

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

U.S. Patent No. 8,929,710

**DECLARATION OF IMMANUEL FREEDMAN IN SUPPORT OF
DIGITAL BROADCASTING SOLUTIONS, LLC's PATENT OWNER
RESPONSE**

I, Immanuel Freedman, declare as follows:

1. I make this declaration based upon my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein.

2. I have been asked to render opinions in *inter partes* review proceeding IPR2023-00976, regarding claims 1-19 (the “Challenged Claims”) of U.S. Patent No. 8,929,710 (Ex. 1001, the “’710 Patent”).

3. This declaration is a statement of my opinions on issues related to the patentability of the Challenged Claims.

4. I am being compensated at my usual rate for this type of consulting work. My compensation is in no way related to the outcome of this case.

I. BACKGROUND AND QUALIFICATIONS

5. I, Immanuel Freedman, have been retained by counsel for Digital Broadcasting Solutions, LLC (“Patent Owner”) as an expert in *Dish Network L.L.C. and Dish Technologies L.L.C. v. Digital Broadcasting Solutions, LLC*, IPR2023-00976.

6. In formulating my opinions, I have relied on my knowledge, training, and experience in the relevant field, which I will summarize briefly here. In addition, my *curriculum vitae* (CV) is attached to this declaration (Ex. 2007).

7. As such, I am qualified to provide opinions regarding the state of the art at the effective filing date of the ’710 Patent (which I understand to be November

1, 2010) and how a person of ordinary skill in the art (“POSITA”) at that time would have interpreted and understood the ’710 Patent.

8. I am being compensated for my work and any travel expenses in connection with this proceeding at my standard consulting rates for this type of consulting work. My compensation is in no way dependent on or contingent on the outcome of my analysis or opinions rendered in this proceeding and is in no way dependent on or contingent on the results of these or any other proceedings relating to the above-captioned patent.

9. I earned a Bachelor of Science degree in Physics from the University of Durham, England, in 1979. I obtained a Doctorate in Physics from the University of Durham, England in 1986. Between obtaining my undergraduate and doctoral degree, I developed a microcomputer system for detecting coalmine fires and heatings as a scientist for the National Coal Board and worked as a software engineer for Laser-Scan Ltd. in Cambridge, England.

10. After obtaining my Doctorate, I served as a Research Assistant at University College London from September 1986 to June 1987, where I developed digital image processing algorithms to improve image and stereo-matching quality for a digital terrain modeling system, including software and algorithms for affine transformation, edge filtering, kriging interpolation, and image stereo-matching with sub-pixel acuity. I continued my work with digital image processing as a Research

Associate at the University of Maryland, from June 1987 to September 1988. During my time at the University of Maryland, I designed algorithms for filtering, segmenting, clustering, and path planning based on digital images organized by quad-tree data structures.

11. From September 1988 to June 1994, I worked as a Senior Systems Engineer for the Hughes STX Corporation. As part of my work, I developed and applied methods for calibration and determination of spacecraft attitude and the comparison of sky maps from the Cosmic Background Explorer (COBE) mission with sky maps from other missions based on scientific data stored in a spatially-referenced database using a quad-tree data structure. In this role, I led the Systems Engineering and end-to-end development of a novel system for compressing imaging and ancillary data that combined scientific modeling with statistical data compression. I was also charged with designing and developing evaluation tools to ensure user-transparent, system-wide compression of a 380-GB dynamic database at an image quality acceptable to end-user scientists. In public recognition of my work, I received National Aeronautics and Space Administration Group Achievement Awards in 1990 and 1992.

12. After June 1994, I began a six-month stint as a contract Software Engineer for the Federal National Mortgage Association in Washington D.C., for which I developed a graphical user interface to monitor and validate loan servicer

input for a Loss Mitigation Project. I then served as an Independent Consultant to Optivision, Inc. for the next six months, where I researched and developed rate control algorithms and software based on the MPEG-2 Test Model 5 for the OPTIVideo™ MPEG-2 video encoder, as well as adaptive quantization algorithms based on the then-JPEG-3 draft standard. In this role, I researched and developed algorithms to improve the quality of gray scale image compression for the medical imaging DICOM Standard by providing a lossless hybrid algorithm encoding image residuals with a diagonal Golomb code based an Enhanced Universal Trellis Coded Quantization algorithm.

13. Between December 1995 and March 1996, I served as a Senior Staff Engineer/Firmware Engineer for General Instrument Inc., Comstream Inc., and Armor Safe Technologies Inc. At Comstream, I worked on integrating an MPEG-2 set top box with OpenTV interactive television middleware programmed in the Microtec C language ported to a Motorola 68340 processor under the pSOS operating system.

14. From January 1996-97, I was the sole proprietor of Anugraha, where I researched and developed algorithms and processes to compress fine art photography at an image quality acceptable to artists based on the JPEG imaging standard implemented with image pre-processing and adaptive quantization. For the next year or so, I worked as an engineering contractor or consultant for various

companies, working primarily on image processing systems and digital interactive television set-top boxes.

15. In October 1998, I began a six-month engagement with Rockwell Collins Inc., where I worked as a Lead Systems Engineer tasked with harmonizing requirements for an MPEG-2 in-flight entertainment system. I then worked for Sun Microsystems Inc. as a Software Engineer until November 1999. During my time at Sun Microsystems Inc., I developed a Distributed Component Object Model (DCOM) software interface between a TV control graphical user interface and a Microsoft broadcast application programming interface (API) with the goal of improving the visual quality of interactive TV displays derived from UDP/IP datagrams synchronized with MPEG-2 audio/video packet data.

16. For the next 22 months, from January 2000 to October 2002, I worked as the Chief Systems Engineer for Media Logic Systems Ltd. During my time at Media Logic Systems, I designed and developed a live interactive television system (iSeeTV) in which customers communicate with human sales agents in video-enabled call centers. To create this system, I researched and developed tools and encoder systems to improve image quality at prescribed latency and bit rate for distributing live video and audio streams encoded via low latency methods. To perform the above, I was required to understand and implement video codec systems employing the MPEG-2 Simple Profile at Main Level (CATV), MPEG-4 Visual

Profile with background sprite coding, and the H.263+ Standard (now known as H.264).

17. Since November 2002, I have been an engineering contractor, and more recently an independent consultant in mathematical modeling, for several companies, such as Cyra Technologies Inc., and Amgen Inc. I also served as a senior research fellow at Merck & Co., Inc., a manager at GlaxoSmithKline Inc., a director at Daiichi Sankyo, Inc., a senior director at Praxis Precision Medicines, and currently serve as a director at Takeda Pharmaceuticals. During this time, I have developed mathematical models and simulations related to various systems, signals, and images. Specifically, I have focused on analyzing, processing, storing, and deriving information from biomedical imaging and other data. Using the information derived from these data, I have created a variety of models related to biology and the effects of drugs on the human body. In recognition of my work, I have received GlaxoSmithKline R&D Recognition Awards in 2012, 2013, and 2016, a Daiichi Sankyo recognition award in 2021, and Takeda Pharmaceuticals recognition awards in 2022 and 2023.

18. In addition to my over thirty years of relevant industry experience, I have authored many publications relating to video and imaging coding. In 2003, I authored a chapter entitled “Video Compression” for the Internet Encyclopedia. In 2004 I authored the chapter entitled “Video” for the Berkshire Encyclopedia of

Human-Computer Interaction. And in 2007 I authored a chapter titled “Video Compression” for the Handbook of Computer Networks.

19. I am also a Senior Member of the Institute of Electrical and Electronics Engineers (“IEEE”) and serve as the current Philadelphia Chapter Chair of the Communications & Information Theory Societies and I am a former Chair of the American Association of Pharmaceutical Scientists Pharmaco-Imaging Community. I also served as the 2019 Vice Chair of the IEEE P2673 Intelligence Augmentation for Medical Imaging Standards Working Group. I also have been registered to practice as a patent agent for the United States Patent and Trademark Office since 2002 (Reg. No. 51,704).

20. From 2017, I have also volunteered, first as a Research Scholar, and currently as a Voluntary Researcher, with the State University of New York at Buffalo. In this role, I have provided mentorship for doctoral candidates in areas relating to computer modeling and estimation.

21. Although I am not rendering an opinion about the level of skill of a POSITA proffered by Petitioner, based on my professional experience, I understand the capabilities of a POSITA (as such a POSITA is defined by Petitioner). Additionally, I myself, at the time the ’710 Patent was filed and at its priority date, qualified as at least a POSITA.

II. MATERIALS CONSIDERED

22. In preparing this declaration, I reviewed the '710 Patent, including its claims in view of its specification, the prosecution history of the '710 Patent, and various prior art and technical references from the time of the invention.

23. In addition, in preparing this declaration, I have reviewed all of the papers and exhibits in the record for *inter partes* review proceeding IPR2023-00976.

III. LEGAL UNDERSTANDING

24. I have worked with counsel for Patent Owner in the preparation of this Declaration. Nevertheless, the opinions, statements, and conclusions offered in this Declaration are purely my own and were neither suggested nor indicated in any way by counsel or anyone other than myself. I confirmed with counsel my understanding that the term “obvious,” as used in the Petition addressed herein and as a general matter under United States law, refers to subject matter that would have occurred to a POSITA to which the '710 Patent is directed without inventive or creative thought. That which is obvious, it is my understanding, flows naturally from the art and the education one of skill practicing in that art would have had in the relevant time frame, which for the '710 Patent is 2010.

A. Anticipation

25. I understand that earlier publications and patents may act to render a patent unpatentable if it anticipates a claim.

26. I understand that a single piece of prior art “anticipates” a claim if each and every element of the claim is disclosed in that prior art. I further understand that, where a claim element is not explicitly disclosed in a prior art reference, the reference may nonetheless anticipate a claim if the missing claim element is necessarily present in the apparatus or a natural result of the method disclosed—i.e. the missing element is “inherent.”

27. To establish such inherency, the evidence must make clear to a person of ordinary skill in the art that the missing claim element is necessarily present in the prior art reference or is the inevitable outcome of the process or thing that is explicitly described in the prior art. Inherency may not be established by a possibility, or even probability, that a certain result may arise from a given set of circumstances.

B. Obviousness

28. I understand that a patent claim can be invalid under 35 U.S.C. § 103 if the claimed subject matter would have been “obvious” to a person of ordinary skill in the art as of the priority date of the patent based upon one or more prior art references. I understand that an obviousness analysis should consider each of the following so-called “Graham factors”: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any (such as unexpected

results, commercial success, long-felt but unsolved needs, failure of others, copying by others, licensing, and skepticism of experts).

29. I understand that a conclusion of obviousness may be based upon either a single prior art reference or a combination of prior art references. However, I understand that merely demonstrating that each of the claim elements was, independently, known in the prior art does not prove that a claim composed of several known elements is obvious. In other words, I have been informed that obviousness requires more than a mere showing that the prior art includes separate references covering each limitation in a claim. Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those elements in the normal course of research and development to yield the claimed invention.

30. Moreover, I understand that it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in a way the claimed new invention does.

31. I further understand that, to determine obviousness, courts look to the interrelated teachings of multiple patents or other prior art references, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art.

32. I also understand that, in determining whether a combination of prior art references renders a claim obvious, it may be helpful to consider whether there is some teaching, suggestion, or motivation to combine the references and a reasonable expectation of success in doing so. I understand, however, that the teaching, suggestion, or motivation to combine inquiry is not required and may not be relied upon in lieu of the obviousness analysis outlined above.

33. I understand that the following exemplary rationales may lead to a conclusion of obviousness: the combination of prior art elements according to known methods to yield predictable results; the substitution of one known element for another to obtain predictable results; and the use of known techniques to improve similar devices in the same way.

34. However, a claim is not obvious if the improvement is more than the predictable use of prior art elements according to their established functions. Similarly, a claim is not obvious if the application of a known technique is beyond the level of ordinary skill in the art.

35. Further, when the prior art teaches away from combining certain known elements, discovery of successful means of combining them is not obvious. I understand that similar subject matter may not be sufficient motivation for a person of skill in the art to combine references if the references have conflicting elements.

36. I understand that, in order to be used in an obviousness combination, a prior art reference must be “analogous.” I understand that two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed; and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. In regard to test (2), the problems to which both the reference and the claimed invention relate must be identified and compared. I also understand that Petitioner has the burden of showing a cited reference is analogous art.

37. I understand that obviousness of a patent claim cannot properly be established through hindsight, and that elements from different prior art references, or different embodiments of a single prior art reference, cannot be selected to create the claimed invention using the invention itself as a roadmap. I understand that the claimed invention as a whole must be compared to the prior art as a whole, and courts must avoid aggregating pieces of prior art through hindsight that would not have been combined absent the inventors’ insight.

38. I understand that obviousness is not established by simply combining previously known elements from the prior art. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. An invention is unpatentable as obvious

if the differences between the patented subject matter and the prior art would have been obvious at the time of invention to a person of ordinary skill in the art.

39. I understand that obviousness of a patent cannot properly be established by mere conclusory statements. Instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. When an expert opines that all the elements of a claim disparately exist in the prior art, the expert should provide the rationale to combine the disparate references. A reason for combining disparate prior art references is a critical component of an obviousness analysis. The obviousness analysis should be made explicit and needs to provide an articulated reasoning with some rational underpinning to identify the reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed invention does.

40. I also understand that inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. This is another reason why merely pointing to the elements being known in the art in separate locations is not the end of the obviousness inquiry.

41. I understand that technical experts may testify to matters like the level of skill in the art at the time of the invention and what a POSITA might find obvious in light of the prior art without addressing objective indicia of non-obviousness.

However, where an expert purports to testify not just to certain factual components underlying the obviousness inquiry, but to the ultimate question of obviousness, the expert must consider all factors relevant to that ultimate question, including all objective evidence of non-obviousness. Accordingly, I have undertaken such considerations here.

42. I understand that, to render obvious a patent claim the prior art references must be enabling. That is, the references must provide sufficient information to allow one skilled in the art to practice what is disclosed without undue experimentation. I understand that, while a prior art reference may support any finding apparent to a person of ordinary skill in the art, prior art references that address different problems may not, depending on the art and circumstances, support an inference that the POSITA would consult both of them simultaneously.

C. Secondary Considerations

43. I understand that one of the so-called *Graham* factors that must be considered in determining obviousness is the existence of any secondary considerations, which tend to show that a patent claim is not obvious. Such secondary considerations of non-obviousness of a patent include (1) long-felt and unmet need in the art that was satisfied by the claimed invention of the patent; (2) failure of others to achieve the results of the claimed invention; (3) commercial success or lack thereof of the products and processes covered by the claimed

invention; (4) deliberate copying of the claimed invention by others in the field; (5) taking of licenses under the patent by others; (6) whether the claimed invention was contrary to the accepted wisdom of the prior art; (7) expression of disbelief or skepticism by those skilled in the art upon learning of the claimed invention; (8) unexpected results achieved by the claimed invention; (9) praise of the claimed invention by others skilled in the art; and (10) lack of contemporaneous and independent invention by others.

44. I understand that each of these considerations may form an independent basis for non-obviousness of a patent. I also understand that the fact that another person simultaneously and independently created the same invention claimed in an asserted patent can serve as an indication that the invention was obvious.

45. I also have been informed by counsel that there must be a nexus between any such secondary considerations and the claimed invention.

IV. CLAIM CONSTRUCTION

46. I reviewed the comments in the Petition and Mr. Jeffay's Expert Declaration (Ex. 1002) pertaining to "claim construction" for the '710 Patent. My understanding is simply that, in the absence of a specific controversy, one arrives at the appropriate "construction" or definition of what is embraced by the claims of the '710 Patent and what is excluded by those claims by a reading of the '710 Patent and

the prosecution history, and arriving at what, based on that reading, the inventor of the claimed subject matter intended to protect as her or his invention.

47. Claim limitation 1[d][i] recites, in part, “a first period of time.” Ex. 1001, 11:66. In my opinion, a POSITA would interpret the “first period of time” to start after transmission of the entire “video program” to the DVR. That opinion is based on the claim language itself. Specifically, claim 1 also recites “a memory device for storing said video program,” “a second command initiates playback of said video program from said memory device” of the DVR, and “at least one processor configured to [] provide said video program in its entirety to a display device . . . if said second command is received during a first period of time.” Ex. 1001, 11:54-66 (emphasis added). In order to “provide said video program in its entirety” from “said memory device,” the entire “video program” must be stored in the “memory device,” which is only possible after transmission of the entire “video program” to the DVR. Accordingly, the “first period of time” must start after transmission of the entire “video program.”

48. Further, that interpretation is also consistent with the dependent claims. For example, dependent claim 6 recites, in part, “wherein said first period of time is a period of time that is less than one week from said transmission of said video program.” Ex. 1001, 12:37-39 (emphasis added). As another example, dependent claim 14 recites, in part, “wherein said first period of time is a first day after said

video program has been transmitted.” Ex. 1001, 14:1-2 (emphasis added).

Accordingly, the dependent claims reinforce that the “first period of time” must start after transmission of the entire “video program.”

49. Further still, that interpretation is also consistent with the prosecution history of the ’710 Patent. As explained by patentee to the Examiner, the claimed invention is directed to

a digital video recorder (“DVR”) that stores a video program and plays at least a portion of the video program back at a later time (e.g., a time more convenient to the user of the DVR, etc.) . . . In a first state, the DVR is configured to play the program as it was originally recorded (e.g., with both the program and auxiliary data). In a second state, the DVR is configured to play the program data without the auxiliary data (or a portion thereof) . . . To this end, the claimed invention provides that if the video program is being watched within a first period of time (e.g., within a day or two of the video program being transmitted to the DVR, etc.), then the video program will be played back in its entirety (e.g., including both program and auxiliary data).

Ex. 1003, pp. 108-109 (emphasis added). Accordingly, based on the prosecution history of the ’710 patent, the “first period of time” must start after transmission of the entire “video program.”

50. Accordingly, the “first period of time” of independent claim 1 must start after transmission of the entire “video program.” Independent claims 9 and 18 also recite the “first period of time” (Ex. 1001, 13:9, 14:34) and should be construed in the same manner.

51. Independent claim 1[c] recites “a first command changes said DVR from a first playback state to a second playback state, and a second command initiates playback of said video program from said memory device.” Ex. 1001, 11:57-61. Accordingly, independent claim 1 requires two distinct commands (i.e., a first command and a second command). In my opinion, a POSITA would not interpret the “first command” as initiating playback of the video program because the claim specifies that the “second command initiates playback. *See* Ex. 1001, 11:62-12:9. The “first command” alone never initiates playback of the video program in independent claim 1. *See id.* Instead, throughout independent claim 1, the “first command” and the “second command” are used together to control operation of the DVR: the “first command” is used to set the playback state of the DVR, while the “second command” is used to initiate playback of the video program after the playback state of the DVR has been set by the “first command.” Ex. 1001, 11:62-12:9. In my opinion, if the “first command” also initiated playback of the video program, that would render the “second command” redundant and render claim 1 illogical.

52. Accordingly, a POSITA would not interpret the “first command” of independent claim 1 as being capable of initiating playback of the video program. Independent claims 9 and 18 also recite the “first command” (Ex. 1001, 12:62, 14:8) and should be construed in the same manner.

V. OPINIONS REGARDING ANTICIPATION AND OBVIOUSNESS

53. Petitioner challenges independent claims 1-19 of the '710 Patent (the “Challenged Claims”).

54. In my opinion, as described below, Petitioner has not established by a preponderance of the evidence that the challenged claims are unpatentable.

A. Ground 1 – *Casagrande* and *Russ* Do Not Render Claims 1-19 Obvious

55. In my opinion, *Casagrande* and *Russ* (the “Ground 1 References”) do not render obvious claims 1-19 for multiple reasons.

56. Although *Casagrande* is generally directed to a set top box with digital video recorder (DVR) functionality, it is fundamentally different than the '710 Patent. *Casagrande* discloses a “receiving device” (e.g., a set-top box with DVR capabilities) that receives and stores a “first audio/visual stream” that includes “segments” and “interstitials” (e.g., commercials). *See* Ex. 1006, 2:33-47, Fig. 7, Fig. 8, Fig. 15. The “receiving device” generates a “second audio visual stream” by removing the “interstitials” from the “first audio/visual stream” and, in some cases, replacing the removed “interstitials” with “substitute content.” *See id.*, 8:63-9:5, 13:13-31, Fig. 4, Fig. 8. The “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 transferred to the display device.” *Id.*, 19:63-66. But *Casagrande* fails to disclose a commercial skipping feature that is time-based (i.e., is precluded during a first period of time and allowed

during a second period of time), as required by the claims. Further, *Casagrande* fails to disclose a “first command” used to set the playback state of the DVR, while a “second command” is used to initiate playback of the “video program” after the playback state of the DVR has been set by the “first command,” as also required by the claims.

57. *Russ* is also fundamentally different than the ’710 Patent. *Russ* is directed to “broadband communications systems, and more particularly, to the insertion of advertisements into presentations of networked multi-room systems.” Ex. 1008, ¶[0002]. *Russ*’ “primary device” (e.g., set-top box) receives and stores a video presentation including a program and commercials. *See id.*, ¶¶[0015], [0020], [0032], Fig. 4. The “primary device” may replace the existing commercials with alternative commercials tailored to the user of the device. *See id.*, ¶¶[0030], [0032].

58. The commercial-related functionality in *Russ* is driven by “tags.” *Russ* uses “ad-insertion tags” to “differentiate between the program and commercials.” *See* Ex. 1008, ¶[0026]. Frames within the program “are preferably tagged to indicate a splicing point when a commercial break is coming.” *Id.*, ¶[0027]. Through the tags, commercials are inserted or replaced. *Id.*, ¶[0028]. *Russ* discloses that the same tag can also specify whether the user can fast forward through a commercial (so-called “trick play” functionality). And the same tag can also specify an expiration date, after which “the tag would become inactive or replaceable.” *See id.*,

¶[0035]. At that point, the commercial would no longer be viewable (because the tag is inactive) or the commercial would be replaced with a different commercial (because the tag is replaced). *See id.* *Russ* fails to disclose providing the entire video program (including the transmitted commercial) during a first time period “regardless of a playback state,” as required by the claims. *Russ* also fails to disclose transmitting a first portion and a third portion (i.e., frames) of a previously stored video program to a display device, but not transmitting a second portion (i.e., frames) of the video program to the display device, “during said second period of time and [when] said DVR is in said second playback state.” In *Russ*, the transmitted commercial can either be skipped or not. While *Russ* does provide that trick play can be precluded for a period of time, the preclusion ends when the commercial expires. Thus, there is not a period of time when the transmitted commercial can be skipped or not, depending on the state of the DVR.

1. Independent Claim 1

59. In my opinion, the combination of *Casagrande* and *Russ* does not render obvious independent claim 1 because the combination does not teach or suggest the following elements of the claim.

a. 1[c] “a controller configured to receive commands from a user of said DVR . . .”

60. Limitation 1[c] recites “a controller configured to receive commands from a user of said DVR, wherein a first command changes said DVR from a first

playback state to a second playback state, and a second command initiates playback of said video program from said memory device.” Ex. 1001, 11:57-61 (emphasis added). The Petition contends that the claimed “first playback state” and “second playback state” correspond to whether the first A/V stream or the second A/V stream is displayed to the user:

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.

Pet. at 30. And it contends that the “first command” toggles between which stream is displayed. *Id.* But it is the “second command” that initiates playback of a particular program or stream. *See* Ex. 1001, 11:62-12:14. The claimed “first command,” which places the DVR in a “first playback state” or a “second playback state,” is associated with time-based limitations on navigation through a program, as discussed in further detail below for limitation 1[d]. Accordingly, the combination of *Casagrande* and *Russ* does not teach or suggest claim limitation 1[c].

61. It is my understanding that the Board rejected this argument in the Institution Decision:

We are not persuaded by Patent Owner’s argument that suggests that Casagrande does not teach the “first command” because it initiates playback rather than changing playback state. *See* Prelim. Resp. 11–12. Casagrande teaches, as Petitioner asserts, 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,” which we preliminarily agree is sufficient to teach the claimed change of playback states by the first command. *See* Ex. 1006, 19:63–66.

Institution Decision, Paper 8 at p. 17. But as I discuss above, the claimed “first command” does not initiate playback of the video program. In contrast, *Casagrande*’s selection of “the first A/V stream 1504 or the second A/V stream 1514” does initiate playback. *Casagrande* is silent on any additional step the user must take to initiate playback after selecting “the first A/V stream 1504 or the second A/V stream 1514.” *See* Ex. 1006, 19:63-7:2. Accordingly, *Casagrande*’s selection of the “first A/V stream 1504 or the second A/V stream 1514” for “output[] to the display device” is not and cannot be the claimed “first command” of claim limitation 1[c].

62. For the foregoing reasons, the combination of *Casagrande* and *Russ* does not teach or suggest claim limitation 1[c].

b. 1[d] “at least one processor configured to . . .”

63. Limitation 1[d] recites “at least one processor configured to” provide different portions of the “video program” based on the “playback state” of the DVR

and when playback is taking place (i.e., whether playback is taking place during the claimed “first period of time” or “second period of time”). Ex. 1001 at 11:62-12:14. The claim recites three scenarios that define the required configuration of the “at least one processor.” *Id.*

64. First, the “at least one processor” must

“(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”

See id. at 11:62-66. The claimed “video program” contains at least three portions. *See id.* at 11:49-53. As a result, under the first scenario, the “at least one processor” must be configured to provide the first, second, and third portions. *See id.* at 11:49-53, 11:62-66. This is true “regardless of the playback state of said DVR.” *See* Ex. 1001, 11:49-53, 11:62-66.

65. Second, the “at least one processor” must

“(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”

See id. at 11:66-12:3. This scenario occurs when (1) “said DVR is in said first playback state” and (2) “said second command is received during a second period of time.” *See id.* Based on the plain language of the claim, the “first command” to set the DVR in the “first playback state” must be received before the “second command”

initiating playback is received. Here again, the “video program” contains at least three portions, so under the second scenario, the “at least one processor” must be configured to provide the first, second, and third portions. *See* Ex. 1001, 11:66-12:3.

66. Third, the “at least one processor” must

“(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”

See id. at 12:3-14. This scenario occurs when (1) “said DVR is in said second playback state” and (2) “said second command is received during said second period of time.” *See id.* Based on the plain language of the claim, the “first command” to set the DVR in the “second playback state” must be received before the “second command” initiating playback is received. Under the third scenario, the “at least one processor” provides only a portion of the video program, not the entirety of the video as under the first and second scenarios. *Compare* Ex. 1001 at 12:3-14 *with* Ex. 1001 at 11:62-66 (first scenario), 11:66-12:3 (second scenario). Specifically, the “at least one processor” will provide “first and third portions of said video program,” but not the second portion, and “said third portion of said video program is provided to said

display device immediately following said first portion of said video program.” *See* Ex. 1001 at 12:3-14.

67. In summary, the “at least one processor” is configured such that the user of the DVR cannot skip the “second portion” of the “video program” during the “first time period” (i.e., the first scenario). *See id.* at 11:62-66. Subsequently, during the “second time period,”¹ the “at least one processor” is configured such that the user of the DVR can choose whether to skip the “second portion” of the “video program” based on selecting the “first playback state” or the “second playback state” (i.e., the second and third scenarios). *See id.* at 11:57-61, 11:66-12:14. As a result, the user cannot skip the “second portion,” which can be a commercial more proximate to when the “video program” was received, whereas the skip functionality becomes available at a later point in time. *See* Ex. 1001 at 11:57-61, 11:62-12:14.

68. In my opinion, the combination of *Casagrande* and *Russ*, as pled in the Petition, does not disclose the first scenario (i.e., limitation 1[d][i]). *See* Pet. at 31-32. The Petition cites to only *Casagrande* for alleged disclosure of the first scenario (i.e., limitation 1[d][i]). *See id.* The cited portions of *Casagrande* show that the first A/V stream may be shown in its entirety even if the user desires to see the second A/V stream “by way of additional information delivered to the receiving device” by

¹ Claim 1 of the ’710 Patent recites that “said second period of time is a period of time after said first period of time.” Ex. 1001 at 12:15-16.

the “content provider.” *See* Ex. 1006 at 19:66-20:2; *see also id.* at 5:66-6:3. But that limitation by the “content provider” remains the same—there is no determination on whether “said second command is received during a first period of time” as is required by the claim. The Petition does not argue that it would have been obvious to modify *Casagrande* to satisfy this claim limitation, alone or in combination with *Russ*, so the combination of *Casagrande* and *Russ* does not disclose the first scenario (i.e., limitation 1[d][i]).

69. It is my understanding that the Board rejected this argument in the Institution Decision: “there is no ‘determination’ step or function recited in claim 1.” Institution Decision, p. 21. Although it is true that the claims do not expressly recite the word “determination,” the plain language of the claim requires that the processor restrict the user from skipping the claimed “second portion” of “said video program” if the “second command” was received during the “first period of time.” Ex. 1001, 11:62-12:14. Accordingly, a POSITA would understand that the DVR must determine whether the “second command” initiating playback was received during the “first period of time” in order to determine whether the user is restricted from skipping the claimed “second portion” during playback.

70. The Board relies heavily on Dr. Jeffay’s declaration for this claim limitation:

Dr. Jeffay testifies that a person of ordinary skill in the art “would have understood that processing a user request for either the first A/V stream or second A/V stream leads to the depiction of the first A/V stream (i.e., the stream in its entirety) on the display device during a first period of time where the content provider has placed restrictions on removing interstitial content.” Ex. 1002 ¶ 111.

Institution Decision, p. 18. But Dr. Jeffay’s declaration does little more than restate Petitioner’s argument without any additional supporting evidence or reasoning. *Compare* Pet. at 32 *with* Ex. 1002, ¶¶111.

71. The combination of *Casagrande* and *Russ*, as pled in the Petition, does not disclose the second scenario (i.e., limitation 1[d][ii]). *See* Pet. at 32-36. *Casagrande* does not disclose the second scenario for the similar reason that the limitation by the “content provider” remains the same—there is no determination based on whether “said second command is received during a second period of time” as is required by the claim. *See* Ex. 1006 at 19:66-20:2; *see also id.* at 5:66-6:3. In other words, it is the “content provider” that determines whether a commercial can be skipped—not the time period as claimed.

72. It is my understanding that the Board rejected this argument in the Institution Decision: “there is no ‘determination’ step or function recited in claim 1.” Institution Decision, p. 21. Although it is true that the claims do not expressly recite the word “determination,” the plain language of the claim requires that the

processor provide “said video program” in different forms (i.e., with or without the “second portion”) based on whether the “second command” was received during the “second period of time.” Ex. 1001, 11:66-12:14. Accordingly, in my opinion, a POSITA would understand that the DVR must determine whether the “second command” initiating playback was received during the “second period of time” in order to determine whether the user is even permitted to skip the claimed “second portion” during playback.

73. Further, based on the plain language of the claim, in the second scenario, the “first command” to set the DVR in the “first playback state” must be received before the “second command” initiating playback is received. Petitioner mapped *Casagrande*’s selection of “the first A/V stream 1504 or the second A/V stream 1512” and *Casagrande*’s “selection of particular segments from the selection menu” for presentation to the claimed “first command” and the claimed “second command,” respectively. See Pet., pp. 30-31 (citing Ex. 1006, 4:1-8, 19:63-66). But *Casagrande* fails to disclose that its selection of “the first A/V stream 1504 or the second A/V stream 1512” (Petitioner-identified “first command”) is ever used with *Casagrande*’s “selection of particular segments from the selection menu” (Petitioner-identified “second command”), much less in the sequence required by the second scenario.

74. The second scenario is also not disclosed by *Russ*. The commercial-related functionality in *Russ* is driven by “tags.” *Russ* uses “ad-insertion tags” to “differentiate between the program and commercials.” *See* Ex. 1008, ¶[0026]. Frames within the program “are preferably tagged to indicate a splicing point when a commercial break is coming.” *Id.*, ¶[0027]. Through the tags, commercials are inserted or replaced. *Id.*, ¶[0028]. *Russ* discloses that the same tag can also specify whether the user can fast forward through a commercial (so-called “trick play” functionality). And the same tag can also specify an expiration date, after which “the tag would become inactive or replaceable.” *See id.*, ¶[0035]. At that point, the commercial would no longer be viewable (because the tag is inactive) or the commercial would be replaced with a different commercial (because the tag is replaced). *See id.* Accordingly, *Russ* does not disclose providing “said video program in its entirety . . . during a second period of time.” In other words, it is the “tag” that determines whether the commercial can be skipped—not the time at which the video program is played back. And if the tag expires (after a period of time), the commercial would either be non-viewable or replaced by a new commercial—not the transmitted commercial (or “second portion”) as claimed. *See id.*

75. It is my understanding that the Board rejected this argument in the Institution Decision: “*Russ* does not describe that an ‘inactive’ tag means that a commercial is ‘no longer viewable.’” Institution Decision, p. 22. I disagree.

disagree. Because a tag “signif[ies] where to insert an ad” in a video program, a POSITA would understand an “inactive tag” to mean the commercial is no longer to be inserted/included into the video program, and thus is not viewable during playback of the video program. Ex. 1008, ¶[0035] (emphasis added).

76. The combination of *Casagrande* and *Russ*, as pled in the Petition, does not disclose the third scenario (i.e., limitation 1[d][iii]). *See* Pet. at 36-38. Claim 1 requires that the “second portion” of “said video program as transmitted” (e.g., the transmitted commercial) is played back during the first period of time “regardless of the playback state of said DVR.” Ex. 1001 at 11:62-12:15. It is not until the second period of time that the “second portion” (e.g., the transmitted commercial) can be played back or not, depending on the playback state, as selected by the user. It is this feature—where the transmitted commercial *cannot* be played back *during the first period of time* but *can* be played back *during the second period of time*—that is not disclosed in either *Casagrande* or *Russ*.

77. *Casagrande* discloses that it is the “content provider” that determines whether the transmitted commercial can be skipped “by way of additional information delivered to the receiving device.” *See* Ex. 1006 at 19:66-20:2; *see also id.* at 5:66-6:3. But that limitation by the “content provider” remains the same during the first and second periods of time—there is no determination based on whether

“said second command is received during said second period of time” as is required by the claim. *See id.*

78. It is my understanding that the Board rejected this argument in the Institution Decision: “there is no ‘determination’ step or function recited in claim 1.” Institution Decision, p. 25. Although it is true that the claims do not expressly recite the word “determination,” the plain language of the claim requires that the processor provide “said video program” in different forms (i.e., with or without the “second portion”) based on whether the “second command” was received during the “second period of time.” Ex. 1001, 11:66-12:14. Accordingly, a POSITA would understand that the DVR must determine whether the “second command” initiating playback was received during the second time period in order to determine whether the user is even permitted to skip the claimed “second portion” during playback.

79. The same is true for *Russ*. In *Russ*, it is the “tag” that determines whether a commercial can be skipped. *See* Ex. 1008, ¶[0035] (e.g., so-called “trick play” functionality). This is the same tag that specifies an expiration date for the commercial. *Id.* Thus, like *Casagrande*, the determination of whether a commercial can be skipped is not based on time, but on the specific commercial, or the “tag” associated therewith.

80. While *Russ* provides that the “tag” can “preclude trick play for only a specified length of time, such as two weeks,” it goes on to provide that this is because

“a commercial could expire after a period of time after which the tag would become inactive or replaceable.” *Id.* Thus, the preclusion of trick play in *Russ* is commercial-dependent, not time-dependent. The commercial that is included with the transmitted video program (i.e., the “second portion”) is either skippable or not. While commercial skipping may resume (e.g., after a period of time), it is not the *transmitted commercial* that is skipped, but a new (or replacement) commercial.

81. Further, based on the plain language of the claims, in the third scenario, the “first command” to set the DVR in the “second playback state” must be received before the “second command” initiating playback is received. Petitioner mapped *Casagrande*’s selection of “the first A/V stream 1504 or the second A/V stream 1512” and *Casagrande*’s “selection of particular segments from the selection menu” for presentation to the claimed “first command” and the claimed “second command,” respectively. *See* Pet., pp. 30-31 (citing Ex. 1006, 4:1-8, 19:63-66). But *Casagrande* fails to disclose that its selection of “the first A/V stream 1504 or the second A/V stream 1512” (Petitioner-identified “first command”) is ever used with *Casagrande*’s “selection of particular segments from the selection menu” (Petitioner-identified “second command”), much less in the sequence required by the third scenario.

82. Accordingly, the combination of *Casagrande* and *Russ* does not disclose the third scenario (i.e., limitation 1[d][iii]).

83. In my opinion, Petitioner's alleged motivations to combine fare no better. *See* Pet. at 33-36. Petitioner argues that because *Casagrande* and *Russ* discuss the general concept of restricting the ability to skip commercials, it would have been obvious to combine the references to arrive at the claimed invention. *See* Pet. at 33-36. Beyond that general assertion that a person of ordinary skill in the art would find it obvious to combine any references that discuss restricting the ability to skip commercials, neither the Petition nor the declaration of Dr. Jeffay identify any specific reasoning to combine or modify the references according to the claimed invention. *See* Pet. at 33-36 (citing Ex. 1002, ¶¶114-118). In fact, Dr. Jeffay's declaration does little more than restate Petitioner's argument without any additional supporting evidence or reasoning. *Compare* Pet. at 33-36 with Ex. 1002 ¶¶114-118. Accordingly, Petitioner's remaining obviousness rationale lacks support.

84. In summary, Petitioner's obviousness rationale for this limitation is driven by hindsight, without any evidence that the claimed invention would have been obvious to a person of ordinary skill in the art.

2. Dependent Claim 3

85. Dependent claim 3 depends from and adds limitations to independent claim 1. As discussed above, the combination of *Casagrande* and *Russ* fails to render independent claim 1 obvious. Accordingly, the combination of *Casagrande* and *Russ* fails to render dependent claim 3 obvious for at least the same reasons.

86. Further, dependent claim 3 recites

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 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.

Ex. 1001, 12:20-26 (emphasis added). Accordingly, claim 3 falls within the third scenario (i.e., claim limitation 1[d][iii]). Petitioner mapped *Casagrande*'s "interstitials" (e.g., commercials) to the claimed "secondary video content." See Pet., p. 40. To meet the requirements of claim limitation 1[d][iii], the Petition cited to the embodiment in *Casagrande* where "interstitials" (e.g., commercials) are skipped in their entirety. See Pet., p. 37 (citing Ex. 1006, Fig. 8). Here, to meet the requirements of claim 3, Petitioner cited to the embodiment in *Casagrande* where the DVR "automatically present[s] the commercial segments regardless of the receipt of user input requesting non-presentation of the segments." Pet., p. 41-42 (quoting Ex. 1006, 24:34-43). In my opinion, that mapping is flawed because the two embodiments (i.e., commercials entirely skipped, commercials presented) are mutually exclusive. That mapping is also flawed because it fails to teach presenting "only a portion" of *Casagrande*'s "interstitials" (e.g., commercials) (Petitioner-identified "secondary video content"). See Ex. 1006, 24:34-43. *Russ* does not cure the deficiencies of *Casagrande*. Accordingly, the combination of *Casagrande* and *Russ* fails to render obvious dependent claim 3.

3. Independent Claim 9

87. The Petition does not provide independent analysis for independent claim 9. *See* Pet. at 22-39. Instead, it contends that the same combination of *Casagrande* and *Russ* is relevant to each of the independent claims. *See id.* As a result, the Petition fails to show that the combination of *Casagrande* and *Russ* renders claim 9 obvious for the same reasons as claim 1.

a. 9[c] “receiving a first command from at least one user of said DVR, said first command indicating a playback state of said DVR”

88. Limitation 9[c] recites “receiving a first command from at least one user of said DVR, said first command indicating a playback state of said DVR.” Ex. 1001, 12:62-64. The Petition contends that the claimed “first playback state” and “second playback state” correspond to whether the first A/V stream or the second A/V stream is displayed to the user. Pet. at 30. And it contends that the “first command” toggles between which stream is displayed. *Id.* But, as with claim 1, the “first playback state” and “second playback state” correspond to more than simply which video stream is displayed. *See* Ex. 1001, 13:4-24. Accordingly, for these reasons and all the reasons discussed above in reference to claim limitation 1[c], the combination of *Casagrande* and *Russ* does not teach or suggest limitation 9[c].

- b. 9[f] “wherein the step of providing said at least a portion of said video program to said display device further comprises . . .”**

89. As with limitation 1[d], limitation 9[f] recites three scenarios that define how video is provided based on (1) the playback state and (2) the “period of time.” *Compare* Ex. 1001 at 13:4-24 (limitation 9[f]) *with* Ex. 1001 at 11:62-12:14 (limitation 1[d]). Like limitation 1[d], limitation 9[f] also requires that the entire “video program” is provided in certain scenarios and that skipping commercials is both user and time dependent. These features are not disclosed in *Casagrande* or *Russ*. Accordingly, the combination of *Casagrande* and *Russ* does not teach or suggest limitation 9[f] for the same reasons as limitation 1[d].

4. Dependent Claim 12

90. Dependent claim 12 depends from and adds limitations to independent claim 9. As discussed above, the combination of *Casagrande* and *Russ* fails to render obvious independent claim 9. Accordingly, the combination of *Casagrande* and *Russ* fails to render obvious dependent claim 12 for at least the same reasons.

91. The Petition relies on the same analysis for both claim 3 and claim 12. See Pet., pp. 40-42. Accordingly, the combination of *Casagrande* and *Russ* fails to render obvious dependent claim 12 for all the reasons discussed above in reference to dependent claim 3.

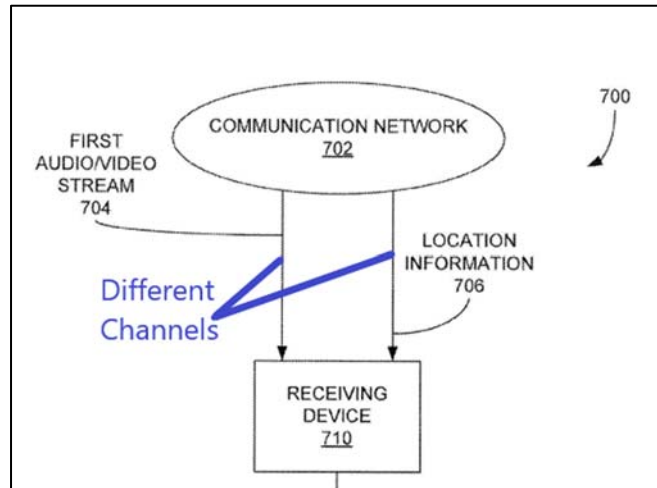
5. Dependent Claim 17

92. Dependent claim 17 depends indirectly from and adds limitations to independent claim 9. As discussed above, the combination of *Casagrande* and *Russ* fails to render obvious independent claim 9. Accordingly, the combination of *Casagrande* and *Russ* fails to render obvious dependent claim 17 for at least the same reasons.

93. Further, claim 17 recites, in part, “receiving . . . 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.” Ex. 1001, 14:11-17 (emphasis added). In other words, the start time and the end time of the second portion are received from the satellite after the video program is stored on the memory device of the DVR.

94. *Casagrande* discloses 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 (emphasis added). Petitioner mapped *Casagrande*’s “location information 706” to the claimed “said at least one times.” Pet., p. 49. Even if that mapping is proper, a POSITA would understand “separately” to mean “on a different channel,” not “at a different time.” For example,

Casagrande's Figure 7 shows different channels for "A/V stream 704" and the "location information 706:"



Ex. 1006, Fig. 7 (excerpted and annotated). Under this reading (i.e., different channels), Petitioner provides no evidence that *Casagrande's* "location information" (Petitioner-identified "said at least one times") is received from the satellite after the video program is stored on the memory device of the DVR, as claim 17 requires. Further, even if "separately" means "at a different time," both Petitioner and its expert still fail to explain why "at a different time" means "received by said DVR after said video program is stored on said memory device," as claim 17 requires. *See* Pet., p. 49 (citing Ex. 1002, ¶¶200-204).

95. Accordingly, *Casagrande* fails to teach or suggest claim 17. *Russ* does not cure the deficiencies of *Casagrande*, and the Petition does not state otherwise. *See* Pet., p. 49. Thus, the combination of *Casagrande* and *Russ* fails to render obvious claim 17.

6. Independent Claim 18

96. The Petition does not provide independent analysis for independent claim 18. *See* Pet. at 22-39. Instead, it contends that the same combination of Casagrande and Russ is relevant to each of the independent claims. *See id.* As a result, the Petition fails to show that the combination of *Casagrande* and *Russ* renders claim 18 obvious for the same reasons as claim 1.

- a. **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”**

97. Limitation 18[c] recites “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.” Ex. 1001, 14:27-30. The Petition contends that the claimed “first playback state” and “second playback state” correspond to whether the first A/V stream or the second A/V stream is displayed to the user. Pet. at 30. And it contends that the “first command” toggles between which stream is displayed. *Id.* But, as with claim 1, the “first playback state” and “second playback state” correspond to more than simply which video stream is displayed. *See* Ex. 1001, 14:31-46. Accordingly, for these

reasons and all the reasons discussed above in reference to claim limitation 1[c], the combination of *Casagrande* and *Russ* does not teach or suggest limitation 18[c].

b. 18[d] “at least one processor for . . .”

98. As with limitation 1[d], limitation 18[d] recites three scenarios that define how video is provided based on (1) the playback state and (2) the “period of time.” Compare Ex. 1001 at 14:31-46 (limitation 18[d]) with Ex. 1001 at 11:62-12:14 (limitation 1[d]). Like limitation 1[d], limitation 18[d] also requires that the entire “video program” is provided in certain scenarios and that skipping commercials is both user and time dependent. These features are not disclosed in *Casagrande* or *Russ*. See *id.* Accordingly, the combination of *Casagrande* and *Russ* does not teach or suggest limitation 18[d] for the same reasons as limitation 1[d].

7. Dependent Claims 2, 4-8, 10-16, and 19

99. Dependent claims 2 and 4-8 depend from and add limitations to independent claim 1. Dependent claims 10-16 depend from and add limitations to independent claim 9. Dependent claim 19 depends from and adds limitations to independent claim 18. The combination of *Casagrande* and *Russ* fails to render obvious independent claims 1, 9, and 18, therefore, the combination of *Casagrande* and *Russ* fails to render obvious dependent claims 2, 4-8, 10-16, and 19 for at least the same reasons.

B. Ground 2 — *Dow* Does Not Anticipate Claims 1-5, 7-13, and 16-19

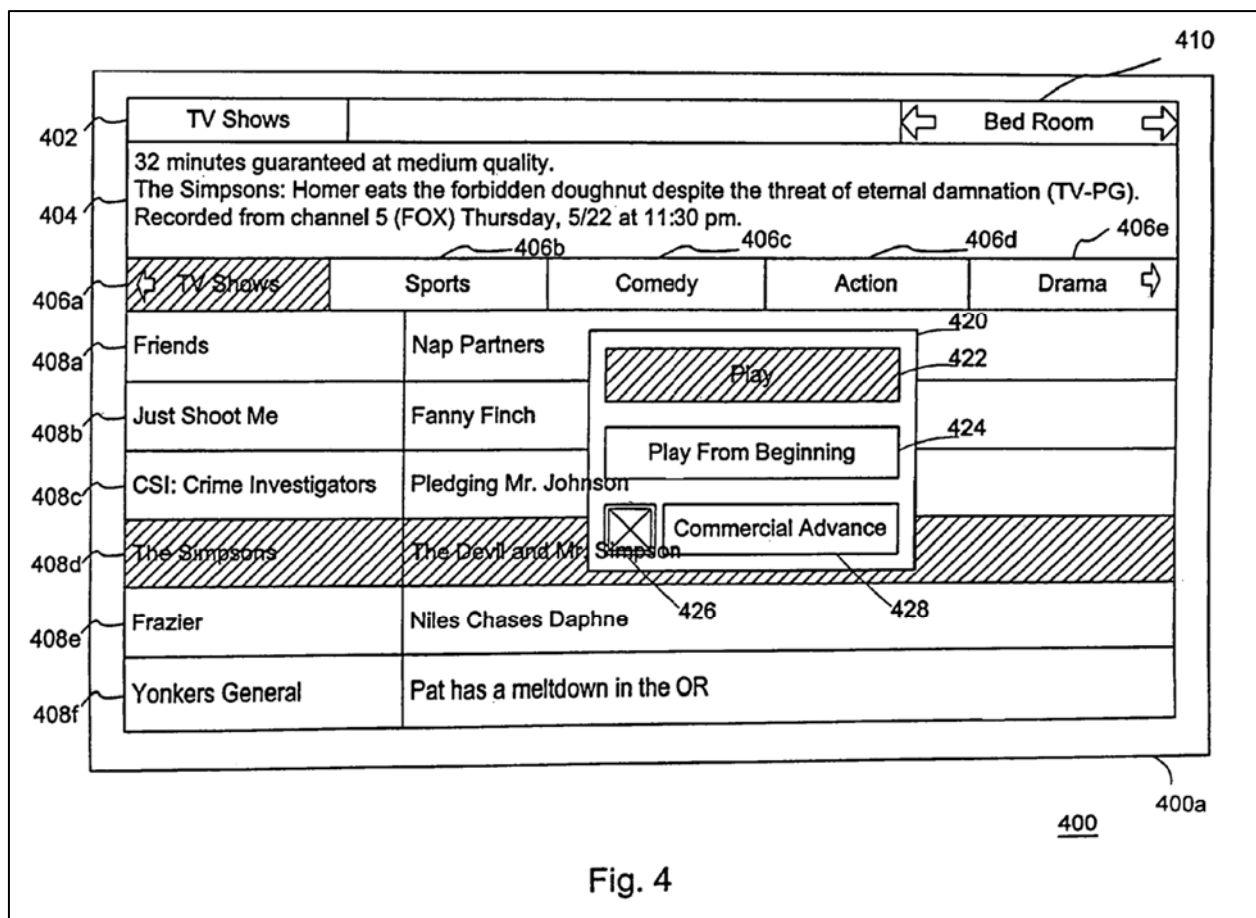
100. In my opinion, *Dow* does not anticipate claims 1-5, 7-13, and 16-19 for multiple reasons.

101. *Dow* is fundamentally different than the claimed inventions of the '710 Patent. *Dow* was filed on April 26, 2002. Ex. 1007. The context from that filing date is important—*Dow* was filed when DVRs were starting to replace VCRs in the marketplace. One of the first DVR prototypes was made at Stanford University in the fall of 1998. *See* Ex. 2002; *see also* Ex. 2003. The first consumer DVRs were demonstrated by Replay Network and TiVo at the 1999 Consumer Electronics Show (CES). *See* Ex. 2004. *Dow* acknowledges that as of its filing date the transition from VCRs to DVRs was “revolutionizing the way broadcast video content is stored, managed, and viewed.” *See* Ex. 1007 at 2:61-62.

102. *Dow* recognizes that predecessor VCRs included commercial-skipping functionality. *See id.* at 1:31-2:60. But those “commercial-skipping VCRs” had shortcomings that limited their ability to accurately detect commercials. *See id.* *Dow* recognizes that the digital storage in a DVR (as opposed to the analog storage in a VCR) can be used to provide better event detection (e.g., detection of commercials) and navigation through those events. *See id.* at 3:14-48. *Dow* purports to “provide improved detection of events in a video signal or data stream” by “calculating the luminance of at least a portion of a video frame, and comparing the

luminance against a threshold value.” *See id.* at 3:53-57. The specification focuses on the details of how to implement *Dow’s* purported improvements to event detection. *See generally* Ex. 1007.

103. With respect to navigation through those events (e.g., skipping commercials), *Dow* discloses a simple toggle for whether the “Commercial Advance” (426 in Fig. 4) feature is enabled:



Ex. 1007, Fig. 4. “The commercial skip toggle 426 indicates whether the commercial skip feature is enabled or not.” *Id.* at 11:57-58. When the feature is enabled, “commercials will be skipped regardless of the play mode selected.” *Id.* at

11:59-61 (emphasis added). *Dow* does not, however, disclose the time-based limitations on navigation through a program claimed in the '710 Patent that were recognized by the inventor of the '710 Patent as DVR technology matured.

1. Independent Claim 1

104. In my opinion, *Dow* does not anticipate independent claim 1 because it does not disclose the following elements of the claim.

a. 1[c] “a controller configured to receive commands from a user of said DVR . . .”

105. Limitation 1[c] recites “a controller configured to receive commands from a user of said DVR, wherein a first command changes said DVR from a first playback state to a second playback state, and a second command initiates playback of said video program from said memory device.” Ex. 1001, 11:57-61 (emphasis added). The Petition contends that the claimed “first playback state” and “second playback state” correspond to whether the commercial-skipping functionality in *Dow* is active or inactive:

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).

Pet. at 56. And it contends that the “first command” toggles whether that functionality is active or inactive. *Id.* But the “first playback state” and “second

playback state” correspond to more than simply whether commercial-skipping functionality is active or inactive. *See* Ex. 1001, 11:62-12:14. They also place time-based limitations on navigation through a program, as discussed in further detail below for limitation 1[d]. *See id.* Accordingly, *Dow* does not anticipate claim limitation 1[c].

b. 1[d] “at least one processor configured to . . .”

106. Limitation 1[d] recites “at least one processor configured to” provide different portions of the “video program” based on the “playback state” of the DVR and when playback is taking place (i.e., whether playback is taking place during the claimed “first period of time” or “second period of time”). Ex. 1001 at 11:62-12:14. The claim recites three scenarios that define the required configuration of the “at least one processor.” *Id.*

107. First, the “at least one processor” must

“(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”

See id. at 11:62-66. The claimed “video program” contains at least three portions. *See id.* at 11:49-53. As a result, under the first scenario, the “at least one processor” must be configured to provide the first, second, and third portions. *See id.* at 11:49-53, 11:62-66. This is true “regardless of the playback state of said DVR.” *See* Ex. 1001 at 11:49-53, 11:62-66.

108. Second, the “at least one processor” must

“(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”

See id. at 11:66-12:3. This scenario occurs when (1) “said DVR is in said first playback state” and (2) “said second command is received during a second period of time.” *See id.* Based on the plain language of the claim, the “first command” to set the DVR in the “first playback state” must be received before the “second command” initiating playback is received. Here again, the “video program” contains at least three portions, so under the second scenario, the “at least one processor” must be configured to provide the first, second, and third portions. *See Ex. 1001, 11:66-12:3.*

109. Third, the “at least one processor” must

“(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”

See id. at 12:3-14. This scenario occurs when (1) “said DVR is in said second playback state” and (2) “said second command is received during said second period of time.” *See id.* Based on the plain language of the claim, the “first command” to set the DVR in the “second playback state” must be received before the “second

command” initiating playback is received. Under the third scenario, the “at least one processor” provides only a portion of the video program, not the entirety of the video as under the first and second scenarios. *Compare* Ex. 1001 at 12:3-14 *with* Ex. 1001 at 11:62-66 (first scenario), 11:66-12:3 (second scenario). Specifically, the “at least one processor” will provide “first and third portions of said video program,” but not the second portion, and “said third portion of said video program is provided to said display device immediately following said first portion of said video program.” *See* Ex. 1001 at 12:3-14.

110. In summary, the “at least one processor” is configured such that the user of the DVR cannot skip the “second portion” of the “video program” during the “first time period” (i.e., the first scenario). *See id.* at 11:62-66. Subsequently, during the “second time period,”² the “at least one processor” is configured such that the user of the DVR can choose whether to skip the “second portion” of the “video program” based on selecting the “first playback state” or the “second playback state” (i.e., the second and third scenarios). *See id.* at 11:57-61, 11:66-12:14. As a result, the user cannot skip the “second portion,” which can be a commercial more proximate to when the “video program” was received, whereas the skip functionality becomes available at a later point in time. *See id.* at 11:57-61, 11:62-12:14.

² Claim 1 of the ’710 Patent recites that “said second period of time is a period of time after said first period of time.” Ex. 1001 at 12:15-16.

111. *Dow* does not disclose any of the three scenarios recited in limitation 1[d]. For the first scenario, the Petition cites to *Dow*'s "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." Pet. at 56 (citing Ex. 1007 at 24:24-27, 24:30-31). Those citations disclose that different operational modes of *Dow*'s DVR affect whether the user can skip commercials, but do not disclose any of those modes being affected by time. See Ex. 1007 at 24:24-27. The Petition also cites to the disclosure in *Dow* 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)." Pet. at 58 (citing Ex. 1007 at 24:43-48) (emphasis added). But there the "commercial skip" is disabled based on what mode the DVR is in, not by time. See Ex. 1007 at 24:43-48. In short, *Dow* does not determine whether a "second command" was received during a "first period of time," as claim limitation 1[d][i] requires.

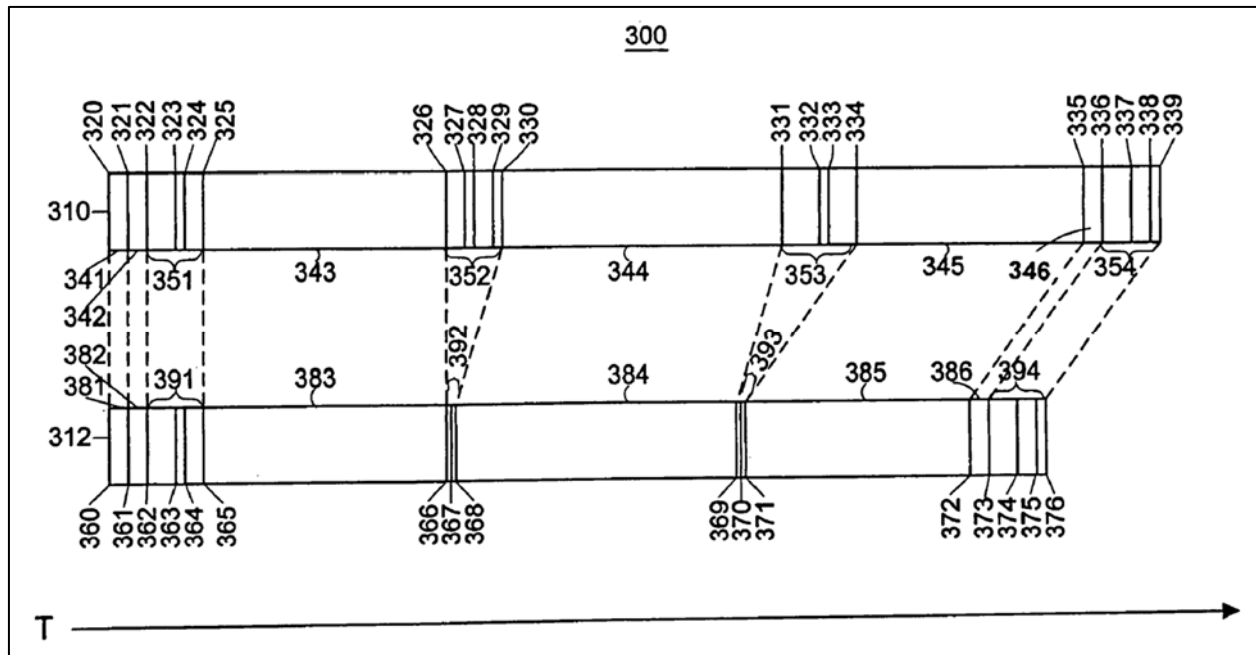
112. Moreover, *Dow* cannot "provide said video in its entirety," as claimed, in either the "live view mode" or "delayed view mode . . . where there is insufficient time to buffer and process events for identifying commercial groups (e.g., a time delay of less than two minutes)." According to claim 1, a transmitted video program

(including first, second, and third portions) is received and stored in a memory device. Ex. 1001 at 11:46-61. “[A] second command initiates playback of said video program *from said memory device*,” where the specific playback from memory depends on DVR state and time. *Id.* (emphasis added). The Petition identifies the content portions of a program as the claimed “first portion” and “third portion,” whereas the commercials between those portions are identified as the claimed “second portion.” See Pet. at 53 (citing Ex. 1007 at Fig. 3). *Dow’s* DVR cannot “provide said video in its entirety” in its “live view mode” because the user is viewing the “first portion” of the program live, so the “second portion” and “third portion” have not been received yet, let alone stored on a memory device, from which playback is initiated. See Ex. 1007 at 24:23-27. Similarly, *Dow’s* DVR cannot “provide said video in its entirety” in its “delayed view mode . . . where there is insufficient time to buffer and process events for identifying commercial groups (e.g., a time delay of less than two minutes)” because the “second portion” has not been fully received and the third portion has not yet been received, let alone stored in a memory device. See Ex. 1007 at 24:43-48. Accordingly, *Dow* does not disclose the “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.”

113. Still referring to the first scenario, Petitioner mapped the period during which *Dow*'s DVR is operating in the "live view mode" or the "delayed view mode" to the claimed "first period of time." *See* Pet., p. 58. That mapping is flawed because, as I discussed above, the claimed "first period of time" must start after transmission of the entire "video program" to the DVR. In contrast, in *Dow*'s "live view mode" or "delayed view mode," the entire "video program" has not been transmitted to the DVR. Specifically, as previously mentioned, the "second portion" has not been fully transmitted and the "third portion" has not yet been transmitted.

114. For the second scenario, the Petition cites to *Dow*'s disclosure of "toggling the commercial skip function between active and inactive modes." *See* Pet. at 58 (citing Ex. 1007 at 24:29-32). But again, *Dow* does not disclose that function being available or not available based on time. *See* Ex. 1007 at 24:29-32. Accordingly, *Dow* does not disclose the "at least one processor" configured to "(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."

115. For the third scenario, the Petition cites to Figure 3 in *Dow*, which depicts how a program will be displayed to the user when commercial-skip function is inactive and active. *See* Pet. at 58-59 (citing Ex. 1007 at Fig. 3, 9:40-45, 10:45-47). Figure 3 is reproduced below:



Ex. 1007 at Fig. 3. The Petition identifies the content portions (343 & 344) of a program as the claimed “first portion” and “third portion,” whereas the commercials between those portions (352) are identified as the claimed “second portion.” See Pet. at 53 (citing Ex. 1007 at Fig. 3). Timeline 310 depicts the program as originally presented, whereas timeline 312 depicts how the program will be displayed with the commercial-skip feature active. See Ex. 1007 at 9:37-47. Figure 3 and the related written disclosures are silent about the commercial-skip feature becoming available during “a second period of time” when it was not available during “a first period of time,” and where the “first period of time” started after transmission of the entire video program. Accordingly, *Dow* does not disclose the “at least one processor” configured to “(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.”

116. Again, while *Dow* may provide that “commercial skip is always inactive in live view mode or in delayed view mode,” this feature is mode-based, not time-based as claimed. *See* Ex. 1007 at 24:43-48. It is also before the first, second, and third portions have been received and stored on a memory device, from which playback is initiated. Thus, by definition, this “inactivation” of “commercial skip” cannot be during “said second period of time . . . wherein said second period of time is a period of time after said first period of time.” Ex. 1001 at 11:62-12:16. In other words, inactivating commercial skip before the commercials have been received (or before the programming after the commercial has been received) is completely different from the claimed invention, where skipping is allowed after the video program (first, second, and third portions) has been received and stored in memory.

2. Dependent Claim 3

117. Dependent claim 3 depends from and adds limitations to independent claim 1. As discussed above, *Dow* fails to anticipate independent claim 1. Accordingly, *Dow* fails to anticipate dependent claim 3 for at least the same reasons.

118. Further, dependent claim 3 recites

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 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.

Ex. 1001, 12:20-26 (emphasis added). Accordingly, claim 3 falls within the third scenario (i.e., claim limitation 1[d][iii]). Petitioner mapped *Dow*'s "commercials" to the claimed "secondary video content." *See* Pet., pp. 60-61 (citing Ex. 1007, 16:5-9). To meet the requirements of claim limitation 1[d][iii], the Petition cites to the embodiment in *Dow* where commercials are skipped in their entirety. *See* Pet, p. 59 (citing Ex. 1007, 10:45-47). Now, to meet the requirements of claim 3, Petitioner cites to the embodiment in *Dow* where the DVR still plays "a small portion of one of more commercials in a skipped commercial group." *See* Pet., p. 61 (citing Ex. 1007, 16:5-9). But those are mutually exclusive embodiments. Petitioner fails to explain how a commercial can be skipped in its entirety but a small portion of the commercial is still played. *See* Pet, pp. 60-61. Accordingly, *Dow* fails to anticipate dependent claim 3.

3. Independent Claim 9

119. The Petition does not provide independent analysis for independent claim 9. *See* Pet. at 51-60. Instead, it contends that the same disclosure in *Dow* is relevant to each of the independent claims. *See id.* As a result, the Petition fails to show that *Dow* anticipates claim 9 for the same reasons as claim 1.

a. 9[c] “receiving a first command from at least one user of said DVR, said first command indicating a playback state of said DVR”

120. Limitation 9[c] recites “receiving a first command from at least one user of said DVR, said first command indicating a playback state of said DVR.” Ex. 1001, 12:62-64. The Petition contends that the “playback state” corresponds to whether the commercial-skipping functionality in *Dow* is active or inactive. *See* Pet. at 56. But as with claim 1, the “first playback state” and “second playback state” correspond to more than simply whether commercial-skipping functionality is active or inactive. *See* Ex. 1001, 13:4-24. Accordingly, *Dow* does not disclose limitation 9[c].

b. 9[f] “wherein the step of providing said at least a portion of said video program to said display device further comprises . . .”

121. As with limitation 1[d], limitation 9[f] recites three scenarios that define how video is provided based on (1) the playback state and (2) the “period of time.” *Compare* Ex. 1001 at 13:4-24 (limitation 9[f]) *with* Ex. 1001 at 11:62-12:14

(limitation 1[d]). Like limitation 1[d], limitation 9[f] also requires that the entire “video program” is provided in certain scenarios and that portions can only be skipped after the entire video program (or at least first, second, and third portions) has been received and stored on a memory device. Accordingly, *Dow* does not anticipate limitation 9[f] for the same reasons as limitation 1[d].

4. Dependent Claim 12

122. Dependent claim 12 depends from and adds limitations to independent claim 9. As discussed above, *Dow* fails to anticipate independent claim 9. Accordingly, *Dow* fails to anticipate dependent claim 12 for at least the same reasons.

123. The Petition relies on the same analysis for both claim 3 and claim 12. *See* Pet., pp. 60-61. Accordingly, *Dow* fails to anticipate dependent claim 12 for all the reasons discussed above in reference to dependent claim 3.

5. Dependent Claim 17

124. Dependent claim 17 depends indirectly from and adds limitations to independent claim 9. As discussed above, *Dow* fails to anticipate independent claim 9. Accordingly, *Dow* fails to anticipate dependent claim 17 for at least the same reasons.

125. Further, claim 17 recites, in part, “receiving . . . 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.” Ex. 1001, 14:11-17 (emphasis added). In other words, the start time and the end time of the second portion are received from the satellite after the video program is stored on the memory device of the DVR.

126. Petitioner mapped *Dow*’s “event data or other metadata” to the claimed “said at least one times.” Pet., pp. 65-66 (citing Ex. 1007, 14:17-19, 16:59-62). Even if that mapping is proper, *Dow* still fails to disclose the specific timing required by claim 17. Specifically, *Dow* fails to disclose that the “event data or other metadata” (i.e., Petitioner-identified “at least one times”) is received from the satellite after the video program is stored on the memory device of the DVR. Accordingly, *Dow* fails to anticipate claim 17.

6. Independent Claim 18

127. The Petition does not provide independent analysis for independent claim 18. *See* Pet. at 51-60. Instead, it contends that the same disclosure in *Dow* is relevant to each of the independent claims. *See id.* As a result, the Petition fails to show that *Dow* anticipates claim 18 for the same reasons as claim 1.

- a. **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”**

128. Limitation 18[c] recites “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.” Ex. 1001, 14:27-30. The Petition contends that the “playback state” corresponds to whether the commercial-skipping functionality in *Dow* is active or inactive. *See* Pet. at 56. But as with claim 1, the “first playback state” and “second playback state” correspond to more than simply whether commercial-skipping functionality in is active or inactive. *See* Ex. 1001, 14:31-46. Accordingly, *Dow* does not disclose limitation 18[c].

- b. **18[d] “at least one processor for . . .”**

129. As with limitation 1[d], limitation 18[d] recites three scenarios that define how video is provided based on (1) the playback state and (2) the “period of time.” *Compare* Ex. 1001 at 14:31-46 (limitation 18[d]) with Ex. 1001 at 11:62-12:14 (limitation 1[d]). Like limitation 1[d], limitation 18[d] also requires that the entire “video program” is provided in certain scenarios and that portions can only be skipped after the entire video program (or at least first, second, and third portions)

has been received and stored on a memory device. *See id.* Accordingly, *Dow* does not disclose limitation 18[d] for the same reasons as limitation 1[d].

7. Dependent Claims 2, 4, 5, 7, 8, 10, 11, 13, 16, and 19

130. Dependent claims 2, 4, 5, 7, and 8 depend from and add limitations to independent claim 1. Dependent claims 10, 11, 13, and 16 depend from and add limitations to independent claim 9. Dependent claim 19 depends from and adds limitations to independent claim 18. *Dow* fails to anticipate independent claims 1, 9, and 18, therefore, *Dow* fails to anticipate dependent claims 2, 4, 5, 7, 8, 10, 11, 13, 16, and 19 for at least the same reasons.

C. Ground 3 – The Combination of *Dow* and *Russ* Does Not Render Obvious Claims 1-19 of the '710 Patent

131. Petitioner contends that the combination of *Dow* and *Russ* renders obvious claims 1-19 of the '710 Patent. Pet. at 13, 67-74. The combination of *Dow* and *Russ* does not render obvious those claims for multiple reasons.

1. Independent Claim 1

132. The combination of *Dow* and *Russ* does not render obvious independent claim 1 because the combination does not teach or suggest the following elements of the claim. As described above, neither *Russ* nor *Dow* discloses the time-based limitations recited in the claims. Accordingly, Petitioner's argument that the combination of *Dow* and *Russ* is driven by impermissible hindsight rather than

evidence of what would have been obvious to a person of ordinary skill in the art at the time of the invention.

a. 1[c] “a controller configured to receive commands from a user . . .”

133. Limitation 1[c] recites “a controller configured to receive commands from a user of said DVR, wherein a first command changes said DVR from a first playback state to a second playback state, and a second command initiates playback of said video program from said memory device.” Petitioner does not contend that it would have been obvious to combine *Dow* and *Russ* to address *Dow*’s failure to disclose limitation 1[c]. *See* Pet. at 67-72. Accordingly, the combination of *Dow* and *Russ* does not teach or suggestion limitation 1[c] for the same reasons provided above in the section regarding *Dow*’s failure to anticipate claim 1.

b. 1[d][i] “at least one processor configured to (i) provide said video program in its entirety . . .”

134. Limitation 1[d][i] recites “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.” Ex. 1001, 11:62-66. Petitioner does not contend that it would have been obvious to combine *Dow* and *Russ* to address *Dow*’s failure to disclose limitation 1[d][i]. *See* Pet. at 67-72. Accordingly, the combination of *Dow* and *Russ* does not teach or suggestion limitation 1[d][i] for

the same reasons for the same reasons provided above in the section regarding *Dow's* failure to anticipate claim 1.

135. Further, in *Dow's* system, once an entire video program is recorded, the user may playback the video program with or without the commercials. *See* Ex. 1007, 10:45-50, 24:14-56. In other words, *Dow* does not impose any time-based restrictions on the user's ability to playback a stored video program without the commercials. *See id.* Following Petitioner's proposed modifications, *Dow's* users will now need to wait some arbitrary time period before they can playback the stored video program without commercials. According to Petitioner, "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." Pet., p. 69. But in my opinion, that is not true for *Dow's* users, who never had such restrictions in the first place. *Dow's* users would not react favorably to the new playback restrictions. Accordingly, there is no motivation to combine *Dow* and *Russ*.

136. Also according to Petitioner, a POSITA "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." Pet., p. 69. *See also* Ex. 1002, ¶¶343-

345. But neither Petitioner nor Petitioner's expert provides any evidence that content providers in *Dow* either (a) suffer from reduced ad revenues because of *Dow's* ad-skipping feature, or (b) would experience an increase in ad revenues if *Dow's* system was modified as proposed by Petitioner. Accordingly, there is no motivation to combine *Dow* and *Russ*.

c. 1[d][ii] “at least one processor configured to . . . (ii) provide said video program in its entirety . . .”

137. Limitation 1[d][ii] recites “at least one processor configured to . . . (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.” Ex. 1001, 11:66-12:3. For this limitation, Petitioner contends that it would have been obvious to combine *Dow* with *Russ* to overcome the shortcomings in *Dow* because “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.” See Pet. at 68-69. But *Russ* does not disclose “providing said video program in its entirety” (i.e., including commercials under Petitioner's argument) “during a second period of time.”

138. The commercial-related functionality in *Russ* is driven by “tags.” *Russ* uses “ad-insertion tags” to “differentiate between the program and commercials.” See Ex. 1008, ¶[0026]. Frames within the program “are preferably tagged to indicate a splicing point when a commercial break is coming.” *Id.*, ¶ [0027]. Through the

tags, commercials are inserted or replaced. *Id.*, ¶[0028]. *Russ* discloses that the same tag can also specify whether the user can fast forward through a commercial (so-called “trick play” functionality). And the same tag can also specify an expiration date, after which “the tag would become inactive or replaceable.” *See id.*, ¶[0035]. At that point, the commercial would no longer be viewable (because the tag is inactive) or the commercial would be replaced with a different commercial (because the tag is replaced). *See id.* Accordingly, *Russ* does not disclose providing “said video program in its entirety” because the commercial would either be non-viewable or replaced by a new commercial. *See id.* And Petitioner’s rationale that “*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” is not supported by the reference. *See Pet.* at 68-69. As discussed above, when the restriction expires, so too does the commercial (or its tag), and a new, different commercial is provided.

139. Petitioner’s remaining obviousness rationale is supported by only the declaration of Dr. Jeffay. *See Pet.* at 69 (citing Ex. 1002, ¶345). But his declaration does little more than restate Petitioner’s argument without any additional supporting evidence or reasoning. Accordingly, Petitioner’s remaining obviousness rationale lacks support.

140. In summary, Petitioner’s obviousness rationale for this limitation is driven by hindsight, without any evidence that the claimed invention would have been obvious to a person of ordinary skill in the art.

d. 1[d][iii] “at least one processor configured to . . . (iii) provide only a portion of said video program . . .”

141. Limitation 1[d][iii] recites “at least one processor configured to . . . (iii) provide only a portion of said video program . . .” Ex. 1001, 12:3-14. In arguing that this feature is obvious, Petitioner merely restates its anticipation arguments for *Dow*, and its previous arguments for *Russ* (where trick play is precluded). *See id.* at 69-72. But as I discussed above, this feature is not disclosed in either *Dow* or *Russ*. In *Dow*, there are no time-based restrictions on commercial skipping after the video program has been received and stored on a memory device—only while the program is being received (as one cannot skip while viewing program live or with a slight (e.g., two minute) delay). In *Russ*, the commercial skipping restrictions are commercial based, not time-based. The transmitted commercial can either be skipped or it cannot (based on its “tag”). It does not switch from non-skippable (during a first period of time) to skippable (during a second period of time). Accordingly, *Russ* cannot make up for this deficiency in *Dow*.

2. Independent Claims 9 and 18

142. The Petition does not provide independent analysis for independent claims 9 or 18. *See Pet.* at 67-72. Instead, it contends that the same disclosures in

Dow and *Russ* are relevant to each of the independent claims. *See id.* As a result, the Petition fails to show that the combination of *Dow* and *Russ* renders obvious claims 9 and 18 for the same reasons as claim 1.

3. Dependent Claim 17

143. Dependent claim 17 depends indirectly from and adds limitations to independent claim 9. As discussed above, the combination of *Dow* and *Russ* fails to render obvious independent claim 9. Accordingly, the combination of *Dow* and *Russ* fails to render obvious dependent claim 17 for at least the same reasons.

144. Further, claim 17 recites, in part, “receiving . . . 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.” Ex. 1001, 14:11-17 (emphasis added). In other words, the start time and the end time of the second portion are received from the satellite after the video program is stored on the memory device of the DVR.

145. Petitioner mapped *Dow*’s “metadata” to the claimed “said at least one times.” Pet., pp. 65-66 (citing Ex. 1007, 14:17-19, 16:59-62), 74. Even if that mapping is proper, *Dow* still fails to disclose the specific timing required by claim 17. Specifically, *Dow* fails to disclose that the “metadata” (i.e., Petitioner-identified

“at least one times”) is received from the satellite after the video program is stored on the memory device of the DVR.

146. According to Petitioner, a POSITA “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” and a POSITA “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.” Pet., p. 74. But neither Petitioner nor its expert provide any evidence or reasoning for those conclusions. See Pet., p. 74; Ex. 1002, ¶¶423-425. The Petition references *Dow*’s “live view mode or delayed view mode.” Pet., p. 74 (citing Ex. 1007, 24:44-48). But as discussed above, in *Dow*’s “live view mode or delayed view mode” the entire video program has not yet been transmitted to the DVR, and thus the video program has not yet been stored in the memory device of the DVR. Accordingly, it is unclear how *Dow*’s “live view mode or delayed view mode” teaches “each one of said at least one times is received by said DVR after said video program is stored on said memory device,” as claim 17 requires. *Russ* does not cure the deficiencies of *Dow*, and the Petition does not state otherwise. See Pet., p. 74. Accordingly, the combination of *Dow* and *Russ* fail to render claim 17 obvious.

4. Dependent Claims 2-8, 10-16, and 19

147. Dependent claims 2-8 depend from and add limitations to independent claim 1. Dependent claims 10-16 depend from and add limitations to independent claim 9. Dependent claim 19 depends from and adds limitations to independent claim 18. The combination of *Dow* and *Russ* fails to render obvious independent claims 1, 9, and 18, therefore, the combination of *Dow* and *Russ* fails to render obvious dependent claims 2-8, 10-16, and 19 for at least the same reasons.

VI. CONCLUSION

148. For the foregoing reasons, it is my opinion that the Challenged Claims of the '710 Patent are patentable.

149. I reserve the right to modify and/or supplement this declaration, to present further analysis, and/or to amend my opinions as more and/or other arguments and/or information becomes available.

150. I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true. The statements in this declaration were made with the knowledge that willful false statements and the like are made punishable by fine or imprisonment under Section 1001 of Title 18 of the United States Code and may jeopardize the validity of the application or any patent issuing thereon.

I. Freedman Date: March 11, 2024

Immanuel Freedman