

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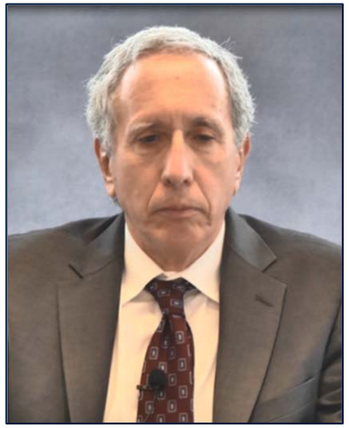
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

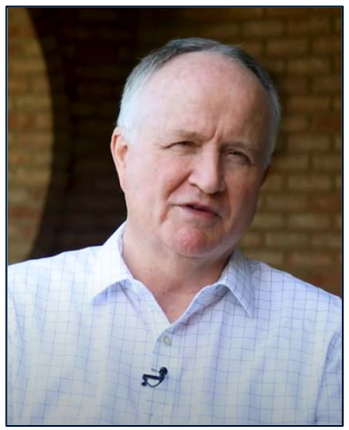
DISH's Expert and Inventor Agree that Segments Are Streamlets



Dr. Kevin Jeffay

audio content streaming." The architecture included using a web server hosting sets of content files where each set represented segments ("streamlets") of a larger media presentation encoded in the same format but at a particular streaming bit-rate.

EX2006 (Jeffay Decl.) ¶ 46



Drew Major

Q. Now, there you're talking about creating video streamlets that were short in length. Earlier you used the word segment. Is that a reference to streamlets?

A. Yes, same type of -- I -- I will call them sometimes video chunks or video streamlets or video segments.

...

Q. So -- so your invention, just to break it down, is you're taking -- you're creating video streamlets or segments, which are the same thing, right?

A. Yeah.

EX1021 (Major Tr.) at 50:11-17, 53:7-11

See Paper 37 (Reply) at 12-13

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon's Segments Can Be the Same Duration

- DISH erroneously argues that Ogdon's segments are only "***approximately*** the same presentation duration" and not the same duration. *See* Paper 19 (POR) at 36 (emphasis in original). But "approximately" the same includes exactly the same.

thereof) having the same presentation order, in each of the other versions. Thus, assuming corresponding segments (or subcollections thereof) in different versions have approximately the same presentation duration, any of the corresponding alternative segments (or subcollections thereof) from different versions can be presented as a replacement for another such corresponding segment (or subcollection) during the presentation. Thus, it is an aspect of the present invention to provide corresponding alternative segments (or subcollections thereof) having substantially different network transmission requirements so that such corresponding alternative segments (or subcollections thereof) can be substituted for one another depending on the performance of the communications network. For example, the segments

EX1004 (Ogdon) at 2:48-61

21. A method for presenting a networked presentation, comprising:

storing a plurality of segments of a presentation for network access via one or more content supplying nodes of a communications network, wherein there are subcollections of one or more of the segments, each subcollection having a predetermined presentation order and there is a first and a second of the subcollections, wherein said first subcollection is replaceable with said second subcollection when presenting the presentation;

EX1004 (Ogdon) at 32:28-38

- Ogdon teaches that its segments can be "substituted for one another" and are "replaceable" with one another. EX1004 (Ogdon) at 2:45-61, Claim 21.

See Paper 1 (Petition) at 24, 27-28

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon's File History Confirms That Segments Can Be the Same Duration

25. A network presentation distribution system as claimed in Claim 1, wherein for at least some of the collections, the corresponding presentation segments in the collection have identical audio portions for the presentation.

EX1014 (Ogdon Provisional) at 35

"This court has looked at the meaning of the term 'about,' and similar qualifying words or phrases, in other cases and has developed an approach to the interpretation of such terms: . . . We thus consider how the term . . . was used in the patent specification, the prosecution history, and other claims."

Ortho-McNeil Pharm. v. Caraco Pharm. Lab'ys, 476 F.3d 1321, 1326 (Fed. Cir. 2007)

Dr. Henry Houh

"A POSITA would have understood this disclosure to teach that corresponding alternate video presentation segments can each have identical audio portions, which would mean that the alternate video presentation segments would also have identical (i.e., same or equal) durations."

EX1003 (Houh Decl.) ¶ 75

See Paper 1 (Petition) at 28

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH Itself Uses Modifiers Such as "About" and "Substantially" to Include "Exactly"

The encoding module is further configured to generate a set of streamlets for each of the sequential streamlets. Each streamlet may comprise a portion of the media content having a predetermined length of time. The predetermined length of time may be in the range of between about 0.1 and 5 seconds.

EX1001 ('138 Patent) at 3:21-26

7. The system of claim 1, wherein each of the first streamlets has a first duration that is the range of 0.1 to 5 seconds.

EX1001 ('138 Patent) at Claim 7

17. As I mentioned above, we viewed this as an entirely new way of delivering video over the Internet that involved creating small, individually encoded streamlets of different qualities, such as high, medium and low quality streamlets from the original video content file, which are aligned by starting time and substantially the same duration (typically 2 seconds), and switching between the different quality streamlets. The contiguous playback in the time indexed order of

EX2010 (Major Decl.) ¶ 17

Q. Okay. So when you say, "Substantially the same duration," you mean precisely the same duration or almost the same duration?

A. Yeah. But --.

MR. GUY: Hold on. Wait. Asked and answered. Objection to form.

A. Yeah. Always the starting time is the same between all the sets.

EX1021 (Major Tr.) at 96:6-13

See Paper 37 (Reply) at 14

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Modifiers Such as "Approximately" Are Frequently Used in Patents to Include "Exactly"

"Claim 1's language 'wherein approximately the same axial force is acting on each of said cutting structure' means 'wherein nearly or exactly the same downforce parallel to the axis of the bit is taken by each cone.'"

Haliburton Servs. v. Smith Int'l, Inc., 2004 WL 305722, at *6 (E.D. Tex. 2004)

"[A]n ordinary artisan would understand the term 'approximately once a month,' as used in the specification of the '918 provisional application, to mean that once a month is the ideal timing for administering a maintenance dose."

Janssen Pharms., Inc. v. Tolmar, Inc., 718 F. Supp. 3d 394, 416 (D. Del. 2024)

See Paper 37 (Reply) at 14

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH Relies on *Ortho-McNeil* but the Case Supports Petitioner Because the "Range" Included the Exact Ratio

Modifiers like "approximately" and "substantially" are not the same as "exactly" or "identical." *See Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Lab'ys, Ltd.*, 476 F.3d 1321, 1328 (Fed. Cir. 2007) (construing "approximately" as "encompassing a ***range***").

Paper 47 (Sur-reply) at 12

- The Federal Circuit however construed "ratio is about 1:5" to mean "approximately 1:5, encompassing a range of ratios no greater than 1:3.6 to 1:7.1." *Ortho-McNeil Pharm. v. Caraco Pharm. Lab'ys*., 476 F.3d 1321, 1324 (Fed. Cir. 2007). **But the "range of ratios" included exactly 1:5.**

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Making Ogdon's Segments the Same Duration Would Have Been Obvious

Dr. Henry Houh

"To the extent it is found that Ogdon does not disclose that the first streamlets of each of the quality level streams each has an equal playback duration, a POSITA would have been motivated to make all of the corresponding segments in each version an equal duration of time to simplify the system and so that each corresponding streamlet in each version could serve as a replacement for that portion of presentation content so that when switching to a different version during the presentation the user still experiences a seamless presentation."

EX1003 (Houh Decl.) ¶ 77

"[W]e are persuaded preliminarily that an ordinarily skilled artisan considering Ogdon's teachings of corresponding segments (1) as having approximately the same duration and (2) as being replacements for one another . . . would have known to make the segments the same duration. . . . Otherwise, we are sufficiently persuaded by Petitioner's contentions, as discussed above . . . that an ordinarily skilled artisan would have known to encode Ogdon's video segments into corresponding quality level bitrates in real-time."

Paper 9 (Institution Decision) at 27

See Paper 1 (Petition) at 28-29

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

SMIL 2.0 Teaches Segments of the Same Duration

To the extent it is argued that Ogdon in view of Allen lacks certain limitations, for example that each corresponding first streamlet has the same or equal first duration (as described in limitations 1[E], 14[C][6], 23[D], and 28[E]), SMIL 2.0 teaches these limitations. For example, SMIL 2.0 teaches using a SMIL element called "<switch>" that "allows an author to specify a set of alternative elements encoded at different quality levels from which only the first acceptable element is chosen" EX1006, 61.

SMIL 2.0 also teaches using a SMIL element called "<seq>" which "defines a sequence" such that "media elements play one after the other" (EX1006, 158) and controlling duration of such media elements using the "dur" attribute (*id.*, 125-128). In one example, SMIL 2.0 teaches providing three sequential media elements and three alternative sequential media elements (annotated below as purple, yellow, and red) each having an equal playback duration of 5 seconds due to the "dur=5s":

Paper 1 (Petition) at 56-59

- DISH did not contest the combination of SMIL 2.0 with Ogdon and Allen, nor did DISH address SMIL 2.0's "dur" attribute in its POR. Its attempt to address "dur" in its sur-reply is too late.
- DISH's new Sur-reply argument, which argues that "SMIL explains that '[i]f the author specifies a value for dur that is shorter than the implicit duration for an element, the implicit duration will be cut short by the specified simple duration" (Sur-reply at 20), does not undermine SMIL's teachings. Even if this optional aspect were done, the example cited in the Petition (Pet. at 57) teaches alternate media with identical 5 second durations.

See Paper 1 (Petition) at 56-59

Ogdon Teaches “a streamlet request”

Ogdon Teaches “a streamlet request”

’138 Patent Independent Claim 14	
14[E]	place **a streamlet request** to the server over the internet connection for the first streamlet of the selected stream;

’138 Patent Dependent Claim 6	
6[B]	receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein **the at least one streamlet request** from the respective one of the one or more end user stations **includes a request** for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams;

Ogdon Teaches "a streamlet request"

'138 Patent Independent Claim 14	
14[E]	place **a streamlet request** to the server over the internet connection for the first streamlet of the selected stream;

'138 Patent Dependent Claim 6	

Not in Dispute:

- Ogdon teaches a "client-pull" system.
- Ogdon's clients place a request for segments.

The Dispute:

- Whether the limitation "a streamlet request" requires a client to place a single request to a server for a single streamlet, as argued by DISH. *See* Paper 19 (POR) at 40. **NO.**
- Even if so, whether Ogdon teaches this. **YES.**
  - DISH's argument that "Ogdon never describes requesting anything less than a 'collection or subcollection' of 'segments'" is wrong. *See* Paper 19 (POR) at 40.

See Paper 47 (Sur-reply) at 14

The Claim Language Does Not Support DISH's Interpretation

- Claim 6 of the '138 Patent, for example, states "at least one" streamlet request "includes" a request for a streamlet. The claim is not limited to a single request for a single streamlet.
- Claim 10 of the '555 Patent confirms that a single request can return multiple streamlets.

6. The system of claim **1**, further comprising: a plurality of web servers located at different locations across the internet, each web server configured to: receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein the at least one streamlet request from the respective one of the one or more end user stations includes a request for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams;

EX1001 ('138 Patent) at Claim 6

10. A content player device to stream a video over a network from a server for playback of the video, the content player device comprising:

a processor;

a digital processing apparatus memory device comprising non-transitory machine-readable instructions that, when executed, cause the processor to:

* * *

place a streamlet request to the server over the one or more network connections for the selected stream;

receive the requested streamlets from the server via the one or more network connections; and

provide the received streamlets for playback of the video.

EX1001 in IPR -146 ('555 Patent) at Claim 10

See Paper 47 (Sur-reply) at 9-10

See Paper 37 (Reply) at 11-12

In Any Event, Ogdon Teaches a Request for a Single Segment

Internet). For many networks (such as those including the Internet), this software package includes a network browser **78** such as the Internet browsers offered by Microsoft and Netscape, together with a client presentation software system **88** that coordinates with the browser **78** for requesting, receiving and displaying presentation segments (from the network **70**) as appropriate during the presentation.

EX1004 (Ogdon) at 7:56-63

Note that each of the one or more presentation versions includes one or more presentation segments (hereinafter also denoted simply "segments") that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation "elements" in that each such subcollection is intended to be an indivisible portion of a presentation performance.

EX1004 (Ogdon) at 2:36-42

1. A network presentation distribution system for presenting a presentation, comprising:

one or more presentation content supplying nodes of a communications network, said content supplying nodes for providing access, by a first user at a first client node of the communications network, to a collection of data segments of said presentation using said communications network, wherein said collection includes first and second subcollections of one or more of said segments;

EX1004 (Ogdon) at Claim 1

See Paper 1 (Petition) at 22, 33-35, 50; Paper 37 (Reply) at 11-12

No Requirement to Retrieve Streamlets from the Same Storage Device

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

No Requirement to Retrieve Streamlets from the Same Storage Device

’138 Patent Dependent Claim 6	
6[A]	The system of claim 1, further comprising: **a plurality of web servers** located at different locations across the internet, each web server configured to:
6[B]	receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein the at least one streamlet request from the respective one of the one or more end user stations includes a request for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams;
6[C]	retrieve from **the at least one storage device** the requested first streamlet from the currently selected one of the low quality stream, the medium quality stream, and the high quality stream; and
6[D]	send the retrieved first streamlet to the respective one of the one or more end user stations over the one or more internet connections.

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

No Requirement to Retrieve Streamlets from the Same Storage Device

’138 Patent Dependent Claim 6	
6[A]	The system of claim 1, further comprising: **a plurality of web servers** located at different locations across the internet, each web server configured to:
6[B]	receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein the at least one streamlet request from the respective one of the one or more end user stations includes a request for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams;
6[C]	retrieve from **the at least one storage device** the requested first streamlet from the currently selected one of the low quality stream, the medium quality stream, and the high quality stream; and

Not in Dispute:

- Ogdon teaches a plurality of web servers.

The Dispute:

- Whether claim 6 of the ’138 Patent requires that the claimed “plurality of web servers” must retrieve streamlets from the “same” storage device, as argued by DISH. *See* Paper 19 (Sur-reply) at 19. **NO.**
- Even if so, whether Ogdon teaches this. **YES.**

No Requirement to Retrieve Streamlets from the Same Storage Device

- The claim language expressly states that the plurality of web servers retrieve streamlets from "the ***at least one*** storage device."

6. The system of claim 1, further comprising: a plurality of web servers located at different locations across the internet, each web server configured to: receive at least one streamlet request over one or more internet connections from a respective one of the one or more end user stations to retrieve the first streamlet, wherein the at least one streamlet request from the respective one of the one or more end user stations includes a request for a currently selected first streamlet from one of the low quality stream, the medium quality stream, and the high quality stream based upon a determination by the respective one of the one or more end user stations to select a higher or lower bitrate version of a respective one of the plurality of streams; retrieve from the at least one storage device the requested first streamlet from the currently selected one of the low quality stream, the medium quality stream, and the high quality stream; and send the retrieved first streamlet to the respective one of the one or more end user stations over the one or more internet connections.

EX1001 ('138 Patent) at Claim 6

Q. Claim 6 of the '138 patent actually says, "[th]e at least one storage device." Agree?

A. Retrieved, yes, retrieved from at least the one storage device, yes, I agree.

Q. At least one storage device means there could be one storage device. Agree?

A. Correct.

Q. There could be two storage devices; correct?

A. Correct.

Q. There could be three storage devices; correct?

A. Sure.

EX1030 (Jeffay Tr.) at 246:3-16

See Paper 37 (Reply) at 19-20

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

In Any Event, Ogdon Teaches Retrieving Streamlets From a Single Storage Device

31. A method for presenting a networked presentation, comprising:

storing a plurality of segments for a presentation, wherein said segments are network accessible from one or more content supplying network nodes for presenting the presentation, and wherein for a first subcollection of one or more of the segments, said first subcollection is capable of being accessed from a first of the content supplying nodes, and at least one of (a) and (b):

(a) said first subcollection has a corresponding different second subcollection of one or more of said segments that has been identified as a replacement for the first subcollection, and

(b) said first subcollection is capable of being accessed from a second of said content supplying nodes;

EX1004 (Ogdon) at Claim 31

The present invention supports presentation content being distributed to any number of communications network (web) servers for enhanced reliability. Thus, if one of these network servers becomes inaccessible during a presentation, the present invention utilizes a notion of "virtual servers" (i.e., a collection of a number of communications network servers from which presentation data can be selectively transmitted) for determining an alternative communications network server. Accordingly, this allows the clients (audience members) using the affected communications network server to be switched to another network server in the virtual server collection during the presentation.

EX1004 (Ogdon) at 5:53-65

See Paper 37 (Reply) at 19-20

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches “receiv[ing] at least one virtual timeline request”

Ogdon Teaches "receiv[ing] at least one virtual timeline request"

'138 Patent Dependent Claim 9	
9	The system of claim 8, wherein the first web server is further configured to: **receive at least one virtual timeline request** over the one or more internet connections **from the one or more end user stations to retrieve a virtual timeline**; and send the virtual timeline to the requesting one of the end user stations over the one or more network connections.

Not in Dispute:

- Ogdon's "commands" within "scripts" are a virtual timeline.
- The clients receive the virtual timeline "commands" from the server.

The Dispute:

- Whether Ogdon teaches "receiv[ing] at least one virtual timeline request" as recited in claim 9 of the '138 Patent. **YES.**
  - DISH only argues that Ogdon's web server does not receive a request for a virtual timeline from a client. Paper 19 (POR) at 39 ("Ogdon fails to disclose or suggest a client requesting its "script" or a server response to the client").

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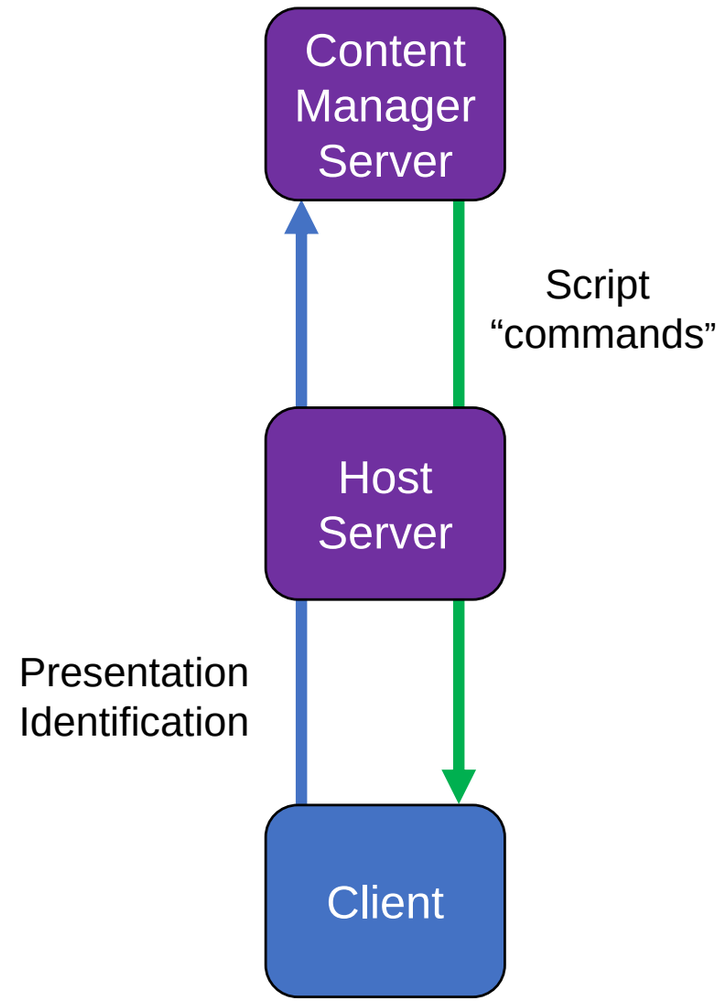
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Claims Do Not Require the Web Server Receive a Request *Directly* From the Client

- Ogdon discloses that a web server (Host Server) receives a request in the form of a "presentation identification" from a Client over the Internet. EX1004 (Ogdon) at 16:45-48.
- In response, the Host Server transmits the request to a Content Manager Server and receives in return virtual timelines (i.e., Script "commands"). EX1004 (Ogdon) at 18:47-51.
- The Host Server then "transmit[s] commands" to the client, *i.e.*, virtual timelines. EX1004 (Ogdon) at 21:59-63.



See Paper 1 (Petition) at 41; Paper 37 (Reply) at 20-21

The ’138 Patent Does Not Have Any Disclosure of a Web Server Receiving a Request From a Client

- Ogdon teaches a client request for a virtual timeline in at least as much detail as the ’138 Patent.
- This is the ***only*** portion of the ’138 Patent that describes “virtual timeline.” *See* EX1001 (’138 Patent) at 12:31-13:2.
- If this is sufficient written description for claim 9, then Ogdon’s robust teachings must render the claim obvious. *See* Petition at 38-41; EX1028 (Houh Decl.) ¶¶ 65-68.

FIG. **6***a* is a schematic block diagram illustrating one embodiment of a virtual timeline **600** in accordance with the present invention. In one embodiment, the virtual timeline **600** comprises at least one quantum media extension **602**. The quantum media extension (hereinafter “QMX”) **602** describes an entire content file **200**. Therefore, the virtual timeline (hereinafter “VT”) **600** may comprise a file that is configured to define a playlist for a user to view. For example, the VT may indicate that the publisher desires a user to watch a first show QMX **602***a* followed by QMX **602***b* and QMX **602***c*. As such, the publisher may define a broadcast schedule in a manner similar to a television station.

FIG. **6***b* is a schematic block diagram illustrating an alternative embodiment of a VT **600** in accordance with the present invention. In the depicted embodiment, the VT **600** may include a single QMX **602** which indicates that the publisher desires the same content to be looped over and over again. For example, the publisher may wish to broadcast a never-ending infomercial on a website.

FIG. **6***c* is a schematic block diagram illustrating one embodiment of a QMX **602** in accordance with the present invention. In one embodiment, the QMX **602** contains a multitude of information generated by the content module **112** configured to describe the content file **200**. Examples of information include, but are not limited to, start index **604**, end index **606**, whether the content is live **608**, proprietary publisher data **610**, encryption level **612**, content duration **614** and bitrate values **616**. The bitrate values **616** may include frame size **618**, audio channel **620** information, codecs **622** used, sample rate **624**, and frames parser **626**.

A publisher may utilize the QVT **600** together with the QMX **602** in order to prescribe a playback order for users, or alternatively selectively edit content. For example, a publisher may indicate in the QMX **602** that audio should be muted at time index 10:42 or video should be skipped for 3 seconds at time index 18:35. As such, the publisher may selectively skip offensive content without the processing requirements of editing the content.

EX1001 (’138 Patent) at 12:31-13:2

See Paper 37 (Reply) at 20-21

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Dr. Jeffay Confirmed That a POSITA Could Practice Claim 9 Based on the Claim Language Alone

Q. Do figure 6A or Column 12, line 31 to 43, describe anything about a virtual timeline being requested by a client?

A. In this passage, no. This is just illustrating a schematic for the timeline, the virtual timeline.

...

Q. Does figure 6A in Column 12, line 31 to 43 describe what's happening in claim 9?

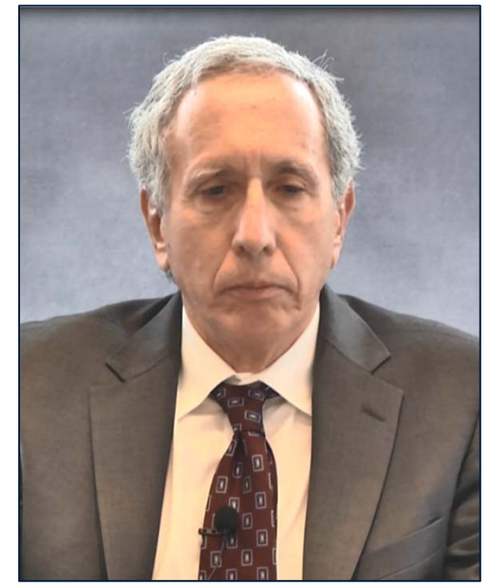
A. No. But I think what's happening in claim 9 is incredibly straightforward for a person of ordinary skill in the art. I don't think they need any more explanation than the text in claim 9.

...

Q. You would agree that claim 9 doesn't need any more explanation from the text in claim 9. Agree?

A. In terms of being able to practice what's in claim 9, yes.

EX1030 (Jeffay Tr.) at 251:9-255:5



Dr. Kevin Jeffay

See Paper 37 (Reply) at 20-21

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches “live event video”

Ogdon Teaches “live event video”

’555 Patent Independent Claim 18	
18[A]	at least one storage device configured to store **live event video**,

The Dispute:

- Whether Ogdon teaches “live event video” as recited in claim 18 of the ’555 Patent. **YES.**

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon Teaches "live event video"

[57] **ABSTRACT**

A presentation system is disclosed for distributing a performance of a presentation synchronously to a plurality of client nodes on a network such as the Internet. The presentation system distributes presentation content data to a plurality of network server nodes, and during a performance of the presentation, the client nodes receiving the presentation determine a particular variation of data presentation to retrieve from the network server nodes. In particular, the

EX1004 (Ogdon) at Abstract

Additionally, the content manager **104** is also responsible for accessing and maintaining a show content archival database **126**. Thus, following a live presentation performance using the present invention, the content manager **104** is capable of downloading the presentation content from the various content webservers **96** as well as presentation information retained in the operations center **58** into the show content archival database **126** for storage and/or possible replay. Note that the audio

EX1004 (Ogdon) at 10:5-13

Note that it is also an aspect of the present invention that an ordering of predefined segments (or subcollections thereof) is capable of being presented and archived, and subsequently represented. Moreover, such an ordering can

EX1004 (Ogdon) at 3:11-14

performance, via, for example, network **70**. Note that confirmation of presentation performance registration includes, if necessary, a download of presentation specific software that provides a client with an icon on the client's client node **56** as a reminder of the scheduled presentation performance date and time for which the client has registered. Further, if the presentation for which the client

EX1004 (Ogdon) at 10:48-54

See -146 Paper 1 (Petition) at 22-23; -146 Paper 34 (Reply) at 19-20

Ogdon and Ogdon + Shteyn Teach Storing Streamlets as “separate files”

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ogdon and Ogdon + Shteyn Teach Storing Streamlets as “separate files”

’798 Patent Dependent Claim 16	
16	The end user station of claim 11, wherein at least a plurality of streamlets are **separate files** stored by the at least one server.

The Dispute:

- Whether Ogdon teaches storing streamlets as “separate files” as recited in claim 16 of the ’798 Patent. **YES.**
  - DISH does not address Ogdon’s disclosure of “separate files” and thus has waived any argument that Ogdon alone does not satisfy this limitation.
- Even if not, whether Shteyn teaches streamlets stored as “separate files” and whether a POSITA would have been motivated to combine Ogdon + Shteyn. **YES.**

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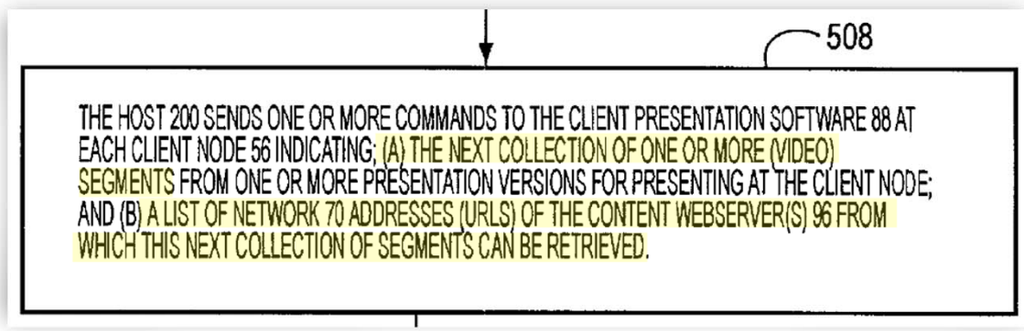
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

DISH Does Not Dispute That Ogdon Alone Teaches Storing Streamlets as "separate files"

Regarding the "Resource Name" column **640** of script description **600**, the entries of this column provide an identification of a presentation resource (e.g. presentation data segment file) independently of the network **70** address or node upon which the resource resides. Thus, a complete specification of a location of the resource requires the corresponding resource location and the resource name entries from the same row of script description **600**. The

EX1004 (Ogdon) at 28:15-22



EX1004 (Ogdon) at FIG. 2C

See -043 Paper 1 (Petition) at 49

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Shteyn Teaches Storing Streamlets as “separate files”

(57) **ABSTRACT**

An electronic file, e.g., an MP3 file, is partitioned into a sequence of segments at the server side. The first segment is played out upon downloading. While the first segment is being played out, the second is being downloaded and buffered so that it is available when the play out of the first segment is completed. While playing out a current one of the segments, next one(s) of the segments are being downloaded and buffered. This partitioning and sequential play out enables to emulate streaming of a file and to minimize latency while downloading an electronic file.

EX1016 in -043 IPR (Shteyn) at Abstract

FIG. 2 gives an example of information-describing content coded in XML. The code fragment labels the segments as having a title “The best ever music” performed by “V. R. Famous” and having several parts. The segment labeled “part1” is in a preferred format and described the length of the part, e.g., in bytes, the format, the minimum bandwidth required for a connection, and the location on the Internet. An alternative first part is labeled “part1 alt” having a different length, different format, different minimum bandwidth requirement, and a different location. The XML code can be

EX1016 in -043 IPR (Shteyn) at 3:44-53

To this end the content file is split into multiple parts. Each part or segment requires a relatively short download time. Therefore, the play-out latency is determined by the download time of the first part. The size of the individual part can

EX1016 in -043 IPR (Shteyn) at 1:65-2:1

See -043 Paper 1 (Petition) at 59-60

A POSITA Would Have Been Motivated to Combine Ogdon and Shteyn

Dr. Henry Houh

"A POSITA would have been motivated to modify the apparatus of Ogdon such that each segment is stored as a separate file at the at least one server to simplify streaming requests by requesting individual successive files rather than requiring the requests to include byte- or other ranges of the video. A POSITA would have had a reasonable expectation of success with such a combination because both Ogdon and Shteyn are drawn to similar systems of client-server based streaming and storing segments as separate files would have been a straightforward modification for a POSITA."

EX1003 in -043 IPR (Houh Decl.) ¶¶ 151-52

"We are persuaded preliminarily that an ordinarily skilled artisan would have combined Shteyn's teaching of storing each segment as a separate file with Ogdon's system (as modified by Allen) to 'simplify streaming requests by requesting individual successive files.'"

Paper 8 in -043 IPR (Institution Decision) at 46

See -043 Paper 1 (Petition) at 60

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Secondary Considerations Do Not Overcome Obviousness

DISH Cannot Show a Nexus to the Claims

"In order to accord substantial weight to secondary considerations in an obviousness analysis, the evidence of secondary considerations must have a 'nexus' to the claims, i.e., there must be a legally and factually sufficient connection between the evidence and the patented invention. . . . A patent claim is not coextensive with a product that includes a 'critical' unclaimed feature that is claimed by a different patent and that materially impacts the product's functionality.'"

Fox Factory, Inc. v. SRAM, LLC, 944 F.3d 1366, 1373-75 (Fed. Cir. 2019) (cleaned up)

"On remand, the Board, in considering the evidence of unexpected results, should determine whether there is a nexus between the unexpected in vivo concentration profile and aspects of the claimed invention not already present in the prior art. More specifically, . . . there must be a nexus to some aspect of the claim not already in the prior art.

In re Huai-Hung Kao, 639 F.3d 1057, 1069 (Fed. Cir. 2011)

See Paper 37 (Reply) at 22-24

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The "Secret" of the Move Player was Multiple TCP Connections

With a single innovation, Quantum streaming solves or alleviates to the extent possible, the problems of reliability, efficiency, and latency. The secret lies in our use of multiple TCP connections between the client and the origin web server (or web cache—the intervention of a cache is transparent to the client.) Other streaming solutions use a single connection and receive their data serially. By requesting more than one streamlet at a time ("parallel retrieval") with each request on a different connection, efficiency is raised to near maximum and latency is virtually eliminated.

EX2011 (Move Internal Doc.) at 6

Move Adaptive Stream mitigates the reliability, efficiency, and latency issues of traditional streaming. The secret lies in the use of multiple TCP connections between the client and the origin Web server and the use of client-side decision-making to retrieve the streamlets with the optimum bit rate. Rather than trust the media server to throttle bit rates up or down, Move Adaptive Stream immediately retrieves the bit rate that best matches current network conditions.

EX2059 (Move Internal Doc.) at 11

move networks, inc.

The Next Generation Video Publishing System

Move Networks provides a new standard for online video distribution

EX2059 (Move Internal Doc.)

See Paper 37 (Reply) at 22-24

Multiple TCP Connections Are Claimed In a Different DISH Patent

2. The end user device of claim **1**, wherein the at least one TCP connection comprises multiple Transmission Control protocol (TCP) connections with the content server.

U.S. Patent No. 10,225,304, Claim 2

10. The method of claim **9**, wherein the at least one TCP connection comprises a plurality of different connections, and wherein the requesting the plurality of sequential streamlets includes requesting sub-parts of the streamlets over different ones of the plurality of different TCP connections, and wherein said presenting includes reassembling the streamlets from the received sub-parts.

U.S. Patent No. 10,225,304, Claim 10

(12) **United States Patent**
Major et al.

(10) **Patent No.: US 10,225,304 B2**
(45) **Date of Patent: *Mar. 5, 2019**

(54) **APPARATUS, SYSTEM, AND METHOD FOR ADAPTIVE-RATE SHIFTING OF STREAMING CONTENT**

(71) Applicant: **DISH TECHNOLOGIES LLC**, Englewood, CO (US)

(72) Inventors: **Robert Drew Major**, Orem, UT (US); **Mark B. Hurst**, Cedar Hills, UT (US)

(73) Assignee: **DISH TECHNOLOGIES LLC**, Englewood, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 39 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **15/207,172**

(22) Filed: **Jul. 11, 2016**

(65) **Prior Publication Data**

US 2016/0323341 A1 Nov. 3, 2016

Related U.S. Application Data

(63) Continuation of application No. 14/516,303, filed on Oct. 16, 2014, now Pat. No. 9,407,564, which is a

(Continued)

(51) **Int. Cl.**
H04L 12/26 (2006.01)
H04L 29/06 (2006.01)

(Continued)

(52) **U.S. Cl.**
CPC ***H04L 65/601*** (2013.01); ***H04L 43/16*** (2013.01); ***H04L 47/25*** (2013.01); ***H04L 65/60*** (2013.01);

(Continued)

(58) **Field of Classification Search**
CPC H04N 19/61; H04N 21/234327; H04N 19/172; H04N 19/176; H04N 19/36;

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,535,355	A	8/1985	Arn et al.
5,168,356	A	12/1992	Acampora et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CA	2466482	5/2003
EP	0 711 077 A2	5/1996

(Continued)

OTHER PUBLICATIONS

Bill Birney, "Intelligent Streaming", Microsoft C orporation, May 2003 (Year: 2003).*

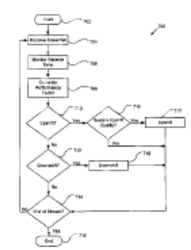
(Continued)

Primary Examiner — Ninos Donabed
(74) *Attorney, Agent, or Firm* — Lorenz & Kopf LLP

(57) **ABSTRACT**

An apparatus for adaptive-rate shifting of streaming content includes an agent controller module configured to simultaneously request at least portions of a plurality of streamlets. The agent controller module is further configured to continuously monitor streamlet requests and subsequent responses, and accordingly request higher or lower quality streamlets. A staging module is configured to stage the streamlets and arrange the streamlets for playback on a content player. A system includes a data communications network, a content server coupled to the data communications network and having a content module configured to process content and generate a plurality of high and low quality streams, and the apparatus. A method includes simultaneously requesting at least portions of a plurality of streamlets, continuously monitoring streamlet requests and subsequent responses, and accordingly requesting higher or lower quality streamlets, and staging the streamlets and arranging the streamlets for playback on a content player.

25 Claims, 7 Drawing Sheets



U.S. Patent No. 10,225,304

See Paper 37 (Reply) at 22-24

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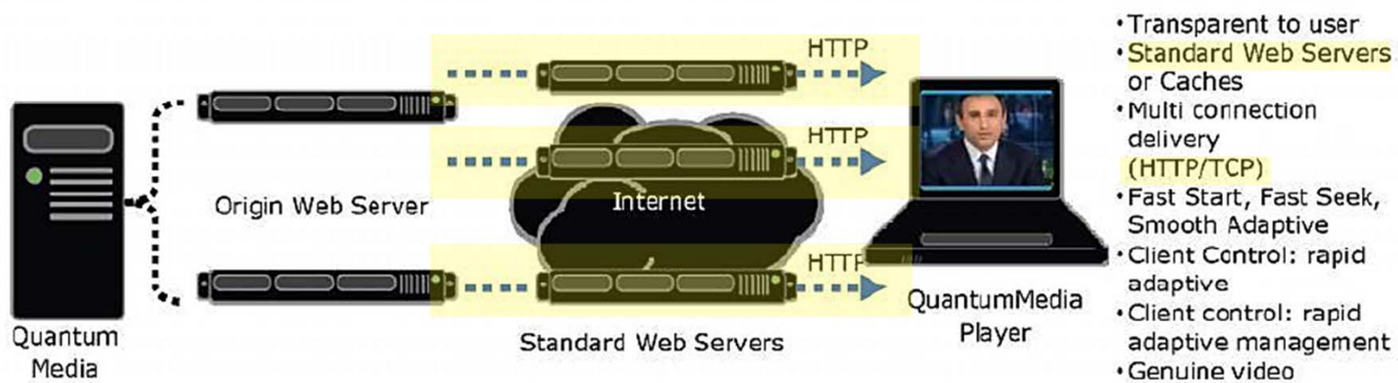
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Other Critical Features of the MOVE Player Are Not Claimed

Further, MOVE's Media Player automatically placed a streamlet request using a HTTP GET request for each streamlet over one or more network connections to the stream to retrieve a streamlet/file for the selected stream, and the HTTP GET requests identify the selected streamlet, and the requested streamlets are received from the server. *See e.g.*, EX2012; 2011.

To playback the video normally, the Move Media Player requests sequential files/streamlets from one of the copies from the video server based on the time indexes. *See e.g.*, EX2012; 2011. For example, the Move system provides for "[s]imple HTTP protocol transfer of media files from standard Web servers rather than deployment of expensive media servers." EX2012 at 22. This is further illustrated in the figure below.



EX2062 (Jeffay Chart) at 3 (citing EX2012 (Internal Move Document) at 22)

See Paper 37 (Reply) at 23-24

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Every "Unique" Feature Was Known in the Prior Art

Claim 14 of the '138 Patent	Leaning
14[Pre]: "An end user station to stream a video over a network from a server for playback of the video, the end user station comprising:"	EX1024, Abstract ("Delivery of recorded audio or video material over a telecommunications link (2) **from a server (1) to a terminal** (3) . . . Provision may be made for **switching** between alternative sub-file sets representing alternative delivery modes of data rates."), 1:3-29, 2:9-10 ("the network is the **internet** or other packet network operating . . ."), 6:13-15 ("the server stores **two or more versions** of the recording recorded at **different compression rates** … and the player program is able to **switch automatically between them**."), 16:6-12 ("The **same principle** may be applied to the delivery of **video recordings**. . . the file is a video file (e.g. in H.261 or MPEG format) and the player program incorporates a video

EX1028 (Houh Decl.) ¶¶ 77-80

See Paper 37 (Reply) at 24-25

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EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Every "Unique" Feature Was Known in the Prior Art

Instituted IPRs		
Patent No.	**IPR No.**	**References**
10,757,156	IPR2024-00917	Leaning, Ala-Honkola
9,407,564	IPR2024-00918	Leaning, Gamble
8,868,772	IPR2024-00919	Leaning, Gamble
11,991,234	IPR2024-00940	Leaning, Klemets, Gamble

Ordered Re-Exams		
Patent No.	**Re-Exam No.**	**References**
10,757,156	90/019,672	Leaning, Gourley, Carmel, Willebeek, Walker
9,407,564	90/019,671	Leaning, Gourley, Carmel, Willebeek, Walker, Rodriguez
8,868,772	90/019,670	Leaning, Gourley, Carmel, Willebeek, Walker, Rodriguez

Paper 48 (Petitioner's Updated Mandatory Notices)

For the reasons provided above, on this record, we are persuaded that Petitioner has shown that Leaning teaches each limitation of independent claim 1. At this stage, the preliminary record includes no evidence of objective indicia weighing in favor of nonobviousness. Accordingly, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in establishing that the subject matter of claim 1 would have been obvious over Leaning.

Paper 10 (Institution Decision) in IPR2024-00917 at 22

As shown above and in the Request, the Leaning disclosure relates to a system that is similar in many aspects to the invention recited in claims 1-18. A reasonable examiner would consider Leaning to be important when determining patentability of the claims of the '156 patent. Additionally, a reasonable examiner would also conclude that the various proposed combinations of Leaning with Gourley, Carmel, and Willebeek to address details relating to network protocols and the delivery of video would be important when determining patentability of the claims.

Requester's proposed SNQs 1, 3-4, and 6-7 therefore raise substantial new questions of patentability affecting claims 1-18.

Order Granting EPR in 90/019,672 at 13

See Paper 37 (Reply) at 24

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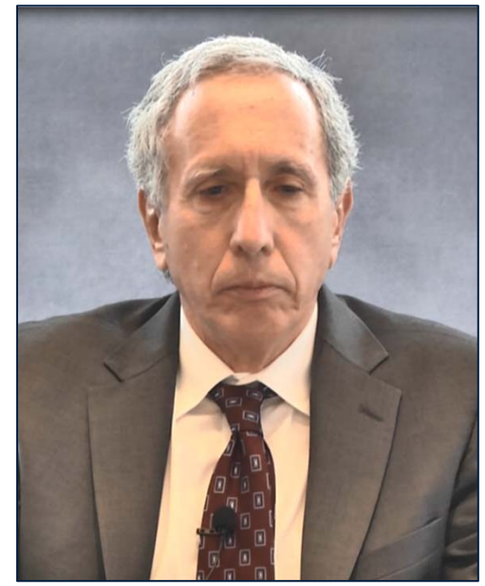
EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Every "Unique" Feature Was Known in the Prior Art Cited by Dr. Jeffay in Other IPRs

- Dr. Jeffay argued elsewhere that RealNetworks and Microsoft invented "encoding a video stream at various bitrates and selecting an appropriate stream for delivery to the end user based on current bandwidth availability on the network to the receiving device." EX1023 (Jeffay Facebook Decl.) ¶ 51.
- Dr. Jeffay argued elsewhere that Carmel discloses "using Internet protocols, such as HTTP" to "request or pull . . .sequential slices by identifier." EX1020 (Jeffay Amazon Decl.) ¶ 68.
- Dr. Jeffay argued elsewhere that Carmel discloses using HTTP to "transit firewalls." EX1023 (Jeffay Facebook Decl.) ¶¶ 60-61.
- Dr. Jeffay argued elsewhere that Willebeek discloses using a "standard HTTP Web server." EX1020 (Jeffay Amazon Decl.) ¶ 76.



Dr. Kevin Jeffay

See Paper 37 (Reply) at 24-25

VENABLE LLP

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Sling's Emmy Had Nothing to Do with the ABR Patents

DISH's patents were filed in 2004, ***sixteen*** years before Sling's Emmy award.

The Emmy was awarded in 2020 for "developing and launching the nation's first live over-the-top television service" "***over the past five years***."

sling

NEWS PROVIDED BY
Sling TV L.L.C. →
Jan 15, 2020, 12:25 ET

ENGLEWOOD, Colo., Jan. 15, 2020 /PRNewswire/ -- The National Academy of Television Arts and Sciences (NATAS) today awarded Sling TV a Technology & Engineering Emmy® Award for its groundbreaking work developing and launching the nation's first live over-the-top television service.

"Our journey over the past five years has been about the customer, offering exceptional value with unprecedented flexibility. In short, making TV better for everyone," said Warren Schlichting, executive vice president and group president, Sling TV. "We are honored to receive this technical Emmy® Award, which recognizes the Sling team's excellence in engineering and creativity. Our company has a history of fostering innovation and disrupting the industry, and Sling's leadership in live streaming TV is another example of our culture."

EX2013 (Sling Press Release)

See Paper 37 (Reply) at 25

The Board Should Exclude DISH's Improper Evidence

VENABLE LLP

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Board Should Exclude Exhibit 2091 at 21:16-24:4 and Arguments Based Thereon Where DISH's Counsel Reads from an Unadmitted Document About the M.Show Commercial Product

- DISH's Sur-Reply quotes from Exhibit 2091 at 21:16-24:4 to assert that a commercial product called "M.Show" delivered Microsoft PowerPoint slides. Sur-Reply at 8. But the portions of Exhibit 2091 cited by DISH are just quotes by its own counsel reading from an unadmitted document during Dr. Houh's deposition.
- Violates 37 C.F.R. § 42.23(b).
- Violates Fed. R. Evid. 106, 401, 402, 403, 602, 801, 802, 901. *See* Paper 49 (Aylo's Motion to Exclude) at 7-10.

Q. And do you see at the top it says It's MShow Time? Do you see that?

A. Yes. . . .

...

Q. In the first paragraph, do you see where it says, M.Show.com, an 85 person company that develops and markets interactive broadcasting services, is targeting both service providers and business customers with its M.Show services? . . . Do you see that?

A. Yes.

EX2091 (Houh Tr.) at 22:16-24:4

See Paper 49 (MTE) at 7-10; Paper 51 (MTE Reply) at 1-2

VENABLE LLP

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Board Should Exclude Exhibit 2091 at 91:9-94:21 and 104:23-106:14 and the Emmy Website Discussing ABC's Emmy in 2006 and Any Arguments Based Thereon

- DISH is again just citing to its own counsel paraphrasing and quoting from an unadmitted document into the record. Paper 47 (Sur-Reply) at 22-25. Dr. Houh had never seen this document or the Emmy Website before.
- Violates 37 C.F.R. § 42.23(b).
- Violates Fed. R. Evid. 401, 402, 403, 602, 801, 802, 901. *See* Paper 49 (Aylo's Motion to Exclude) at 10-12.
- Cannot be relevant because even if ABC did receive an Emmy in 2006, DISH's own evidence shows it did not start using the Move player until 2007.

April 4, 2007

ABC's big Move away from Flash

Flash! Ah-aah! Savior of the universe! Oops. Sorry. This blog post is about Flash, the multimedia software from Adobe (ADBE) that is used to serve up videos on sites like Google's (GOOG) YouTube and News Corp.'s (NWS) MySpace, not the cheese-tastic song by Queen from the campy 1980 Flash Gordon movie. I couldn't help myself.

Anyway, Adobe's Flash is used by many large media companies. And it has been the backbone of the video player that TV network ABC used on its web site. Note the use of the past tense.

Earlier this week, ABC.com unveiled a new broadband video player, which includes among other things, an option to watch shows such as "Lost," "Dancing with the Stars," "Grey's Anatomy" and "Desperate Housewives" in a full-screen format. But ABC is no longer using Flash. Instead the new player relies on a technology developed by privately-held Move Networks.

EX2034 (Media Biz Article)

See Paper 49 (MTE) at 10-12; Paper 51 (MTE Reply) at 3-5

EX1036 – DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Board Should Exclude Exhibits That Are Email Chains Between Non-Declarants and Third Parties and Any Arguments Based Thereon

- Aylo moves to exclude Exhibits 2031-2033, 2049, 2057, 2071, 2078, 2079, and 2081, which are a collection of unauthenticated and out-of-court email chains.
- None of the individuals identified in these exhibits were declarants in these proceedings.
- Violates Fed. R. Evid. 602, 703, 801, 802, 902. *See* Paper 49 (Aylo's Motion to Exclude) at 3-6.
- *Viking Drill & Tool, Inc. v. Wang*, No. IPR2023-00474, 2024 WL 3311903, at *21 (P.T.A.B. July 5, 2024) (excluding emails "directed towards the out-of-court statements of a third party").

Message

From: Greg Smith [gsmith@movenetworks.com]
Sent: 5/15/2007 10:44:56 PM
To: John W. Edwards [john@movenetworks.com]; <Mark.Taylor@Level3.com> [Mark.Taylor@Level3.com]
Subject: RE: Follow up

Mark:

[redacted] I'd like to talk with you about point number 3. Are you available in the next few hours?

-Greg

Gregory M. Smith
CTO | Move Networks, Inc.
phone: 801-756-5805 cell: 917-399-8892 fax: 801-756-5806
www.movenetworks.com

From: Taylor, Mark [mailto:Mark.Taylor@Level3.com]
Sent: Thursday, May 10, 2007 5:52 PM
To: jedwards@movenetworks.com
Cc: Gips, Don; Lepard, Cecil
Subject: Follow up

John

Thank you for the time you and your team gave us today. We really appreciated it very much. As discussed I'll follow up directly with an outline of potential collaboration areas.

I have a couple of follow up questions/requests;

1. Could I have an electronic copy of the presentation please?

EX2031 (Email Chain)

See Paper 49 (MTE) at 3-6; Paper 51 (MTE Reply) at 5