



***IPR2023-00652:
Google LLC v. SafeCast Limited***

Petitioner's Presentation for Oral Argument
(U.S. Patent No. 9,392,302)

July 18, 2024

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Two Unpatentability Grounds

- **Ground 1:** Claims 1–4, 6–9, and 12–15 are rendered obvious by U.S. Patent No. U.S. Patent App. Pub. No. 2002/0144262 (“Plotnick,” Ex-1005) in view of U.S. Patent No. 8,413,189 (“Parekh,” Ex-1007).
- **Ground 2:** Claims 1–4, 6–9, and 12–15 are rendered obvious by Plotnick (Ex-1005).¹

Paper 1 at 4

Roadmap

- **Overview of '302 Patent and Prior Art**
- **Ground 1: Disputed Claim Elements**
 - 1[c.1] and 1[e.1]: “first field related to a local broadcasting time regulation”
 - 1) Patent Owner’s incorrect claim interpretation
 - 2) Plotnick and Parekh teach the correct interpretation
 - 3) Unrebutted evidence of motivation to combine
 - 4) Patent Owner’s new argument about “regulators” in Parekh
 - 5) Patent Owner’s irrelevant arguments about “airability” in Parekh
 - 1[c.2]: “second field related to the number of times [the ad] has previously been shown”
 - 1) Plotnick teaches the “second field”
- **Ground 2: No Material Disputes**

U.S. Patent No. 9,392,302

- 1[a] 1. A system for automating compliance with local broadcasting regulations laid down by a broadcasting authority and applicable to advertisements, said advertisements being provided during time-shifted viewing/listening comprises:
- 1[b] programme supply means to supply broadcast digital video/audio programmes having therein periodic breaks for the insertion of advertisements;
- 1[c] advertisement supply means to supply advertisements within the periodic breaks, each advertisement having associated therewith a header comprising a first field related to a local broadcasting time regulation laid down by the broadcasting authority, which local broadcasting time regulation restricts the time of day at which said advertisement may be shown, and a second field related to the number of times said advertisement has previously been shown during time-shifted viewing;
- 1[c.1]
- 1[c.2]

- 1[d] rules database means containing rules relating to said local broadcasting time regulation;
- 1[e] clock means to supply a real-time clock signal; and
- 1[e.1] control means arranged to read said first field and said clock signal and said rules database and to apply said local broadcasting time regulation to each advertisement before said advertisement is shown;
- 1[f] wherein the control means is further arranged to update the second field in the header of said advertisement when said advertisement is again shown during time-shifted viewing.

Ex. 1001, Cl. 1

Prior Art Plotnick: U.S. Pub No. 2002/0144262

[0154] FIG. 10 illustrates an exemplary data flow in a STB PVR (PVR enabled set-top box) for delivering targeted advertising. The STB differentiates individual viewing habits, characterizes the current viewer based on current and historical viewing information, and selects advertising appropriate for the current viewer based on the characterization. Ads 1002 are received by the STB PVR from a downstream ad feed 1000 for storage and subsequent presentation to the viewer. Control data related to ads (ad metadata) 1006 is received by the STB PVR from a downstream control feed 1004. The control data 1006 includes descriptions of the ad content, target audience, encoding attributes, delivery instructions, and contract limitations. The control data can be created by a number of parties including the ad producer, advertiser, media buyer, network operator, and broadband service provider. The set-top box can supplement this control data by adding presentation history and user interaction data.

Ex. 1005 at ¶154 (cited in Paper 1 at 21-22)

Prior Art Parekh: U.S. Pat. No. 8,413,189

Items of advertising content are received, each with an inclusion criterion used to determine both whether and how that item of advertising content is to be included in a broadcast. Stored user profile data, associated with a plurality of

Ex. 1007 at 2:37-40 (cited in Paper 1 at 25-26)

Rules Engine.

In some embodiments, rules engine **308** is used to temper the indication of control from the user community with regards to what tracks are played on-air and in what order from gaming platform server **322** with a combination of guidelines and rules, such as station policies and regulations from regulators **110**. Throughout this specification, a “track” refers without loss of generality to any piece of media content, including a song, audiobook, sound bite, audio clip, video clip, video, music video, movie or game.

For example, tracks elected by the users may be deferred, or other tracks may be inserted, based on business rules. These rules may be static which apply at all times or dynamic which apply only under certain conditions, such as time of day or size of online audience.

Examples of business rules include FCC regulations for content, including: that indecent and/or profane material may not be broadcast outside the FCC Safe Harbor; three songs

Ex. 1007 at 11:14-31 (cited in Paper 1 at 25-26)

Ground 1: Undisputed And **Disputed** Claim Elements

Claim Element	Exemplary Prior Art Disclosures
1[a]: system for automating compliance	Plotnick ¶¶134: “ad targeting system 600.” Paper 1 at 31-32.
1[b]: programme supply means	Plotnick ¶¶139: “video storage 620 component” “store[s] all video audio programs on the set-top box, including ads.” Paper 1 at 36, 38.
1[c]: ad supply means	
1[c.1]: each ad has a header with a first field related to a local broadcasting time regulation	Plotnick ¶¶154, 194: “control data 1006” is “processed [] to generate ad queue[s]” which may depend on “what time of day it is” and may include the brand of an advertisement. Paper 42-43, 44-45. Parekh 11:26-36 teaches to apply FCC time regulations. Paper 1 at 45-46.
1[c.2]: second field related to number of times ad was shown 1[f]: the control means updates second field	Plotnick ¶¶156, 163: “updates the ad metadata 1006 based on ad delivery” “and transmits an insertion report” for billing. Paper 1 at 47-48.
1[d]: rules database means has rules relating to the local broadcasting time regulation	Plotnick ¶¶150, 155-156: “a database module 800” “stores information essential to the operation of the ad queuing.” Paper 1 at 49-50.
1[e]: clock means	Plotnick ¶¶158, 194: “what time of day it is” and “current system time.” Paper 1 at 52.
1[e.1]: control means reads the first field to apply the time regulation	Plotnick ¶¶154-156, Fig. 10, 194: “processing component 1010” applies “processing control instructions 1010” to create “ad queues” based on “what time of day it is.” Paper 1 at 53-54.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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 - 4) Patent Owner’s new argument about “regulators” in Parekh
 - 5) Patent Owner’s irrelevant arguments about “airability” in Parekh
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1[c.1] and 1[e.1]: Patent Owner Applies The Incorrect Claim Interpretation Of The “First Field”

Patent Owner argues that the “first field” must **include** the “local broadcasting time [regulation].”

Ex. 1005, ¶ 154. That is, the “control data 1006” does not include “a local broadcasting time.”

Paper 9 at 10

exposed to inappropriate content.” Neither Parekh nor Plotnick discloses “the metadata of an advertisement includes the local broadcasting time regulation.” It

Paper 11 at 18

The First Field Is Only “Related To” The Regulation

associated therewith a header comprising a first field related to a local broadcasting time regulation laid down by the broadcasting authority, which local broadcasting

Ex. 1001 at 1[c.1] (Paper 10 at 5-6)

The Fields in an advert header can be used to ensure that only appropriate adverts are shown during the time-shifted viewing, e.g. the Time of Day Validity and Days Validity will prevent certain adverts, such as those for alcoholic drinks, being shown before e.g. 7.30 pm so that children are protected, and that certain adverts are not shown on a Sunday. Even a selected word can be used as a control e.g. the word “politician” can prevent an advert being shown during an election campaign.

Ex. 1001 at 6:4-12 (cited in Paper 1 at 57)

TABLE 1

Fields in advertisement headers	
Field Name	Activity
Time of Day validity	Code to indicate time of day when advert may be shown.
Days validity	Code to indicate the days of the week when advert may be shown
Advert identifier	Number with check digit to uniquely identify the advert
Frame length	Number giving exact length of advert in frames
Start date	Earliest date and time of permitted showing
End date	Latest date and time of permitted showing
Urgency matrix	Table of hours indicating advertiser's preferred time of showing
Interactive or Passive	Specifies if a button depression is expected
Showings	Number of times advert is to be shown
Viewings	Number of times this advert has been shown in time-shifted programme viewing
Frequency	Minimum period to elapse before repeat showing
When last selected	Date and time when advert last selected for viewing
Special expiry	Optional Field
Warnings	Keywords to match against viewing regulations

Ex. 1001 at 4:23 (cited in Paper 1 at 57)

Patent Owner Admits Content Descriptions Are “Related To” Local Broadcasting Regulations

Patent Owner’s Sur-Reply at 15:

Furthermore, the use of content to select broadcasting time of programming to compliance with FCC broadcasting time regulations, including advertisements, was well-known. For example, Pursuant to a 1996 Congressional directive, the

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Plotnick's "Control Data" Is Used To Select Ads Based On Time Of Day

[0154] FIG. 10 illustrates an exemplary data flow in a STB PVR (PVR enabled set-top box) for delivering targeted advertising. The STB differentiates individual viewing habits, characterizes the current viewer based on current and historical viewing information, and selects advertising appropriate for the current viewer based on the characterization. Ads 1002 are received by the STB PVR from a downstream ad feed 1000 for storage and subsequent presentation to the viewer. Control data related to ads (ad metadata) 1006 is received by the STB PVR from a downstream control feed 1004. The control data 1006 includes descriptions of the ad content, target audience, encoding attributes, delivery instructions, and contract limitations. The control data can be created by a number of parties including the ad producer, advertiser, media buyer, network operator, and broadband service provider. The set-top box can supplement this control data by adding presentation history and user interaction data.

Ex. 1005 ¶154 (cited in Paper 1 at 44)

[0194] FIGS. 14A-B illustrate several exemplary embodiments where advertisements 1410 (in a preferred embodiment targeted advertisements) and an ad queue 1420 are stored on the PVR 1250. The video stream 1210 from the video server 1200 includes avails 1400 (either blank avails or avails with default ads available for replacement with targeted ads). The PVR 1250 inserts the ads 1410 in the avails 1400 based on the ad queue 1420. The ad queue 1420 is a list of the next ads 1410 that should be inserted. The ad queue 1420 may vary based on what subscriber 1260 is interacting with the TV, what time of day it is, what day of the week, what programs are on, and other criteria that would be well within the scope of the current invention.

Ex. 1005 ¶194 (cited in Paper 1 at 42-43)

Plotnick With Parekh Selects Ads Based On Time Regulations

Plotnick teaches changing ad schedules based on time of day, and Parekh teaches that such time of day considerations should include the FCC Safe Harbor time regulation.

[0051] However, the relative appropriateness of the prepared ad schedule may change as circumstances change. Such circumstances may include, but are not limited to, the time of day, program or type of program being watched,

Ex. 1006 ¶51 (Paper 1 at 44-45)

For example, tracks elected by the users may be deferred, or other tracks may be inserted, based on business rules. These rules may be static which apply at all times or dynamic which apply only under certain conditions, such as time of day or size of online audience.

Examples of business rules include FCC regulations for content, including: that indecent and/or profane material may not be broadcast outside the FCC Safe Harbor; three songs

Ex. 1007 at 11:26-36 (cited in Paper 1 at 44-45)

Patent Owner Admits Parekh Applies Regulations Based On Content

Patent Owner Sur-Reply at 14-15 (describing Parekh):

Then, rules engine 308 examines the content of the advertisement, it checks the metadata (394) to find whether or not the content of the advertisement includes profanity material, if the content of the advertisement includes profanity material, the rules engine 308 will broadcast the advertisement inside the FCC Safe Harbor based on FCC regulations from regulators 110.

Paper 11 at 14-15

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Patent Owner's Attorney Arguments Against Motivation To Combine

Parekh only discloses that advertising content needs to be compliance with local broadcasting regulations laid down by a broadcasting authority during broadcasting time (not during “time-shifted” period), and the local broadcasting regulations are stored in the rule engine, not in the “metadata” of the advertisement.

Plotnick discloses ad queue may vary based on what time of day it is during “time-shifted” period and but does not teach local broadcasting regulations, Plotnick

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Unrebutted Expert Testimony Supports Motivation To Combine

as control data in a PVR system like Plotnick. Plotnick selects and replaces ads in broadcast programs based on the time of day and specified ad schedules. Parekh teaches a similar method for selecting advertisements based on time of day regulations. Combining Plotnick and Parekh would have been straightforward—

Ex. 1002 ¶129 (cited in Paper 1 at 42)

implement solutions via TV hardware, a POSITA working on a PVR system would have been motivated to implement the ability to limit improper content from being shown to children. In fact, as Plotnick recognized and taught, due to the time-shifting ability of PVR systems, the appropriateness of ads may change depending on the time of day that the ads are played and the identity of the viewer. Ex-1006 ¶51. A POSITA would have understood that PVR time-shifting functionality created an even higher risk of inappropriate content being shown to children because late night content could be recorded when children were sleeping but played during the

Ex. 1040 ¶227 (cited in Paper 10 at 14-15)

228. And in order to find a standard and/or commonly accepted set of rules for what types of media content should be disallowed and at what times of day, a POSITA would have looked to local broadcasting regulations, like the FCC regulation on timing for indecent and profane content, that represented the type of media content rules and timing that were being broadly applied to television content at the time.

Ex. 1040 ¶228 (cited in Paper 10 at 14-15)

Roadmap

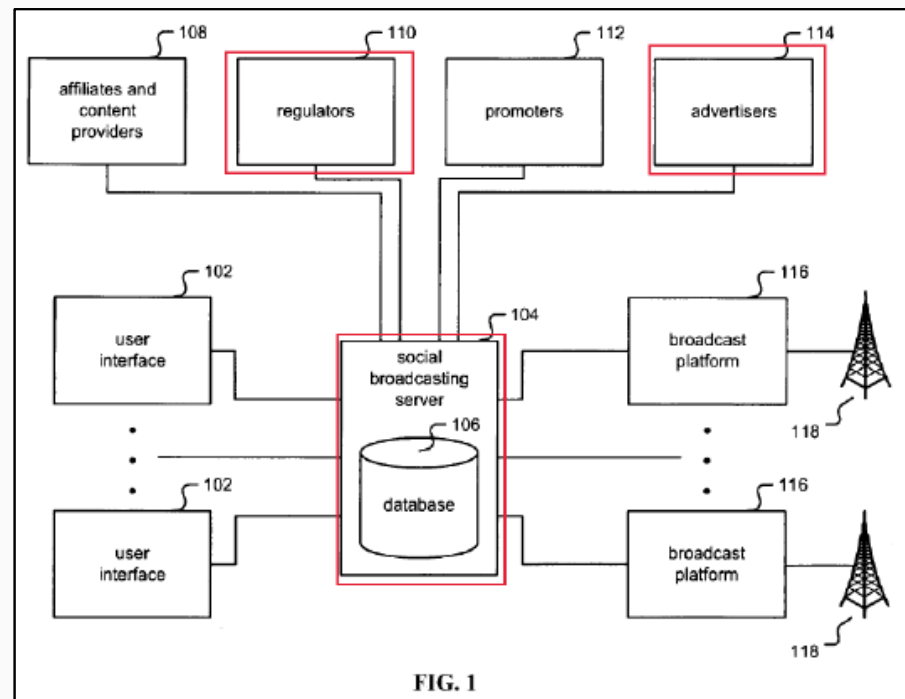
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Patent Owner's Sur-Reply Argues That "Regulators" In Parekh Apply Regulations

The cited portion of Parekh shows that **Regulators 110** of the social broadcasting system determines the time of day at which the advertisement may be shown (**when broadcasting on broadcast station(s)**).

To depict how the **Regulators 110** determines the time of day at which the advertisement may be shown, referring to Fig. 3A(reproduced below), Parekh discloses a rules engine as follows

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Parekh's "Rules Engine" Applies The Regulations

Rules Engine.

In some embodiments, rules engine 308 is used to temper the indication of control from the user community with regards to what tracks are played on-air and in what order from gaming platform server 322 with a combination of guidelines and rules, such as station policies and regulations from regulators 110. Throughout this specification, a "track"

Ex. 1007 at 11:14-20 (cited in Paper 1 at 45-46)

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Patent Owner's Two Arguments Based On "Airability" Disclosure Of Parekh

Patent Owner's Response argues that the "airability" teaching teaches away from applying the FCC regulation at time of playback.

The cited portion of Parekh shows that, regarding content issues such as illegal recordings or profanity, the content will be rejected before added to the media database with the appropriate metadata, which means the unrejected content can be broadcast at any time, there is no need that "metadata" including "a first field related to a local broadcasting time regulation laid down by the broadcasting authority."

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The Patent Owner's Sur-Reply then shifts to argue that the "airability" teaching means that Parekh's "first field" does not include the time regulation.

Therefore, in order to compliance with FCC broadcasting time regulations, the metadata of an advertisement of Parekh includes "content information about whether or not the content of the advertisement includes profanity material," the metadata need not to include "a first field related to a local broadcasting time regulation laid down by the broadcasting authority,

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“Airability” In Parekh Is An Irrelevant Precursor To Applying Time Regulations

(396). The content is analyzed for “airability” (386), analogous to rules interpreted and/or provided for by moderation server 316. This may involve automated, semi-automated and/or manual ways of rendering the content to analyze for airability. If (388) problems are detected, the content is rejected (396), otherwise the content is reviewed by a screener to find any content issues (390), such as illegal recordings or profanity. If (392) it fails the review, it is rejected (396), otherwise it is added to the media database 340 with the appropriate metadata (394).

Ex. 1007 at 10:59-11:13 (cited in Paper 10 at 11)

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1[c.2] Patent Owner's Argument About "Second Field"

Although "the processing component 10101 updates the ad metadata 1006 based on ad delivery and user interaction." Ex. 1005, ¶ 154. "After presenting the ad to the viewer, the system updates the ad metadata and transmits an insertion report to the head-end." Ex. 1005, ¶ 163. Since the ad metadata does not include the number of times said advertisement has previously been shown. "updates the ad metadata" will not include updating "the number of times said advertisement has previously been shown during time-shifted viewing."

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Plotnick Teaches The “Second Field”

[0163] When an ad insertion opportunity arises, the set-top box determines whether the current session profile matches any of the historical profiles in the profile database. If a match exists, the match will be used for selecting an appropriate advertisement. Otherwise, the set-top box uses the current session profile to select an appropriate advertisement. After presenting the ad to the viewer, the system updates the ad metadata and transmits an insertion report to the head-end.

Ex. 1005 ¶163 (cited in Paper 1 at 47-48)

[0170] The T&B system 712 also allows the advertisers to create a VoD ad campaign 1166. Based on the ad campaign 1166 a prepend/postpend ad schedule component 1168 is created. Based on the schedule 1168, ad delivery instructions 1170 are transmitted to the VoD Server 1172. The VoD Server 1172 stores content to support the video-on-demand service. The VoD Server 1172 uses the ad delivery instructions 1170 to schedule the ads for display at the beginning and end of VoD content. The traffic and billing system 712 tracks the insertion results and bills the advertiser based on the insertions and contract requirements.

Ex. 1005 ¶170 (cited in Paper 1 at 47-48)

containing metadata. Plotnick discloses that the processing component 1010 “updates the ad metadata 1006 based on ad delivery and user interaction.” Ex-1005, ¶156. A POSITA would have understood this included updating the ad metadata stored in the database of Plotnick. Additionally, after an advertisement is presented, “the system updates the ad metadata and transmits an insertion report to the head-end.” *Id.*, ¶163. As Plotnick explains, the system will include updates to the “ad metadata” based on “ad delivery,” among other things. A POSITA would have understood these metrics would include the number of times the ad was shown to the user during playback. For example, Plotnick explains that ad insertion results

Ex. 1002 ¶130 (cited in Paper 1 at 47-48)

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Ground 2: Plotnick Alone Renders The Claims Obvious

- No dispute that Plotnick renders obvious the Patent Owner's infringement claim interpretation.

In Ground 2, Petitioner construes the claims based on how Patent Owner appears to apply the claims in its Preliminary Infringement Contentions attached as Ex, 1022, 3-4. and Ex, 1023, 2-3. Pet., 73. It is obvious that claim construction In Ground 2 is not in compliance with the regulations of 37 C.F.R. §42.100(b). petitioner fails to establish in ground 2 that challenged claims 1-4, 6-9, and 12-15 are obvious over Plotnick since the arguments are based on false claim construction.

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