

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DISH Network L.L.C. and DISH Technologies L.L.C.

Petitioner,

v.

Digital Broadcasting Solutions, LLC

Patent Owner.

IPR2023-00976

Attorney Docket No.: 081841.0149

PETITION FOR *INTER PARTES* REVIEW OF

U.S. PATENT NO. 8, 929, 710

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PETITIONER’S EXHIBIT LIST

Ex. No.	Description of Documents
1001	U.S. Patent No. 8,929,710 (“ 710 Patent ”)
1002	Declaration of Dr. Kevin Jeffay
1003	Prosecution File History of the ’710 Patent
1004	Complaint, <i>Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.</i> , United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335, Dkt. No. 1
1005	Infringement Contentions, <i>Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.</i> , United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335
1006	U.S. Patent No. 8,510,771 to Casagrande et al., entitled “Methods and apparatus for filtering content from a presentation stream using signature data” (“ Casagrande ”)
1007	U.S. Patent No. 7,251,413 to Dow et al., entitled “System and method for improved blackfield detection” (“ Dow ”)
1008	U.S. Patent App. Pub. No. 2006/0225105 by Russ, entitled “Networked multi-room system ad insertion” (“ Russ ”)
1009	Order Carrying DISH’s Motion to Change Venue, <i>Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.</i> , United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335, Dkt. No. 41
1010	DISH’s Supplemental Brief in Support of its Motion to Transfer (Public Redacted Version), <i>Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.</i> , United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335, Dkt. No. 44
1011	Docket Control Order, <i>Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.</i> , United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335, Dkt. No. 28

I. MANDATORY NOTICES UNDER 37 C.F.R. 42.8(a)(1)

A. Real Party-in-Interest under 37 C.F.R. 42.8(b)(1)

DISH Network L.L.C. (“DISH”) is the petitioner. DISH is directly or indirectly owned by the following direct or indirect owner: DISH Network Corporation.

B. Related Matters under 37 C.F.R. 42.8(b)(2)

Patent Owner asserts the ’710 Patent in the following district court case along with U.S. Patent No. 9,538,122: *Digital Broadcasting Solutions, LLC v. DISH Network L.L.C.*, United States District Court for the Eastern District of Texas, Case No. 2:22-CV-00335 (The “District Court” matter).

C. Lead and Back-Up Counsel under 37 C.F.R. 42.8(b)(3)

Petitioner designates the following: Lead Counsel is Eliot D. Williams (Reg. No. 50, 822) of Baker Botts L.L.P.; Back-up Counsel are G. Hopkins Guy (Reg. No. 35, 886), Ali Dhanani (Reg. No. 66, 233), and Thomas Carter (Reg. No. 76,040) of Baker Botts L.L.P.

D. Service Information under 37 C.F.R. 42.8(b)(4)

A copy of this entire Petition, including all Exhibits and a power of attorney, is being served by FEDERAL EXPRESS, costs prepaid, to the address of the attorney or agent of record for Digital Broadcasting Solutions, LLC (“DBS” or “Patent Owner”) in the district court proceedings regarding the ’710 Patent: WILLIAMS SIMONS & LANDIS PLLC, 2633 McKinney Ave, Suite 130 #366

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Dallas, TX 75204; 601 Congress Ave., Suite 600 Austin, TX 78701; 1735 Market Street, Suite A #453 Philadelphia, PA 19103; and to the correspondence address listed for the '710 Patent: SECURED MAIL SOLUTIONS, LLC Suite 253, 9550 S. Eastern Ave., Las Vegas, NV 89123.

Petitioner consents to service by electronic mail at: eliot.williams@bakerbotts.com, hop.guy@bakerbotts.com, ali.dhanani@bakerbotts.com, and thomas.carter@bakerbotts.com. A Power of Attorney is filed concurrently herewith under 37 C.F.R. §42.10(b).

II. CLAIM LISTING

A. Claim 1

1[Pre]	A digital video recorder (“DVR”) for time shifting at least a portion of a transmitted video program, comprising:
1[a][i]	a tuner for receiving said video program as transmitted, said video program including at least first, second, and third portions, wherein said second portion as transmitted is configured to follow said first portion, and said third portion as transmitted is configured to follow said second portion;
1[b]	a memory device for storing said video program, allowing at least a portion of said video program to be played back at a later time;
1[c]	a controller configured to receive commands from a user of said DVR, wherein a first command changes said DVR from a first payback state to a second playback state, and a second command initiates playback of said video program from said memory device;
1[d][i]	at least one processor configured to (i) provide said video program in its entirety to a display device in response to receiving said second command regardless of a playback state of said DVR if said second command is received during a first period of time,
1[d][ii]	(ii) provide said video program in its entirety to said display device in response to receiving said second command if said second command is received during a second period of time and said DVR is in said first playback state, and
1[d][iii]	(iii) provide only a portion of said video program to said display device in response to receiving said second command if said second command is received during said second period of time and said DVR is in said second playback state, said portion of said video program including at least said first and third portions of said video program, wherein said third portion of said video program is provided to said display device immediately following said first portion of said video program if said second command is received during said second period of time and said DVR is in said second playback state;
1[e]	wherein said second period of time is a period of time after said first period of time.

B. Claim 2

2. The DVR of claim 1, wherein said controller is configured to receive said commands from a remote control operated by said user of said DVR.
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C. Claim 3

3. The DVR of claim 1, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said to said display device if said second command is received during said second portion of time and said DVR is in said second playback state includes said primary video content and only a portion of said secondary video content.

D. Claim 4

4. The DVR of claim 1, wherein said video program includes at least a primary and secondary video content, and said portion of said video program that is provided to said to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes only said primary video content.

E. Claim 5

5. The DVR of claim 4, wherein said memory device is further configured to store at least one time when said secondary video content begins and at least one time when said secondary video content ends.

F. Claim 6

6. The DVR of claim 1, wherein said first period of time is a period of time that is less than one week from said transmission of said video program, and said second period of time is any time after said first period of time.

G. Claim 7

7. The DVR of claim 4, wherein said secondary video content comprises at least one advertisement.

H. Claim 8

8[a]	The DVR of claim 1, wherein said at least one processor is further configured to (i) retrieve said portion of said video program from said memory device if said second command is received during said second period of time and said DVR is in said second playback state, and
8[b]	(ii) retrieve said video program in its entirety from said memory device if another second command is received at a time thereafter and said

	DVR is switched to said first playback state at or before said time thereafter.
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I. Claim 9

9[Pre]	A method for time shifting at least a portion of a video program transmitted to a digital video recorder (“DVR”), comprising:
9[a]	receiving said video program, said video program including at least first, second, and third portions, wherein said second portion as transmitted is configured to follow said first portion, and said third portion as transmitted is configured to follow said second portion;
9[b]	storing said video program on a memory device in said DVR;
9[c]	receiving a first command from at least one user of said DVR, said first command indicating a playback state of said DVR;
9[d]	receiving a second command from said at least one user of said DVR, said second command indicating a desire to playback at least a portion of said video program; and
9[e]	providing at least a portion of said video program to a display device in response to receiving said second command;
9[f][i]	wherein said step of providing said at least a portion of said video program to said display device further comprises (i) providing said video program to said display device in response to receiving said second command regardless of a playback state of said DVR if said second command is received during a first period of time
9[f][ii]	(ii) providing said video program to said display device in response to receiving said second command if said second command is received during a second period of time and said DVR is in said first playback state, and
9[f][iii]	(iii) providing only a portion of said video program to said display device in response to receiving said second command if said second command is received during said second period of time and said DVR is in said second playback state, said portion of said video program including at least said first and second portions of said video program, wherein said third portion of said video program is provided to said display device immediately following said portion of said video program if said second command is received during said second period of time and said DVR is in said second playback state;
9[g]	wherein said second period of time is a period of time after said first period of time.

J. Claim 10

10. The method of claim 9, wherein said step of receiving said video program further comprises receiving said video program from a satellite via an antenna.

K. Claim 11

11. The method of claim 9, wherein said step of storing said video program on said memory device in said DVR further comprises storing at least one time of when said second portion of said video program begins and at least one time of when said second portion of said video program ends, wherein said portion of said video program provided during said second time and when said DVR is in said second playback state does not include at least said second portion.

L. Claim 12

12. The method of claim 9, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes said primary video content and only a portion of said secondary video content.

M. Claim 13

13. The method of claim 9, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes only said primary video content.

N. Claim 14

14. The method of claim 9, wherein said first period of time is a first day after said video program has been transmitted, and said second period of time is a time period thereafter.

O. Claim 15

15. The method of claim 9, wherein said first period of time is a period of time that is less than one week from said transmission of said video program, and said second period of time is a time period after said first period of time.

P. Claim 16

16. The method of claim 13, wherein said secondary video content is at least one advertisement.

Q. Claim 17

17. The method of claim 11, wherein said step of receiving said video program further comprises receiving said video program, said at least one time of when said second portion of said video program begins, and said at least one time of when said second portion of said video program ends from a satellite, wherein each one of said at least one times is received by said DVR after said video program is stored on said memory device.

R. Claim 18

18[Pre][i]	A digital video recorder (DVR) for time shifting at least a first portion of a video program,
18[Pre][ii]	said first portion of said video program consists of first, second and third portions, wherein said second portion as transmitted is configured to follow said first portion, and said third portion as transmitted is configured to follow said second portion, comprising:
18[a]	a tuner for receiving said video program;
18[b]	A memory device for storing said video program;
18[c]	a controller for receiving commands including at least a first command for setting a playback state of said DVR and a second command for initiating a playback of said video program from said memory device; and
18[d][i]	at least one processor for (i) providing said first portion of said video program in its entirety to a display device in response to receiving said second command during a first period of time,
18[d][ii]	(ii) providing said first portion of said video program in its entirety to said display device in response to receiving said second command during a second period of time if said DVR is in a first playback state, and
18[d][iii]	(iii) providing only said first and third portions of said video program to said display device in response to receiving said second command during said second period of time if said DVR is in a second playback state, wherein said third portion of said video program is provided to said display device immediately following said first portion of said

	video program if said second command is received during said second period of time and said DVR is in said second playback state.
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S. Claim 19

19. The method of claim 18, wherein said first and third portions of said video program include primary content and said second portion includes secondary content.

III. FORMAL REQUIREMENTS

A. Standing

Petitioner certifies that the '710 Patent is eligible for *inter partes* review and that Petitioner is not barred or estopped from challenging the claims on the grounds.

B. Identification of Challenge

Petitioner requests review on the grounds that (1) claims 1-19 of the '710 Patent are obvious over Casagrande in view of Russ under 35 U.S.C. §103; (2) claims 1-5, 7-13, and 16-19 are anticipated by Dow under 35 U.S.C. §102; and (3) claims 1-19 are obvious over Dow in view of Russ under §103.

IV. SUMMARY OF THE '710 PATENT

The '710 Patent “relates to the storage and play back of time-shifted data, and more particularly to a system and method for adding auxiliary data to data that has been time-shifted.” Ex[1001], 1:16-19. At best, the challenged claims relate to the patent’s purported embodiment where “the auxiliary data is removed only after its value has diminished.” Ex[1001], Abstract.¹

The '710 Patent admits that it was already known in the art that “[d]igital video recorders (“DVRs”), like TIVO™, [were] commonly used to record data (e.g., video, audio, etc.), allowing it to be played back at a later time.” Ex[1001], 1:21-23. The patent refers to this concept as “time-shifting,” which “allows the recorded data (in its original form) to be played back at a later time.” Ex[1001], 1:24-25.

¹ Petitioner does not concede the claims comply with 35 U.S.C. §112.

Thus, “the user can re-watch the [recorded] program (or a portion thereof), or skip a portion of the program.” Ex[1001], 1:43-45.

Because of the then-existing ability to skip over portions of programs, the ’710 Patent purports to recognize the dilemma that time-shifting functions presented to content owners and content providers. Namely, “it allows the user to skip commercials, or paid advertisements, which can decrease the value of the program to the content owner, the content provider and advertisers.” Ex[1001], 1:46-49.

During prosecution of the ’710 Patent, the Examiner rejected the claims twice over the prior art. *See, e.g.*, Ex[1003], 45-50, 79-88. All original claims 1-20 were cancelled and new claims added, after which the Examiner issued a Notice of Allowability. Ex[1003], 118-20 (quoting claim renumbered as independent claim 9).

V. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSA”) pertaining to the ’710 Patent would have been someone with at least a bachelor of science in one of electrical engineering, computer engineering, computer science, or a similar technology degree, as well as two years of relevant industry experience, including Internet networking architectures, digital programming delivery in broadcast, cable, or television networks, and set-top boxes. Ex[1002] ¶42.

VI. CLAIM CONSTRUCTION

The District Court has not construed the ’710 Patent’s claims. Petitioner has

applied what it understands to be Patent Owner's interpretation of the terms as evidenced by the Complaint (Ex[1004]) and Initial Infringement Contentions (Ex[1005]) filed in the District Court matter. *See also* Ex[1002] ¶64. However, Petitioner submits that the prior art discloses or renders obvious every claim element under any reasonable construction, in accordance with 37 C.F.R. §42.100(b), as further explained in the grounds. Further, Petitioner reserves the right to construe any term as this proceeding and the District Court matter progress.

VII. SUMMARY OF PRIOR ART

The earliest possible priority date for the '710 Patent is the 11/01/2010 filing date of Provisional Application No. 61/408, 759. The Casagrande, Dow, and Russ references are prior art under 35 U.S.C. §102 even if Patent Owner establishes the challenged claims are entitled to the benefit of the 11/01/2010 filing date.

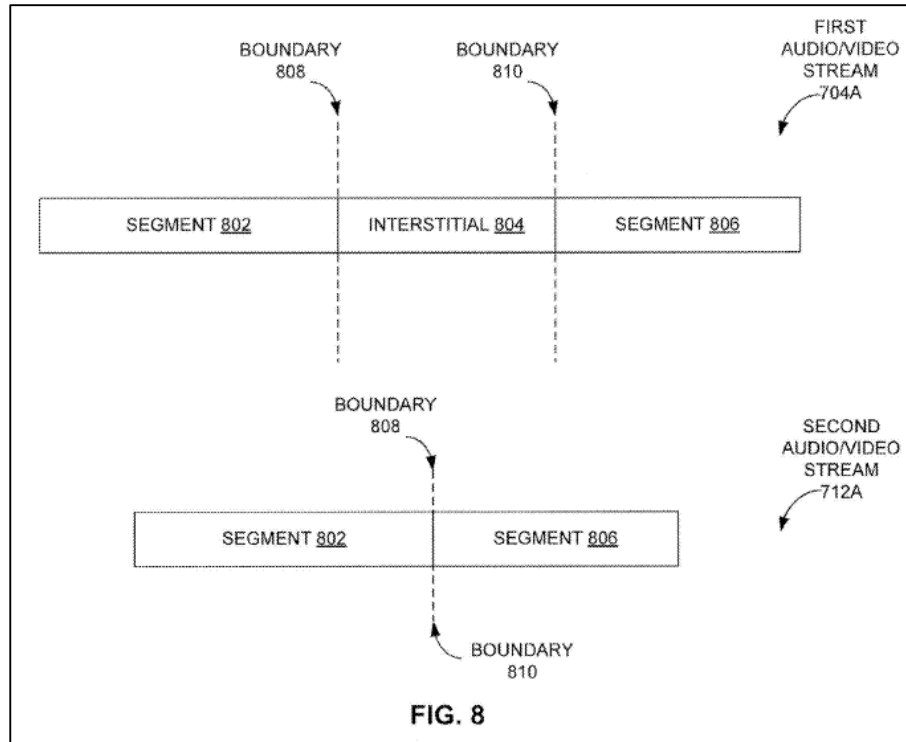
A. Casagrande (Ex[1006])

Casagrande, U.S. Patent No. 8, 510, 771, was filed on 05/04/2009, published on 06/24/2010, and issued on 08/13/2013. Because Casagrande is a patent that was filed and published before the '710 Patent's potential priority date, Casagrande is prior art under at least §§102(a) and (e).

Casagrande describes systems and methods for identifying locations within a presentation stream (i.e., video program) for filtering data segments from the stream. Ex[1006], Abstract. Casagrande uses metadata to "identify boundaries of segments within the presentation stream, such as segments of a show and interstitials (e.g.,

commercials) of the show.” *Id.* After identifying those segments, Casagrande allows playback of selected segments from the presentation stream and omitting others from the stream. *Id.*, 3:3-5, 20-29. Casagrande also discloses that the show may be associated with “playback restrictions” that restrict user operations or otherwise “prevent the user from maintaining” certain types of playback control, including outputting the stream “without skipping over” any segments, “regardless of whether a user provides input requesting....skipping.” *Id.*, 4:20-32, 6:1-3, 19:63-20:2.

Casagrande discloses a DVR that plays back a recorded program with the ability to perform traditional time-shifting functions, e.g., fast-forwarding, as well as *to skip over commercial breaks*. *See id.*, 1:22-26. Casagrande teaches that “a user may be restricted from temporally moving through particular identified segments.” *Id.*, 4:20-22. In other words, during a first period of time, Casagrande’s DVR will “automatically output particular segments of a presentation stream without skipping over or otherwise fast forwarding through the segments, regardless of whether a user provides input” requesting skipping or fast forwarding. *Id.*, 4:23-27. As shown below, Casagrande’s Figure 8 provides “a graphical representation of the first A/V stream received by the receiving device and a second A/V stream outputted by the receiving device.” *Id.*, 1:59-61.



Casagrande's first A/V stream 704A includes contiguous segments (segments 802 and 806, respectively) separated by interstitial 804 where removing interstitial 804 results in the device maintaining the order of segments 802 and 806 to form the second A/V stream 712A. *Id.*, Fig. 8. If there are no corresponding restrictions to time shifting the stream, then the DVR's control logic will (a) detect all interstitial content boundaries using the metadata's location information and signature data, (b) remove all interstitials from the stream, and (c) output a second stream containing only primary video content. *See, e.g., Id.*, 13:5-31.

When there are restrictions to time shifting the stream, Casagrande teaches its DVR's control logic, will output the stream in its entirety, or, alternatively, (a) detect some or all of the interstitials using the metadata's location information and

signature data, (b) replace some or all of the detected interstitials, and (c) output a second stream containing primary video content along with partial or entirely new interstitials. *See, e.g., id.*, 24:31-56.

B. Dow (Ex[1007])

Dow, U.S. Patent No. 7, 251, 413, was filed on 04/26/2002 and issued on 07/31/2007. Because Dow issued more than one year before the '710 Patent's potential priority date, Dow is prior art under at least §§102(a), (b), and (e).

Dow is directed towards “systems and methods for providing enhanced navigation of stored digital video content based upon an event index.” Ex[1007], Abstract. Specifically, Dow teaches the “detection of events in a video signal or data stream.” *Id.*, 3:53-54.

According to Dow, a video program “contains content of varying natures, for example, program segments and commercials.” *Id.*, 9:48-49. “These portions of content are viewed sequentially in a normal presentation, such as during a television broadcast.” *Id.*, 9:49-51. Dow teaches that its “commercial indexer 140, may detect events, analyze event patterns, and store data regarding identified transitions in content.” *Id.*, 6:61-64. “The data stored regarding the identified transitions in content may then be used by the program navigator 150 to provide enhanced playback options, such as commercial skipping.” *Id.*, 6:64-67.

Dow describes a control interface module that prompts control signals through a user interface. *Id.*, 24:16-20, 24:55-56. Similarly, Dow's interface module

“define[s] one or more control signals for toggling the commercial skip function between active and inactive modes.” *Id.*, 24:29-31. Thus, a user of Dow’s DVR may view television programs according to one of two playback states: a first state, where commercial skip is inactive; and a second state, where commercial skip is active.

Dow teaches that during certain time-periods, commercial skipping is always inactive because the DVR prohibits the toggling of the DVR’s commercial skip function. *Id.*, 24:44-48. During these times and others, users are prohibited from enabling the commercial skip function toggle, and thus must watch the entire video program. Ex[1002] ¶240.

C. Russ (Ex[1008])

Russ is a U.S. patent application publication that was filed on 04/05/2005 and published on 10/05/2006. Because Russ published more than one year before the ’710 Patent’s potential priority date, Russ is prior art under at least §§102(a), (b), and (e).

Russ describes the insertion of replacement material “into a presentation from a tuned source in a networked multi-room system (NMS) with a primary device and at least one remote device.” Ex[1008], Abstract. Specifically, Russ utilizes presentation metadata to display secondary content with a previously recorded presentation stream. *See id.* ¶¶0022, 0023, 0026-0031.

Russ teaches that “a user’s trick play functionality could be restricted while viewing a portion of the presentation, such as commercials.” *Id.* ¶0033. Russ teaches using a multipurpose tag to command a primary device to “preclude trick play for only a specified length of time, such as two weeks,” after which, a user may utilize trick play functionality. *Id.* ¶¶0034-0035. Thus, Russ teaches a technique where a user must view the entire presentation stream during a first time period (e.g., one week) and only a portion of the same presentation stream if viewed during a second time period occurring after the first time period.

D. Motivations to Combine

While Section VIII provides specific motivations to combine for individual claim limitations, a POSA would generally have been motivated to combine the teachings of Dow, Casagrande, and Russ for several reasons. Ex[1002] ¶86. First, Dow, Casagrande, and Russ all relate to users utilizing DVRs to view audio-video content. Ex[1007], Abstract; Ex[1006], 1:18-34; Ex[1008] ¶0003; Ex[1002] ¶86. All three references disclose the use of time-shifting functionality when viewing content on DVRs. Ex[1007], 9:37–39; Ex[1006], 9:64-67; Ex[1008] ¶0032; Ex[1002] ¶86. All three references teach the use of restrictions to prevent users from performing trick-play or skipping over content such as advertisements. Ex[1007], 24:44-48; Ex[1006], 9:64-67; Ex[1008] ¶0033; Ex[1002] ¶86. A POSA viewing the teachings of Casagrande and Dow, would naturally have looked to Russ

for additional details regarding the implementation of such functionalities on DVRs. Ex[1002] ¶86.

A POSA would have recognized that Russ's limits on the use of trick-play (e.g., fast-forwarding) based on time periods was applicable to the various types of trick play described in Casagrande, such as automatically skipping interstitials (e.g., commercials). *Id.* ¶86. A POSA would have been motivated to implement the known time-based limits on restrictions found in Russ in Casagrande's DVR to obtain the predictable result of restricting automatically skipping of interstitials for a finite time period, thereby increasing the financial value of the interstitial content to the broadcaster. *Id.* ¶¶86, 118. For those reasons, a POSA would have had a reasonable expectation of success incorporating Russ's techniques into Casagrande's DVR. *Id.* ¶118.

Similarly, a POSA would have naturally been motivated to combine Russ's teachings on limiting trick play functionality with Dow's commercial skip functions. While Dow expressly discloses restricting its commercial skip function in certain examples, Russ expressly teaches an example restricting trick play commercial skipping for a length of time "such as two weeks," which a POSITA would understand to be a potential way to implement Dow's commercial skip restrictions with a reasonable expectation of success. *Id.* ¶¶86, 343-345. In the same way a POSA would have been motivated to increase the financial value of interstitial content when combining Casagrande and Russ, a POSA would also have been

motivated to restrict a DVR user's ability to enable the Dow-taught commercial skip functionality. Ex[1002] ¶345.

VIII. ASSERTED GROUNDS

A. Ground 1: Claims 1-19 Are Obvious Over Casagrande and Russ

Casagrande in view of Russ renders obvious claims 1-19.

1. Independent Claims 1, 9, and 18

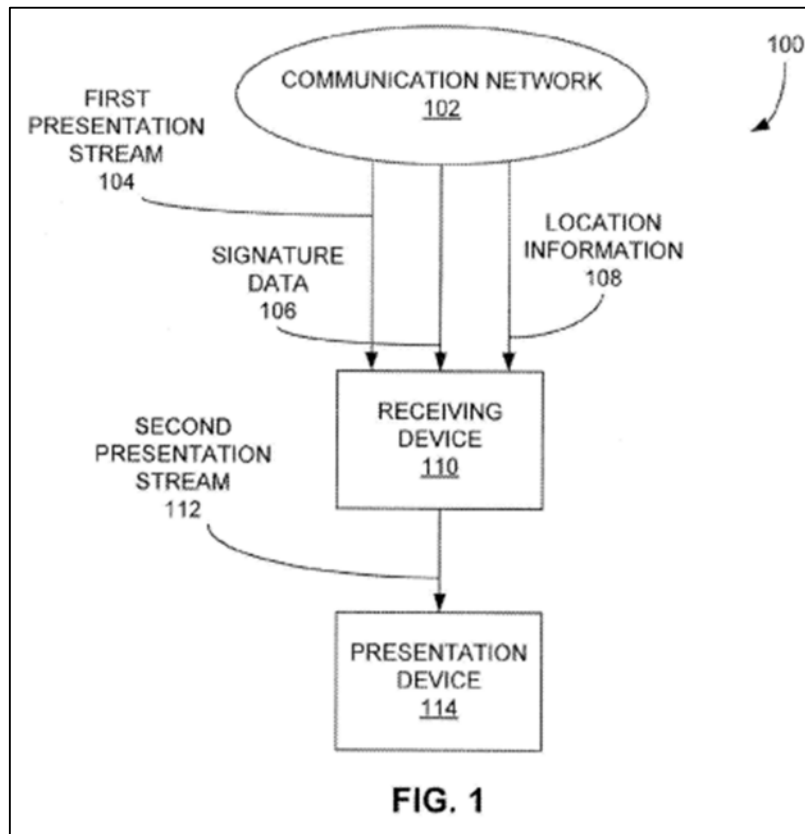
- a. *1[Pre]: "A digital video recorder ("DVR") for time shifting at least a portion of a transmitted video program, comprising:"; 9[Pre]; 18[Pre][i]*

To the extent they are limiting, Casagrande discloses these preambles. Casagrande discloses a DVR to "allow viewers to record video in a digital format to a disk drive or other type of storage medium for later playback." Ex[1006], 1:17-22. Casagrande explains that DVRs "are often incorporated to set-top boxes for satellite and cable television services" and that "[a] television program stored on a set-top box allows a viewer to perform time shifting functions, and may additionally allow a view to skip over commercial breaks." *Id.*, 1:21-25. Further, a POSA would have understood that "[t]ime-shifting was a well-known practice in A/V presentations as of the priority date of the '710 Patent, and includes pausing, fast forwarding, rewinding, skipping ahead, skipping back, and buffering." Ex[1002] ¶87.

- b. *1[a]: "a tuner for receiving said video program as transmitted, said video program including at least first, second, and third portions, wherein said second portion as transmitted is*

configured to follow said first portion, and said third portion as transmitted is configured to follow said second portion;”; 9[a]; 18[Pre][ii]; 18[a]

Casagrande explains that “[t]he receiving device 110 of Fig. 1 may be any device capable of receiving a presentation stream from the communication network 102.” Ex[1006], 6:26-34; Fig. 1 (below); Ex[1002] ¶88.



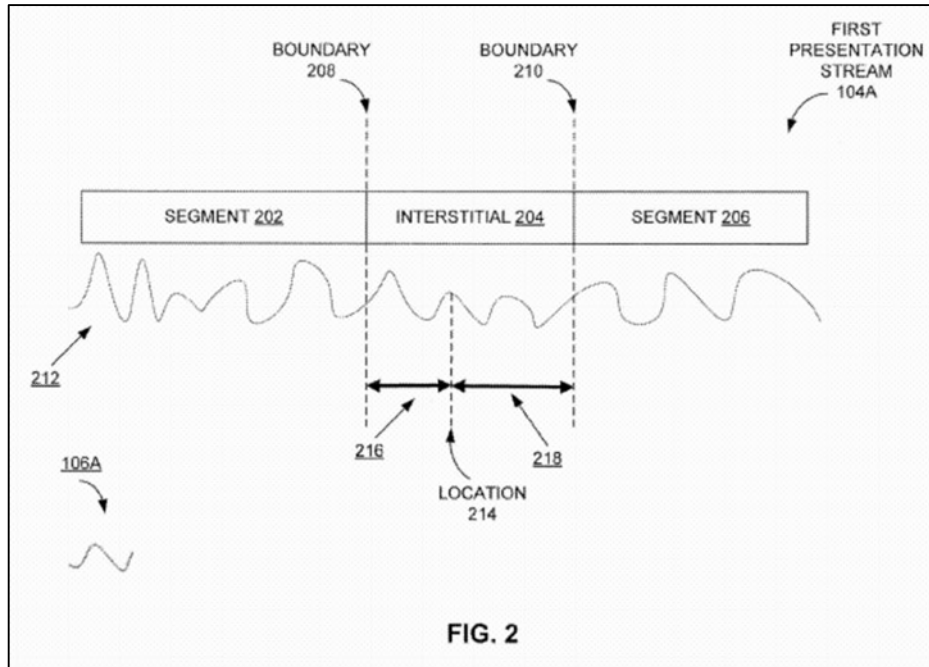
Further, Casagrande’s “communication network 102 comprises a cable or satellite television network for distribution of an A/V stream and the receiving device 110 comprises a set-top box [“STB”] configured to communicate with the communication network 102.” Ex[1006], 6:28-32; Ex[1002] ¶88. Casagrande’s STB includes a “communication interface 1502” with “circuitry to receive a first A/V stream 1504 and location information 1508.” Ex[1006], 17:62-64; Ex[1002]

¶90. Casagrande explains that “[i]f the receiving device 1510 is a satellite set-top box, then the communication interface 1502 may be configured to receive satellite programming, such as the first A/V stream 1504, via an antenna from a satellite transponder.” Ex[1006], 17:65-18:2; Ex[1002] ¶90. It may also be a “terrestrial (over the air) television receiver”. Ex[1006], 4:41-46; Ex[1002] ¶89. Casagrande teaches that “the location information 706 may be transmitted to the receiving device 710 together or separately from the first A/V stream 704” Ex[1006], 12:52-54.

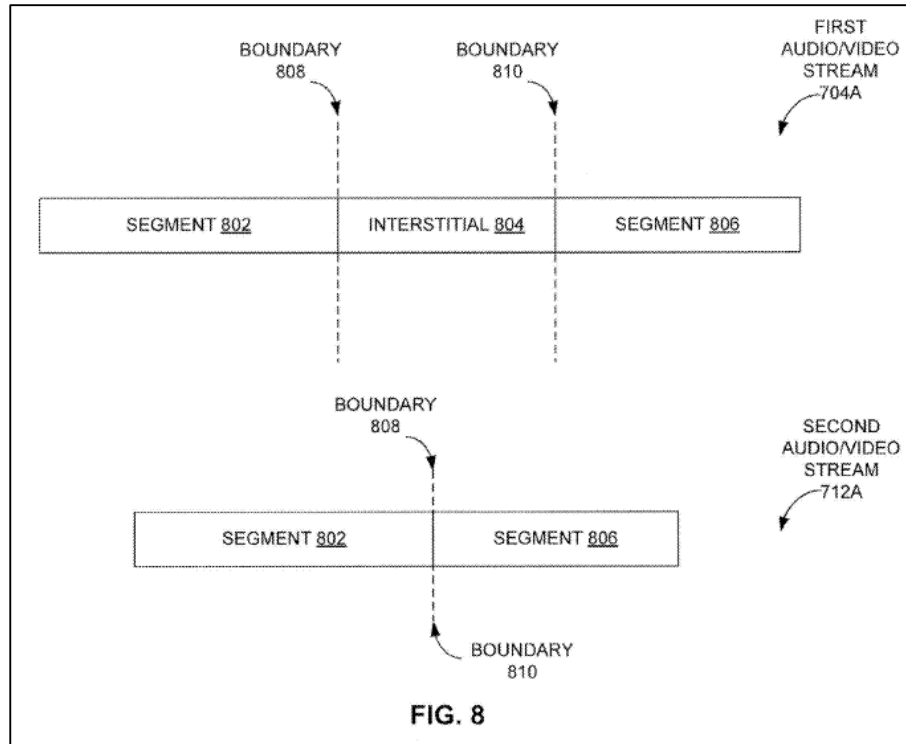
Casagrande describes configuring its receiving device 110 to receive a presentation stream, including an A/V stream or “a contiguous block of associated audio and video data.” Ex[1006], 4:41-46; Ex[1002] ¶89. Casagrande teaches that “the receiving device identifies portions of the presentation stream based on the identified location, such as the boundaries of segments of content or insertion locations of supplemental content.” Ex[1006], 3:1-5; Ex[1002] ¶89. The receiving device “then perform[s] further processing using the identified portions of the presentation stream, such as filtering of segments of the presentation stream.” Ex[1006], 3:5-7; Ex[1002] ¶89.

Casagrande also discloses the presence of “segments” and “interstitials” within the A/V streams. See Ex[1002] ¶94. Specifically, Casagrande discloses an exemplary A/V stream in Fig. 2 below, that “comprise[s] multiple segments of video frames, which are interspersed with interstitials (e.g., commercials).” Ex[1006], 4:57-62, Fig. 2 (below). Casagrande explains that “interstitials are the

video frames of a recording that do not belong to a selected show (e.g., commercials, promotions, alerts, and other shows).” *Id.*, 4:57-63; Ex[1002] ¶94.



Likewise, Casagrande’s Figure 8 details “a graphical representation of the first A/V stream received by the receiving device and a second A/V stream outputted by the receiving device.” Ex[1006], 1:59-61, Fig. 8; Ex[1002] ¶95.



The first A/V stream 704A has contiguous segments (segments 802 and 806, respectively) separated by interstitial 804. Ex[1002] ¶95. And as Figure 8 shows, segments 802 and 806 maintain their order after removal of the interstitial 804 to form the second A/V stream 712A. *Id.* ¶96. Accordingly, a POSA would have understood that Casagrande’s Figures 2 and 8 demonstrate that segments 202/802, interstitials 204/804, and segment 206/806 correspond to the claimed “first, second, and third portions, wherein said second portion as transmitted is configured to follow said first portion, and said third portion as transmitted is configured to follow said second portion.” *Id.* ¶96.

A POSA would have understood that Casagrande’s STB uses one or more tuners for receiving A/V content. *Id.* ¶93. It was well-known that satellite STBs

used a tuner to receive the data from a satellite transponder via the antenna. *Id.*

¶91. Similarly, it was well known that an over the air terrestrial receiver used a tuner to extract the relevant broadcast channel from the received signal. *Id.*

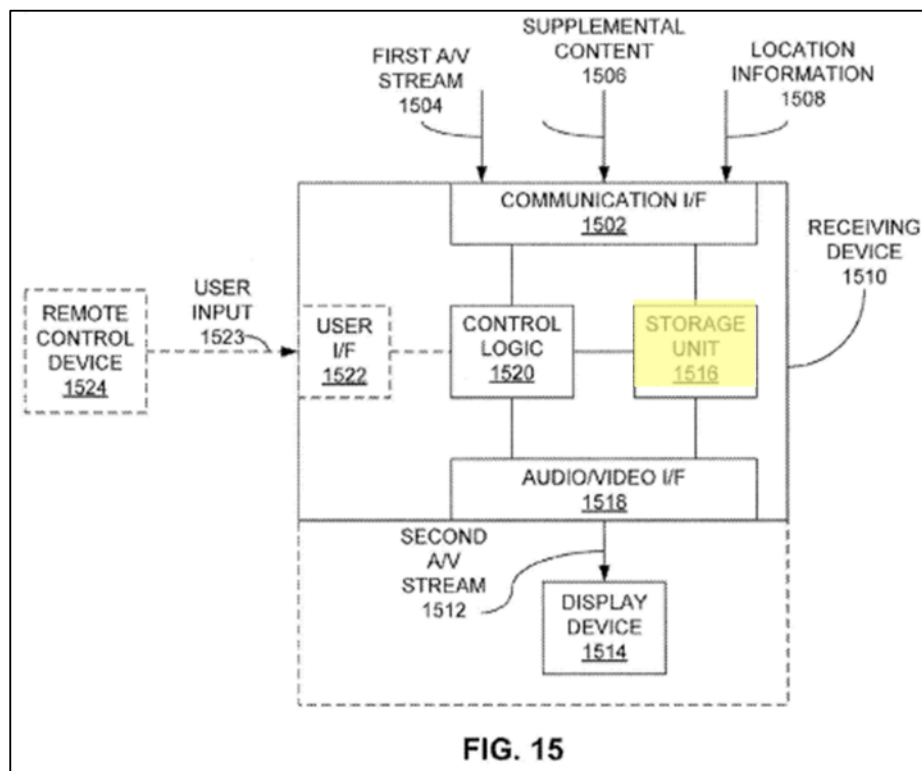
Russ explains that “[b]roadband communications systems, such as satellite and cable television systems, are now capable of providing many services in addition to analog broadcast video.” Ex[1008] ¶[0003]; Ex[1002] ¶92. Russ teaches that “[i]n implementing enhanced programming... the set-top box [] has become an important computing device for accessing various video services.” Ex[1008] ¶[0003]; Ex[1002] ¶92. Russ explains that the set-top box “includes a processor, a tuner system, a storage device, a modulator, and a remote device communications receiver.” Ex[1008] ¶[0020]; Ex[1002] ¶92. Russ explains that “[a] processor and a tuner system...may be included to extract channels from the received downstream broadband signals.” Ex[1008] ¶[0020]; Ex[1002] ¶92.

Thus, a POSA viewing the teachings of Casagrande and Russ would have understood that Casagrande discloses or renders obvious a DVR including one or more tuners to “extract channels” from the received A/V signal. Ex[1002] ¶93. A POSA would have been motivated to combine the teachings of Casagrande and Russ to properly process the received user input and A/V stream in Casagrande’s DVR. *Id.* It would be obvious to a POSA to use a tuner and related software, such as those disclosed in Russ, to implement Casagrande’s disclosure of extracting desired channels, because Russ showed that a tuner was effective for that purpose in a similar

system. *Id.*

- c. 1[b]: “a memory device for storing said video program, allowing at least a portion of said video program to be played back at a later time;”; 9[b]; 18[b]

Casagrande’s Figure 15 includes “a storage unit 1516, which is configured to store both the first A/V stream 1504 and the supplemental content 1506. The storage unit 1516 may include any storage component configured to store one or more such A/V streams.” Ex[1006], 18:18-25, Fig. 15 (highlighting added); Ex[1002] ¶98.



Casagrande explains that “[t]he receiving device 1510, by way of the control logic 1520...store[s] the A/V stream 1504 in the storage unit 1516.” Ex[1006], 18:64-67; Ex[1002] ¶99. Casagrande’s storage unit is, or includes, a memory

device for storing a received A/V stream. Ex[1002] ¶99.

Casagrande's storage unit allows for playback of the saved video program at a later time. *Id.* ¶100. Specifically, “[c]ommunicatively coupled with the storage unit 1516 is an A/V interface 1518, which is configured to output A/V streams from the receiving device 1510 to the display device 1514 for presentation to a user.” Ex[1006], 18:26-29; Ex[1002] ¶100.

- d. 1[c]: “a controller configured to receive commands from a user of said DVR, wherein a first command changes said DVR from a first payback state to a second playback state, and a second command initiates playback of said video program from said memory device;”; 9[c]; 9[d]; 9[e]; 18[c]

Casagrande teaches that its control logic “communicate[s] with a user interface 1522 configured to receive user input 1523 directing the operation of the device 1510.” Ex[1006], 18:54-60; Ex[1002] ¶102. Casagrande explains that “control logic 1520 includes a processor, such as a microprocessor, microcontroller, digital signal processor (DSP), or the like for execution of software configured to perform the various control functions described herein.” Ex[1006], 18:45-49; Ex[1002] ¶102. User input of commands can be “generated by way of a remote control device 1524, which may transmit the user input 1523 to the user interface 1522.” Ex[1006], 7:32-34, 18:54-60; Ex[1002] ¶¶101-102. The '710 Patent explains that user commands are “provided to the processor 740 via the controller 710.” Ex[1001], 8:15-16; Ex[1002] ¶92. Thus, a POSA would have understood that at least Casagrande's “user interface” comprises the claimed “controller”

because it communicates with the “remote control” to receive “user input” and to deliver instructions to “control logic” including a “processor.” Ex[1002] ¶103.

The ’710 Patent describes various commands: “a user (via the remote control 770 and the controller 710) may” enter commands such as “select[ing] a particular channel to watch or record.” Ex[1001], 7:40-42. Regarding the claimed “first command,” Casagrande teaches that “a user may select by way of the user input 1523 whether the first A/V stream 1504 or the second A/V stream 1512 is outputted to the display device 1514 by way of the A/V interface 1518,” corresponding to the claimed first and second playback states. Ex[1006], 19:63-66; Ex[1002] ¶105.

In particular, Casagrande explains that “[t]he receiving device 710A is operable to receive a first A/V stream 704” that “includ[es] at least one segment of a show, at least one interstitial of the show and text data.” Ex[1006], 15:21-24, 21:28-32; Ex[1002] ¶104. After processing the first A/V stream has begun, “the control logic 1520 generates and transmits the second A/V stream 1512.” Ex[1006], 19:10-14; Ex[1002] ¶104. Casagrande teaches that “the receiving device 710 filters particular portions from the first A/V stream 704 to output a second A/V stream 712 for presentation by the display device 714.” Ex[1006], 15:30-34; Ex[1002] ¶104. Particularly, the “second A/V stream” has the interstitials (e.g., commercials) removed from the first A/V stream. Ex[1002] ¶104.

Thus, Casagrande teaches a user selecting between a first playback state (i.e., playback of the entire first A/V stream) and a second playback state (i.e., playback

of the second A/V stream, excluding commercials). Ex[1002] ¶105.

Regarding the claimed “second command,” Casagrande explains that “a user may be presented with a menu of available segments of the television program, and may select one or more of the available segments for presentation.” Ex[1006], 4:1-4; Ex[1002] ¶¶177, 106. Further, Casagrande explains that “[b]ased upon user selection of particular segments from the selection menu, the receiving device responsively outputs the selected segments.” Ex[1006], 4:4-8; Ex[1002] ¶106.

Thus, a POSA would have understood that Casagrande’s second command from a user of the DVR indicates a desire to playback at least a portion of the video program. Ex[1002] ¶106.

- e. 1[d][i]: “at least one processor configured to (i) provide said video program in its entirety to a display device in response to receiving said second command regardless of a playback state of said DVR if said second command is received during a first period of time,”; 9[f][i]; 18[d][i]

Casagrande teaches the use of “control logic 1520 [that] **includes a processor**...for execution of software configured to perform the various control functions described herein.” Ex[1006], 18:45-49; Ex[1002] ¶¶108-109. That control logic 1520 is “configured to control the operation of each of” the “communication interface 1502, the storage unit 1516, and the A/V interface 1518.” Ex[1006], 18:42-45; Ex[1002] ¶109. Casagrande further explains that “A/V interface 1518...is configured to output A/V streams from the receiving device 1510 to a display device 1514 for presentation to a user.” Ex[1006], 18:26-29; Ex[1002]

¶109.

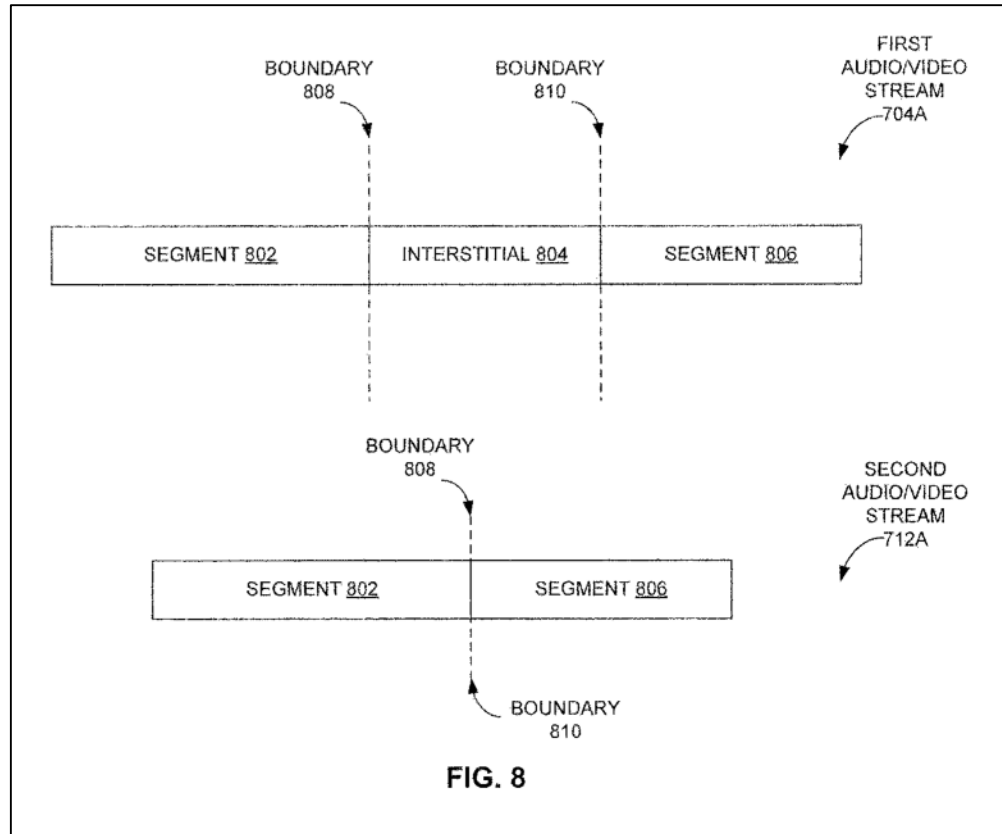
A POSA would also have understood that Casagrande teaches that the entirety of the A/V presentation (e.g., the first A/V stream) may be presented in some cases, even when the user requests the shortened version without commercials (the second A/V stream). Ex[1002] ¶110. As Casagrande explains: “a content provider of the first A/V stream 1504 *may prevent the user from maintaining such control.*” Ex[1006], 19:66-20:2; 5:66-6:3; Ex[1002] ¶110. Casagrande specifically explains that “commercials within a television program may be associated with *restrictions against fast forwarding or skipping*, and a recording device may *automatically present the commercial segments regardless of the receipt of user input requesting non-presentation of the segments.*” Ex[1006], 4:28-32; Ex[1002] ¶110. Thus, Casagrande teaches playback of the entire first A/V stream during a first period of time (i.e., while restrictions are active), “regardless of” whether the first or second playback state had been requested by the user. *Id.* ¶111.

As discussed below, the combination with Russ would entail these restrictions on skipping/etc. being limited to a particular time period.

- f. 1[d][ii]: “(ii) *provide said video program in its entirety to said display device in response to receiving said second command if said second command is received during a second period of time and said DVR is in said first playback state, and*”; 9[f][i]; 18[d][ii]

Similar to Casagrande, Russ discloses its “trick play functionality” for skipping commercials “could be restricted,” particularly suggesting to “*preclude*

trick play for only a specified length of time, such as two weeks.” Ex[1008] ¶¶ [0034]-[0035]; Ex[1002] ¶114. Russ further explains that “a tag corresponding with a commercial could expire after a period of time.” Ex[1008] ¶[0035]; Ex[1002] ¶114. Thus, Russ discloses the desirability of having a first period of time wherein the user must watch the entire A/V stream, including commercials, regardless of whether the user requested playback of a commercial-free stream. Ex[1002] ¶114. Similarly, Russ discloses the desirability of having a second period of time (i.e., once the restriction expires) in which the user may elect to skip the commercials or not. *Id.* ¶114. A POSA would have been motivated to combine the time-based restrictions of Russ with the ability to restrict the skipping of interstitials as illustrated by Casagrande’s Figure 8 below.



This combination would effectuate the desired result of restricting “temporally moving through particular identified segments” that Casagrande discusses. Ex[1006], 4:20-21; Ex[1002] ¶117. A POSA would have found it obvious to apply the time-based nature of the restrictions on trick-play taught in Russ as a way to implement the various “playback restrictions” found in Casagrande, including the restriction on skipping commercials entirely. *Id.* ¶¶114-118; Ex[1006], 4:20-32; 5:67-6:1. Casagrande and Russ both disclose restrictions on removing interstitials that are directly linked to first and second periods of time. Ex[1002] ¶117. A POSA would therefore have looked to the teachings and methods of Russ for guidance on how to further achieve Casagrande’s desired results.

Id.

A POSA would have recognized that Russ's limits on the use of trick play based on time periods was applicable to the various types of trick play described in Casagrande, such as automatically skipping interstitials (e.g., commercials). *Id.*

¶116. A POSA would have been motivated to implement the known time-based limits on restrictions found in Russ in Casagrande's DVR to obtain the predictable result of restricting automatically skipping of interstitials for a finite period of time, thereby increasing the financial value of the interstitial content to the broadcaster.

Id. ¶116. A POSA would have had a reasonable expectation of success incorporating Russ's techniques into Casagrande's DVR, as they would have entailed simple software/user interface modifications well within the skill in the art, and because a similar technique had been shown to work in Russ's similar system. [expert cites on expectation of success].

Further, a POSA would have understood that some users would be more willing to accept restrictions on commercial skipping soon after distribution of the content while others may be willing to wait to watch the program in order to allow commercial skipping. *Id.* ¶118. Accordingly, a POSA would have understood that Russ's technique allows the content provider to obtain additional revenue from advertisements during the restriction period. *Id.* As Casagrande discloses, some commercials become less relevant over time, further confirming the obviousness of having an initial period where commercials are shown, and a later period where

commercials can be skipped.

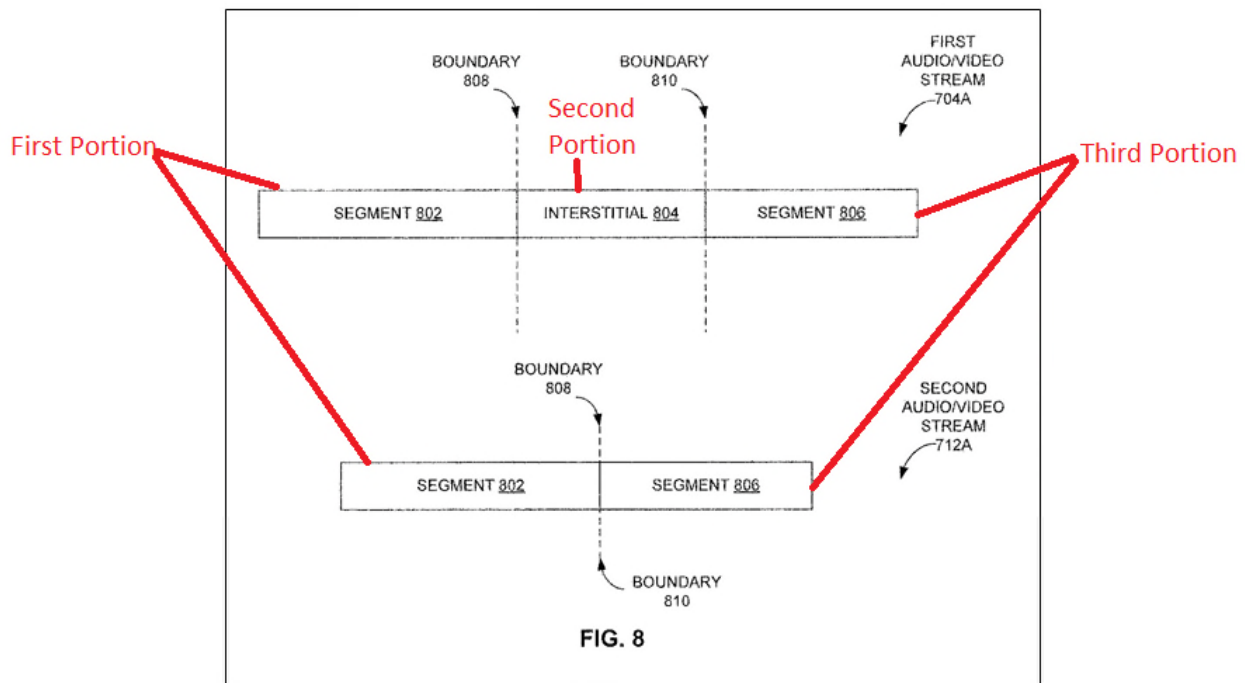
A POSA would also have recognized that the time-based limits on restrictions of Russ were one of a number of finite, identified solutions to providing restrictions to skipping or fast-forwarding through content. *Id.*

Casagrande and Russ disclose a first period of time where only the first A/V stream may be played such as when the content provider has placed restrictions on removing interstitials. *Id.* ¶113. A POSA would have appreciated that multiple reasons existed for a user of Casagrande to select the playback of the first A/V stream (i.e., the entire video program) even after a period of restriction on commercial skipping had ended, such as, for example, when watching the Super Bowl where commercials may be of particular interest. *Id.* ¶104.

- g. 1[d][iii]: “(iii) provide only a portion of said video program to said display device in response to receiving said second command if said second command is received during said second period of time and said DVR is in said second playback state, said portion of said video program including at least said first and third portions of said video program, wherein said third portion of said video program is provided to said display device immediately following said first portion of said video program if said second command is received during said second period of time and said DVR is in said second playback state;”; 9[f][iii]; 18[d][iii]

A POSA would have understood that Casagrande’s “second A/V stream” effectively includes a subset of segments in the original temporal order of the first A/V stream without the identified interstitial content. *Id.* ¶121. Casagrande’s Figure 21 illustrates the “process for processing an audio/video stream.” Ex[1006],

23:45-46, Fig. 21; Ex[1002] ¶121. Using Figure 21's steps, Casagrande teaches that a user "may effectively view a subset of the segments of an A/V stream in the original temporal order of the segments, skipping output of undesigned segments of the A/V stream." Ex[1006], 24:23-26; Ex[1002] ¶121. This is shown in Casagrande's Figure 8, annotated below. Ex[1006], 13:5-8, Fig. 8; Ex[1002] ¶121.



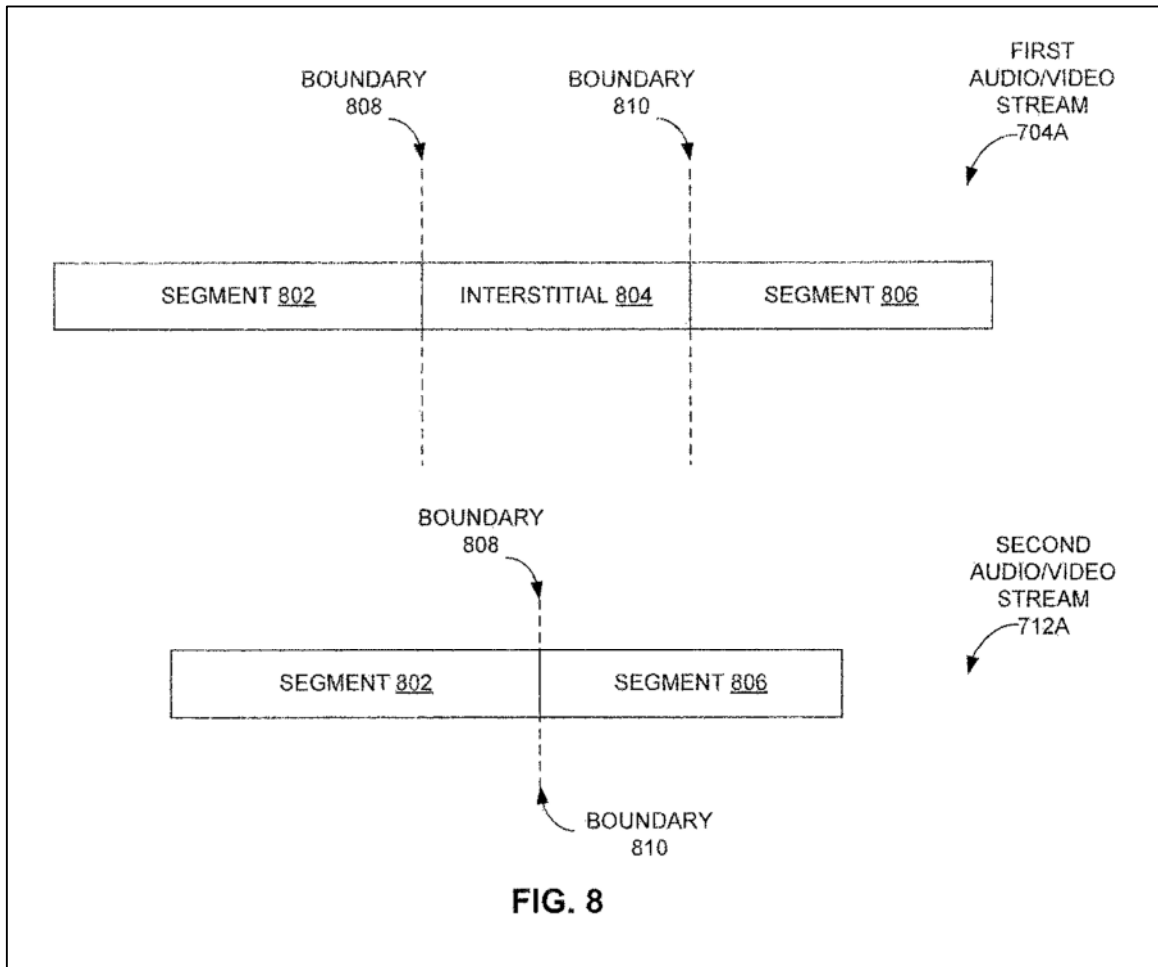
In Casagrande, "a first A/V stream 704 includes a first A/V segment 802 of a show, an interstitial 804 and a second A/V segment 806 of the show." Ex[1006], 13:13-15. Casagrande teaches that "the boundary 808 (e.g., the ending boundary of segment 802) is the starting point at which the interstitial 804 is to be filtered from the first A/V stream 704A" and that "the boundary 810 (e.g., the beginning boundary of segment 806) is the ending point at which the interstitial 804 is to be filtered from the first A/V Stream 704A." *Id.*, 13:23-28; Ex[1002] ¶122. Casagrande explains

that “[a]s a result of the filtering...the second segment 806 [third portion] is outputted immediately following the first segment 802 [first portion].” Ex[1006], 13:29-31; Ex[1002] ¶121.

As discussed for claim element 1[d][ii], in the combination with Russ, once the commercial skipping inhibition period (i.e., the claimed first period of time) expires, the combination would permit the user to request playback of the “second A/V stream” where the commercial is removed as described above. *Id.* ¶¶122, 123.

- h. 1[e]: “*wherein said second period of time is a period of time after said first period of time.*”; 9[g]

As noted, Russ explains that “a tag corresponding with a commercial could expire after a period of time after which the tag would become inactive or replaceable.” Ex[1008] ¶[0035]; Ex[1002] ¶125. In other words, during the first period of time, the combination of Casagrande and Russ results in the ability to play only the “first A/V stream” as shown in Figure 8, regardless of whether the user requests playback of a stream without commercials. Ex[1006], Fig. 8; Ex[1002] ¶125.



Further, the second period of time wherein skipping of commercials is allowed begins once the restriction expires. Ex[1002] ¶126.

2. Claims Depending From Claims 1, 9, and 18

- a. *Claim 2: “The DVR of claim 1, wherein said controller is configured to receive said commands from a remote control operated by said user of said DVR.”*

As discussed above, Casagrande discloses a controller housed within a receiving device that receives transmitted user commands from a user input device, such as a remote control. *Id.* ¶129; *see also* Ex[1006], Fig. 15 (depicting remote control device 1524 transmitting user input 1523 to the receiving device 1510 and

into the control logic 1520). The remote control device 1524, “may transmit the user input 1523 to the user interface 1522 by use of, for example, infrared (IR) or radio frequency (RF) signals.” Ex[1006], 18:54-60; Ex[1002] ¶129. Casagrande also explains that various time shifting commands can be done “manually, for example, using a fast forward button of a remote control associated with a DVR.” Ex[1006], 1:26-30; Ex[1002] ¶129.

- b. *Claim 3: “The DVR of claim 1, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second portion of time and said DVR is in said second playback state includes said primary video content and only a portion of said secondary video content.”*

Claim 12: “The method of claim 9, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes said primary video content and only a portion of said secondary video content.”

Casagrande discloses that its DVR receives and displays a television program having multiple segments of video frames, which are interspersed with interstitials (e.g., commercials, promotions, alerts, etc.). Ex[1006], 4:57-59; Ex[1002] ¶133. A POSA would have understood that Casagrande’s multiple segments of video frames correspond to the claimed “primary content” while interstitials correspond to the claimed “secondary content.” Ex[1002] ¶133. Casagrande’s interstitials are the video frames of a recording that do not belong to a selected show. *Id.* ¶134.

To remove them, Casagrande discloses that the receiving device 710A will then “operate to output the content within the boundaries 1106 and 1108 [of a video segment]...and utilize the identified boundaries to determine content to skip during output of a second A/V stream.” Ex[1006], 16:4-12; Ex[1002] ¶134.

Regarding the limitation wherein the video includes “only a portion of said secondary video content,” Casagrande discloses that “a user may be presented with a menu of available segments of the television program, and may select one or more of the available segments for presentation.” Ex[1006], 4:1-4; Ex[1002] ¶135. Casagrande explains that “[t]he receiving device may identify segments and generate a selection menu therefrom. Based upon user selection of the particular segments from the selection menu, the receiving device responsively outputs the selected segments, skipping presentation of the undesignated segments.” Ex[1006], 4:4-8; Ex[1002] ¶135. Specifically, Casagrande teaches that “a user may select particular news stories that they desire to view, and the recording device may output the selected news stories back-to-back, skipping presentation of undesignated segments interspersed therebetween.” Ex[1006], 4:8-12; Ex[1002] ¶135. Further, Casagrande explains that a “DVR may automatically output particular segments of the A/V stream without skipping over or otherwise fast forwarding through the segments, regardless of whether a user provides input requesting fast forwarding or skipping through the segment. For example, commercials within a television program may be associated with restrictions against fast forwarding or skipping, and

a recording device may automatically present the commercial segments regardless of the receipt of user input requesting non-presentation of the segments.” Ex[1006], 24:34-43; Ex[1002] ¶135.

- c. *Claim 4: “The DVR of claim 1, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes only said primary video content.”*

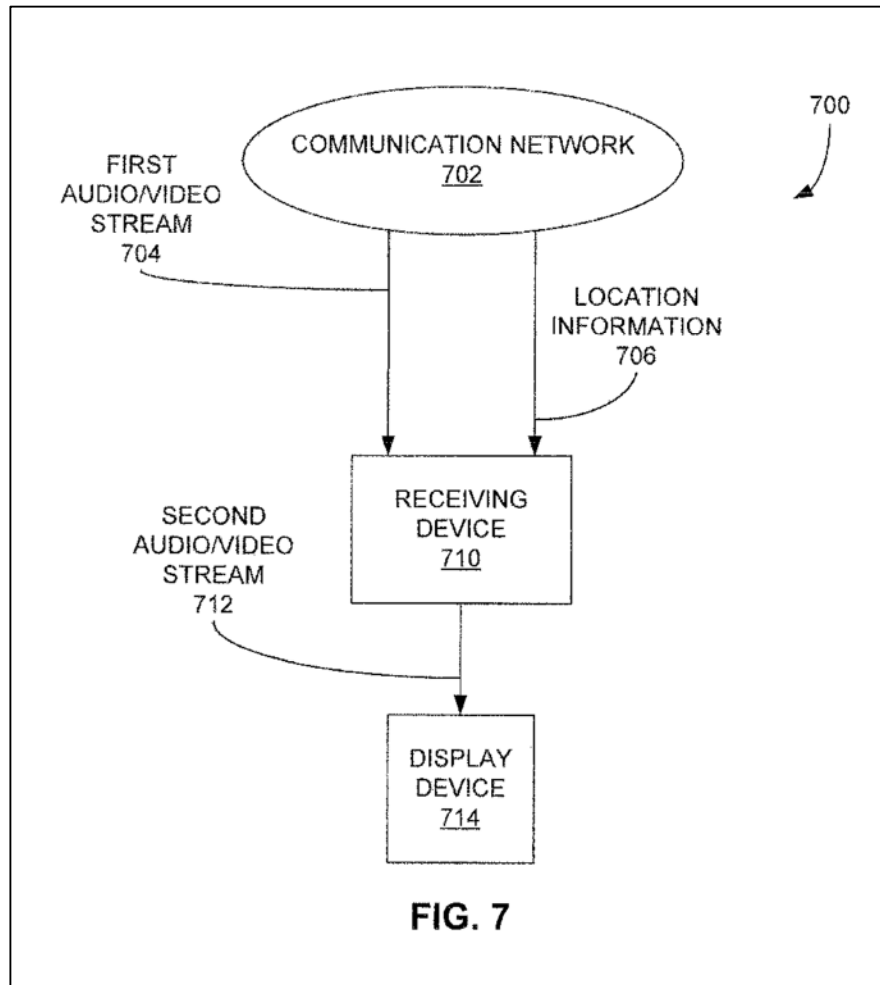
Claim 13: “The method of claim 9, wherein said video program includes at least primary and secondary video content, and said portion of said video program that is provided to said display device if said second command is received during said second period of time and said DVR is in said second playback state includes only primary video content.”

A POSA would have understood that Casagrande’s multiple segments of video frames correspond to the claimed “primary content” while Casagrande’s interstitials correspond to the claimed “secondary content.” Ex[1002] ¶138. Further, Casagrande discloses a “second A/V stream” comprising only the video segments and not the interstitials. *See supra* Claim Element 1[d][iii]. For instance, Casagrande discloses “the receiving device 710 may output the video content...omitting presentation of the interstitial.” Ex[1006], 14:40-44; Ex[1002] ¶141. Thus, Casagrande discloses this claim. Ex[1002] ¶142.

- d. *Claim 5: “The DVR of claim 4, wherein said memory device is further configured to store at least one time when said secondary video content begins and at least one time when said secondary video content ends.”*

Casagrande teaches a storage unit within the receiving device. *See supra* Claim Element 1[b]; Ex[1002] ¶144. Casagrande also discloses the use of “location information 108” that “specifies portions of the first presentation stream 104 that are to be skipped and/or presented during presentation of the A/V data of the first presentation stream 104 by the receiving device 110.” Ex[1006], 7:35-39; Ex[1002] ¶144. In other words, “the location information 108 may identify which portions of the content of the first presentation stream 104 are to be presented and/or skipped during presentation to a user.” Ex[1006], 7:67-8:3; Ex[1002] ¶144. The location information, as described throughout Casagrande, includes “metadata associated with the presentation stream,” which further includes information as to where the boundaries separating A/V segments and/or interstitials exist. *See* Ex[1006], 2:36-38; Ex[1002] ¶144. Casagrande also discloses a “first A/V stream 704 includ[ing] a first A/V segment 802 of a show, an interstitial 804, and a second A/V segment 806 of the show. Also indicated are beginning and ending boundaries 808 and 810 of the interstitial 804, which are indicated to the receiving device 710 (see FIG. 7) by way of the location information 706. It is to be recognized that the boundaries 808 and 810 of the interstitial 804 are also boundaries of the segments 802 and 806.” Ex[1006], 13:13-20; Ex[1002] ¶144.

With reference to Figure 7, reproduced below, Casagrande explains that “[t]he communication network 702 also transmits location information 706 to the receiving device 710.” Ex[1006], 12:51-52, Fig. 7; Ex[1002] ¶144.



Casagrande teaches that “[t]he location information 706 may be transmitted to the receiving device 710 together or separately from the first A/V stream 704.” Ex[1006], 12:52-54; Ex[1002] ¶145. Finally, Casagrande explains that “the location information 1508 may be stored in the storage unit 1516 for subsequent retrieval and processing by the control logic 1520.” Ex[1006], 19:6-9; Ex[1002] ¶145.

- e. *Claim 6: “The DVR of claim 1, wherein said first period of time is a period of time that is less than one week from said transmission of said video program, and said second period of time is any time after said first period of time.”*

Claim 15: “The method of claim 9, wherein said first period of time is a period of time that is less than one week from said transmission of said video program, and said second period of time is a time period after said first period of time.”

Claim 14: “The method of claim 9, wherein said first period of time is a first day after said video program has been transmitted, and said second period of time is a time period thereafter.”

Russ teaches “trick play functionality” such as “fast forward” may be used to skip commercials. Ex[1008] ¶0033; *see supra* Claim Element 1[d][iii]. Russ also teaches that trick play “could be restricted while viewing a portion of a presentation, such as commercials” and “would not work for certain commercials as specified, for example, by the local cable operator or the presentation programmer.” Ex[1008] ¶[0033]; Ex[1002] ¶149. Russ explains that “[t]he commercial slot could also preclude trick play for only a specified length of time, such as two weeks.” Ex[1008] ¶[0035]; Ex[1002] ¶149.

A POSA would have understood that Russ’s disclosure of a two week period is exemplary in nature. Ex[1002] ¶150. Russ discloses “a specified length of time” and then uses the phrase “such as” to show a particular example. *Id.* A POSA would have understood that a day, or a weekend is also an example of “a specified length of time” that would be an obvious implementation choice. *Id.* For example, a “local cable operator” or “presentation programmer” would have found it obvious to specify period of time, such as a day or weekend, if a particular commercial were only relevant for that time period. *Id.* For example, a

“presentation programmer” may include a commercial for an event that takes place the next day, or only during the weekend. *Id.* Thus, the receiver of Casagrande may would be able to automatically skip the commercial after that event. Ex[1002] ¶¶ 193-195, 150.

- f. *Claim 7: “The DVR of claim 4, wherein said secondary video content comprises at least one advertisement.”*

Claim 16: “The method of claim 13, wherein secondary video content is at least one advertisement.”

Casagrande discloses an A/V stream that may be a “television program” that is “comprised of multiple segments of video frames, which are interspersed with interstitials (e.g., commercials).” Ex[1006], 4:57-59; Ex[1002] ¶153. Specifically, Casagrande explains that “interstitials” can be commercials. Ex[1006], 4:59-62; Ex[1002] ¶153.

- g. *Claim 8: “The DVR of claim 1, wherein said at least one processor is further configured to”*

Casagrande discloses that “a processor...or the like...to perform the various control functions.” Ex[1006], 18:45-49; Ex[1002] ¶156; *see also supra* Claim Element 1[d][i].

- (a) Claim 8[a]: “(i) retrieve said portion of said video program from said memory device if said second command is received during said second period of time and said DVR is in said second playback state, and”

Casagrande teaches that “[r]esponsive to identifying portions of the first A/V stream 704, the receiving device 710 filters particular portions from the first A/V

stream 704 to output a second A/V stream 712 for presentation by the display device 714.” Ex[1006], 15:30-34; Ex[1002] ¶157. Casagrande explains that “[d]epending on the implementation, the second A/V stream 1512 may or may not be stored as a separate data structure in the storage unit 1516.” Ex[1006], 19:37-39; Ex[1002] ¶157. Specifically, Casagrande teaches that “[b]oth the first A/V stream 1504 and the second A/V stream 1512 may reside within the storage unit 1516.” Ex[1006], 19:43-44; Ex[1002] ¶157. Additionally, “[i]n one implementation, a user may select by way of the user input 1523 whether the first A/V stream 1504 or the second A/V stream 1512 is outputted to the display device 1514 by way of the A/V interface.” Ex[1006], 19:63-66; Ex[1002] ¶157. Casagrande then explains that “[a]t some point after the location information 1508 is processed, the control logic 1520 generates and transmits a second A/V stream 1512 over the A/V interface 1518 to the display device 1514.” Ex[1006], 19:10-13; Ex[1002] ¶158.

Thus, a POSA would have understood that Casagrande discloses a processor, by way of a control logic, configured to retrieve a said second portion of a video program from a memory device if a said second command is received during a said second period of time and said DVR is in a said second playback state. Ex[1002] ¶159.

- (b) Claim 8[b]: “(ii) retrieve said video program in its entirety from said memory device if another second command is received at a time thereafter

and said DVR is switched to said first playback state at or before said time thereafter.”

A POSA would have understood that changing the “playback state” of Casagrande is not temporally limited to before the first request to view an A/V stream is received and processed. *Id.* ¶163. Thus, a subsequent request to view the “first A/V stream” comprising the entire content stream may be received after a request to view the “second A/V stream” has been processed. *Id.* Casagrande explains that “a user may select by way of the user input 1523 whether the first A/V stream 1504 or the second A/V stream 1512 is outputted to the display device 1514 by way of the A/V interface 1518.” Ex[1006], 19:63-66; Ex[1002] ¶163. Casagrande discloses that “both the first A/V stream 1504 and the second A/V stream 1512 may reside within the storage unit 1516.” Ex[1006], 19:44-45; Ex[1002] ¶164.

- h. *Claim 10: “The method of claim 9, wherein said step of receiving said video program further comprises receiving said video program from a satellite via an antenna.”*

As explained above, Casagrande explains that the received program can be from a satellite via an antenna. *See supra* Claim Element 1[a]. See also Ex[1006], 4:33-40; 17:62-18:2; (“receive satellite programming, such as the first A/V stream 1504, via an antenna from a satellite transponder.”); Ex[1002] ¶¶182-183.

- i. *Claim 11: “The method of claim 9, wherein said step of storing said video program in said DVR further comprises storing at least one time of when said second portion of said video program begins and at least one time of when said second portion of said*

video program ends, wherein said portion of said video program provided during said second time and when said DVR is in said second playback state does not include at least said second portion.”

Casagrande discloses the additional limitations of this claim. *See supra* Claims 4 and 5. Ex[1002] ¶¶185-187.

- j. *Claim 17: “The method of claim 11, wherein said step of receiving said video program further comprises receiving said video program, said at least one time of when said second portion of said video program begins, and said at least one time of when said second portion of said video program ends from a satellite, wherein each one of said at least one times is received by said DVR after said video program is stored on said memory device.”*

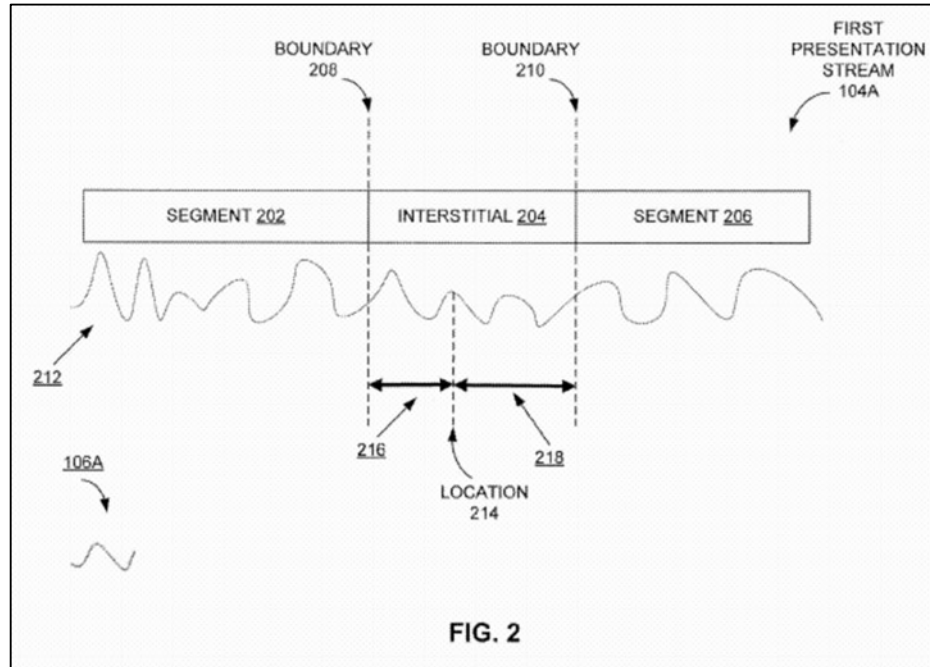
Casagrande teaches storing the video program and the times of when a second portion of the video program begins and ends. *See supra* Claim 11; Ex[1002] ¶201. Casagrande also discloses receiving this information from a satellite. *See supra* Claim 10; Ex[1002] ¶202. Further, Casagrande teaches that “[t]he location information 706 may be transmitted to the receiving device 710 together or separately from the first A/V stream 704.” Ex[1006], 12:52-54; Ex[1002] ¶203. Thus, a POSA would have understood that the location information that includes “each one of said at least one times” may be received after storage of the video stream and/or that receiving the location information after storage of the video stream would be obvious in view of Casagrande’s teaching and suggestion. Ex[1002] ¶204.

- k. *Claim 19: “The method of claim 18, wherein said first and third*

portions of said video program include primary content and said secondary portion includes secondary content.”

Casagrande teaches its DVR will receive and display a television program comprised of multiple segments of video frames, which are interspersed with interstitials (e.g., commercials, promotions, alerts, etc.). Ex[1006], 4:57-59; Ex[1002] ¶216. A POSA would have understood that Casagrande’s multiple segments of video frames correspond to the claimed “primary content” while Casagrande’s interstitials correspond to the claimed “secondary content.” Ex[1002] ¶216. Indeed, Casagrande states that its interstitials are the video frames of a recording that do not belong to a selected show. *Id.* ¶217.

Casagrande discloses that an A/V stream, such as depicted in Fig. 2 below, “comprise[s] of multiple segments of video frames, which are interspersed with interstitials (e.g., commercials).” Ex[1006], 4:57-63, Fig. 2; Ex[1002] ¶218. Casagrande specifies that “interstitials are the video frames of a recording that do not belong to a selected show (e.g., commercials, promotions, alerts, and other shows).” Ex[1006], 4:57-63; Ex[1002] ¶218.



Thus, all challenged claims are obvious over Casagrande alone or in combination with Russ. Ex[1002] ¶222.

B. Ground 2: Claims 1-5, 7-13, and 16-19 Are Anticipated by Dow.

1. Independent Claims 1, 9, and 18

a. 1[Pre], 9[Pre], and 18[Pre][i]

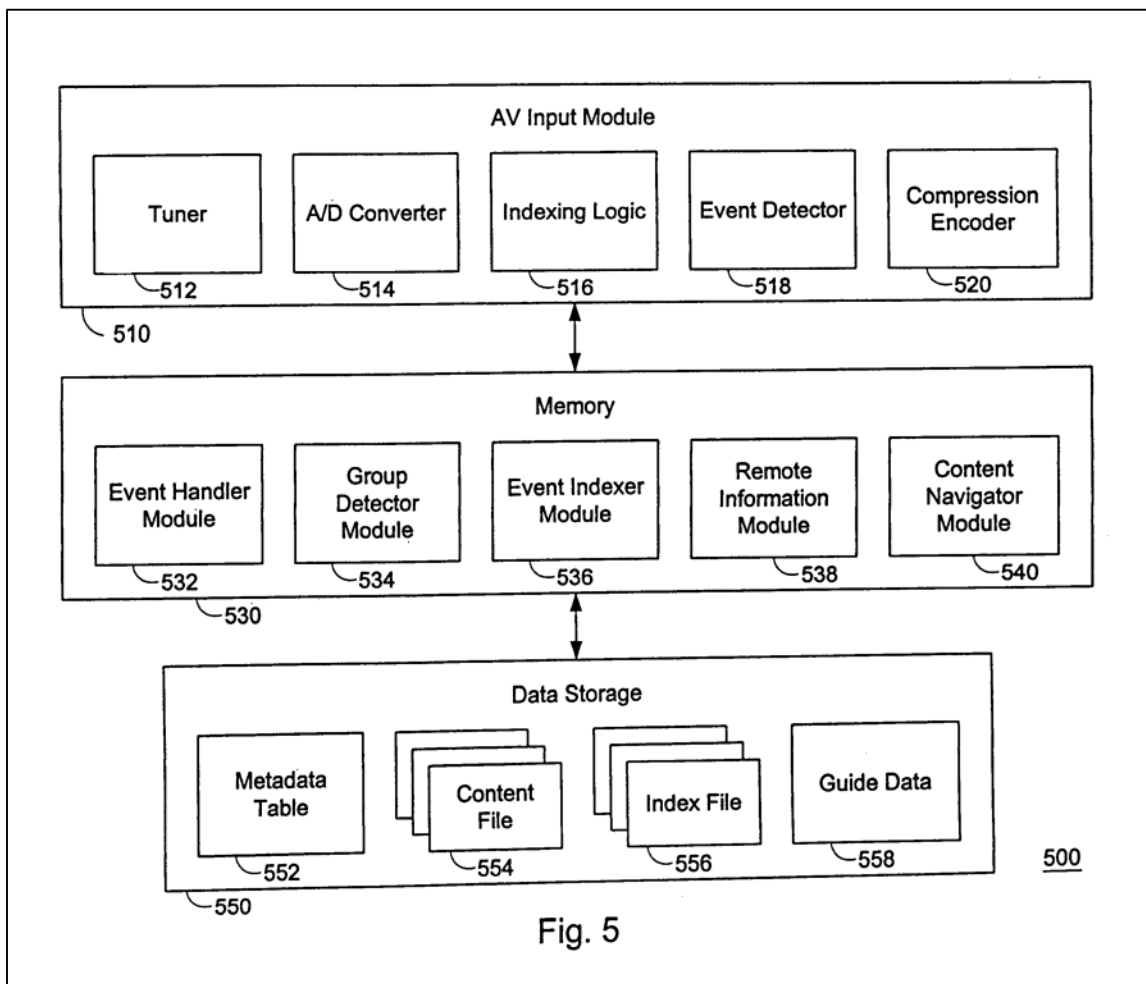
To the extent they are limiting, Dow discloses these preambles. Dow teaches a DVR that “provide[s] a large number of enhancements for receiving, storing, and viewing video content,” including “enhanced navigation options, such as slow motion, fast-forwarding, and rewinding.” Ex[1007], 3:2-26.

Dow discloses methods for skipping entire portions of a presentation. For example, Dow teaches its DVR receives program-associated data and utilizing that data to detect the location of embedded commercial programs for ultimately

skipping over them when they would otherwise be presented. *See id.*, 6:53-7:6.

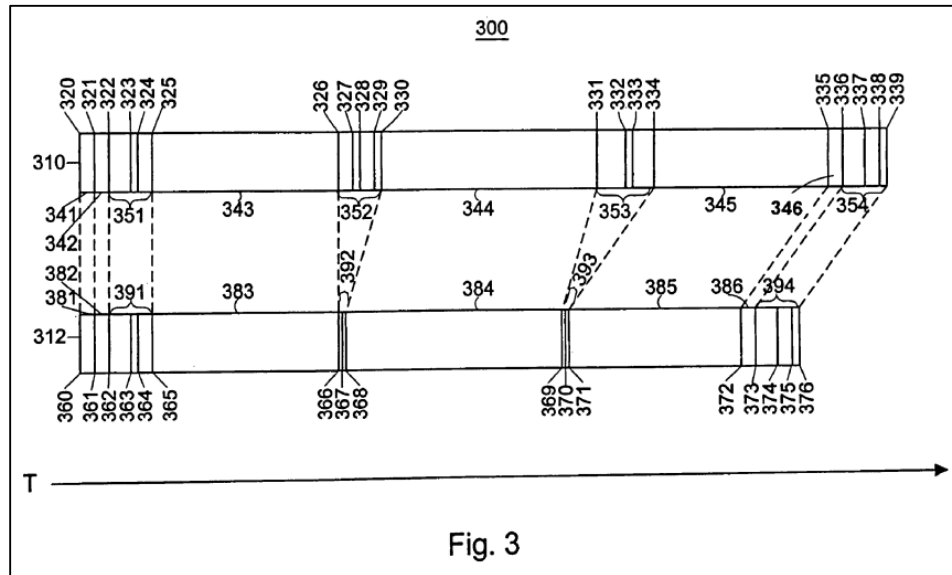
b. 1[a], 9[a], 18[Pre][ii], and 18[a]

According to Dow, “the AV input module 510 receives an external signal, such as a broadcast signal, signal from another playback device, or packetized communication signal.” *Id.*, 12:35-37; Fig. 5 (below).



Referencing Figure 5, Dow recites an “AV input module [that] includes a tuner 512,...indexing logic 516, [and] event detector 518.” *Id.*, 12:28-30. “The tuner 512 is a conventional tuner for selecting a signal or channel from a spectrum of available signals or channels.” *Id.*, 12:31-32.

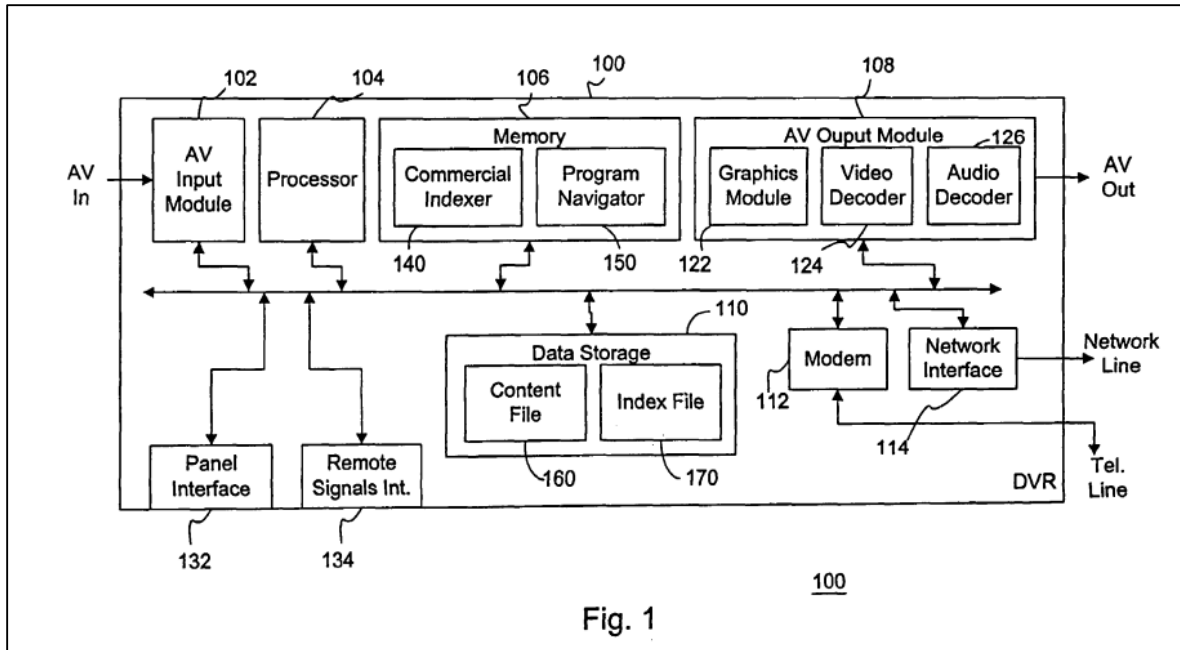
Dow further teaches a video program containing “portions of content” that are “viewed sequentially in a normal presentation, such as during a television broadcast or standard replay from a recorded source. *Id.*, 9:49-52, Fig. 3 (below).



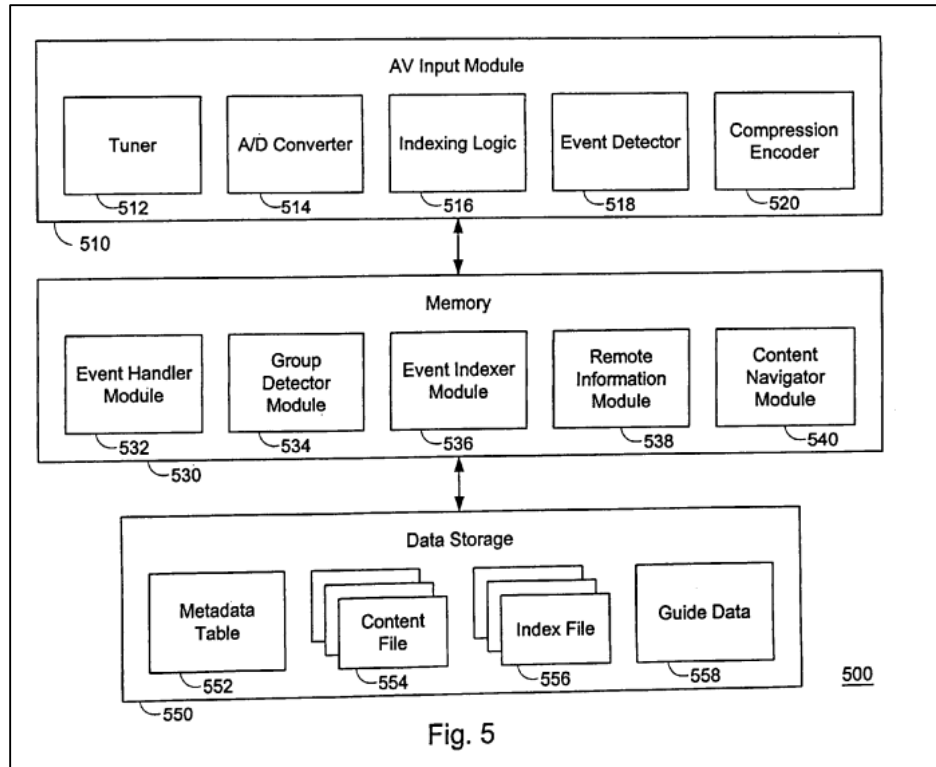
Dow explains that “[t]he program 300 contains content of varying features, for example, program segments and commercials.” *Id.*, 9:48-49. Figure 3 depicts a video program 300, a first portion comprising content 343, a second portion comprising a commercial group 352, and a third portion comprising content 344.

c. 1[b], 9[b], and 18[b]

Dow’s DVR “includes...a memory 106,...[and] a data storage medium 110.” *Id.*, 5:3-9, Fig. 1 (below).



Dow teaches that “the DVR memory 106 includes an [sic] commercial indexer 140 and a program navigator 150 and the data storage 110 includes at least one content file 160 and at least one index file 170.” *Id.*, 6:45-48. Referencing Figure 5, Dow explains that the “memory 530 includes software modules for processing received data, selectively storing secondary data, and providing navigation of stored content. The data storage 550 includes files for storing content and other data used in the operation of the DVR.” *Id.*, 12:11-17, Fig. 5 (below).



Thus, as Figure 5 shows, Dow's DVR contains a memory device for storing a received video program, allowing for a portion of said video program to be played back at a later time.

d. $1[c]$, $9[c]-9[e]$, and $18[c]$

As Dr. Jeffay explains, “[t]he first portion of claim element $1[c]$, a controller configured to received commands from a user of said DVR, generally claims devices related to remotely controlling the DVR system.” Ex[1002] ¶231. The’710 Patent explains the controller is “in communication with a remote control 770 (e.g., as operated by a user of the system),” it receives a user command via the remote control, and it subsequently transmits the command to the DVR’s processor. Ex[1001], 7:32-34.

In Dow, “the processor 104 executes instructions such as those stored in the memory 106 to provide functionality” of the DVR. Ex[1007], 5:9-12, Fig. 1 (below). The user controls the operation of Dow’s DVR “through control signals originating from a remote control, which are received through the remote signals interface 134, in conventional fashion.” *Id.*, 5:21-26.

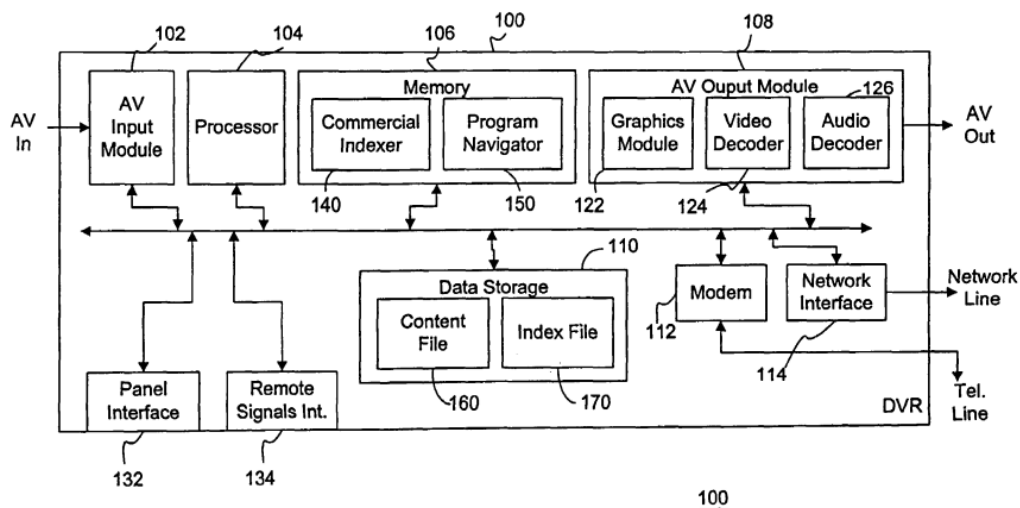


Fig. 1

Similarly, Dow teaches a control interface module for providing an interface between the navigation function module and the DVR generally. The control interface module “define[s] one or more control signals for toggling the commercial skip function between active and inactive modes, such as a button on (and corresponding control signal from) a remote control,” thereby defining a first command for changing from disabled commercial skipping (first playback state) to enable commercial skipping (second playback state). *Id.*, 24:29-32.

Dow further teaches its controller receives a second command to initiate playback

of the program stored in memory. For instance, Dow explains that the control interface module provides “a global default through a menu system for defining whether commercial skip function is active or inactive at the start of playback (e.g., when the play button is pressed),” indicating a second command. *Id.*, 24:37-40. “The menu overlay 420 displays one or more ways of viewing the previously recorded programs, including using the commercial skipping feature. Display of menu overlay 420 may be initiated based on a control signal received from the user.” *Id.*, 11:42-46. Dow discloses that “the user may select one or more of the programs for recording,” indicating a third command. *Id.*, 6:14-15.

Dow teaches providing a portion of a stored program to a display device in response to receiving the second command indicating the user’s desire to view that portion. For example, “a user of the DVR 100 may use its enhanced navigation features to view recorded content with substantially reduced commercials.” *Id.*, 9:37-39. Dow also explains that “the DVR may skip from location of the event corresponding to the beginning of the commercial group to the location of the event corresponding to the end of the commercial group, thus skipping the commercial group” and only presenting a portion of the video program to the user. *Id.*, 26:53-56; Ex[1002] ¶284. And Dow’s Figure 4 depicts an exemplary display device. Ex[1007], 5:29-33 (explaining DVR may be built into display device), 11:1-12:4, Fig. 4.

e. 1[d][i], 9[f][i], and 18[d][i]

Dow's processor generally "executes instructions such as those stored in the memory 106 to provide functionality." *Id.*, 5:9-12.

Dow's control interface module defines "variables governing the activation of the navigation function when the DVR is in a particular state, such as playback mode, playback menu mode, live view mode, program guide menu mode, etc." *Id.*, 24:24-27. The control interface module defines "control signals for toggling the commercial skip function between active," when the user may skip commercials, "and inactive modes," when the user may not skip any commercials. *Id.*, 24:30-31. Dow teaches that "[t]he control interface module 818 may define that commercial skip is always inactive in live view mode or in delayed view mode (a form of playback) where there is insufficient time to buffer and process events for identifying commercial groups (e.g., a time delay of less than two minutes)." *Id.*, 24:43-48.

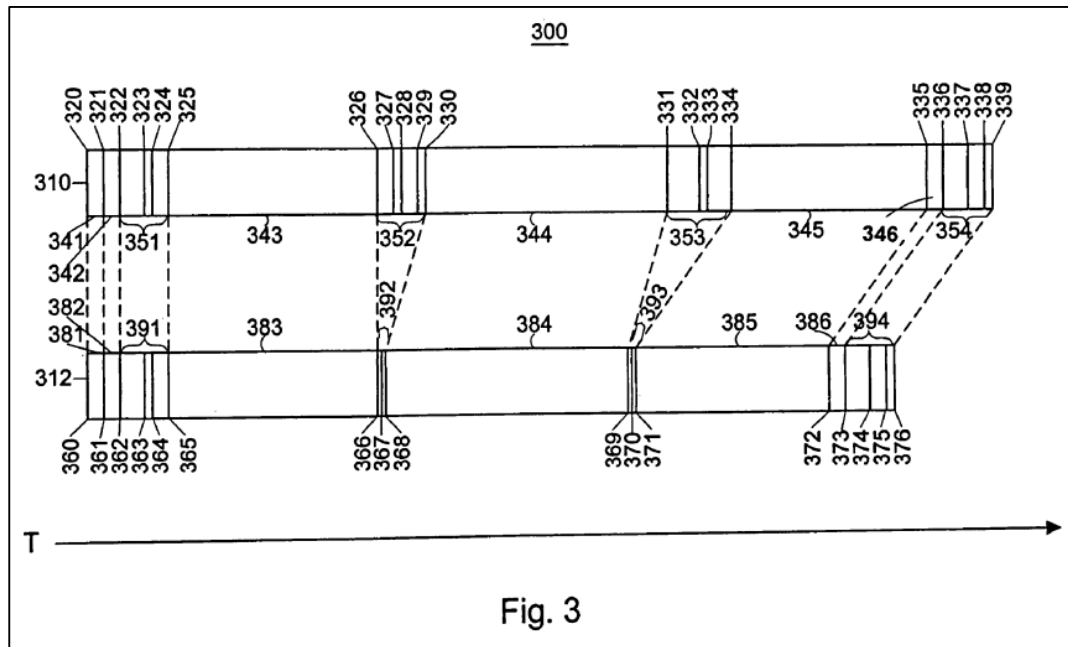
f. *1[d][ii], 9[f][ii], and 18[d][ii]*

Dow's first playback state occurs when the commercial skip feature is not enabled. As discussed above, Dow's control interface module defines "one or more control signals for toggling the commercial skip function between active and inactive modes, such as a button on (and corresponding control signal from) a remote control." *Id.*, 24:29-32. Thus, a user of Dow's DVR may disable the commercial skip feature in a second period of time.

g. *1[d][iii], 9[f][iii], and 18[d][iii]*

Dow's Figure 3 "shows a timeline of a program 300 that has been recorded

on a DVR.” *Id.*, 9:39-40.



Dow explains that “[t]he first timeline 310 is the program 300 as it may be viewed in correspondence with how it was originally presented and stored on DVR 100. The second timeline 312 is the program 300 viewed with one embodiment of an automated commercial skipping feature enabled.” *Id.*, 9:40-45. In the second timeline 312, Figure 3 illustrates commercial-skip-indicators 392, 393. Dow, however, teaches that those indicators are optional such that “[p]rogram segments 383, 384, and 385 would be presented sequentially without any interruption or other indication that commercials had been skipped.” *Id.*, 10:45-47.

h. *1[e] and 9[g]*

Dow’s DVR maintains the ability to toggle the commercial skip function. In certain instances, namely “where there is insufficient time to buffer and process events for identifying commercial groups” commercial skipping is inhibited. *Id.*,

24:44-47. Because the user cannot enable commercial skip during that period of time, the second period of time during which commercial skip is available must occur after the first period of time. Ex[1002] ¶243.

In sum, Dow anticipates claims 1, 9, and 18.

2. Claims Depending From Claims 1, 9, and 18

a. Claim 2

Dow teaches that “[t]he user may control the operation of the DVR 100 through control signals...originating from a remote control, which are received through the remote signals interface 134, in conventional fashion.” Ex[1007], 5:21-26; Ex[1002] ¶246-247.

b. Claims 3 and 12

Dow discloses a video program containing content of varying natures, “for example, program segments and commercials.” *Id.*, 9:48-49. Those content portions “are viewed sequentially in a normal presentation, such as during a television broadcast or standard replay from a recorded source” but are viewed without commercials in presentations using Dow’s commercial skip function. *Id.*, 9:49-52.

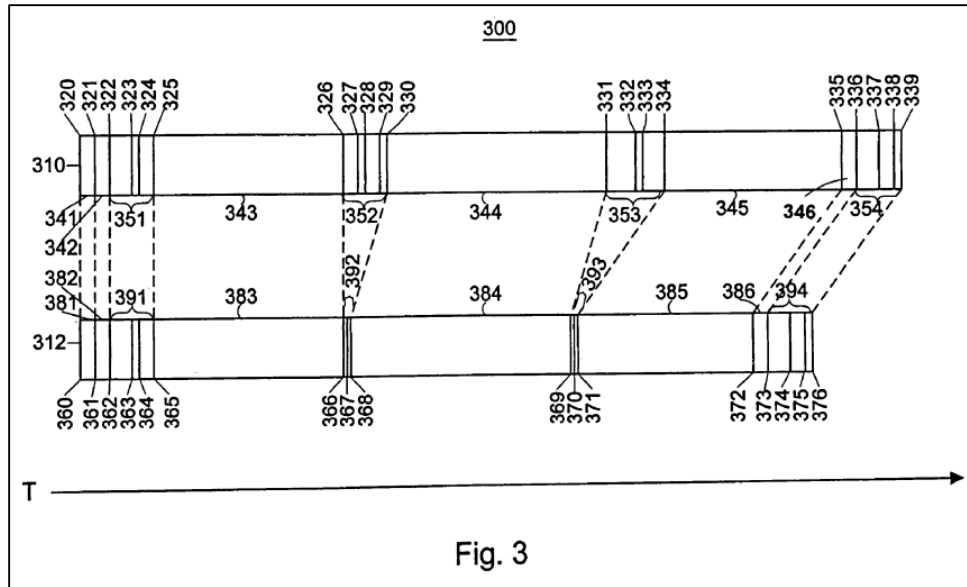
As Dr. Jeffay explains, “Dow also teaches a commercial skip feature, which is utilized to filter commercials or certain chapters from a video program.” Ex[1002] ¶250. Dow teaches that, in a first time period, “where there is insufficient time to buffer and process events for identifying commercial groups,” the

commercial skip feature “is always inactive.” Ex[1007], 24:44-47; Ex[1002] ¶250. During a second time period, when the commercial skip feature is enabled, Dow discloses that users may utilize the DVR’s “enhanced navigation features to view recorded content with substantially reduced commercials.” Ex[1007], 9:37-39; Ex[1002] ¶250. Dow’s DVR “may provide an indicator in order to notify the user that the commercial skip function has skipped commercial content. For example, the content navigation module 540 may play a small portion of one or more commercials in a skipped commercial group.” Ex[1007], 16:5-9; Ex[1002] ¶250.

c. *Claim 4 and 13*

Dow discloses a video program containing content of varying natures, including primary and secondary video content. Ex[1007], 9:49-52; Ex[1002] ¶253. As shown for claims 3 and 12, users view those content portions sequentially in a normal presentation, e.g., a television broadcast, but are viewed without commercials using Dow’s commercial skip function. Ex[1007], 9:49-52.

Dow’s commercial skip feature is utilized to filter commercials or certain chapters from a video program. Ex[1002] ¶254. During the second time period (when Dow’s commercial skip feature is enabled), the DVR will playback a portion of the original video program containing only primary video content. *See supra* claim 1[e]. As Figure 3 shows, “[t]he second timeline 312 is the program 300 viewed with one embodiment of an automated commercial skipping feature enabled.” Ex[1007]9:43-45, Fig. 3 (below).



“Program segments 383, 384, and 385 would be presented sequentially without any interruption or other indication that commercials had been skipped. *Id.*, 10:47-50. The user may also “select whether or not beginning and ending segments are subject to detection and skipping” such that certain embodiments “skip all commercials in a program based upon user aggressiveness settings or alternate event pattern detection techniques.” Ex[1007], 10:62-66; Ex[1002] ¶254.

d. *Claim 5*

Dow teaches a DVR having, among other features, a memory and a data storage medium. Ex[1002] ¶257. The DVR also contains an event indexer module, which “provides the logic for writing an event index into the data storage 550.” Ex[1007], 14:48-49; Ex[1002] ¶257. According to Dow, “[t]he event indexer module 536 receives one or more identifiers and corresponding file locations for those identifiers. For example,...a first tag indicating a starting location for a

commercial group and a second tag indicating an ending location for a commercial group,” which Dow teaches are indicative of the time when scene changes or commercial groups begin. Ex[1007], 14:49-57; Ex[1002] ¶257.

e. *Claims 7 and 16*

The ’710 Patent explains that “secondary video content” refers to “auxiliary data,” which includes advertisements, news tickers, or crawlers. Ex[1002] ¶260; Ex[1001], 5:48-49. Dow discloses a video program that “includes a number of commercials embedded within the video presentation.” Ex[1007], 10:17-18; Ex[1002] ¶260.

As Dow’s Figure 3 illustrates, “[t]he commercials are embedded as commercial groups, depicted as commercial groups,” comprising “3-4 commercials separated by a corresponding number of transitions.” Ex[1007], 10:19-25. Thus, the commercials embedded within the video presentation correspond to secondary content.

f. *Claim 8*

(a) Claim 8[i]

Dow discloses a processor that “executes instructions such as those stored in the memory 106 to provide functionality” to the DVR. *Id.*, 5:10-11. According to Dow, “[t]he user may control the operation of the DVR 100 through control signals...originating from a remote control, which are received through the remote signals interface 134, in conventional fashion.” *Id.*, 5:21-26.

Further, as explained above, Dow’s “control interface module 818 provides an interface between operation of the navigation module 814 and general operation of the DVR.... For example, a commercial skip function may be active or inactive during playback. The control interface module 818 may define one or more control signals for toggling the commercial skip function between active and inactive modes, such as a button on (and corresponding control signal from) a remote control.” *Id.*, 24:14-32.

According to Dr. Jeffay, “when the commercial skip feature of Dow’s DVR is activated, a user may use the DVR’s enhanced navigation features to view recorded content that has been retrieved from memory “with substantially reduced commercials.” Ex[1002] ¶265 (quoting Ex[1007], 9:37-39).

(b) Claim 8[ii]

Dow teaches a commercial interface module that defines “one or more control signals for toggling the commercial skip function between active and inactive modes, such as a button on (and corresponding control signal from) a remote control.” Ex[1007], 24:29-32. Thus, Dow’s DVR can switch back to a first playback state, during which commercial skipping is inactive.

Further, Dow discloses the retrieval of a video program in its entirety via a menu overlay that “displays one or more ways of viewing the previously recorded programs, including using the commercial skipping features. Display of menu overlay 420 may be initiated based on a control signal received from the user, e.g.,

when the user presses select on the remote control.” *Id.*, 11:42-47.

g. *Claim 10*

Dow explains that its DVR’s AV module “receives input through various conventional interfaces, including coaxial RF/Ant, S-Video, component audio/video, network interfaces, and others.” *Id.*, 5:34-36. As Dow illustrates, “[t]he received signals can originate from standard NTSC broadcast,...***satellite***, Internet, or other sources, with the AV input module 102 being configured to include appropriate conventional tuning and/or decoding functionality.” *Id.*, 5:36-41. A POSA would have understood Dow’s system includes an antenna for receiving such satellite-provided content. Ex[1002] ¶291; Ex[1007], 1:11-19, 6:39-44; Ex[1001], 4:13-28 (acknowledging satellite receivers were known in art).

h. *Claim 11*

Dow discloses storing the time when a commercial group or second portion begins and ends. Ex[1002] ¶292; *see also supra* Claim 5. Dow discloses playing only the primary program content (e.g., the content segments and not the commercials) when the commercial skip feature of Dow’s DVR is enabled (e.g., the second playback state). Ex[1002] ¶293; *see also supra* Claim 4.

i. *Claim 17*

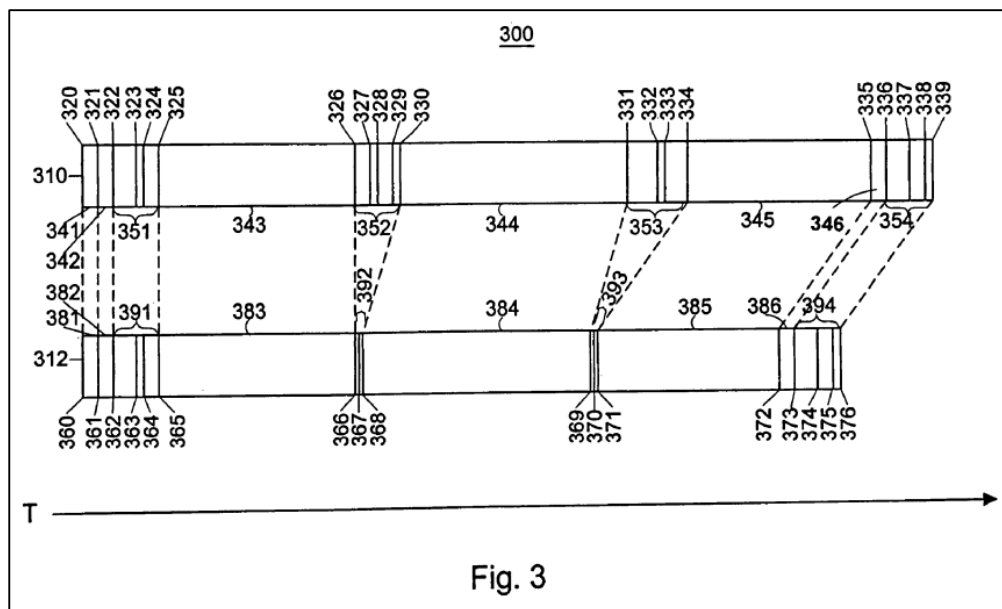
Dow teaches receiving a video program from a satellite. *See supra* Claim 10; Ex[1002] ¶¶291, 305. Dow also discloses that “event data or other metadata may be provided with received video data.” Ex[1007], 14:17-19. Dow indexes

this metadata into a metadata table and stores it in the DVR's data storage unit. *Id.*, 16:59-60. Importantly, “[t]he metadata table 552 provides a variety of information regarding [the] stored video programs.” *Id.*, 16:61-62. Specifically, the metadata table includes “program name, one or more categories, program description, rating information, running time, recording quality, source, data/time of recording, etc.” *Id.*, 17:9-11. Additionally, the metadata table includes “the location of a corresponding content file, corresponding index file (time-based index file and/or commercial index file), a data pointer for where the last viewing left off, etc.” *Id.*, 17:14-17. The program information of the metadata table is “derived from guide data” communicated alongside the received video data. *Id.*, 17:20-21;14:17-19.

j. *Claim 19*

The '710 Patent explains that “time-shifted” data is “data that has been recorded and is being played back” at a later time. Ex[1001], 4:52-54. Dr. Jeffay explains that auxiliary data refers to data such as advertisements, news tickers, “crawlers, and the like.” Ex[1002] ¶318 (citing Ex[1001], 4:51-52). “The purported aim of the '710 Patent is to provide for the addition of auxiliary data, or secondary video content, to primary content, or time-shifted data. Ex[1002] ¶318 (citing Ex[1001], 3:62-64).

Dow teaches a video program containing “a number of commercials embedded within the video presentation.” Ex[1007]10:17-19, Fig. 3 (below).



“The commercials are embedded as commercial groups, depicted as commercial groups 351-354 in the first timeline 310.” *Id.*, 10:19-20. “There are four commercial groups 351-354 contained in the first timeline 310, representing the commercial groups as broadcast and recorded.” *Id.*, 10:23-27. The program content, on the other hand, “is depicted as program content 341-346 in the first timeline 310.” *Id.*, 10:6-7.

In sum, Dow anticipates claims 1-5, 7-13, and 16-19.

C. Ground 3: Claims 1-19 Are Obvious Over Dow and Russ.

Claims and elements not discussed below are disclosed or rendered obvious for the reasons stated above in Ground 2. Ex[1002] ¶323.

1. Independent Claims 1, 9, and 18

To the extent Patent Owner asserts that Dow does not disclose or render obvious the elements of claims 1, 9, and 18 discussed below, Dow and Russ render

obvious those elements.

a. 1[d][ii], 9[f][ii], and 18[d][ii]

Dow discloses providing an entire video program in response to receiving a command initiating playback. *See supra* claim elements 1[c] and 1[d][i]. Dow explains this functionality can occur during either a first time period or a second time period, or both. When the commercial skip function of Dow is inactive, Dow plays the video program in its entirety due to “insufficient time to buffer and process events for identifying commercial groups.” Ex[1007], 24:46-47. According to Dow, this occurs while the video is being played back at some delay.

Russ teaches “trick play functionality” such as “fast forward” may be used to skip commercials. Ex[1008] ¶[0033]; Ex[1002] ¶343. Russ also teaches that trick play “could be restricted while viewing a portion of a presentation, such as commercials” and “would not work for certain commercials as specified, for example, by the local cable operator or the presentation programmer.” *Id.* Russ explains that “[t]he commercial slot could also preclude trick play for only a specified length of time, such as two weeks.” Ex[1008] ¶[0035]; Ex[1002] ¶343. Russ further explains that, “[f]or example, a tag corresponding with a commercial could expire after a period of time after which the tag would become inactive or replaceable.” Ex[1008] ¶[0035]; Ex[1002] ¶343. Thus, Russ discloses the desirability of having a first time period wherein the user must watch the entire A/V stream, including commercials, such as when the operator or programmer has placed

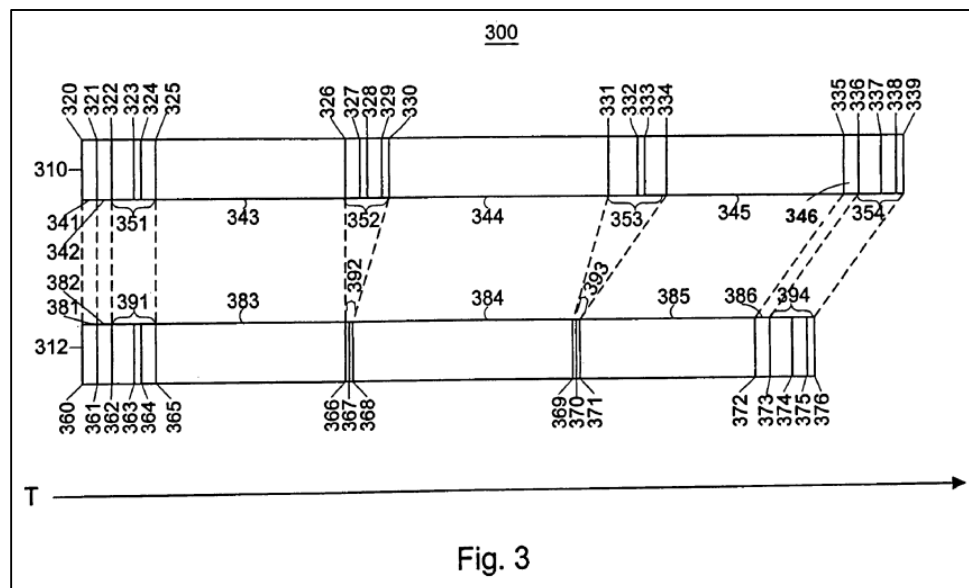
a two-week restriction on skipping commercials. Ex[1002] ¶344. And like Dow, Russ discloses the desirability of having a second time period (i.e., once the restriction expires) in which the user may elect to skip the commercials or not. *Id.* ¶345.

Further, a POSA would have recognized that Russ's time-based restrictions were one of a finite, identified solutions to providing restrictions to skipping or fast-forwarding through content. Thus, a POSA would have found it obvious to implement the time-based restrictions of Russ in Dow's DVR. *Id.* ¶345. A POSA would have understood, as confirmed by Russ's disclosures, that some users are willing to accept restrictions on commercial skipping soon after distribution of content (i.e., a first period of beginning upon completion of transmission of the program) while other users are willing to wait weeks to watch the program to allow for availability of commercial skipping. *Id.* Accordingly, a POSA would have understood that combining Russ's techniques with Dow's teachings allows the content provider to obtain additional revenue from showing advertisements to users who value watching the program during the initial release period while still appealing to viewers who are willing to delay watching the program until commercial skipping becomes available. *Id.* ¶343.

b. *1[d][iii], 9[f][iii], and 18[d][iii]*

Dow discloses or alone renders obvious these claim elements. Dow teaches the playback of only a portion of a video program when the commercial skip function

is active, when the DVR is in its second playback state. For example, Dow discloses the use of the DVR's "enhanced navigation features to view recorded content with substantially reduced commercials." Ex[1007], 9:37-39. The first timeline of Dow's Figure 3 is shown as element 310 and represents "the program 300 as it may be viewed in correspondence with how it was originally presented and stored on DVR 100." *Id.*, 9:41-43, Fig. 3. Figure 3 shows the second timeline as element 312 and represents "a substantially different viewing experience, including a shortened total running time for the presentation," where the commercial skip feature is enabled. *Id.*, 9:45-47.



Dow explains that "[p]rogram segments 383, 384, and 385 would be presented sequentially without any interruption or other indication that commercials had been skipped." *Id.*, 10:47-50. A POSA would have understood that the shortened presentation with presentation content being sequentially presented would

necessarily require a third portion being presented immediately following a first segment. Ex[1002] ¶345.

c. *1[e] and 9[g]*

Dow explicitly and inherently states that the second time period follows the first time period. For example, Dow teaches that its control interface module defines that “the commercial skip is always inactive in live view mode or delayed view mode (a form of playback) where there is insufficient time to buffer and process events for identifying commercial groups (e.g., a time delay of less than two minutes).” Ex[1007], 24:43-48.

Russ explains that “[t]he commercial slot could also preclude trick play for only a specified length of time, such as two weeks.” Ex[1008] ¶[0035]; Ex[1002] ¶350. Russ further explains that “a tag corresponding with a commercial could expire after a period of time after which the tag would become inactive or replaceable.” Ex[1008] ¶[0035]; Ex[1002] ¶350.

Russ clearly defines a first time period where trick play is “preclude[d].” *Id.* In other words, during the first time period, the Dow-Russ combination would have resulted in the ability to play only the first timeline of Dow’s Figure 3. Ex[1002] ¶348. During the second time period, after the commercial skip or trick play restrictions are lifted, the Dow-Russ combination would have results in a user being permitted to view the program according to the second timeline of Dow’s Figure 3, with abbreviated or no commercials. Ex[1007], Fig. 3; Ex[1002] ¶348.

Accordingly, Dow in view of Russ renders obvious claims 1, 9, and 18. Ex[1002] ¶¶351, 402, 437.

2. Claims Depending From Claims 1, 9, and 18

To the extent Patent Owner asserts that Dow does not disclose or render obvious the claims discussed below, Dow and Russ render those claims obvious.

a. Claims 6, 14, and 15

Dow's control interface module provides menu options for selecting whether to activate the commercial skip function when selecting playback from a playback menu. Ex[1007], 24:40-43. For example, the module may define that commercial skip feature "is always inactive in live view mode or in delayed view mode (a form of playback) where there is insufficient time to buffer and process events for identifying commercial groups (e.g., a time delay of less than two minutes)." *Id.*, 24:44-48. The control interface module also defines compatibility with other navigation features that may be activated in the same mode as the navigation function, including skip ahead. *Id.*, 24:48-52.

Further, Dow discloses a certain time period during which a user is restricted from utilizing the DVR's commercial skip feature. For example, Dow teaches that the DVR's commercial skip feature is "always inactive in live view mode or delayed view mode (a form of playback) where there is insufficient time to buffer and process the events for identifying commercial groups (e.g., a time delay of less than two minutes)." *Id.*, 24:44-48.

Russ teaches “trick play functionality” such as “fast forward” may be used to skip commercials. Ex[1008] ¶[0033]; *see supra* Claim Element 1[d][iii]. Russ also teaches that trick play “could be restricted while viewing a portion of a presentation, such as commercials” and “would not work for certain commercials as specified, for example, by the local cable operator or the presentation programmer.” Ex[1008] ¶[0033]; Ex[1002] ¶¶367, 417. Russ explains that “[t]he commercial slot could also preclude trick play for only a specified length of time, such as two weeks.” Ex[1008] ¶[0035]; Ex[1002] ¶¶367, 417.

Dow’s and Russ’s disclosures of a two-minute period or a two-week period, respectively, are exemplary in nature. Ex[1002] ¶¶369. For example, Russ discloses “a specified length of time” and then uses the phrase “such as” to show a particular example. A POSA would have understood that any reasonable time period could have been used. *Id.* ¶417. A “local cable operator” or “presentation programmer” would have found it obvious to specify a shorter period of time, such as a day, if a particular commercial were only relevant for that time period. *Id.* ¶¶369, 417. And a POSA would have understood a presentation programmer may include a commercial for an event taking place the day after the program airs. *Id.* Thus, the Dow-Russ combination renders obvious the first time period being the first day after transmitting the program and the second time period (i.e., availability of commercial skipping) being after the first time period. *Id.* ¶¶370, 418.

b. *Claim 17*

While Dow discloses that “video programs may be broadcast with metadata indicating video events,” a POSA would have understood that the metadata affiliated with video events could be transmitted to the DVR separately, or after the video program has been transmitted. Dow’s commercial skip feature, which utilizes indicators within a video program, “is always inactive in live view mode or delayed view mode (a form of playback) where there is insufficient time to buffer and process events for identifying commercial groups.” Ex[1007], 24:44-48. Thus, a POSA would have found it obvious to have Dow’s DVR store the video program in memory separately or before receiving the times when the second portion begins and ends. Ex[1002] ¶¶424, 425.

IX. SECONDARY CONSIDERATIONS

Petitioner is not aware of evidence of secondary considerations that would meaningfully rebut a *prima facie* showing of obviousness.

Patent Owner is a non-practicing entity that does not have a product embodying the challenged claims and thus is not entitled to any presumption of nexus between any evidence of secondary considerations and the challenged claims. *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 33, Final Written Decision (P.T.A.B. Jan. 24, 2020) (precedential); *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019). The mere existence of third-party licenses is not sufficient to overcome a showing of obviousness without the required showing of nexus. *In re Antor Media Corp.*, 689 F.3d 1282, 1293-94 (Fed. Cir. 2012);

Adobe Inc. v. RAH Color Techs. LLC, IPR2019-00628, Paper 77, Institution Decision, at 72-73 (P.T.A.B. Aug. 20, 2019).

Accordingly, any arguments regarding secondary considerations should be afforded little weight.

X. DISCRETIONARY DENIAL IS NOT WARRANTED.

A. PTAB should not exercise its discretion to deny institution under *Becton and Advanced Bionics*.

Furthermore, institution should not be denied under the framework set forth in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, Institution Decision (P.T.A.B. Dec. 15, 2017) (precedential as to §III.C.5, first paragraph) and *Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6, Institution Decision (P.T.A.B. Feb. 13, 2020) (precedential). The PTO has not previously considered Casagrande, Dow, or Russ in connection with any of the '710 Patent's claims. U.S. Patent No. 8,155,498 to Dow *et al.* ("Dow '498"), which shares several common inventors and has a similar specification to the Dow reference discussed herein is cited on the face of U.S. Patent No. 9,538, 122, a continuation of the '710 Patent. Ex[1001], (56). However, Dow '498 shares no familial relationship to Dow and was never relied on as the basis of a rejection by the Examiner. Further, the combinations presented in the Petition are not redundant to any combination of references considered during prosecution. Additionally, the instant Petition provides the analysis of Dr. Jeffay, an expert in the

fields of computer science, computer network architecture, and digital program delivery in broadcast, cable or satellite television networks, and STBs. Ex[1002] ¶¶1-43. Dr. Jeffay’s analysis of the prior art has not been presented to the PTO. And, in view of the new information presented in this Petition, the Board has ample discretion to institute an IPR on the grounds presented. Discretionary denial under 35 U.S.C. §325(d) is not warranted here.

B. Discretionary denial under the *Fintiv* factors is not appropriate.

1. Factor 1: Institution Increases the Likelihood of a Stay.

Factor 1 favors institution. No party in the District Court matter has requested a stay as of yet, but a stay prior to institution is highly unlikely. Similarly, the Board repeatedly states that it will not speculate on how a district court will treat a motion to stay. *See, e.g., VMware, Inc. v. Intell. Ventures I LLC*, IPR2020-00859, Paper 13, Institution Decision, at 12 (P.T.A.B. Nov. 5, 2020) (informative) (“We agree with Petitioner. In the absence of any evidence specific to this case, we decline to speculate about the presiding judge’s inclinations.”); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15, Institution Decision, at 12 (P.T.A.B. May 13, 2020) (informative) (“We decline to infer, based on actions taken in different cases with different facts, how the District Court would rule should a stay be requested by the parties in the parallel case here.”). Thus, Factor 1 favors institution.

2. Factor 2: The Current District Court Schedule.

The parties are currently waiting for a ruling from the Court on DISH's November 2022 Motion to Transfer Venue to the District of Colorado from the Eastern District of Texas. After evaluating initial briefing, the District Court carried its ruling on the Motion so that the parties could conduct 75 days of venue-based discovery, which only recently concluded. Ex[1009]. Through venue discovery, DISH has confirmed that the District Court Matter should not continue in the Eastern District of Texas. At a minimum, DISH has proven that DBS has no meaningful contacts within the Eastern District of Texas; all of the District Court matter's relevant witnesses, documents, and source code are in Colorado; and any relevant evidence outside either district is clearly more accessible if the District Court matter were transferred to the District of Colorado. Ex[1010].

Even if the District Court matter were to stay in Texas (which it should not), trial is not proximate such that Institution should be denied. According to the current Docket Control Order (Ex[1011]), *which was issued before the District Court ordered the 75-day venue discovery period*, trial is scheduled for April 1, 2024. Still, the parties have not conducted any claim construction discovery, exchanged proposed constructions of claim terms, or exchanged positions beyond initial infringement contentions.

Moreover, even if a trial occurs in April 2024, such a trial date would precede the FWD date by no more than seven months. The Board has previously granted

institution in cases in which a FWD was issued three to five months after the trial date. See e.g., *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24, Institution Decision, at 8-10 (P.T.A.B. June 16, 2020).

Further, the Board has relied on various justifications when granting institution, e.g., Petitioners' diligence in filing the petition, minimal investment made by either party in litigation (fact and expert discovery not started), and the merits of the invalidity challenge were strong. *Verizon Business Network Servs., Inc. v. Huawei Inv. & Holding Co. Ltd.*, IPR2020-01141, Paper 12, Institution Decision (P.T.A.B. Jan. 14, 2021); *HP, Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13, Institution Decision (P.T.A.B. Jan. 14, 2021). The same factors weigh even more heavily in favor of institution here. For instance, Petitioner has exercised diligence and filed this petition well in advance of the one-year bar date. Moreover, fact and expert discovery have not started and no depositions outside venue discovery have occurred. The *Markman* hearing has not yet been held is not scheduled to take place for at least several months. And, in view of the grounds asserted in this petition, the merits of the invalidity challenge are strong.

Therefore, *Fintiv* Factor 2 weighs against discretionary denial but is, at worst, neutral.

3. Factor 3: Petitioner’s Diligence and Investment in the IPR Outweighs the Parties’ Minimal Investment in Litigation.

This petition was filed more than three months before the one-year statutory bar date. *Pharm., Inc. v. Sanofi-Aventis Deutschland GmbH*, IPR2018-01680, Paper 22, Institution Decision, at 18 (P.T.A.B. Apr. 3, 2019) (finding that petition filed two months before bar date is “well within the timeframe allowed by statute, weighing heavily in [petitioner’s] favor”).

Moreover, Petitioner filed this petition at a very early stage of the litigation—a fact that “has weighed against exercising the authority to deny institution under *NHK*.” *Apple, Inc. v. Seven Networks, LLC*, IPR2020-00156, Paper 10, Institution Decision, at 12 (P.T.A.B. June 15, 2020). In particular, Petitioner filed this petition even before the parties have identified terms to be construed during Claim Construction. No substantive orders have been issued by the court, no depositions have been taken outside of court-ordered venue discovery, and fact and expert discovery have not begun.

Thus, Factor 3 weighs against discretionary denial.

4. Factor 4: The Petition’s Grounds Are Materially Different From Any That Might Be Raised in Litigation.

As noted above, the co-pending litigation is in an early stage. At present, there is little or no overlap in issues between the litigation and any IPR resulting from this petition. It would be premature to conclude that the issues raised in this

proceeding will overlap with those in the District Court. Instituting this proceeding will allow the Board to address the asserted prior art, narrowing the issues in the co-pending litigations due to the estoppel provisions of 35 U.S.C. §315(e)(2). This factor therefore weighs against denial.

For at least these reasons, Factor 4 weighs against discretionary denial. *See, e.g., Fintiv* at 12-13; *Snap, Inc. v. SRK Tech. LLC*, IPR2020-00820, Paper 15, Institution Decision, at 13-16 (P.T.A.B. October 21, 2020); *Sand Revolution* at 11-12.

5. Factor 5: Institution Would Promote Judicial Efficiency

Petitioner and Patent Owner are parties to the co-pending litigation. At worst, where the parties are the same such as in this case, Factor 5 is neutral and, and thus, need not be considered a basis for discretionary denial. *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00122, Paper 15, Institution Decision, at 10 (P.T.A.B. May 15, 2020) (APJ Crumbley, dissenting).

6. Factor 6: The Merits of this Petition Strongly Favor Institution

The merits of this Petition can hardly be overstated. As demonstrated in the Petition with reference to Dr. Jeffay's testimony and additional evidence, institution would result in a finding of unpatentability of the Challenged Claims, which are either anticipated or obvious based upon prior art references that materially differ from those considered by the Examiner during prosecution. The strength of the

Petition for *Inter Partes* Review of U.S. Patent No. 8,929,710

merits alone is enough to outweigh any inefficiencies born of parallel litigation (and as explained above, institution of this Petition would actually *promote* efficiency). *See Fintiv* at 14-15. Accordingly, *Fintiv* Factor 6 favors institution. *See Snap* at 16-19.

XI. CONCLUSION

Petitioner respectfully requests institution of *inter partes* review of the '710 Patent and cancellation of the challenged claims as unpatentable pursuant to 35 U.S.C. §318(b).

Petition for *Inter Partes* Review of U.S. Patent No. 8,929,710

Respectfully Submitted,

May 26, 2023

/ Eliot D. Williams /

Eliot D. Williams (Reg. No. 50, 822)

BAKER BOTTS L.L.P.

700 K Street, N.W.

Washington, D.C. 20001

202.639.1334

G. Hopkins Guy III (Reg. No. 35, 866)

BAKER BOTTS L.L.P.

1001 Page Mill Road, Bldg. 1, Suite 200

Palo Alto, California 94304-1007

650.739.7500

Ali Dhanani (Reg. No. 66, 233)

Thomas B. Carter Jr. (Reg. No. 76,040)

BAKER BOTTS L.L.P.

910 Louisiana St.

Houston, TX 77002

713.229.1108

Attorneys for Petitioner, DISH Network
L.L.C.

CERTIFICATE OF SERVICE

In accordance with 37 C.F.R. §§42.6(e) and 42.105, the undersigned certifies that on May 26, 2023, a complete and entire copy of the **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,929,710 UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.100 *ET SEQ.*** (“Petition”) including exhibits and testimony relied upon were served on the patent owner at the correspondence address of record for the subject patent:

SECURED MAIL SOLUTIONS, LLC
Suite 253
9550 S. Eastern Ave.
Las Vegas, NV 89123

via overnight carrier; and

and to counsel for patent owner in the Lawsuit,

WILLIAMS SIMONS & LANDIS PLLC
2633 McKinney Ave., Suite 130 #366
Dallas, TX 75204
dbscounselwsl@wsltrial.com

via electronic mail.

Date: May 26, 2023

/ Eliot D. Williams /
Eliot D. Williams (Reg. No. 50, 822)
G. Hopkins Guy III (Reg. No. 35, 866)
Ali Dhanani (Reg. No. 66, 233)
Thomas B. Carter Jr. (Reg. No. 76,040)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001
202.639.1334

Petition for *Inter Partes* Review of U.S. Patent No. 8,929,710

Attorneys for Petitioner, DISH Network
L.L.C.

CERTIFICATION UNDER 37 C.F.R. §42.24(d)

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that the word count under §42.24(a)(1) for the foregoing Petition for *Inter Partes* Review totals 13,656 words, within the 14,000 word limit allowed under §42.24(a)(1)(i).

Date: May 26, 2023

/ Eliot D. Williams /

Eliot D. Williams (Reg. No. 50, 822)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001
202.639.1334

G. Hopkins Guy III (Reg. No. 35, 866)
BAKER BOTTS L.L.P.
1001 Page Mill Road, Bldg. 1, Suite 200
Palo Alto, California 94304-1007
650.739.7500

Ali Dhanani (Reg. No. 66, 233)
Thomas B. Carter Jr. (Reg. No. 76,040)
BAKER BOTTS L.L.P.
910 Louisiana St.
Houston, TX 77002
713.229.1108

Attorneys for Petitioner, DISH Network
L.L.C.