

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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HULU, LLC,  
Petitioner,

v.

PUCs, LLC,  
Patent Owner.

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IPR2021-00811

U.S. Patent No. 10,728,619

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NO. 10,728,619**

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## EXHIBIT LIST

<b>Exhibit No.</b>	<b>Description</b>
1001	U.S. Patent No. 10,728,619 (“the ’619 patent”)
1002	Prosecution File History for the ’619 patent
1003	Declaration of Stephen Gray
1004	U.S. Patent Publication No. 2011/0264530 (“Santangelo”)
1005	U.S. Patent No. 6,698,020 (“Zigmond”)
1006	Herhold, S., “Web Effort Aims At Tailoring Pitches,” <i>The Philadelphia Inquirer</i> , February 27, 1997.
1007	PR Newswire, “The New York Times On The Web Creates New On-line Marketing Standard,” July 14, 1997.
1008	U.S. Patent Publication No. 2008/0307454A1 (“Ahanger”)
1009	U.S. Patent No. 10,327,026 (“Mishra”)
1010	U.S. Patent No. 5,931,901 (“Wolfe”)
1011	U.S. Patent Publication No. 2008/0282285A1 (“Thomas”)
1012	U.S. Patent Publication No. 2007/0162951A1 (“Rashkovskiy”)
1013	U.S. Patent No. 8,775,256 (“Rosenberg”)
1014	U.S. Patent Application No. 12/536,724 (“Dillon”)
1015	U.S. Patent Application No. 12/582,653 (“Patel”)
1016	U.S. Patent Application No. 12/284,757 (“Lajoie”)
1017	U.S. Patent Application No. 12/503,749 (“Tidwell”)

## **I. BACKGROUND**

### **A. “Over-the-top”/“OTT” Content Delivery**

Since the 2000s, it has been common for content providers to deliver content to users “over-the-top” of networks that do not belong to the content provider, such as the Internet. Ex. 1003 ¶¶10. Examples of over-the-top (“OTT”) services that launched before the ’619 patent include YouTube in 2005, Hulu in 2007, Netflix Watch Now in 2007, and CBS All Access in 2014. Ex. 1003 ¶¶10.

### **B. “Tailored” or “Targeted” Advertising**

Tailoring advertising for particular users or groups has been known for decades. Ex. 1003 ¶¶10-17. For example, in 1997, the New York Times announced that advertisers could target advertising to its registered users based upon information supplied by the users themselves and from third-party sources, including age, gender, income, and zip code. Ex. 1007; Ex. 1006.

It was well-known in the 1990s and 2000s to tailor video advertising using demographic, location, behavior and media data. Zigmond (1998) teaches targeting advertisements to viewers by taking into account a household’s demographic data, geographic location and viewing habits. Ex. 1005, Abstract. This included using a viewer’s prior interactions with advertisements to select future advertisements. Ex. 1005, 4:53-5:3, 9:28-38. Ahanger (2008) teaches an advertising platform “[with] flexible and configurable ad insertion rules... based on a user profile, user behavior history, topic of the stream to be delivered,

duration of the video or ad, and/or the popularity rating of the video or ad.” Ex. 1008, Abstract. Mishra (2017) teaches generating or identifying “advertisements [based on] the visual content of a video file.” Ex. 1009, 24:57-25:19, 9:50-58.

### **C. Advertisement Rules**

Using rules and criteria to tailor advertisements to users was well-known in the art. Ex. 1003 ¶¶18-20. Wolfe (1997) teaches a method of providing programmed media content via the Internet to subscribers and bundling such programming with advertisements “tailored to the individual.” Ex. 1010, 1:51-60. Wolfe suggests using criteria, such as time, age, and geographic restrictions, to identify subscriber profiles and match media content with advertisements to be transmitted to subscribers. *Id.*, 4:12-17. The content owner, e.g., the advertiser, specifies rules governing the distribution of the content based on these characteristics. *Id.*, 4:1-6, 4:50--55.

Santangelo (2011) teaches using rules to “determine[] whether content will be inserted at the beginning of play out of the requested primary content... For example, whether secondary content is inserted may be dependent on one or more factors relating to the primary content, the subscriber, the type of delivery requested, the requesting device, the user context, etc.” Ex. 1004, [0196]. Other references discuss concepts that a POSITA would have understood to describe

using advertisement rules to tailor content, without explicitly calling them “rules.”  
Ex. 1009, 9:5-58; Ex. 1003 ¶20.

#### **D. Pause Ads**

In addition to the tailored advertising discussed above, long before 2017, the concept of delivering an ad during a pause was already known. Numerous references specifically discuss the concept of playing an ad during a pause in media playback. Ex. 1003 ¶21 (citing Ex. 1011; Ex. 1012; Ex. 1013; Ex. 1009, 25:41-47).

#### **E. Interactive Advertising**

Interactive advertising was well-known by the 1990s. Ex. 1003 ¶¶22-24. Zigmond (1998) teaches interactive advertisements that allowed the viewer to request more information or provide feedback. Ex. 1005, 9:21-31. Ahanger (2000) teaches interactive advertisements with features such as polls, surveys, and clickable ads for more information. Ex. 1008, [0163]-[0169]. Mishra also teaches an advertisement that includes a reference or identifier that may be accessed to order physical items shown in the advertisement. Ex. 1009, 4:37-52.

## **II. THE '619 PATENT**

### **A. Overview**

The '619 patent purports to improve “[c]onventional advertisement systems... by using user data, media data, and advertisement data to select one or more advertisements for playback during a partial or complete pause in media

playback.” Ex. 1001, 1:65-2:1. The ’619 patent states this is an “improvement over the prior art because it allows highly user and media-relevant advertisements to be played back during a partial or complete pause in media playback.” Ex. 1001, 2:3-6; Ex. 1003 ¶26.

As explained above, using user data, media data, and advertisement data to select one or more advertisements for playback during a pause in media playback was long-known by POSITAs before the ’619 patent. The ’619 patent describes multiple prior art references and acknowledges that they teach playing advertisements during a pause. Ex. 1003 ¶27.

Applicant attempted to distinguish the prior art by alleging that queuing and delivering advertisements based on user data, media data, and advertisement data and delivering such advertisements through software-based mediums was not known. Ex. 1003 ¶28.

## **B. Prosecution History**

At least one serious error was made during examination. Ex. 1003 ¶¶29-35. In order to obtain allowance, the Applicant amended claims 1 and 4, and argued that all other claims depended from amended claim 1 and were similarly allowable. Ex. 1002 at 000116-128. But this argument was wrong because claim 8 is an independent claim that does not contain the same limitations of claim 1, and claims 9-12 depend from claim 8. The Examiner was misled by the Applicant’s argument

and wrote in the Notice of Allowance that “regarding claims 2-12 all claimed limitations are allowed as per discussion for claim 1.” Ex. 1002 at 000135; Ex. 1003 ¶35.

**C. Priority Date**

The application for the '619 patent was filed on December 20, 2018, claiming priority to a provisional application filed on December 31, 2017. Although the claims of the '619 patent are not supported by the provisional application, this issue is moot because the prior art predate the provisional application.

**III. IDENTIFICATION OF CHALLENGE**

**A. Statutory Grounds**

Petitioner requests *inter partes* review and cancelation of the challenged claims on the following grounds:

<b>Grounds</b>	<b>Claims</b>	<b>Statutory Basis</b>	<b>Prior Art</b>
1	1-12	§103	Santangelo
2	1-12	§103	Santangelo in view of Zigmond

Grounds 1 and 2 each render the challenged claims obvious. A claim is unpatentable under 35 U.S.C. §103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill

in the art to which the subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

**B. Prior Art**

**1. Santangelo (Exhibit 1004)**

U.S. Patent Application Publication No. 2011/0264530 to Santangelo is prior art under 35 U.S.C. § 102(a)(1) because it published on October 27, 2011, which is before the '619 patent's earliest claimed priority date (December 31, 2017).

Santangelo teaches an apparatus and methods for the selecting and inserting secondary content (including advertisements, promotions, and info-mercials) into primary content. Ex. 1004, [0004], [0006]. FIG. 6a depicts an additive model insertion method that teaches a non-disruptive way of inserting secondary content into primary content. Ex. 1004, [0182].

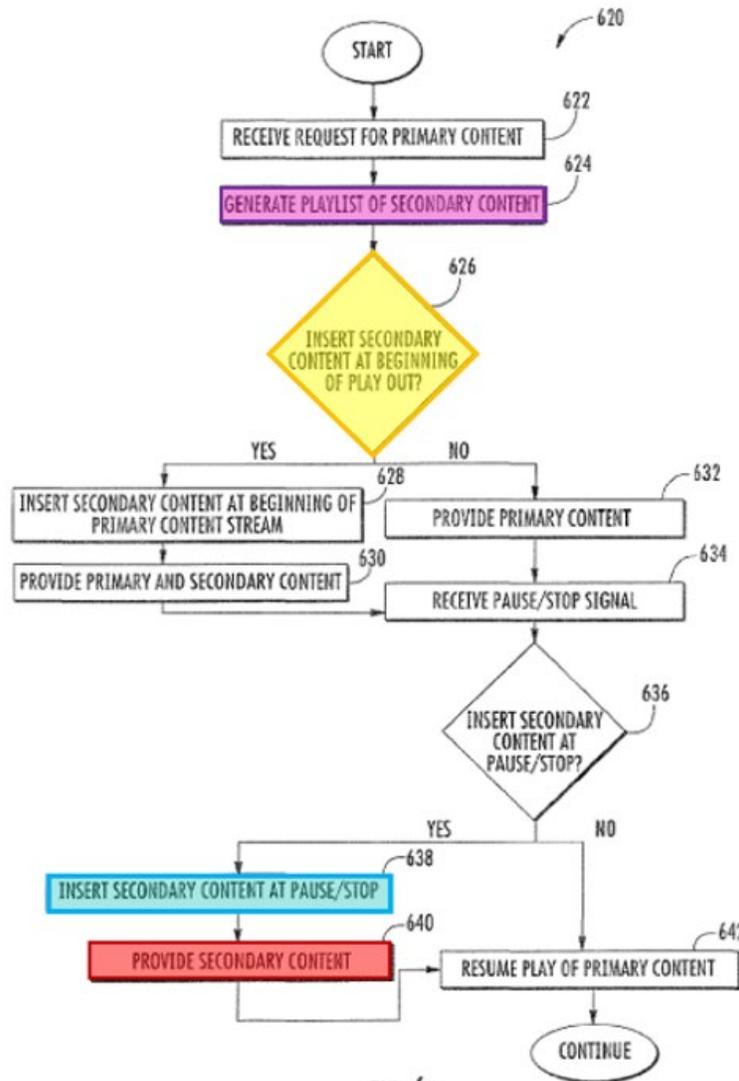


FIG. 6a

The method detects media playback by the user when it receives a user's request for primary content. Ex. 1004, [0193]. The method confirms whether the user is entitled to receive the requested content. Ex. 1004, [0194], [0126], [0163], [0175] (incorporating by reference Ex. 1014 (Dillon), [0018]) (teaching authenticating or confirming subscriber identity); Ex. 1003 ¶45. If so, the primary content server responds and triggers creating a secondary content playlist (e.g., an

advertisement playlist). Ex. 1004, [0195-0196], FIG. 4, [0186], FIG. 6, [0184]; Ex. 1003 ¶46.

Because it is advantageous to tailor secondary content to the user, Santangelo teaches a content and data distribution network with management entities for providing primary content with contextually-related secondary content inserted into the presentation sent to the users' devices. Ex. 1004, Abstract; Ex. 1003 ¶47. FIG. 2 illustrates Santangelo's content and data distribution network used for performing the method in FIG. 6a. Ex. 1004, [0030], [0099]; Ex. 1003 ¶48.

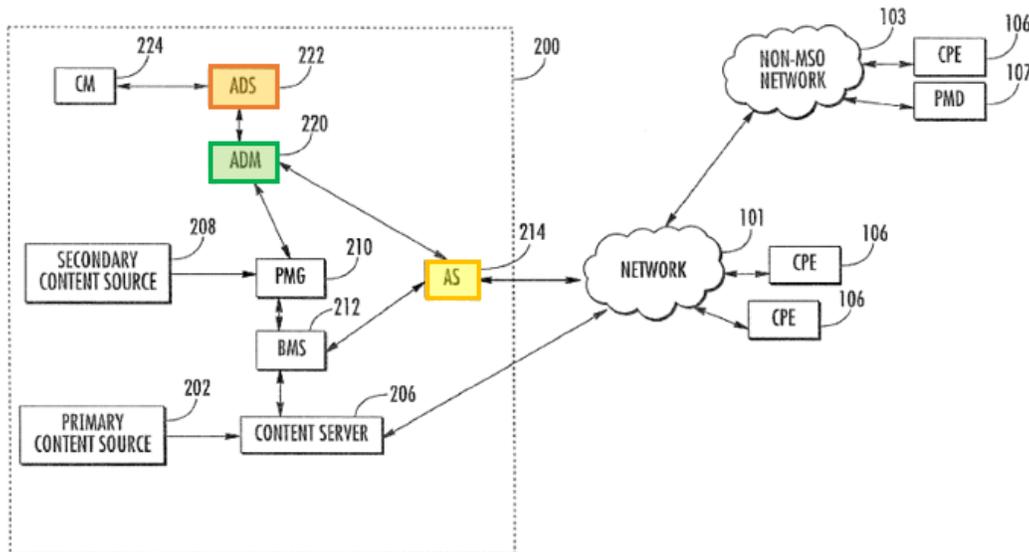


FIG. 2

Santangelo explains that when the primary content server 206 sends a message to ADM 220 to begin generating a secondary content playlist, secondary content is selected based on what is known about the user (such as demographic,

psychographic, firmographic, geographic and/or behavioral variables), the user's device, and the primary content. Ex. 1004, [0195], [0186]; Ex. 1003 ¶49.

User equipment also monitors user engagement with the content. FIG. 8 illustrates an exemplary customer premises equipment (CPE) comprising client application 810. Ex. 1004, [0195].

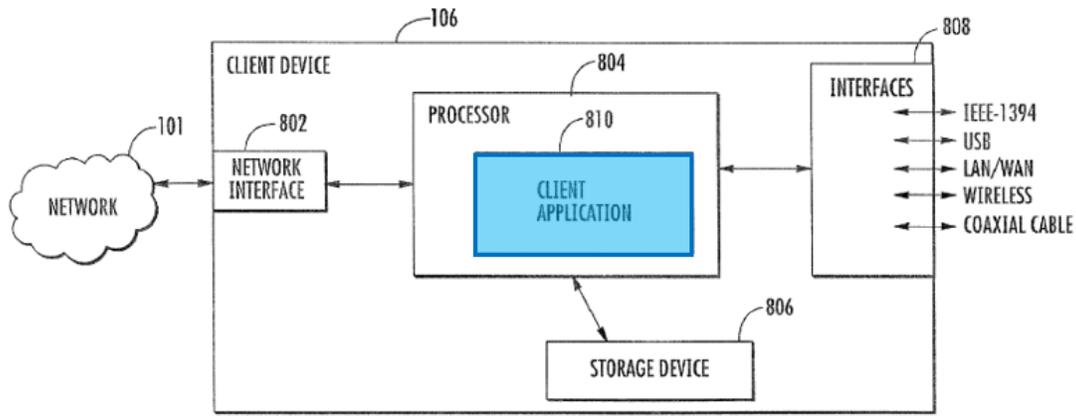


FIG. 8

For example, the client application 810 may provide subscriber account information upstream to facilitate providing content based on subscriber identification. Ex. 1004, [0268]. Client application 810 may collect information regarding the user's actions (e.g., button presses, playback events, trick mode events) with respect to content. Ex. 1004, [0268].

Finally, Santangelo teaches determining and inserting secondary content if the user pauses the primary content during playback. Ex. 1004, [0197]. The pause or stop command triggers a signal to the management entities 220, 222, 224, 210, 212, which determine whether secondary content should be inserted. Ex. 1004,

[0198]. If so, secondary content is inserted and presented to the user at step 640. Ex. 1004, [0199-0200]. Finally, primary content is shown when the user is ready to resume viewing. Ex. 1004 [0199-200]; Ex. 1003 ¶53.

## 2. Zigmond (Exhibit 1005)

U.S. Patent No. 6,698,020 to Zigmond is prior art under 35 U.S.C. § 102(a)(1) because it issued on February 24, 2004, which is before the '619 patent's earliest claimed priority date (December 31, 2017).

Zigmond is directed to methods and systems for selecting and inserting advertisements into a video programming feed. Ex. 1005, 1:9-12. Recognizing that advertisers prefer to target specific viewer segments most receptive to advertisements (*id.*, 1:23-26), Zigmond allows advertisers to target individual viewers based on the needs and interests of individual viewers and households (*id.*, 4:10-12).

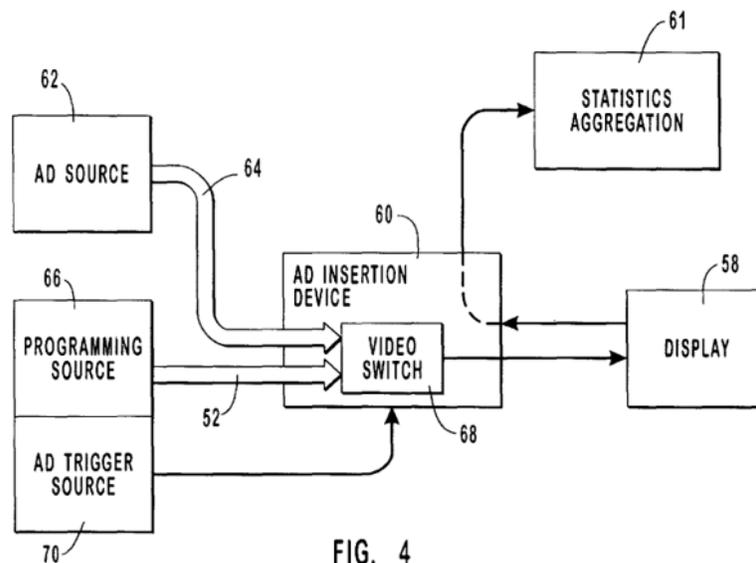


FIG. 4

Zigmond teaches using ad selection rules and criteria, such as viewer characteristics, video programming content, and geographical location, programming content, advertisement content, subject matter, cast members, and permitted themes (e.g., parental lock) to select advertisements for display. Ex. 1005 4:25-29, 10:58-61, 11:30-49, 12:62-66, 13:51-58; Ex. 1003 ¶¶57-58, 194-196. Zigmond also teaches monitoring viewer response to selected advertisements by, for example, periodically transmitting stored viewer responses to a clearinghouse that provides the information to the advertisers, providing a list of viewer actions that can be monitored, and using the viewer responses to improve advertisement selection. Ex. 1005, 4:53-59, 9:21-33, 9:39-54, 13:7-9.

**C. Standing**

Petitioner certifies that it is not barred or estopped from requesting this inter partes review and that the '619 patent is eligible for IPR.

**D. Discretionary Analysis for Review**

This is the first petition seeking inter partes review of the '619 patent. The co-pending district court case is in its infancy and the defendant's answer is not due until June 4, 2021.

#### IV. LEVEL OF ORDINARY SKILL

A person of ordinary skill in art would have been (i) a person with a bachelor's degree in computer science or a similar field with at least four years of experience in delivery of media content and advertising over the Internet or (ii) a person with a master's degree in computer science or a similar field. A person with less formal education but more relevant practical experience may also meet this standard. Ex. 1003, ¶¶59-61.

By the late 2017 timeframe, a POSITA would have known and had the skills necessary to:

- Understand how to build applications for over-the-top media content streaming with advertisement insertions (*id.*, ¶10);
- Tailor or target advertising to users, including via user identification and verification, aggregation, inference, and analysis of data including but not limited to user data, media data, and advertising data (*id.*, ¶¶11-16);
- Use advertisement selection rules and user data, media data, and advertising data to select and present advertisements to users (*id.*, ¶¶17-19);
- Understand how to present advertisements to users during a pause in a user's media playback (*id.*, ¶20); and
- Understand how to implement and receive interaction from a user viewing or interacting with an advertisement, and designing or building systems

that receive that interactive input and cause further actions, including, but not limited to causing services or products to be delivered to users in response to purchase actions or interactions (*id.*, ¶¶21-24).

## V. CLAIM CONSTRUCTION

### A. “Over-the-Top” or “OTT”

The preamble of claim 1 recites “an over-the-top data delivery system.” Ex. 1003 ¶¶63-64. A POSITA would have understood that “over-the-top”, in the context of data delivery, is satisfied by, at least, sending data over another’s network, which includes using publicly accessible internet connections to deliver media streams. This is consistent with the term’s usage by the claims and in the examples in the specification: “OTT systems can include any one or more systems or elements of a larger system that use publicly accessible internet connections to deliver video streams.” Ex. 1001, 9:26-31; Ex. 1003 ¶63.

Additionally, the specification uses “over-the-top” or “OTT” in various embodiments to describe systems that are able to access the internet and deliver media streams, or access the internet and establish a connection with an ad engine. Ex. 1001, 9:32-34; *id.*, 1:22-27. In addition, this meaning is further supported by Santangelo’s description of “over-the-top” in the same context of providing content over a network. Ex. 1004, [0102].

## **B. “Queu[ing]”**

A POSITA would have understood that the term “queuing” (in the context of the challenged claims) means designating one or more advertisements for display or delivery. Ex. 1003 ¶¶65-66. This is consistent with the specification’s usage of “queuing” and its various conjugations (e.g., “queue,” “queued,” etc.). For example, the ’619 patent refers to the queuing of advertisements as those that “can then playback... when the user pauses the movie.” Ex. 1001, 8:18-20, 9:9-10. Further, the specification describes playing back queued advertisements retrieved from a server or local storage. *Id.*, 9:9-25.

## **C. “Third-Party Services”**

A POSITA would have understood that the term “third-party services” is satisfied by, at least, a service by a party that is not the content provider that provides advertisements. Ex. 1003 ¶¶67-68. In the context of advertising, this is consistent with the ’619 patent’s claims. Ex. 1001, 12:1-3: (“[Claim 1]:... delivering an advertisement from any one or more third-party services...”). The specification provides additional guidance consistent with this understanding. For example, in the context of interactive software applications such as video games, the specification makes clear that patent contemplates different parties as possible sources of advertisements, and references “third-party” entities as separate from the party associated with the video game. Ex. 1001, 8:63-9:8.

#### **D. “Database”**

A POSITA would have understood that the term “database” means a repository for data. Ex. 1003 ¶¶69-70. This is consistent with the ’619 patent’s definition of a database:

Database 112 is a repository for data used by ad engine 110... [D]atabase 112 can reside anywhere within a distributed data processing environment provided that ad engine 110 has access to database 112.

Ex. 1001, 5:14-18. The ’619 patent further describes that the database may be in the form of data stored on a solid-state drive or may be distributed across databases in a distributed database in the cloud. Ex. 1001, 5:63-6:3. “[C]loud storage” is an example of “a distributed database system.” *Id.*, 7:36-38 (“...a distributed database system (e.g., cloud storage.”).

## VI. CHALLENGED CLAIMS

### A. Ground 1: Claims 1-12 are Rendered Obvious by Santangelo

A POSITA would have found claims 1-12 of the '619 patent obvious based on the teachings of Santangelo. Ex. 1003 ¶72.

#### 1. Independent Claim 1

The teachings of Santangelo render the limitations of claim 1 obvious. Ex. 1003 ¶73.

<p><b>1[a] A method for displaying tailored advertising in response to user media playback behavior via an over-the-top data delivery system, comprising:</b></p>
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Santangelo teaches all elements of the preamble. Ex. 1003 ¶74. Santangelo generally teaches an apparatus and methods for inserting targeted advertising into content requested by a user. Santangelo's title is "apparatus and methods for dynamic secondary content and data insertion and delivery," and the abstract makes clear that secondary content includes advertising. Ex. 1004, Title and Abstract. Santangelo characterizes his invention as disclosing "methods and apparatus for providing primary content to network users, the primary content having secondary content (e.g., targeted advertisements or promotions, infomercials, telescoping advertisements, etc.) inserted therein..." Ex. 1004, [0061]; Ex. 1003 ¶75.

First, Santangelo teaches an over-the-top data delivery system. FIG. 2

depicts a content and data distribution network for inserting secondary content:

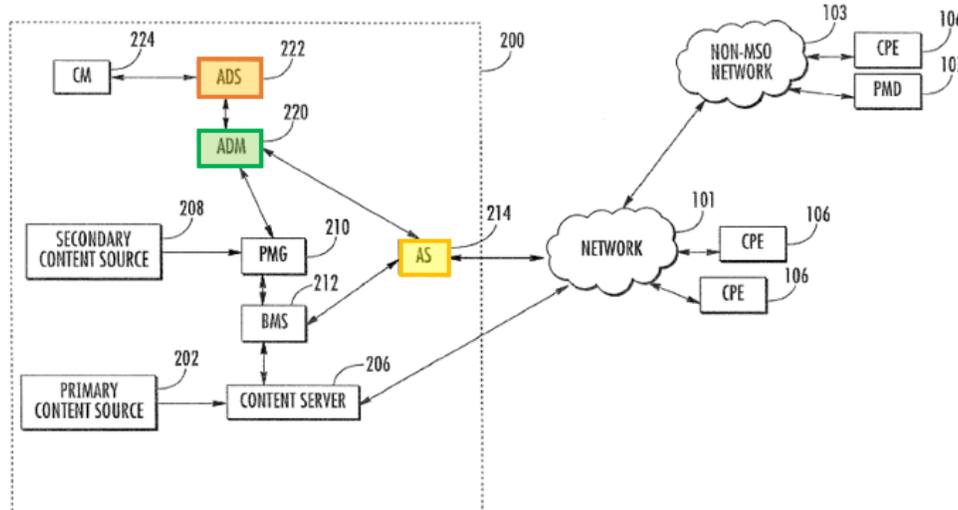


FIG. 2

Ex. 1004, [0099]. The system includes content management entities (e.g., ADM 220, ADS 222, and CM 224) that cooperate to provide content and advertising to a plurality of customer premises equipment or personal media devices over the provider's network (e.g., network 101), as well as over other providers' networks (e.g., non-MSO network 103). Ex. 1004, [0099].

A POSITA would have understood that Santangelo teaches an over-the-top data delivery system because the system can send content and advertising to a user's customer premises equipment over a network controlled by the system provider (e.g., network 101) or over another provider's network (e.g., non-MSO network 103). MSO stands for "multiple systems operator," and Santangelo uses

the term in connection with FIG. 2 to distinguish between the network provided by the entity operating the components of distribution network 200 and network 101 from the “non-MSO network 103.” Ex. 1004, [0075]. The over-the-top element is further taught by Santangelo’s suggestion of a variation where “network services are sent ‘over-the-top’ of other provider’s infrastructure, thereby making the service network substantially network-agnostic.” Ex. 1004, [0102]; Ex. 1003 ¶76.

Finally, over-the-top is taught by the general teaching that his invention can be used to provide a video for play over the Internet (with YouTube given as an example). Ex. 1004, [0079]. The ’619 patent identifies a video-over-the-Internet service as an example of an over-the-top system. Ex. 1001, 9:29-31; Ex. 1003 ¶77.

*Second*, “displaying tailored advertising in response to user media playback behavior” is taught by Santangelo’s secondary content insertion teachings, such as the “secondary content additive insertion model” related to FIGs. 6 and 6a. When a user selects content for delivery, the content management entities depicted in FIG. 2 (CM 224, ADM, 220, and ADS 222) “cooperate to select and insert secondary content into the requested primary content.” Ex. 1004, [0148], [0099]. When the user’s customer premises equipment or portable media device begins a session, the management entities receive a request and respond by assembling a presentation stream that combines the primary content and secondary content, which is then displayed to the user. Ex. 1004, [0149]; Ex. 1003 ¶78.

FIG. 6a illustrates a method of providing secondary content insertion according to the additive model. Ex. 1004, [0039]; Ex. 1003 ¶79.

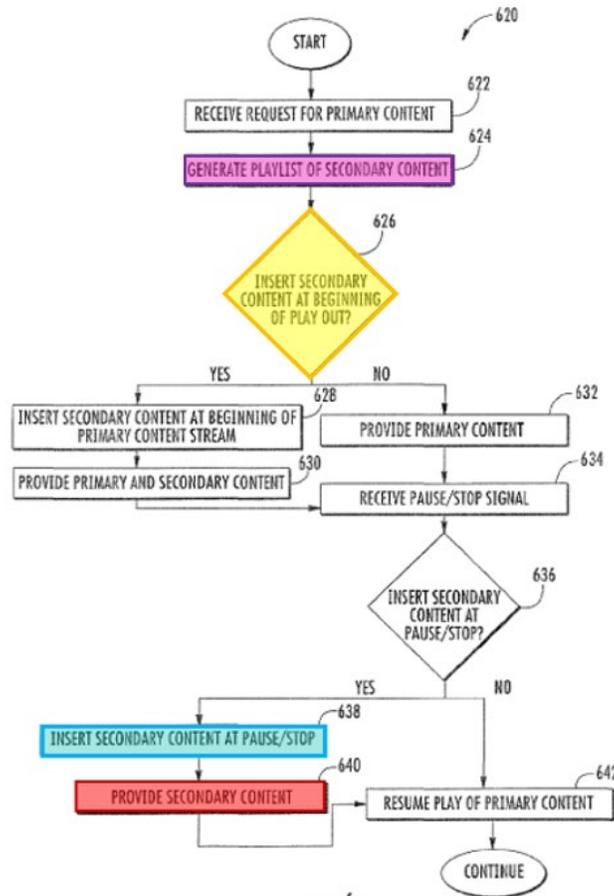


FIG. 6a

At step 622, a request for primary content is received, which triggers creating a secondary content playlist for insertion with the primary content at step 624. Ex. 1004, [0193-0195]. The content management entities tailor the secondary content (i.e., advertising) by selecting secondary content for the playlist based on demographic, psychographic, behavioral and other information associated with the requesting subscriber (i.e., user). *Id.*, [0196], Abstract. The additive

model can also tailor secondary content based upon the nature of the requested primary content, such as genre. Ex. 1004, [0186]; Ex. 1003 ¶80.

Finally, Santangelo renders obvious displaying the tailored advertising in response to user playback behavior because Santangelo inserts and displays an item of secondary content (i.e., ad) in response to the user pressing a “pause” or “stop” button, as shown at steps 634 through 642. Ex. 1004, [0197-201].

Santangelo also teaches providing the secondary content playlist to the user, and allowing the user to select the items of secondary content to be played. Ex. 1004, [0203]; Ex. 1003 ¶81.

<b>[1b] verifying an identity of the user;</b>
--

This limitation is rendered obvious because Santangelo teaches authenticating the subscriber (i.e., user) before providing content to the subscriber in a step known as checking “entitlements.” Ex. 1003 ¶82.

As explained for element 1[a], FIGs. 6 and 6a of Santangelo describes a method for selecting secondary content. Ex. 1004, [0193], [0269].

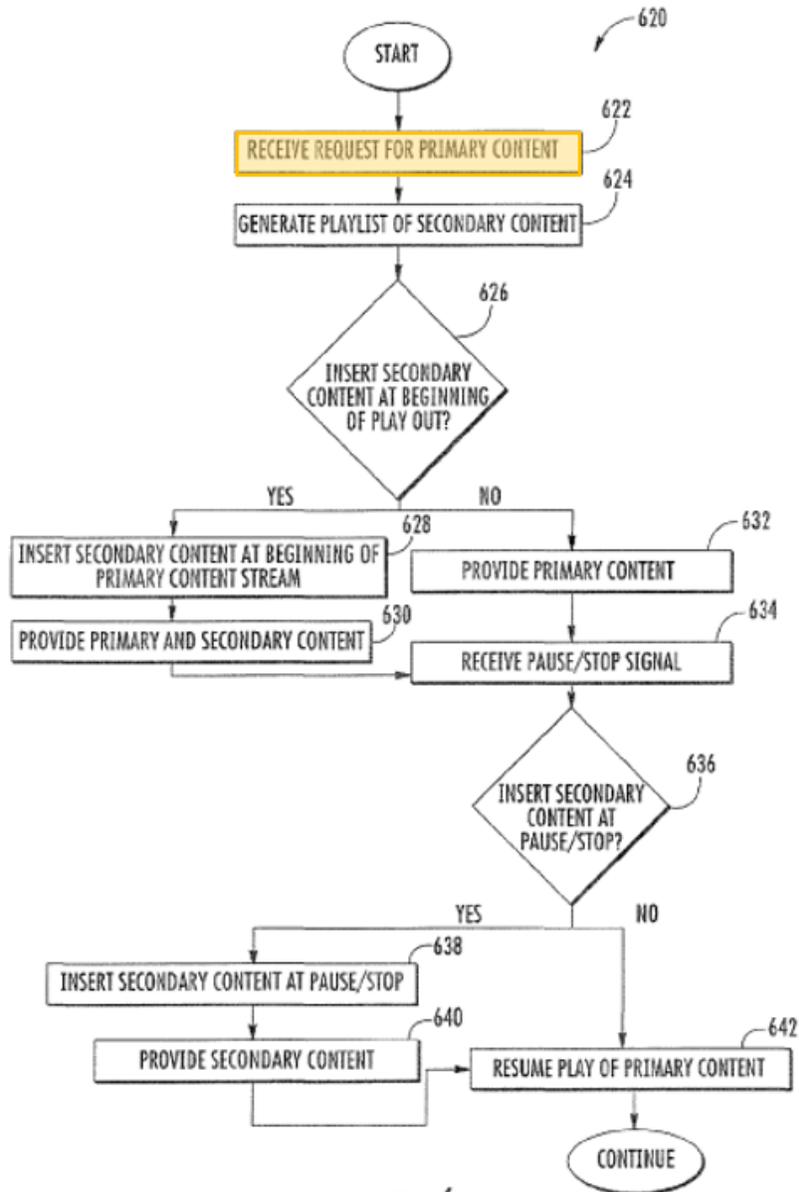


FIG. 6a

Ex. 1003 ¶83.

At step 622, the system receives a request for primary content. Ex. 1004, [0193]. Santangelo teaches that the system receives an indication of the “entitlements of the requesting subscriber to view the requested content in order for the content to be provided thereto” and that this can be accomplished using the

“entitlements” approaches described by Dillon (Ex. 1014). Ex. 1004, [0194]. A POSITA would have understood that Santangelo is referring to Dillon’s entitlement teachings because Santangelo describes Dillon as disclosing methods and an apparatus that can be used to determine whether customer premises equipment or personal media device is entitled to requested content. Ex. 1004, [0126], [0163]; Ex. 1003 ¶84. This limitation is rendered obvious because Dillon teaches that a subscriber’s identity should be authenticated with an identity server to confirm (i.e., verify the identity of the user) before providing access to requested content. Ex. 1014 (Dillon), [0018]. Dillon further teaches that this can be accomplished through the well-known login technique. Ex. 1014, 000017, [0053]; Ex. 1003 ¶85.

In addition, a POSITA would have found this limitation obvious based on Santangelo’s teaching that the user’s CPE may provide subscriber account information to the content management entities to identify the subscriber and provide selection of content based on the identity of the subscriber. Ex. 1004, [0268] (describing operation of an exemplary CPE). A POSITA would have understood from Santangelo’s description of the need to determine the user identity by a login process as referring to the well-known concept of a login process where the user’s identity is verified by a database or some other store of user credentials. Ex. 1003 ¶86.

**[1c] analyzing historical data associated with the identity, wherein the historical data includes patterns of user behavior associated with one or more advertisements;**

This limitation is rendered obvious by Santangelo's data collection and analysis teachings. *First*, Santangelo teaches historical data associated with the identity of the user because Santangelo teaches capturing the user's interactions with content, such as by capturing CPE button presses or function invocations. Ex. 1004, [243]. *Second*, Santangelo teaches analyzing the historical data because it teaches learning the user's patterns of behavior from the recorded interactions with content:

The captured information is transmitted to one or more of the above-referenced data collection entities, and may be used... to assist in selecting content for insertion. For example, one or more patterns regarding a user or device may be "learned" from the users' button presses and other actions taken with respect to content... [T]he learned patterns can be used to identify and recommend content targeted to a particular user (or group of users)... Content may then be selected to align with a user's preferences (the latter which the viewer need not enter manually).

Ex. 1004, [0244]; Ex. 1003 ¶87.

Santangelo further teaches that said historical data includes patterns of user behavior associated with one or more advertisements because Santangelo describes

learning a user's preference for sports or family content based upon the user's differing reactions to sports-related vs. family programming advertisements. Ex. 1004, [0245]. A POSITA would have found the claimed limitation obvious because analyzing captured behavior of an identified user that often fast forwards through sports-related advertisements (i.e., one viewing pattern with respect to a first advertisement), but views advertisements for family programming (i.e., another viewing pattern with respect to a second advertisement) is analyzing historical data capturing patterns of user behavior associated with one or more advertisements. Ex. 1003 ¶88.

Santangelo teaches that, as viewers watch the media content and interact with on-demand programming, the exemplary CPE client collects information regarding the user's actions with respect to content, such as recording viewers' "button presses, playback events, trick mode events, etc.," and sends the recorded information to the ADS 222 and other content management entities charged with selecting advertising content to the user. Ex. 1004, [0268]; Ex. 1003 ¶89.

<b>[1d] detecting media playback by the user;</b>
---

This limitation is rendered obvious by Santangelo's teaching of detecting a user's request for primary content. Santangelo teaches "detecting media playback by the user" at step 622 "receive request for primary content" in FIG. 6a.

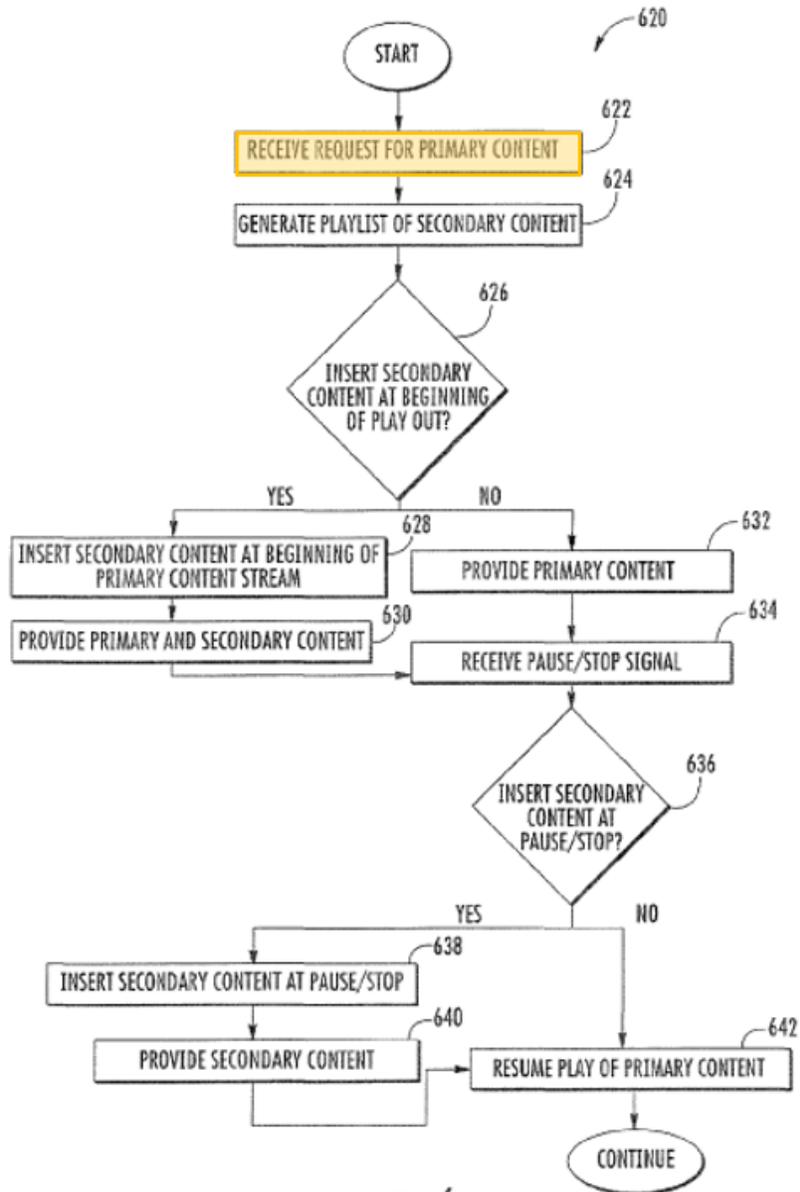


FIG. 6a

Ex. 1003 ¶90.

At step 622, Santangelo detects media playback by the user when it receives a request from the user to deliver the primary content. Ex. 1004, [0193], [0182];

Ex. 1003 ¶91.

In addition, Santangelo explains that its CPE client application 810 may also record viewer button presses, *playback events*, and trick mode events and use the information in advertisement selection. Ex. 1004, [0268]-[0269]. Therefore, a POSITA would have found it obvious to detect media playback by the user because Santangelo teaches making a request for primary content and detecting button presses by the user that activates play, pause, and other playback and trick mode events that control media playback by the user. Ex. 1003 ¶92.

**[1e] analyzing content associated with the media playback;**

This limitation is rendered obvious by Santangelo’s teaching of selecting secondary content (e.g., advertisements) based on the content of the media being played for the user. As described above for element 1[a], Santangelo teaches, in connection with FIG. 6a, selecting a secondary content (e.g., advertisements) playlist based on the genre, topics, subject matter or themes of the primary content requested by the user. Ex. 1004, [0186] (describing selecting content for playlist based upon information such as “genre of the selected primary content”); Ex. 1003 ¶93.

Santangelo also teaches that metadata associated with the requested primary content may be used to identify different scenes, “subject matter” (e.g., “car chase scenes,” “airport-related scenes,”) and “themes” (such as “romantic scenes,”) in the playback media, and then using the identified subject matter or themes for

selecting secondary content. Ex. 1004, [0186]; Ex. 1003 ¶94. As another example, Santangelo teaches analyzing a user's engagement with the content of advertisements, such as sports-related advertising vs. family-themed advertising, and proposes to use the information to identify further advertisements with themes relevant to the user's interests. Ex. 1004, [0244]-[0246] (describing use of learned patterns to identify and recommend content); *supra* limitation [1c] and Ex. 1003 ¶¶87-89; Ex. 1003 ¶¶93-95. A POSITA would have understood that these teachings relate to step 624 of FIG. 6a because that is when the secondary content playlist is generated. Ex. 1003 ¶96.

A POSITA would have further found this limitation obvious because Santangelo suggests that the application server (AS) 214 analyzes content being viewed to profile the user's interests, which may in turn be used for targeting advertising. Ex. 1004, [0119]. A POSITA would have found it obvious to apply this teaching to the methods described in connection with FIG. 6a's secondary content additive insertion method because ADM 220 and ADS 222 are content management components used to select secondary content. Ex. 1004, [0195]; Ex. 1003 ¶¶97, 98 (describing Santangelo paragraph 247's teachings).

Thus, a POSITA would have found it obvious to perform the claimed method of "analyzing content associated with the media playback" because Santangelo teaches analyzing the media content being played to identify "scenes,"

subject matter, or themes and using that information to search for advertisements associated with the primary content. Ex. 1003 ¶99.

<b>[1f]      retrieving an advertisement rule associated with the user;</b>
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This limitation is rendered obvious because Santangelo teaches using business or operational rules associated with the user for controlling the selection and insertion of advertisements. Ex. 1003 ¶100.

*First*, Santangelo teaches selecting advertising based on the user and their preferences, as well as based on the primary content (e.g., requested content) and the secondary content (e.g., advertising). For example, Santangelo teaches that the content management entities (e.g., the ADM 220, ADS 222, and/or CM 224) select a secondary content (e.g., advertisements) playlist “based on *what is known about the subscriber* (such as by querying a data warehouse having records indicating demographic, psychographic, firmographic, geographic and/or behavioral variables) and/or the requesting device.” Ex. 1004, [0195]; Ex. 1003 ¶101.

In addition, Santangelo teaches that the selection criteria can be based on the requesting user and/or the primary content:

[P]laylists may be created (e.g., as primary content is requested), based on information contained in the request and/or information regarding the requested content or requesting user/device, or their context.

Ex. 1004, [0186], [0185]; *see also* limitation [1e] *supra* (discussing Santangelo's teaching of selecting advertising based on user requested primary content); Ex. 1003 ¶102.

Further, as explained for limitation [1c], Santangelo teaches that the selection criteria can be dependent on "behavioral variables," such as a user's viewing patterns associated with different advertisements (e.g., fast-forwarding sports-related advertisements vs. watching family-themed advertisements). *Supra* limitation [1c]; Ex. 1003 ¶¶103, 87-89.

*Second*, a POSITA would have found it obvious to implement Santangelo's advertising selection criteria as one or more advertisement rules associated with the user because Santangelo teaches using a recommendation engine to select advertising based upon the user's preferences. Santangelo describes an exemplary teaching where a recommendation engine learns the user's preference for family-related advertisements over sports-related advertisements, and teaches using that learned preference to select family-related advertisements in the future. Ex. 1004, [0245]. A POSITA would have found it obvious to create and retrieve advertisement rules associated with the user from this example because a recommendation engine is a common and well-known technology that creates rules for making user-specific recommendations from learned relationships. Recommendation engines have long been applied to select content and advertising

for users in multimedia contexts, such as on Internet services like YouTube, Netflix, Hulu, and Spotify. Ex. 1003 ¶104.

*Third*, a POSITA would have found it obvious to implement advertisement selection criteria as a set of advertisement rules because Santangelo teaches using a rules engine to control advertisement selection and insertion. Ex. 1004, [0272].

Santangelo explains what a rules engine is, and that a rules engine may be applied to the selection of secondary content (e.g., advertisements). Ex. 1004, [0272-0273], [0275-0276], [0281-0284]. A POSITA would have understood that rules engines are commonly used in computer systems, and that a rules engine executes one or more rules in such a system. One advantage of using a rules engine is that it enables policies and rules to be defined, executed, and maintained separately from the application to facilitate their maintenance and modification. Thus, based on Santangelo's teachings of a rules engine, a POSITA would have understood the purpose of the rules engine is to create, maintain, and apply rules. Ex. 1003 ¶105.

A POSITA would have further found it obvious to use rules for selecting advertisements because a rules engine is a common teaching that Santangelo applies to selecting secondary content (advertisements) to achieve increased user satisfaction, higher profit from increased advertising revenue, and increased views of given content. Ex. 1004, [0272]. For example, Santangelo teaches using business/operational rules to dynamically (or manually) control the selection

and/or insertion of secondary content, and that such rules can be associated with a user. Ex. 1004, [0274]. It would have been further obvious to “retrieve an advertisement rule associated with the user” because it was well-known that a rules engine retrieves a rule before executing it. Ex. 1003 ¶106.

<p><b>[1g]     queueing user tailored advertisements based on the analyzed content and the advertisement rule; and</b></p>
--

This limitation is rendered obvious because Santangelo teaches generating a secondary content playlist that is ready to be used, based on analyzed characteristics and the advertisement rule discussed for limitation [1f]. Ex. 1003 ¶107.

A POSITA would have found it obvious to perform the claimed “queueing of user tailored advertisements” because Santangelo teaches that the secondary content playlist is generated at step 624 *before* any secondary content is inserted in response to a pause at step 638 and presented to the user:

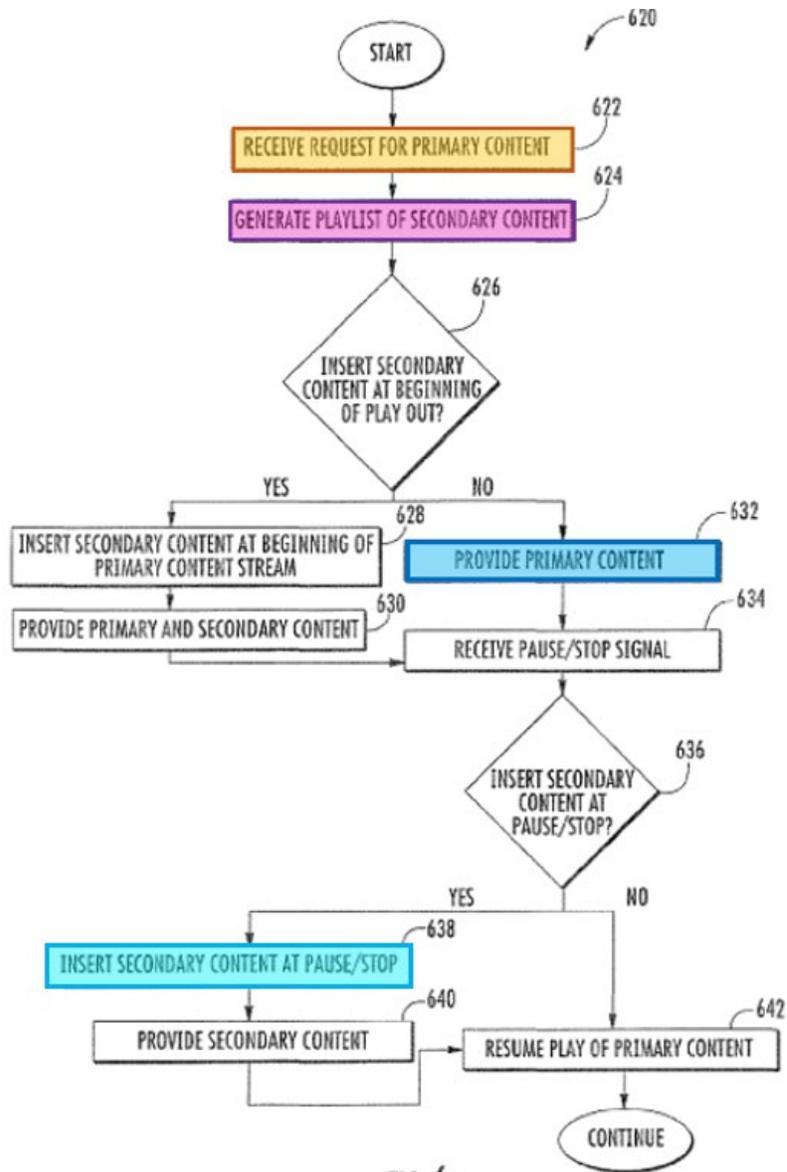


FIG. 6a

Ex. 1003 ¶108. The secondary content is inserted from the playlist into the primary content after the playlist is generated in response to a pause or stop signal at steps 636-638. Ex. 1004, FIG. 6a, [0197-0198], [0200], [0186]. A POSITA would have understood that Santangelo’s teaching of generating a playlist of advertisements that are ready and waiting to be used is “queueing” advertisements

because the advertisements are designated for playback and waiting to be inserted into the primary content as needed. Ex. 1003 ¶109.

As explained above for claims [1e] and [1f], Santangelo teaches selecting secondary content for such a playlist in a manner that that “analyz[es] content associated with the media playback” ([1e]), and “retriev[es] an advertisement rule associated with the user” ([1f]). Therefore, it would have been obvious that the output from those steps are used to generate the list of secondary content included in the playlist. Ex. 1003 ¶110.

<p><b>[1h] delivering an advertisement from any one or more third-party services in response to detecting a pause in the media playback.</b></p>
--

This limitation is rendered obvious by Santangelo’s teaching of delivering advertisements from third party services and displaying them when the user pauses or stops playback of requested content. Ex. 1003 ¶111.

As explained for limitation [1g], Santangelo’s playlist comprises a queue of user-tailored advertisements based on the analyzed content and the advertisement rule. A POSITA would have found it obvious to include in the playlist “an advertisement from any one or more third-party services” because Santangelo teaches that network operators can generate a stream of revenue by offering targeted secondary content insertion as “placement opportunities to prospective or existing advertisers.” Ex. 1004, [0062]. A POSITA would have found it obvious

the suggestion of accepting advertisements to generate revenue teaches advertisements from third-party services because advertisements from third-party services is a common way for a network operator to earn revenue. Furthermore, Santangelo notes that a network operator may accept ads from competing third-party services and may wish to avoid playing their advertisements back-to-back. Ex. 1004, [0279]; Ex. 1003 ¶112.

Furthermore, Santangelo gives examples of advertising included with primary content that span a range of services that are commonly provided by different service providers, such as sports-related services, theme parks, and movies (Ex. 1004, [0245]); restaurants (*id.*, [0256]); car-related services (*id.*, [0278]); mobility-related services, travel, home repair, real-estate, and major appliances (*id.*, [0282]). A POSITA would have understood these promoted services are third-party services that are separate from the network that provides the content delivery service. Ex. 1003 ¶113.

Next, Santangelo teaches that the secondary content in the playlist (the queue) is delivered in response to detecting a pause in the media playback. As show in FIG. 6a, secondary content items in the playlist are provided to the user in response to a detected pause in media playback at steps 634-640:

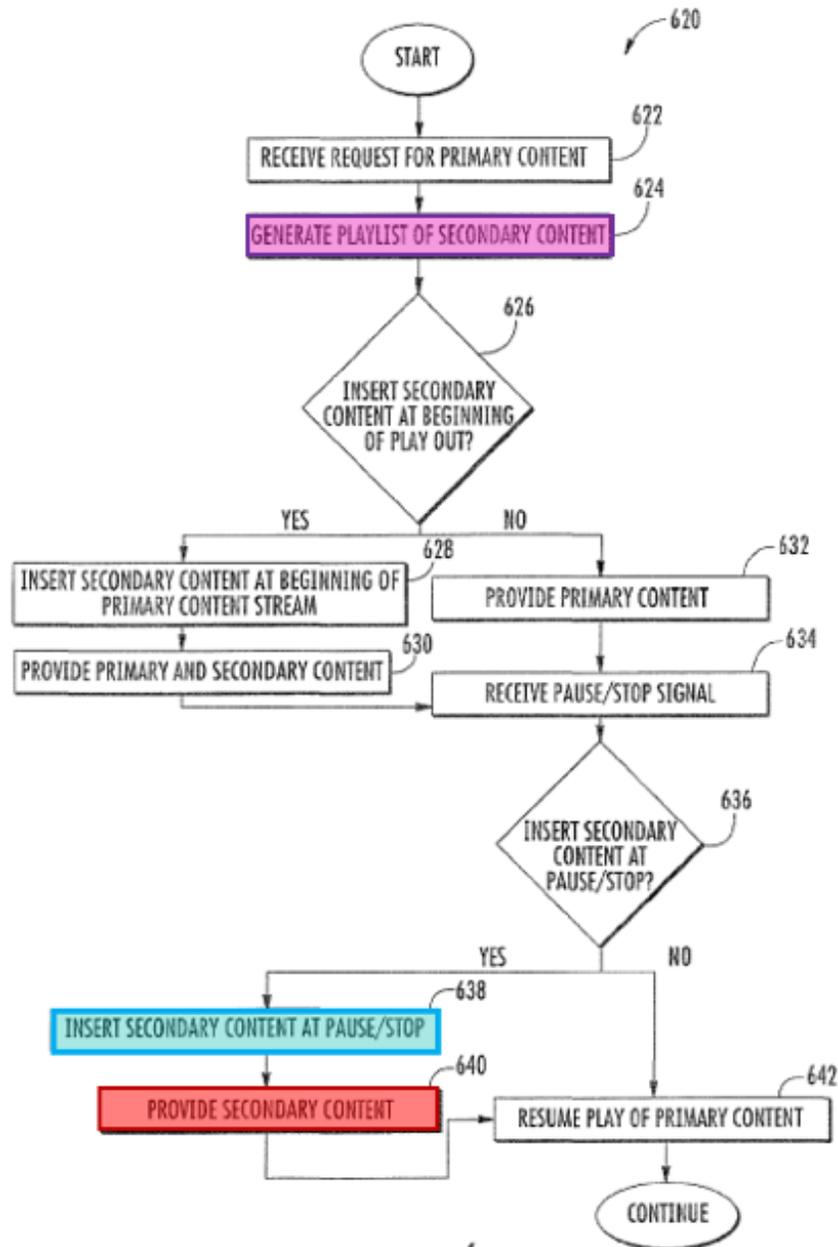


FIG. 6a

Ex. 1004, [0200], [0193]-[0199]. [0182]; Ex. 1003 ¶114. This limitation is further taught in connection with Santangelo’s description of how CPE adapted for use with the method of FIG. 6a inserts secondary content in response to a pause in playback. Ex. 1004, [0269] (“the client application 810 may insert secondary

content when the user pauses or otherwise stops playback of requested content”),  
Ex. 1003 ¶115.

Thus, a POSITA would have found it obvious that Santangelo teaches delivering an advertisement from any one or more third-party services in response to detecting a pause in the media playback. Ex. 1003 ¶116.

## 2. Dependent Claim 2

**2. The method of claim 1, wherein the advertisement rule controls selection of advertisements based on a variable selected from the group consisting of: permitted brands, permitted themes, advertisement length, advertisement content, advertisement format, seasonality, user advertisement preferences, derived user advertisement preferences, and technical specifications of a playback device.**

Claim 2 depends from claim 1. Santangelo’s example teaching of selecting advertising according to the user’s preference for family-related advertising over sports-related advertising for limitation [1f] renders the additional limitation of claim 2 obvious because selecting advertisements related to family programming as opposed to advertisements related to sports is an example of an advertisement rule controlling selection of advertisements based on “advertisement content.” Ex. 1004, [0244-0245]. In addition, this example also teaches a selection based upon “derived user advertisement preferences” because Santangelo describes learning the user’s preference for family versus sports advertising from the user’s

interactions with advertisements in the past. Ex. 1004, [0244-0245]; Ex. 1003 ¶117.

In addition, a POSITA would have found it obvious to have an advertisement rule control selection of advertisements based on technical specifications of a playback device because Santangelo teaches selecting advertising for the playlist based upon information regarding the requesting device. Ex. 1004, [0186], [0271]; Ex. 1003 ¶118.

### 3. Dependent Claim 3

**3. The method of claim 1, wherein analyzing the media content further comprises analyzing a media attribute selected from the group consisting of: total playback time, format, designated commercial breaks, subject matter, themes, actors, production studios, and playback permissions.**

Claim 3 depends from claim 1. Santangelo renders the additional limitation of claim 3 obvious because Santangelo teaches analyzing media attributes that include subject matter, themes, and playback permissions. Ex. 1003 ¶119.

As explained for limitation [1e] (“analyzing content associated with the media playback”), Santangelo teaches analyzing metadata associated with the requested or played content to identify that the content contains certain subject matter, such as “one or more car chase scenes” or “one or more airport-related scenes.” *Supra* limitation [1e]; Ex. 1003 ¶¶93-94,96-99 (describing teachings from

Ex. 1004, [0185]-[0186]). In addition, these teachings included identifying themes present in the content, such as “one or more romantic scenes.” *Id.*; Ex. 1003 ¶120.

Santangelo further teaches analyzing a user’s engagement with the advertisements to learn, for example, that a user prefers sports-related advertising versus family-related advertising. *Supra* limitation [1e]; Ex. 1003 ¶¶95-99 (describing teachings from Ex. 1004 at [0244]-[0246]). A POSITA would have understood that this is yet another teaching of analyzing a subject matter or theme attribute of the advertising content, which is also media content. Ex. 1003 ¶121.

Further, Santangelo’s teaching of checking entitlements before media content is delivered is an example of playback permissions. Ex. 1004, [0126]. A POSITA would have found it obvious that checking “entitlements” includes analyzing a playback permissions attribute associated with the requested content in order to determine whether the requesting user is entitled to receive the requested content. Ex. 1003 ¶122.

#### **4. Dependent Claim 4**

Claim 4 depends from claim 1. The additional limitations of claim 4 are rendered obvious by Santangelo. Ex. 1003 ¶123.

<b>[4a] creating the advertisement rule for the user;</b>
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From the analysis for limitation [1f], a POSITA would have found it obvious to implement Santangelo’s advertising selection criteria as one or more

advertisement rules associated with a user because Santangelo teaches using a recommendation engine to select advertising based upon user preferences, because Santangelo teaches a rules engine that controls advertisement selection and insertion, and because those rules are taught to be implemented at the user level or associated with a user. Ex. 1003 ¶124.

A POSITA would have found it obvious to create the advertisement rule for the user for two reasons. *First*, as explained for limitation [1f], one reason for having a rules engine is to have, maintain, and execute rules. It would have been obvious for a rule to exist before it is applied, and it would further be obvious that such a rule must be created before it would exist. Ex. 1003 ¶125.

*Second*, a POSITA would also have found this limitation obvious because Santangelo teaches constructing new advertising campaigns for newly-considered user profiles. Ex. 1004, [0280]; Ex. 1003 ¶126. And, Santangelo explicitly explains using user-specific logins for purposes of tailoring secondary content for that user. *Id.*

Paragraph 280 explicitly teaches creating a new profile for a new user (where the new user is a family or group of aggregated users), and a POSITA would have found it obvious to extend this teaching to creating a profile for a new individual user because Santangelo explains that its teachings with regards to users and device specific data may apply to either individual users, or multiple

users/organizations. Ex. 1004, [0280] (“it is appreciated that the ‘user’ and ‘device’ specific data previously referenced therein may also apply to multiple individuals, or organizations”). Additionally, Santangelo, in the same paragraph, also teaches the use of user-specific logins and sub-profiles to “specifically identify” and “tailor the secondary content” for an individual who is a member of a larger entity or group. *Id.*

While not explicitly reciting “rules,” a POSITA would have also found it obvious that the created profiles and constructed advertisement campaigns use rules because this teaching is included in Santangelo’s “Business/Operational Rules Engine” section. Ex. 1004, [0280] (paragraph is internal to the [0272]-[0284] rules engine teachings). Thus, it would have been obvious to create an advertisement rule for the user before applying it for selecting user tailored advertisements. Ex. 1003 ¶127.

Additionally, it would have been obvious that the rules are “for the user” because, as explained for limitations [1c], [1e], and [1f], Santangelo teaches that the selection criteria are associated with the user, including the user’s viewing patterns and the user’s media content, and they identify user tailored advertisements for the user. *Supra* limitation [1c] and Ex. 1003 ¶¶87-89 (for selection based on user advertisement preferences); limitation [1e] and Ex. 1003

¶¶93-99 (for selection based on content); limitation [1f] and Ex. 1003 ¶¶100-106 (for selection based on both user preferences and content); Ex. 1003 ¶128.

**[4b] applying the advertisement rule to a group of available advertisements; and**

This limitation is obvious over Santangelo because Santangelo teaches that the purpose of advertisement rules is to select one or more advertisements for a user. Ex. 1003 ¶129.

As explained for limitations [1f] and [1g], Santangelo teaches applying the advertisement rules to generate a playlist of advertisements. Ex. 1003 ¶¶130, 100-110. Thus, it would have been obvious to apply the advertisement rule to a group of available advertisements in order to select one or more advertisements. Ex. 1003 ¶130.

**[4c] compiling the user-tailored advertisements based on the advertisement rule.**

This limitation is obvious over Santangelo for the same reasons set forth in claim 1. Ex. 1003 ¶131.

A POSITA would have found it obvious that limitation [4c] is substantially identical to limitation [1g] “queueing user tailored advertisements based on the analyzed content and the advertisement rule” because it would have been obvious that “queueing user tailored advertisements” includes “compiling the user-tailored advertisements.” Therefore, as explained in limitation [1g], Santangelo teaches

limitation [4c]. *Supra* limitation [1g] and Ex. 1003 ¶¶107-110 (generating a playlist of user tailored advertisements); limitation [1c] and Ex. 1003 ¶¶87-89 (selection based on user advertisement preferences); limitation [1e] and Ex. 1003 ¶¶93-99 (selection based on content); limitation [1f] and Ex. 1003 ¶¶100-106 (selection based on both user preferences and content); Ex. 1003 ¶132.

### **5. Dependent Claims 5 and 7**

Claim 5 depends from claim 1, and claim 7 depends from claim 5.

Santangelo renders obvious the further limitations of claims 5 and 7 because Santangelo describes secondary content (e.g., advertisements) that is enhanced with user-interactive media features or applications. Ex. 1004, at [0253] (“[The] secondary content discussed herein may comprise so-called ‘enhanced content’... [T]he secondary content... may comprise one or more user-interactive media features or applications.”); Ex. 1003 ¶133.

Santangelo teaches a request for information (RFI) application as an example of such an application, which allows the user to choose to receive additional information for a product or service. Ex. 1004, [0258]. Santangelo further teaches interaction by incorporating related teachings from a patent application that describes allowing users to interact and receive additional information related to an advertisement via RFI applications, where users may enter contact information and select a delivery preference for said advertisement

information (e.g. by phone, email, or mail). Ex. 1015, 000053:26-54:14 ; Ex. 1003 ¶134.

Thus, as to the additional limitations of claim 5, a POSITA would have found it obvious that Santangelo and its incorporated RFI application teachings teach advertisements configured to receive user input via a user interface because entering contact information and selecting options are all examples of ways users provide input. Ex. 1003 ¶135.

The further limitation of claim 7 is rendered obvious by the teaching that “the user’s selection of a preference at the delivery preference page 910 will be saved by the RFI application... for future use” because “saving” in a software context means to store data, and in order for the application to store the user’s delivery preference, the application must have received an input from the user that indicates that preference. Ex. 1015, 000054:9-11; Ex. 1003 ¶136.

## **6. Dependent Claim 6**

<p><b>6. The method of claim 5, further comprising:</b> <b>receiving a user purchase request associated with the advertisement;</b> <b>executing the user purchase request; and</b> <b>causing one or more of a product and a service to be delivered to the user.</b></p>
--

Claim 6 is rendered obvious by Santangelo for (i) the same reasons set forth in claim 5, and (ii) because Santangelo additionally teaches interactive links that

execute and cause one or more of a product and a service to be delivered to the user. Ex. 1003 ¶137.

As explained for claim 5, Santangelo teaches the delivery of additional information related to an advertisement to a user in response to the user's request. Santangelo also incorporates by reference teachings from co-owned Patent Application No. 12/284,757, which further teaches an example of an advertisement for a Ford Mustang, with interactive links and pointers included with advertisements that, when interacted with, allow a user to contact a dealer, locate local Ford dealers running sales, set up a test drive, and additional actions. Santangelo further teaches that dealers could use the user provided information to bring a demo car to the user's home for test drives and to consummate a purchase. Ex. 1004, [0258]; Ex. 1016, 000059:5-17; Ex. 1003 ¶138.

Given Santangelo's teachings, it would have been obvious to a POSITA that Santangelo's method receive user requests associated with an advertisement, including purchase requests, executing such requests, and causing a product or a service to be delivered to the user. Ex. 1003 ¶139.

## 7. Independent Claim 8

Claim 8 was allowed in error because the Applicant erroneously argued that claim 8 was allowable on the basis that it depended on then amended claim 1 (however, claim 8 was an independent claim that that did not depend from claim 1). Ex. 1003 ¶35 (explaining prosecution history), ¶140.

Independent claim 8 is substantially the same as independent claim 1, with two exceptions: independent claim 8 (i) omits limitations [1b]-[1d] and (ii) claim 8 requires a “media player through a content provider-based software application” instead of “an over-the-top data delivery system.” Ex. 1003 ¶141. For ease of comparison, Dr. Gray included a side-by-side comparison of claims 1 and 8 in his declaration that highlights the differences between the claims. *Id.* ¶142.

As set forth above, each of the limitations of claim 1 is rendered obvious by Santangelo. The parallel requirements of claim 8 are obvious in view of Santangelo for the same reasons. Further differences of claim 8 are also rendered obvious by Santangelo as explained below. Ex. 1003 ¶143.

<b>8[a] A method for displaying tailored advertising on a media player through a content provider-based software application, comprising:</b>
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This element is rendered obvious by Santangelo. Ex. 1003 ¶144.

**a. displaying tailored advertising on a media player**

As explained for limitation 1[a], Santangelo teaches “a method for displaying tailored advertising on a media player.” *Supra* element [1a]; Ex. 1003 ¶¶145, 75-81.

**b. through a content provider-based software application**

A POSITA would also have found it obvious to display tailored advertising on a media player “through a content provider-based software application” (and with use of Santangelo’s content delivery network depicted in FIG. 2) because Santangelo teaches that its apparatus and methods “are readily extensible to other content delivery paradigms” that include several examples of content provider-based software applications. Ex. 1004, [00079]. For example, Santangelo identifies “YouTube®”, which is one such content provider-based software application. Ex. 1004, [0079], [0285] (“the concepts... described herein are readily extensible to other content delivery paradigms which provide content ‘on demand’, including without limitation:...(iii) selection of a video for play via the Internet, such as via the ‘YouTube®’ website”), [0289]; Ex. 1003 ¶146.

It would have been obvious to a POSITA that references to YouTube or the YouTube website teach or suggest a content provider-based software application because, well-before the date of the alleged invention, a POSITA would have known that YouTube used at least three different methods of content delivery

involving software applications. For example, from its launch in 2005, the YouTube website used the Adobe Flash Player plugin to launch its content streaming app in the user's Internet browser. In January 2010, YouTube also launched an additional feature of its website where visitors to its website could stream content via YouTube's own HTML5-based media player app. Multiple versions of the mobile YouTube app were also available, including on Apple iPhones sold before 2017, and as far back as the iPhone's launch in 2007. Ex. 1003 ¶147.

A POSITA would have understood that the various YouTube applications are examples of content provider-based software applications because YouTube was a well-known provider of video content on the Internet. Ex. 1003 ¶148.

As another example, Santangelo teaches that the customer premise equipment itself runs "CPE client software." Ex. 1004, [0243]-[0244]. A POSITA would have understood that the software on the CPE is a content provider-based software application and media player because content providers (such as cable companies) typically supply CPE that has software used for media playback that includes the content provider's branding. Further, Santangelo teaches that the content provider may provide an EBIF user agent, which is a software application that provides media playback and deliver tailored advertising to media player through a content provider-based software application. Ex. 1004, [0255]. A

POSITA would have known that an EBIF user agent content provider-based software application for delivering multimedia content to a user because it was known in the art that EBIF was a device and network independent application format for supporting interactive TV applications. Ex. 1015, 000034:25-30; Ex. 1003 ¶149.

**[8b] retrieving an advertisement rule associated with a user;**

This limitation is obvious over Santangelo for the same reasons set forth in claim 1. *Supra* claim 1; Ex. 1003 ¶¶150, 74-116.

In particular, limitation [8b] is substantially identical to limitation [1f] “retrieving an advertisement rule associated with the user,” and Santangelo teaches limitation [1f]. *Supra* limitation [1c] and Ex. 1003 ¶¶87-89 (selection based on user advertisement preferences); limitation [1e] and Ex. 1003 ¶¶93-99 (based on content); limitation [1f] and Ex. 1003 ¶¶100-106 (based on both user preferences and content); Ex. 1003 ¶151.

**[8c] analyzing content associated with the media player through the content provider-based software application;**

This limitation is obvious over Santangelo for the same reasons set forth in claim 1. *See* claim 1; Ex. 1003 ¶152, 74-116. As explained for limitation [1e], Santangelo teaches “analyzing content associated with the media playback,” which is substantially the same as limitation [8c] “analyzing content associated with the

media player” because media playback is performed by the media player.

*Supra* limitation [1e]; Ex. 1003 ¶¶153, 93-99. A POSITA would have found it obvious to analyze content associated with the media player “through the content provider-based software application” because Santangelo teaches that the client application running on the customer premise equipment facilitates secondary content (e.g., advertising) insertion by providing information about the subscriber (e.g., user) and “the user’s actions with respect to content.” Ex. 1004, [0268]; Ex. 1003 ¶154.

<b>[8d] selecting one or more advertisements that are tailored to the user based on the analyzed content and the advertisement rule; and</b>
--

This limitation is obvious over Santangelo for the same reasons set forth in claim 1. *See* claim 1; Ex. 1003 ¶¶155, 74-116. A POSITA would have found “selecting one or more advertisements...” obvious from Santangelo’s teaching of limitation 1[g] (“queuing user tailored advertisements...”) because Santangelo teaches queuing a subset of available secondary content that is selected using various criteria. *Supra* limitation [1g] and Ex. 1003 ¶¶107-110 (queueing a playlist of user tailored advertisements); limitation [1c] and Ex. 1003 ¶¶87-89 (selection based on user advertisement preferences); limitation [1e] and Ex. 1003 ¶¶93-99 (based on content); limitation [1f] and Ex. 1003 ¶¶100-106 (based on both user preferences and content); Ex. 1003 ¶156.

**[8e] displaying the one or more advertisements on the media player through the content provider-based software application in response to receiving a pause command during playback of the content.**

This limitation is obvious over Santangelo for the same reasons set forth in claim 1. *See* claim 1; Ex. 1003 ¶¶57, 74-116.

**a. displaying the one or more advertisements on the media player**

A POSITA would have found it obvious that Santangelo teaches limitation [8e] because, as explained for element 1[a], Santangelo teaches “displaying the one or more advertisements on the media player.” *Supra* element [1a]; Ex. 1003 ¶¶158, 78-81.

**b. through the content provider-based software application**

As explained for element 8[a], the advertisement is provided “through a content provider-based software application.” *Supra* element 8[a]; Ex. 1003 ¶¶159, 146-149.

**c. in response to receiving a pause command during playback of the content**

A POSITA would have found it obvious that Santangelo teaches “displaying the one or more advertisements on the media player through the content provider-based software application **in response to receiving a pause command during playback of the content**” because, as explained for limitation [1h], Santangelo teaches “delivering an advertisement from any one or more third-party services [to

a client device, such as CPE 106] **in response to detecting a pause in the media playback.**” *Supra* limitation [1h]; Ex. 1003 ¶¶114-115; *see also* Ex. 1004, [0269], [0185], [0197]-[0198], Abstract. A POSITA would have found it obvious that “receiving a pause command during playback of the content” is substantially similar to “detecting a pause in the media playback.” Ex. 1003 ¶¶160, 114-115.

## **8. Dependent Claims 9 and 10**

**9. The method of claim 8, wherein the content comprises one or more media files stored in a database.**

**10. The method of claim 8, wherein the one or more advertisements comprises one or more media files stored in a database.**

Claim 9 and 10 are dependent claims directed to storing content or advertisements as one or more media files in a database. As explained for claim 1, Santangelo teaches a method for displaying tailored advertising where the advertising and user-requested content is obtained from Santangelo’s content delivery network depicted in FIG. 2. *See* element 1[a]; Ex. 1003 ¶¶75-80. In addition, the same content delivery network is used by the media player (through a content provider-based software application) to playback requested content and advertisements. *See* limitation 8[a]; Ex. 1003 ¶146. The further limitations of claims 9 and 10 are rendered obvious by Santangelo’s teaching that assets (which include content and advertisements) are stored as one or more media files on a

content server or VOD server and the associated broadcast file system (BFS). Ex. 1003 ¶161.

FIG. 2 of Santangelo illustrates a “content and data distribution network 200...for use in dynamic secondary content insertion or dynamic advertisement insertion (DAI)...,” and includes content server 206. Ex. 1004, [0099]; Ex. 1003 ¶162.

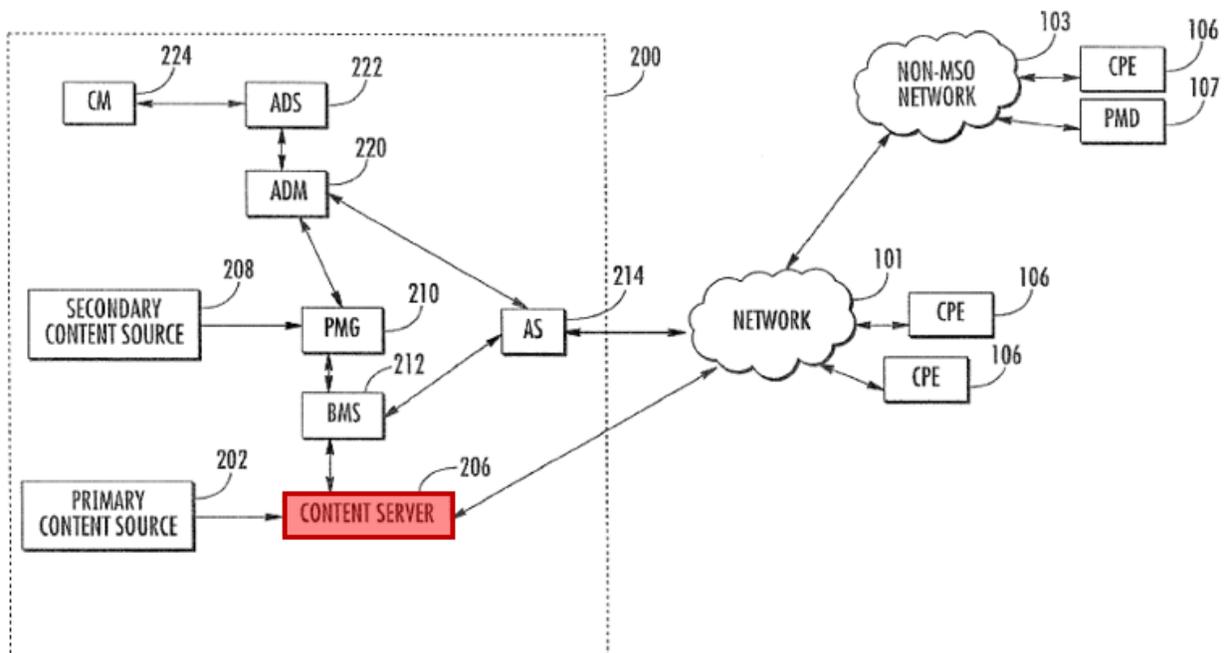


FIG. 2

First, Santangelo teaches or suggests storing content at least at Santangelo’s content server 206/VOD server 206. Ex. 1004, [0110] (“...long form content is received at one or more content catchers 204 from a plurality of content sources 202...The long form content is presented to the users, in one embodiment, as on-demand content. Content retrieved via the catchers 204 is transmitted to a video

on-demand (VOD) server 206 for storage.”), [0120] (“...VOD programming is pre-stored at the VOD server...”); Ex. 1003 ¶163.

*Second*, Santangelo teaches storing assets at the VOD server. Ex. 1004 [0111] (“assets [are] stored at the VOD server 206” and “[m]etadata regarding the assets stored at the VOD server 206 is maintained, and utilized to catalogue and carousel the offerings by the broadcast file system (BFS) 216”), [0112] (“secondary content is also delivered from the PMG 210 to the VOD server 206.”), [0113] (“advertisement content is provided as short form content to the VOD server 206.”). “Assets” includes primary content and secondary content. Ex. 1004, [0149] (“[A] presentation stream is assembled by combining primary content and secondary content assets (also referred to elsewhere herein as ‘entertainment content assets (EC)’ and ‘advertisement content assets (AC)’, respectively).”). Ex. 1003 ¶164.

A POSITA would have found it obvious that the assets are stored as one or more media files because Santangelo teaches that a content server may be configured to convert content stored in a first file container format to a second file container format that is supported by the customer premises equipment. Ex. 1004, [0129]; Ex. 1003 ¶165.

A POSITA would have found it obvious to store the content or advertising as one or more media files in a database because Santangelo teaches storing the

assets on the content server 206/VOD server 206 and its associated broadcast file system. Ex. 1004, [0111]. A POSITA would have understood from the teachings of storing content and advertising at the VOD server (as well as the reference to a file system) that the server is a repository for data (i.e., a database). Ex. 1003 ¶166.

To the extent that the Patent Owner argues that storing assets as media files on the content server/VOD server does not meet this limitation, storing media files in a database would have been obvious to a POSITA for several reasons. First, databases such as relational databases (e.g., Oracle, IBM DB2, Sybase, Microsoft SQL) were well-known and in widespread use for more than two decades (as of 2017). Storing content, including media files, in a database was a well-known, common, and predictable solution for storing and retrieving data and metadata. Ex. 1003 ¶167.

## 9. Dependent Claim 11

<p><b>11. The method of claim 8, wherein the content is selected from the group consisting of: a television show, a streaming video, a movie, a video game, and an audio recording, wherein the content comprises any one or more of short form content and long term content.</b></p>
--

Claim 11 is obvious over Santangelo. Ex. 1003 ¶168.

*First*, a POSITA would have found it obvious that, in Santangelo, “the content is selected from” any one of: a television show or a streaming video or a movie because Santangelo teaches that content can be a **streaming video** for play

via the Internet, such as via the “YouTube®” website (Ex. 1004, [0079]) or “packetized video (e.g. IPTV)” (*id.*, [0265]); a requested **movie** (*id.*, [0186]). Ex. 1003 ¶169.

*Second*, a POSITA would have found it obvious that Santangelo teaches that “the content comprises any one or more of short form content and long term content” because Santangelo teaches that “[t]he primary content may include for instance **long form content** (i.e., content into which secondary content has not yet been inserted) or **short form content** (i.e., content having secondary content inserted therein).” Ex. 1004 (Santangelo), [0066]; Ex. 1003 ¶170. A POSITA would have understood Santangelo’s “long form content” to be substantially similar to the claim’s “long term” content because the ’619 patent’s specification references “long and short form content” (Ex. 1001, 2:17) and “long form content applications” (Ex. 1001, 1:54), “long term” does not appear anywhere in the ’619 patent except in this claim, and “long term content” is situated in opposition to “short form content” in this claim.

#### **10. Dependent Claim 12**

Claim 12 is obvious over Santangelo. Ex. 1003 ¶171.

A POSITA would have found it obvious that “the media player through the content provider-based software application is selected from” any one of a computer, a television, a tablet computer, a smart phone, a smart watch, a

projector, and an audio playback device because Santangelo teaches that the customer premises equipment, which contains the content provider-based software application, encompasses televisions and ITV Personal Computers. Ex. 1004, [0048] (“The term ‘customer premises equipment’ (CPE) includes such electronic equipment such as set-top boxes (e.g., DSTBs), televisions, cable modems (CMs), embedded multimedia terminal adapters (eMTAs), whether stand-alone or integrated with other devices, Digital Video Recorders (DVR), gateway storage devices (Furnace), and ITV Personal Computers.”); *see also*, Ex. 1004, [0044] (additionally suggesting personal computers (PCs) and minicomputers, mobile devices, and smartphones); Ex. 1003 ¶172.

**F. Ground 2: Claims 1-12 are Rendered Obvious by Santangelo in View of Zigmond**

A POSITA would have been motivated to combine Santangelo’s additive insertion model with additional monitoring and advertisement rules in Zigmond. Ex. 1003 ¶173.

First, Santangelo and Zigmond are both directed to selecting and inserting advertisements to a primary media content for presentation to a user. Ex. 1004, [0004], [0006]; Ex. 1005, 1:9-12. Both Santangelo and Zigmond recognize the need to select user tailored advertisements, and Zigmond demonstrates that these teachings were already known in the late 1990s. Ex. 1004, Abstract, [0195]; Ex. 1005, 1:23-26. Moreover, they both monitor and collect viewer information and

viewer response to advertisements. Ex. 1004, Abstract, [0244]-[0245] [0268]; Ex. 1005, 4:53-67, 9:21-32, 9:52-54, 13:7-12; Ex. 1003 ¶174.

Second, as noted above, Santangelo already teaches monitoring user button presses to learn user response associated with advertising. Ex. 1004 (Santangelo), [0244], [0245]. Like Zigmond, Santangelo teaches recording viewer action, such as “button presses, playback events, trick mode events, etc.,” and sending the recorded information recording information to ADS 222, one of the ad selection entities for analyzing user preferences and making advertisement selection decisions. Ex. 1004, [0244], [0268]. Additionally, like Zigmond, Santangelo has selection rules for selecting advertisements based on user preferences, content, and other criteria. Ex. 1004, [0119], [0186], [0195]-[0196], [0244]-[0247]. Santangelo even has a “rules” engine disposed at e.g., the ADM 220, ADS 222, CM 224, CPE 106 or other location that is “fully integrated” and adapted to control whether an advertisement is selected for insertion to a user’s device. Ex. 1004, [0245], [0272], [0196]. Because Santangelo’s CPE already monitors viewer responses and uses rules for selecting advertisements, a POSITA would have recognized and been motivated to modify Santangelo’s method to include Zigmond’s additional monitoring functions and selection rules because this would further the goals already taught in Santangelo. Ex. 1003 ¶175.

Third, a POSITA would have recognized the benefits of including some of the monitoring functions in Zigmond, such as providing individual user for multiple users sharing a subscriber account, and recording viewer channel changes and other feedback during display of advertising. Ex. 1005, 9:56-10:3, 9:21-32. These additional functions provide even more information on user characteristics for further targeting of advertisements. Similarly, adding Zigmond's additional selection criteria, such as recent advertisement content, permitted themes (e.g., parental locks), etc., provide advertisers and users greater control on what advertisements to display. Ex. 1005, 4:25-29, 11:30-49, 12:62-66, 13:51-58; Ex. 1003 ¶176.

Fourth, adding Zigmond's additional functionality was a routine and conventional design decision in December 2017. Given the routine nature of having user device collect and monitor user response/feedback to advertising and the prevalent use of advertisement selection rules for identifying user-relevant advertisements, it would have been obvious to a POSITA to augment Santangelo's monitoring functionality and use of advertisement rules. *See Overview of Technology.* Ex. 1003 ¶¶177, 18-20.

A POSITA would have expected success in augmenting Santangelo's functionality in view of Zigmond because Santangelo already monitors viewers responses and applies selection rules at the user level based on many user

preferences, content, device capabilities, and user entitlements. Adding Zigmond’s additional monitoring and selection functionality would have been a small and obvious step from the method that Santangelo already teaches. Ex. 1003 ¶¶178.

### **1. Independent Claim 1**

The limitations of claim 1 are rendered obvious by the combination of Santangelo and Zigmond. Ex. 1003 ¶179.

**1[a] A method for displaying tailored advertising in response to user media playback behavior via an over-the-top data delivery system, comprising:**

As explained above with respect to Ground 1, Santangelo teaches this limitation. *Supra* limitation [1a] in Ground 1; Ex. 1003 ¶¶180, 74-81.

To the extent Patent Owner argues that Santangelo does not sufficiently teach an over-the-top data delivery system, Zigmond further renders this limitation obvious because Zigmond teaches delivering tailored advertisement via over-the-top data delivery system, such as via the Internet. Ex. 1005, 15:11-16, 7:16-21; Ex. 1003 ¶181.

**[1b] verifying an identity of the user;**

As explained above with respect to Ground 1, Santangelo teaches authenticating the subscriber before providing contents to the subscriber in a step known as checking “entitlements.” *Supra* limitation [1b] in Ground 1; Ex. 1003 ¶¶182, 82-86.

Zigmond further renders this limitation obvious because Zigmond teaches confirming the identity of individual users/viewers via a login screen or protocol. Ex. 1005, 9:56-10:3; Ex. 1003 ¶183.

**[1c] analyzing historical data associated with the identity, wherein the historical data includes patterns of user behavior associated with one or more advertisements;**

As explained above with respect to Ground 1, Santangelo teaches this limitation. *Supra* limitation [1c] in Ground 1; Ex. 1003 ¶¶184, 87-89.

Zigmond further renders this limitation obvious because it teaches monitoring the response of the viewer to the selected advertisement:

For example, information relating to the viewer response may be stored in the home entertainment system and may be periodically transmitted to a clearinghouse, where the information is made available to the advertisers, the operator of the advertising source, or other interested parties. Thus, the invention allows potentially valuable viewer feedback to be compiled.

Ex. 1005, 4:53-67; Ex. 1003 ¶185.

Zigmond also teaches identifying individual users in a household, such as through a login screen, to obtain the best estimate of the identity of the users and their viewing habits. Ex. 1005, 9:56-10:3. Zigmond also teaches collecting data provided by user in voluntary survey or questionnaire filled out during the registration process. Ex. 1005, 10:35-47; Ex. 1003 ¶186.

Zigmond also teaches compiling and periodically reporting viewer responses to selected advertisements; viewer actions to monitor include “channel changes during display of the selected advertisement, requests by the viewer for additional information, feedback provided by the viewer in response to the advertisement, and the like.” Ex. 1005, 9:21-32; Ex. 1003 ¶187.

Zigmond further teaches using the viewer response for improving advertisement selection. Ex. 1005, 13:7-9 (“[t]he ad selection criteria may further be used to choose advertisements that are compatible with television viewing habits of the viewer...”); *id.*, 9:52-54, *see also* 13:7-12; Ex. 1003 ¶188.

Zigmond also teaches sending viewer response to advertisers or other interested parties. Ex. 1005, 9:48-51 (“The viewer response information may be periodically sent to a clearinghouse where the information may be aggregated and made available to the operator of the advertisement source 62, the advertisers, or other interested parties.”), 9:33-38; Ex. 1003 ¶189.

<b>[1d] detecting media playback by the user;</b>
---

As explained above with respect to Ground 1, Santangelo teaches this limitation. *Supra* limitation [1d] in Ground 1; Ex. 1003 ¶¶190, 90-92.

Zigmond further renders this limitation obvious because Zigmond teaches monitoring “actions includ[ing] channel changes during display of the selected advertisement.” Ex. 1005, 9:26-27. Because Zigmond teaches monitoring viewer

action through viewer button presses, it would have been obvious to “detect media playback by the user” through viewer button presses. Ex. 1003 ¶191.

Zigmond also teaches detecting a “triggering event” that indicates “the video programming feed is interrupted and the selected advertisement is displayed to the viewer using a display screen of the home entertainment system...”

Ex. 1005, 4:45-48. Because Zigmond detects the “triggering event” which is an absence or interruption of the video signal, it would have been obvious for Zigmond to detect the presence of video signal, and hence, detect media playback by the user. Ex. 1003 ¶192.

<b>[1e] analyzing content associated with the media playback;</b>
---

As explained above with respect to Ground 1, Santangelo teaches this limitation. *Supra* limitation [1e] in Ground 1; Ex. 1003 ¶¶193, 93-99.

Zigmond further renders this limitation obvious because Zigmond teaches analyzing the actors within the content. Ex. 1005, 12:60-13:1; Ex. 1003 ¶194.

Zigmond also teaches different methods of analyzing the subject matter of the media content. Ex. 1005, 13:1-6. Zigmond also teaches analyzing content for permitted themes and content using parental lock codes. *Id.*, 10:58-61 (“Storage location 82 may also store content ratings or parental lock codes when the home entertainment system is compatible with such features.”); Ex. 1003 ¶195.

Zigmond further teaches that its selection rules can identify advertisements by advertisement content and advertisement subject matter:

Typical ad selection criteria include both advertisement parameters associated with particular advertisements and ad selection rules. The advertisement parameters include, for example, a description of the content of the advertisement, codes that identify the subject matter of the advertisement, or other mechanisms for characterizing the advertisement so that the advertisement may be displayed to an appropriate segment of the viewing population.

Ex. 1005 11:31-42; Ex. 1003 ¶196.

<b>[1f] retrieving an advertisement rule associated with the user;</b>
--

As explained above with respect to Ground 1, Santangelo teaches this limitation. *Supra* limitation [1f] in Ground 1; Ex. 1003 ¶¶197, 100-106.

To the extent PO argues that Santangelo does not sufficiently disclose “retrieving an advertisement rule associated with the user,” Zigmond renders this element obvious by expressly teaching using “ad selection rules” based on “identifying characteristics of the viewer” to select advertisement “specifically associated with characteristics of the viewer or the household.” Ex. 1005, 4:24-34. A POSITA would have found it obvious that such characteristics of the viewer include age, sex, income, preferred language, city, neighborhood or the street

address of the household, local time, hobbies, interests, spending habits, and anticipated major purchases would reveal user advertisement preferences or derived user advertisement preferences. Ex. 1005, 10:48-63, 4:24-34. A POSITA would have found it obvious to retrieve a rule before applying it. Ex. 1003 ¶198.

Zigmond also teaches identifying individual users in a household, such as through a login structure, to obtain the best estimate of the identity of the users and their viewing habits. Ex. 1005, 9:56-10:3; *See* limitation [1b] in Ground 2; Ex. 1003 ¶183. Furthermore, the ad selection rules may be automatically modified as more viewer and household information is compiled.” Ex. 1005, 12:10-14; *see also id.*, 11:50-53; Ex. 1003 ¶¶199, 180.

Therefore, a POSITA would have found it obvious that Zigmond teaches “retrieving an advertisement rule associated with the user” because the rules select advertisements based on the characteristics of the viewer, and Zigmond teaches that its ad selection rules are automatically updated based on available information about the viewer or the household. Ex. 1003 ¶200; Ex. 1005, 10:36-47, 11:66-12:14.

Zigmond further teaches that its ad selection criteria for selecting appropriate advertisements for the viewer can be based on programming content, **advertisement content**, subject matter, **permitted themes** based on parental lock.

*Supra* limitation [1e] in Ground 2; Ex. 1003 ¶¶194-196; Ex. 1005 4:25-29, 11:30-49, 13:51-58; *id.*,14:13-20 (selection by advertisement content):

Typical ad selection criteria include both advertisement parameters associated with particular advertisements and ad selection rules. The advertisement parameters include, for example, a description of the **content of the advertisement**, codes that identify the **subject matter of the advertisement**, or other mechanisms for characterizing the advertisement so that the advertisement may be displayed to an appropriate segment of the viewing population.

Ex. 1005, 11:30-49; Ex. 1003 ¶¶201.

Zigmond also teaches that its rules can select advertisements based on cast members (i.e., actors). Ex. 1005 12:62-66; *supra* limitation [1e] in Ground 2; Ex. 1003 ¶¶202, 194.

Zigmond also expressly teaches the creation and updating of ad selection rules. For example, the ad selection rules are preinstalled in new devices. Ex. 1005 12:10-12 (“preinstalled initial ad selection rules are included in new ad insertion devices and the associated home entertainment systems.”). And, “the ad selection rules may be automatically modified as more viewer and household information is compiled.” Ex. 1005, 12:12-14. Additionally, it would have been

obvious for a rule to exist before it is applied, and it would further have been obvious that such a rule must be created before it would exist. Ex. 1003 ¶203.

**[1g] queueing user tailored advertisements based on the analyzed content and the advertisement rule; and**

As explained above with respect to Ground 1, Santangelo teaches this limitation. *See supra* limitation [1g] in Ground 1; Ex. 1003 ¶¶204, 107-110.

The combination of Santangelo and Zigmond further renders this limitation obvious because the combination teaches that the advertisements are selected using a selection rule that is based on both user behavior/viewing patterns and primary content. *See supra* limitation [1f] in Ground 2; Ex. 1003 ¶¶205, 197-203.

**[1h] delivering an advertisement from any one or more third-party services in response to detecting a pause in the media playback.**

As explained above, Santangelo teaches this limitation. *See supra* limitation [1h] in Ground 1; Ex. 1003 ¶¶206, 111-116.

Zigmond further renders this element obvious because Zigmond teaches the involvement of third-party advertisers. Ex. 1005, 8:12-16 (“Any of a number of entities may be the advertisement content provider or, in other words, the party responsible for making the advertisements available to advertisement source 62 and ad insertion device 60. In one embodiment, the advertisement content provider is the advertiser.”), 8:55-58 (“A predetermined agreement between third party ad source 62 and programming source 66 may be used to ensure that actual triggering

events are provided to the ad insertion device 60.”), *id.*, 9:1-4 (“It can be understood that an operator of an advertisement source 62 is able to sell advertising time and deliver advertisements to viewers with or without the participation of the operator of programming source 66 or other content providers.”). Ex. 1003 ¶207.

## 2. Dependent Claim 2

As explained above in connection with claim 1 in Ground 2, the combination of Santangelo and Zigmond teaches claim 2. *See* limitation [1f] in Ground 2; Ex. 1003 ¶¶208, 197-203.

Santangelo teaches using selection rules based on user viewing patterns indicating user advertisement preferences or derived user advertisement preferences. *See* claim 2 in Ground 1 (Ex. 1003 ¶117) for user advertisement preferences; limitation [1f] in Ground 1, (*id.*, ¶¶102-103) for selection based on both user preferences and advertisement content. Santangelo also teaches selecting based on the capabilities of the user’s device. *See* claim 2 in Ground 1; Ex. 1003 ¶118; Ex. 1003 ¶209.

Zigmond further renders claim 2 obvious because, as explained for limitation [1f] in Ground 2, Zigmond teaches ad selection rules based on user advertisement preferences or derived user advertisement preferences (i.e., characteristics of the viewer) (Ex. 1003 ¶198) and advertisement content (*id.*, 201), and permitted themes (*id.*, 201); Ex. 1003 ¶210.

### 3. Dependent Claim 3

As explained above with respect to claim 1 in Ground 2, the combination of Santangelo and Zigmond teaches claim 3. *See* limitation [1e] in Ground 2; Ex. 1003 ¶¶211, 193-196.

Santangelo teaches analyzing a media attribute, such as playback permissions, subject matter, or themes. *See* claim 3 in Ground 1; Ex. 1003 ¶¶212, 119-122.

Zigmond further renders claim 3 obvious because Zigmond teaches analyzing media content based on actors, content, and subject matter. *See* claim [1e] in Ground 2; Ex. 1003 ¶¶213, 194-196.

### 4. Dependent Claim 4

Claim 4 depends from claim 1. As explained below, a POSITA would have found that the further limitations of claim 4 are rendered obvious by the combination of Santangelo and Zigmond. Ex. 1003 ¶214.

<b>[4a] creating the advertisement rule for the user;</b>
---

As explained above in connection with Claim 1 in Ground 2, the combination of Santangelo and Zigmond teaches this limitation. Ex. 1003 ¶215.

In particular, Zigmond renders limitation [4b] obvious because Zigmond teaches **creating** and updating of ad selection rules. *See supra* limitation [1f] in Ground 2; Ex. 1003 ¶216, 203.

A POSITA would also have found limitation [4a] obvious because Santangelo's and Zigmond's advertisement selection rules are **associated with the user**, they are based on the user's viewing patterns and the user's media content, and they identify user tailored advertisements **for the user**. See limitation [1f] in Ground 2; Ex. 1003 ¶¶217, 197-203.

As also explained for limitation [4a] in Ground 1, it would have been obvious for a rule to exist before it is applied. Therefore, Santangelo and Zigmond also teaches "creating the advertisement rule for the user." See limitation [4a] in Ground 1; Ex. 1003 ¶¶218, 125-127.

**[4b] applying the advertisement rule to a group of available advertisements; and**

This limitation is obvious because, in both Santangelo and Zigmond, the purpose of the advertisement rules is to select one or more advertisements for a user. See *supra* limitation [1f] in Ground 2; Ex. 1003 ¶¶197-203, 100, 106. It would have been obvious to apply the advertisement rule to a group of available advertisements in order to select one or more advertisements. Ex. 1003 ¶219.

**[4c] compiling the user-tailored advertisements based on the advertisement rule.**

As explained above in connection with Claim 1 in Ground 2, the combination of Santangelo and Zigmond teaches this limitation. Ex. 1003 ¶220.

A POSITA would have found it obvious that limitation [4c] is substantially identical to limitation [1g] “queueing user tailored advertisements based on the analyzed content and the advertisement rule” because it would have been obvious that “queueing user tailored advertisements” includes “compiling the user-tailored advertisements.” *See* limitations [4c] in Ground 1; Ex. 1003 ¶¶131-132.

Therefore, limitation [4c] is obvious because Santangelo teaches limitation [1g].

*See supra* limitation [1g] in Ground 1; Ex. 1003 ¶¶221, 107-110.

#### **5. Dependent Claims 5 and 7**

Claim 5 depends from claim 1, and claim 7 depends from claim 5. The combination of Santangelo and Zigmond renders obvious the further limitations of claims 5 and 7 because, as explained in claims 5 and 7 in Ground 1, Santangelo describes secondary content (e.g., advertisements) that is enhanced with user-interactive media features or applications. Ex. 1004, [0253]; Ex. 1015, 000053:27-000054:14; *see* claims 5 and 7 in Ground 1; Ex. 1003 ¶¶222, 133-136.

#### **6. Dependent Claim 6**

As explained above with respect to Ground 1, Santangelo teaches claim 6. *See* claim 6 in Ground 1; Ex. 1003 ¶¶223, 137-139.

## 7. Independent Claim 8

The combination of Santangelo and Zigmond renders the limitations of claim 8 obvious to a POSITA. Ex. 1003 ¶¶224.

The combination of Santangelo and Zigmond renders the limitations of claim 8 obvious to a POSITA. Ex. 1003 ¶¶225.

**8[a]. A method for displaying tailored advertising on a media player through a content provider-based software application, comprising:**

This limitation is obvious over the combination of Santangelo and Zigmond because, as explained for limitation 8[a] in Ground 1, Santangelo teaches this limitation. *See supra* limitation [8a] in Ground 1; Ex. 1003 ¶¶226, 144-148.

**[8b] retrieving an advertisement rule associated with a user;**

This limitation is obvious over the combination of Santangelo and Zigmond for the same reasons set forth in claim [1f] in Ground 2; Ex. 1003 ¶¶227, 197-203.

**[8c] analyzing content associated with the media player through the content provider-based software application;**

The combination of Santangelo and Zigmond renders this limitation obvious to a POSITA. Ex. 1003 ¶¶228.

A POSITA would have found it obvious to perform the claimed step because, *first*, as explained for limitation [1e], the combination of Santangelo and Zigmond teaches “analyzing content associated with the media playback,” which is

substantially the same as limitation [8c] “analyzing content associated with the media player.” *See supra* limitation [1e] in Ground 2; Ex. 1003 ¶¶229, 193-196.

**Second**, a POSITA would have found it obvious to analyze content associated with the media player “through the content provider-based software application” because, as explained for element 8[a] in Ground 1, Santangelo teaches delivery media and advertising content using an EBIF user agent (i.e., an application program in EBIF format), and Santangelo supports delivering YouTube content, which a POSITA would understand to include YouTube’s apps (i.e., software application) carrying the content. Ex. 1004, [0079], [0255], [0285]; *see supra* limitation [8a] in Ground 1; Ex. 1003 ¶¶230, 146-149.

<p><b>[8d] selecting one or more advertisements that are tailored to the user based on the analyzed content and the advertisement rule; and</b></p>
---

This limitation is obvious over the combination of Santangelo and Zigmond for the same reasons set forth in claim 1 in Ground 2; Ex. 1003 ¶¶231.

A POSITA would have found it obvious that the combination of Santangelo and Zigmond teaches limitation [8d] because, as explained in limitation [1g], Santangelo teaches queueing (i.e., generating a playlist of) advertisements that are tailored to the user by “selecting one or more advertisements...” using selection rules “based on the analyzed content and the advertisement rule.” *See supra*

limitation [1g] in Ground 2; Ex. 1003 ¶¶204-205. Thus, it would have been obvious that the combination teaches [8d]. Ex. 1003 ¶232.

<p><b>[8e] displaying the one or more advertisements on the media player through the content provider-based software application in response to receiving a pause command during playback of the content.</b></p>
---

This limitation is obvious over the combination of Santangelo and Zigmond because, as explained for limitation [8e] in Ground 1, Santangelo teaches this limitation. *See supra* limitation [8e] in Ground 1; Ex. 1003 ¶¶233, 157-160.

#### **8. Dependent Claims 9 and 10**

Claim 9 and 10 are obvious over the combination of Santangelo and Zigmond for the same reasons set forth with respect to claim 9 and 10 in Ground 1, *see* claim 9 and 10 in Ground 1; Ex. 1003 ¶¶161-166; and for the same reasons set forth with respect to claim 8 in Ground 2, *see* claim 8 in Ground 2; Ex. 1003 ¶¶234, 223-233.

#### **9. Dependent Claim 11**

Claim 10 is obvious over the combination of Santangelo and Zigmond for the same reasons set forth with respect to claim 11 in Ground 1, *see* claim 11 in Ground 1 (Ex. 1003 ¶¶168-170) and the same reasons set forth with respect to claim 8 in Ground 2, *see* claim 8 in Ground 2; Ex. 1003 ¶¶235, 223-232.

## **10. Dependent Claim 12**

Claim 10 is obvious over the combination of Santangelo and Zigmond for the same reasons set forth with respect to claim 12 in Ground 1, *see* claim 12 in Ground 1 (Ex. 1003 ¶¶171-172) and the same reasons set forth with respect to claim 8 in Ground 2, *see* claim 8 in Ground 2; Ex. 1003 ¶¶234, 223-232.

## **VII. CONCLUSION**

For the foregoing reasons, Petitioner requests *inter partes* review and that the challenged claims be canceled as unpatentable.

## VIII. MANDATORY NOTICES AND FEES

**Real Party In Interest:** Petitioner, Hulu, LLC, is a real party-in-interest.

The following entities own ten percent or more of the stock of Petitioner Hulu, LLC: The Walt Disney Company and Comcast Corporation. Neither of the parties listed above as part-owners of Hulu controlled or funded this IPR, nor did they contribute to the preparation of this IPR in any way.

**Related Matters:** The '619 patent is the subject of the following civil actions and administrative proceedings:

- *Pause Commercials, Inc. v. Hulu, Inc. et al.*,  
Case No. 2:21-cv-02302 (C.D. Cal.)

**Lead and Backup Counsel:** Pursuant to 37 C.F.R. §42.8(b)(3) and 42.10(a), Petitioner designates Harper Batts (Reg. No. 56,160) as lead counsel and Chris Ponder (Reg. No. 77,167) and Jeffrey Liang (Reg. No. 69,043) as back-up counsel, each of Sheppard, Mullin, Richter & Hampton LLP.

**Service Information:** Petitioner consents to service by electronic mail addressed to:

HBatts@sheppardmullin.com,  
CPonder@sheppardmullin.com,  
JLiang@sheppardmullin.com, and  
LegalTM-HU-PUC@sheppardmullin.com

Petitioner's counsel may also be served by mail or hand delivery at Sheppard, Mullin, Richter & Hampton LLP, 379 Lytton Ave., Palo Alto, CA

94301. Petitioner's counsel may be reached by telephone at (650) 815-2673 and by facsimile at (650) 815-4668.

**Fees:** The Office is authorized to charge fees for this Petition to Deposit Account No. 50-4561, Ref. 16VF-327336 (619).

Respectfully submitted,

SHEPPARD, MULLIN,  
RICHTER & HAMPTON LLP

/Harper Batts/  
Harper Batts (Reg. No. 56,160)

## **CLAIM APPENDIX**

1[a]. A method for displaying tailored advertising in response to user media playback behavior via an over-the-top data delivery system, comprising:

[1b] verifying an identity of the user;

[1c] analyzing historical data associated with the identity, wherein the historical data includes patterns of user behavior associated with one or more advertisements;

[1d] detecting media playback by the user;

[1e] analyzing content associated with the media playback;

[1f] retrieving an advertisement rule associated with the user;

[1g] queueing user tailored advertisements based on the analyzed content and the advertisement rule; and

[1h] delivering an advertisement from any one or more third-party services in response to detecting a pause in the media playback.

2. The method of claim 1, wherein the advertisement rule controls selection of advertisements based on a variable selected from the group consisting of: permitted brands, permitted themes, advertisement length, advertisement content, advertisement format, seasonality, user advertisement preferences, derived user advertisement preferences, and technical specifications of a playback device.

3. The method of claim 1, wherein analyzing the media content further comprises analyzing a media attribute selected from the group consisting of: total playback time, format, designated commercial breaks, subject matter, themes, actors, production studios, and playback permissions.

4. The method of claim 1, further comprising:

[4a] creating the advertisement rule for the user;

[4b] applying the advertisement rule to a group of available advertisements;

and

[4c] compiling the user-tailored advertisements based on the advertisement rule.

5. The method of claim 1, wherein the advertisement is configured to receive user input via a user interface.

6. The method of claim 5, further comprising:

receiving a user purchase request associated with the advertisement;

executing the user purchase request; and

causing one or more of a product and a service to be delivered to the user.

7. The method of claim 5, further comprising:

receiving a user purchase request associated with the advertisement; and  
storing the user information.

8[a]. A method for displaying tailored advertising on a media player through  
a content provider-based software application, comprising:

[8b] retrieving an advertisement rule associated with a user;

[8c] analyzing content associated with the media player through the content  
provider-based software application;

[8d] selecting one or more advertisements that are tailored to the user based  
on the analyzed content and the advertisement rule; and

[8e] displaying the one or more advertisements on the media player through  
the content provider-based software application in response to receiving a pause  
command during playback of the content.

9. The method of claim 8, wherein the content comprises one or more media  
files stored in a database.

10. The method of claim 8, wherein the one or more advertisements  
comprises one or more media files stored in a database.

11. The method of claim 8, wherein the content is selected from the group consisting of: a television show, a streaming video, a movie, a video game, and an audio recording, wherein the content comprises any one or more of short form content and long term content.

12. The method of claim 8, wherein the media player through the content provider-based software application is selected from the group consisting of: a computer, a television, a tablet computer, a smart phone, a smart watch, a projector, and an audio playback device.

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on April 29, 2021, true and correct copies of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 10,728,619 and Exhibits 1001-1017 were served in their entirety on the Patent Owner at the following addresses of record as listed on PAIR, via Priority Mail Express®:

FISH IP LAW, LLP  
Attn: Brian Kim  
2603 Main Street, Suite 1000  
Irvine, CA 92614

PUCS, LLC  
12028 National Blvd.  
Los Angeles, CA 90064

The undersigned certifies that true and correct copies of the Petition for *Inter Partes* Review of U.S. Patent No. 10,728,619 and Exhibits 1001-1017 were also sent via electronic mail to the attorneys of record for Plaintiff in the concurrent litigation matter(s):

John van Loben Sels (SBN 201354) - [jvanlobensels@fishiplaw.com](mailto:jvanlobensels@fishiplaw.com)  
Brian Kim (SBN 309962) - [bkim@fishiplaw.com](mailto:bkim@fishiplaw.com)

FISH IP LAW, LLP

SHEPPARD, MULLIN,  
RICHTER & HAMPTON LLP

/Harper Batts/  
Harper Batts (Reg. No. 56,160)  
Attorney for Petitioner

Date: April 29, 2021

379 Lytton Ave.  
Palo Alto, CA 94301  
Tel: (650) 815-2673

**CERTIFICATE OF COMPLIANCE WITH  
TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS,  
AND TYPE STYLE REQUIREMENTS**

1. This Petition complies with the type-volume limitation of 14,000 words, comprising 13,548 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a).

2. This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman.

Respectfully submitted,

SHEPPARD, MULLIN,  
RICHTER & HAMPTON LLP

*/Harper Batts/*  
Harper Batts (Reg. No. 56,160)  
Attorney for Petitioner

Date: April 29, 2021

379 Lytton Ave.  
Palo Alto, CA 94301  
Tel: (650) 815-2673