

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AKAMAI TECHNOLOGIES, INC.,
Petitioner

v.

EQUIL IP HOLDINGS LLC,
Patent Owner

Case IPR2023-00330
U.S. Patent No. 8,495,242

**DECLARATION OF DR. MARK T. JONES
IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE**

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Equil EX2001
Akamai Techs. v. Equil IP Holdings
IPR2023-00330

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	QUALIFICATIONS	2
III.	LEGAL PRINCIPLES	5
	A. Claim Construction	5
	B. 35 U.S.C. § 112(a)	6
IV.	THE '242 PATENT	7
V.	LEVEL OF ORDINARY SKILL IN THE ART	9
VI.	CLAIM CONSTRUCTION	10
VII.	THE '242 PATENT PRIORITY	10
VIII.	CONCLUSION	12

I, Mark. T. Jones, hereby declare as follows.

I. INTRODUCTION

1. I have been retained on behalf of Patent Owner Equil IP Holdings LLC (“Equil IP”) for the above-captioned *inter partes* review (IPR). I understand that this proceeding involves U.S. Patent No. 8,495,242 (“the ’242 patent”) titled “Automated media delivery system.”

2. I understand that Sean Barger, Steve Johnson, Matt Butler, Jerry Destremps, David Pochron, and Trent Brown are the named inventors of the ’242 patent. I also understand that the ’242 patent is currently assigned to Equil IP.

3. I have reviewed and am familiar with the following documents:

Paper or Exhibit No.	Description
2	Akamai Technologies’ Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,495,242
1001	U.S. Patent No. 8,495,242 (“the ’242 patent”)
1002	File History of U.S. Application No. 12/713,637
1007	U.S. Patent Application Publication No. US 2002/0078093 (“Samaniego”)
1010	File History of U.S. Application No. 11/269,916
1013	Redline Comparison of specifications from Samaniego and the ’242 patent
1021	Redline Comparison of specifications from Samaniego and Publication No. 2006/0265476 of Application No. 11/269,916

Paper or Exhibit No.	Description
1026	File History of U.S. Application No. 12/173,747
1028	Redline Comparison of specifications from Samaniego and Publication No. 2009/0070485 of Application No. 12/173,747
1035	File History of U.S. Application No. 09/929,904
2002	Curriculum Vitae of Dr. Mark T. Jones

II. QUALIFICATIONS

4. My CV is attached as EX2002. I am a Professor Emeritus of Electrical and Computer Engineering at Virginia Tech in Blacksburg, Virginia. I graduated *summa cum laude* from Clemson University in 1986 with a B.S. in Computer Science and a minor in Computer Engineering, while holding a National Merit Scholarship and the R. F. Poole Scholarship. I then graduated from Duke University in 1990 with a Ph.D. in Computer Science, while holding the Von Neumann Fellowship.

5. Upon graduation, I joined the Department of Energy at its Argonne National Laboratory facility. My responsibilities there included the design and use of software for computers with hundreds of processing elements. This software was designed for compatibility with new parallel computer architectures as they became available, as well as with other large software components being written in

the Department of Energy. While with the Department of Energy, I received the IEEE Gordon Bell Prize.

6. In 1994, I joined the Computer Science faculty at the University of Tennessee. My teaching responsibilities included computer architecture and computer networking. My research interests included the design and use of software that used the collective power of large groups of workstations. While at the University of Tennessee, I received a CAREER Award from the National Science Foundation.

7. In 1997, I joined the Electrical and Computer Engineering faculty at Virginia Tech. My teaching responsibilities have included the design of embedded systems, computer organization, computer architecture, a variety of programming courses, and parallel computing. I have been cited multiple times on the College of Engineering's Dean's List for teaching.

8. In addition to the activities, education, and professional experience listed above, I have been involved in research projects that contribute to my expertise relating to this report. While at Virginia Tech, I have been a primary or co-investigator on government and industrial research grants and contracts in excess of five million dollars.

9. The majority of the research contracts undertaken in the laboratory have involved collaboration and coordination with other groups to build a larger

system. My responsibilities under the SLAAC project (a collaborative effort funded by the Defense Advanced Research Projects Agency involving the University of Southern California, Sandia National Laboratory, Los Alamos National Laboratory, Brigham Young University, UCLA, Lockheed-Martin, and the Navy) included the development of a software system for monitoring, configuring, and controlling a networked collection of computers hosting specialized computer hardware. As part of the DSN project (a collaborative effort funded by the Defense Advanced Research Projects Agency involving UCLA and USC), I was responsible for designing algorithms and software for controlling and monitoring a large network of autonomous computer sensor nodes. This software was integrated with software from several other teams around the country for a set of field demonstrations over a three-year period.

10. In the TEAMDEC project for the Air Force Research Laboratory, I led an effort to design and construct a collaborative, Internet-based decision making system. This Java-based system provided a geographically diverse team with Internet-based tools to enable collaborative decision-making. On the server side, the system architecture made extensive use of database technology. This work was awarded first prize at the 2002 AOL/CIT Research Day.

11. Other projects have involved the close coupling of computer hardware and software, including the writing of device drivers and simple operating systems,

the design of hardware circuits, the design of new system architectures, architectures for secure computing, the modification of complex operating systems, and software for mediating between complex software packages. Additionally, my research has included video-conferencing, network-based visualization of large-scale scientific computing results, and a wireless link for communicating video from a UAV.

12. In my professional experience, I have become familiar with many problems faced by computer scientists, designers, programmers, and users in the area of networked media delivery and related topics and technologies.

III. LEGAL PRINCIPLES

A. Claim Construction

13. I understand that, during an *inter partes* review, an unexpired claim is construed according to its ordinary and customary meaning consistent with the standard established in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) (“*Phillips*”). As such, it is my understanding that claim terms are given the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. In this standard, my understanding is that the primary source of claim construction should be intrinsic evidence; that is, the patent itself. I also understand that I may use extrinsic evidence to construe the claims; however, I understand that intrinsic evidence takes priority.

B. 35 U.S.C. § 112(a)

14. I understand that 35 U.S.C. § 112(a) includes a written description requirement and an enablement requirement. I understand that that while written description and enablement are separate requirements, they often rise and fall together in the predictable arts (such as the electrical arts). I also understand that to rely upon the priority date of an earlier-filed patent application, that earlier-filed application must also provide support that satisfies the written description and enablement requirements.

15. I understand that the test for sufficiency of written description is whether the disclosure of the patent or application which is relied upon reasonably conveys that the inventor had possession of the claimed subject matter as of the filing date. I understand that a description that merely renders the claimed subject matter obvious does not satisfy the written description requirement.

16. I understand that the test for enablement is whether the disclosure teaches those in the art to make and use the invention without undue experimentation. I understand that the following factors are considered in determining whether a disclosure would require undue experimentation: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art;

(7) the predictability or unpredictability of the art; and (8) the breadth of the claims.

IV. THE '242 PATENT

17. The '242 patent describes an automatic graphics delivery method that “automat[es] the production of media through content generation procedures controlled by proprietary tags placed within URLs embedded within Web documents.” EX1001, 7:6-11. The method “automatically processes the URL encoded tags and automatically produces derivative media for the web site from the original media.” *Id.*, 7:13-16.

18. By way of example, Figure 22, reproduced below, is “a flowchart of the content generation procedure according to a preferred embodiment” of the '242 patent. EX1001, 19:54-55. A URL with proprietary tags 2200 is parsed at step 2210 to “determine the content generation procedure to execute, any dynamic modifications to the media, user profile characteristics, and proxy-cache control.” *Id.*, 19:56-59. At step 2220, a unique final lookup key is generated for the media. *Id.*, 19:59-61. The media cache is checked at step 2230. *Id.* If the indicated media exists, the media is delivered to the browser at step 2295. *Id.*, 19:61-63.

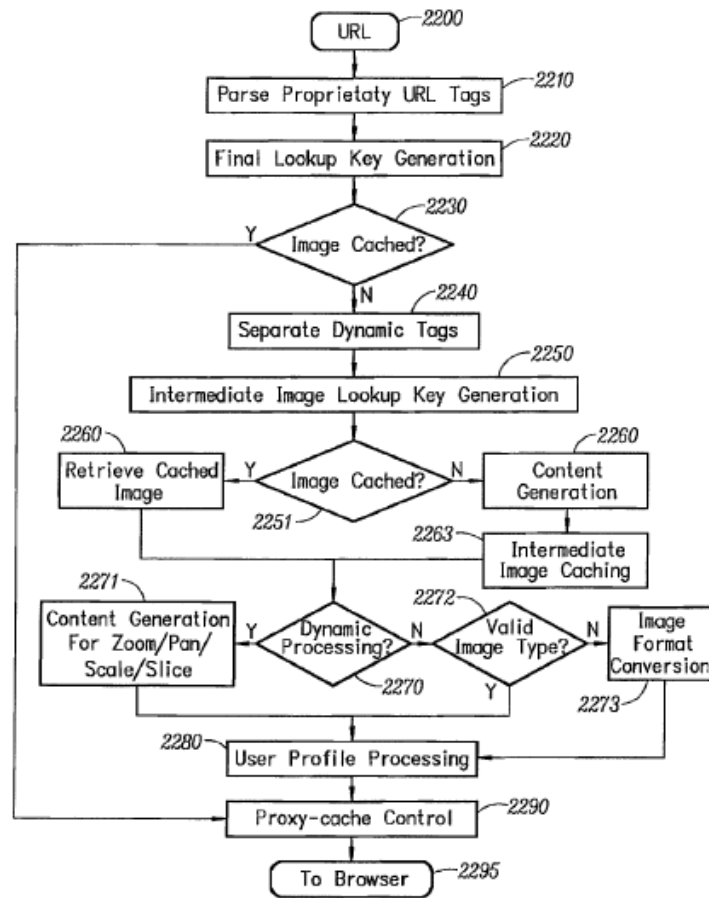


FIG. 22

EX1001, FIG. 22.

19. If the media does not exist, dynamic media system tags are separated from content generation control tags at step 2240. *Id.*, 19:63-65. A unique intermediate image lookup key is generated at step 2250. *Id.* The cache is checked

for this intermediate media at step 2251¹. *Id.*, 19:66-67. If the intermediate media is found, it is retrieved at step 2260 and used directly for dynamic processing, if required. *Id.*, 19:67-20:1, FIG. 22. If the intermediate media is not found, content is generated at step 2262² and cached at step 2263. *Id.*, 20:1-3. The intermediate media is evaluated for dynamic processing at step 2270. *Id.* If dynamic processing is required, the dynamic content generator operates on the media at step 2271. *Id.*, 20:3-6. The image is then customized by the user profiling system at step 2280 for specified browser or client attributes. *Id.*, 20:7-9. Any cache-control directives specified are attached to the response at step 2290. *Id.*, 20:9-11. The media is delivered to the browser at step 2295. *Id.*

V. LEVEL OF ORDINARY SKILL IN THE ART

20. I have been informed that a person of ordinary skill in the art (“POSITA”) is a hypothetical person that has ordinary creativity and is not an automaton. I understand that Akamai has proposed that a POSITA would have had a bachelor’s degree in computer systems, computer science, or the equivalent

¹ The specification includes a typographical error. As seen in Figure 22, the cache checking step is 2251.

² There is a typographical error in Figure 22, where the “Content Generation” block is labeled as 2260 rather than 2262.

thereof, and at least two years of experience with networked media delivery or related technologies. Pet., 10. I understand that Akamai has further proposed that more education can supplement practical experience, and vice-versa. *Id.* For purposes of this declaration, I have applied Akamai's definition of a POSITA. As of the relevant time period I was at least a person of ordinary skill in the art according to Akamai's definition.

VI. CLAIM CONSTRUCTION

21. I understand that the '242 patent is currently involved in the following district court litigation between Equil IP and Akamai: *Equil IP Holdings LLC v. Akamai Technologies, Inc.*, No. 1-22-cv-00677 (D. Del.). I further understand that the parties have not engaged in claim construction in that litigation.

22. I understand that Petitioner has proposed that all claim terms should be construed according to their plain and ordinary meaning. Pet., 10-11. I have applied the plain and ordinary meaning to the claim terms of the '242 patent in my analysis herein.

VII. THE '242 PATENT PRIORITY

23. I have been asked by Patent Owner's counsel to determine whether claim 9 of the '242 patent is supported by each of the applications in its priority chain, shown in the chart below. A copy of the originally filed specification of

each application is available in the corresponding file history, the exhibit numbers of which also are identified in the chart.

Appl. No.	Filing Date	Corresponding US Patent/Pub. No.	Exhibit No. (File History)
12/713,637	February 26, 2010	8,495,242	1002
12/173,747	July 15, 2008	8,656,046	1026
11/269,916	November 7, 2005	2006/0265476	1010
09/929,904	August 14, 2001	6,964,009	1035

24. I understand that Samaniego (EX1007) is the pre-issuance publication of the '904 application, the earliest application discussed herein. As shown by Akamai's redline comparison in EX1013, the specifications of the '242 patent and Samaniego are identical except for the addition of a cross-reference paragraph in the specification of the '242 patent. Likewise, the specifications of each of the applications in the priority chain are the same. *See* EX1021 (comparison of Samaniego and publication of the '916 application), EX1028 (comparison of Samaniego and publication of the '747 application).

25. The chart attached to this declaration as Appendix A demonstrates, in my expert opinion, that all the limitations of claim 9 of the '242 patent are supported by each of the '637 application, the '747 application, the '916

application, and the '904 application.³ The cited portions demonstrate that the inventors had possession of the claimed subject matter and also enable a POSITA to make and use the invention without undue experimentation.

VIII. CONCLUSION

26. The findings and opinions set forth in this declaration are based on my work and analysis to date. I may continue my analysis. I may also receive additional documentation and other factual evidence over the course of this proceeding that will allow me to supplement and/or refine my opinions. I reserve the right to add to, alter, or delete my opinions and my declaration upon discovery of any additional information. I reserve the right to make such changes as may be deemed necessary.

27. In signing this declaration, I recognize that the declaration will be filed as evidence in an *inter partes* review before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will

³ Citations to the '637 application, the '747 application, the '916 application, and the '904 application are exemplary and there may be additional portions of the applications that support the claims.

take place within the United States. If cross-examination is required, I will appear for cross-examination within the United States during the time allotted.

28. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on this 25th day of April 2023, in Blacksburg, Virginia.



Dr. Mark T. Jones

Appendix A

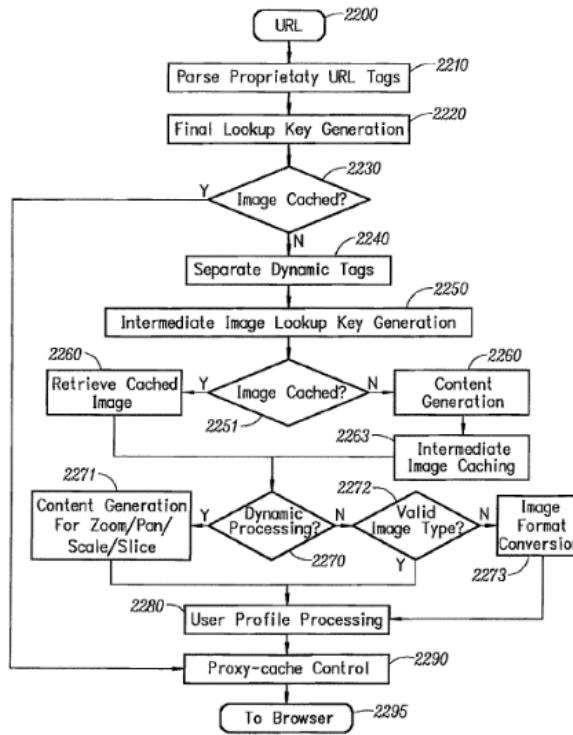
Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
[9.P] A method for accessing dynamically transcoding media content, the method comprising:	Although the '242 patent does not use the term “transcoding,” a skilled artisan would appreciate that the '242 patent is directed to reading media content from one format and writing into various other formats (e.g., BMP, GIF, JPG, PNG, TIF, PICT, TGA, PSD, FPX, see Table C), which are examples of the claimed “transcoding.” 1:19-21¹ “[T]he invention relates to an Internet server-based software system that provides delivery of automated graphics and other media to Web sites for access by an end user or consumer.”	1:18-20 ²	1:17-18	1:7-9

¹ All citations are to the native page and line numbers of the as-filed specifications. The as-filed applications are available at the page range of each exhibit identified in the column headers.

² Where the quotations are the same across all specifications, only corresponding citations are provided for the '747 application, the '916 application, and the '904 application.

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	10:5-7 (see also 12:31-33 and 27:27-29) “The system takes as input the client connection, server traffic, content generation procedures, and proprietary tags placed within the URL to generate optimized media for the client.” 12:10-11 “FIG. 21 is a schematic diagram showing process flow of a proprietary enabled page delivered to a Web browser...”	10:5-7 (12:31-33, 27:27-29) 12:10-11	10:5-7 (12:31-33, 27:13-15) 12:10-11	8:20-22 (10:35-37, 23-32-34) 10:15-16

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	FIG. 21	FIG. 21	FIG. 21	FIG. 21
	12:13-14 “FIG. 22 shows a flowchart of a content generation procedure according to a preferred embodiment of the invention...”	12:13-14	12:13-14	10:18-19

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	 <pre> graph TD 2200([URL]) --> 2210[Parse Proprietary URL Tags] 2210 --> 2220[Final Lookup Key Generation] 2220 --> 2230{Image Cached?} 2230 -- Y --> 2290[Proxy-cache Control] 2230 -- N --> 2240[Separate Dynamic Tags] 2240 --> 2250[Intermediate Image Lookup Key Generation] 2250 --> 2260{Image Cached?} 2260 -- Y --> 2261[Retrieve Cached Image] 2260 -- N --> 2262[Content Generation] 2261 --> 2271[Content Generation For Zoom/Pan/Scale/Slice] 2262 --> 2263[Intermediate Image Caching] 2271 --> 2270{Dynamic Processing?} 2263 --> 2270 2270 -- Y --> 2280[User Profile Processing] 2270 -- N --> 2272{Valid Image Type?} 2272 -- Y --> 2280 2272 -- N --> 2273[Image Format Conversion] 2280 --> 2290 2273 --> 2290 2290 --> 2295([To Browser]) 2295 --> 2290 </pre> <i>FIG. 22</i>			
	30:28-34 “The system parses the URL 2100 to determine the content generation	30:28-34	30:14-20	26:19-24

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	procedure 2140 to execute, any corresponding input parameters to be used by such procedure, any dynamic content processing 2150 to be performed by dynamic media procedures, any user profile information 2160 to be used to modify the resulting image, and any cache control HTTP headers 2190 the site instructs to accompany the resulting image.” 31:19-21 “The resulting image after any dynamic media processing is complete, is checked to ensure that the image is in a valid Web image format. If not, the image is automatically converted into a valid format.” 26:24 “The claimed method allows the creation of all 100 combinations automatically.”	31:19-21 26:23	31:5-7 26:10	27:4-6 22:34

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
[9.1] an act of receiving a request for media content to be delivered to a client presentation system for media content, wherein the requested media content has a limited number of base transcoding profiles associated therewith, each base transcoding profile corresponding to a cached version of the requested media content;	The claimed “base transcoding profiles” are defined by proprietary tags, which indicate particular image generation procedures and corresponding input parameters to execute on original media in order to obtain intermediate media. Each cached intermediate image (generated at step 2260 based on content generation procedures and input parameters in the URL tags and cached for reuse at step 2263) corresponds to the proprietary tags that defined its generation. A limited number of proprietary tags is associated with each original media because they are added by the author of the original media at the time of creation. 12:26-29 “The author simply places the original media in the system, and adds proprietary tags to the URLS for accessing that media. The system automatically	12:26-29	12:26-29	10:30-33

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	processes the URL encoded tags and automatically produces derivative media for the web site from the original media.” 14:22-24 “HTML with proprietary tags 300 is the original HTML document that is embedded with proprietary tags which describe how the images are to be manipulated for the Web.” 15:12-19 “The media caching subsystem 620 determines if an image has been created for the requested proprietary tag. If the image has already been created and the files that built that image have not been modified, the media caching subsystem 620 returns an HTML tag that refers to a previously-generated image. If the image has not been created, the media caching subsystem 620 hands the HTML tag to a media creation subsystem 630. The media creation subsystem 630 returns an image to	14:22-24 15:12-19	14:22-24 15:9-16	12:16-18 12:37-13:6

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	the media caching subsystem 620. The media caching subsystem 620 adds the created image and the HTML tag to a media cache database 640.” 15:21-25 “The media cache database 640 contains references to the created images 645. In a preferred embodiment, the references are the script used to create the image, the names of the images used to create the image, the dates of those files, and the HTML that represents the created image. The media caching subsystem 620 performs lookups in this database to determine if the image has been created.” 15:30-34 “The media creation subsystem 630 takes a proprietary tag from the media caching subsystem 620 and generates an image. The image is generated by deciphering the tag and handing it to the media processing engine 650. After the	15:21-25 15:30-34	15:18-22 15:27-31	13:8-12 13:17-21

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	image is created, the media creation subsystem returns the name of the newly created image to the media caching subsystem 620.” 16:1-3 “The media processing engine 650 interprets the proprietary tag and generates the image. The media processing engine 650 looks up images in a media repository to obtain the location of the original file.” 16:27-31 “FIG. 8 is a flow chart showing an authoring process according to a preferred embodiment of the invention. The process starts (800) when a user adds an original graphic to the system (810). The user then creates an HTML document that contains proprietary media tags (820). The user then places the HTML document on a Web server (830) and ends the authoring process (840).”	16:1-3 16:27-31	16:1-3 16:26-30	13:23-25 14:9-13

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	28:14-21 “Resource locators (URLs) are placed within HTML documents 301 accessible to the Web server 110. These URLs direct browsers to generate requests for media to the system 100. The system processes such URLs by interpreting the proprietary tags, executing the indicated image generation procedures on the original media 200, and returning derivative Web-safe media to client browsers 120a-120d via the Internet 130. Additionally, such generated media is cached on the image server 100 and, therefore need not be regenerated for subsequent requests.”	28:14-21	27:33-28:6	24:14-21
	28:34-29:6 “Browsers 120 send such tags to the image system 100 as media requests. A server 2000 within the image system 100 receives the media requests, decodes the URL tags, and retrieves any media that already exists in the media caching system	28:34-29:6	28:19-25	24:34-25:2

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	2010. Non-existent media is subsequently generated by a media creation system 2020 using original media 2050 stored in a media repository 2040 and using content generation procedures 2030.” 29:12-16 “The system receives a request for media through a URL containing proprietary tags for controlling image generation. The system parses this URL to determine the content generation procedure to execute, input to the content generation procedure, post-processing directives for, for example, zoom/pan/slice, browser properties, and any cache control directives.” 29:23-25 “The media caching subsystem is a mechanism for associating final or intermediate derivative media with the procedure, input, and user characteristics used to generate said media, specified	29:12-16 29:23-25	28:31-35 29:8-10	25:8-12 25:18-20

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	through proprietary tags within the requested URL.”			
	30:26-34 “The browser 120 requests the Web page 301 from the Web site 110. Upon receipt of the page 301, the browser contacts the system 100 requesting media specified in the URL. The system parses the URL 2100 to determine the content generation procedure 2140 to execute, any corresponding input parameters to be used by such procedure, any dynamic content processing 2150 to be performed by dynamic media procedures, any user profile information 2160 to be used to modify the resulting image, and any cache control HTTP headers 2190 the site instructs to accompany the resulting image.”	30:26-34	30:12-20	26:17-25
	31:1-9 “The parser generates a unique primary lookup key 2110 for the specified resulting media. If the key corresponds to	31:1-9	30:22-29	26:26-33

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	an existing generated media 2180, such media is returned immediately to the browser 120 through a media cache 2120, and the transaction is complete. In the case of media generation requiring dynamic content processing, a unique secondary lookup key corresponding to intermediate media is generated 2130. If intermediate media 2170 corresponding to this key is found, such media is passed directly to the dynamic media content system 2150...” 32:3-5 The cache is then checked for such intermediate media (2261). If such intermediate media is found, it is used directly for dynamic processing, if required.”	32:3-5	31:23-25	27:22-24
[9.2] at the time of the request, and without input by a network administrator, an act of	The claimed “transcoding” includes, e.g., content generation procedures and/or dynamic content processing and/or user profile processing to be performed on the			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
automatically identifying transcoding parameters to be applied to the requested media content prior to delivery to the client presentation system, wherein identification of transcoding parameters is based on one or more formats of any client presentation system;	original media content. The “transcoding parameters” are inputs used by such content generation procedures, dynamic content processing, and/or user profile processing. For example, the proprietary tags contained within a URL that is requested by a browser can include input parameters to be used by content generation procedures or user profile information to be used to modify the resulting image. The system parses the URL to identify these parameters and determines an optimized media content for a Web client based on individual needs of Web site users such as, for example, connection speed and file format. 9:30-32 “The system streamlines the post-production process by automating the production of media through content generation procedures controlled by			
		9:30-32	9:30-32	8:13-15

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	proprietary tags placed within URLs embedded within Web documents.”			
	8:20-22 “It would be advantageous to provide a system that generates media that is optimized for the Web client, wherein client connection speed determines optimum quality and file size.”	8:20-22	8:20-22	7:8-10
	8:34-35 “It would be advantageous to provide a system wherein the client browser does not require a plug-in.”	8:34-35	8:34-35	7:21-22
	10:5-7 (see also 12:31-33 and 27:27-29) “The system takes as input the client connection, server traffic, content generation procedures, and proprietary tags placed within the URL to generate optimized media for the client.”	10:5-7 (12:31-33, 27:27-29)	10:5-7 (12:31-33, 27:13-15)	8:20-22 (10:35-37, 23-32-34)
	29:12-16 “The system receives a request for media through a URL containing	29:12-16	28:31-29:1	25:8-12

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	proprietary tags for controlling image generation. The system parses this URL to determine the content generation procedure to execute, input to the content generation procedure, post-processing directives for, for example, zoom/pan/slice, browser properties, and any cache control directives.” 29:23-25 “The media caching subsystem is a mechanism for associating final or intermediate derivative media with the procedure, input, and user characteristics used to generate said media, specified through proprietary tags within the requested URL.” 29:35-30:2 “The resulting media is passed to the user profile system where it is again modified to account for any specific user browser characteristics specified using the proprietary URL tags.”	29:23-25 29:35-30:2	29:8-10 29:19-21	25:18-20 25:29-31

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	30:13-15 “The user profile system operates on the final image about to be returned to the browser and may modify the image to account for individual needs of Web site users.”	30:13-15	29:32-30:1	26:4-5
	30:22-35 “An HTML page 301 is created for the Web site comprising the system 100, the page containing one or more URLs directing a browser 120 to request the specified content generation procedure 2140 from the system 100 using input parameters specified with proprietary tags encoded within the URL ... The system parses the URL 2100 to determine the content generation procedure 2140 to execute, any corresponding input parameters to be used by such procedure, any dynamic content processing 2150 to be performed by dynamic media procedures[, and] any user profile	30:22-35	30:8-20	26:13-24

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	information 2160 to be used to modify the resulting image...”			
	31:23-27 “The final media is passed to a user profile system 2160 wherein browser characteristics specified through proprietary tags within the URL are inspected, and appropriate modification to the media is performed, based on such characteristics. The resulting image is handed to the media cache system 2120 for caching and returned to the browser 120.”	31:23-27	31:9-13	27:8-12
	31:30-34 “A URL containing proprietary tags (2200) is parsed (2210) to determine ... any dynamic modifications to the media, user profile characteristics, and proxy-cache control.”	31:30-34	31:16-19	27:15-17
	32:10-11 “The resulting image is then customized by the user profiling system	32:10-11	31:30-31	27:28-29

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	(2280) for specified browser or client attributes.” 32:30-31 “[A]ccording to the invention, URLs containing proprietary content creation tags initiate a process whereby graphic images for a site are automatically produced.” 24:19-25:9 (Table C); 35:26-36:15 (Table F) The system “[r]eads and writes various file formats;” “[d]ynamically and efficiently creates images that can be panned, zoomed, or sliced from original assets without Browser plugins;” “[d]ynamically creates images that can be panned and zoomed without browser plugins or special file formats;” “[o]ptimizes images for client connection speed;” [and] [a]llow[s] site-specific customized image optimizations for a variety of purposes.”	32:30-31 24:19-25:9 (Table C); 35:26-36:15 (Table F)	32:16-17 24:14-35 (Table C); 35:13-35 (Table F)	28:9-10 21:5-26 (Table C); 30:32-31:24 (Table F)

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	33:5-30 (Table D), <i>see, e.g.</i>, “args = arguments Supplies page dependent parameters used to control the content creation procedure from within the Web page.” “is = image size parameter Specifies scale factors to be applied to any portion of an image generated by any combination of a content generation procedure, arguments, crop rectangles, slice tables, and slice positions.” “p = user profile string Specifies a user profile identifier used to modify the final image prior to returning the image to the browser, thus allowing clients to modify the image returned to the browser to account for individual browsing conditions.”	33:5-30 (Table D)	32:23-33:16 (Table D)	28:16-29:8 (Table D)
[9.3] an act of determining that the transcoding parameters to	The claimed “act of determining” that two sets of transcoding parameters to be applied to requested media content “are the same”			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
be applied to the requested media content prior to delivery to the client presentation system are the same as transcoding parameters that are being applied to the requested media content prior to delivery to another client presentation system;	includes, e.g., determining that intermediate or final media that has previously been cached matches the lookup key for a media content request from another client system. In other words, if previously generated intermediate or final media matches the new media content request, then the transcoding parameters to be applied to the requested media content must be the same. 28:10-11 “Multiple client browsers 120a-120d communicate with both the Web server 110 and the image server 100 via the Internet 130.” 29:12-17 “The system receives a request for media through a URL containing proprietary tags for controlling image generation. The system parses this URL to determine the content generation procedure to execute, input to the content generation	28:10-11 29:12-17	27:29-30 28:31-29:2	24:10-11 25:8-13

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	procedure, post-processing directives for, for example, zoom/pan/slice, browser properties, and any cache control directives. Such data is handed to a media caching subsystem that returns the requested image if found.” 29:23-27 “The media caching subsystem is a mechanism for associating final or intermediate derivative media with the procedure, input, and user characteristics used to generate said media, specified through proprietary tags within the requested URL. This system may be implemented using a database, file system, or any other mechanism having capability to track such associations.” 31:1-17 “The parser generates a unique primary lookup key 2110 for the specified resulting media. If the key corresponds to an existing generated media 2180. Such	29:23-27 31:1-17	29:8-12 30:22-31:3	25:18-22 26:26-27:2

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	media is returned immediately to the browser 120 through a media cache 2120, and the transaction is complete. Otherwise, a media generation occurs. In the case of media generation requiring dynamic content processing, a unique secondary lookup key corresponding to intermediate media is generated 2130. If intermediate media 2170 corresponding to this key is found, such media is passed directly to the dynamic media content system 2150 having dynamic media procedures, wherein appropriate action is taken to generate the required derivative from the intermediate media data. A unique key is generated for the derivative 2130 and passed to the media caching system 2120. If the media caching system finds no such intermediate image. Such intermediate image is generated according to instructions specified by the content generation procedure, cached by the media cache system 2120 as a			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	secondary cached media 2170, and passed to the dynamic media system 2150. Again, appropriate action is taken to generate the required derivative from the intermediate image data.” 31:34-32:5 “A unique final lookup key is generated for the media (2220) and the media cache is checked (2230). If the indicated media exists, control passes to proxy-cache control (2290) and the media is delivered to the browser (2295). Otherwise, dynamic media system tags are separated from content generation control tags (2240) and a unique intermediate image lookup key is generated (2250). The cache is then checked for such intermediate media (2261). If such intermediate media is found, it is used directly for dynamic processing, if required.”	31:34-32:5	31:19-25	27:17-24

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
[9.4] an act of transcoding the requested media content in accordance with the identified transcoding parameters, such that the identified transcoding parameters are used to perform additional incremental transcoding on top of the base transcoding profile;	As noted above, the claimed “base transcoding profiles” are defined by proprietary tags and each corresponds to an intermediate media content that has been transcoded from an original media content, according to the content generation procedures and corresponding input parameters identified by the proprietary tags. The claimed “additional incremental transcoding” corresponds to subsequent processing (steps 2270-2273 in FIG. 22), which includes, for example, dynamic processing such as zooming, panning, scaling, and slicing operations (steps 2270 and 2271); image format conversion (step 2273); and user profile customization (step 2280). Exemplary parameters (also identified by the proprietary tags) for the subsequent processing are included in Table D.			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	29:32-34 “This media is then passed to the dynamic image content system, if necessary, to generate a subsequent derivative media suitably modified for the needs of zooming, panning, or slice...”	29:32-34	29:17-19	25:27-29
	30:7-11 “The dynamic content system operates on intermediate derivative images to generate image subsets or scalings used by Web site designers to implement zooming in on an image, panning across an image, slicing an image into parts, and the like for special Web page effects. The input to this system is cached by the media caching system such that the intermediate image need not be regenerated.”	30:7-11	29:26-30	25:35-26:2
	30:13-15 “The user profile system operates on the final image about to be returned to the browser and may modify the image to account for individual needs of Web site users.”	30:13-15	29:32-30:1	26:4-5

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	31:23-27 “The final media is passed to a user profile system 2160 wherein browser characteristics specified through proprietary tags within the URL are inspected, and appropriate modification to the media is performed, based on such characteristics. The resulting image is handed to the media 30 cache system 2120 for caching and returned to the browser 120.”	31:23-27	31:9-13	27:8-12
	32:4-11 “If such intermediate media is found, it is used directly for dynamic processing, if required. ... If dynamic processing is required, the media is operated upon by the dynamic content generator (2271), otherwise it is evaluated for valid content type (2272). If the content type is invalid, the media is automatically converted to a valid type (2273). The resulting image is then customized by the	32:4-11	31:24-31	27:23-29

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	user profiling system (2280) for specified browser or client attributes.” 33:5-30 (Table D), <i>see, e.g.</i>, “is = image size parameter Specifies scale factors to be applied to any portion of an image generated by any combination of a content generation procedure, arguments, crop rectangles, slice tables, and slice positions.” “p = user profile string Specifies a user profile identifier used to modify the final image prior to returning the image to the browser, thus allowing clients to modify the image returned to the browser to account for individual browsing conditions.”	33:5-30 (Table D)	32:23-33:16 (Table D)	28:16-29:8 (Table D)
[9.5] wherein the act of transcoding the requested media content in accordance with the	The claimed “base transcoded version” corresponds to intermediate media content that has been transcoded from an original media content, according to the content			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
identified transcoding parameters comprises: an act of selecting a pre-existing base transcoded version of the requested media content comprising intermediate derivative media that has been transcoded in accordance with only a portion of the identified transcoding parameters; and an act of creating a final version by incrementally performing further transcoding of the pre-existing base transcoded version in accordance with a remaining portion of the identified	generation procedures and corresponding input parameters identified by the proprietary tags; the claimed “final version” corresponds to content that has undergone subsequent processing (steps 2270-2273), also in accordance with inputs identified by the proprietary tags, which includes, for example, dynamic processing (step 2270), such as zooming, panning, scaling, and slicing operations (step 2271), as well as image format conversion (step 2273), and user profile customization (step 2280). The “<i>pre-existing</i> base transcoded version” is a <i>cached</i> intermediate media content. As noted above, the claimed “transcoding parameters” are the inputs used to by the content generation procedures and/or dynamic content processing and/or user profile processing to be performed on the original media content.			

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
transcoding parameters; and	30:7-10 “The dynamic content system operates on intermediate derivative images to generate image subsets or scalings used by Web site designers to implement zooming in on an image, panning across an image, slicing an image into parts, and the like for special Web page effects.”	30:7-10	29:26-29	25:35-26:1
	31:7-11 “If intermediate media 2170 corresponding to this key is found, such media is passed directly to the dynamic media content system 2150 having dynamic media procedures, wherein appropriate action is taken to generate the required derivative from the intermediate media data.”	31:7-11	30:27-31	26:31-34
	32:3-5 “The cache is then checked for such intermediate media (2261). If such intermediate media is found, it is used directly for dynamic processing, if required.”	32:3-5	31:23-25	27:22-24

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	32:7-11 “If dynamic processing is required, the media is operated upon by the dynamic content generator (2271), otherwise it is evaluated for valid content type (2272). If the content type is invalid, the media is automatically converted to a valid type (2273). The resulting image is then customized by the user profiling system (2280) for specified browser or client attributes.”	32:7-11	31:27-31	27:25-29
[9.6] an act of delivering the transcoded media content to both client presentation systems concurrently.	8:16-17 “It would be advantageous to provide a system that generates media based on current Web server traffic thereby optimizing throughput of the media through the Web server.”	8:16-17	8:16-18	7:5-6
	13:15-17 “The system 100 is attached to a Web server 110, which is connected to multiple client browsers 120(a-d) via the Internet 130.”	13:15-17	13:15-17	11:14-16

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	28:15-19 “These URLs direct browsers to generate requests for media to the system 100. The system processes such URLs by interpreting the proprietary tags, executing the indicated image generation procedures on the original media 200, and returning derivative Web-safe media to client browsers 120a-120d via the Internet 130.”	28:15-19	27:34-28:4	24:15-19
	28:34-29:1 “Browsers 120 send such tags to the image system 100 as media requests.” see also, e.g., FIG. 20.	28:34-29:1	28:19-20	24:34-35
	30:2-5 “This media is then returned to the browser, along with any cache control directives encoded within the URL, and its identifier is passed to the media caching system for subsequent retrieval.”	30:2-5	29:21-24	25:31-33

Claimed Features	Support for Claimed Features:			
	U.S. Appl. 12/713,637, EX1002, 2-64	U.S. Appl. 12/173,747, EX1026, 2-64	U.S. Appl. 11/269,916, EX1010, 4-67	U.S. Appl. 09/929,904, EX1035, 6-63
	31:26-27 “The resulting image is handed to the media cache system 2120 for caching and returned to the browser 120.”	31:26-27	31:12-13	25:31:33
	32:11-13 “Finally, any cache control directives specified are attached to the response (2290) and the media is delivered to the browser (2295).”	32:11-13	31:31-33	27:30-31