IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of Philip Donian et al.	§	REQUEST FOR *EX PARTE*
	§	REEXAMINATION
U.S. Patent No. 11,463,768	§	
	§	Attorney Docket No.: 50348.126
Filed: April 19, 2021	§	
	§	Customer No.: 27683
Issued: October 4, 2022	§	
	§	
Title: ADAPTIV DIGITAL MEDIA	§	
CONTENT PRESENTATION	§	
AND CONTROL PLATFORM	§	

REQUEST FOR *EX PARTE* REEXAMINATION
UNDER 35 U.S.C. §§ 302-306

Mail Stop *Ex Parte* Reexam
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the provisions of 35 U.S.C. §§ 302-306, Unified Patents, LLC ("Requester") hereby requests an *ex parte* reexamination of claims 1, 10, 19, and 27 ("Challenged Claims") of United States Patent No. 11,463,768 ("the '768 patent," EX1001) that issued on October 4, 2022, to Philip M. Donian et al., resulting from U.S. Patent Application No. 17/234,498 filed on April 19, 2021.

Requester hereby asserts that claims 1, 10, 19, and 27 of the '768 patent are invalid over prior art references that were not previously considered in any rejections

before the Patent Office, that are non-cumulative of, and better than, the prior art that was before the examiner during the original prosecution of the '768 patent, and that raise substantial new questions of patentability. Requester therefore requests that an order for reexamination be issued, and that the Office reject and cancel the Challenged Claims.

The '768 patent was involved in *Piranha Media Distribution LLC v. Hulu LLC*, No. 2:24-v-00498 (C.D. Cal.) (Complaint filed January 19, 2024) (hereinafter "Hulu litigation"). Requester is not a party to the Hulu litigation. As described in more detail in Section VII below, the Hulu litigation is terminated because the U.S. District Court for the Central District of California held ***all claims*** of the '768 patent and ***all claims*** of its parent U.S. Patent No. 10,986,403 patent-ineligible under 35 U.S.C. § 101. *See* EX1019 (Order Granting Defendant's Motion to Dismiss). In the Hulu litigation, the court did not conduct a claim construction hearing, or construe any terms of the '768 patent. The court held that the Hulu litigation "may be properly dismissed without claim construction." EX1019 (Order Granting Defendant's Motion to Dismiss), 7. Thus, the Challenged Claims have been held invalid as being patent-ineligible under 35 U.S.C. § 101. Patent Owner has appealed the court's holding that the Challenged Claims are patent-ineligible. EX1020, 1-2 (Plaintiff's Notice of Appeal).

The Office may address the unpatentability of the Challenged Claims based

on the proposed rejections presented in this Request, independent from the district court's finding that the Challenged Claims are patent-ineligible under 35 U.S.C. § 101. *See Volvo Penta of the Americas, LLC v. Brunswick Corp.*, IPR2022-01366, Paper 15 at 7 (May 2, 2023) (Vidal) (citing 84 Fed. Reg. 16654) ("[T]he Office will consider…a request for reexamination *before* [1] the Office issues a certificate canceling all claims or [2] before the Federal Circuit issues its mandate in relation to a decision finding all claims invalid or unpatentable."). Neither condition [1] nor [2] has occurred. Accordingly, the Office should consider and order reexamination based on this Request. *See* MPEP § 2286.III ("In view of the statutory mandate to make the determination on the [reexamination] request within 3 months, the determination on the request based on the record before the examiner will be made without awaiting a decision by the federal court."). If the Federal Circuit later issues a final holding of invalidity, the Office may then terminate this reexamination proceeding. *See* MPEP § 2286.IV ("Upon the issuance of a final holding of invalidity or unenforceability, the claims being examined which are held invalid or unenforceable are no longer in force, and therefore, will be withdrawn from consideration in the reexamination.").

Several claims of the '768 patent were recently challenged in two Petitions for *Inter Partes* Review (IPR) filed by Hulu, LLC ("Hulu"). The following table identifies the claims challenged in each of Hulu's IPR Petitions. As of the filing of

this Request, Patent Owner has not filed preliminary responses to Hulu's IPR petitions, and the Patent Trial and Appeal Board has not issued decisions on institution.

IPR Petition	Claims Challenged	Petition Filing Date
IPR2024-01252, *Hulu, LLC v. Piranha Media Distribution, LLC*	1-3, 5-12, 14-21, 23-25, 27-29, 31-33	August 22, 2024
IPR2024-01253, *Hulu, LLC v. Piranha Media Distribution, LLC*	1-3, 5-12, 14-21, 23-25, 27-29, 31-33	August 22, 2024

Requester is not a party to the Hulu IPRs and has no involvement in the Hulu IPRs. The unpatentability grounds presented in this Request are different than and not cumulative of the grounds raised in Hulu's IPR petitions. Further, as shown herein, the unpatentability grounds presented in this Request raise substantial new questions of patentability that have not been considered before with respect to the Challenged Claims of the '768 patent. Accordingly, the Office should order reexamination on the unpatentability grounds presented in this Request.

As explained in Section II.G of this Request, the '768 patent is expired. Consequently, no amendments to the Challenged Claims may be entered in this *ex parte* reexamination proceeding. *See* 37 C.F.R. § 1.530(j) ("No amendment may be proposed for entry in an expired patent. Moreover, no amendment, other than the cancellation of claims, will be incorporated into the patent by a certificate issued

after the expiration of the patent."); MPEP § 2253.III ("The cancellation of the original patent claims is the only 'amendatory' change permitted in an expired patent").

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I. CERTIFICATION REGARDING NO ESTOPPEL

In accordance with 37 C.F.R. § 1.510(b)(6), Requester hereby certifies that the estoppel provisions of 35 U.S.C. § 315(e)(1) or 35 U.S.C. § 325(e)(1) do not prohibit Requester from filing this *ex parte* reexamination request.

II. STATEMENT POINTING OUT SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

A. Summary of Substantial New Questions of Patentability

This Request relies on four references—Wu (EX1004), Rosenberg (EX1005), Angel (EX1006), and Eldering (EX1007). Rosenberg and Angel have not been considered before with respect to the ’768 patent.

As indicated on pages 3-4 above, Hulu filed two IPR petitions against several claims of the ’768 patent. In IPR2024-01215, Hulu challenged claims 1-3, 5-12, 14-21, 23-25, 27-29, and 31-33 as being obvious over Wu (EX1004) in view of Doherty (U.S. Publication No. 2003/0200128). In IPR2024-01216, Hulu challenged claims 1-3, 5-12, 14-21, 23-25, 27-29, and 31-33 as being obvious over Eldering (EX1007)[1] in view of “Eldering-II” (U.S. Publication No. 2003/0149975). Wu and Eldering have therefore been separately presented to the Office across Hulu’s two IPR

[1] In IPR2024-01216, Hulu referred to Eldering (EX1007) as “Eldering-I.” *See* EX1016 (Petition in IPR2024-01216), iii (Exhibit 1004 in Exhibit List).

petitions, which were filed shortly before this Request. However, the Office has not evaluated the combination of Wu and Eldering as presented in this Request. Wu is cited in Hulu's Petition in IPR2024-01215, but Eldering is cited in Hulu's Petition in IPR2024-01216, which presents different obviousness grounds than the Petition in IPR2024-01215, as indicated above. Furthermore, the Office has not evaluated the obviousness grounds presented herein based on Wu in view Rosenberg, Eldering, and Angel with respect to the Challenged Claims. In addition, as shown in Sections III.A.7 to III.B below, the Challenged Claims are unpatentable as obvious over the combination of Wu, Rosenberg, Eldering, and Angel. Therefore, Wu, Rosenberg, Eldering, and Angel raise a substantial new question (SNQ) of patentability that has not been considered by the Office.

This Request presents multiple SNQs with respect to the Challenged Claims, as shown in Section II.H, below. The SNQs raised herein also present different questions of patentability than are raised in IPR2024-01215 and IPR2024-01216. Accordingly, the Office should not deny this Request under 35 U.S.C. § 325(d). To the extent the Office may consider exercising its discretion to deny this Request under 35 U.S.C. § 325(d), Requester requests, in the alternative, that this Request be granted but the proceeding stayed pending the outcome of IPR2024-01252 and IPR2024-01253. In this way, the Office's resources may be conserved while still acknowledging the substantial new questions of patentability raised by this Request.

See 35 U.S.C. § 304 ("If…a substantial new question of patentability…is raised, the determination will include an order for reexamination of the patent").

As described in Section II.D below, during prosecution, the applicant added the following features of cancelled prosecution claim 9 into claim 1 to gain allowance of claim 1.

> [1.3.3][2] the adapted advertisement insertion point determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system; and
>
> [1.3.4] modify the adapted insertion point of digital advertising content based on the advertisement requirement.

EX1002 ('768 FH), 51 (amendment of claim 1), 58 (applicant arguments).

The applicant also added features corresponding to limitation [1.3.3] in prosecution claims 12, 22, and 30 (issued claims 10, 19, and 27, respectively). EX1002, 53 (prosecution claim 22), 54-55 (prosecution claim 19), 56 (prosecution claim 30). The Examiner then allowed the application based on these amendments. EX1002 ('768 FH), 13-21.

As shown in Section III.A.7 below (Proposed Rejection #1), limitations [1.3.3] and [1.3.4] are rendered obvious by Wu in view of Rosenberg, Eldering, and Angel. As discussed above, the Office has not considered Rosenberg or Angel with

[2] The limitation numbering refers to the limitation numbering in Section III below.

respect to the ’768 patent. In addition, the Office has not considered the combination of Wu, Rosenberg, Eldering, and Angel with respect to the ’768 patent.

Further, as shown in Section III.B below (Proposed Rejection #2), limitations [10.2.3], [19.1.2], and [27.1.2] corresponding to limitation [1.3.3] are rendered obvious by Wu in view of Rosenberg and Angel.

Accordingly, a substantial new question of patentability is raised for each of claims 1, 10, 19, and 27.

B. Overview of the ’768 Patent

The ’768 patent is generally directed to “[a] system and method for displaying digital media files.” EX1001 (’768 patent), Abstract. The ’768 patent explains that media broadcasters utilize advertising revenue to make digital content more affordable to consumers. For example, “[m]edia broadcasting employs the practice of mixing licensed content with advertisements and other paid announcements in a pre-configured time sequence, then transmitting this sequence asymmetrically over the airwaves to a large number of consumer receivers capable of showing the content in real-time as it is comes in.” *Id.*, 2:3-8. With the advent of digital video recorders (DVRs) and devices that stream content over the Internet, consumers have the ability to skip or fast forward to different portions of digital content (e.g., a television program), but that frustrates business models for advertisers, who insert advertisements at specific locations in content and whose advertising payments

make the digital content more affordable to consumers. *Id.*, 4:1-11 (explaining that digital video recorders (DVRs) "include the ability to eliminate commercial advertisements saved during the recording process."), 4:50-5:37 (overview of streaming media content over the Internet).

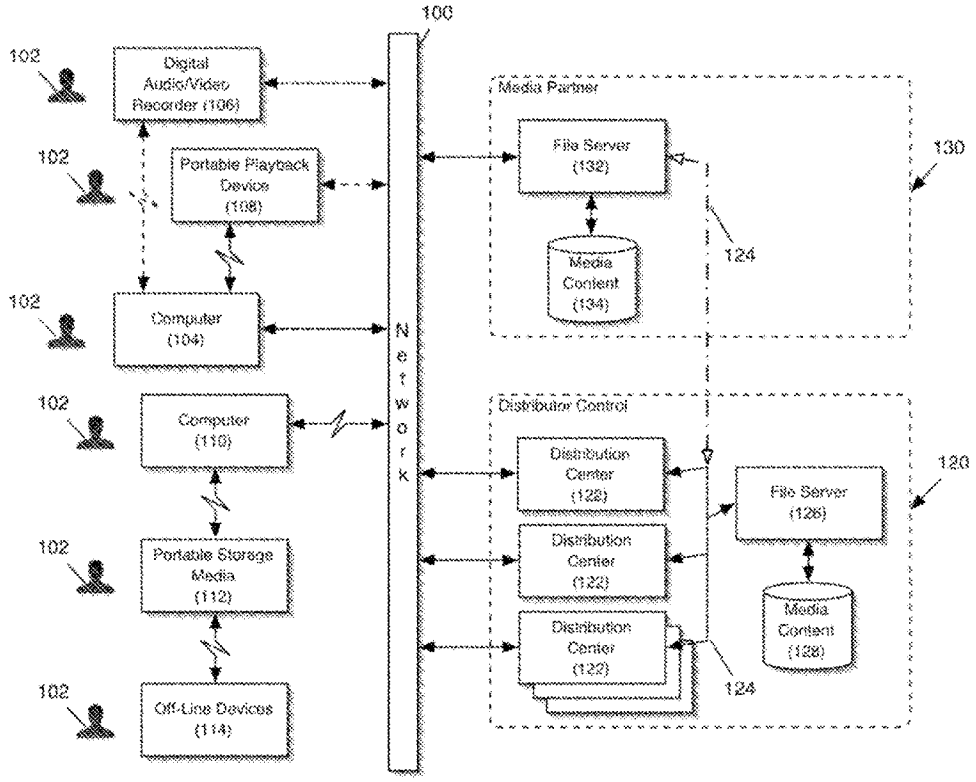
To ensure that required advertisements are viewed by consumers, the '768 patent explains that its "object [is] to provide a revenue generating market for the free consumer redistribution of media content, sponsored through paid advertising that a consumer may be required to experience during the course of media playback, provided by means of a system and/or method that offers the benefits of content restriction and controlled playback, working in conjunction with customized, addressable advertising on an individual consumer basis, with monitoring of content use and ad penetration to track audience viewership." EX1001 ('768 patent), 6:33-42.

The '768 patent utilizes "application software [that] functions primarily as a media presentation 'player/viewer', capable of running audio, video, and print media content," where "[t]he player/viewer allows for a 'general license', whereby a consumer can obtain free use of a media property, with strict controls enforced during media playback." *Id.*, 6:53-62. The '768 patent explains that "[t]hese enforced controls amount to the intermittent insertion of paid commercial advertisements and other promotional material into the time sequence of the media

content during its course of presentation, along with the temporary disabling of certain user controls to ensure that this [advertisement] material is presented in its entirety. The consumer gains free use of content in exchange for exposure to these paid advertisements." *Id.*, 6:63-7:3.

Fig. 1 of the '768 patent, below, shows "a diagram of a networked computer system for the wide distribution of digital media content over at least one public or private telecommunications network 100, such as the Internet." EX1001 ('768 patent), 9:60-63. The '768 patent explains that "[a] multitude of consumers 102 use their individual computer systems 104 and 110 or other digital device systems [e.g., DVR] 106, 108, and 114 to play and view a variety of media content." *Id.*, 10:1-4.

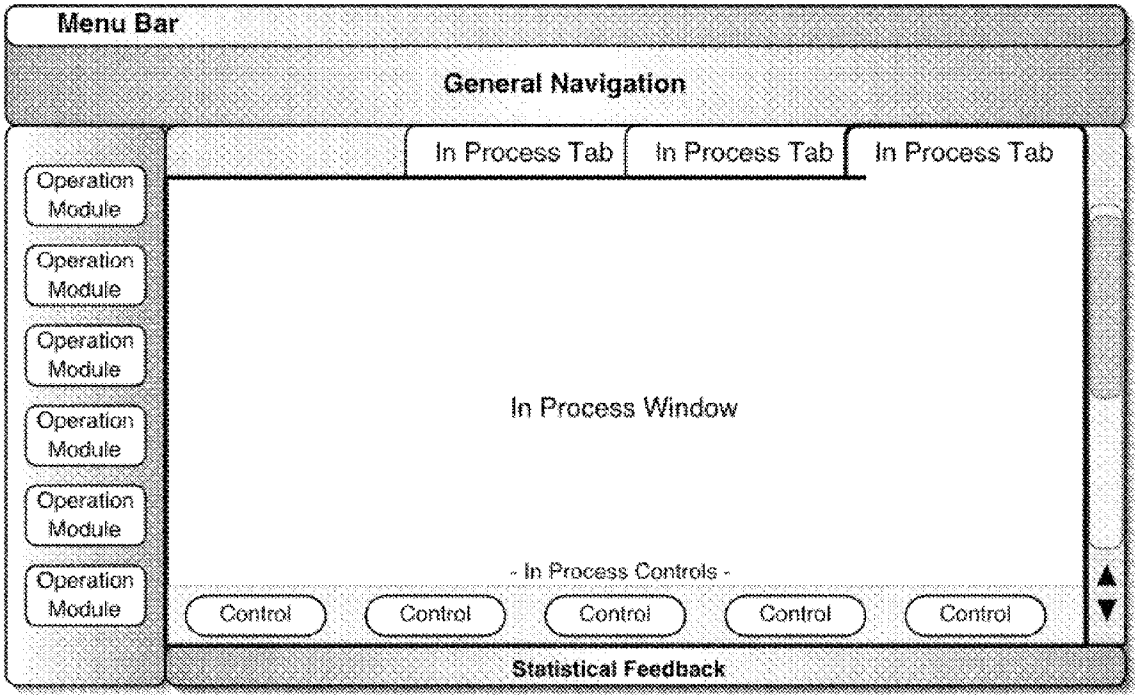
Figure 1



EX1001 ('768 patent), Fig. 1

Fig. 3A, below, is "a diagram of the player/viewer software's graphical user interface [GUI], as it might appear on computer system 104." EX1001, 13:42-44. The '768 patent explains that "[t]he player/viewer's user interface (FIG. 3A) takes direction from a consumer by appearing on the consumer's display device 222 [Fig. 2] and giving audio and/or visual feedback to the input actions of its user." *Id.*, 13:63-66. The player/viewer software GUI has "one or more control areas through which a consumer 102 may take specific actions pertinent to the associated media presentation" (e.g., fast forward). *Id.*, 14:19-22.

Figure 3A



EX1001 ('768 patent), Fig. 3A

The '768 patent explains that the player/viewer software GUI controls the presentation of advertisements based on the controls that the user implements (e.g., fast forwarding). Specifically, the '768 patent describes that "[t]he player/viewer may [] have the power to select which ads are best suited for a particular consumer 102 given information the distributor 120 maintains in its central database about each consumer, applied in conjunction with each specific media title or track request. EX1001, 14:55-60.

To achieve these functions, the '768 patent explains that the player/viewer software has an "advertisement manager" module, and an "intersplicer" module.

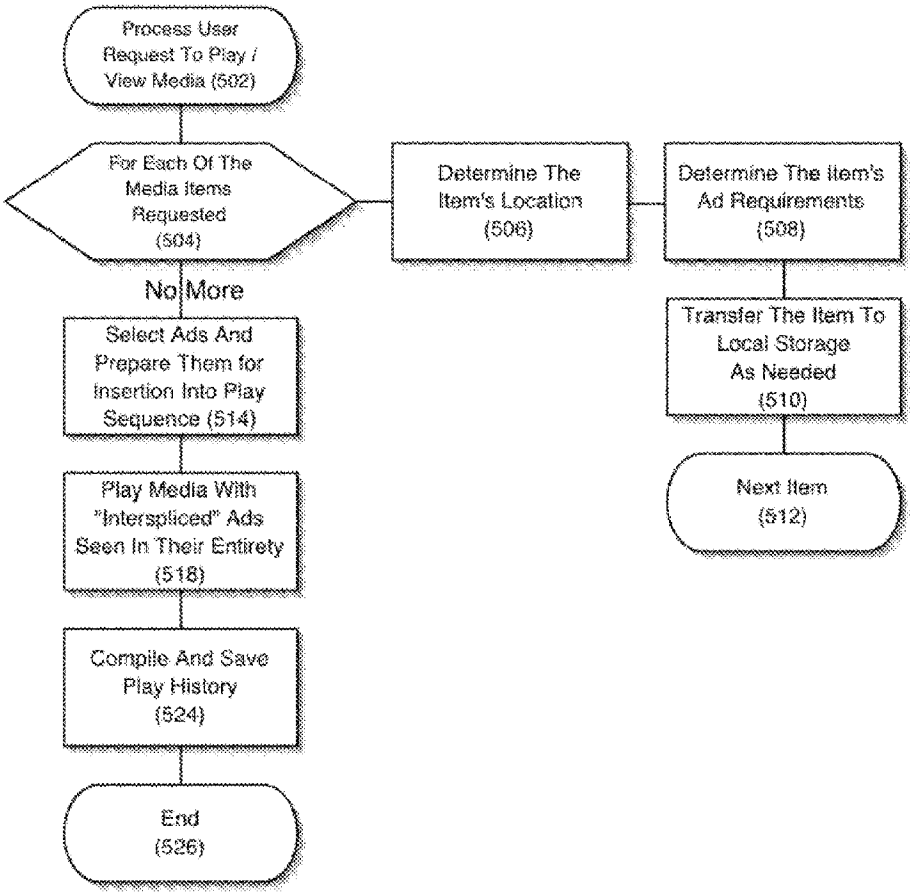
Specifically, the ’768 patent “provides a means to sequence these ads into appropriate blocks that are initially chosen and scheduled into the content stream by a novel ‘advertisement manager’ module of the player/viewer software.” EX1001 (’768 patent), 14:61-65. The ’768 patent also refers to the “advertisement manager” as an “ad manager.” *See, e.g., id.*, Abstract. Claim 1 of the ’768 patent recites an “advertisement rotator” (see limitation [1.2] below). As described in the ’768 patent, the advertisement manager module of the player/viewer software implements the functions of an “ad rotator.” *Id.*, 28:37-42 (ad manager 514 implements functions of ad rotator 516 in Fig. 5B), 22:24-27 (flowchart of Fig. 5A illustrates logic of the player/viewer software), 24:31-34 (“FIG. 5B [is] a block diagram to illustrate how the logical components of the player/viewer [software] operate together in carrying out the logic described with reference to FIG. 5A.”). The functions of the “ad rotator” are described below with reference to Fig. 5B.

The ’768 patent explains that the “‘intersplicer’ module in the player viewer software [] launches, communicates with, and strictly controls a digital rights management enabled real-time player module, while the player module handles the actual playback and viewing of the media content through the player/viewer software.” EX1001 (’768 patent), 14:65-15:3. In particular, “[t]he intersplicer [] has the ability to adaptively re-group and re-sequence the insertion of ad blocks extemporaneously (i.e. ‘on the fly’), in response to the consumer's arbitrary direction

of the playback within the requested content, by means of playback controls. *Id.*, 15:14-18, 7:51-55 (similar description of intersplicer). The "intersplicer" module provides the player/viewer software "the power to intersplice paid commercial ads into the presentation stream intermittently over time throughout the course of playing an audio or video sequence." *Id.*, 18:56-59.

Fig. 5A, below, provides "a flowchart to illustrate the logic by which the player/viewer software processes a user request 502 to play or view some media." EX1001 ('768 patent), 22:24-27. "In step 508, the program determines the ad requirements called for by the item, by checking if any specially granted or restricted service levels apply on the content's use." *Id.*, 22:61-63.

Figure 5A



EX1001 ('768 patent), Fig. 5A

With reference to Fig. 5A, above, the '768 patent explains that "step 514, and the logic it comprises, is referred to herein as the 'intersplicer.'" EX1001 ('768 patent), 23:43-45. "In step 514, the program selects appropriate ads to go with the media request list and prepares them for insertion into the content play/view sequence." *Id.*, 23:31-33. In addition, step 514 (the intersplicer) "determines the rules and parameters by which step 518 adaptively selects and groups ads

extemporaneously in response to user actions during playback, and provides an ongoing maintenance service to rotate ads into and out of play as needed during the course of the session." *Id.*, 23:38-43. The '768 patent explains that "[i]n step 518, the program plays…the requested media with ads, each of which can be forced to run in its entirety, interspliced into the content play sequence [in step 514]." *Id.*, 46-69.

The '768 patent explains that "FIG. 5B is a block diagram illustrating certain software components that operate together to carry out the method of FIG. 5A." EX1001 ('768 patent), 9:22-24, 24:31-34 ("FIG. 5B [is] a block diagram to illustrate how the logical components of the player/viewer [software] operate together in carrying out the logic described with reference to FIG. 5A."). The '768 patent indicates that the "[a]d manager 514…establishes a concurrent ad rotator 516," for example, by "start[ing] a new thread for this purpose," so that the ad rotator thread 516 is "associated with the thread of the [user's] request [step] 502 [in Fig. 5A]" to "play or view some media." *Id.*, 28:37-42, 22:24-27.

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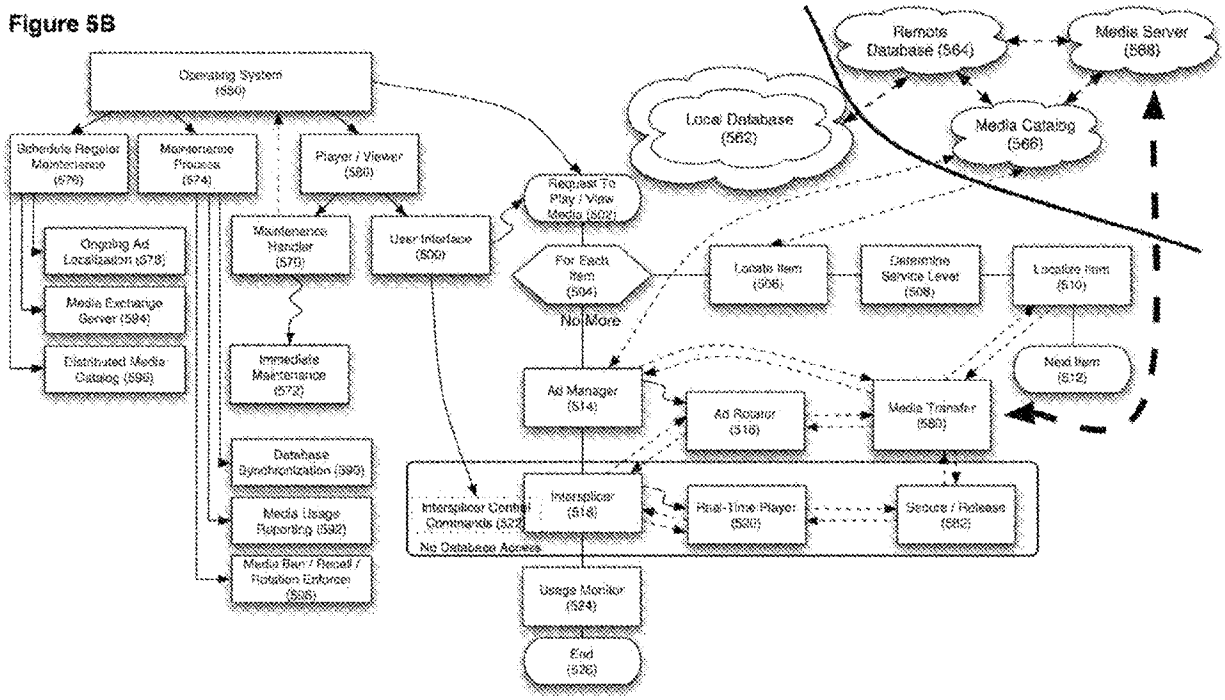

EX1001 ('768 patent), Fig. 5B

With reference to Figure 5B, above, the '768 patent explains that "[a]d rotator 516 handles requests for new ads from an intersplicer 518 by selecting and localizing appropriate ads, grouping them into blocks if so requested, and sending the result back to requesting intersplicer 518." EX1001 ('768 patent), 28:47-50.

Thus, the '768 patent provides that the ad rotator 516 (implemented by the ad manager 514) and intersplicer 518 are each software functions or modules of the player/viewer software, and that these different software functions or modules communicate with each other. The software implementation of the ad rotator 516 (by the ad manager 514) corresponds to the "advertisement rotator" in the claims

(see, e.g., limitation [1.2]), and the software implementation of the intersplicer 518 corresponds to the "intersplicer" in the claims (see, e.g., limitation [1.3.1]).

C. Priority Date of the '768 Patent

The '768 patent is a continuation of Application No. 10/606,729 ("the '729 application"),[3] now U.S. Patent No. 10,986,403 ("the '403 patent").[4] The '768 patent claims priority to Provisional Application No. 60/393,193, filed on June 27, 2002, and Provisional Application No. 60/392,232, filed on June 27, 2002. For purposes of the obviousness grounds herein, Requester assumes a priority date of June 27, 2002, without conceding that the '768 patent is entitled to that priority date. Each of the prior art references identified below predates June 27, 2002.

D. Prosecution History of the '768 Patent

The '768 patent was filed as Application No. 17/234,498 ("the '498 application") (EX1002) on April 19, 2021. The '498 application was filed with original claims 1 and 2. EX1002, 369. In a preliminary amendment, the applicant made a minor amendment to claim 1, cancelled claim 2, and added new claims 3-21. EX1002, 257-261. As explained below, issued claim 1 corresponds to the combination of prosecution claims 1 and 9.

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[3] The '768 patent is a continuation of an application filed prior to the enactment of the America Invents Act ("AIA"). Thus, the pre-AIA statutory framework applies.
[4] An excerpted version of the prosecution history of the '403 patent is submitted as EX1008.

The Examiner issued two Office Actions during prosecution of the ’498 application. EX1002, 239-246. In the first Office Action, the Examiner rejected claims 1 and 3-21 under AIA 35 U.S.C. § 102(a)(2) as being anticipated by Hua (U.S. Publication No. 2007/0204310) (EX1009). The Examiner rejected claims 1 and 3-21 under AIA § 102(a)(2) because the ’498 application was first examined under the AIA. EX1002, 241. The applicant then filed a request for a corrected filing receipt to claim priority to the pre-AIA priority applications identified in Section II.C above. EX1002, 234-236. In response to the first Office Action, the applicant amended the specification to identify the priority applications, and argued that Hua is not prior art to the claims of the ’498 application. EX1002, 95-96, 167.

In the second Office Action, the Examiner rejected claims 1, 5-8, 12, and 15-18 on the basis of obviousness-type double patenting over claim 1 of the ’403 patent, the parent of the ’768 patent. EX1002, 70-72. In addition, the Examiner identified dependent claims 3, 4, 9-11, 13, 14, and 19-21 as reciting allowable subject matter. EX1002, 70.

In response to the second Office Action, the applicant amended claim 1 to include the features of claim 9, and cancelled claim 9. EX1002, 51-52. In its remarks, the applicant explained that it “amended independent claims 1 and 12 to substantially incorporate the respective elements of claims 9 and 19, which recite that ‘the adapted insertion point is determined based on ‘one or more advertisement requirements.’”

EX1002, 58. The amendment to claim 1 including the features of cancelled claim 9 is reproduced below. The amended features to claim 1 correspond to limitations [1.3.3] and [1.3.4] in Section III.A.7 below.

1. **(Currently Amended)** A digital media system comprising:

a user interface for receiving user input for controlling a course of presentation of digital media content;

an advertisement rotator for managing one or more requests for advertising content to be presented during the course of presentation of the digital media content either visually or audibly; and

an intersplicer in communication with the advertisement rotator, the intersplicer configured to:

change a predetermined advertisement insertion point in the digital media content to an adapted advertisement insertion point in the digital media content, in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content, the adapted advertisement insertion point determined by an adaptive preference rule <u>based on</u> <u>an advertisement requirement that applies to the digital media system;</u>

<u>modify the adapted insertion point of digital advertising content based on the advertisement requirement</u>; and

request, from the advertisement rotator, digital advertising content to be played at the adapted advertisement insertion point.

EX1002, 51.

The amendment to prosecution claim 12 (issued claim 10) including the features of cancelled claim 19 is reproduced below. The amended features to claim 1 correspond to limitation [10.2.3] in Section III.A.7 below.

12. **(Currently Amended)** A digital media advertisement presentation control system comprising:

at least one processor;

a non-transitory computer-readable storage medium storing instructions that, when executed by the processor, cause the processor to perform operations comprising:

replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content, in response to receiving a request to update a current play position in the digital media content to a new play position in the digital media content, the adapted insertion point determined by an adaptive preference rule <u>based on one or more advertisement requirements</u>;

requesting digital advertising content to be played at the adapted insertion point of digital advertising content; and

presenting the digital advertising content at the adapted insertion point of digital advertising content.

EX1002, 53.

The applicant also argued that the Examiner should withdraw the obviousness-type double patenting rejection of prosecution claims 1 and 12 (issued claims 1 and 10) because the Examiner did not reject prosecution claims 9 and 19 under the doctrine of obviousness-type double patenting, and prosecution claims 1 and 12 (issued claims 1 and 10) were amended to include the features of cancelled claims 9 and 19. EX1002, 60.

In addition, the applicant added new claims 22-37. EX1002, 54-57. Prosecution claims 22 and 30 correspond to issued claims, 19 and 27, respectively. EX1002, 25. The applicant argued that "[n]ew claims 22-37 are counterpart process

and computer product claims to the system claims previously pending in the Application. The new claims have substantially the same scope… It is respectfully submitted that claims 22-37 are also in condition for allowance by the virtue of substantially incorporating all the features of the allowable claims." EX1002, 58. The applicant's characterization of prosecution claims 22 and 30 (issued claims 19 and 27) "substantially incorporating all the features of the allowable claims" is incorrect, however. Cancelled prosecution claim 9, which was added to claim 1, recited the following features:

> 9. (Previously Presented) The digital media system of claim 1, wherein the intersplicer is further configured to:
>
> determine an advertisement requirement that applies to the digital media system; and
>
> modify the adapted insertion point of digital advertising content based on the advertisement requirement.

EX1002, 92.

Prosecution claims 22 and 30 (issued claims 19 and 27) do not, however, recite (1) an advertising requirement <u>that applies to the digital media system</u>, or (2) modifying the adapted insertion point of digital advertising content based on the advertising content. Likewise, prosecution claim 12 (issued claim 10) does not recite the combination of features (1) and (2) that were added to prosecution claim 1 (issued claim 1).

The Examiner then allowed the '498 application in response to the applicant's response to the second Office Action. EX1002, 13-21. The Examiner provided the following reasons for allowance for prosecution claims 1, 12, 22, and 30 (issued claims 1, 10, 19, and 27, respectively):

> Claims 1,3-8,10-18,20-37 are considered allowable since when reading the claims in light of the specification none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 1, including "change a predetermined ad insertion point in the digital media content to an adapted advertisement insertion point in the content, in response to receiving a user input to update a current play position in the content to a new play position in the content, the adapted advertisement insertion point determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system, modify the adapted insertion point based on the advertising requirement" Inter alia, independent claims 12,22 cite similar limitations.

EX1002, 19.

Thus, the Examiner identified limitations [1.3.2] to [1.3.4] of claim 1 (see Section III.A.7 below) as the allegedly allowable features of claim 1. The Examiner indicated that "[t]he closest prior art Plotnick [U.S. Publication No. 2002/0144262 (EX1009)] "teaches inserting alternative ads during a fast forward command," but does not disclose limitations [1.3.2] to [1.3.4]. EX1002, 19.

Issued claims 10, 19, and 27 do not recite "modify the adapted insertion point of digital advertising content based on the advertisement requirement" (limitation

[1.3.4] below), a feature that was (a) added to claim 1 to gain allowance, and (b) identified as an allowable feature by the Examiner. EX1002, 51, 19.

E. Prosecution History of the '403 Patent

As noted in Section II.C above, the '768 patent is a continuation of the '403 patent. The '403 patent was subject to a lengthy prosecution that included eight Office Actions, the PTAB's affirmance of the rejection of the claims after the eight Office Action, a ninth Office Action, and then a Notice of Allowance after the applicant substantively amended the claims. EX1008 is an excerpted version of the prosecution history of the '403 patent beginning at the applicant's response to the ninth Office Action, and the Notice of Allowance. As indicated in the reasons for allowance below, the Examiner identified the claims of the '403 patent as being allowable due to claim features reciting, for example, "one or more initially sequenced positions at which the digital advertising content is scheduled to be presented," and "one or more alternatively sequenced insertion points [that are] different than the one or more initially sequenced insertion points."

> The prior art of record, Knepper et al. (US 2001/0042249A1), Hannah et al. (US 7,761,327 B1) and Wang (US 2002/0191950 A1) failed to teach the following limitation:
>
> the content stream comprising one or more initially sequenced insertion points at which the digital advertising content is scheduled to be presented relative to the digital media content during play;
>
> in response to user input updating a current play position in the content stream to a new play position in the content stream, the one or more processors using one or more adaptive preference rules to adaptively modify a presentation position of the digital advertising content from at least one of the one or more initially sequenced insertion points to one or more alternatively sequenced insertion points in the digital media content;
>
> at least one of the one or more alternatively sequenced insertion points being different than the one or more initially sequenced insertion points relative to the digital media content within the content stream;

EX1009, 7.[5]

The Challenged Claims of the '768 patent do not recite the above limitations, including the features related to "one or mor initially sequenced insertion points" and "one or more alternatively sequenced insertion points."

F. Citation of Prior Art

In accordance with 37 C.F.R. § 1.510(b)(3), reexamination of claims 1, 10,

[5] The Knepper, Hannah, and Wang references identified in the Examiner's reasons for allowance of the '403 patent are submitted as EX1010 to EX1012, respectively.

19, and 27 (the "Challenged Claims") of the '768 patent is requested in view of the following references. For purposes of identifying prior art status below, Requester assumes that the earliest priority date of claims 1, 10, 19, and 27 of the '446 patent is June 27, 2002, as indicated in Section II.C above.

Exhibit No.	Prior Art Reference
EX1004	U.S. Patent 7,877,766 to Wu et al. ("Wu")
EX1005	U.S. Patent Publication 2002/0090198 to Rosenberg et al. ("Rosenberg")
EX1006	U.S. Patent 7,292,773 to Angel ("Angel")
EX1007	U.S. Patent Publication 2002/0083439 to Eldering ("Eldering")

Wu, Rosenberg, Eldering, and Angel are each prior art under pre-AIA 35 U.S.C. § 102(e). Wu was filed on May 4, 2000. Rosenberg was filed on December 26, 2001. Angel was filed on September 4, 2001. Eldering was filed on December 21, 2000.

G. Claim Construction

The '768 patent is expired.[6] Thus, Requester submits that all terms of the Challenged Claims should be interpreted according to their ordinary and customary meaning as understood by a person of ordinary skill in the art ("POSITA") in

[6] The '768 patent is a continuation of U.S. Patent No. 10,986,403, which was filed on June 26, 2003. The '768 patent does not have any patent term extension or adjustment. See EX1001 ('768 patent), cover. Based on the filing date of the parent '203 patent, the expiry of the '768 patent is June 26, 2023.

question at the time of the alleged invention of the '768 patent. MPEP § 2258.I.G ("In a reexamination proceeding involving claims of an expired patent, claim construction pursuant to the principle set forth by the court in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USQ2d 1321, 1329 (Fed. Cir. 2005)."). The present Request presents the following claim analysis in a manner according to the ordinary and customary meaning of the terms of the '768 patent as understood by a POSITA at the time of the alleged invention of the '768 patent.

Patent Owner proposed a construction for the claim term "*intersplicer*" in the Hulu litigation. Specifically, Patent Owner argued that "*intersplicer*" should be construed to mean "digital rights management software that enforces the conveyance of advertisements inserted into a digital media stream for presentation during the course of media playback to allow for free, unlimited viewing of requested digital media through a general licensing process that is transparent to the user." EX1018, 1.

The Office should reject this construction for two reasons. First, Patent Owner's construction is not the ordinary and customary meaning of this term in view of the disclosure of the '768 patent. The term "intersplicer" is not defined in the specification of the '768 patent, and the term "intersplicer" is not a well-known term in the art. EX1003 (Wechselberger), ¶ 56. The '768 patent does not describe or imply that that an "intersplicer" requires any feature of Patent Owner's proposed

construction. Second, Patent Owner's construction improperly imports limitations that are not required by the claims. *See* MPEP § 2111.01.II; *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) ("Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment."). Patent Owner's proposed construction is based, in part, on a sentence in Column 14, line 65 to Column 15, line 3 of the '768 patent. However, the '768 patent describes other embodiments of an "intersplicer" that do not discuss, suggest, or even imply any relationship to digital rights management. *See, e.g.*, EX1001 ('768 patent), 15:14-18, 23:49-57, 26:59-65, 28:47-29:53 (describing intersplicer 518 in Figs. 5A-5B), 31:29-30, 34:52-36:17 9 (describing intersplicer 518 with respect to the flowchart of Fig. 7A, where "FIG. 7A is a flowchart illustrating one particular method for performing the intersplicing operation of FIG. 5A." (EX1001, 9:31-33)), etc. The term "intersplicer" should be given its ordinary and customary meaning requiring only the features recited in limitations [1.3.1]-[1.3.4] below. EX1003 (Wechselberger), ¶ 57.

H. Identification of Substantial New Questions of Patentability[7]

This Request presents multiple substantial new questions of patentability (SNQs) with respect to claims 1, 10, 19, and 27 of the '768 patent.

As discussed in Section II.D above, the applicant obtained allowance of the '768 patent by amending claim 1 to include the following features (underlining showing additions) of cancelled prosecution claim 19.

> [1.3.3][8] the adapted advertisement insertion point determined by an adaptive preference rule <u>based on an advertisement requirement that applies to the digital media system</u>; and
>
> [1.3.4] <u>modify the adapted insertion point of digital advertising content based on the advertisement requirement</u>.

EX1002 ('768 FH), 51 (amendment of claim 1), 58 (applicant arguments).

The applicant also added features corresponding to limitation [1.3.3] in issued claim 10 (limitation [10.2.3]), issued claim 19 (limitation [19.1.2]), and issued claim 27 (limitation [27.1.2]). EX1002, 53-56.

The Examiner then allowed the application based on these amendments. EX1002 ('768 FH), 13-21. In allowing the application, the Examiner identified that the "[t]he closest prior art Plotnick [U.S. Publication No. 2002/0144262 (EX1009)]

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[7] Unless otherwise specified, all **bold** and ***bold italics*** emphasis below has been added. Text in *italics* is used to signify claim language.
[8] The limitation numbering refers to the limitation numbering in Section III below.

"teaches inserting alternative ads during a fast forward command," but does not disclose the following limitations [1.3.2] to [1.3.4] of claim 1. EX1002, 19.

> [1.3.2] change a predetermined advertisement insertion point in the digital media content to an adapted advertisement insertion point in the digital media content, in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content;
>
> [1.3.3] the adapted advertisement insertion point determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system; and
>
> [1.3.4] modify the adapted insertion point of digital advertising content based on the advertisement requirement.

However, limitations [1.3.2] to [1.3.4] are conventional implementation details rendered obvious by Wu, Rosenberg, and Angel, as shown in Section III.A.7[1.3.3]-[1.3.5] below. The Office has not considered any of Wu, Rosenberg, or Angel with respect to the '768 patent. In addition, the Office has not considered the combination of Wu, Rosenberg, and Angel with respect to the '768 patent.

1. Wu and Rosenberg Raise an SNQ for Limitation [1.3.2].

Wu teaches *…a predetermined advertisement insertion point in the digital media content…*, because Wu teaches that each advertisement has a specified time interval relative to a corresponding segment of video content when the video segment is played in normal playback mode, as shown in Figs. 4A-4B below.

EX1004 (Wu), 7:14-19. For example, as shown in Figs. 4A and 4B, Ad 402 has a *predetermined advertisement insertion point* at 1200-1260 seconds when the media stream 204 is played during normal playback mode, and Ad 404 has a *predetermined advertisement insertion point* at 2340-2400 seconds when the media stream 204 is played during normal playback mode. *Id.*, 7:23-37.

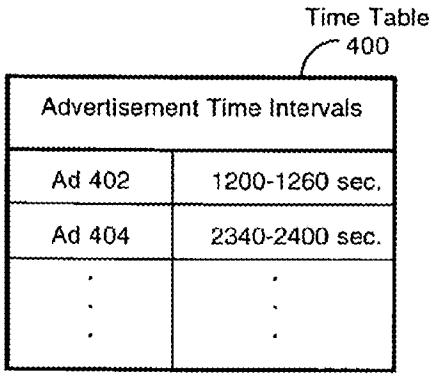


Fig. 4A

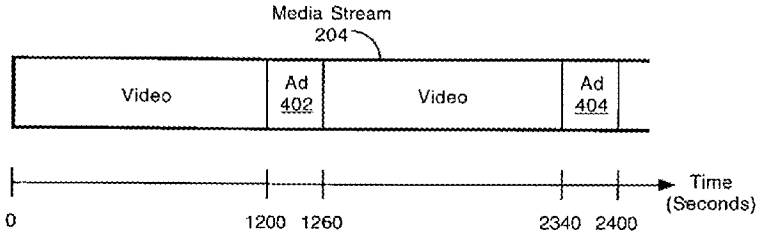


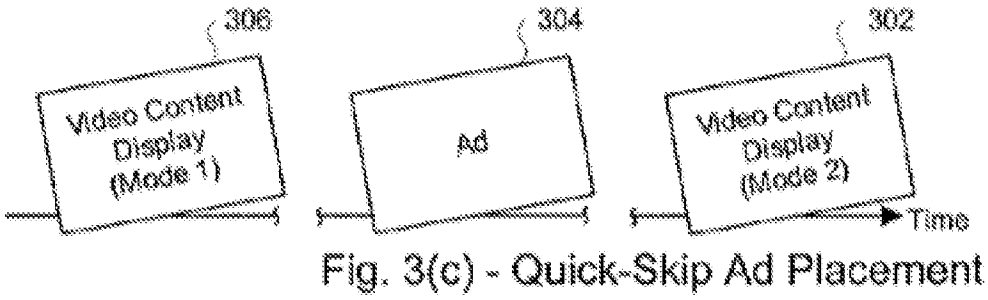
Fig. 4B

EX1004 (Wu), Figs. 4A-4B

Wu also teaches that advertisement insertion point may be updated *in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content*, because Wu that "[t]he general idea of one embodiment in accordance with the present invention is that **when a user of an electronic digital recording/play back device causes it to fast forward through or skip over a recorded television advertisement**, an overlay screen corresponding to the **skipped advertisement** is displayed on a

portion of a television screen once the user resumes watching the recorded television show in normal play back mode." EX1004 (Wu), 2:24–31.

Rosenberg teaches *chang[ing] a predetermined advertisement insertion point in the digital in the digital media content to an adapted advertisement insertion point*, in response to user input, as recited in limitation [1.3.2]. Specifically, as shown in Fig. 3(c) below, Rosenberg teaches newly inserting and displaying a skipped-over advertisement "in a time interval between the two video content displays [306, 302]" when the user skips from one segment (mode 1) to a second segment (mode 2) of the media content. EX1005 (Rosenberg), ¶ 61 (quick-skip ad is "displayed in a time interval between the two video content displays [306, 302]."), Fig. 3(c) (ad 304 displayed between first mode 306 of video content and second mode 302 of video content).



EX1005 (Rosenberg), Fig. 3(c) (partial)

Accordingly, Wu and Rosenberg teach *the adapted advertisement insertion point* (e.g., an advertisement in Wu, which has a specified insertion point relative to

the a segment of the video stream (advertisement timelines specified in Figs. 4A-4B), modified by Rosenberg's teaching that ads are inserted into different segments of a video stream when the user skips or fast forwards to a different portion of the video stream (e.g., ad 304 is newly inserted between modes 306 and 302 in Rosenberg's Fig. 3(c))).

Thus, Wu and Rosenberg raise an SNQ with respect to limitation [1.3.2], which was identified by the Examiner as not being taught by the prior art considered during prosecution. Wu and Rosenberg were not considered during prosecution of the '768 patent.

2. Wu, Rosenberg, and Angel Raise an SNQ for Limitation [1.3.3].

As described above in Section II.H.2, Wu and Rosenberg teach the claimed *adapted advertisement insertion point*.

Wu, Rosenberg, and Angel teach *that the adapted advertisement insertion point [is] determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system*. First, Angel teaches *an adaptive preference rule* for inserting and displaying advertisements. With reference to Fig. 2, below, Angel teaches that a mandatory segment (e.g., advertisement) has a description 245 that defines requirements (rules) for displaying the mandatory segment (e.g., advertisement). EX1006 (Angel), 4:39-44. The "[d]escription 245

comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249." *Id.*, 4:39-43. The duration 247 defines how long the mandatory segment lasts, and the mandatory level 249 defines whether the advertisement may be skipped or is required to be played. *Id.*, 4:52-63, 5:32-37.

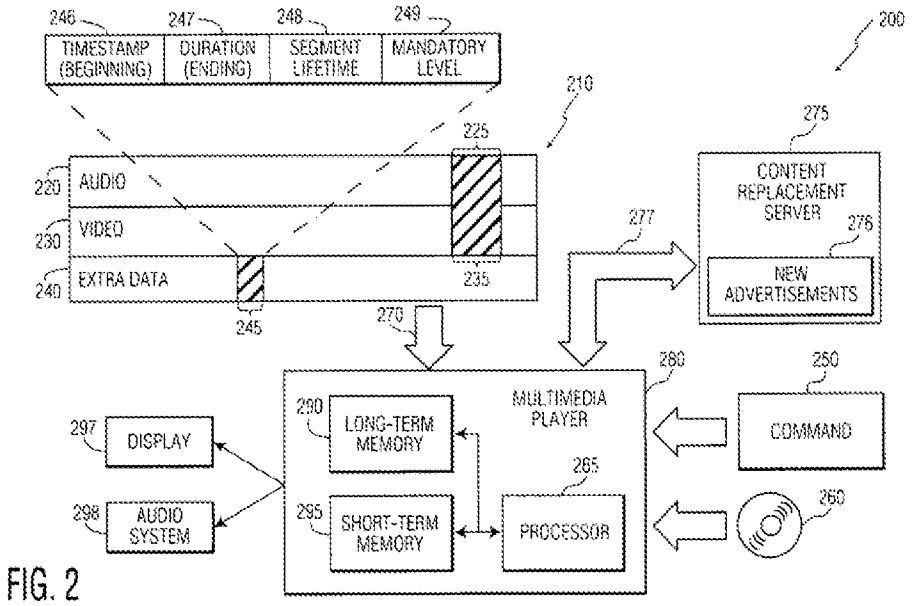


FIG. 2

EX1006 (Angel), Fig. 2

As explained in Section III.A.7[1.3.3] below, the description 245 in the mandatory segment (see Fig. 2, above) is an *adaptive preference rule*, because the mandatory level 249 in the description 245 of the mandatory segment (e.g., advertisement) (*preference rule*) defines whether the mandatory segment may be skipped, i.e., it is adaptive. EX1006 (Angel), 5:32-37 ("Mandatory level 249 indicates to what extent a mandatory segment is allowed to be skipped. In one embodiment, mandatory level 249 may be 'hard' or 'soft,' where **'hard' indicates**

that the mandatory segment cannot be skipped and 'soft' indicates that the mandatory segment can be skipped if certain conditions are met.").

In addition, Angel teaches *an adaptive preference rule based on [the] advertisement requirement that applies to the digital media system*. With reference to Fig. 1, below, Angel teaches that the activation distances 160 relative to the mandatory segment 140 are *advertisement requirement that applies to the digital media system*, because "**[t]he activation distances 160 are used to determine whether or not the mandatory segment 140 should be enforced**. If the activation distance 160 is too long, then the mandatory segment 140 might not be enforced. For example, if a user jumps one hour of a two hour video, there could be quite a few mandatory segments 140 in this one hour. In this situation, the mandatory segments within the one hour might not be played." EX1006 (Angel), 3:28-35.

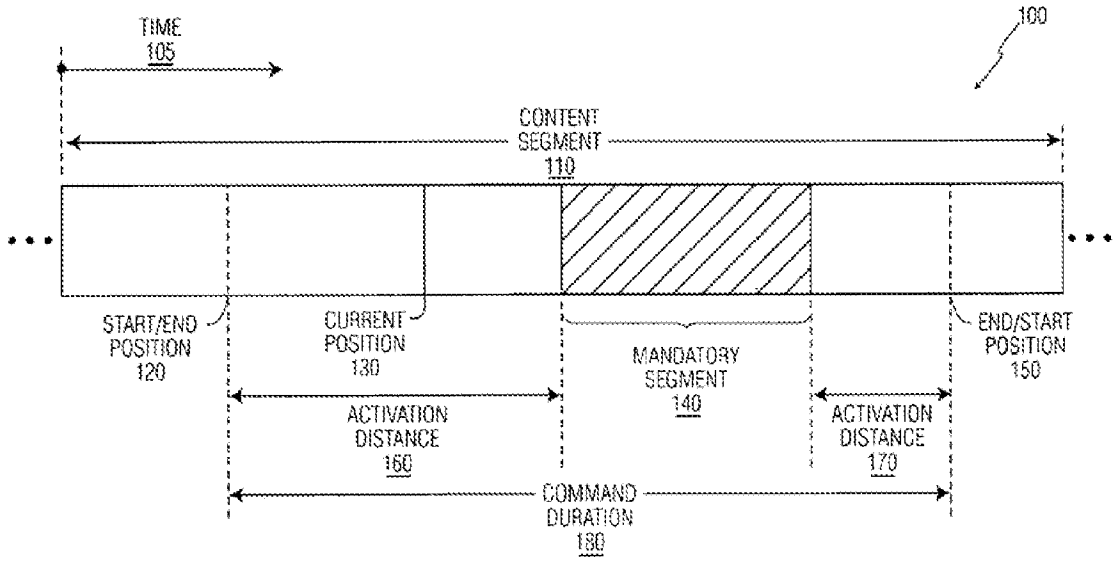


FIG. 1

EX1006 (Angel), Fig. 1

Further, Angel's *adaptive preference rule* (mandatory level 249) is *based on [the] advertisement requirement that applies to the digital media system* (activation distances 160 relative to the mandatory segment 140), because the mandatory level 249, which indicates whether the mandatory segment must be enforced, is based on the original placement of the advertisement relative to the length of the video segment. EX1006 (Angel), 5:40-43 ("a mandatory segment might be labeled as 'soft' such that a user who is skipping one hour of a television show would also skip this mandatory segment if it resides in the hour.").

Accordingly, Wu, Rosenberg, and Angel raise an SNQ with respect to limitation [1.3.3], which was identified by the Examiner as not being taught by the

prior art considered during prosecution. Wu, Rosenberg, and Angel were not considered during prosecution of the '768 patent.

3. Wu, Rosenberg, and Angel Raise an SNQ for Limitation [1.3.4].

As described above in Section II.H.2, Wu and Rosenberg teach the claimed *adapted advertisement insertion point*. Further, as described above in Section II.H.2, Angel teaches the claimed *advertisement requirement*.

Wu, Rosenberg, and Angel show that the claim feature of *modify[ing] the adapted insertion point of digital advertising content based on the advertisement requirement* is a well-known conventional implementation detail.

First, Wu teaches that software 208 in the user's digital video recorder 100 (Fig. 1) uses the advertisement time intervals in the time table 400 (*see* Fig. 4A below) "to detect when an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode." *Id.*, 7:32-37; *see also id.*, 6:62-65 ("[T]he present embodiment determines whether an advertisement of recorded media stream 204 [Fig. 4B] was played back in normal mode by electronic digital recording/play back device 100 for **a specific amount of time**."). Thus, Wu discloses that an objective is to play an advertisement for its designated duration.

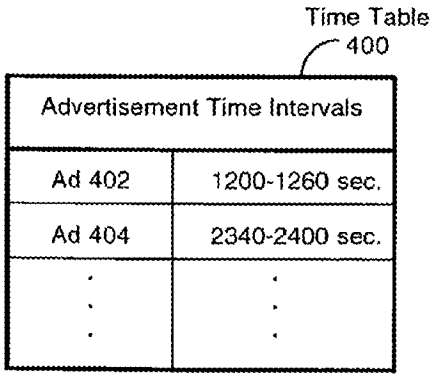


Fig. 4A

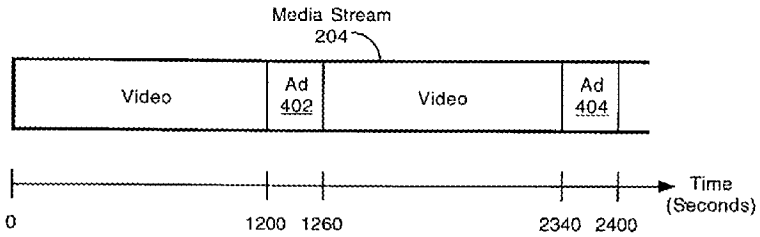


Fig. 4B

EX1004 (Wu), Figs. 4A-4B

Similarly, as shown in Fig. 2, below, Angel discloses that each advertisement (mandatory segment) has a "duration" 247 specified in the description 245 of the mandatory segment, and the "[d]uration 247 comprises a time duration that describes how long mandatory segment 235 lasts…. For example, …the duration 247 indicates that the mandatory segment 235 is 60 seconds long." EX1006 (Angel), 4:52-59.

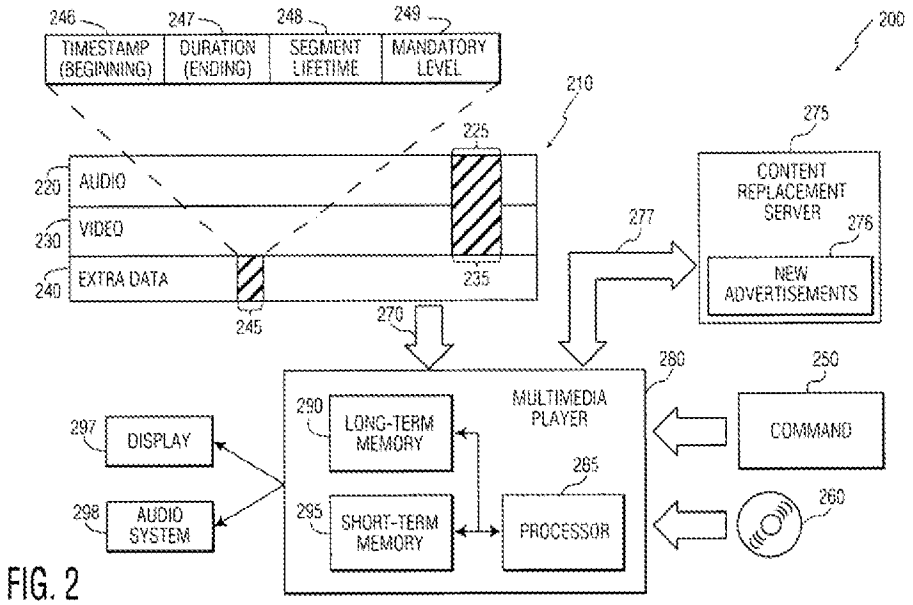


FIG. 2

EX1006 (Angel), Fig. 2

As described above in Section II.H.2, Wu, Rosenberg, and Angel teach that the advertisement insertion point is adapted according to an *adaptive preference rule* (the duration 247 and mandatory level 249 in the description 245 of Angel's mandatory segment). Thus, Angel teaches that the placement of the advertisement, as updated in Rosenberg, would have to be modified to accommodate the required duration specified in Angel's description 245.

Accordingly, Wu, Rosenberg and Angel teach that *the adapted insertion point of digital advertising content* (i.e., the adapted insertion point of an advertisement for upcoming programs) *is modified* (to correspond to the duration of the ad) *based on the advertisement requirement* (based on the activation distance 160 between the user's jump move relative to the original placement of the ad, as taught by Angel).

Therefore, Wu, Rosenberg, and Angel raise an SNQ for limitation [1.3.4], which was identified by the Examiner as not being taught by the prior art considered during prosecution. Wu, Rosenberg, and Angel were not considered during prosecution of the '768 patent.

4. Wu, Rosenberg, Eldering, and Angel Raise an SNQ for Claim 1

As shown in Section III.A.7 below, claim 1 is rendered obvious by Wu in view of the conventional implementation details as taught by Rosenberg, Eldering, and Angel. The combination of Wu, Rosenberg, Eldering, and Angel therefore renders obvious claim 1, including allegedly allowable limitations [1.3.2]-[1.3.4]. Therefore, the combination of Wu, Rosenberg, Eldering, and Angel raises an SNQ for claim 1, because the Office has not considered this combination of references which renders claim 1 obvious.

5. Wu, Rosenberg, and Angel Also Raise SNQs for Claims 10, 19, and 27.

Limitations [10.2.3], [19.1.2], and [27.1.2] of claims 10, 19, and 27 are similar to limitation [1.3.3], which the Examiner identified as part of the reasons for allowance. EX1002 ('768 FH), 19. As shown in Section III.A.7 below, limitations [10.2.3], [19.1.2], and [27.1.2] are taught by Wu, Rosenberg, and Angel. Therefore, Wu, Rosenberg, and Angel also raise SNQs with respect to claims 10, 19, and 27.

As shown below and confirmed in the Declaration of Anthony J.

Wechselberger (EX1003), the technology claimed in the '768 patent was not new. The references presented in this Request render obvious the Challenged Claims, which should be canceled for unpatentability.

III. DETAILED EXPLANATION OF THE PERTINENCE AND MANNER OF APPLYING THE PRIOR ART REFERENCES TO EVERY CLAIM FOR WHICH REEXAMINATION IS REQUESTED

The proposed rejections detailed below show that claims 1, 10, 19, and 27 of the '768 patent are unpatentable.

A. Proposed Rejection #1: Claim 1 would have been obvious over Wu in view of Rosenberg, Eldering, and Angel

1. Overview of Wu

Wu is generally directed to "the use of an electronic digital recording/play back device" (e.g., a TiVo® or similar digital video recorder (DVR)). EX1004 (Wu), 1:42-47. Wu explains that "the electronic digital recording/play back device has the ability to digitally record and subsequently play back specific television shows for its user." *Id.*, 1:47-49. "[D]uring play back of a previously recorded television show, the electronic digital recording/play back device also enables its user to fast forward or skip through all or some of the recorded television show." *Id.*, 1:56-59. However, in doing so, "a user of the electronic digital recording/play back device typically fast forwards through or skips over advertisements previously recorded by their electronic digital recording/play back device." *Id.*, 1:59-63.

Wu explains that "there are disadvantages associated with users of electronic digital recording/play back devices fast forwarding through or skipping over advertisements." *Id.*, 1:64-67. For example, Wu explains that advertisers "will become increasingly aware that their advertisements are not very effective," and may accordingly reduce "available funding for television program development." *Id.*, 1:65-2:14.

In view of these drawbacks, Wu is directed to "[a] method and system of providing a non-skippable sub-advertisement stream." *Id.*, Abstract. Wu explains that "[t]he general idea of one [of its] embodiment[s]…is that when a user of an electronic digital recording/play back device causes it to **fast forward through or skip over a recorded television advertisement, an overlay screen corresponding to the skipped advertisement is displayed on a portion of a television screen once the user resumes watching the recorded television show in normal play back mode**." *Id.*, 2:25-31. In this way, "the user of the electronic digital recording/play back device is unable to easily avoid viewing content corresponding to the skipped advertisement." *Id.*, 33-35.

Fig. 2 of Wu, below, illustrates "a consumer electronic network system 200 in accordance with the present invention," which includes "a content provider source 202 (e.g., television broadcast company, the Internet, television cable company, and the like) coupled to electronic digital recording/play back system 100, which is

coupled to display device 112." *Id.*, 5:40-42, 5:56-60. As shown in Fig. 2, Wu discloses that "software 208…operating on electronic digital recording/play back system 100 would be able to determine whether or not an advertisement is being fast forwarded through or skipped over during normal play back mode." *Id.*, 7:14-19.

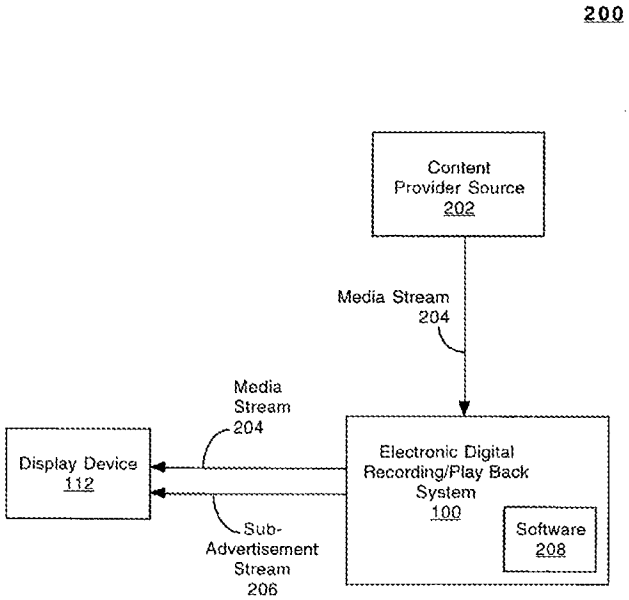


Fig. 2

EX1004 (Wu), Fig. 2

Wu explains that "specific time intervals of the advertisements" are stored within a time table 400 (shown in Fig. 4A) to "enable[e] software 208 to detect when an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode." *Id.*, 7:32-37. For example, as shown in Figs. 4A-4B below, ad 402 is inserted at 1200-1260 seconds after a first video

segment spanning 0 to 1200 seconds of the media stream 204, and ad 404 is inserted at 2,340-2,400 seconds after a second video segment spanning 1,260 to 2,340 seconds of the media stream 204.

Time Table
400

Advertisement Time Intervals	
Ad 402	1200-1260 sec.
Ad 404	2340-2400 sec.
⋮	⋮

Fig. 4A

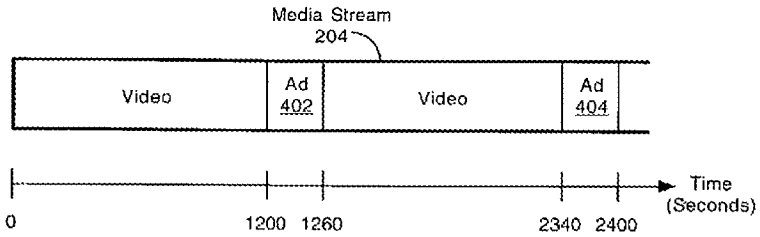


Fig. 4B

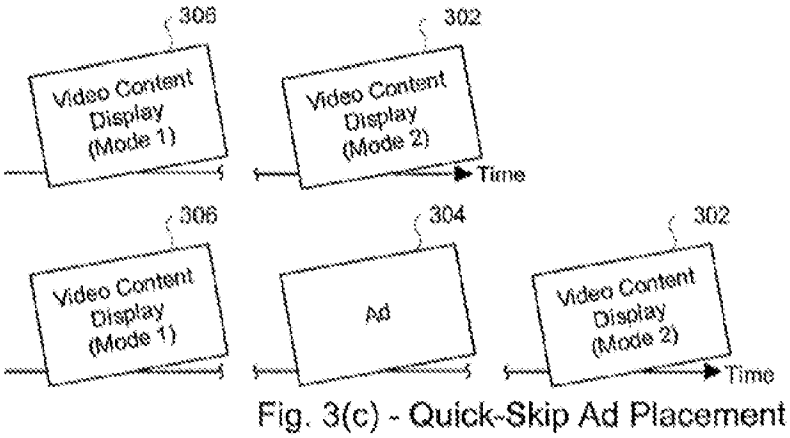
EX1004 (Wu), Figs. 4A-4B

Wu discloses that the electronic digital recording/play back system 100 outputs a "sub-advertisement stream 206 corresponding to the skipped advertisement [so that the sub-advertisement stream 206] is displayed on a portion of the screen of display device 112 once the user resumes watching the recorded television show in normal play back mode." *Id.*, 5:43-50. For example, Wu discloses that the sub-advertisement stream 206 may be output to be displayed simultaneously with the media stream 204 when it is played in normal playback mode (*Id.*, 8:20-26), or the media stream 204 may be stopped or paused while sub-advertisement stream 206 is output "as a full screen display to display device 112." *Id.*, 8:36-42.

Thus, Wu discloses that if a user fast forwards or skips over a television ad that is scheduled to be displayed during the media stream 204, the advertisement is shown to the user at a different time when the user has resumed a normal playback mode. *Id.*, 2:25-31, 5:43-50.

2. Overview of Rosenberg

Rosenberg teaches that the insertion point of an advertisement is adapted when the user skips through the content, e.g., by fast forwarding ("quick-skip"). Rosenberg refers to a user skipping through the content as changing from a first mode to a second mode, as shown in Fig. 3(c) below. EX1005 (Rosenberg), ¶ 45. With reference to Fig. 3(c), Rosenberg explains that the first mode display 306 is the video playback prior to the user request to quick-skip, and the second mode display 302 is the video playback after the quick-skip ceases. *Id.*, ¶ 45.



EX1005 (Rosenberg), Fig. 3(c)

Rosenberg teaches that when the user changes modes (e.g., from first mode

306 to second mode 302 in Fig. 3(c), "[a]n ad opportunity exists during the increment between modes, which could last several milliseconds or several minutes." EX1005, ¶ 45. For example, as shown in Fig. 3(c), above, an ad 304 (second row of Fig. 3(c)) is inserted between the first mode 306 and the second mode 302. *Id.*, ¶ 61 ("FIG. 3(c) is a set of timelines showing the possible types of video display occurring without ads, and also when a quick-skip ad is placed in the video display. A quick-skip mode change describes a switch from video playback mode 306 at one time to video playback mode 308 at a different time…. Here, an ad is displayed in a time interval between the two video content displays, even though it might be possible to switch from one content display to the other without a significant time lapse.").

Thus, Rosenberg teaches changing the insertion point of an ad (e.g., ad 304 in Fig. 3(c)) when the user skips from a first mode to a second mode (e.g., by fast forwarding), such that the ad is displayed between the first mode and the second mode, as shown in Fig. 3(c) above.

Like Wu, Rosenberg discloses that control software 114 in the user's digital video recorder (DVR) 108 detects whether to insert an ad into the video output stream when the display is changed from a first mode to a second mode, as shown in Rosenberg's Fig. 1(a) below. *Id.*, ¶¶ 40 ("An ad opportunity arises when the control software 114 detects that the display should change modes from a first mode (or its current mode) to a second mode [step 200 in Fig. 2]."), 31 ("A digital video

recorder 108 is coupled in communication with a server 100 containing an ad database 102, receives a video input stream 106, and outputs a video output stream 118. The digital video recorder 108 contains ad placement software 114 coupled in communication with a memory 110, which in turn, is coupled in communication with a video capture engine 112.").

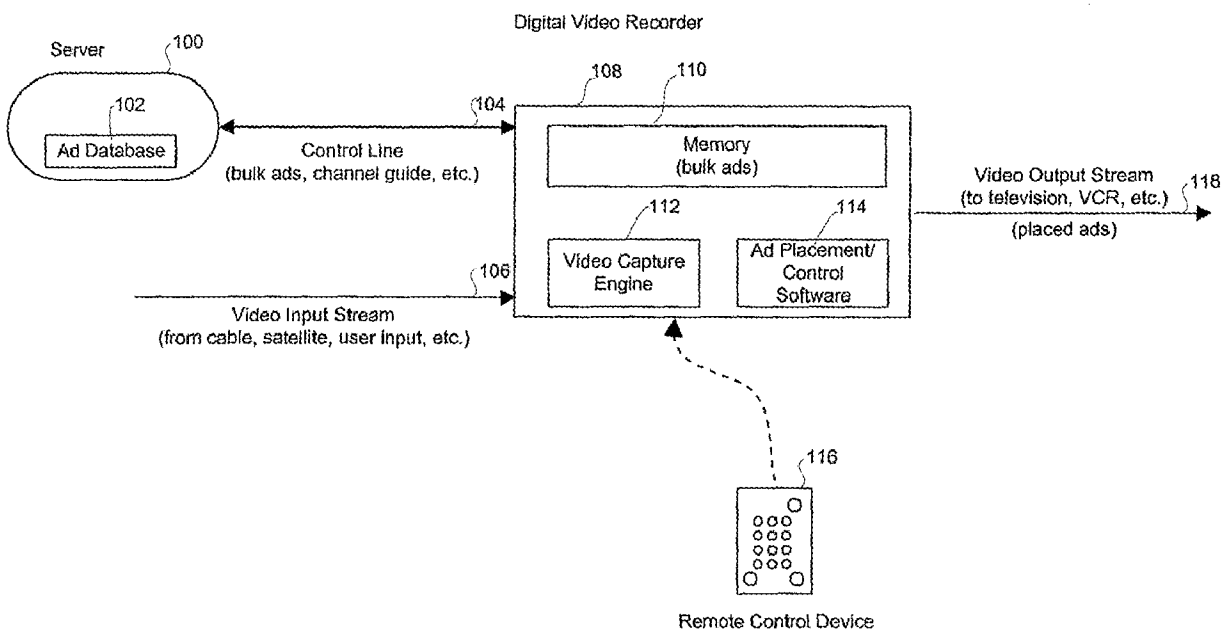


Fig. 1(a)-Digital Video Recorder Overview

EX1005 (Rosenberg), Fig. 1(a)

3. Overview of Eldering

Eldering is cited in this Request to show that it was known to implement different functions performed by the software of a user's set top box or digital video recorder in separate modules, where each module performs a specific function of the software.

Eldering is directed to "[a] system for inserting advertisement into channels of media programming…for improving effectiveness in targeted advertising." EX1007 (Eldering), Abstract. In particular, Eldering "pertains to targeted advertising, such as in television programming delivery systems utilizing set top boxes for each subscriber." *Id.*, ¶ 3. Eldering's object is "to provide a method and system for inserting targeted advertisements into television program channels according to [an] ad insertion schedule." *Id.*, ¶ 11. Eldering explains that each subscriber has a set top box that is "capable of receiving television programming streams or channels carrying programs and openings (or avails). Although the avails may contain default ads, other ads, more suitable to the user, can be inserted." *Id.*, ¶ 13. A subscriber's set top box includes "an ad processing unit coupled to a display device (e.g., a TV)," where "[t]he ad processing unit determines the next ad or ads to be inserted into the upcoming avails of the programming channel, and the order in which these ads are to be inserted into the programming channel." *Id.*, ¶ 15. Eldering explains that the ad processing unit in the subscriber's set top box inserts the ads in the avails. *Id.*

As shown in Figure 2, below, Eldering explains that a subscriber's set top box includes an "advertisement processing unit" (APU) 22 that is "realized as a combination of both hardware and software and includes components which are typically used as part of a television set-top including a microprocessor, Random

Access Memory (RAM), and in the case of a Personal Video Recorder [e.g., DVR], a hard drive." EX1007 (Eldering), ¶ 43. As shown in Figure 2, the software components of the APU 22 include, in part, an ad insertion module 304, an ad scheduler 312, an ad storage unit 314, and an avail data storage unit 318. *Id.*, ¶ 42.

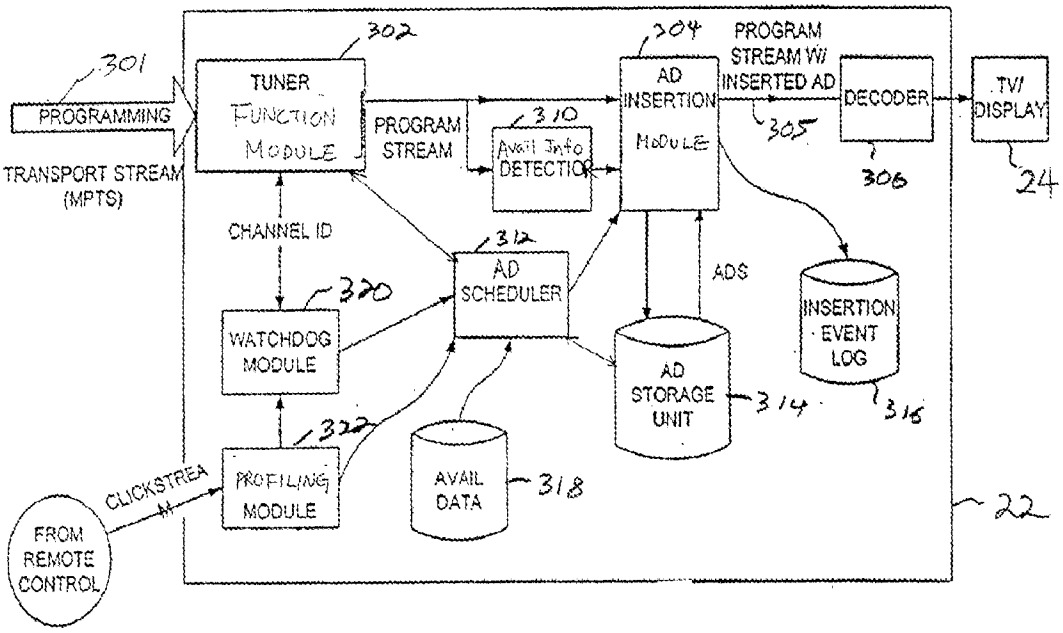


Figure 2

EX1007 (Eldering), Fig. 2

Eldering explains that "the avail data storage unit 318 stores therein avail information (e.g., avail size, avail ID, etc.) directed to the avails of the upcoming programming channels." EX1007 (Eldering), ¶ 44. In addition, "[t]he ad scheduler 312 may schedule or reschedule the ad insertion based on the outputs from the avail data storage unit 318." *Id.* Eldering discloses that "the scheduler 312 is a real time scheduler so that the rescheduling of ads is performed in real time, i.e., almost

simultaneous with the detection of the change in the viewing parameters." *Id.*, ¶ 58. For example, Eldering explains that the ad scheduler 312 may "reschedule the ads upon detection of certain channel changes." *Id.*, ¶ 63. Eldering indicates that "Once the avail is detected based on the avail time information, the advertisement insertion module 304, according to the ad insertion schedule provided by the ad scheduler 312, requests a particular advertisement from the advertisement storage unit 314 which then sends the requested advertisement to the advertisement insertion module 304." *Id.*, ¶ 46.

Thus, as illustrated in Figure 2, above, Eldering shows that it was known to have different software modules in a subscriber's set top box communicate with each other to (1) change the insertion time (i.e., reschedule) a scheduled advertisement (e.g., ad scheduler 312), and (2) obtain an appropriate advertisement (rotate the advertisements) from the ad storage unit 314 according to the ad insertion schedule (e.g., ad insertion module 304). EX1007 (Eldering), ¶¶ 44, 46.

4. Overview of Angel

Angel "provides techniques for enforcing mandatory segments in multimedia content." EX1006 (Angel), 2:7-8. As explained below, Angel is generally directed to enforcing rules about displaying mandatory segments (e.g., advertisements) when a user skips through recorded multimedia content.

Angel explains that "[m]ultimedia content often includes mandatory segments

that someone, such as the content owner or an advertiser, wishes to be presented to the user." EX1006 (Angel), 1:15-17, 2:8-11 ("A mandatory segment is a portion of the multimedia content that someone, usually an advertiser, wishes the viewer or listener to see or hear."). For example, Angel notes that "there is a tendency among advertisers to introduce mandatory segments of content (e.g., commercials) that the user will not be able to skip while playing the content." *Id.*, 1:23-26. Angel's Fig. 1, below, shows an embodiment of multimedia content 100 that includes a content segment 110, which has a **mandatory segment 140** between a start/end position 120 and an end/start position 150 of the content segment 110. *Id.*, 2:40-67.

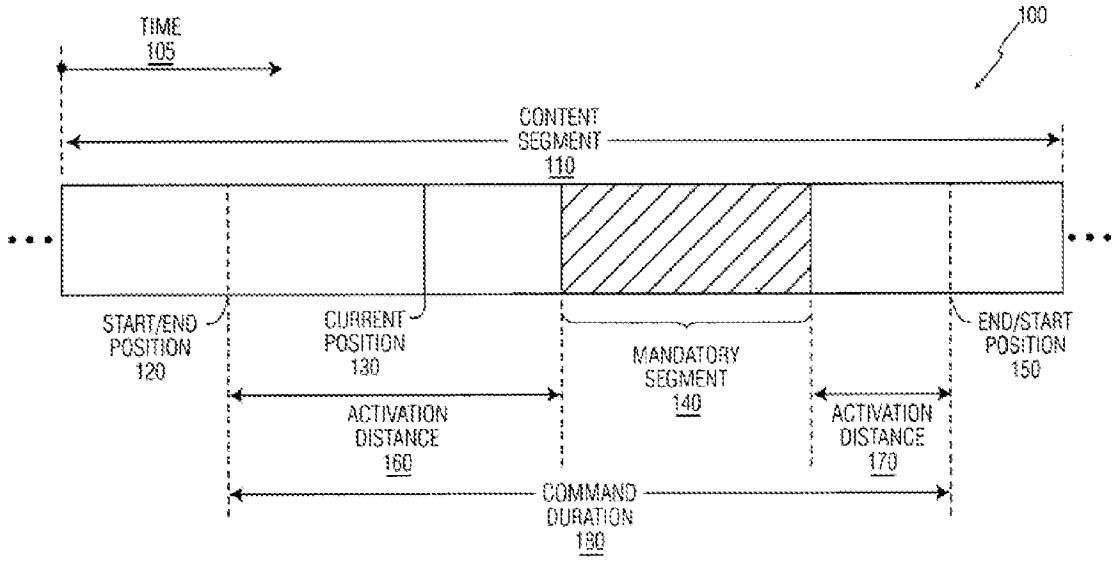


FIG. 1

EX1006 (Angel), Fig. 1

As shown in Fig. 2, below, Angel teaches that a mandatory segment (e.g.,

mandatory segment 235 in video content 230) has a description 245 that defines requirements (rules) for displaying the mandatory segment (e.g., advertisement). *Id.*, 4:39-44 ("Audio portion 220 contains a mandatory segment 225. This mandatory segment 225 is described in extra data 240 by description 245. Similarly, in video portion 230, there is a mandatory segment 235. This mandatory segment 235 is also described in extra data 240 by description 245.").

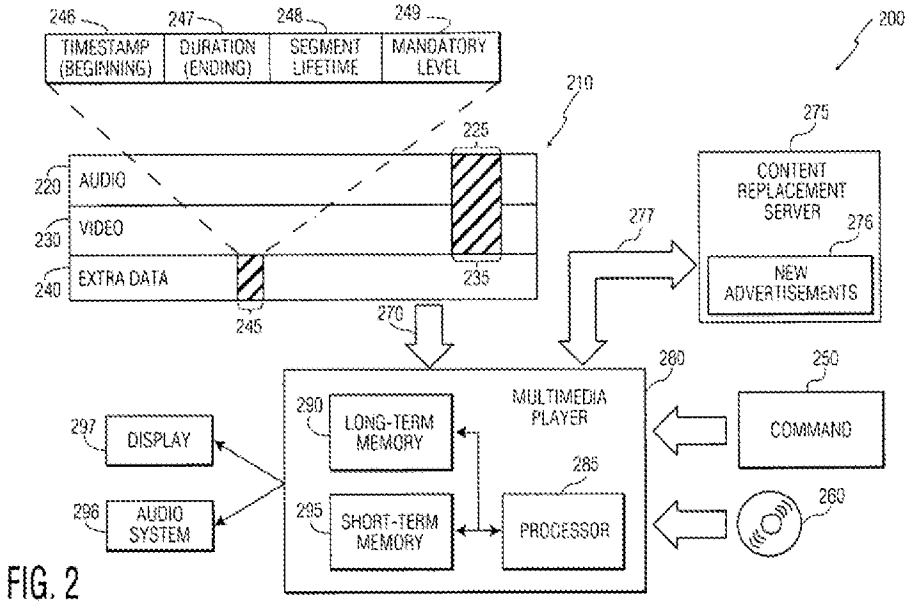


FIG. 2

EX1006 (Angel), Fig. 2

The description 245 defines requirements (rules) for the display of the mandatory segment (e.g., advertisement). For example, as shown in Fig. 2, above, the "[d]escription 245 comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249." *Id.*, 4:39-43. The timestamp 246 identifies when the mandatory segment starts (e.g., relative to a starting frame), and the "[d]uration

247 comprises a time duration that describes how long mandatory segment 235 lasts." *Id.*, 4:52-63. The segment lifetime 248 defines the time period (e.g., date ranges) in which the mandatory segment must be enforced and/or the number of times the mandatory segment is to be played (e.g., five times). *Id.*, 5:1-27. The "[m]andatory level 249 indicates to what extent a mandatory segment is allowed to be skipped." *Id.*, 5:32-33. For example, "mandatory level 249 may be 'hard' or 'soft,' where 'hard' indicates that the mandatory segment cannot be skipped and 'soft' indicates that the mandatory segment can be skipped if certain conditions are met. *Id.*, 5:33-37.

Thus, Angel teaches that the description 245 in the content segment defines a requirement (rule) about displaying mandatory segments (e.g., advertisements) when a user skips through recorded multimedia content.

5. Wu, Rosenberg, Eldering, and Angel are Analogous Art

Wu, Rosenberg, Eldering, and Angel are each analogous art to the '768 patent at least because Wu, Rosenberg, Eldering, and Angel are each directed to the same field of endeavor as the '768 patent. The '768 patent is directed to a system and method "for displaying digital media files," where an "intersplicer combines the media files with [] ad files." EX1001 ('768 patent), Abstract. Likewise, Wu, Rosenberg, Eldering, and Angel are each directed to systems and methods that display digital content in association with advertisements. EX1004 (Wu), 2:24-31

(displaying advertisements with digital content when a user fast forwards or skips over a recorded television advertisement); EX1005 (Rosenberg), ¶ 12 ("The present invention provides a method and system for types of ad placement opportunities in a digital video stream."); EX1007 (Eldering), ¶ 10 (explaining that "object of the present invention to provide a method and system for inserting targeted advertisements into media program channels at the subscriber's side."); EX1006 (Angel), 2:7-8 ("The present invention provides techniques for enforcing mandatory segments in multimedia content."); EX1003 (Wechselberger), ¶ 80.

In addition, Wu, Rosenberg, and Angel are each reasonably pertinent to a problem the inventors of the '768 patent attempted to solve. The '768 patent explains that its "object [is] to provide a revenue generating market for the free consumer redistribution of media content, sponsored through paid advertising that a consumer may be required to experience during the course of media playback." EX1001, 6:33-42. Similarly, Wu, Rosenberg, and Angel are each directed to systems that cause required advertisements to be displayed if the user skips over or fast forwards through recorded digital content containing the advertisements. EX1004 (Wu), 2:24-31; EX1005 (Rosenberg), ¶ 12; EX1006 (Angel), 2:7-20. Similarly, Eldering is directed to a system including an ad scheduler that inserts new advertisements in response to a change in viewing parameters. EX1007 (Eldering), Abstract ("The ad scheduler stores an ordered list [of advertisements] corresponding to the identified

order and modifies the stored ordered list whenever a modification requiring event occurs."), ¶ 16 ("Changes in one or more of certain viewing parameters may warrant a change in the ad insertion schedule since the currently scheduled ads may not be appropriate in view of the change in the viewing parameters. Such viewing parameters may include, but are not limited to, channel selection, viewer identity, and the type of program being watched."), ¶ 63 (describing embodiment where scheduled advertisements are rescheduled "upon detection of certain channel changes"); EX1003 (Wechselberger), ¶ 81.

Thus, Wu, Rosenberg, Eldering, and Angel are each analogous art to the '768 patent because they are both (1) in the same field of endeavor as the '768 patent, and (2) reasonably pertinent to a problem the inventors of the '768 patent attempted to solve. *See* MPEP 2141(a)(I); *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); EX1003 (Wechselberger), ¶ 82.

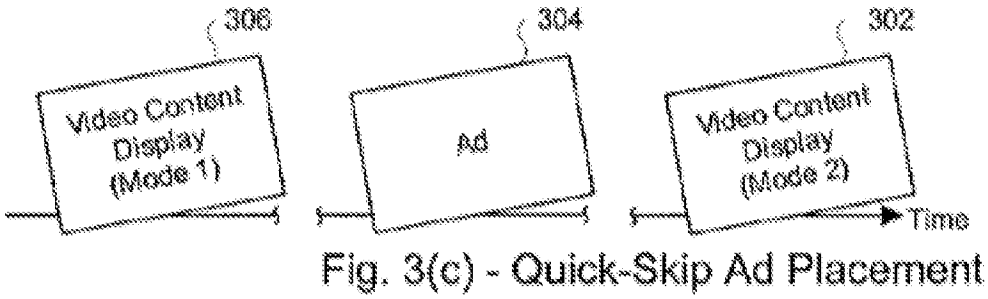
6. Motivation to Combine Wu with Rosenberg, Eldering, and Angel

First, a POSITA would have been motivated to modify Wu to utilize the conventional implementation details of Rosenberg and Angel to ensure that an advertisement is displayed as intended by the advertiser when a user skips over or fast forwards past recorded content containing the advertisement. Wu explains that "when a user of an electronic digital recording/play back device causes it to fast

forward through or skip over a recorded television advertisement, an overlay screen corresponding to the skipped advertisement is displayed on a portion of a television screen once the user resumes watching the recorded television show in normal play back mode." EX1004 (Wu), 2:24-31. Wu does not, however, explicitly disclose a technique or method for how the skipped-over advertisement is displayed relative to the digital content that the user has skipped to, or for how long the skipped-over advertisement is displayed. A POSITA therefore would have looked to conventional implementation details as taught by Rosenberg and Angel to implement Wu's technique of enforcing the presentation of advertisement information before a skipped-to segment begins so that a skipped-over advertisement is displayed without interfering with the skipped-to portion of the digital content (as may be the case with Wu) and for the required duration as specified by the advertiser. EX1003 (Wechselberger), ¶ 83.

As described in Section III.A.2 above, Rosenberg teaches that a skipped-over advertisement is displayed before the second mode of the digital content when the user skips over content and then resumes normal playback mode. EX1005 (Rosenberg), ¶ 61 (quick-skip ad is "displayed in a time interval between the two video content displays [306, 302]."), Fig. 3(c) (ad 304 displayed between first mode 306 of video content and second mode 302 of video content). Rosenberg discloses that "the video for mode two is delayed from displaying for a period of time

approximately equal to the length of the ad." *Id.*, ¶ 66. Implementing this technique in Wu's system would advantageously allow the user to view the full length of a skipped-over advertisement when the user skips from a first portion of the content (mode 1 306 in Rosenberg) and then resume a normal playback mode (mode 2 302 in Rosenberg) without causing the skipped-over advertisement to obscure any portion of the skipped-to segment of the digital content (mode 2 302 in Rosenberg), as shown in Rosenberg's Fig. 3(c) below. EX1003 (Wechselberger), ¶ 84.



EX1005 (Rosenberg), Fig. 3(c) (partial)

In this way, a POSITA would have been motivated to modify Wu so that when the user skips from a first portion of the content (mode 1 in Rosenberg) over an ad that was intended to be displayed, that ad is then displayed before the skipped-to portion of the content is displayed (mode 2 in Rosenberg). This modification would achieve Wu's objective of ensuring that a required ad "cannot be fast forwarded through or skipped over" (EX1004 (Wu), 2:18-21), while also displaying the required ad without obscuring the portion of the content that the user skipped to, as

taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 61, 66, Fig. 3(c); EX1003 (Wechselberger), ¶ 85.

Further, a POSITA would have been motivated to utilize the conventional implementation details of Angel's advertisement display rules (e.g., contained in description 245 of a mandatory segment) to ensure that advertisements are displayed for the required duration as specified by the advertiser when the user skips or fast forwards a portion of Wu's content containing an advertisement that is intended to be displayed. As described in Section III.A.4 above, Angel discloses that a mandatory segment (e.g., advertisement) contains a description 245 that comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249, as shown in Angel's Fig. 2 below. EX1006 (Angel), 4:39-43; EX1003 (Wechselberger), ¶ 86.

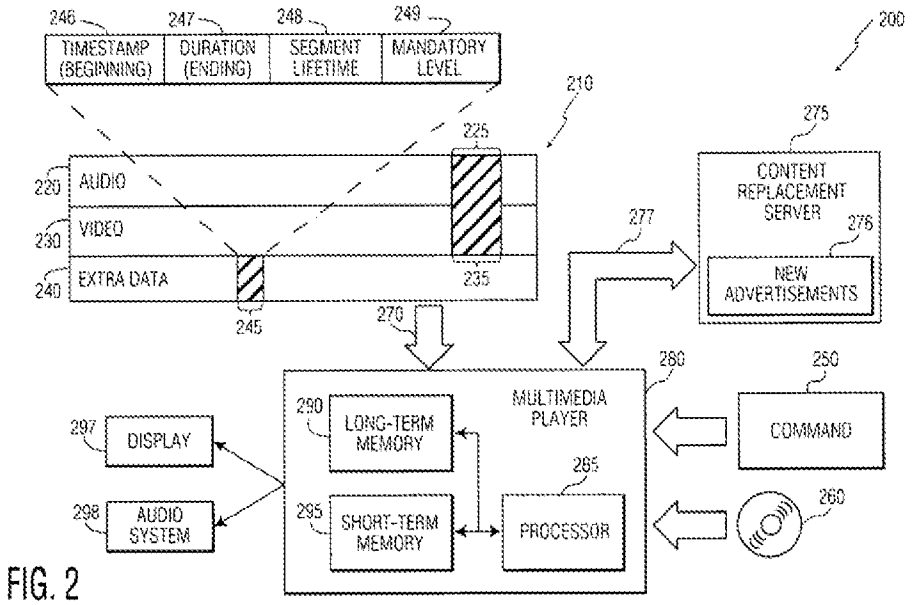


FIG. 2

EX1006 (Angel), Fig. 2

In the modification of Wu incorporating Rosenberg's conventional technique of moving the insertion point of an advertisement if the user skips over an advertisement "which cannot be fast forwarded through or skipped over" (EX1004 (Wu), 2:18-21), a POSITA would have been motivated to utilize the advertisement display requirements (e.g., description 245) as taught by Angel to ensure that an advertisement is displayed for its required duration (duration 247 in description 245), if the advertisement is required to be displayed based on the segment lifetime 248 and/or mandatory level 249 in the description 245. EX1006 (Angel), 4:39-43; EX1003 (Wechselberger), ¶ 87. Angel teaches that the segment lifetime 248 defines the time period (e.g., date ranges) in which the mandatory segment must be enforced and/or the number of times the mandatory segment is to be played (e.g., five times),

and the mandatory level 249 indicates to what extent a mandatory segment is allowed to be skipped. EX1006 (Angel), 4:30-33, 5:1-27, 5:32-33, 5:40-43, 9:4-8; EX1003 (Wechselberger), ¶ 87.

Wu explains that "businesses are less likely to continue to pay television content providers for more advertisement time in the future if their advertisements are being fast forwarded through or skipped over by users of electronic digital recording/play back devices." EX1004 (Wu), 2:6-10. A POSITA would have been motivated to utilize Angel's conventional implementation details of incorporating rule-based requirements in the advertisements, as taught by Angel, to ensure that ads that are required to be displayed are in fact displayed if the user skips through content, and for the required duration designated by the advertiser. EX1006 (Angel), 4:39-43 (description 245 in mandatory segment (e.g., advertisement) comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249), Fig. 2; EX1003 (Wechselberger), ¶ 88.

This modification would have been the combination prior art elements (Wu's electronic digital recording/play back system 100 changing the advertisement insertion point of an advertisement when the user skips over or fast forwards through an advertisement, as taught by Rosenberg, in accordance with advertisement display requirements contained in the advertisements, as taught by Angel) according to known methods (the software 208 in Wu's electronic digital recording/play back

system 100 modifying the placement of advertisements) to yield the predictable result of inserting an advertisement before displaying digital content that the user has skipped or fast forwarded to, based on advertisement display requirements defined in the advertisements. *See* MPEP § 2143.I(A); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007); EX1003 (Wechselberger), ¶ 89.

Second, a POSITA would have been motivated to implement Wu's software 208 in Wu's electronic digital recording/play back system (DVR) 100, as modified by Rosenberg and Angel above, as separate modules that request and respond to each other. As shown in Wu's Figure 2, Wu's DVR 100 executes software 208 to carry out the functions of the DVR 100. EX1004 (Wu), 4:44-50, 7:14-43 (describing functions of software 208). For example, Wu teaches that the DVR 100 (via the software 208) rotates the placement time of advertisements if the user skips or fast forwards over an advertisement that is intended to be displayed. EX1004 (Wu), 7:14-19, 5:43-50. In addition, Wu teaches that the software 208 (executing the functions in the flowchart of Figure 3) responds to a user input (e.g., fast forward or skipping of media content) and adapts the insertion of a scheduled advertisement that is being skipped over or fast forwarded. EX1004 (Wu), 7:23-37, 6:59-65 (step 306 in Fig. 3), 7:14-22, 7:38-43, 2:24-31, 5:43-50 (skipped over advertisement is displayed when user resumes watching in normal playback mode); EX1003 (Wechselberger), ¶ 90.

A POSITA would have been motivated to implement the separate functions

of (1) adapting the insertion of a scheduled advertisement and (2) rotating the placement of advertisements in a displayed television program as separate modules of the software 208, because doing so provides the benefit of designing separate software modules to perform separate functions. EX1003 (Wechselberger), ¶ 91. As discussed above, Wu discloses the software in set top boxes executing certain functions, but does not specify whether the software would operate as one or as separate modules. *See, e.g.,* EX1004 (Wu), 7:19-22 (explaining that "there are many different ways…that software 208 can perform the functionality of step 306 [in Fig. 3]."). This is a conventional implementation detail as taught by Eldering, for example, and is thus an example of combining prior art elements (e.g., software functionality for changing the insertion time of a scheduled advertisement and obtaining the appropriate advertisement for insertion, as taught by Wu in view of Rosenberg) according to known methods (e.g., implemented as separate modules, as taught by Eldering) to yield predictable results (e.g., a functional set top box / DVR having software that performs the functions of the set top box / DVR). *See* MPEP § 2143.I(A); *KSR*, 550 U.S. at 416; EX1003 (Wechselberger), ¶ 91.

Eldering teaches the desirability of implementing separate functions performed by the software of a subscriber's set top box / DVR as separate modules, as shown in Eldering's Figure 2, below. EX1007 (Eldering), ¶¶ 43 (explaining that the software functions of the set-top box may be implemented as different modules),

42 (identifying software functions of advertisement processing unit (APU) 22 of the set-top box as having multiple different modules each performing a separate function). Specifically, as described above in Section III.A.3 and shown below in Figure 2, below, Eldering teaches that the APU 22 in a subscriber's set top box includes multiple modules each executing the software functions of the APU. EX1007 (Eldering), ¶ 43 ("The APU 22 can be realized as a combination of both hardware and software and includes components which are typically used as part of a television set-top…. Many of the elements and **modules** of the APU 22 can be realized as software running directly on the operating system of the set-top box or on middleware running on the operating system."); EX1003 (Wechselberger), ¶ 92.

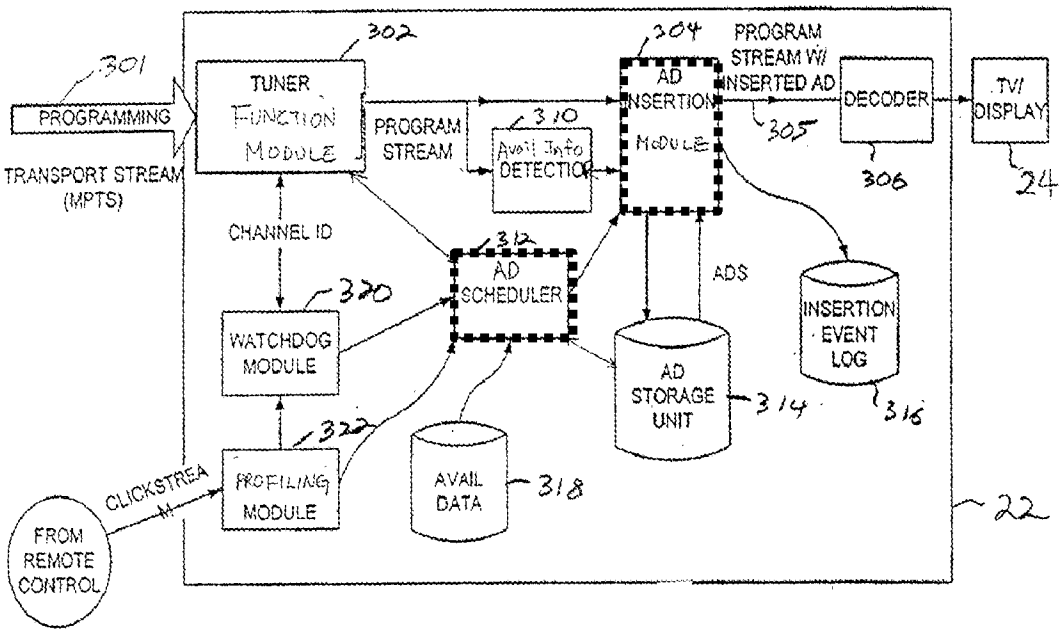


Figure 2

EX1007 (Eldering), Fig. 2 (annotated)

Furthermore, a POSITA would have been motivated to combine the technique of changing the insertion point of a scheduled advertisement and obtaining the appropriate advertisement, as taught by Wu, Rosenberg, and Angel, with the modularization of the software performing this technique, as taught by Eldering, because it is the use of a known technique (e.g., modularization of software functionality) to improve similar devices (e.g., Wu and Eldering's DVR / set top boxes) in the same way (e.g., implementing Wu's disclosed software functionality as separate modules, as taught by Eldering). *See* MPEP § 2143.I(A); *KSR*, 550 U.S. at 417. For example, as shown in Figure 2, above, Eldering teaches the functions of an ad insertion module 304 and ad scheduler (rescheduler) 312 as separate modules in the software of the advertisement processing unit (APU) 22 in the subscribers' set top box. EX1007 (Eldering), ¶¶ 42-44. The ad insertion module 304 and ad scheduler 312 communicate with each other to obtain a scheduled (or rescheduled) advertisement. EX1007 (Eldering), ¶ 46. Accordingly, Eldering provides a teaching, suggestion, and motivation for implementing separate functions performed by the software of the subscriber's set top box as different modules that communicate with each other. *See* MPEP § 2143.I(G), 2143.01 ("Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so.") (citing *In re Kahn*, 441 F.3d 977, 986 (Fed. Cir. 2006)); EX1003 (Wechselberger), ¶ 93.

A POSITA would have been motivated to implement Wu's software 208 in Wu's electronic digital recording/play back system (DVR) 100, as modified by Rosenberg and Angel above, as separate modules corresponding to each function of the software, as taught by Eldering. This modification would have involved the combination of prior art elements (Wu's electronic digital recording/play back system 100 changing the advertisement insertion point of an advertisement when the user skips over or fast forwards through an advertisement, as taught by Rosenberg, in accordance with advertisement display requirements contained in the advertisements, as taught by Angel) according to known methods (the software 208 in Wu's electronic digital recording/play back system 100 (1) rescheduling advertisements that are skipped over or fast forwarded and (2) modifying the placement of advertisements, as taught by Rosenberg, as separate processing modules, as taught by Eldering) to yield the predictable result of inserting an advertisement before displaying digital content that the user has skipped or fast forwarded to, based on advertisement display requirements defined in the advertisements. MPEP § 2143.I(A); *KSR*, 550 U.S. at 416; EX1003 (Wechselberger), ¶ 94.

Third, a POSITA would have had a reasonable expectation of success in modifying Wu to utilize the conventional implementation details of Rosenberg and Angel to ensure that an advertisement is displayed as intended by the advertiser when

a user skips over or fast forwards past recorded content containing the advertisement. EX1003 (Wechselberger), ¶ 95. Wu discloses that software 208 in the electronic digital recording/play back system (e.g., DVR) "determine[s] whether or not an advertisement is being fast forwarded through or skipped over during normal play back mode." EX1004 (Wu), 7:14-19. Similarly, Rosenberg and Angel each discloses that software of the DVR inserts advertisements into displayed content when the user skips through or fast forwards over an advertisement that is intended to be displayed. EX1005 (Rosenberg), ¶ 40 (control software 114 in user's DVR 108 detects whether to insert an ad into the video output stream when the display is changed from a first mode to a second mode); EX1006 (Angel), 3:53-55 ("Multimedia player 280 [in Fig. 2] comprises processor 285, a long-term memory 290, and a short-term memory 295, each of which are interconnected."), 7:13-15 ("Short-term memory 295 or long-term memory 290 configures the processor 285 to implement the methods, steps, and functions disclosed herein."); EX1003 (Wechselberger), ¶ 95.

A POSITA would have a reasonable expectation of success in implementing the conventional implementation details for advertisement enforcement as taught by Rosenberg and Angel, by implementing these functions in Wu's software 208 executed by the user's electronic digital recording/play back system 100 (e.g., DVR). Further, a POSITA would have a reasonable expectation of success in implementing these advertisement enforcement functions in Wu's software 208,

because Rosenberg teaches how to modify the advertisement insertion point when a user skips over an advertisement, and Angel teaches how to enforce advertisement requirements contained in the advertisement data. EX1003 (Wechselberger), ¶ 95.

Further, a POSITA would have had a reasonable expectation of success of configuring Wu's software 208 to carry out the separate functions of rescheduling advertisements and insertion of rescheduled advertisements as separate modules of Wu's software 208. As shown by Eldering, this conventional implementation detail of configuring software of a DVR (or set top box) to implement separate functions as separate modules of the software was known to those in the art and would achieve the objective of performing the software functions of the DVR. EX1003 (Wechselberger), ¶ 96.

As explained by Mr. Wechselberger, Eldering applies the "modular programming" approach to software development that was well-known to practitioners of computer programming. Modular programming has long been fundamental to programming integrated systems, as shown by the following papers dating to the 1990s and early 2000s (i.e., before the priority date of the '768 patent). EX1003 (Wechselberger), ¶ 97 (citing EX1021, 1 ("It is widely agreed that modular programming (in the sense of using small program units, or *modules*, to construct more sophisticated units) is one of the key points in the successful construction of reusable and maintainable software."); EX1022, 17 (Section 4.3) ("Support for

modular programming is essential for any programming model if it is to be used to develop large complicated applications."); EX1023, 1 ("Without some guiding principle of organization, larger C programs can become difficult to understand and impossible to maintain. Modular programming is one way of managing the complexity."); EX1024, 2 ("Modular programming is now widespread, and found in virtually all major languages developed since the 1990s.")).

7. Claim 1 would have been obvious over Wu in view of Rosenberg and Angel.

Claim 1 is obvious over Wu, Rosenberg, and Angel for the following reasons. EX1003 (Wechselberger), ¶ 98.

[1.0] A digital media system comprising:

Wu discloses or at least renders obvious the preamble, to the extent it is limiting. EX1003 (Wechselberger), ¶ 99.

As shown in Fig. 2, below, Wu discloses "a consumer electronic network system 200" that includes an electronic digital recording/play back system 100 (e.g., DVR), which receives a media stream 204 from a content provider source 202, and outputs the media stream 204 with an associated sub-advertisement stream 206 to a display device 112." Ex.1004 (Wu), 5:40-65, 6:31-34 ("[T]he electronic digital recording/play back system 100 (FIG. 2) receives media stream 204 output by content provider source 202 and digitally records it."). Wu's "consumer electronic

system 200" is *[a] digital media system*, because it receives the media stream and outputs the media stream 204 with an associated sub-advertisement stream 206 to the display device 112. EX1003 (Wechselberger), ¶ 100.

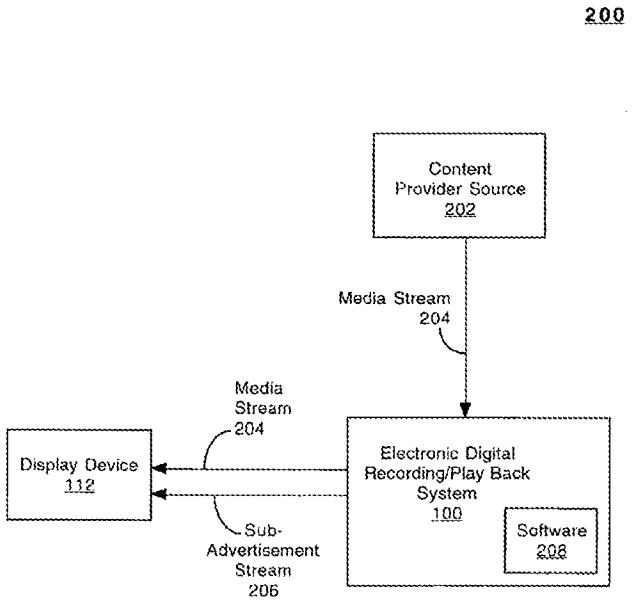


Fig. 2

EX1004 (Wu), Fig. 2

Thus, Wu discloses or at least renders obvious *[a] digital media system*. EX1003 (Wechselberger), ¶ 101.

[1.1] a user interface for receiving user input for controlling a course of presentation of digital media content;

Wu discloses or at least renders obvious limitation [1.1]. EX1003 (Wechselberger), ¶ 102.

As described above for preamble [1.0], Wu discloses an electronic digital recording/play back system 100 that receives a media stream 204 from a content provider source 202, and outputs the media stream 204 with an associated sub-advertisement stream 206 to a display device 112," as shown in Fig. 2, below. Ex.1004 (Wu), 5:40-65; EX1003 (Wechselberger), ¶ 103.

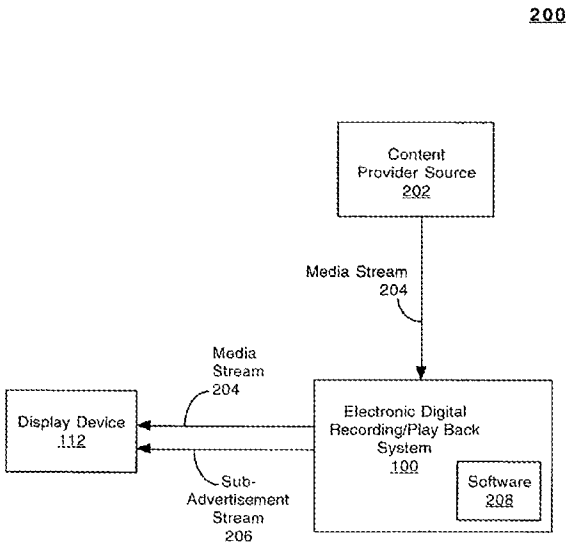


Fig. 2

EX1004 (Wu), Fig. 2

Wu explains that "one of the well known brands of electronic digital recording/play back devices is commercially available under the name of TiVo®. Typically, the electronic digital recording/play back device has the ability to digitally record and subsequently play back specific television shows for its user." EX1004

(Wu), 1:42-49. Further, Wu discloses that the electronic digitial recording/play back device has *a user interface for receiving user input for controlling a course of presentation of digital media content*, because the user can pause the media stream, fast forward the media stream, or skip to a different portion of the media stream. *Id.*, 1:52-59. For example, with reference to Fig. 2, above, Wu discloses that "when a user of electronic digital recording/play back system 100 causes it to fast forward through or skip over a recorded television advertisement of media stream 204, an overlay sub-advertisement stream 206 corresponding to the skipped advertisement is displayed on a portion of the screen of display device 112 once the user resumes watching the recorded television show in normal play back mode. Therefore, the user is exposed to content of the skipped advertisement while viewing the recorded television show of media stream 204." *Id.*, 5:43-50, 7:6-10 ("[W]hile viewing recorded media stream 204 in normal play back mode, the user may cause electronic digital recording/play back system 100 to fast forward through or skip over advertisements."); EX1003 (Wechselberger), ¶ 104.

For brevity, Wu's electronic digital recording/play back system 100 will be abbreviated herein as a "DVR" (digital video recorder). EX1004 (Wu), 6:31-34 ("[T]he electronic digital recording/play back system 100 (FIG. 2) receives media stream 204 output by content provider source 202 and digitally records it."); EX1003 (Wechselberger), ¶ 105.

Thus, Wu discloses or at least renders obvious *a user interface for receiving user input* (user controlling the DVR 100) *for controlling a course of presentation of digital media content* (user pausing, skipping and/or fast forwarding the digital media content on the DVR 100). EX1003 (Wechselberger), ¶ 106.

[1.2] an advertisement rotator for managing one or more requests for advertising content to be presented during the course of presentation of the digital media content either visually or audibly; and

Wu in view Rosenberg and Eldering renders obvious limitation [1.2]. EX1003 (Wechselberger), ¶ 107.

First, Wu discloses *an advertisement rotator* because Wu teaches that the software 208 in the DVR 100 selects and obtains an appropriate advertisement if the user skips or fast forwards over an advertisement that was intended to be displayed, as explained below. Initially, with reference to Figure 2, below, Wu discloses that the DVR 100 includes software 208 that executes the functions of the DVR 100. EX1004 (Wu), 4:44-53 ("Within the following discussions of the present invention, certain processes and steps are discussed that are realized, in one embodiment, as a series of instructions (e.g., software program) that reside within computer readable memory units of electronic digital recording/play back system 100 and executed by processors of system 100. When executed, the instructions cause electronic digital recording/play back device 100 to perform specific actions and exhibit specific behavior which is described in detail below."). Thus, the software 208 of the DVR

100 executes the functions of the DVR 100. EX1003 (Wechselberger), ¶ 108.

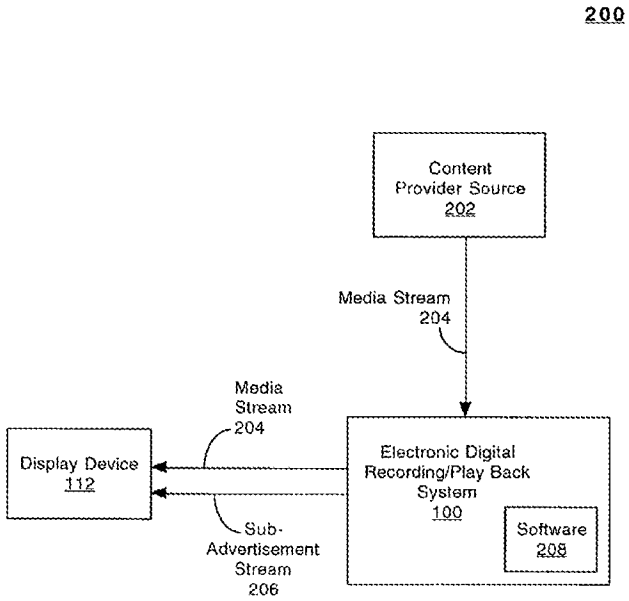


Fig. 2

EX1004 (Wu), Fig. 2

Figure 3, below, illustrates a flowchart 300 of processes performed by the software 208 of Wu's DVR 100. EX1004 (Wu), 6:12-24. Wu's software 208 performing step 308 in Figure 3 teaches the claimed *advertisement rotator* because the software 208 selects and obtains an appropriate advertisement to output based on various parameters, as explained below. EX1004 (Wu), 8:8-12; EX1003 (Wechselberger), ¶ 109.

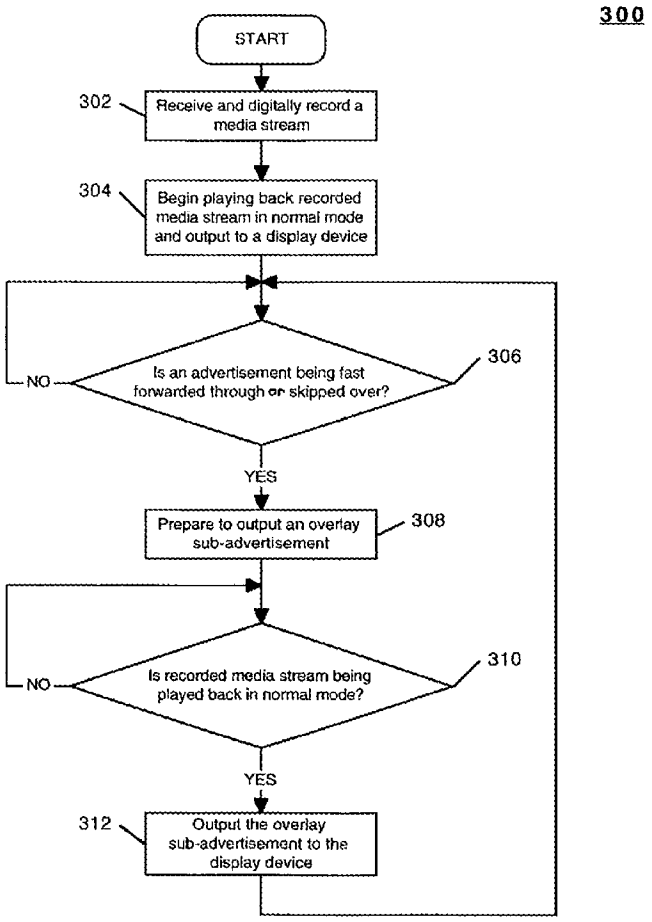


Fig. 3

EX1004 (Wu), Fig. 3

With reference to Figure 3, above, Wu discloses that in step 306, the "software 208…operating on electronic digital recording/play back system [DVR] 100…determine[s] whether or not an advertisement is being fast forwarded through or skipped over during normal play back mode." EX1004 (Wu), 7:14-19. If an advertisement in the media stream 204 is being fast forwarded or skipped over (yes in step 306), then in step 308, the DVR's software 208 "prepares to output an overlay

sub-advertisement stream 206" when "the user resumes watching the recorded television show in normal play back mode." *Id.*, 7:44-45, 5:43-50. In step 308, the software 208 selects an appropriate advertisement by "us[ing] a wide variety of parameters (e.g., priority of advertisement, time of advertisement, source of advertisement, etc.) to determine which sub-advertisement 206 to prepare for output." *Id.*, 8:8-12. Accordingly, Wu discloses or at least renders obvious *an advertisement rotator* (software 208 in DVR 100 executing step 308) that selects and obtains an appropriate advertisement if the user skips or fast forwards over an advertisement that is intended to be displayed. EX1003 (Wechselberger), ¶ 110.

This is the same function that is performed by the "ad rotator" of the '768 patent. As described in Section II.B above, the specification of the '768 patent describes the function of an "ad rotator" that is implemented by the "advertisement manager" module of the player/viewer software. EX1001 ('768 patent), 14:61-64 (DVR's player/viewer software implements "advertisement manager" module), 28:37-42 (ad manager 514 implements functions of ad rotator 516 in Fig. 5B), 22:24-27 (flowchart of Fig. 5A illustrates logic of the player/viewer software), 24:31-34 ("FIG. 5B [is] a block diagram to illustrate how the logical components of the player/viewer [software] operate together in carrying out the logic described with reference to FIG. 5A."). The '768 patent explains that the "[a]d rotator 516 [in Figure 5B] handles requests for new ads from an intersplicer 518 by selecting and localizing

appropriate ads, grouping them into blocks if so requested, and sending the result back to requesting intersplicer 518." EX1001 ('768 patent), 28:47-50. Likewise, Wu discloses that if the user skips or fast forwards over an advertisement that is intended to be displayed, then in step 308 of Figure 3, the software 208 of Wu's DVR 100 selects an appropriate advertisement by "us[ing] a wide variety of parameters (e.g., priority of advertisement, time of advertisement, source of advertisement, etc.) to determine which sub-advertisement 206 to prepare for output." EX1004 (Wu), 8:8-12. Thus, Wu discloses or at least renders obvious *an advertisement rotator* (software 208 in user's DVR 100 executing step 308 to select and obtain an advertisement to prepare for output). EX1003 (Wechselberger), ¶ 111.

Second, Wu in view of Rosenberg render obvious *an advertisement rotator for managing one or more requests for advertising content*. EX1003 (Wechselberger), ¶ 112. With reference to Fig. 2, below, Wu discloses that the media stream 204 received from the content provider source 202 includes advertisements having specific time intervals relative to a corresponding video segment of the media stream 204. EX1004 (Wu), 5:43-36 ("…when a user of electronic digital recording/play back system 100 causes it to fast forward through or skip over **a recorded television advertisement of media stream 204**…."). As described above, Wu discloses that the software 208 in the DVR 100 selects and obtains an appropriate advertisement (output from DVR 100 as sub-advertisement stream 106)

from a remote source such as the content provider source 202 (or other server) according to "a wide variety of parameters" such as the time of the advertisement or the priority of advertisement, etc. EX1004 (Wu), 8:4-12 ("[S]ub-advertisement 206 stored by a memory device of electronic digital recording/play back system 100 may be **updated from time to time by a remote source (e.g., a computer via the Internet)**. At step 308 [in Fig. 3], it is further appreciated that the present embodiment may use a wide variety of parameters (e.g., priority of advertisement, **time of advertisement**, source of advertisement, etc.) **to determine which sub-advertisement 206 to prepare for output**."). EX1003 (Wechselberger), ¶ 112.

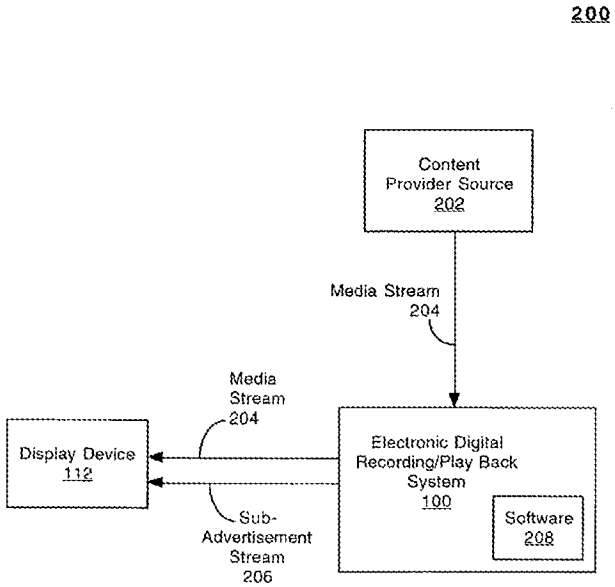


Fig. 2

EX1004 (Wu), Fig. 2

Accordingly, Wu suggests that the *advertisement rotator* (software 208 in the DVR 100) *manag[es] one or more requests for advertising content*, because the software 208 selects and obtains advertisements from the content provider source 202 by using a wide variety of parameters such as the time of the advertisement or the priority of the advertisement, for example. EX1004 (Wu), 8:4-12; EX1003 (Wechselberger), ¶ 113.

To the extent it is argued that Wu does not explicitly disclose or suggest that the *advertisement rotator* (software 208 in the DVR 100) *manag[es] one or more requests for advertising content*, the *manage[ment of] one or more requests for advertising content* is an obvious implementation detail taught by Rosenberg and Eldering. EX1003 (Wechselberger), ¶ 114. As described above, Wu teaches that the DVR 100 may obtain updated advertisements from a remote source over the Internet. EX1004 (Wu), 8:4-12. Similarly, with reference to Fig. 1(a), below, Rosenberg teaches that the ad placement control software 114 in the DVR 108 obtains advertisements from the ad database 102 in the server 100 when an advertisement opportunity is presented (e.g., when the user has skipped from one segment of the content to another segment of the content). EX1005 (Rosenberg), ¶¶ 44 ("The control software 114 continuously monitors the digital video recorder 108 for ad opportunities by detecting that the output video stream should change from a first mode to second mode 200. In this embodiment, **the control software requests ads**

from the ad placement software when an ad opportunity is detected."), 31-32 (ad placement software 114 in DVR 108 receives advertisements from ad database 102 in server 100); EX1003 (Wechselberger), ¶ 114.

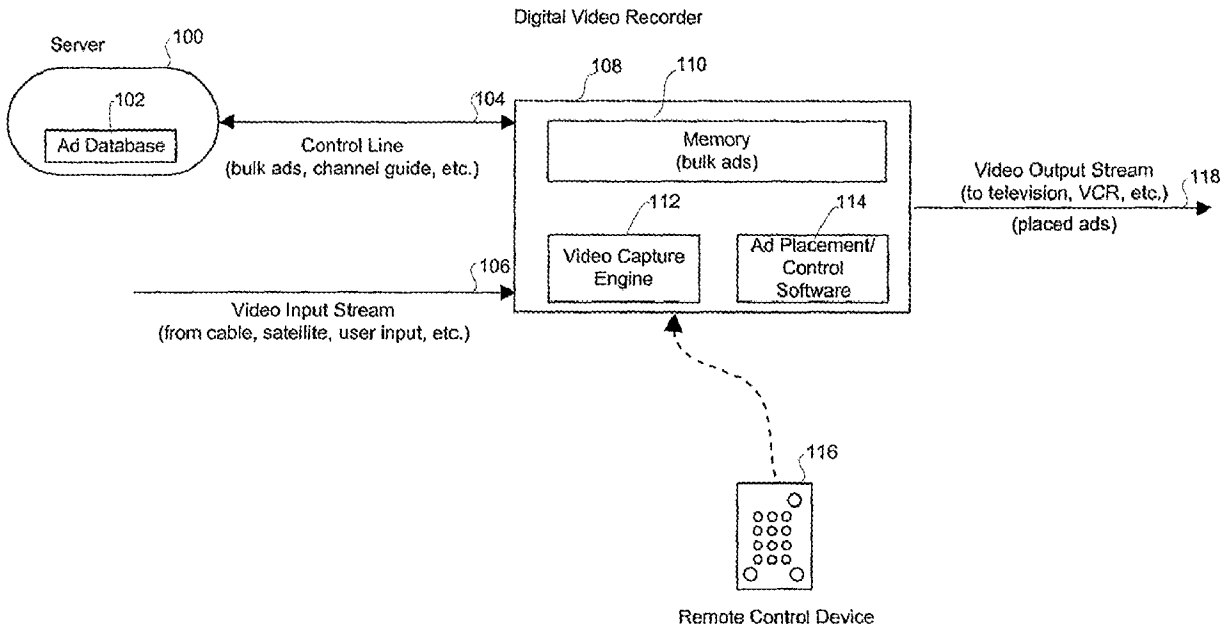


Fig. 1(a)-Digital Video Recorder Overview

EX1005 (Rosenberg), Fig. 1(a)

As described in Section III.A.6 above, a POSITA would have been motivated to modify Wu so that when the user skips from a first portion of the content (mode 1 in Rosenberg) over an advertisement that was intended to be displayed, that advertisement is then displayed before the skipped-to portion of the content is displayed (mode 2 in Rosenberg). EX1003 (Wechselberger), ¶ 115. This modification would achieve Wu's objective of ensuring that an advertisement that is intended to be displayed "cannot be fast forwarded through or skipped over"

(EX1004 (Wu), 2:18-21), while also displaying the desired advertisement without obscuring the portion of the content that the user skipped to, as taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 61, 66, Fig. 3(c). Accordingly, a POSITA would have been motivated to modify Wu so that Wu's DVR 100 (Fig. 2) obtains advertisements from the content provider source 202, when there is an opportunity for an advertisement, as taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 44 ("the control software [of the DVR] requests ads from the ad placement software when an ad opportunity is detected."), 31-32. Rosenberg's ad placement software in the DVR thus *manag[es] one or more requests for advertising content* when an advertisement opportunity is presented (e.g., when the user has skipped from one segment of the content to another segment of the content). EX1005 (Rosenberg), ¶ 44. Rosenberg's ad placement software in the DVR is similar to Wu's software 208 because Rosenberg's ad placement software, like Wu's software 208, selects an appropriate advertisement. EX1005 (Rosenberg), ¶ 13 ("[A]d placement software selects an appropriate ad to fill the ad placement opportunity in accordance with the type of opportunity available."); EX1003 (Wechselberger), ¶ 115.

Third, it would have been obvious to implement Wu and Rosenberg's *advertisement rotator* (software 208 in Wu's DVR 100 selecting and obtaining an appropriate advertisement into the content stream when the user has skipped over or fast forwarded past an advertisement that is intended to be displayed, as modified to

request advertisements from the ad database when there is an ad placement opportunity, as taught by Rosenberg), as a separate module in Wu's software 208 to perform these functions. As described in Section III.A.6 above, a POSITA would have been motivated to modify Wu to implement the separate functions of Wu's software 208 as separate modules that respectively make requests and respond to each other, as taught by Eldering. Accordingly, a POSITA would have been motivated to implement Wu's *advertisement rotator* in Wu's software 208, as modified by Rosenberg, as a separate module of the software 208, because it is the combination of prior art elements (e.g., software functionality for changing the insertion time of a scheduled advertisement and obtaining the appropriate advertisement for insertion, as taught by Wu in view of Rosenberg) according to known methods (e.g., implemented as separate modules, as taught by Eldering) to yield predictable results (e.g., a functional set top box / DVR having software that performs the functions of the set top box / DVR). EX1003 (Wechselberger), ¶ 116. Specifically, a POSITA would have been motivated to implement Wu's software 208 to perform the functions of steps 306 and 310 (the *intersplicer*), as modularized by Eldering, to change the insertion point of a scheduled advertisement when an intended advertisement is skipped over, as taught by Wu and Rosenberg, and communicate with Wu's software 208 performing step 308, as modularized by Eldering, to request step 308 to obtain an advertisement, and step 308 responsively

selects and obtains an appropriate advertisement, as taught by Wu and Rosenberg. EX1003 (Wechselberger), ¶ 116.

Thus, Wu and Rosenberg render obvious *an advertisement rotator* (software 208 in Wu's DVR 100 that selects and obtains advertisements to prepare for output in step 308 of Figure 3) *for managing one or more requests for advertising content* (Wu's software 208 receiving requests by Wu's software 208 performing steps 306 and 310, as taught by Wu in view of Rosenberg, and performing step 308 in Wu's Fig. 3, modularized as taught by Eldering, to select and obtain the appropriate advertisement for insertion) *to be presented during the course of presentation of the digital media content either visually or audibly* (software 208 in Wu's DVR 100 inserting an advertisement into the content stream when the user has skipped over or fast forwarded past an advertisement that is intended to be displayed). EX1003 (Wechselberger), ¶ 117.

Accordingly, Wu, Rosenberg, and Eldering, render obvious limitation [1.2]. EX1003 (Wechselberger), ¶ 118.

[1.3.1] an intersplicer in communication with the advertisement rotator, the intersplicer configured to:

As shown below, limitation [1.3.1] is taught by the prior art in two separate ways. First, Wu discloses or at least renders obvious limitation [1.3.1]. Second, Wu in view of Rosenberg and Eldering render obvious limitation [1.3.1]. EX1003

(Wechselberger), ¶ 119.

Wu's software 208 in the DVR also discloses or at least renders obvious the claimed *intersplicer in communication with the advertisement rotator*, because the software 208 (stored in memory unit 106) comprises multiple functions each executed by the processor 102 of the DVR 100, as shown in Fig. 1, below, for carrying out the functions of Wu. EX1004 (Wu), 6:15-18 ("processes of the present invention…are carried out by a processor and electrical components under the control of computer readable and computer executable instructions."), 4:54-5:5 (processor(s) 102 executes instructions stored in memory); EX1003 (Wechselberger), ¶ 120.

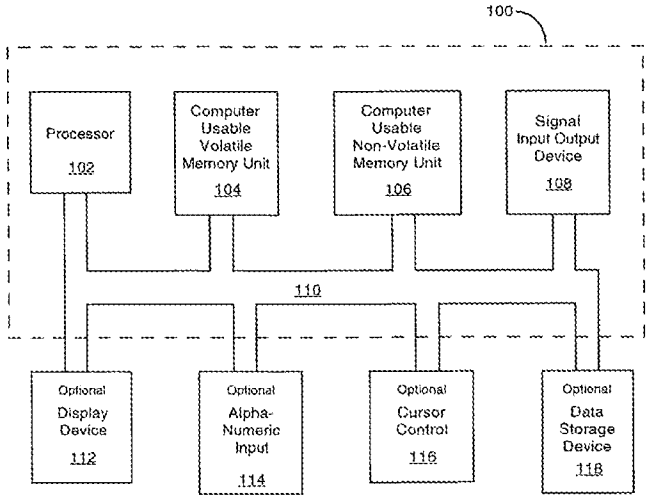


Fig. 1

EX1004 (Wu), Fig. 1

The ’768 patent explains that the player/viewer software executes the functions of both the *intersplicer* and the “ad rotator” (corresponding to the claimed *advertisement rotator*). EX1001 (’768 patent), 14:61-15:3 (player/viewer software executes functions of both the intersplicer and an “advertisement manager” (ad manager)), 28:37-42 (ad manager 514 implements functions of ad rotator 516 in Fig. 5B), 22:24-27 (flowchart of Fig. 5A illustrates logic of the player/viewer software), 24:31-34 (“FIG. 5B [is] a block diagram to illustrate how the logical components of the player/viewer [software] operate together in carrying out the logic described with reference to FIG. 5A.”). Likewise, the software 208 of Wu’s DVR 100 executes the functions of both (1) the *intersplicer* and (2) the *advertisement rotator*. EX1003 (Wechselberger), ¶ 121. Specifically, as explained herein, Wu discloses that the software 208 of the DVR 100 executes the functions of *an intersplicer*. In addition, as explained above for limitation [1.2], the software 208 of Wu’s DVR 100 executes the functions of *the advertisement rotator* (selecting and obtaining an appropriate advertisement). EX1004 (Wu), 8:8-12, Fig. 3 (step 308). The corresponding *intersplicer* and *advertisement rotator* functions executed by Wu’s software 208 are *in communication with* each other because the same software 208 executes separate software steps for carrying out the *intersplicer* and *advertisement rotator* functions. EX1004 (Wu), 6:15-18 (“processes of the present invention…are carried out by a processor and electrical components under the control of computer readable and

computer executable instructions."), 4:54-5:5 (processor(s) 102 executes instructions stored in memory). These functions are illustrated, for example, in the flowchart of Wu's Fig. 3, below, which is executed by software 208. EX1004 (Wu), 6:15-18 ("Flowchart 300 includes processes of the present invention which, in one embodiment, are carried out by a processor and electrical components under the control of computer readable and computer executable instructions."), 7:6-22 (describing flowchart of Fig. 3, and explaining that software 208 of DVR 100 performs steps in the flowchart; "For example, software 208 (in accordance with the present embodiment) operating on electronic digital recording/play back system 100 would be able to determine whether or not an advertisement is being fast forwarded through or skipped over during normal play back mode."); EX1003 (Wechselberger), ¶ 121.

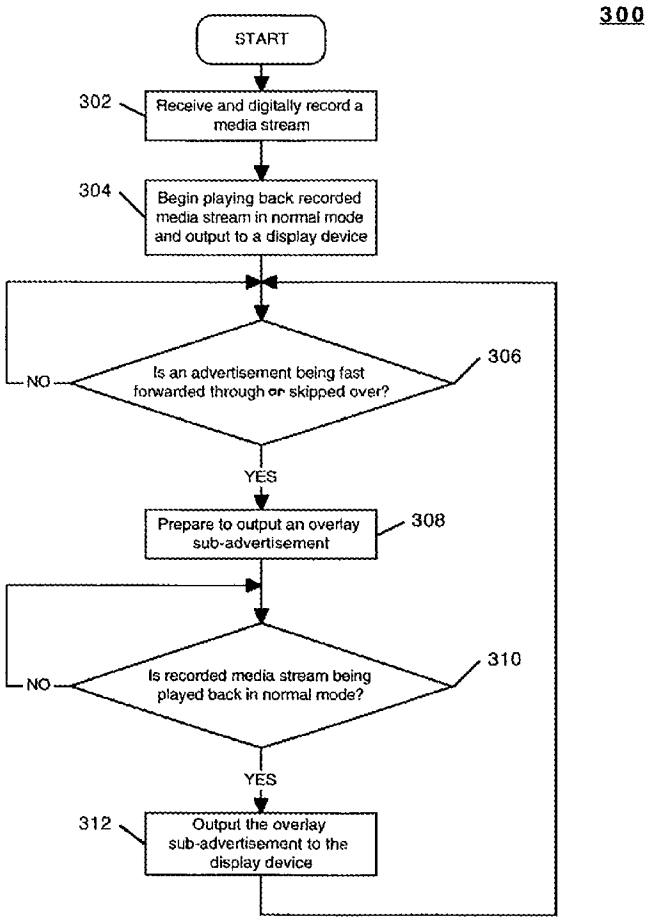


Fig. 3

EX1004 (Wu), Fig. 3

Thus, Wu's software 208 in the DVR 100 discloses or at least renders obvious *an intersplicer* (Wu's software 208 performing steps 306 and 310) *in communication with the advertisement rotator* (Wu's software 208 performing step 308), because the software 208 performs the functions of both the *intersplicer* and the *advertisement rotator*, as separate functions of the software. EX1003 (Wechselberger), ¶ 122. Wu's software steps 306 and 310 (the *intersplicer*) are *in*

communication with software step 308 (the *advertisement rotator*) because the functions of the *intersplicer* (software steps 306 and 310) directly impact and are impacted by the function of the *advertisement rotator* (software step 308) as an intermediary function of steps 306 and 310. Specifically, with reference to Fig. 3, above, step 308 of Wu's flowchart, which teaches the claimed *advertisement rotator*, is implemented when it is determined in step 306 (part of the function of the claimed *intersplicer*) that an advertisement that is intended to be displayed is fast forwarded or skipped through, as described above for limitation [1.2]. EX1004 (Wu), 7:44-50, 8:4-12. Then, step 310 of Wu's flowchart, which teaches part of the claimed *intersplicer*, is in communication with step 308 of Wu's flowchart because step 310 prepares the advertisement that is selected and obtained in step 308 (the *advertisement rotator*). EX1004 (Wu), 13:19. Steps 306 and 310 in Fig. 3 disclose or render obvious the functions of the *intersplicer*, because the software 208 responds to a user input (e.g., fast forward or skipping of media content) and adapts the insertion of a scheduled advertisement, as described with respect to limitation [1.3.2] below. This is the same function of the "intersplicer" as described in the specification of the '768 patent. Specifically, the '768 patent explains that the "'intersplicer' module in the player viewer software… adaptively re-group[s] and re-sequence[s] the insertion of ad blocks extemporaneously (i.e. 'on the fly'), in response to the consumer's arbitrary direction of the playback within the requested

content, by means of playback controls." EX1001 ('768 patent), 14:65-15:3, 15:14-18; EX1003 (Wechselberger), ¶ 122.

To the extent it is argued that Wu does not expressly disclose that the separate functions of *the advertisement rotator* (Wu's software 208 performing step 308) and the *intersplicer* (Wu's software 208 performing steps 306 and 310) are separate modules in Wu's software 208 *in communication with* each other, it would have been obvious to implement these different functions as separate modules in communication with each other. EX1003 (Wechselberger), ¶ 123. As described in Section III.A.6 above, a POSITA would have been motivated to modify Wu to implement the separate functions of Wu's software 208 as separate modules that respectively perform different functions of the software 208, as taught by Eldering. For example, as shown in Figure 2, below, Eldering teaches that the ad insertion module 304 and the ad scheduler 312 are separate modules of the "advertisement processing unit" (APU) 22 in a subscriber's set top box, and communicate with each other to reschedule advertisements as necessary and obtain an appropriate advertisement from the ad storage unit 314 when there has been a rescheduling of the advertisements by the ad scheduler 312. EX1007 (Eldering), ¶¶ 42, 44, 49, 58. This modularization of separate functions in the software of a user's set top box / DVR is a well-known implementation detail, as shown in Section III.A.6 above. EX1003 (Wechselberger), ¶ 123.

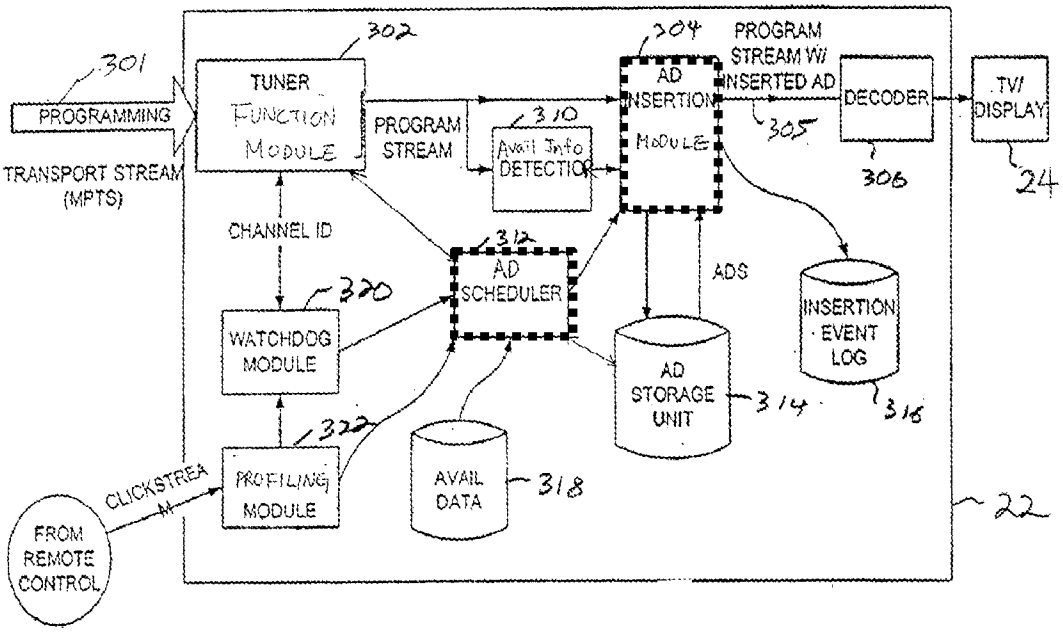


Figure 2

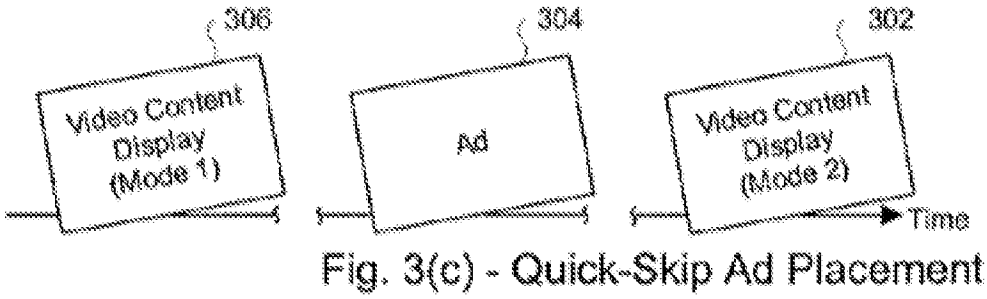
EX1007 (Eldering), Fig. 2 (annotated)

Accordingly, a POSITA would have been motivated to implement the separate functions of Wu's software 208 as separate modules in communication with each other, as taught by Eldering, for the reasons presented in Section III.A.6 above. For instance, as described in Section III.A.6 above, a POSITA would have been motivated to combine prior art elements (e.g., software functionality for changing the insertion time of a scheduled advertisement and obtaining the appropriate advertisement for insertion, as taught by Wu in view of Rosenberg) according to known methods (e.g., implemented as separate modules, as taught by Eldering) to yield predictable results (e.g., software modules in a set top box / DVR that perform the functions of insertion time of a scheduled advertisement and obtaining the

appropriate advertisement for insertion). *See* MPEP § 2143.I(A); *KSR*, 550 U.S. at 416. Thus, Wu in view of Eldering render obvious *an intersplicer* (Wu's software 208 performing steps 306 and 310) *in communication with the advertisement rotator* (Wu's software 208 performing steps 308), where the functions of the *intersplicer* and *advertisement rotator* are implemented as separate modules in Wu's software 208, as taught by Eldering, and these separate software modules are *in communication with* each other (separate software modules communicating with each other, as taught by Eldering). EX1003 (Wechselberger), ¶ 124.

Alternatively, Wu in view of Eldering and Rosenberg render obvious *an intersplicer in communication with the advertisement rotator*. EX1003 (Wechselberger), ¶ 125. To the extent it is argued that the claim requires that the *intersplicer* inserts advertisement blocks and it is further argued that Wu does not explicitly disclose an *intersplicer* that inserts advertisement blocks, as is described in the specification of the '768 patent but not recited in limitation [1.3.1], this is a conventional implementation detail as taught by Rosenberg. As shown in Fig. 3(c) below, Rosenberg teaches that an advertisement block (e.g., Ad 304) is inserted between two segments of video content when the user has quick-skipped (e.g., fast forwarded) from a first mode 306 (mode 1) to a second mode 302 (mode 2). EX1005 (Rosenberg), ¶ 61. The "intersplicer" functions of Rosenberg are explained in more detail below with respect to limitations [1.3.2] and [1.3.3], which further define the

functions of the claimed "intersplicer." EX1003 (Wechselberger), ¶ 125.



EX1005 (Rosenberg), Fig. 3(c) (partial)

As explained in Section III.A.6 above, a POSITA would have been motivated to modify Wu in view of Rosenberg and Eldering so that when the user skips from a first portion of the content (e.g., mode 1 in Rosenberg) over an ad that was intended to be displayed, that ad (e.g., Ad 304 in Rosenberg) is then displayed before the skipped-to portion of the content is displayed (e.g., mode 2 in Rosenberg). EX1003 (Wechselberger), ¶ 126. Thus, Wu in view of Rosenberg render obvious *an intersplicer* (Wu's software 208 performing steps 306 and 310 in Wu's Fig. 3, modularized as taught by Eldering, to change the insertion time of an advertisement block as taught by Rosenberg) *in communication with the advertisement rotator* (requesting ads from Wu's software 208 performing step 308 in Wu's Fig. 3, modularized as taught by Eldering, to select and obtain the appropriate advertisement for insertion, as taught by Wu in view of Rosenberg), where these separate modules (Wu's software performing steps 306 and 310, and Wu's software

performing step 308) are i*n communication with* each other as modules of Wu's software 208 that interact with each other to perform their respective functions, as taught by Eldering (e.g., Eldering's ad scheduler 312 and ad insertion module 304 interacting with each other to perform their functions). EX1003 (Wechselberger), ¶ 126.

[1.3.2] change a predetermined advertisement insertion point in the digital media content to an adapted advertisement insertion point in the digital media content, in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content

Wu in view of Rosenberg renders obvious limitation [1.3.2]. A POSITA would have been motivated to modify Wu in view of Rosenberg for the reasons presented in Section III.A.6 above. EX1003 (Wechselberger), ¶ 127.

First, Wu discloses or at least renders obvious *…a predetermined advertisement insertion point in the digital media content….* EX1003 (Wechselberger), ¶ 128. Wu indicates that advertisements are received as part of the media stream 204. EX1004 (Wu), 5:43-36 ("…when a user of electronic digital recording/play back system 100 causes it to fast forward through or skip over **a recorded television advertisement of media stream 204**…."). Each advertisement has a specific time interval and placement point relative to a corresponding video segment of the media stream 204 to enable the software 208 in the DVR 100 "to determine whether or not an advertisement is being fast forwarded through or

skipped over during normal play back mode." EX1004 (Wu), 7:14-19. Specifically, as shown in Figs. 4A and 4B below, each advertisement has a time interval and placement point relative to a corresponding segment of the media stream 204 during normal play back mode (*a predetermined advertisement insertion point in the digital media content*) to permit the DVR software 208 to determine whether that advertisement being fast forwarded through or skipped over during normal play back mode. As shown in Figs. 4A and 4B, Ad 402 has a *predetermined advertisement* insertion point at 1200-1260 seconds when the media stream 204 is played during normal playback mode, and Ad 404 has a *predetermined advertisement insertion point* at 2340-2400 seconds when the media stream 204 is played during normal playback mode. As shown, "FIG. 4A corresponds to FIG. 4B, which illustrates an **incrementing time reference digitally recorded in conjunction with media stream 204**." EX1004 (Wu), 7:28-32; EX1003 (Wechselberger), ¶ 128.

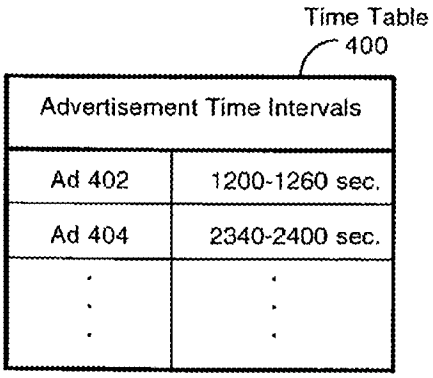


Fig. 4A

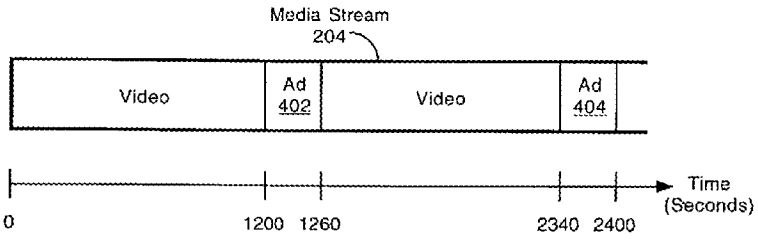


Fig. 4B

EX1004 (Wu), Figs. 4A-4B

Wu discloses that the software 208 in the DVR 100 utilizes the time table 400 in Fig. 4A "to determine… whether an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode." EX1004 (Wu), 7:23-28. Specifically, Wu teaches that "the specific time intervals of the advertisements (e.g., 402 and 404) are stored within time table 400 thereby enabling software 208 to detect when an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode." *Id.*, 7:32-37; EX1003 (Wechselberger), ¶ 129.

Thus, Wu discloses or at least renders obvious *…a predetermined advertisement insertion point in the digital media content*, because each advertisement has a "specific time interval" relative to a corresponding portion of the video segments of the media stream 204 when the media stream 204 is played in

normal playback mode (*a predetermined advertisement* insertion *point in the digital media content*) (e.g., Ad 402 in inserted at 1200-1260 seconds, and Ad 404 is inserted at 2340-2400 seconds), as shown in Figs. 4A and 4B above. EX1003 (Wechselberger), ¶ 130.

Second, Wu teaches that the user may "…*update a current play position in the digital media content to a new play position in the digital media content*," and suggests that the user's manipulation of the current play position may result in a "skipped advertisement." EX1003 (Wechselberger), ¶ 131. Specifically, Wu discloses that "[t]he general idea of one embodiment in accordance with the present invention is that **when a user of an electronic digital recording/play back device causes it to fast forward through or skip over a recorded television advertisement**, an overlay screen corresponding to the **skipped advertisement** is displayed on a portion of a television screen once the user resumes watching the recorded television show in normal play back mode." EX1004 (Wu), 2:24–31; EX1003 (Wechselberger), ¶ 131.

As shown in Fig. 3 below, the software 208 in the user's DVR 100 detects whether an ad is being fast forwarded or skipped over (step 306). EX1004 (Wu), 6:59-65 ("**In step 306, the present embodiment determines whether an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode**. In other words, the present

embodiment determines whether an advertisement of recorded media stream 204 was played back in normal mode by electronic digital recording/play back device 100 **for a specific amount of time**."), 7:14-22 ("[S]oftware 208 (in accordance with the present embodiment) operating on electronic digital recording/play back system 100 would be able to determine whether or not an advertisement is being fast forwarded through or skipped over during normal play back mode [step 306]."); EX1003 (Wechselberger), ¶ 132.

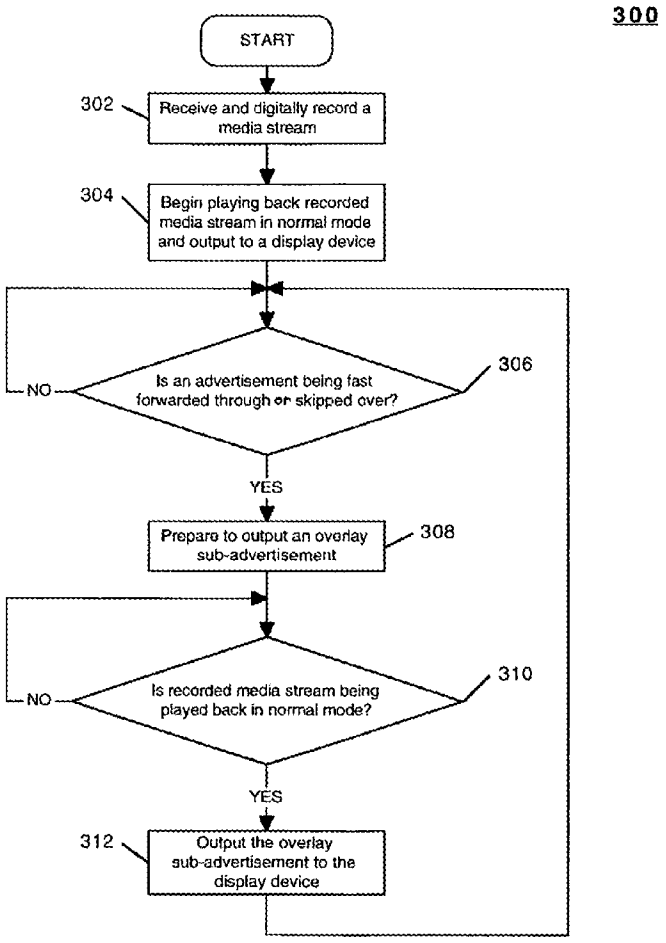


Fig. 3

EX1004 (Wu), Fig. 3

For example, Wu teaches that the software 208 in the user's DVR 100 may detect whether an advertisement is being skipped using flags in the media stream that identify advertisements. EX1004 (Wu), 6:47-49 ("[M]edia stream 204 of the present embodiment may be embedded with flags, each one identifying an advertisement."), 7:38-43 ("[I]f electronic digital recording/play back system 100

receives and records a media stream 204 that is embedded with flags identifying each advertisement, **software 208 may utilize those flags** to determine when an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode."); EX1003 (Wechselberger), ¶ 133.

Thus, Wu discloses or at least renders obvious…*a predetermined advertisement insertion point in the digital media content* (each advertisement has a specified insertion point ("specific time intervals") relative to a corresponding portion of the video segments of the media stream 204) …, *in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content* (software 208 in user's DVR 100 receiving a command to fast forward or skip over video segments and corresponding advertisements in the media stream 204). EX1003 (Wechselberger), ¶ 134.

Third, Rosenberg renders obvious *chang[ing] a predetermined advertisement insertion point in the digital media content to an adapted advertisement insertion point in the digital media content*, because Rosenberg discloses that advertisements are inserted into different segments of a content stream when the user skips or fast forwards to a different portion of the video content of the content stream. EX1003 (Wechselberger), ¶ 135. With reference to Fig. 1(a) below, Rosenberg discloses that a digital video recorder (DVR) 108 receives a video input stream 106 and advertisements from an ad database 102 via control line 104.

EX1005 (Rosenberg), ¶¶ 31, 33 (DVR receives advertisements via control line 104). A user (viewer) can control the functionality of the DVR 108 by using a remote control 116 in communication with ad placement/control software 114 in the DVR 108. *Id.*, ¶ 31. An ad placement/control software 114 in the DVR 108 places an advertisement in the video output stream when the user changes modes from a first segment of the video stream to a second segment of the video stream (e.g., by fast forwarding). *Id.*, ¶ 40; EX1003 (Wechselberger), ¶ 135.

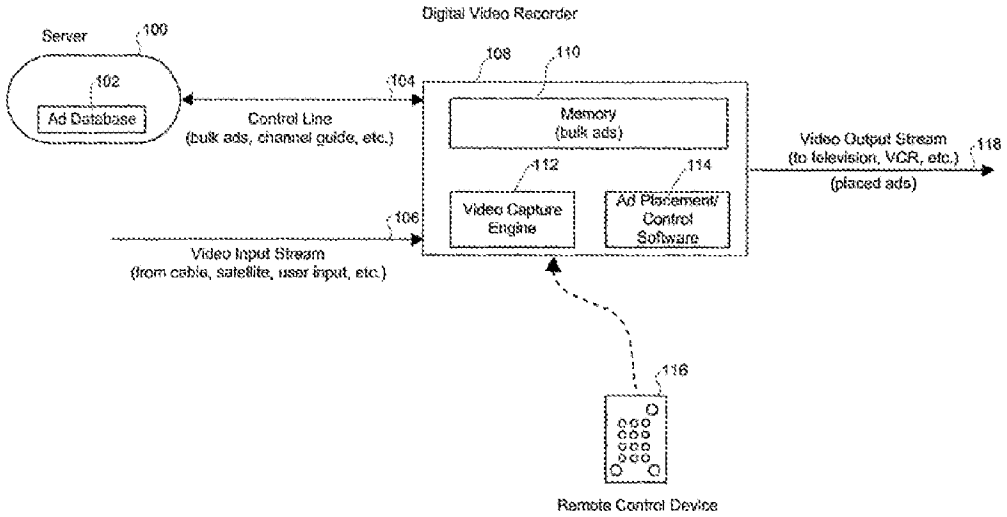


Fig. 1(a)-Digital Video Recorder Overview

EX1005 (Rosenberg), Fig. 1(a)

Specifically, Rosenberg teaches inserting ads into the video content stream when the user quick-skips from one segment (first mode) to another second (second mode), as shown in Fig. 2 below. EX1005 (Rosenberg), ¶ 40 ("An ad opportunity arises when the control software 114 [of the user's DVR 108 in Fig. 1] detects that

the display should change modes from a first mode (or its current mode) to a second mode 200. Next, the ad placement software 114 obtains an ad for placement 202 prior to allowing the second mode to display. The display video from the first mode is removed from the video output stream 204. The ad is placed into the video stream 206 either concurrently with the previous step, or sometime afterwards. Last, the second mode is displayed either during or after the ad display 208."); EX1003 (Wechselberger), ¶ 136.

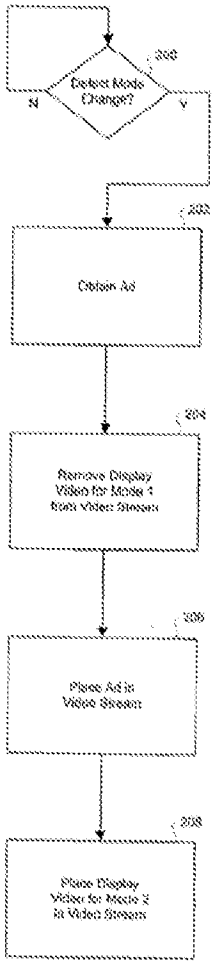
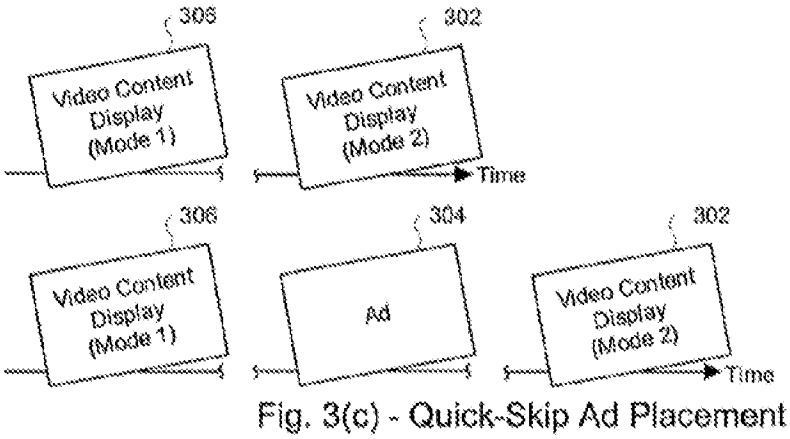


Fig. 2 - Ad Placement Flow Chart

EX1005 (Rosenberg), Fig. 2

Rosenberg teaches that the insertion point of an advertisement is adapted when the user skips through the content, e.g., by fast forwarding ("quick-skip"). Rosenberg refers to a user skipping through the content as changing from a first mode to a second mode, as shown in Fig. 3(c) below. Ex.1005 (Rosenberg), ¶45. With reference to Fig. 3(c), Rosenberg explains that the first mode display 306 is the video playback prior to the user request to quick-skip, and the second mode display

302 is the video playback after the quick-skip ceases. *Id.*, ¶ 45; EX1003 (Wechselberger), ¶ 137.



EX1005 (Rosenberg), Fig. 3(c)

Fig. 3(c) above shows an example where the user has quick-skipped (e.g., fast forwarded) from a first mode 306 (mode 1) to a second mode 302 (mode 2). In Fig. 3(c), the second row shows a timeline where an advertisement 304 is newly inserted between the first 306 and the second mode 302.

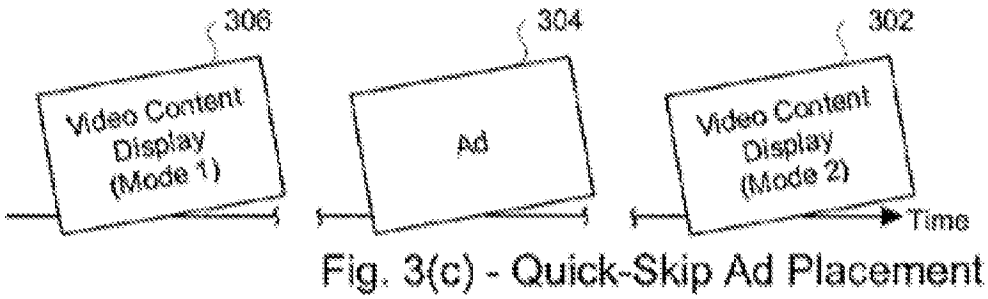
> FIG. 3(c) [sic] is a set of timelines showing the possible types of video display occurring without ads, and also when a quick-skip ad is placed in the video display. A quick-skip mode change describes a switch from video playback mode 306 at one time to video playback mode 30[2] at a different time. Specifically, the digital video recorder can "fast-forward" or "rewind" through a video segment without the user having to wait for physical tape to be skipped. Here, **an ad [304] is displayed in a time interval between the two video content displays [306 and 302]**, even though it might be possible to switch from one content display to the other without a significant time lapse.

EX1005 (Rosenberg), ¶ 61; EX1003 (Wechselberger), ¶ 138.

Thus, Rosenberg teaches *changing the insertion point of* an ad (e.g., ad 304 in Fig. 3(c)) when the user skips from a first mode to a second mode (e.g., by fast forwarding), such that the ad is displayed between the first mode and the second mode, as shown in Fig. 3(c) above. EX1003 (Wechselberger), ¶ 139. In Rosenberg, the insertion point of an ad is *chang[ed]* because an ad is newly inserted into a position in the video content where the ad was not previously present. EX1005 (Rosenberg), ¶¶ 12-13 ("The present invention provides a method and system for types of ad placement opportunities in a digital video stream…. During various mode changes related to video playback and other transitions, ad placement software selects an appropriate ad to fill the ad placement opportunity in accordance with the type of opportunity available."), 40 ("An ad opportunity arises when the control software 114 detects that the display should change modes from a first mode (or its current mode) to a second mode 200. Next, the ad placement software 114 obtains an ad for placement 202 prior to allowing the second mode to display."), 47 ("The ad placement software 114 prepares to dynamically fill the ad opportunity by obtaining an ad 202 in real-time."), 56 ("Mode changes provide ad placement opportunities."); EX1003 (Wechselberger), ¶ 139.

As described in Section III.A.6 above, a POSITA would have been motivated to modify Wu in view of Rosenberg so that when the user skips from a first portion of the content (mode 1 in Rosenberg) over an ad that was intended to be displayed,

that ad is then displayed before the skipped-to portion of the content is displayed (mode 2 in Rosenberg), as an alternative to Wu's technique of overlaying the skipped advertisement over the skipped-to portion of the content (e.g., mode 2 in Rosenberg). EX1003 (Wechselberger), ¶ 140. As shown in Fig. 3(c), below, Rosenberg teaches that a skipped-over advertisement is displayed before the second mode of the digital content when the user skips over content and then resumes normal playback mode. EX1005 (Rosenberg), ¶ 61 (quick-skip ad is "displayed in a time interval between the two video content displays [306, 302]."), Fig. 3(c) (ad 304 displayed between first mode 306 of video content and second mode 302 of video content). Rosenberg discloses that "the video for mode two is delayed from displaying for a period of time approximately equal to the length of the ad." *Id.*, ¶ 66. Implementing this technique in Wu's system would advantageously allow the user to view the full length of a skipped-over advertisement when the user skips from a first portion of the content (mode 1 306 in Rosenberg) and then resumes a normal playback mode (mode 2 302 in Rosenberg) without causing the skipped-over advertisement to obscure any portion of the skipped-to segment of the digital content (mode 2 302 in Rosenberg), as shown in Rosenberg's Fig. 3(c) below. EX1003 (Wechselberger), ¶ 140.



EX1005 (Rosenberg), Fig. 3(c) (partial)

In this way, a POSITA would have been motivated to modify Wu so that when the user skips from a first portion of the content (mode 1 in Rosenberg) over an ad that was intended to be displayed, that ad is then displayed before the skipped-to portion of the content is displayed (mode 2 in Rosenberg). This modification would achieve Wu's objective of ensuring that a required ad "cannot be fast forwarded through or skipped over" (EX1004 (Wu), 2:18-21), while also displaying the required ad without obscuring the portion of the content that the user skipped to, as taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 61, 66, Fig. 3(c); EX1003 (Wechselberger), ¶ 141.

Thus, Wu and Rosenberg render obvious *chang[ing] a predetermined advertisement insertion point in the digital media content to an adapted advertisement insertion point in the digital media content*, because (1) Wu teaches that an ad has a "predetermined advertisement insertion point" as discussed above for limitation [1.3.2], and (2) Rosenberg teaches inserting an ad (e.g., ad 304 in Fig.

3(c)) ("changing a predetermined advertisement insertion point…") in a different portion of a video display when the user engages in a "quick-skip mode change." EX1003 (Wechselberger), ¶ 142.

Accordingly, in the combination of Wu in view of Rosenberg, responsive to a fast forward command (as taught by Wu, also called a "quick-skip mode change" in Rosenberg) that results in a fast forward over a recorded television advertisement, the *predetermined advertisement insertion point in the digital media content* (i.e., ads having an ad insertion point in Wu's time table 400) is *change[d]* to the "increment between modes" (as taught by Rosenberg) (e.g., ad 304 is newly inserted between modes 306 and 302 in Rosenberg's Fig. 3(c)), *in response to receiving a user input to update a current play position in the digital media content to a new play position in the digital media content* (Wu teaches that the user may fast forward or skip to different positions in the content). EX1003 (Wechselberger), ¶ 143.

[1.3.3] the adapted advertisement insertion point determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system;

Wu in view of Rosenberg and Angel render obvious limitation [1.3.3]. EX1003 (Wechselberger), ¶ 144.

First, as described above for limitation [1.3.2], Wu and Rosenberg render obvious *the adapted advertisement insertion point* (e.g., an advertisement in Wu, which has a specified insertion point relative to the a segment of the video stream

(advertisement timelines specified in Figs. 4A-4B), modified by Rosenberg's teaching that ads are inserted into different segments of a video stream when the user skips or fast forwards to a different portion of the video stream (e.g., ad 304 is newly inserted between modes 306 and 302 in Rosenberg's Fig. 3(c))). EX1003 (Wechselberger), ¶ 145.

Second, as explained below, Angel teaches that the *insertion point* of an advertisement is *determined by an adaptive preference rule based on an advertisement requirement that applies to the digital media system*. As described in Section III.A.6 above, a POSITA would have been motivated to utilize the conventional implementation details of Angel's advertisement display rules (described in more detail below) to ensure that advertisements are displayed for the required duration as specified by the advertiser when the user skips or fast forwards a portion of Wu's content containing an advertisement that is intended to be displayed. Angel discloses that a mandatory segment (e.g., advertisement) contains a description 245 that comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249, as shown in Angel's Fig. 2 below. EX1006 (Angel), 4:39-43; EX1003 (Wechselberger), ¶ 146.

Angel "provides techniques for enforcing mandatory segments in multimedia content." EX1006 (Angel), 2:7-8. Angel explains that "[m]ultimedia content often includes mandatory segments that someone, such as the content owner or an

advertiser, wishes to be presented to the user." *Id.*, 1:15-17, 2:8-11 ("A mandatory segment is a portion of the multimedia content that someone, usually an advertiser, wishes the viewer or listener to see or hear."). Angel's Fig. 1, below, shows an embodiment of multimedia content 100 that includes a content segment 110, which has a **mandatory segment 140** between a start/end position 120 and an end/start position 150 of the content segment 110. *Id.*, 2:40-67; EX1003 (Wechselberger), ¶ 147.

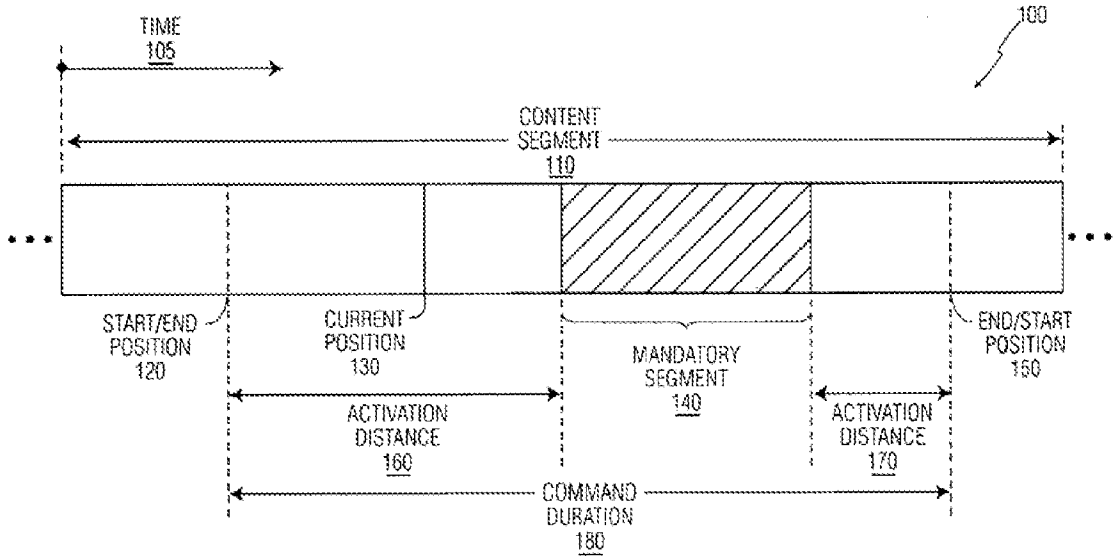


FIG. 1

EX1006 (Angel), Fig. 1

With reference to Fig. 1, above, Angel discloses that a user may input certain "commands" such as rewind, skip, or fast forward that impact whether the user will view mandatory segments (e.g., advertisements). EX1006 (Angel), 3:19 ("Each

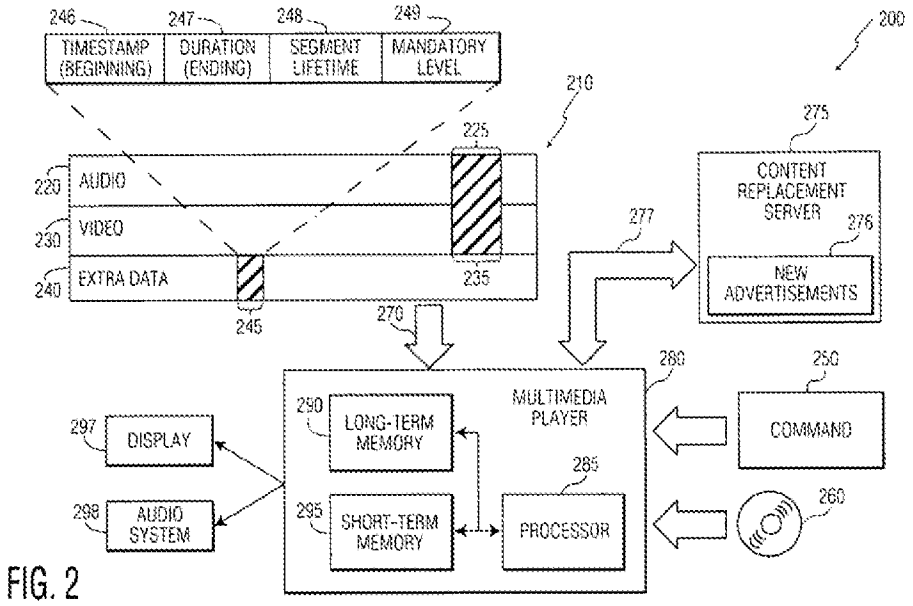
command can affect a mandatory segment."), 2:56-59 ("Commands have a duration [180], which has a start and an end time or frame. For instance, a Jump+N command, where N is a time or a number of frames, might start at location start/end position 120 and end at location end/start position 150."). The processor in a multimedia player 280 (Fig. 2 below) determines whether to enforce mandatory segments based on the user's commands and the duration of the commands:

> The present invention **enforces mandatory segments by receiving a command and determining if a duration of the command affects one or more mandatory segments**. The command affects the mandatory segment if the duration ends in the mandatory segment, begins in the mandatory segment, encompasses the mandatory segment, or begins and ends in the mandatory segment. In other words, if the command potentially causes a portion of a mandatory segment to be skipped or missed, the command affects the mandatory segment. This is explained in more detail below in reference to FIG. 1.
> When the **command affects a mandatory segment, the present invention interprets the command and its duration and determines whether or not the mandatory segment should be enforced**.

EX1006 (Angel), 2:11-25; EX1003 (Wechselberger), ¶ 148.

Angel is directed to enforcing rules (requirements) about displaying mandatory segments (e.g., advertisements) when a user skips through recorded multimedia content. As shown in Fig. 2, below, Angel teaches that a mandatory segment (e.g., mandatory segment 235 in video content 230) has a description 245 (contained in extra data 240) that defines requirements (rules) for displaying the

mandatory segment (e.g., advertisement). EX1006 (Angel), 4:39-44 ("Audio portion 220 contains a mandatory segment 225. This mandatory segment 225 is described in extra data 240 by description 245. Similarly, in video portion 230, there is a mandatory segment 235. This mandatory segment 235 is also described in extra data 240 by description 245."). EX1003 (Wechselberger), ¶ 149.



EX1006 (Angel), Fig. 2

The description 245 defines requirements (rules) for the display of the mandatory segment (e.g., advertisement). For example, as shown in Fig. 2, above, the "[d]escription 245 comprises a timestamp 246, a duration 247, a segment lifetime 248, and a mandatory level 249." *Id.*, 4:39-43. The timestamp 246 identifies when the mandatory segment starts (e.g., relative to a starting frame), and the "[d]uration 247 comprises a time duration that describes how long mandatory segment 235

lasts." *Id.*, 4:52-63. The segment lifetime 248 defines the time period (e.g., date ranges) in which the mandatory segment must be enforced and/or the number of times the mandatory segment is to be played (e.g., five times). *Id.*, 5:1-27. The "[m]andatory level 249 indicates to what extent a mandatory segment is allowed to be skipped." *Id.*, 5:32-33. For example, "mandatory level 249 may be 'hard' or 'soft,' where 'hard' indicates that the mandatory segment cannot be skipped and 'soft' indicates that the mandatory segment can be skipped if certain conditions are met. *Id.*, 5:33-37; EX1003 (Wechselberger), ¶ 150.

Angel teaches (1) *...an advertisement requirement that applies to the digital media system*, and (2) *an adaptive preference rule based on [the] advertisement requirement that applies to the digital media system*. EX1003 (Wechselberger), ¶ 151. **First**, with reference to Angel's Fig. 1, below, the activation distances 160 relative to the mandatory segment 140 teach the claimed *advertisement requirement that applies to the digital media system*, because "**[t]he activation distances 160 are used to determine whether or not the mandatory segment 140 should be enforced**. If the activation distance 160 is too long, then the mandatory segment 140 might not be enforced. For example, if a user jumps one hour of a two hour video, there could be quite a few mandatory segments 140 in this one hour. In this situation, the mandatory segments within the one hour might not be played." EX1006 (Angel), 3:28-35; *see also id.*, 8:64-9:8 ("Jump commands where a large section of

multimedia content is being jumped might not cause the mandatory segments within the jumped portion to be played. This is helpful, for instance, when viewing television programs. If a person tapes a two-hour sports event, and skips the first hour, there could be a large amount of commercials in the skipped hour. It might be onerous to cause this person to view all the commercials in the hour. Instead, they can be skipped because the duration of the Jump command meets a predetermined activation distance, and this causes all the mandatory segments to be skipped."); EX1003 (Wechselberger), ¶ 151.

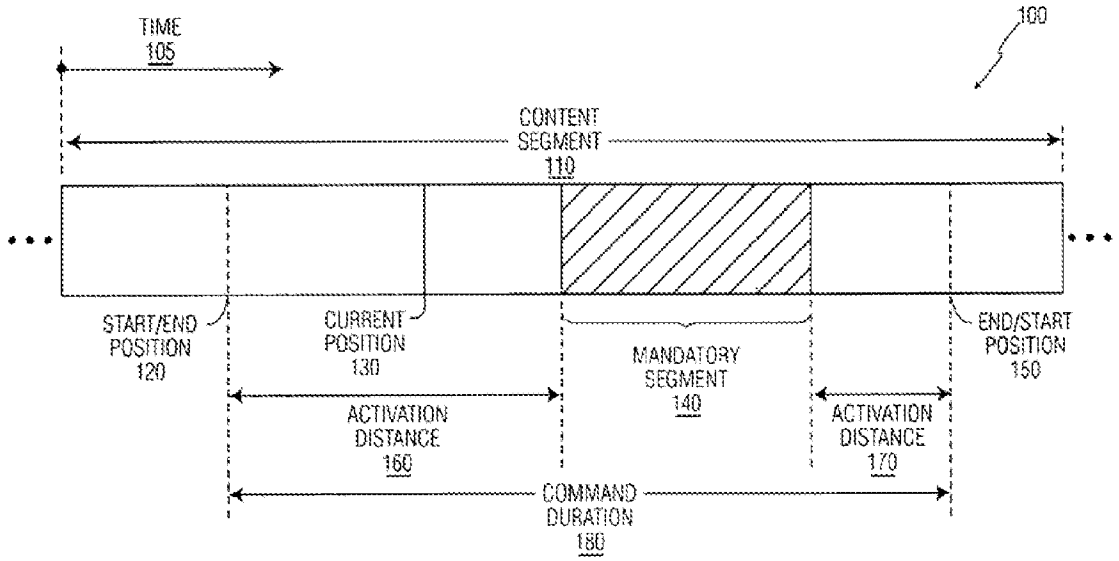


FIG. 1

EX1006 (Angel), Fig. 1

The activation distances 160 relative to the mandatory segment 140 teach the claimed *advertisement requirement that applies to the digital media system*, because

"[t]he activation distances 160 are used to determine whether or not the mandatory segment 140 should be enforced." EX1006 (Angel), 3:28-31. This requirement applies to the entire digital media system of Angel. Thus, Angel teaches that if the user skips too far ahead in the content, for example, an advertisement (mandatory segment) may not be displayed, if the advertisement would be out of context or deemed unnecessary based on the user's jump action. Accordingly, the activation distances 160 relative to the mandatory segment 140 teach the claimed *advertisement requirement that applies to the digital media system*. EX1003 (Wechselberger), ¶ 152.

Second, the description 245 in the mandatory segment (see Fig. 2, above) is an *adaptive preference rule*, because the mandatory level 249 in the description 245 of the mandatory segment (e.g., advertisement) defines whether the mandatory segment may be skipped, i.e., it is *adaptive* and a *preference rule* regarding whether a mandatory segment may be skipped based on preferences ("hard" or "soft"). EX1006 (Angel), 5:32-37 ("Mandatory level 249 indicates to what extent a mandatory segment is allowed to be skipped. In one embodiment, mandatory level 249 may be 'hard' or 'soft,' where **'hard' indicates that the mandatory segment cannot be skipped and 'soft' indicates that the mandatory segment can be skipped if certain conditions are met."**). For example, Angel discloses that the mandatory level 249 may be designated as "soft" or "hard" based on how far along

the user has skipped in relation to the placement of the ad in the video stream. As one example, Angel discloses that "a mandatory segment might be labeled as 'soft' such that a user who is skipping one hour of a television show would also skip this mandatory segment if it resides in the hour." EX1006 (Angel), 5:40-43; EX1003 (Wechselberger), ¶ 153.

It is noted that the specification of the '768 patent uses the term "adaptive reference rule" only once in relation to functions of the "intersplicer" module of the player/viewer software, as illustrated in Figs. 6A-6B of the '768 patent. EX1001 ('768 patent), 33:6-13 ("In step 630, the ad manager ends, and the request that called it passes control on to intersplicer 518. The ad manager passes its master ad table 670, ad block table 672, content play section table 674, **adaptive preference rules**, which include ad preference tables 676 and ad preference parameters 678, and the ad rotator reference 680, to the intersplicer 518 (FIG. 5A), which retains them for its own use."). The specification of the '768 patent previously explains that "[t]he intersplicer [] has the ability to **adaptively** re-group and re-sequence the insertion of ad blocks extemporaneously (i.e. 'on the fly'), in response to the consumer's arbitrary direction of the playback within the requested content, by means of playback controls. *Id.*, 15:14-18, 7:51-55 (similar description of intersplicer). Thus, while not explicitly defined, the specification of the '768 patent indicates that the "intersplicer" module of the player/viewer software may "adaptively" insert

advertisements "on the fly" according to preference rules. EX1003 (Wechselberger), ¶ 154.

This is the same technique disclosed by Angel. EX1003 (Wechselberger), ¶ 155. As described above, the mandatory level 249 in the description 245 of Angel's mandatory segment (e.g., advertisement) (*preference rule*) defines whether the mandatory segment may be skipped (i.e., it is adaptive) based on how long the user has skipped in relation to the placement of the ad in the video stream. EX1006 (Angel), 5:32-43. Thus, Angel's mandatory level 249 in the description 245 of the mandatory segment is an *adaptive preference rule* that defines whether the mandatory segment may be skipped. EX1006 (Angel), 5:32-37. The mandatory level 249 is therefore *adaptive* and a *preference rule*. Further, Angel's *adaptive preference rule* (mandatory level 249) is *based on [the] advertisement requirement that applies to the digital media system* (activation distances 160 relative to the mandatory segment 140), because the mandatory level 249, which indicates whether the mandatory segment must be enforced, is based on the original placement of the advertisement relative to the length of the video segment. EX1006 (Angel), 5:40-43 ("a mandatory segment might be labeled as 'soft' such that a user who is skipping one hour of a television show would also skip this mandatory segment if it resides in the hour."); EX1003 (Wechselberger), ¶ 155.

Accordingly, the Wu-Rosenberg-Angel combination renders obvious *the*

adapted advertisement insertion point (advertisement moved to a new location in the video stream, as taught by Rosenberg) *determined by an adaptive preference rule* (determined by mandatory level 249 in Angel's description 245) *based on an advertisement requirement that applies to the digital media system* (whether to play the advertisement based on the activation distance between the user's jump action and the mandatory segment, as taught by Angel), as recited in limitation [1.3.3]. EX1003 (Wechselberger), ¶ 156.

As described above in Section III.A.6, a POSITA would have been motivated to incorporate in Wu Rosenberg's conventional technique of moving the insertion point of an advertisement if the user skips over an advertisement "which cannot be fast forwarded through or skipped over" (EX1004 (Wu), 2:18-21). EX1003 (Wechselberger), ¶ 157. A POSITA would have been motivated to utilize the advertisement display requirements (e.g., description 245) as taught by Angel to ensure that an advertisement is displayed for its required duration (duration 247 in description 245), if the advertisement is required to be displayed based on the segment lifetime 248 and/or mandatory level 249 in the description 245. EX1006 (Angel), 4:39-43; EX1003 (Wechselberger), ¶ 157. Thus, in the Wu-Rosenberg-Angel combination, the software 208 in Wu's DVR would *change a predetermined advertisement insertion point in the digital media content* (moving insertion point of advertisement, as taught by Rosenberg), in accordance with an *adapted preference*

rule (as taught by Angel's duration 247 and mandatory level 249 in the description 245 of the advertisement), to ensure that an intended advertisement is displayed before the start of the skipped-to segment of the digital media content (as taught by Rosenberg), and for the required duration (as taught by Wu), when the mandatory level 249 indicates that the mandatory segment (advertisement) may not be skipped. EX1006 (Angel), 5:1-27, 5:32-33; EX1003 (Wechselberger), ¶ 157.

[1.3.4] modify the adapted insertion point of digital advertising content based on the advertisement requirement; and[9]

Wu in view of Rosenberg and Angel render obvious limitation [1.3.4]. EX1003 (Wechselberger), ¶ 158.

First, as described above for limitation [1.3.3], Wu, Rosenberg, and Angel render obvious *the adapted insertion point of digital advertising content based on the advertisement requirement* (moving the insertion point of Wu's advertisement, as taught by Rosenberg, based on whether to play the advertisement according to the activation distance between the user's jump action and the mandatory segment (*the advertising requirement*), as taught by Angel). EX1003 (Wechselberger), ¶ 159.

[9] The phrase "*modify[ing] <u>the</u> adapted insertion point of digital advertising content*" in limitation [1.3.4] lacks antecedent basis. Claim 1 does not previously recite an "adapted insertion point of digital advertising content." Because indefiniteness grounds may not be raised in a request for reexamination, Requester assumes, for purposes of the obviousness grounds raised herein, that "*the adapted insertion point of digital advertising content*" is intended to refer to "*an adapted advertisement insertion point in the digital media content*," as recited in limitation [1.3.2].

Second, as explained below, a POSITA would have been motivated to modify Wu so that an advertisement is displayed for its intended time duration (e.g., 60 seconds), as taught by Wu, when the insertion point of that advertisement is changed due the user skipping or fast forwarding over the advertisement, as taught by Rosenberg. EX1003 (Wechselberger), ¶ 160.

Wu discloses that an advertisement is designated to be displayed for a certain period of time. For example, as shown in Figs. 4A-4B, below, each advertisement has a duration specified in the ad time table 400 (e.g., Ad 402 is 60 seconds (1,200-1,260 seconds in video segment), and Ad 404 is 60 seconds) (2,340-2,400 seconds in video segment). EX1004 (Wu), 7:23-27. Wu discloses that the software 208 in the user's DVR 100 (*see* Fig. 1) uses the advertisement time intervals in the time table 400 (*see* Fig. 4A) "to detect when an advertisement of recorded media stream 204 is being fast forwarded through or skipped over during normal play back mode." *Id.*, 7:32-37; *see also id.*, 6:62-65 ("[T]he present embodiment [Fig. 3] determines whether an advertisement of recorded media stream 204 was played back in normal mode by electronic digital recording/play back device 100 for **a specific amount of time**."). Thus, Wu discloses that an objective is to play an advertisement for its designated duration. EX1003 (Wechselberger), ¶ 161.

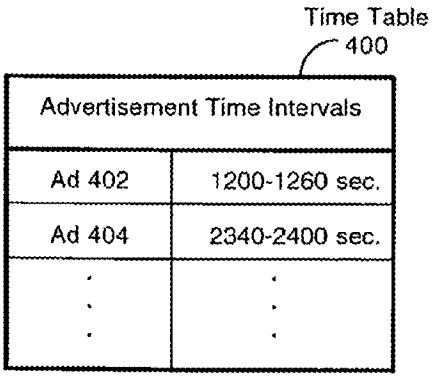


Fig. 4A

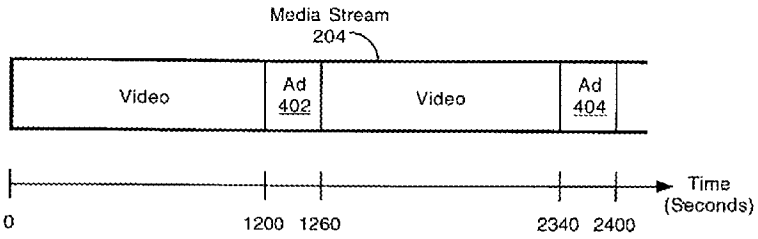


Fig. 4B

EX1004 (Wu), Figs. 4A-4B

Similarly, as shown in Fig. 2, below, Angel discloses that each advertisement (mandatory segment) has a "duration" 247 specified in the description 245 of the mandatory segment, and the "[d]uration 247 comprises a time duration that describes how long mandatory segment 235 lasts…. For example, …the duration 247 indicates that the mandatory segment 235 is 60 seconds long." EX1006 (Angel), 4:52-59; EX1003 (Wechselberger), ¶ 162.

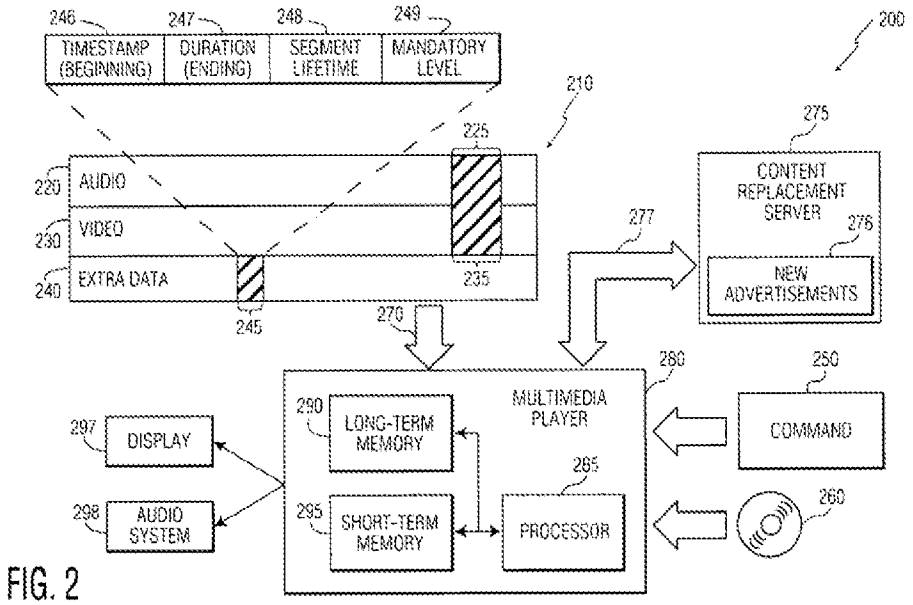


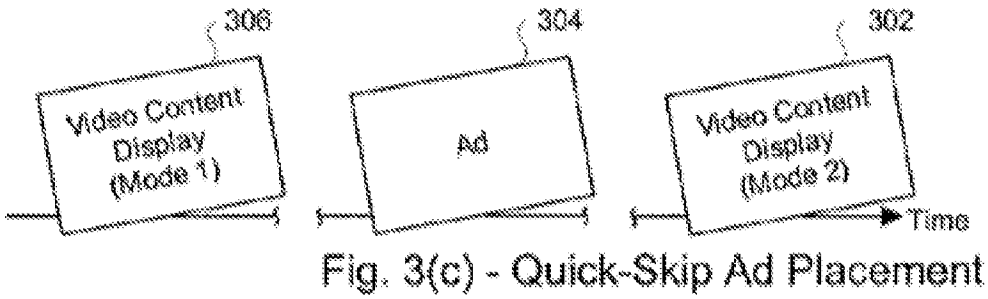
FIG. 2

EX1006 (Angel), Fig. 2

As described above in Section III.A.6, a POSITA would have been motivated to modify Wu to change the insertion time of an advertisement that is intended to be displayed when the user skips over or fast forwards over the advertisement, as taught by Rosenberg, according to the requirements (rule) set forth in the advertisement, as taught by Angel. EX1003 (Wechselberger), ¶ 163. Thus, in the Wu-Rosenberg-Angel combination, a POSITA would have been motivated to *modify the adapted insertion point of digital advertising content based on the advertisement requirement*, so that the advertisement inserted at a new point in the video stream plays for the required duration 247 specified in Angel's description 245. Thus, an advertisement inserted into a new location, as taught by Rosenberg (*adapted insertion point*), would have its adapted insertion point *modif[ied]* to account for the

duration of the advertisement, if the ad is moved based on the distance between the user's jump move relative to the original placement of the ad, as taught by Angel) (i.e., the activation distances 160). EX1003 (Wechselberger), ¶ 163.

A POSITA would have found this modification desirable because Rosenberg discloses that a skipped-over advertisement is displayed before the second mode of the digital content when the user skips over content and then resumes normal playback mode. EX1005 (Rosenberg), ¶ 61 (quick-skip ad is "displayed in a time interval between the two video content displays [306, 302]."), Fig. 3(c) (ad 304 displayed between first mode 306 of video content and second mode 302 of video content); EX1003 (Wechselberger), ¶ 164. Rosenberg discloses that "the video for mode two is delayed from displaying for a period of time approximately equal to the length of the ad." EX1005 (Rosenberg), ¶ 66. Implementing this technique in Wu's system would advantageously allow the user to view the full length of a skipped-over advertisement when the user skips from a first portion of the content (mode 1 306 in Rosenberg) and then resumes a normal playback mode (mode 2 302 in Rosenberg) without causing the skipped-over advertisement to obscure any portion of the skipped-to segment of the digital content (mode 2 302 in Rosenberg), as shown in Rosenberg's Fig. 3(c) below. EX1003 (Wechselberger), ¶ 164.



EX1005 (Rosenberg), Fig. 3(c) (partial)

In this way, a POSITA would have been motivated to modify Wu so that when the user skips from a first portion of the content (mode 1 in Rosenberg) over an ad that was intended to be displayed, that ad is then displayed before the skipped-to portion of the content is displayed (mode 2 in Rosenberg). This modification would achieve Wu's objective of ensuring that a required ad "cannot be fast forwarded through or skipped over" (EX1004 (Wu), 2:18-21), while also displaying the required ad without obscuring the portion of the content that the user skipped to, as taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 61, 66, Fig. 3(c); EX1003 (Wechselberger), ¶ 165.

Thus, Wu, Rosenberg and Angel render obvious that *the adapted insertion point of digital advertising content* (i.e., the adapted insertion point of an advertisement for upcoming programs) *is modified* (to correspond to the duration of the ad) *based on the advertisement requirement* (based on the activation distance 160 between the user's jump move relative to the original placement of the ad, as

taught by Angel). EX1003 (Wechselberger), ¶ 166.

[1.3.5] request, from the advertisement rotator, digital advertising content to be played at the adapted advertisement insertion point.

Wu in view of Rosenberg and Eldering render obvious limitation [1.3.5]. EX1003 (Wechselberger), ¶ 167.

First, as described above for limitation [1.2], Wu and Eldering render obvious the claimed *advertisement rotator*. EX1003 (Wechselberger), ¶ 168.

Second, as described above for limitation [1.3.2], Wu in view of Rosenberg render obvious displaying advertisements *at the adapted advertisement insertion point*. EX1003 (Wechselberger), ¶ 169.

Third, with reference to Fig. 2, below, Wu discloses that the DVR 100 obtains advertisements (output from DVR 100 as sub-advertisement stream 106) from a remote source such as the content provider source 202 (or other server) according to the time of the advertisement (e.g., *at the adapted advertisement insertion point*). EX1004 (Wu), 8:4-12 ("[S]ub-advertisement 206 stored by a memory device of electronic digital recording/play back system 100 may be **updated from time to time by a remote source (e.g., a computer via the Internet)**. At step 308, it is further appreciated that the present embodiment may use a wide variety of parameters (e.g., priority of advertisement, **time of advertisement**, source of advertisement, etc.) **to determine which sub-advertisement 206 to prepare for**

output."). EX1003 (Wechselberger), ¶ 170.

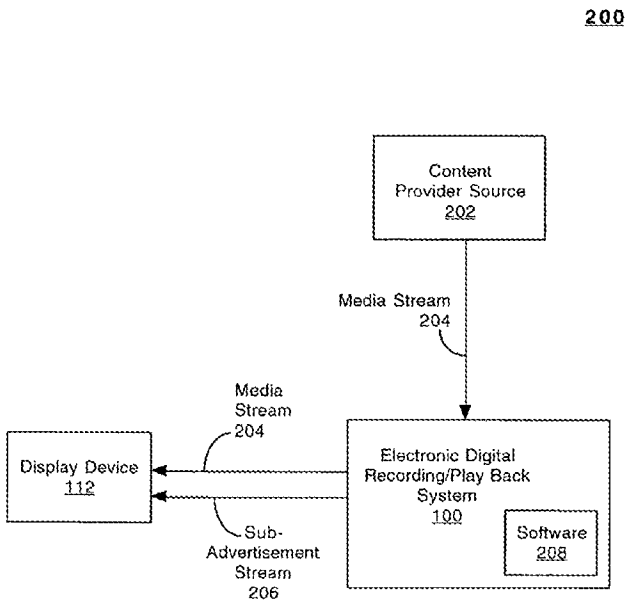


Fig. 2

EX1004 (Wu), Fig. 2

To the extent it is argued that Wu does not explicitly disclose that the DVR 100 *request[s]…digital advertising content*, this is an obvious implementation detail taught by Rosenberg. EX1003 (Wechselberger), ¶ 171. As described above, Wu teaches that the DVR 100 may obtain updated advertisements from a remote source over the Internet. EX1004 (Wu), 8:4-12. Similarly, with reference to Fig. 1(a), below, Rosenberg teaches that the ad placement control software 114 in the DVR 108 requests advertisements from the ad database 102 in the server 100 when an

advertisement opportunity is presented (e.g., when the user has skipped from one segment of the content to another segment of the content). EX1005 (Rosenberg), ¶¶ 44 ("The control software 114 continuously monitors the digital video recorder 108 for ad opportunities by detecting that the output video stream should change from a first mode to second mode 200. In this embodiment, the control software requests ads from the ad placement software when an ad opportunity is detected."), 31-32 (ad placement software 114 in DVR 108 receives advertisements from ad database 102 in server 100); EX1003 (Wechselberger), ¶ 171.

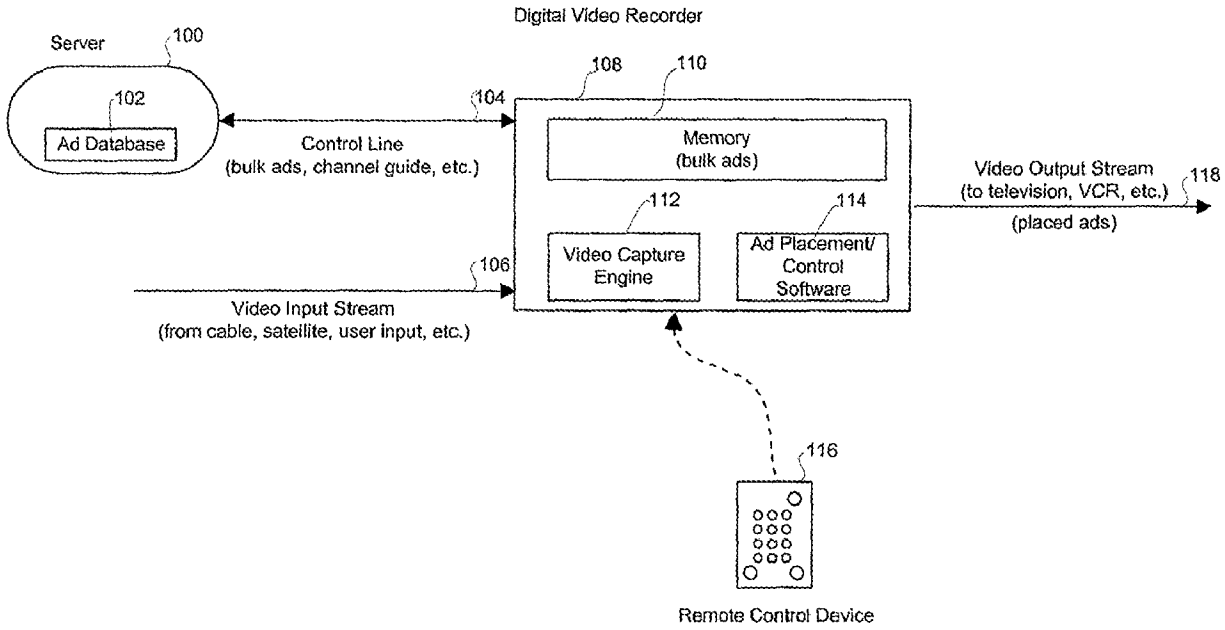


Fig. 1(a)-Digital Video Recorder Overview

EX1005 (Rosenberg), Fig. 1(a)

A POSITA would have been motivated to modify Wu so that its DVR 100 (Fig. 2) requests and obtains advertisements from the content provider source 202,

when there is an opportunity for an advertisement, as taught by Rosenberg. EX1005 (Rosenberg), ¶¶ 41, 31-32; EX1003 (Wechselberger), ¶ 172.

Fourth, as discussed above with respect to limitations [1.2] and [1.3.1], a POSITA would have been motivated to implement the separate functions of Wu's software 208, as modified above by Rosenberg, as separate processing modules in Wu's software 208, as taught by Eldering. *See* Section III.A.6 above. Specifically, a POSITA would have been motivated to implement Wu's software 208 to perform the functions of steps 306 and 310 (the *intersplicer*), as modularized by Eldering, to change the insertion point of a scheduled advertisement when an intended advertisement is skipped over, as taught by Wu and Rosenberg, and communicate with Wu's software 208 performing step 308 (the *advertisement rotator*), as modularized by Eldering, to request step 308 to obtain an advertisement, and step 308 responsively selects and obtains an appropriate advertisement, as taught by Wu and Rosenberg. EX1003 (Wechselberger), ¶ 173.

Thus, Wu in view of Rosenberg and Eldering render obvious the *intersplicer* (Wu's software 208 performing steps 306 and 310 in Wu's Fig. 3, modularized as taught by Eldering, to change the insertion time of an advertisement block as taught by Rosenberg))…*request[ing], from the advertisement rotator* (Wu's software 208 performing step 308 in Wu's Fig. 3, modularized as taught by Eldering, to select and obtain the appropriate advertisement for insertion as requested by Wu's software

208 performing steps 306 and 310, as taught by Wu in view of Rosenberg), *digital advertising content* (Wu's DVR 100 requesting digital advertising content, as taught by Rosenberg) *to be played at the adapted advertisement insertion point*, because the advertising content to be played *at the adapted advertisement insertion point* (as taught by Rosenberg) is obtained in Wu according to the time of the advertisement (e.g., *at the adapted advertisement insertion point*). EX1004 (Wu), 8:4-12; EX1003 (Wechselberger), ¶ 174.

Accordingly, for at least the foregoing reasons, claim 1 is rendered obvious by Wu in view of Rosenberg, Eldering, and Angel. EX1003 (Wechselberger), ¶ 175.

B. Proposed Rejection #2: Claims 10, 19, and 27 would have been obvious over Wu in view of Rosenberg, and Angel.

Claims 10, 19, and 27 of the '768 patent are obvious over Wu, Rosenberg, and Angel. As shown by the Claim Comparison Chart (EX1013), claims 10, 19, and 27 recite limitations similar to claim 1. The following analysis identifies limitations of claims 10, 19, and 27 that are similar to limitations of claim 1 addressed above, and addresses limitations of claims 10, 19, and 27 that are different than limitations of claim 1. EX1003 (Wechselberger), ¶ 176.

Requester notes that claims 10, 19, and 27 of the '768 patent do not recite limitation [1.3.4] of claim 1, which was added to gain allowance of claim 1, as explained in Section II.D above. In addition, claims 10, 19, and 27 do not recite a

limitation corresponding to limitation [1.2] for which Eldering was cited in Section III.A.7 above. EX1003 (Wechselberger), ¶ 177.

1. Claim 10 would have been obvious over Wu in view of Rosenberg and Angel.

[10.0] A digital media advertisement presentation control system comprising:

Wu discloses or at least renders obvious the preamble of claim 10, to the extent it is limiting. EX1003 (Wechselberger), ¶ 178.

As shown in Fig. 2, below, Wu discloses "a consumer electronic network system 200" that includes an electronic digital recording/play back system 100 (e.g., DVR), which receives a media stream 204 from a content provider source 202, and outputs the media stream 204 with an associated sub-advertisement stream 206 to a display device 112." Ex.1004 (Wu), 5:40-65, 6:31-34 ("[T]he electronic digital recording/play back system 100 (FIG. 2) receives media stream 204 output by content provider source 202 and digitally records it."). Wu's "consumer electronic system 200" is *[a] digital media advertisement presentation control system*, because it receives the media stream and outputs the media stream 204 with an associated sub-advertisement stream 206 to the display device 112. Ex.1004 (Wu), 5:40-65, 6:31-34; EX1003 (Wechselberger), ¶ 179.

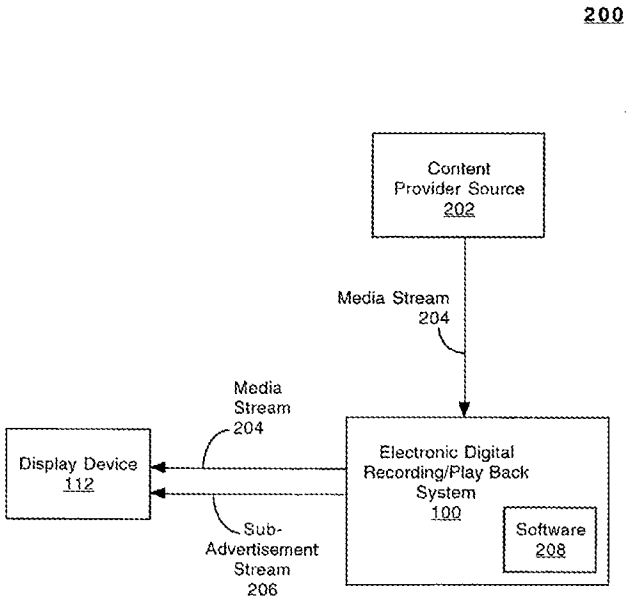


Fig. 2

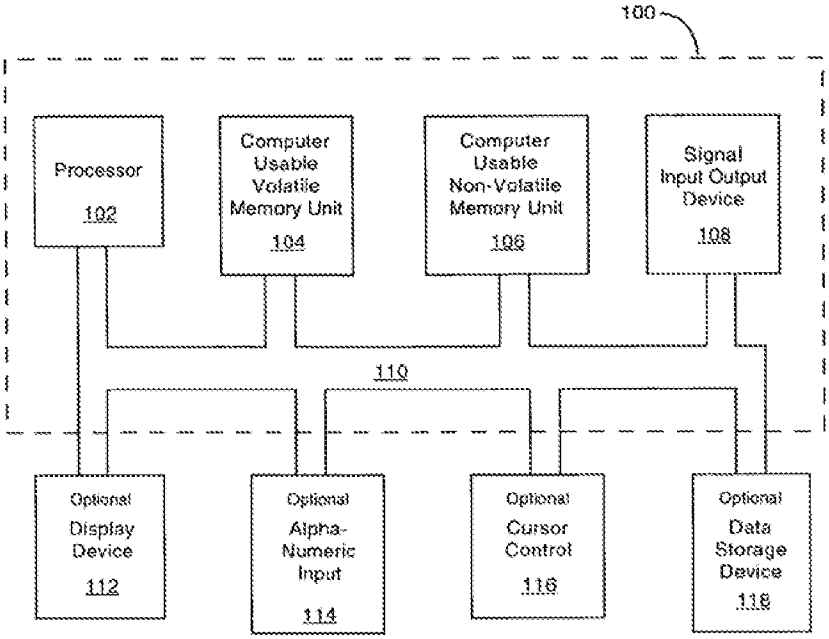
EX1004 (Wu), Fig. 2

Thus, Wu discloses or at least renders obvious *[a] digital media advertisement presentation control system*. EX1003 (Wechselberger), ¶ 180.

[10.1] at least one processor;

With reference to Fig. 2, above, Wu discloses that the electronic digital recording/play back system 100 (e.g., DVR) includes *at least one processor*. EX1004 (Wu), 4:44-53 ("Within the following discussions of the present invention, certain processes and steps are discussed that are realized, in one embodiment, as a series of instructions (e.g., software program) that reside within computer readable memory units of electronic digital recording/play back system 100 and **executed by**

processors of system 100. When executed, the instructions cause electronic digital recording/play back device 100 to perform specific actions and exhibit specific behavior which is described in detail below."). Fig. 1, below, illustrates that the DVR 100 includes "one or more central processors 102 coupled with bus 110 for processing information and instructions," where "[c]entral processor unit 102 may be a microprocessor or any other type of processor." EX1004 (Wu), 4:54-60; EX1003 (Wechselberger), ¶ 181.



EX1004 (Wu), Fig. 1

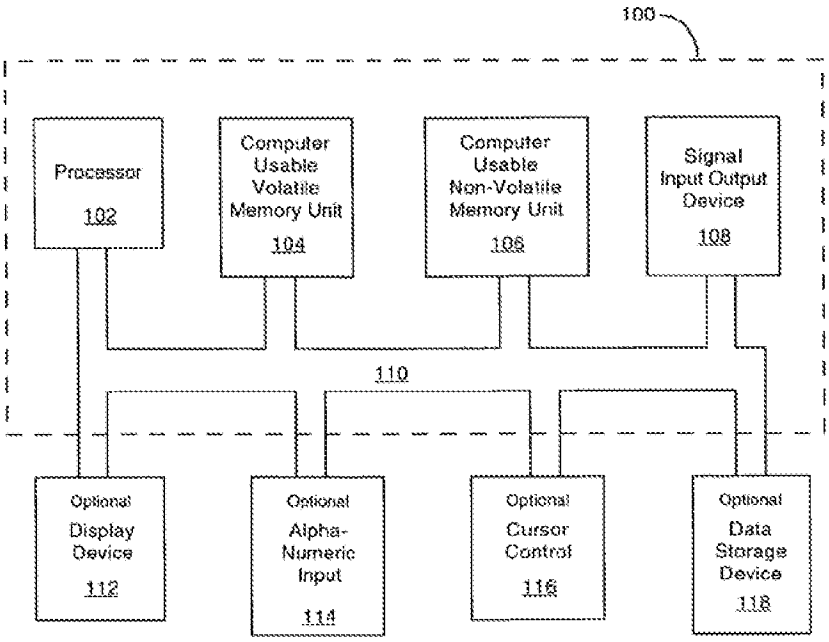
Thus, Wu discloses *at least one processor* (e.g., processor 102 in Fig. 1), as recited in limitation [10.1]. EX1003 (Wechselberger), ¶ 182.

[10.2.1] a non-transitory computer-readable storage medium storing instructions that, when executed by the processor, cause the processor to perform operations comprising:

Wu discloses or at least renders obvious limitation [10.2.1]. Specifically, Wu discloses that the DVR 100 includes *a non-transitory computer-readable storage medium* ("computer readable memory units") *storing instructions* ("a series of instructions (e.g., software program)") *that, when executed by the processor* ("executed by processors of system [DVR] 100"), *cause the processor to perform operations* (processor executes instructions), as recited in limitation [10.2.1]. EX1004 (Wu), 4:44-53 ("Within the following discussions of the present invention, certain processes and steps are discussed that are realized, in one embodiment, as **a series of instructions (e.g., software program)** that reside within **computer readable memory units of electronic digital recording/play back system 100 and executed by processors of system 100**. When executed, the instructions cause electronic digital recording/play back device 100 to perform specific actions and exhibit specific behavior which is described in detail below."); EX1003 (Wechselberger), ¶ 183.

For example, with reference to Fig. 1, below, the DVR 100 includes "a computer usable non-volatile memory unit 106 (e.g., read only memory, programmable ROM, flash memory, EPROM, EEPROM, etc.) coupled with bus 110 for storing static information and instructions for processor(s) 102." EX1004 (Wu),

4:60-5:2; EX1003 (Wechselberger), ¶ 184.



EX1004 (Wu), Fig. 1

Thus, Wu discloses or at least renders obvious limitation [10.2.1]. EX1003 (Wechselberger), ¶ 185.

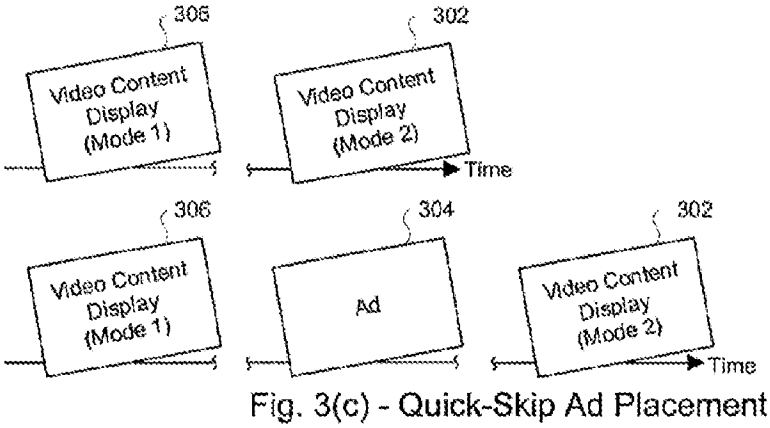
[10.2.2] replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content, in response to receiving a request to update a current play position in the digital media content to a new play position in the digital media content,

Limitation [10.2.2] is similar to limitation [1.3.2]. EX1013 (Claim Comparison Chart), 2. Limitation [10.2.2] recites "replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content…," whereas limitation [1.3.2] recites "change a predetermined advertisement insertion point in the digital media content to an

adapted advertisement insertion point in the digital media content…." EX1003 (Wechselberger), ¶ 186.

As described above for limitation [1.3.2], in the combination of Wu and Rosenberg, responsive to a fast forward command (as taught by Wu, also called a "quick-skip mode change" in Rosenberg) that results in a fast forward over a recorded television advertisement, the *predetermined advertisement insertion point in the digital media content* (i.e., ads having an ad insertion point in Wu's time table 400) is *change[d]* to the "increment between modes" (as taught by Rosenberg) (e.g., ad 304 is newly inserted between modes 306 and 302 in Rosenberg's Fig. 3(c)). EX1003 (Wechselberger), ¶ 187.

For the same reasons, Wu and Rosenberg render obvious *replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content…*, because, as shown in Rosenberg's Fig. 3(c) below, the *predetermined advertisement insertion point* of ad 304 is replaced with a new advertisement insertion point by newly being inserted between nodes 306 and 302 in Rosenberg's Fig. 3(c). EX1005 (Rosenberg), ¶ 61 ("Here, an ad [304] is displayed in a time interval between the two video content displays [306 and 302]…."). EX1003 (Wechselberger), ¶ 188.



EX1005 (Rosenberg), Fig. 3(c)

Thus, limitation [10.2.2] is obvious over Wu and Rosenberg for the same reasons presented above for limitation [1.3.2]. EX1003 (Wechselberger), ¶ 189.

[10.2.3] the adapted insertion point determined by an adaptive preference rule based on one or more advertisement requirements;

Limitation [10.2.3] is rendered obvious by Wu in view of Rosenberg and Angel, for the same reasons presented above for limitation [1.3.3]. EX1003 (Wechselberger), ¶ 190.

Limitation [10.2.3] is substantially similar to limitation [1.3.3]. Limitation [10.2.3] recites "the adapted insertion point determined…," whereas limitation [1.3.3] recites "the adapted advertisement insertion point determined…." In addition, limitation [10.2.3] recites "…one or more advertisement requirements," whereas limitation [1.3.3] recites "an advertisement requirement that applies to the digital media system." The features of limitation [10.2.3], with slightly modified

wording as compared to limitation [1.3.3], are rendered obvious by Wu in view of Rosenberg and Angel, for the same reasons presented above for limitation [1.3.3]. EX1003 (Wechselberger), ¶ 191.

[10.2.4] requesting digital advertising content to be played at the adapted insertion point of digital advertising content; and

Limitation [10.2.4] is rendered obvious by Wu in view of Rosenberg for the same reasons presented above for limitation [1.3.5]. Limitation [10.2.4] contains slight differences in wording from limitation [1.3.5], as shown in the table below. *See also* EX1013 (Claim Comparison chart), 3; EX1003 (Wechselberger), ¶ 192.

Limitation [10.2.4]	Limitation [1.3.5]
requesting digital advertising content to be played at the adapted insertion point of digital advertising content; and	request, from the advertisement rotator, digital advertising content to be played at the adapted advertisement insertion point.

Despite the minor differences in wording above, the combination of Wu and Rosenberg render obvious *request[ing] digital advertising content* (Wu's DVR 100 requesting digital advertising content, as taught by Rosenberg) *to be played at the adapted advertisement insertion point of digital advertising content*, because the advertising content to be played *at the adapted advertisement insertion point* (as taught by Rosenberg) is obtained in Wu according to the time location of the advertisement (e.g., *at the adapted advertisement insertion point*). EX1004 (Wu), 8:4-12; *see* limitation [1.3.5] above. EX1003 (Wechselberger), ¶ 193.

[10.2.5] presenting the digital advertising content at the adapted insertion point of digital advertising content.

Limitation [10.2.5] is rendered obvious by Wu in view of Rosenberg and Angel. EX1003 (Wechselberger), ¶ 194.

First, as described above with respect to limitations [1.3.3] and [10.2.3], Wu, Rosenberg, and Angel render obvious *the adapted insertion point of digital advertising content based on the advertisement requirement* (moving the insertion point of Wu's advertisement, as taught by Rosenberg, based on whether to play the advertisement according to the activation distance between the user's jump action and the mandatory segment (*the advertising requirement*), as taught by Angel). EX1003 (Wechselberger), ¶ 195.

Second, Wu and Rosenberg render obvious *presenting the digital advertising content at the adapted insertion point of digital advertising content.* As shown in Fig. 2, below, Wu discloses that the DVR 100 *presents the digital advertising content* (sub-advertisement stream 206) to the display device 112. EX1004 (Wu), 5:43-50 ("[S]ub-advertisement stream 206 corresponding to the skipped advertisement is displayed on a portion of the screen of display device 112 once the user resumes watching the recorded television show in normal play back mode."). EX1003 (Wechselberger), ¶ 196.

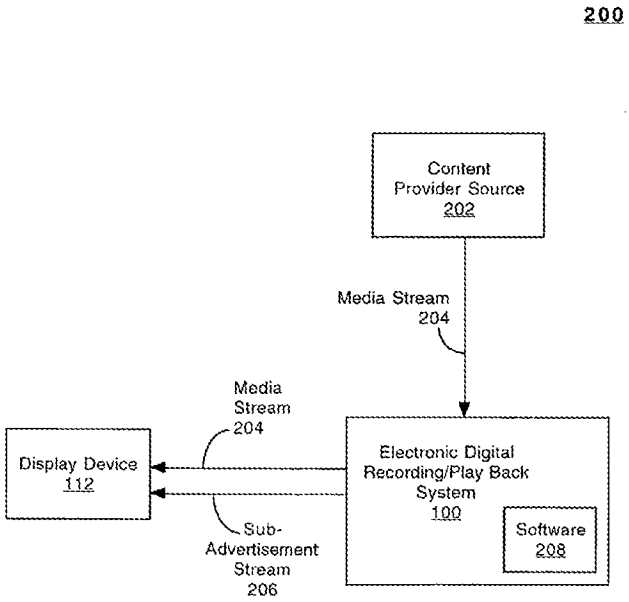


Fig. 2

EX1004 (Wu), Fig. 2

As shown in Fig. 3(c), below, Rosenberg teaches that when the user has quick-skipped (e.g., fast forwarded) from a first mode 306 (mode 1) to a second mode 302 (mode 2), an advertisement 304 is newly inserted between the first 306 and the second mode 302. EX1005 (Rosenberg), ¶ 61; EX1003 (Wechselberger), ¶ 197.

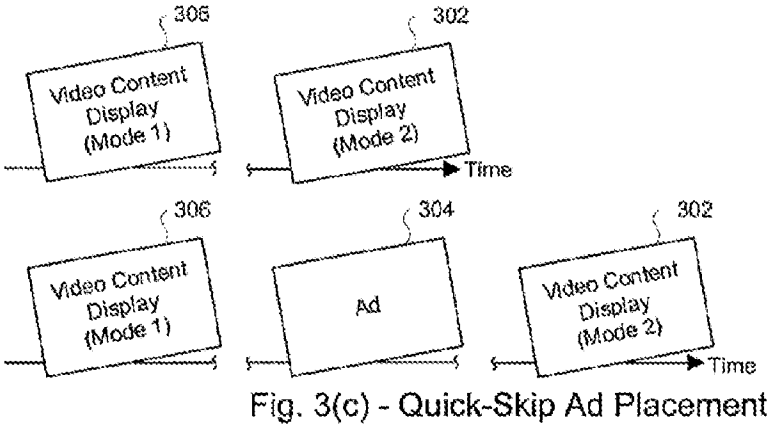


Fig. 3(c) - Quick-Skip Ad Placement

EX1005 (Rosenberg), Fig. 3(c)

Thus, Wu in view of Rosenberg render obvious *presenting the digital advertising content* (Wu's DVR outputting the sub-advertisement stream 206) *at the adapted insertion point of digital advertising content* (inserting advertisement between different display modes, as taught by Rosenberg). EX1003 (Wechselberger), ¶ 198.

2. Claim 19 would have been obvious over Wu in view of Rosenberg and Angel.

[19.0] A method embedded in a machine-readable medium in form of executable instructions to cause at least one programmable processor to perform operations comprising:

Wu discloses or at least renders obvious limitation [19.0]. EX1003 (Wechselberger), ¶ 199.

First, Wu discloses *[a] method.* EX1004 (Wu), Abstract ("A **method** and system of providing a non-skippable sub-advertisement stream."), 2:36-38 ("[T]he

present invention includes a **method** for providing a non-skippable sub-advertisement to a display device."). EX1003 (Wechselberger), ¶ 200.

Second, Wu discloses that the *executable instructions* ("a series of instructions (e.g., software program)") for implementing the disclosed functions of the DVR 100 (Fig. 2) are stored in *a machine-readable medium* ("computer readable memory units") and executed by *at least one programmable processor* ("executed by processors of system [DVR] 100"). EX1004 (Wu), 4:44-53 ("Within the following discussions of the present invention, certain processes and steps are discussed that are realized, in one embodiment, as **a series of instructions (e.g., software program)** that reside within **computer readable memory units of electronic digital recording/play back system 100 and executed by processors of system 100**. When executed, the instructions cause electronic digital recording/play back device 100 to perform specific actions and exhibit specific behavior which is described in detail below."). EX1003 (Wechselberger), ¶ 201.

Thus, Wu discloses or at least renders obvious *[a] method* (method) *embedded in a machine-readable medium* ("computer readable memory units of electronic digital recording/play back system 100") *in form of executable instructions* ("a series of instructions (e.g., software program)") *to cause at least one programmable processor* ("executed by processors of system [DVR] 100") *to perform operations*, as recited in limitation [19.0]. EX1003 (Wechselberger), ¶ 202.

[19.1.1] replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content, in response to receiving a request to update a current play position in the digital media content to a new play position in the digital media content,

Limitation [19.1.1] is identical to limitation [10.2.2], which is similar to limitation [1.3.2] as shown above. EX1013 (Claim Comparison Chart), 2; EX1003 (Wechselberger), ¶ 203.

[19.1.2] the adapted insertion point determined by an adaptive preference rule based on one or more advertisement requirements;

Limitation [19.1.2] is identical to limitation [10.2.3], which is substantially similar to limitation [1.3.3] as shown above. EX1013 (Claim Comparison Chart), 2; EX1003 (Wechselberger), ¶ 204.

[19.2] requesting digital advertising content to be played at the adapted insertion point of digital advertising content; and

Limitation [19.2] is identical to limitation [10.2.4] addressed above. EX1013 (Claim Comparison Chart), 3; EX1003 (Wechselberger), ¶ 205.

[19.3] presenting the digital advertising content at the adapted insertion point of digital advertising content.

Limitation [19.3] is identical to limitation [10.2.5] addressed above. EX1013 (Claim Comparison Chart), 3; EX1003 (Wechselberger), ¶ 206.

3. Claim 27 would have been obvious over Wu in view of Rosenberg and Angel.

[27.0] A computer program product comprising a non-transitory machine-readable medium storing instructions that, when executed by at least one programmable processor, cause the at least one programmable processor to perform operations comprising:

Wu discloses limitation [27.0] for the same reasons as presented above for limitation [19.0]. Specifically, Wu discloses *[a] computer program product comprising a non-transitory machine-readable medium* ("computer readable memory units of electronic digital recording/play back system 100") *storing instructions* ("a series of instructions (e.g., software program)") that, when executed by at least one programmable processor ("executed by processors of system [DVR] 100"), cause the at least one programmable processor to perform operations. EX1004 (Wu), 4:44-53 ("Within the following discussions of the present invention, certain processes and steps are discussed that are realized, in one embodiment, as **a series of instructions (e.g., software program)** that reside within **computer readable memory units of electronic digital recording/play back system 100 and executed by processors of system 100**. When executed, the instructions cause electronic digital recording/play back device 100 to perform specific actions and exhibit specific behavior which is described in detail below."); EX1003 (Wechselberger), ¶ 207.

Thus, Wu discloses or at least renders obvious limitation [27.0]. EX1003

(Wechselberger), ¶ 208.

[27.1.1] replacing a predetermined advertisement insertion point in digital media content with an adapted insertion point for digital advertising content, in response to receiving a request to update a current play position in the digital media content to a new play position in the digital media content,

Limitation [27.1.1] is identical to limitations [10.2.2] and [19.1.1], which are similar to limitation [1.3.2] as shown above. EX1013 (Claim Comparison Chart), 2; EX1003 (Wechselberger), ¶ 209.

[27.1.2] the adapted insertion point determined by an adaptive preference rule based on one or more advertisement requirements;

Limitation [27.1.2] is identical to limitations [10.2.3] and [19.1.2], which are substantially similar to limitation [1.3.3] as shown above. EX1013 (Claim Comparison Chart), 2; EX1003 (Wechselberger), ¶ 210.

[27.2] requesting digital advertising content to be played at the adapted insertion point of digital advertising content; and

Limitation [27.2] is identical to limitations [10.2.4] and [19.2], which are substantially similar to limitation [1.3.5] as shown above. EX1013 (Claim Comparison Chart), 3; EX1003 (Wechselberger), ¶ 211.

[27.3] presenting the digital advertising content at the adapted insertion point of digital advertising content.

Limitation [27.3] is identical to limitations [10.2.5] and [19.3] addressed above. EX1013 (Claim Comparison Chart), 3; EX1003 (Wechselberger), ¶ 212.

Accordingly, for at least the foregoing reasons, claims 10, 19, and 27 are also unpatentable as obvious over Wu in view of Rosenberg and Angel. EX1003 (Wechselberger), ¶ 213.

IV. LIST OF EXHIBITS

EX1001	U.S. Patent 11,463,768 to Philip M. Donian et al. ("'768 patent")
EX1002	Prosecution History of U.S. Patent 11,463,768 ("'768 FH")
EX1003	Declaration of Anthony J. Wechselberger
EX1004	U.S. Patent 7,877,766 to Wu et al. ("Wu")
EX1005	U.S. Patent Publication 2002/0090198 to Rosenberg et al. ("Rosenberg")
EX1006	U.S. Patent 7,292,773 to Angel ("Angel")
EX1007	U.S. Patent Publication 2002/0083439 to Eldering ("Eldering")
EX1008	Excerpt of Prosecution History of U.S. Patent 10,986,403 ("'403 FH")
EX1009	U.S. Patent Publication 2002/0144262 to Plotnick et al. ("Plotnick")
EX1010	U.S. Patent Publication 2001/0042249 to Knepper et al. ("Knepper")
EX1011	U.S. Patent 7,761,327 to Hannah et al. ("Hannah")
EX1012	U.S. Patent Publication 2002/0191950 to Wang ("Wang")
EX1013	Claim Comparison Chart – '768 Patent
EX1014	*Curriculum vitae* of Anthony J. Wechselberger
EX1015	Petition for *Inter Partes* Review in IPR2024-01252
EX1016	Petition for *Inter Partes* Review in IPR2024-01253
EX1017	Hulu, LLC's Notice of Motion and Motion to Dismiss the Complaint for Failure to State a Claim Pursuant to F.R.C.P. 12(B)(6) and 35 U.S.C. § 101, *Piranha Media Distribution LLC v. Hulu LLC*, No. 2:24-v-00498 (C.D. Cal.), Dkt. No. 23
EX1018	Plaintiff's Opposition to Motion to Dismiss, *Piranha Media Distribution LLC v. Hulu LLC*, No. 2:24-v-00498 (C.D. Cal.), Dkt. No. 28
EX1019	Ordering Granting Defendant's Motion to Dismiss, *Piranha Media Distribution LLC v. Hulu LLC*, No. 2:24-v-00498 (C.D. Cal.), Dkt. No. 50
EX1020	Plaintiff's Notice of Appeal, *Piranha Media Distribution LLC v. Hulu LLC*, No. 2:24-v-00498 (C.D. Cal.), Dkt. No. 54
EX1021	J. Nicklisch et al., "An Exploration of Modular Programs," The Glasgow Workshop on Functional Programming, 1996

EX1022	P. Tang et al., "Parallel Programming with Interacting Processes," Languages and Compilers for Parallel Computing, LCPC1999, Lecture Notes in Computer Science, vol. 1863, 1999
EX1023	J. Hayes, "Modular Programming in C," Embedded Systems Programming, Nov. 2001
EX1024	"Modular Programming," Wikipedia, available at https://en.wikipedia.org/wiki/Modular_programming (last accessed October 9, 2024)

VI. THE OFFICE SHOULD NOT DENY REEXAMINATION UNDER 35 U.S.C. § 325(D)

The Office should not deny reexamination of the unpatentability grounds presented in this Request under 35 U.S.C. § 325(d). The Office has not considered whether the Challenged Claims are unpatentable over (1) Wu in view of Rosenberg, Eldering, and Angel or (2) Wu in view of Rosenberg and Angel, as presented herein. Therefore, the obviousness grounds presented herein (Wu in view of Rosenberg, Eldering, and Angel for claim 1, and Wu in view of Rosenberg, and Angel for claims 10, 19, and 27) are not the same or substantially the same prior art or arguments that were previously presented to the Office. *See* 35 U.S.C. § 325(d).

As indicated on pages 3-4 and in Section II.A above, Hulu recently filed two IPR petitions against several claims of the ’768 patent. The obviousness grounds presented in this Request (Wu in view of Rosenberg, Eldering, and Angel for claim 1, and Wu in view of Rosenberg and Angel for claims 10, 19, and 27) differ from the obviousness grounds presented in Hulu’s IPR petitions, as shown in the table below.

IPR Petition	Claims Challenged	Obviousness Grounds[10]
IPR2024-01252, *Hulu, LLC v. Piranha Media Distribution, LLC*	1-3, 5-12, 14-21, 23-25, 27-29, 31-33	Wu in view of Doherty (EX1015, 8)
IPR2024-01253, *Hulu, LLC v. Piranha Media Distribution, LLC*	1-3, 5-12, 14-21, 23-25, 27-29, 31-33	Eldering-I in view of Eldering-II (EX1016, 8)

While Hulu's Petition in IPR2024-01252 relies on Wu (EX1004) and Hulu's Petition in IPR2024-01253 relies on Eldering (EX1007), the obviousness grounds presented in this Request (Wu in view of Rosenberg, Eldering, and Angel for claim 1, and Wu in view of Rosenberg and Angel for claims 10, 19, and 27) are different from the obviousness grounds presented in the IPR2024-01252 Petition (Wu in view of Doherty).[11] Furthermore, the obviousness grounds presented in this Request are different than the obviousness grounds presented in the IPR2024-01253 Petition (Eldering (EX1004) in view of Eldering-II). Therefore, the Office should not deny institution of this Request under § 325(d), because the Office has not been presented with the same or substantially the same prior art or arguments presented in this

[10] Doherty is U.S. Publication No. 2003/0200128. Eldering-I is U.S. Publication No. 2002/0083439 (EX1007 in this Request). Eldering-II is U.S. Publication No. 2003/0149975.

[11] Hulu's Petition in IPR2024-01252 cites to the published application of Angel (U.S. Publication No. 2003/0044162) as a background reference (EX1015, 29 (citing Ex.-1018 (Angel publication)), ¶¶10-15), but Angel is not part of the obviousness grounds presented in the IPR2024-01252 Petition.

Request. *See, e.g.*, Order Granting Reexamination, No. 90/019,483, pp. 13-14 (July 11, 2024) (obviousness grounds presented in a reexamination request are not based on the same or substantially the same prior art or arguments when the obviousness grounds in the reexamination request and IPR petition had different combination of references using common reference).

Furthermore, the Office of Patent Legal Administration has explained that the framework for discretionary denial under § 325(d) in *Advanced Bionics, LLC v. MEDEL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) ("*Advanced Bionics*") and *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) ("*Becton*") applies to *inter partes* review (IPR) proceedings but not to *ex parte* reexamination proceedings. *See* Reexam Petition Decision, No. 90/014,801, at p. 6 (August 31, 2022) (explaining that *Advanced Bionics* and the "*Becton* factors were specifically formulated to apply to AIA trial proceedings, not to ex parte reexamination proceedings").

Advanced Bionics explains that the Patent Trial and Appeal Board uses the two-part framework in evaluating discretionary denial under § 325(d):

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and

> (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics at 8. If the first part is satisfied and the petitioner fails to make a showing of Office error in the second part, "the Director generally will exercise discretion not to institute *inter partes* review." *Id.* at 8-9. "At bottom, this framework reflects a commitment to **defer to previous Office evaluations of the evidence of record** unless material error is shown." *Id.* at 9 (emphasis added). Thus, discretionary denial under the *Advanced Bionics* framework presupposes that there is evidence that the Office previously considered art or arguments in some way (such that there is an opportunity to demonstrate whether error occurred). There is no such evidence of any evaluation here. The Office has not considered the combination of Wu in view of Rosenberg and Angel as presented in this Request. Furthermore, the Office has not considered Wu as presented in Hulu's IPR petition in IPR2024-01215. Therefore, the Office should not exercise its discretion to deny reexamination under § 325(d). *See, e.g.*, Order Granting Reexamination in No. 90/019,499 (July 25, 2024), p. 19 (declining to deny reexamination under § 325(d) in view of prior IPR petition due to "[t]he fact that the PTAB has not yet issued a decision on the institution of inter partes review in the [] petition and therefore has not yet considered the merits of the references presented in the IPR petition.").

Finally, to the extent the Office is inclined to deny this Request under 35 U.S.C. § 325(d), Requester requests, in the alternative, that this Request be granted but the proceeding stayed pending the outcome of IPR2024-01252 and IPR2024-01253. In this way, the Office's resources may be conserved while still acknowledging the substantial new questions of patentability raised by this Request. *See* 35 U.S.C. § 304 ("If…a substantial new question of patentability…is raised, the determination will include an order for reexamination of the patent").

VII. THE CHALLENGED CLAIMS WERE HELD PATENT-INELIGIBLE

As noted on page 2 of this Request, the Challenged Claims were held patent-ineligible under 35 U.S.C. § 101 in the Hulu litigation. *See* EX1019 (Order Granting Defendant's Motion to Dismiss). Specifically, the U.S. District Court for the Central District of California held that "…the asserted claims are directed at an abstract idea and do not contain an inventive concept. The claims are patent ineligible and are invalid under § 101." EX1019, 15.

In the court's Order, the term "asserted claims" refers to ***all claims*** of the '768 patent and ***all claims*** of the parent U.S. Patent No. 10,986,403. This is confirmed by the parties' briefing on the patent ineligibility issue. The defendant in the Hulu litigation "move[d] to dismiss this action on the grounds that ***all claims*** of the asserted patents, U.S. Patent Nos. 10,986,403 ("the '403 patent") and 11,463,768 ("the '768 patent"), are ineligible for patenting under 35 U.S.C. § 101." EX1017

(Defendant's Motion to Dismiss), i. Further, the Defendant explained that "[a]s explained in this motion, all claims of the asserted patents are ineligible for patenting under the Supreme Court's *Alice* test." *Id.*, 1. In its briefing, Defendant specifically identified independent claims 1, 10, 19, and 27 of the '768 patent, the Challenged Claims herein, as patent-ineligible. *Id.*, 20-22. Patent Owner likewise generically referenced the "Asserted Claims" as all claims of the '768 and '403 patents. EX1018 (Plaintiff's Opposition to Defendant's Motion to Dismiss), 1 ("[T]he claims of the asserted '403 and '768 patents (hereinafter "Asserted Claims")…."). Thus, ***all claims*** of the '768 patent were held patent-ineligible. EX1019, 15.[12]

The Office may address the unpatentability of the Challenged Claims based on the proposed rejections presented in this Request, independent from the district court's finding that the Challenged Claims are patent-ineligible under 35 U.S.C. § 101. As explained by the Director, "the Office will consider…a request for reexamination *before* [1] the Office issues a certificate canceling all claims or [2] before the Federal Circuit issues its mandate in relation to a decision finding all

[12] Patent Owner, Defendant, and the district court referred to claim 1 of '403 patent as a representative claim in the patent-ineligibility briefing and order. See EX1017, 15 ("Claim 1 of the '403 Patent Is Representative of the Other Challenged Claims"), 20 ("Claim 1 of the '403 patent is representative of all the claims of the '768 patent."); EX1018, 6 (referencing representative claim 1 of the '403 patent); EX1019, 2 ("The parties agree that, for the purposes of this Motion, the Court can treat the '403 Patent, and in particular claim 1 of the '403 Patent, as the representative claim.").

claims invalid or unpatentable." *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, IPR2022-01366, Paper 15 at 7 (May 2, 2023) (Vidal) (citing 84 Fed. Reg. 16654). Neither condition [1] nor [2] has occurred. Specifically, the Office has not issued a certificate cancelling the Challenged Claims, and the Federal Circuit has not issued a mandate affirming the patent-ineligibility of the Challenged Claims. In *Volvo*, the challenged patent was previously found patent-ineligible in a district court proceeding, and the Director held that the PTAB incorrectly determined that it could not address unpatentability challenges based on prior art. *Id.*, 2-4. The same standard applies in this reexamination proceeding. Therefore, the Office should consider the proposed rejections presented in this Request. If the Challenged Claims are cancelled after all appeal rights are exhausted, then the Office may terminate this reexamination proceeding. *See* MPEP § 2286.IV ("Upon the issuance of a final holding of invalidity or unenforceability, the claims being examined which are held invalid or unenforceable are no longer in force, and therefore, will be withdrawn from consideration in the reexamination."). There has not been a final holding of invalidity of the Challenged Claims. Therefore, the Office should order reexamination based on the proposed rejections presented herein.

VIII. CONCLUSION

For the reasons set forth above, substantial new questions of patentability are raised in connection with claims 1, 10, 19, and 27 by this Request for *Ex Parte*

Reexamination, because the claims are rendered obvious in view of the above-listed prior art references. Therefore, Requester asks that this request for reexamination be granted and that claims 1, 10, 19, and 27 be canceled.

As identified in the attached Certificate of Service and in accordance with 37 C.F.R. §§ 1.33(c) and 1.510(b)(5), a copy of the present Request, in its entirety, is being served to the address of the attorney or agent of record.

Please direct all correspondence in this matter to the undersigned.

Respectfully submitted,

October 11, 2024

/*Jonathan R. Bowser*/
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Counsel for Third Party Requester

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence, all attachments, and any corresponding filing fee are being filed via the Electronic Filing System (Patent Center) with the U.S. Patent and Trademark Office on October 11, 2024.

/Krista Myrick/
Krista Myrick