

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

NL GIKEN INC.
Patent Owner.

U.S. Patent No. 9,948,968
Issue Date: April 17, 2018
Title: Digital Contents Receiving Apparatus

Inter Partes Review No.: IPR2024-01277

**DECLARATION OF ANDREW B. LIPPMAN, Ph.D. IN SUPPORT OF
PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 9,948,968**

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I. INTRODUCTION

1. I am making this declaration at the request of Apple Inc. (“Apple” or “Petitioner”) in the proceeding of the *Inter Partes* Review of U.S. Patent No. 9,948,968 (“the ’968 Patent”). I am informed that the ’968 Patent is purportedly owned by NL GIKEN INC. (“NL GIKEN” or “Patent Owner”). A copy of the ’968 Patent is provided as exhibit EX1001 to the Petition.

2. I am over the age of eighteen (18) and otherwise competent to make this declaration, which is based upon facts and matters within my own personal knowledge or in information I have reviewed.

3. I am being compensated for my work in this matter at the rate of \$700 per hour. I have no financial interest in either party or in the outcome of this proceeding. I am being paid for my time, regardless of the facts I know or discover and regardless of the conclusions or opinions that I reach and express. My compensation is not contingent on the outcome of this proceeding or the specifics of my testimony.

4. I have been asked to provide my technical expertise, analysis, insights and opinions regarding the ’968 Patent and prior art, and whether certain prior art references disclose, teach, or suggest features recited in claims 1-12 (“the Challenged Claims”) of the ’968 Patent. In forming the opinions expressed in this

declaration, I relied upon my education and experience in the relevant field of the art, and have considered the viewpoint of a person having ordinary skill in the relevant art (“POSITA”) at the time of the alleged invention in September 2008.

My opinions directed to the invalidity of the Challenged Claims are based, at least in part, on the patents, applications, and/or publications identified and discussed further below, which I have been instructed by Petitioner’s counsel constitute prior art.

II. MY BACKGROUND, QUALIFICATIONS, AND PROFESSIONAL EXPERIENCE

5. My qualifications and professional experience are described in my Curriculum Vitae, a copy of which can be found in Exhibit 1004. The following is a brief summary of my relevant qualifications and professional experience.

6. I earned my undergraduate degree in Electrical Engineering from MIT in 1971. I earned a Master of Science degree in Computer Graphics from MIT in 1978. I earned a Ph.D. in Electrical Engineering from the École Polytechnique Fédérale de Lausanne (Switzerland) in 1995. My thesis was on scalable video, a technique for representing visual data in a fluid and variable networking and processing environment, similar to what we call streaming today.

7. I am currently a Senior Research Scientist at the Massachusetts Institute of Technology (“MIT”) and Associate Director of the MIT Media

Laboratory, an approximately \$80 million per year research and teaching facility at MIT, which I helped establish in the early 1980s.

8. At MIT, I have supervised over 50 Masters and Ph.D. theses in the Media Arts and Sciences program and have taught courses such as Digital Video and MIT's freshman physics seminar. Through the course of my career, I have directed and served as principal investigator of research projects supported by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), The National Science Foundation (NSF), and over 50 industrial companies. I have never precisely calculated my net research volume, but it is in excess of \$50 million.

9. I am named as an inventor on six patents in the area of video and digital processing and have served on the advisory boards for technology companies in fields ranging from video conferencing to music analysis. I have authored or coauthored over 65 published papers in the fields of interactivity, communications, video coding, and television. I served on the editorial board of the Image Communication Journal between 1989 and 2003. I have served as an expert witness in patent cases since 2001, addressing diverse features of interactive television, electronic program guides, and user interaction.

10. I have worked generally on video interaction systems since the 1970s. In the early 1970s, I developed font representations that permitted high quality display of text on standard broadcast television receivers. In 1978, I directed a DARPA-funded project called the “Movie-Map” that used computing and optical video and image storage to create an “experiential map” that featured “surrogate travel,” the ability to recreate the visual experience of traveling through a real place, a city. This is similar to Google’s Street-View and mapping systems.

11. In the 1980s, I was principal investigator of Office of Naval Research funded programs in video and graphics computer systems for interactive learning dedicated to maintenance and repair. I also developed networked video communications systems that included scripting languages for specifying audiovisual content and representing it on various monitoring terminals.

12. In 1991, I created the “Media Bank” program at MIT, the purpose of which was to allow a diverse set of networked devices to access appropriate forms of content for which they had the bandwidth and processing power to display. This entailed maintaining state information about terminal devices at a server and using that to determine the best representation of the audiovisual material to deliver to them. In addition, it included and developed cryptographic distribution methods that ensured secure delivery of information on the network. Related to this work, I

also supervised Masters theses on networked distribution of video and coding specifically for diverse uses on the Internet. My colleagues and I created demonstrations of interactive television systems for news that combined the evening newscast with additional data from print sources so the viewer could learn more about the story than was available in the live broadcast.

13. Also in 1991, I created the Television of Tomorrow program at MIT. This program addressed the digital representation and delivery of video at diverse scales and through diverse networks. This program built on work on scalable representations of images that were standards-independent and interactive.

14. In 1993, I was invited to be a member of Robert Kahn's "Cross Industry Working Group" the goal of which was to develop the ideas for a National Information Infrastructure. At DARPA, Kahn had initiated the research to develop the Arpanet and the Internet. Throughout this period, my students and I worked on distributed interactive systems for consumer use (television, electronic newspapers, learning) including the basic technology of the network and the client-server interactions.

15. I was a member of the Motion Picture Experts Groups, an ISO standards committee effort that defined the standards for common distribution of "MP3" music and storage and distribution of "MPEG Video." I co-wrote the paper

defining the requirements for the MPEG-2 standard with Okubo and McCann in 1995. MPEG standards remain the predominant encoding for distribution of digital video to this day. I was also the principal investigator on industry-funded programs addressing digital motion pictures — the “Movies of the Future” program at MIT, and high definition television, “Television of Tomorrow.” At MIT, I created the “Digital Life” consortium, the purpose of which was to explore and develop ideas relevant to an Internet-connected society.

III. MATERIALS CONSIDERED

16. In preparing this declaration and formulating my opinions, I have considered, relied upon, and applied my own knowledge, background and experience in the relevant field. I have also considered the viewpoint of a POSITA in the field, as of the relevant time frame. I also reviewed the '968 Patent (EX1001), the file history of the '968 Patent (EX1002), and each of the documents cited herein, and I have considered these documents in light of the general knowledge in the art as of September 14, 2008.

17. Among other things, the documents and materials I reviewed and considered include:

<i>Exhibit #</i>	<i>Description</i>
1001	U.S. Patent No. 9,948,968 (the “'968 Patent”)

<i>Exhibit #</i>	<i>Description</i>
1002	Prosecution History of the '968 Patent
1005	U.S. Patent Pub. No. 2007/0157249 A1, to Cordray et al. ("Cordray"), filed December 29, 2005, published July 5, 2007
1006	U.S. Patent Pub. No 2010/0031162 A1, to Wiser et al., ("Wiser"), filed April 14, 2008, published February 4, 2010
1007	Exhibit O, entitled "Claim Chart for US 9,948,968 and Apple," for Complaint in the Litigation
1008	Plaintiff NL Giken Inc.'s Answering Brief in Opposition to Defendant Apple Inc.'s Motion to Dismiss Pursuant to Fed. R. Civ. P. 12(b)(6), in the Litigation, Doc. 22

IV. RELEVANT LEGAL STANDARDS

18. I am not a lawyer, and therefore I offer no opinions on the law.

Nonetheless, I have been informed and understand that certain legal standards are relevant to my analysis. In preparing and expressing my opinions and considering the subject matter of the '968 Patent, I rely on certain basic legal principles that counsel have explained to me, as summarized below.

A. Patent and Prosecution History

19. I have been informed that a patent includes a specification, one or more drawings, and one or more claims. I have been informed that the specification provides a written description of the patented invention, the drawings illustrate the invention, and the claims define the scope of the invention. I

understand that the file history includes the back and forth communication between a patent applicant and the United States Patent and Trademark Office (“USPTO” or “Patent Office”) during the application process, including the application itself, as well as office actions filed by the USPTO examiner and responses filed by the applicant.

20. I have been informed and understand that a patent is to be understood from the perspective of a POSITA. Such an individual is considered to possess normal skills and knowledge in a particular technical field (as opposed to being a genius). I have been informed and understand that in considering what the claims of a patent require, what was known prior to that patent, what a prior art reference discloses, and whether an invention is obvious or not, one must use the perspective of such a POSITA.

B. Presumption of Validity and Burden of Proof

21. I have been informed and understand that an issued patent claim is presumed to be valid. I have further been informed that establishing a patent claim to be unpatentable in an *inter partes review* proceeding requires proof by “preponderance of the evidence,” which I understand means proof that it is more likely than not that the claim is unpatentable.

C. Claim Construction

22. I have been informed and understand that the first step in an unpatentability analysis involves construing claims, as necessary, to determine their scope. Counsel has informed me that claim terms are given their plain and ordinary meaning as would be understood by one of ordinary skill in the relevant art. Because the meaning of a claim term may not be readily apparent, I understand that I should look to those sources available to the public that show what a POSITA would have understood a claim term to mean. These include, in order of importance, the words of the claims themselves, the patent specification, the prosecution history, and, finally, evidence outside the patent like dictionaries, textbooks, or other resources that may inform the meaning of the claim terms.

D. Prior Art

23. I am told that the second step in an unpatentability analysis involves comparing the construed claim language against the disclosures of the prior art.

24. I have been informed that prior art to the '968 Patent includes patents and printed publications in the relevant art that predate the priority date of the alleged invention recited in the '968 Patent. For purposes of this declaration, I have been asked to apply September 14, 2008, the effective filing date of the '968 Patent, as the priority date.

25. I have further been informed and understand that a person of ordinary skill in the art is presumed to know the relevant prior art.

26. I have been informed and understand that a patent claim may be declared unpatentable if it is anticipated by, or rendered obvious in view of, prior art.

E. Anticipation

27. I have been informed that, to anticipate a claim under 35 U.S.C. § 102, a reference must teach or disclose every element of the claim either expressly or inherently to a person having ordinary skill in the relevant art. I have also been informed that, to be an inherent disclosure, the prior art reference must necessarily disclose the limitation, and the fact that the reference might possibly practice or contain a claimed limitation is insufficient to establish that the reference inherently teaches the limitation.

F. Obviousness

28. I have been informed that a patent claim is not patentable under 35 U.S.C. § 103 if the differences between the patent claim and the prior art are such that the claimed subject matter as a whole would have been obvious at the time the claimed invention was made to a person having ordinary skill in the relevant art. Obviousness, as I have been informed and understand, is based on the scope and

content of the prior art, the differences between the prior art and the claim, the level of ordinary skill in the art, and, to the extent that they exist, certain objective indicia of non-obviousness.

29. I have been informed that whether there are any relevant differences between the prior art and the claimed invention is to be analyzed from the view of a person of ordinary skill in the relevant art at the time of the invention. As such, my opinions below as to a person of ordinary skill in the art are as of the time of the invention, even if not expressly stated as such; for example, even if stated in the present tense.

30. In analyzing the relevance of the differences between the claimed invention and the prior art, I have been informed that I must consider the impact, if any, of such differences on the obviousness or non-obviousness of the invention as a whole, not merely some portion of it. The person of ordinary skill faced with a problem is able to apply his or her experience and ability to solve the problem and also look to any available prior art to help solve the problem.

31. I have been informed and understand that a single prior art reference can render a patent claim obvious under 35 U.S.C. § 103 if any differences between that reference and the claims would have been obvious to a person of ordinary skill in the art.

32. Alternatively, I have been informed and understand that a prior art reference may be combined with other references to disclose each element of the invention under 35 U.S.C. § 103. Thus, the teachings of two or more references may be combined in the same way as disclosed in the claims, if such a combination would have been obvious to one having ordinary skill in the art. I have been informed and understand that a reference may also be combined with the knowledge of a person of ordinary skill in the art, and that this knowledge may be used to combine multiple references.

33. I have been informed that a precise teaching in the prior art directed to the subject matter of the claimed invention is not needed. I have been informed that one may take into account the inferences and creative steps that a person of ordinary skill in the art would have employed in reviewing the prior art at the time of the invention. For example, if the claimed invention combined elements known in the prior art and the combination yielded results that were predictable to a person of ordinary skill in the art at the time of the invention, then this evidence would make it more likely that the claim was obvious. On the other hand, if the combination of known elements yielded unexpected or unpredictable results, or if the prior art teaches away from combining the known elements, then this evidence

would make it more likely that the claim that successfully combined those elements was not obvious.

34. I have been informed that there are recognized, exemplary, rationales for combining or modifying references to show obviousness of claimed subject matter. Some of the rationales include the following: combining prior art elements according to known methods to yield predictable results; simple substitution of one known element for another to yield predictable results; use of a known technique to improve a similar device (method or product) in the same way; applying a known technique to a known device (method or product) ready for improvement to yield predictable results; choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art teachings to arrive at the claimed invention.

35. I have been informed that objective indicia can be important evidence regarding whether a patent is obvious or nonobvious, if it has an appropriate nexus

to the claimed invention, *i.e.*, is a result of the merits of a claimed invention (rather than the result of design needs or market-pressure advertising or similar activities). Such indicia include: commercial success of products covered by the patent claims; a long-felt need for the invention; failed attempts by others to make the invention; copying of the invention by others in the field; unexpected results achieved by the invention as compared to the closest prior art; praise of the invention by the infringer or others in the field; the taking of licenses under the patent by others; expressions of surprise by experts and those skilled in the art at the making of the invention; and the patentee proceeded contrary to the accepted wisdom of the prior art.

V. LEVEL OF ORDINARY SKILL IN THE ART

36. I have been informed and understand that a POSITA is a hypothetical person who is presumed to be aware of all pertinent prior art, thinks along conventional wisdom in the art, and is a person of ordinary creativity.

37. I understand there are multiple factors relevant to determining the level of ordinary skill in the pertinent art, including (1) the levels of education and experience of persons working in the field at the time of the invention; (2) the sophistication of the technology; (3) the types of problems encountered in the field; and (4) the prior art solutions to those problems.

38. I have been informed by Apple's counsel that the earliest priority date for the '968 Patent is September 14, 2008, the date on which the respective Japanese application was filed.

39. Based on the technologies disclosed in the '968 Patent, I believe that a POSITA would include someone who had, at the priority date of the '968 Patent, a Bachelor's degree in Electrical Engineering, Computer Engineering, Computer Science, or a related subject, and two to three years of work experience in the field of computer systems and/or telecommunications. Less experience can be remedied with additional education (*e.g.*, a master's degree), and likewise, less education can be remedied with additional work experience (*e.g.*, 5–6 years).

40. Based on this criteria, as of the relevant time frame for the '968 Patent, I possessed at least such experience and knowledge of a POSITA, and am qualified to opine on the '968 Patent.

41. For purposes of this declaration, in general, and unless otherwise noted, my statements and opinions, such as those regarding my experience and the understanding of a POSITA generally (and specifically related to the references I consulted herein), reflect the knowledge that existed in the field as of September 14, 2008. Unless otherwise stated, when I provide my understanding and analysis

below, it is consistent with, refers to, and applies the level of a POSITA as of the priority date of the '968 Patent.

VI. SUMMARY OF OPINIONS

42. As described in detail below, based on my review of the '968 Patent and its prosecution history, the other materials I have considered, and my knowledge and experience, I offer the following opinions in this declaration:

43. Claims 1-12 are invalid at least as obvious over Cordray in view of ordinary skill in the art.

44. Claims 1-12 are invalid at least as obvious over Cordray in view of Wisner.

VII. THE '968 PATENT

A. Disclosure of the '968 Patent

45. The '968 Patent, titled "Digital Contents Receiving Apparatus," issued on April 17, 2018. EX1001, (10), (45), (54). The '968 Patent explains that various types of apparatus have been developed for receiving "digital moving image contents." *Id.*, 1:26-53. These include television sets and recording devices that can receive digital content from television stations over broadcast airwaves, as well as television sets and personal computers capable of downloading or streaming digital content from server stations via the Internet. *Id.* According to the

'968 Patent, the “increase of options” for a digital content receiving apparatus may be confusing for ordinary users who “cannot fully appreciate them.” *Id.*, 1:54-57.

46. To address this problem, the '968 Patent purports to provide an “improved digital moving image contents receiving apparatus in easiness of use.” *Id.*, 1:63-67. In particular, the '968 Patent purports to describe “a receiving apparatus capable of receiving digital contents from [an] outside contents source” that can “designate one of the digital contents in the outside source” and “keep information necessary . . . to designating the same digital content again.” EX1001, 2:2-7.

47. A first way this can be accomplished is by keeping a record of where in a digital moving image content (*e.g.*, a television program) a user's viewing was interrupted and allowing the user to resume viewing of the content from that position. EX1001, FIG. 2, 6:41-7:67, 17:7-10. As described, this involves, *e.g.*, “detect[ing]” whether the television program was “interrupted” during play. *Id.*, FIGS. 2, 6:41-7:67. If so, the content is “retrieved” in a “record recall process” and the “position” where viewing “halt[ed]” is “searched for.” *Id.* Then, viewing can be “restarted from the interrupted position.” *Id.*, 7:29-40. This “restart play from point of interruption” operation is analogous to “bookmarking.” As such, in this

declaration, I may refer to the “restart play from point of interruption” operation as “bookmarking.”

48. A second way that such functionality is provided is by allowing “chapter selection” for recorded or streaming content that is “divided into chapters.” EX1001, FIG. 4, 10:42-12:24. In this instance, a “view format of chapters is displayed” so that a user may “shift” (*i.e.*, skip) to a selected chapter. EX1001, FIG. 4; 10:52-11:44. The patent admits that this “chapter selection” functionality “is similar to well known functions for conventional picture recorder, such as the first-forward [sic] function, or the skipping function or the selection among chapters of a chaptered digital moving image content.” *Id.*, 10:52-62. Thus, if a user encounters or begins viewing of some program or broadcast digital moving image content “midstream” and “gets interested in the content, the user can enjoy the content at any desirable position, including the beginning, of the content.” *Id.*, 11:31-36.

49. FIG. 1 is a block diagram of the “receiving apparatus” of the ’968 Patent:

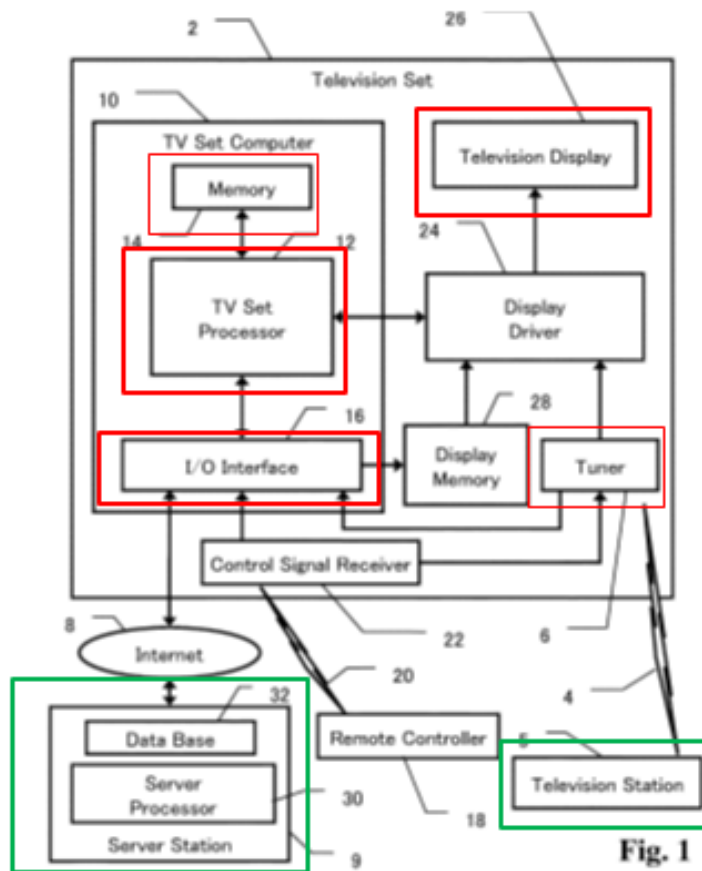


Fig. 1

EX1001, FIG. 1 (annotated). As shown, the receiving apparatus comprises, *inter alia*, a tuner 6, a TV set processor 12, memory 14, input/output (I/O) interface, and a television display 26 (each boxed in red). EX1001, FIG. 1, 4:57-5:12. The receiving apparatus receives digital moving image content from one or more “providers” (boxed in green) which may include, *e.g.*, TV station 5 and server station 32. EX1001, FIG. 1, 4:59-62.

50. In operation, the apparatus shown in FIG. 1 may perform or implement the “restart play from point of interruption” (or “bookmarking”) and

“chapter selection” functionalities that purportedly make it easier for a user to select or access content received from television station 5 or server station 9. *See e.g.*, EX1001, FIGS. 1, 4, and accompanying description. To implement these functionalities, the TV set processor 12 “designates” a portion of the content where termination of forward play occurs, and stores that designation in memory, so that when viewing starts again a succeeding portion of the content can be immediately available for display. EX1001, claims 1, 5, 9.

51. I understand from Apple’s counsel that Patent Owner has alleged that the ‘968 Patent is directed to the concept of automatically playing the next episode in a series when the previous episode completes. Based on my review of the ‘968 Patent’s figures and related description, I do not agree with Patent Owner’s assertion.

52. The ‘968 Patent issued with 12 claims. I reproduce those claims below with prefixes inserted before the various claim elements for reference and ease of understanding in my analysis.

[1pre] *A receiving apparatus configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being*

*commutatively connected to the receiving apparatus, the receiving apparatus comprising:*¹

- [1a] *a processor executing instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation;*
- [1b] *a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;*
- [1c] *a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and control the processor to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;*
- [1d] *a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor; and*
- [1e] *a display configured to display the succeeding part of the digital moving image contents received by the receiver.*
- [2] *The receiving apparatus according to claim 1, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.*
- [3] *The receiving apparatus according to claim 1, wherein the processor is configured to designate a part of the digital moving image contents provided*

¹ Claim language is quoted in italics throughout this petition to distinguish it from other quoted material.

by the provider by streaming technology in accordance with a program schedule table.

- [4] *The receiving apparatus according to claim 1, wherein the processor is configured to designate an optional part of the digital moving image contents in response to the manual operation.*
- [5pre] *A receiving method configured to receive digital moving image contents from a provider of the digital moving image contents, the receiving method comprising:*
 - [5a] *a step of executing, by a computer processor, instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation;*
 - [5b] *a step of keeping information necessary for the executing step to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;*
 - [5c] *a step of controlling the keeping step to keep the information in response to a termination of viewing the viewed part and control the executing step to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;*
 - [5d] *a step of receiving the designated succeeding part of the digital moving image contents in response to the designation by the executing step; and*
 - [5e] *a step of displaying the succeeding part of the digital moving image contents received by the receiving step.*

- [6] *The receiving method according to claim 5, wherein the executing step is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.*
- [7] *The receiving method according to claim 5, wherein the executing step is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.*
- [8] *The receiving method according to claim 5, wherein the receiving method is further configured to designate an optional part of the digital moving image contents in response to the manual operation.*
- [9pre] *A receiving system configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being commutatively connected to the receiving system, the receiving system comprising:*
- [9a] *a processor executing instructions to designate a part of the digital moving image contents from the provider automatically or in response to a manual operation;*
- [9b] *a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;*
- [9c] *a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and*

control the processor to automatically designate a succeeding part of the digital moving image contents when the viewing starts again;

[9d] *a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor; and*

[9e] *a display configured to display the succeeding part of the digital moving image contents received by the receiver.*

[10] *The receiving system according to claim 9, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.*

[11] *The receiving system according to claim 9, wherein the processor is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.*

[12] *The receiving system according to claim 9, wherein the processor is configured to designate an optional part of the digital moving image contents in response to the manual operation.*

Claim 1 is representative of the issued claims.

B. Prosecution History of the '968 Patent

53. I reviewed the prosecution history for the '968 Patent (EX1002).

54. The application from which the '968 Patent issued was filed on June 27, 2017. It claims priority to September 14, 2008. EX1001, (22), (63), (30).

55. I understand that during prosecution, the Examiner rejected the proposed claims based only upon: (i) non-statutory obviousness-type double patenting (over related U.S. Patent Nos. 8,726,028 and 9,210,484), and (ii) indefiniteness. EX1002. In response, the Applicant filed a Terminal Disclaimer and amended claims to address certain indefiniteness problems. EX1002.

56. I further understand that afterwards the Examiner issued a Notice of Allowance, giving the following reasons for allowance:

[N]one of the cited prior art teaches or suggests the steps of
“instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation; a step of keeping information necessary for the executing step to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents; a step of controlling the keeping step to keep the information in response to a termination of viewing the viewed part and control the executing step to automatically designate the succeeding part of the digital moving image content when the viewing starts again; a step of receiving the

designated succeeding part of the digital moving image contents in response to the designation by the executing step; and a step of displaying the succeeding part of the digital moving image contents received by the receiving step,” in view of other limitations of the claims 1, 5 and 9.

EX1002, p. 29.

57. It is my opinion, as will be shown in more detail below, that the systems and methods claimed in the '968 Patent, including the limitations that were identified by the Examiner in the reasons for allowance, were well-known in the prior art before the priority date of the '968 Patent.

C. Claim Construction²

58. I have been informed and understand that, for the purposes of this *inter partes* review, Petitioner submits that the terms of the '968 Patent should be given their plain and ordinary meaning as understood by a POSITA. In order to

² I have been informed and understand that Petitioner does not concede that any term not construed herein meets the statutory requirements of written description, enablement, or definiteness under 35 U.S.C. § 112, or that the Challenged Claims recite patentable subject matter under 35 U.S.C. § 101.

understand the meaning of the claims, I have reviewed the entirety of the '968 Patent (EX1001) and its prosecution history (EX1002). I have applied the plain and ordinary meaning of the claim terms of the '968 Patent in my analysis. No specific construction of any claim term is required because the prior art references that I rely on in this declaration meet or disclose each of the claim terms under any reasonable construction.

D. Priority Date of Claims

59. For the purposes of this *inter partes* review and my declaration, I have been instructed to assume that the effective filing date of each of the Challenged Claims is no earlier than September 14, 2008.

VIII. CHALLENGES

A. Challenge 1: Claims 1-12 are unpatentable over Cordray in view of ordinary skill in the art

60. Cordray, entitled "Systems and Methods for Episode Tracking in an Interactive Media Environment," was filed on December 29, 2005 and published July 5, 2007. EX1005, (10), (12), (22), (43), (54). I understand that Corday was not cited or identified during prosecution of the '968 Patent. EX1001, (56); EX1002.

61. Cordray describes a similar problem as the '968 Patent. EX1005. Cordray recognizes that "the amount of media available to users in any given media delivery system can be substantial." EX1005, [0033]. Indeed, content

delivery options such as “video-on-demand (VOD) services” and “digital video recording (DVR) services” have become “increasingly important.” EX1005, [0002]-[0006]. These delivery options—which “allow a user to become disconnected with the rigid broadcast schedule of media content,” make it difficult for a user to navigate through and select multimedia content. EX1005, [0005]. Moreover, some media content “may be serial in nature” and when such content is viewed out of sequence it can cause the viewer “to be confused or lose interest in the media content.” EX1005, [0005]. Accordingly, it “would be desirable to provide systems and methods for monitoring a user’s viewing progress of a user-selected series of related programs.” *Id.*, [0007].

62. Cordray discloses a similar solution as the ’968 Patent—a system for improving ease of use by simplifying how users locate and consume multimedia content from multiple sources. EX1005, Abstract, [0036]. Cordray’s system is able to “track and report a user’s progress through a series of related programming, such as a broadcast television series or a set of movie sequels,” thus allowing the user to “efficiently navigate media selections and easily identify media that they may desire.” EX1005, [0006], [0033]. FIG. 1 shows Cordray’s “interactive media system”:

64. In a “television-centric” distribution subsystem, user equipment devices (boxed in red) “receive media (such as television, music, web pages, etc.) and other data from distribution facility 104 over communications paths such as communications paths 114, 116, and 118.” EX1005, [0037]-[0042]. Distribution facility 104 is coupled to programming sources 102 over communications path 106.

65. In a “non-television-centric” distribution subsystem, “media such as video (which may include television programming), audio, images, web pages, or a suitable combination thereof, are provided to equipment of a plurality of users (*e.g.*, user equipment 108, user television equipment 110, and user computer equipment 112) by server 130 via communications network 126” (which can be the Internet). *Id.*, [0043]-[0044]. Server 130 is coupled through communications network paths 132 and 134 to distribution facility 104, which in turn is coupled to programming sources 102 over communications path 106.

66. Details for the internal components of user equipment (*e.g.* user equipment 108, user television equipment 110, user computer equipment 112) are shown in FIG. 6:

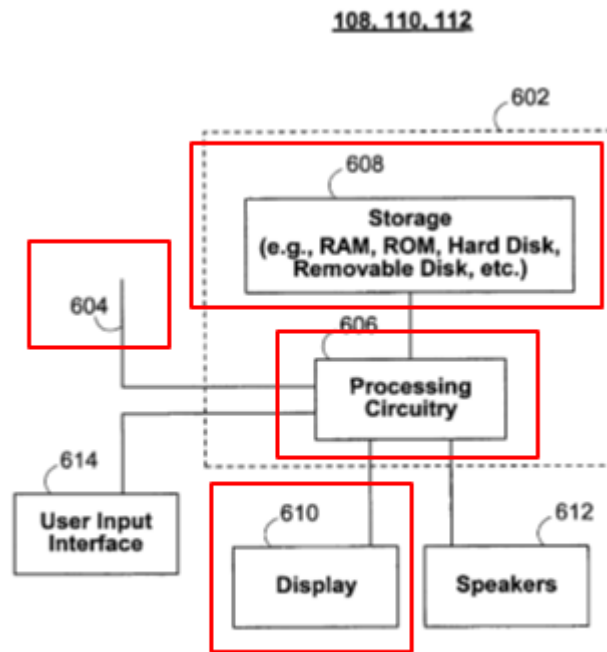


FIG. 6

EX1005, Fig. 6 (annotated); see also *Id.*, [0096].

67. As shown in FIG. 6, components of the user equipment include control circuitry 602 (comprising processing circuitry 606 and storage 608), input/output 604, and display 610. *Id.* Control circuitry 602 “executes instructions for an interactive media guidance application or other interactive application (*e.g.*, web browser) from memory.” *Id.*, [0097]. Processing circuitry 606 “may be based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, etc.” *Id.*, [0097]. “Memory (*e.g.*, random-access memory and read-only memory), hard drives, optical drives, or any other suitable memory or storage devices may be provided as storage 608 that is part of control

circuitry 602.” *Id.*, [0096]. Input/output 604 “may be connected to one or more communications paths” *Id.* Display 610 “may be a monitor, a television, or any other suitable equipment for displaying visual images.” *Id.*, [0097].

68. An interactive media monitoring application (which I may refer to as the “monitoring application”) running on the processing circuitry can “track the user’s viewing progress through the series of related programs, such as a broadcast television series made available via a VOD or DVR service.” *Id.*, [0036]. To implement such tracking, the monitoring application can “create and maintain user media profiles that track the user’s progress through user-selected series of programming, episode by episode, show by show, or game by game.” *Id.*, [0102]. In particular, the monitoring application stores information in a data structure in memory, such as media profile record 710 shown in FIG. 7B. *Id.*, [0107].

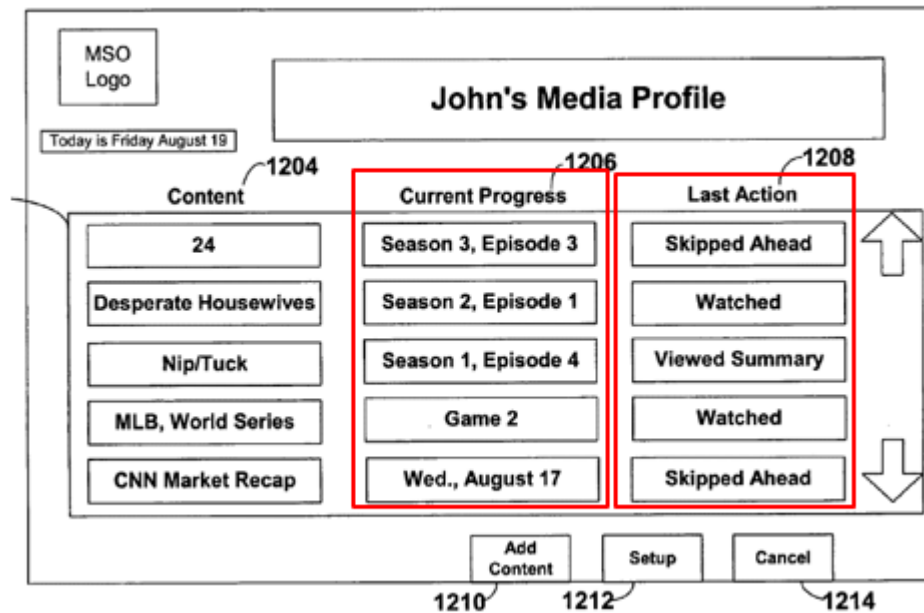
710

712 PROGRAM_ID	714 PROGRESS	716 POSITION	718 LAST ACTION
prog_id0001	1,3	null	SK
prog_id0002	2,4	36:09	WA
prog_id0003	2,1	12:18	SC
prog_id0004	1,6	null	SK
prog_id0005	3,2	17:49	BP

EX1005, Fig. 7B (annotated in red).

69. Notably, Cordray’s system provides the same “bookmarking” and “chapter selection” functionalities described in the ’968 Patent. *See e.g.*, EX1005, FIGS. 7B, 11, 12, and accompanying description.

70. *First*, with regard to “bookmarking,” media profile record 710 includes a “position” column 716 that tracks the user’s “elapsed viewing time” within a program episode “if the user has not yet completed the entire episode” *Id.*, FIG. 7B, [0107]. Such information is utilized to re-start content from where it was interrupted. For example, as explained in relation to FIG. 12, which describes an “illustrative display” screen, the “Last Action” column can display “position” information—*i.e.*, the “time or position” within the content where viewing was interrupted:



EX1005, FIG. 12. As the narrative relating to FIG. 12 states:

In some embodiments, last action column 1208 may also display the user's most recent viewing status. For example, if the user attempted to view the program, but stopped the program before the program completed, the "Interrupted" status may be displayed in last action column 1208 along with the time or position within the program where the [sic] was interrupted or stopped viewing the program. A link to start the program where the user left off may also be displayed in last action column 1208.

EX1005, FIG 12, [0129]. Thus, utilizing the “position indicator” information in the media profile record, the monitoring application can find and start the next unwatched portion of video content when content is interrupted or paused.

71. *Second*, with regard to the “find the next chapter or episode” functionality, progress column 714 shown in FIG. 7 may contain the user’s “season number and/or episode number” for a particular program. EX1005, [0107]. Such information is utilized by the monitoring application to allow immediate access to the next portion of content in the series. With reference to FIG. 11 of Cordray, such information can be leveraged so that the “user’s media profile may advance to the next episode in the series.” *Id.*, FIG. 11, [0122]. With reference to FIG. 12, Cordray explains that “progress column 1206 may display the next episode for the user to watch. A user may highlight any entry in progress column 1206 to automatically present the next unwatched episode in the series on the user equipment.” *Id.*, FIG. 12, [0127].

72. With respect to automatically presenting the next unwatched episode in a series, Cordray further describes that “if a user at the user equipment has watched only episodes 1 and 2 of the series ‘24’ on the FOX® network via VOD or DVR services, [the monitoring application] may assemble substitute content/data source” to contain *inter alia* “other media content associated with

watched episodes or the next unwatched episode in the series (*i.e.*, episode 3).”

EX1005, [0115]. That is, the system of Cordray can automatically present the next unwatched episode in a way that is tailored to the user’s viewing experience as if the unwatched episode were viewed in real-time via TV broadcast.

73. As addressed below in detail, Cordray discloses the same elements the Examiner believed to be missing from the prior art of record during prosecution of the ’968 Patent application. EX1002, p. 29.

74. As noted above, Ground 1 of this Petition primarily addresses “bookmarking” (*i.e.* pausing or interrupting digital moving image contents and re-starting play from the same spot). To the extent the Board agrees with Patent Owner’s argument in the Litigation that the claims of the ’968 Patent do not cover “bookmarking” but rather only “finding the next chapter or episode of digital moving image content,” Ground 2 addresses that argument

1. Detailed Invalidity Analysis

a. Claim 1

- i.* [1pre] ***“A receiving apparatus configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being commutatively connected to the***

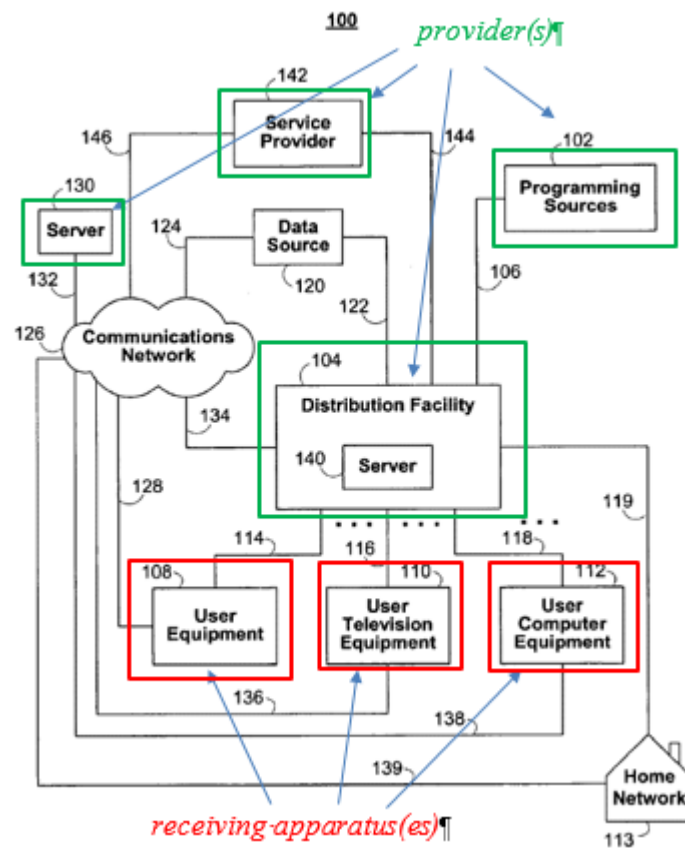
receiving apparatus, the receiving apparatus comprising,”³

75. To the extent the preamble is a limitation, Cordray discloses this limitation.

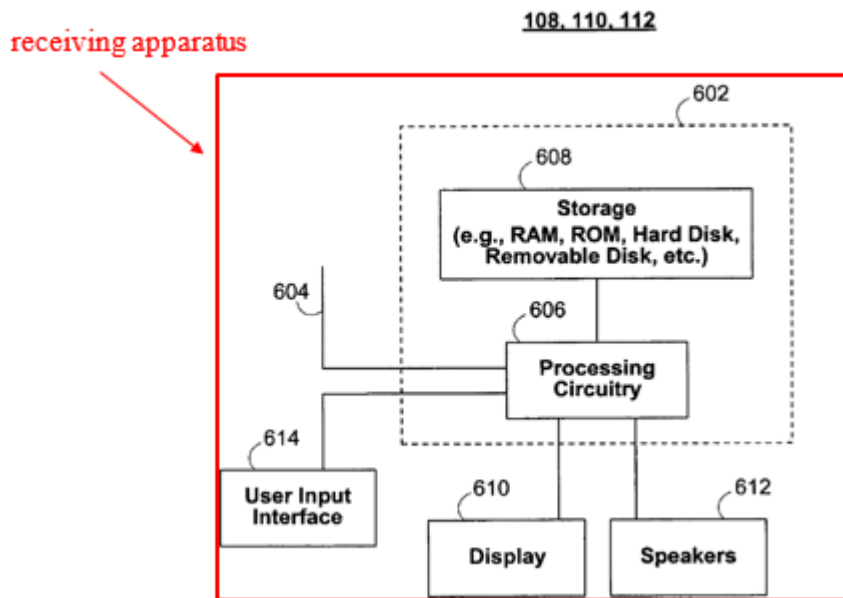
76. Cordray discloses a “*receiving apparatus configured to receive digital moving image contents*” as shown in FIGS 1 and 6, illustrating “user equipment devices 108, 110, and 112” which “may receive media (such as television, music,

³ In my opinion, it is unclear what “*the provider being commutatively connected to the receiving apparatus*” means. However, it appears from the Complaint in the co-pending district court action *NL Giken Inc. v. Apple Inc.*, 1-24-cv-00013, D. Del. (the “Litigation”) that Patent Owner is interpreting this term to mean “*the provider being communicatively connected to the receiving apparatus.*” See EX1009 (Exhibit O, entitled “Claim Chart for US 9,948,968 and Apple,” for Complaint in the Litigation), p. 1 (“Apple Accused Products include a receiving apparatus configured to receive from Apple’s servers video content via the Apple TV+ app, which is commutatively connected to the receiving apparatus.”). I understand that for purposes of this proceeding only and without any concession that it is correct, Petitioner adopts Patent Owner’s interpretation. As such, I apply that interpretation in my analysis.

web pages, etc.)” through connections with digital content providers. EX1005, FIGS. 1-3, 5, 6, [0042]:



EX1005, FIG. 1 (annotated).



EX1005, FIG. 6 (annotated).

77. According to the '968 Patent, “digital moving image contents” includes digital television programming and video content. *See* EX1001, 1:26-27 (“Typical digital contents are digital moving image contents, which have been provided by television stations through digital airwaves.”); 1:31-35 (“digital moving image contents...are received by recording apparatus as the digital contents receiving apparatus, such as DVD (Digital Versatile Disc) recorders or HDD (Hard Disk Drive) recorders”).

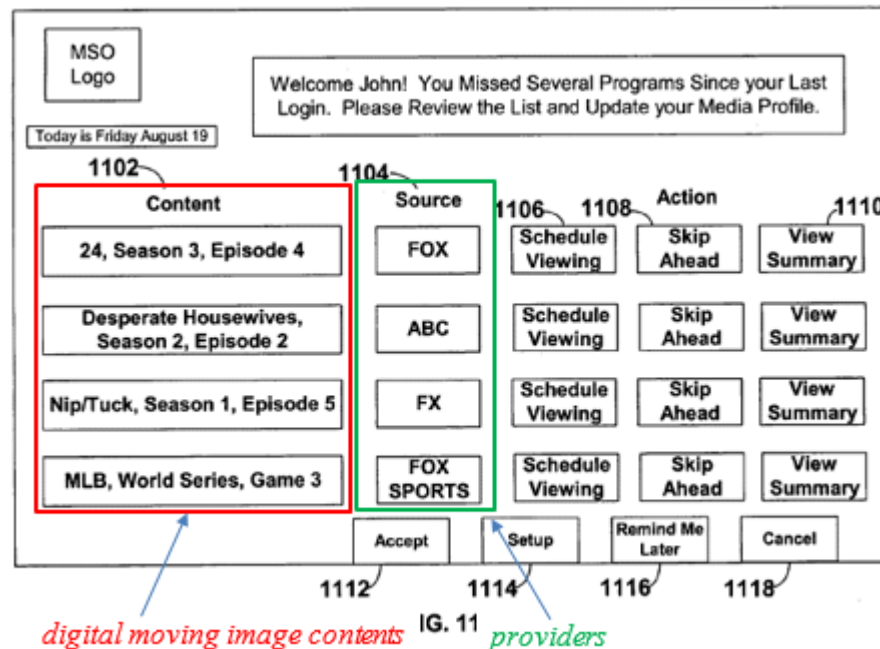
78. Cordray’s user equipment devices can include a set-top box/recording device (analog or digital) (FIG. 2), a television (FIGS. 3, 6), and/or a computer (FIGS. 4, 5, 6). EX1005, FIGS. 2-6. Each of these user equipment devices is a

“receiving apparatus configured to receive digital moving image contents” because each can receive digital television and other digital video content. EX1005, [0035], [0038], [0042]. “Media (*e.g.*, television programming, music programming, other video and audio, and web pages) may be received via input/output 604 (*e.g.*, from programming sources 102, servers or other equipment, such as server 130, service providers such as service provider 142, distribution facility 104, etc.).” EX1005, [0096]. The functionality of the set-top box and recording device(s) also may be integrated “into a television or personal computer or other suitable device.” EX1005, [0082]. In any case, the user equipment devices 108, 110, 112 include processing circuitry, memory/storage, input/output, and display. EX1005, FIGS. 2-6.

79. Cordray discloses that the media content (*“digital moving image contents”*) received by each user equipment device (*“receiving apparatus”*) is communicated through a connection from “*a provider of the digital moving image contents,*” such as, programming sources 102 or distribution mechanism (*e.g.*, server 130, service provider 142, distribution facility 104, each of which “provides” television programming or video content to the user. *See e.g.*, EX1005, FIGS. 1, 11, and accompanying description. This is consistent with the ’968

Patent's description of a "*provider*," which includes, *e.g.*, a "television station" or a "server station." EX1001, 4:59-62.

80. Additional examples of "*digital moving image contents*" and "*providers*" of the same are illustrated in FIG. 11:



EX1005, FIG. 11 (annotated). In this figure, the provider is a "programming source" such as a television network (*e.g.*, ABC), while the digital moving image contents are television programs (*e.g.*, particular episodes/games or entire series).

81. Cordray discloses "*the provider being commutatively connected to the receiving apparatus*" because programming sources 102 and distribution facility 104 ("*providers*") are connected to, and communicate with, user equipment devices 108, 110, 112 ("*receiving apparatus*") through communication paths 106,

114, 116, 118, 132, 136, which “may be cables or other wired connections, free-space connections (*e.g.*, for broadcast or other wireless signals), satellite links, or any other suitable link or combination of links.” EX1005, [0042]. Likewise, service provider 142 and server 130 (also “*providers*”) are connected to user equipment through communications network 126. *Id.*, [0043]-[0044]. For example, “[v]ideo-on demand content and video recorded using a network-based video recorder arrangement may be stored on server 140 or server 130 or at service provider 142 and may be provided to the user equipment when requested by users.” *Id.*, [0062].

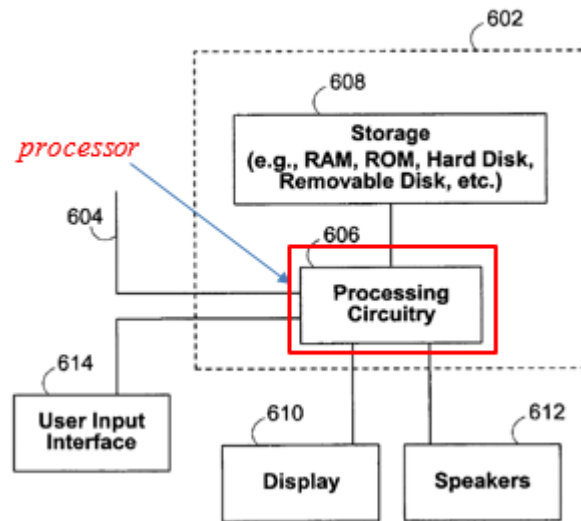
82. As such, Cordray discloses [1pre].

ii. [1a] “a processor executing instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation;”

83. Cordray discloses this limitation.

84. Cordray discloses a “*processor executing instructions*” in that user equipment devices 108, 110, 112 include processing circuitry 606:

108, 110, 112



EX1005, FIG. 6 (annotated). “Control circuitry 602 may be based on any suitable processing circuitry 606 such as processing circuitry based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, etc.” *Id.*, [0097]. Cordray discloses that the control circuitry 602 (including processing circuitry 606) “executes instructions for an interactive media guidance application or other interactive application (*e.g.*, web browser) from memory.” *Id.* The monitoring application “may . . . be integrated with an existing interactive media guidance application, such as an interactive television program guide.” *Id.*, [0036]. Additionally, the monitoring application is “implemented at least partially on user equipment.” *Id.*, [0058]. As a POSITA would understand, processing circuitry 606 would be executing the instructions for the monitoring application on the user equipment.

85. Cordray further discloses that the processing circuitry 606 executing the monitoring application (“*processor executing instructions*”) “*designate[s] a part of the digital moving image contents in the provider.*” EX1005, FIG. 7B, [0105]-[0108]. In order to keep track of “the user’s current viewing progress” and “elapsed viewing time” for the video or television programming content stored at a TV station, distribution facility, or server (“*digital moving image contents in the provider*”), may indicate a portion (“*designate a part*”) of the contents as viewed (or not yet viewed) by way of a “position indicator” maintained in a “media profile record 710” associated with the user. EX1005, FIG. 7B, [0105]-[0108]. The media profile record may be “stored locally on the user equipment” in memory by the monitoring application. *Id.*, [0058]. FIG. 7B shows an exemplary format for the media profile record:

digital moving image contents *Designations*

712 714 716 718

710

PROGRAM_ID	PROGRESS	POSITION	LAST ACTION
prog_id0001	1,3	null	SK
prog_id0002	2,4	36:09	WA
prog_id0003	2,1	12:18	SC
prog_id0004	1,6	null	SK
prog_id0005	3,2	17:49	BP

EX1005, FIG. 7B (annotated).

86. Media profile record 710 includes a program column 710, a progress column 714, and a position column 716. EX1005, FIG. 7B, [0107]. The various programs monitored by the monitoring application may be listed in program column 712. *Id.* Position column 716 tracks the user's "elapsed viewing time" within the episode "if the user has not yet completed the entire episode" *Id.* (*i.e.* "bookmarking"). By keeping track of "the user's current viewing progress" and "elapsed viewing time" for the video or television programming content using the position indicator of column 716 in the media profile record 710, the processor is executing instructions to "*designate a part of the digital moving image contents in the provider.*" EX1005, [0107]. The user media profile "may be stored locally on the user equipment or on a network device (*e.g.*, server 130 and/or server 140)," and the designations refer to media content that is available "*in the provider*" (*e.g.*, has been received, or will be received, from a programming source 102 as NBC, ABC, or HBO). EX1005, [0039], [0058].

87. Cordray discloses that the indications ("*designations*") of media content can be made "*automatically.*" In the "bookmarking" context, "an incomplete or interrupted viewing may cause the interactive media monitoring application to save state data about the user's viewing progress to the user's media

profile (*e.g.*, the interactive media monitoring application may save the user's time position within the episode)." EX1005, [0160]. Because the monitoring application can determine and store the position indicator for the episode upon "interruption" without any input from the user, the "*designation*" can be made "automatically" in Cordray's system.

88. Cordray further discloses that, alternatively, the indication or designation of media content can be made "*in response to a manual operation.*" EX1005, FIG. 4, [0083], [0129]. For example, FIG. 4 shows an "illustrative remote control 400 for operating user television equipment 110" in FIG. 1. EX1005, FIG. 4, [0083]. This remote control 400 may include, *e.g.*, a "pause" key to stop play of digital moving image contents. *Id.*, [0083]. Thus, "if the user attempted to view the program, but stopped the program before the program completed," the "time or position within the program where the [user] was interrupted or stopped viewing the program" is maintained and can be presented to the user along with "[a] link to start the program where the user left off." *Id.*, [0129]. Here, because the position indicator is determined in response to the user affirmatively "stopping" the program content (*e.g.*, by pressing the "pause" key), the indication or designation is made "*in response to a manual operation.*"

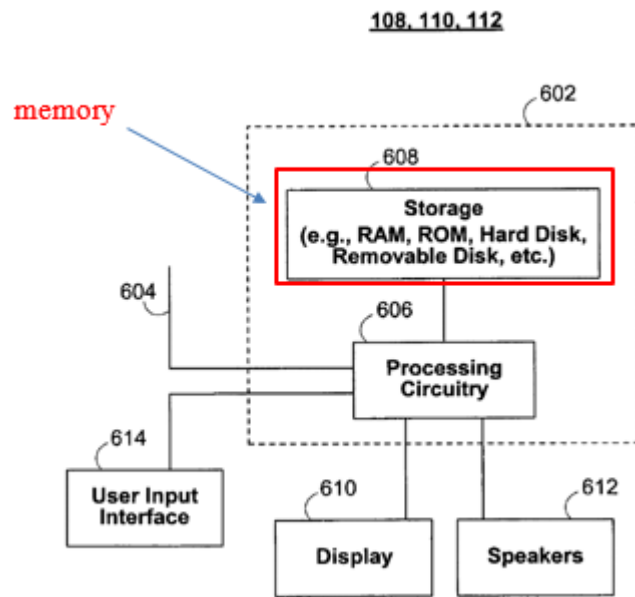
89. Cordray further describes that control circuitry 602 may be controlled “using user input interface 614,” which may be “any suitable user interface, such as a mouse, trackball, keypad, keyboard, touch screen, touch pad, voice recognition interface, or a remote control,” as seen in FIG. 6. EX1005, FIG. 6, [0098]. User interface 614 can be used in conjunction with interactive display screens, as shown in FIGS. 10-17, which “use commonly-used application selection objects such as hyperlinks, buttons, lists, drop down boxes, and checkboxes.” EX1005, [0118].

90. Thus, Cordray discloses [1a].

iii. [1b] “a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;”

91. Cordray discloses this limitation.

92. Cordray discloses a “*memory*” in that it explains that each of user equipment 108, 110, 112, comprises storage 608, which is “[m]emory (*e.g.*, random-access memory and read-only memory), hard drives, optical drives, or any other suitable memory or storage devices.” EX1005, FIG. 6, [0097].



EX1005, FIG. 6 (annotated).

93. Cordray discloses that its storage or memory within the user equipment “*keeps information*” such as, for example, a media profile record 710. EX1005, FIG. 7B, [0102]-[0108]. “Media profiles may be stored locally at the user equipment” EX1005, [0105]. Further, “[m]edia profiles may be stored in any convenient fashion (*e.g.*, as records in one or more relational databases, as lists in memory, and/or as files on a hard drive or other storage media).” EX1005, [0106]. For each program that the user is viewing, the media profile record 710 contains “*information*” for the identification of the program, a progress indicator, a position indicator, and a last action indicator, as shown in program column 712, progress

column 714, position column 716, and last action column 718, as seen in FIG. 7B.

Id., [0107].

information

712 714 716 718

710

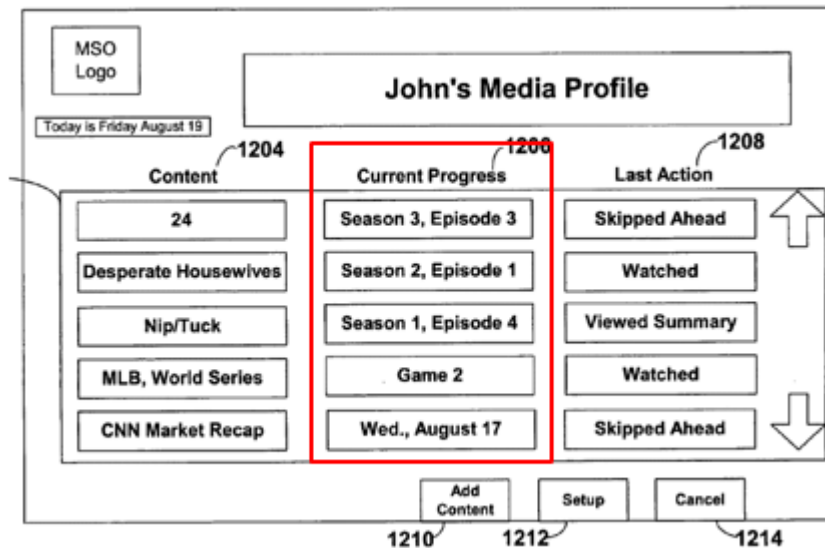
PROGRAM_ID	PROGRESS	POSITION	LAST ACTION
prog_id0001	1,3	null	SK
prog_id0002	2,4	36:09	WA
prog_id0003	2,1	12:18	SC
prog_id0004	1,6	null	SK
prog_id0005	3,2	17:49	BP

EX1005, FIG. 7B (annotated).

94. Cordray further discloses that the media profile record (“*information*”) stored in memory is “*necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents.*” The information in media profile 710 keeps track of or indicates the “user’s current viewing progress” through TV programming (“*digital moving image contents*”). EX1005, FIG. 7B, [0058]. The portion of the programming that the user has already watched is “*a viewed part of the digital moving image contents*”; and the portion that the user has not yet watched is “*a*

succeeding part of the digital moving image contents.” As discussed above, in the “bookmarking” context, “an incomplete or interrupted viewing may cause the interactive media monitoring application to save state data about the user’s viewing progress to the user’s media profile (e.g., the interactive media monitoring application may save the user’s time position within the episode)” so that the user can “start the episode at the point the user was interrupted.” EX1005, [0160].

Because the monitoring application can store the position indicator for the content without any input from the user, the “*designation*” is made “*automatically*” in Cordray’s system. This information is “*necessary for the processor to automatically designate*” the part of the content that the user has not yet been watched (“*a succeeding part of the digital moving image contents*”) to the already-watched portion of the contents (“*viewed part of the digital moving image contents*”) in that the processing circuitry 606 (“*processor*”) uses the information to resume play for as-yet-unviewed content. See [1c]; EX1005, [0107]. For example, the monitoring application “may analyze position and progress data in media profile record 710 to determine the user’s position within an episode.” EX1005, [0160]. This data (“*information*”) is then used to restart play at the appropriate location, as described with reference to FIG. 12.



EX1005, FIG. 12.

95. For example, with respect to “bookmarking,” Cordray describes that “if the user attempted to view the program, but stopped the program before the program completed, the ‘Interrupted’ status may be displayed in last action column 1208 along with the time or position within the program where the [] was interrupted or stopped viewing the program. A link to start the program where the user left off may also be displayed in the last action column 1208.” EX1005, [0129].

96. In any event, Cordray’s utilization of the user’s media profile allows the user to pause and resume viewing of a program at the point of interruption or where the user left off. EX1005, [0129]. As such, Cordray discloses that the information of the media profile is “*necessary for the processor to automatically*

designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents.”

97. Thus, Cordray discloses [1b].

- iv. ***[1c] “a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and control the processor to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;”***

98. Cordray discloses this limitation.

99. Cordray discloses a “*designation software controller*” in the form of the monitoring application running on processing circuitry 606. *First*, the monitoring application is a “*controller*” because Cordray describes the monitoring application as controlling various aspects of operation of the user equipment device, including the storage of designation information (progress and position indicators) in memory: “[t]he monitoring application may update the user’s profile to reflect the user’s new viewing progress.” EX1005, [0104]. As discussed, “[m]edia profiles may be stored locally at the user equipment” *Id.*, [0105]. “Records 700 and 710 may be stored in any convenient data structure and on any suitable storage or memory device.” *Id.*, [0108]. This is consistent with repeated descriptions of the monitoring application being used to “control” various features

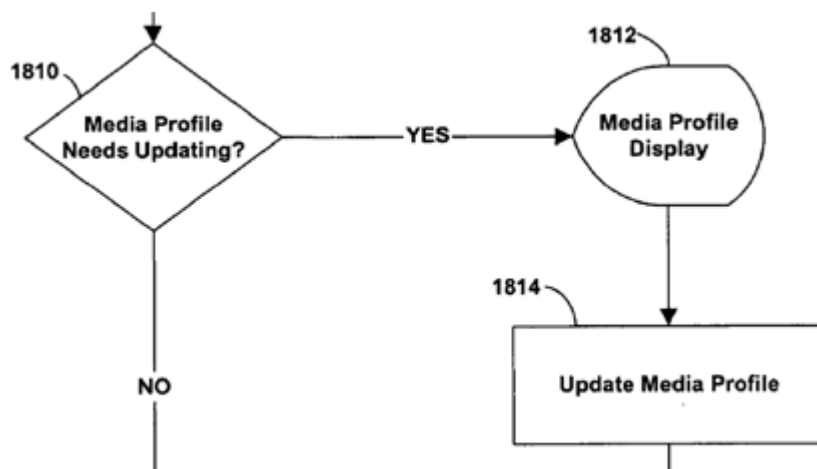
associated with a user's stored progress information. For example, "[t]he monitoring application may compare progress data stored in media profile record 710 with data associated with available forums and control the membership of the forum or community as new users request access to the forum or community." EX1005, [0156]; *see also Id.*, [0102]-[0108], [0112].

100. *Second*, the monitoring application is "*software*" because Cordray describes that the monitoring application "may be provided" using "operating system software," "middleware software," and/or "application-level software." EX1005, [0059].

101. *Third*, one of the operations that the monitoring application controls is "designating" parts of digital moving image content with a "position indicator" and storing and updating such a designation in memory as part of the user media profile 710, as discussed above.. Thus, Cordray's monitoring application is a "*designation software controller*."

102. Further, Cordray discloses that the monitoring application is "*configured to control the memory to keep the information in response to a termination of viewing the viewed part*." As discussed in [1b], Cordray discloses "*information*" in the form of the user media profile 710—including for each program, information regarding the identification of the program, the progress

indicator, and the position indicator—which is kept or stored in “*the memory*” or storage 608 of the user equipment device. *See e.g.*, [1b]. Cordray discloses that the storage or keeping of the user media profile 710 in the memory can be controlled by the monitoring application. EX1005, FIG. 6, [0097], [0108], [0106], [0157]-[0160]. For example, Cordray describes that the media profile 710 “may be manipulated and maintained [*i.e.* ‘kept’] by the [monitoring application] or other applications resident on the user equipment.” EX1005, FIG. 6, [0097], [0108]. The monitoring application “may determine if the current user’s media profile needs to be updated” and, if so, controls the update of information in the memory of the user equipment device. EX1005, FIG. 18, [0106], [0157]-[0160]. This process of updating the media profile by controlling the memory to keep the information is shown, *inter alia*, in FIG. 18 of Cordray, excerpted below:



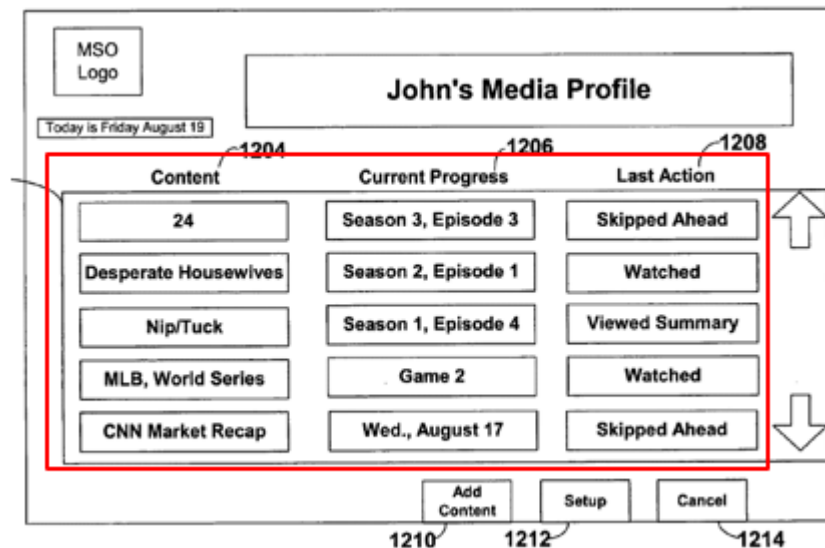
EX1005, FIG. 18 (excerpted). Thus, Cordray discloses that the monitoring application is “*configured to control the memory to keep*” the media profile (“*information*”).

103. Cordray further discloses that the monitoring application’s control of memory in the user equipment to update and store the media profile is “*in response to a termination of viewing the viewed part.*” As discussed in [1b], Cordray discloses “*the viewed part*” of a program, series, or episode because it describes that a user may have already watched some portion of a program, series, or episode. *See e.g.*, [1b]. Once that portion of content has been viewed and the viewing stops, the monitoring application controls the memory to update the media profile “*in response to*” that “*termination of viewing*” so that the progress and position indicators for the content reflect the user’s current viewing progress and the elapsed viewing time. EX1005, FIG. 7B, [0102]-[0108], [0160]. “[A]n incomplete or interrupted viewing may cause the [monitoring application] to save state data about the user’s viewing progress to the user’s media profile (*e.g.*, the [monitoring application] may save the user’s time position within the episode).” *Id.*, [0160] (“bookmarking”). Thus, the monitoring application stores the updated media profile with the new chapter or bookmarking information in memory “*in response to a termination of viewing the viewed part.*”

104. Cordray further discloses that the monitoring application “*control[s] the processor to automatically designate the succeeding part of the digital moving image contents when the viewing starts again.*” As discussed in [1b], Cordray discloses that the monitoring application controls the “*processor to automatically designate the succeeding part of the digital moving image contents*” because Cordray describes that processing circuitry 606 of the control circuitry 602 on the user equipment may use the information in the media profile record 710 (including information regarding the identification of the program, the progress indicator, and the position indicator) to resume play for as-yet-unviewed content for a program, series, or episode. *See e.g.*, [1b]. Cordray discloses that the monitoring application can “*control the processor*” to carry out this designating because a POSITA would understand the monitoring application executes instructions that control the operation of the processing circuitry—*e.g.*, in making computations, directing storage of records into memory, and the like. EX1005, [0036], [0058], [0097]; EX1008 (disclosing user equipment operations that “may be driven by software on the receiver controller”).

105. Cordray discloses that this designation occurs “*when viewing starts again*” because it describes that the processing circuitry 606 uses the information in the media profile record 710 to play the as-yet-unviewed content of a program,

series, or episode when the user resumes viewing of that program, series, or episode. For example, FIG. 12 illustrates a user media profile viewing progress screen 1200. EX1005, FIG. 12, [0126]-[0130].



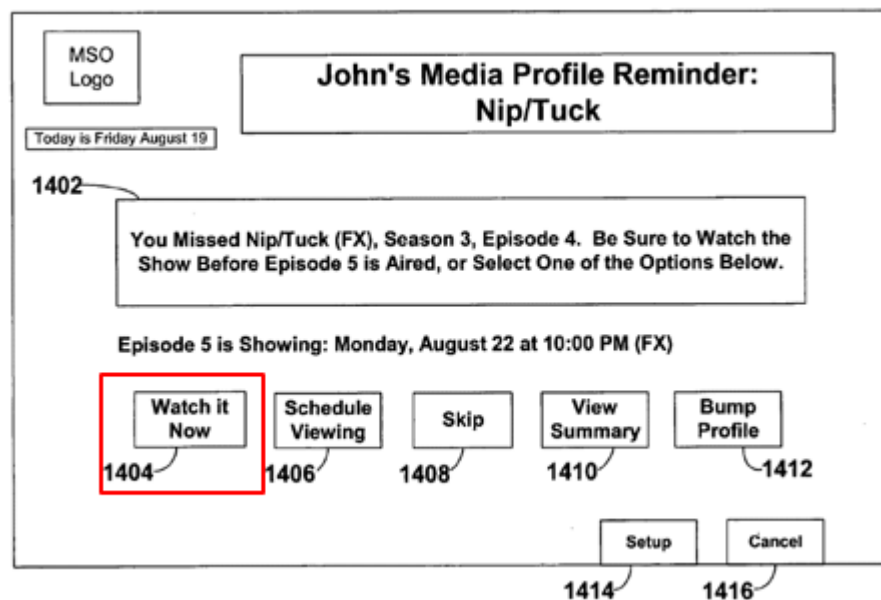
EX1005, FIG. 12. Cordray explains how the exemplary screen shown in FIG. 12 can be used by the user to restart interrupted/paused content at a designated location or to start the designated next episode. With regard to the latter, Cordray states:

For example, if the user attempted to view the program, but stopped the program before the program completed, the “Interrupted” status may be displayed in last action column 1208 along with the time or position within the program where the was interrupted or stopped viewing the

program. A link to start the program where the user left off may also be displayed in last action column 1208.

EX1005, [0129].

106. Cordray further discloses the automatic designation of the next portion of content to be played “*when the viewing starts again*” with respect to FIG. 14. EX1005, FIG. 14, [0141]-[0142]. FIG. 14 of Cordray shows a “reminder” screen presented to the user based on the user’s preferences and recorded progress within one or more series of related programs. EX1005, [0141]-[0142]. This reminder screen allows the user to select “Watch It Now” and view the next unviewed episode in chronological order:



EX1005, FIG. 14.

107. As such, Cordray discloses [1c].

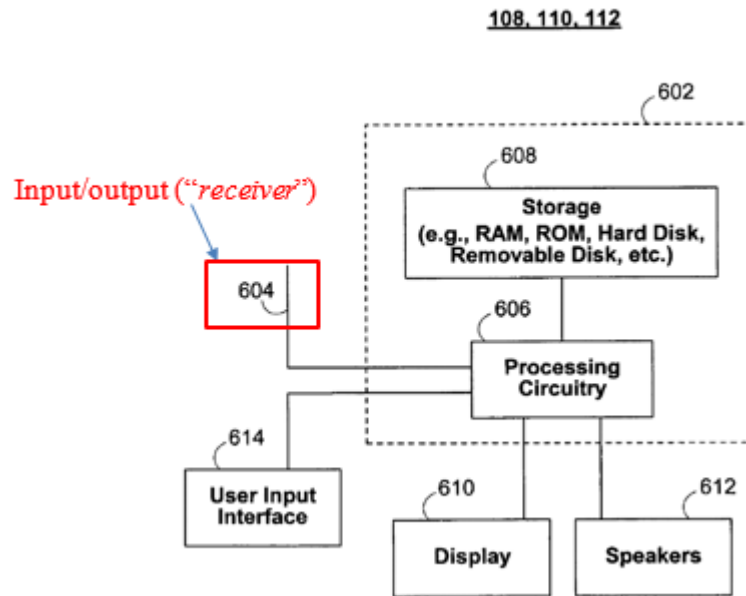
- v. [1d] *“a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor; and”*⁴

108. Cordray discloses this limitation.

109. Cordray discloses a “*receiver*” because it describes that the user equipment can have an input/output and one or more tuners or similar receiving circuitry that receive digital content. EX1005, FIGS. 2-6, [0066], [0076], [0089], [0096]-[0097]. Regarding the input/output, Cordray states: “Media (*e.g.*, television programming, music programming, other video and audio, and web page) may be received via input/output 604 (*e.g.*, from programming sources 102, servers or other equipment, such as server 130, service providers such as service provider

⁴ Although it is unclear what the term “*a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor*” means, it appears from the Complaint that the Patent Owner is interpreting it to mean “*a receiving element configured to receive the designated succeeding part of the digital moving image contents in response to the designation by the processor.*” For purposes of this proceeding only and without waiver, Petitioner adopts Patent Owner’s interpretation.

142, distribution facility 104, etc.).” EX1005, FIG. 6, [0096]. The input/output 604 is shown in FIG. 6:



EX1005, FIG. 6 (annotated). Cordray’s description of input/output 604 is substantively consistent with the ’968 Patent’s description of input/output interface 16. *See* EX1001, FIG. 1, 5:2-5 (“Input/output interface 16 serves as a receiver for inputting data of digital moving image program contents stored in data base 32 of server station 9 downloaded by way of internet 8.”).

110. Cordray further explains that “one or more analog tuners, one or more MPEG-2 decoders or other digital video circuitry, or any other suitable tuning or video circuits or combinations of such circuits” (collectively, “receiving circuitry”) may be “used by the user equipment to receive . . . a particular television or music

channel or other desired audio and video content (e.g., video-on-demand content or requested network-based or local video recorder playback).” EX1005, [0097].

Taken individually or in combination, the input/output 604 and the receiving circuitry are “*receiver(s)*” of digital moving image contents.

111. Cordray discloses that the input/output 604 and the receiving circuitry (“*receiver(s)*”) receive “*the designated succeeding part of the digital moving image contents in response to the designation by the processor.*” EX1005, FIGS. 2-6, 7B, 12, 14, and accompanying description. As discussed in [1b] and [1c], Cordray discloses “*the designated succeeding part of the digital moving image contents*” because the processing circuitry 606 analyzes and uses progress and position indicators in the media profile record to determine the user’s viewing progress or position in program, series, or episode so that a user can resume play for as-yet-unviewed content. *See e.g.*, [1b], [1c].

112. Cordray discloses that the as-yet-unviewed content can be received from a source external to the user equipment. For example, in a disclosed arrangement including a “network-based video recorder,” video can be recorded “on network equipment such as server 130, 140, or equipment at service provider 142,” while supporting “functions such as fast-forward, rewind, pause, play, and record” from the user equipment. EX1005, [0094]. Based on this disclosure, a

POSITA would understand that such “*designated succeeding part of the digital moving image contents*” is received by the input/output and receiving circuitry (“*receiver(s)*”) of the user equipment from the network-based video recorder over the network when play resumes for the as-yet-unviewed part of a program, starting from the user’s current viewing position.

113. Additionally, Cordray discloses that the input/output and receiving circuitry receive the “*designated succeeding part of the digital moving image contents*” “*in response to the designation by the processor.*” Whether play is paused or interrupted, play can be resumed from the “bookmarked” location from the network-based video recorder based on the designation by the processor (*i.e.*, the position indicator).

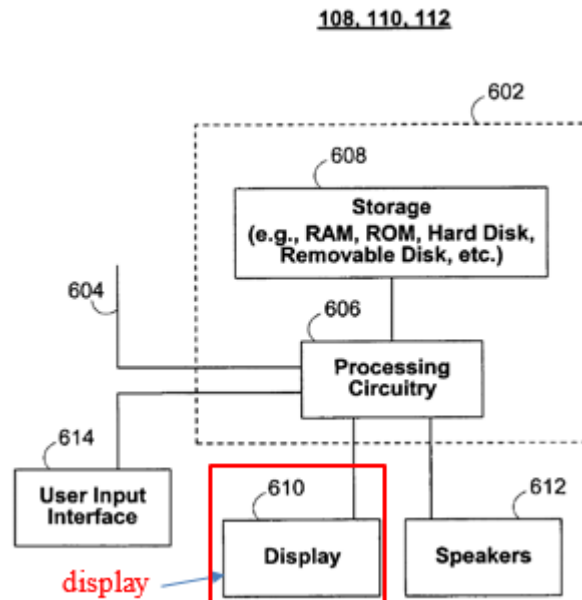
114. Thus, Cordray discloses [1d].

vi. [1e] “a display configured to display the succeeding part of the digital moving image contents received by the receiver.”

115. Cordray discloses this limitation.

116. Cordray discloses a “*display*” in that it describes, for example, that the user equipment 108, 110, 112 may include display 610. EX1005, FIGS. 1-3, 5, 6, [0075]-[0076], [0081], [0085], [0089], [0097]. Display 610 may be “a monitor, a

television, or any other suitable equipment for displaying visual images.” EX1005, FIG. 6, [0097].



EX1005, FIG. 6 (annotated).

117. Cordray further discloses or teaches that its display is “*configured to display the succeeding part of the digital moving image contents received by the receiver.*” As discussed in [1b]-[1d], Cordray discloses or teaches “*the succeeding part of the digital moving image contents received by the receiver*” in that the input/output and receiving circuitry of the user equipment receive the as-yet-unviewed part of a program, series, or episode when the user resumes play of the content. See e.g., [1b]-[1d]. Cordray discloses or teaches that such content is displayed on the display 610: “Television programming and other video and on-

screen options and information may be displayed on display 610.” EX1005, [0097]. Thus, the display 610 is “*configured to display*” the as-yet-unviewed part of a program, series, or episode when the user resumes play of the content (“*the succeeding part of the digital moving image contents received by the receiver*”).

118. As such, Cordray discloses [1e].

b. Claim 2

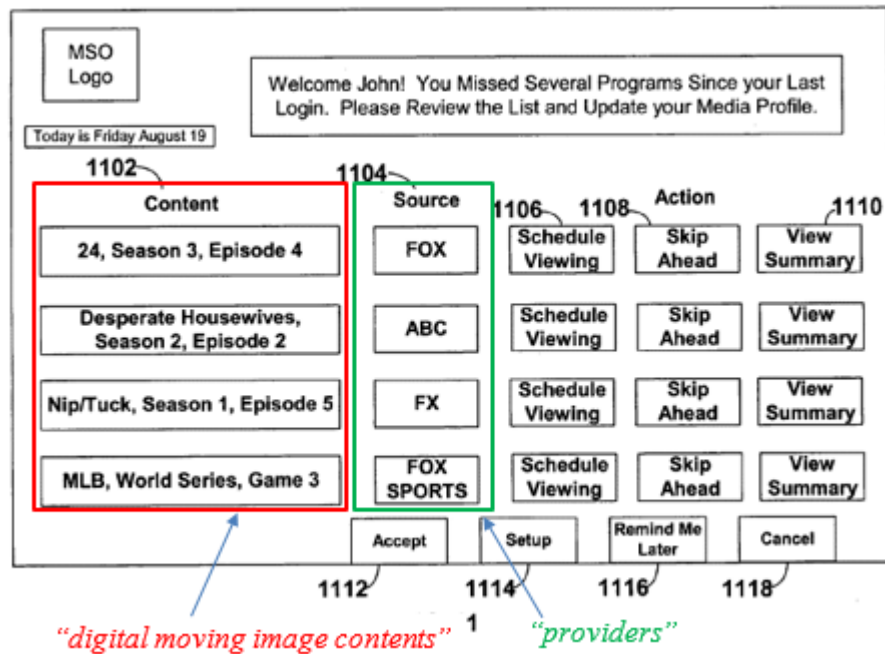
- i. [2] “The receiving apparatus according to claim 1, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”*

119. Cordray discloses this limitation.

120. As discussed above in [1a], Cordray discloses that the “*processor is configured to designate the part of the digital moving image contents*” in the form of processing circuitry 606 executing the monitoring application in user equipment devices 108, 110, 112, which designates part of a program, series, or episode as viewed (or not yet viewed) using a “position indicator” maintained in a media profile record 710. *See e.g.*, [1a]. As discussed above in [1pre], Cordray discloses “*provider(s)*” because it describes programming sources 102 (*e.g.*, NBC, ABC, and HBO), distribution facility 104, server 130, and service provider 142, each of

which provides media content to the user equipment device. EX1005, FIG. 1, and accompanying description.

121. Cordray further discloses that the designation of a part of the content as viewed (or not yet viewed) is made “*by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.*” FIG. 11 of Cordray shows an access summary screen 1100 that “may list the programs or other media content that the user has missed since the user’s last log-in to the [monitoring application]” (“*part of the digital moving image contents*”). EX1005, FIG. 11, [0122]. These programs “may correspond to programs the [monitoring application executing on the processing circuitry 606] is monitoring for the current user (*i.e.*, programs, series, or other media content the user has included in the user's media profile to be monitored).” EX1005, FIG. 11, [0122]. The media content may originate from various “*providers*” including programming sources 102, which “may be any suitable sources of television and music programming” (*e.g.*, FOX, ABC, FX, etc.). *Id.*, FIG. 11, [0039], [0122]. As Cordray explains, “[s]ource column 1104 lists the channel or source of the media content in content column 1102.” EX1005, FIG. 11, [0122].



EX1005, FIG. 11 (annotated). Because the programs here are monitored by the monitoring application executing on the processing circuitry and are correlated to their respective sources or providers, the designation of the programs as viewed (or as not yet viewed) is made by selecting a source for the programs (“*selecting the provider*”). As Cordray explains: “the [monitoring application] may update the appropriate entry in the user’s media profile to reflect the completion of the episode. In some embodiments, a user is associated with one media profile containing all the user-selected media content to be monitored.” *Id.*, [0103]. As a POSITA would understand, the monitoring application must select the provider from among potentially many providers included in the media profile in order to designate the contents. Columns 1102 and 1104 of FIG. 11 show that the part of a

program designated as viewed (or not yet viewed) is provided by a particular source (“*wherein the part of the digital moving image contents is provided by the selected provider*”). EX1005, FIG. 11, [0122].

122. Thus, Cordray discloses [2].

c. Claim 3

- i. [3] “*The receiving apparatus according to claim 1, wherein the processor is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.*”**

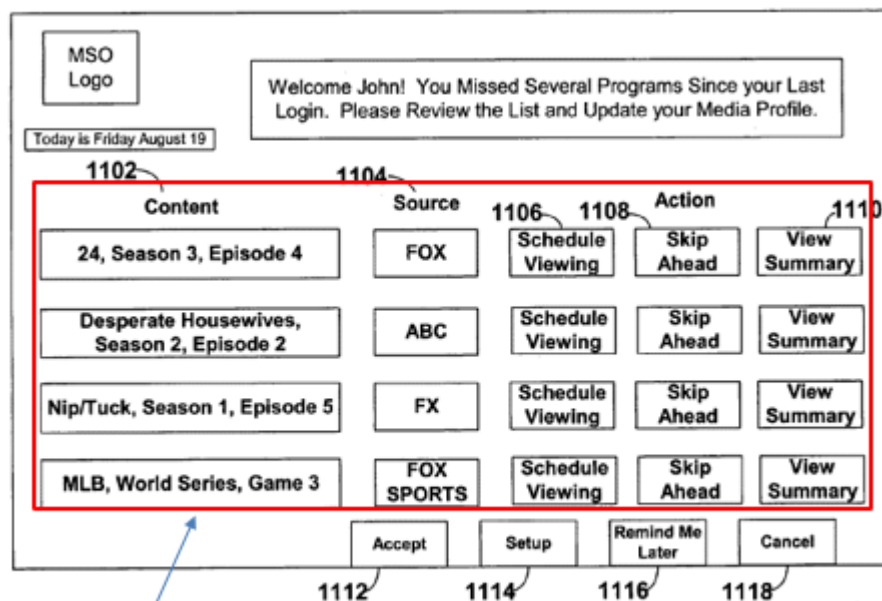
123. Cordray discloses this limitation.

124. As discussed in [1a] and [2], Cordray discloses “*the processor is configured to designate a part of the digital moving image contents provided by the provider*” in that it describes processing circuitry 606 in user equipment devices 108, 110, 112, running the monitoring application, which is used to designate a part of a program or a series of programming from a provider, such as NBC, ABC, HBO, FOX, ABC, FX, etc. *See e.g.*, [1a], [2].

125. Cordray further discloses that the program or media content from the provider (“*digital moving image contents provided by the provider*”) can be provided and received “*by streaming technology*” because Cordray describes, for example, that the user equipment “may contain a television or video card, such as a

television tuner card, for decoding analog, digital, and high-definition television channels and for handling streaming video content.” EX1005, [0090]; *see also Id.*, [0049].

126. Cordray also discloses that the designation or selection of media content by the processing circuitry running the monitoring application is made “*in accordance with a program schedule table.*” Cordray discloses a “program schedule table,” for example, in FIG. 11, which illustrates a summary screen displaying a table with the “programs the interactive media application is monitoring for the current user (*i.e.*, programs, series, or other media content the user has included in the user's media profile to be monitored).” EX1005, FIG. 11, [0122].

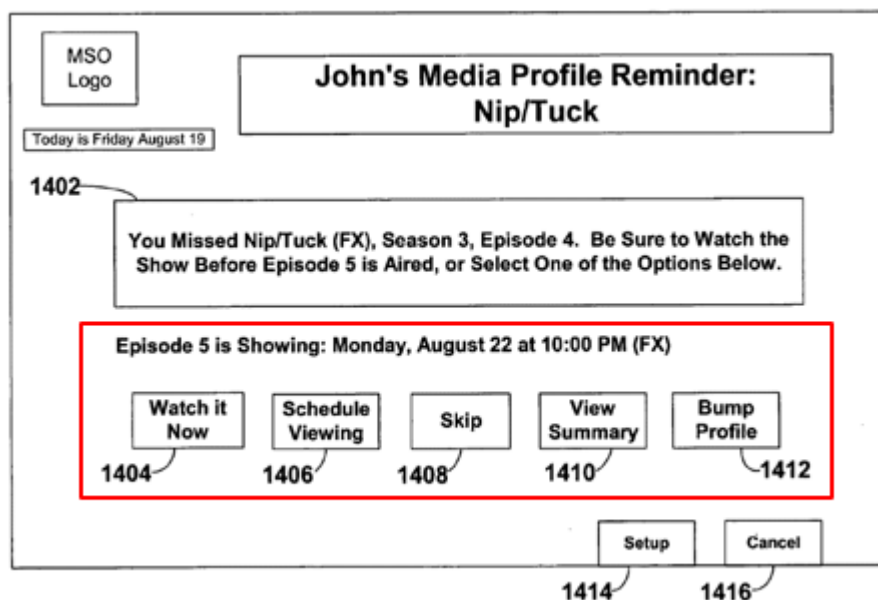


“program schedule table”

FIG. 11

EX1005, FIG. 11 (annotated). The table of Cordray's FIG. 11 allows the user to select one or more actions with respect to the programs, including "schedule viewing," and as such, the table is "*a program schedule table.*" EX1005, FIG. 11, [0122]. Furthermore, any designation or selection of a program from the table of FIG. 11 is made "*in accordance with a program schedule table.*" *Id.* In particular, Cordray explains that the monitoring application "may . . . be integrated with an existing interactive media guidance application, such as an interactive television program guide." *Id.*, [0036]. To that end, the monitoring application "may use guidance application data, such as program schedule and content data, as well as other data associated with media content in the media delivery system to filter media content and other information (*e.g.*, web or Internet data) so that this content and information is consistent with the user's viewing progress." *Id.*

127. FIG. 14 also shows a "*program schedule table,*" indicating when the next episode in a series will air, and offering the option to "schedule viewing" of the series or otherwise "Watch it Now" (*e.g.*, streaming on demand):



EX1005, FIG. 14 (annotated).

128. Thus, Cordray discloses [3].

d. Claim 4

- i. [4] “The receiving apparatus according to claim 1, wherein the processor is configured to designate an optional part of the digital moving image contents in response to the manual operation.”*

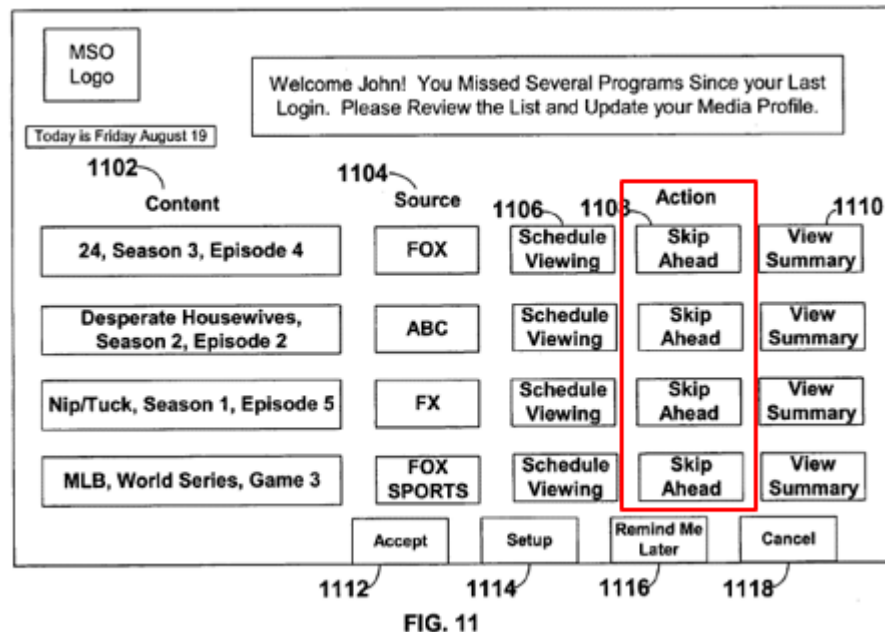
129. Cordray discloses this limitation.

130. As discussed in [1a], Cordray discloses that the “*processor is configured to designate a part of the digital moving image contents...in response to a manual operation*” because Cordray describes that the processing circuitry 602 may receive manual user input for selecting or designating programs for viewing through user interface 614 (*e.g.*, mouse, trackball, keypad, keyboard, touch screen,

touch pad, voice recognition interface, or a remote control”) as seen in FIGS. 4 and 6. *See* [1a]; EX1005, FIG. 6, [0098].

131. Cordray further discloses that the media content manually selected by a user can be “*an optional part of the digital moving image contents*” because Cordray describes that various “options may be presented to a user for watching a program or series of programs on a time-shifted basis,” where such options include “show[ing] the user a summary (video/highlights, text, or a combination of the two) of this episode (*e.g.*, via tvguide.com, or TV Guide Spot) so that the user can keep up with the series even though the user does not wish to watch this entire episode,” and “skip[ping] this episode.” EX1005, FIG. 11, [0122]-[0123]. Moreover, the system of Cordray supports functions such as “pause, stop, fast-forward and reverse” to allow the user to navigate through content. EX1005, [0083]. Any portion of the content for a program that a user chooses not to watch (*e.g.*, by skipping over) is an “*an optional part of the digital moving image contents*.” Cordray’s disclosure of skipping over or shifting to another position in a program is consistent with the disclosure of the ’968 Patent, *e.g.*: “[T]he position of the digital moving image content to start with is optionally shifted from the position currently displayed. The position to be optionally shifted includes the beginning of the content.” EX1001, 8:14-18.

132. Cordray discloses that the designation of content to be skipped over (“an optional part of the digital moving image contents”) can be made “in response to the manual operation” because Cordray describes that the various “options may be presented to a user” for manual selection, as seen for example, in FIG. 11:



EX1005, FIG. 11, [0123]. “To skip the episode and advance the user’s media profile as if the episode had been watched, the user may select skip selection 1108.” *Id.*, [0122]. All this “optional content” can be selected and viewed by the user (or not).

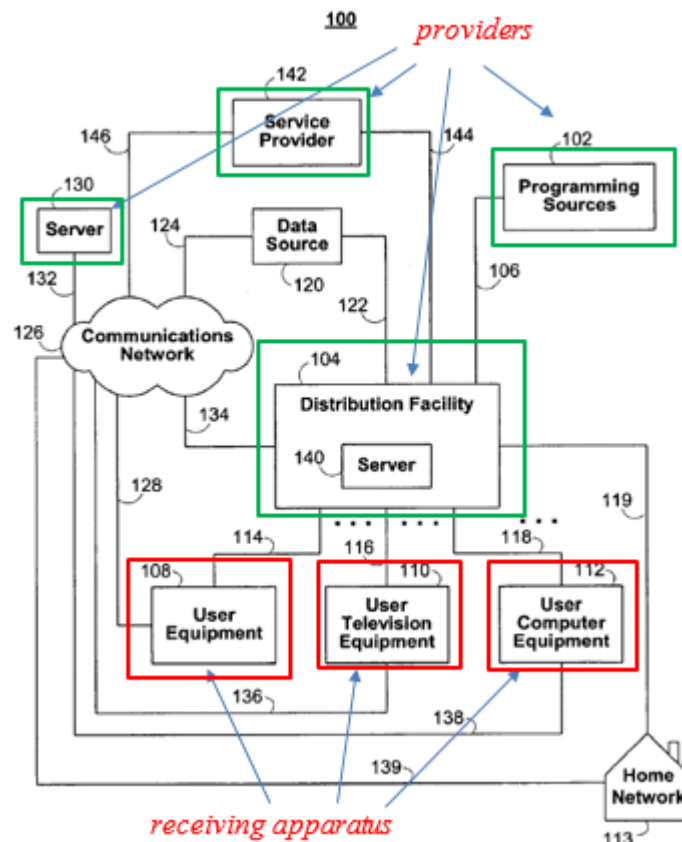
133. Thus, Cordray discloses [4].

e. Claim 5

i. [5pre] “A receiving method configured to receive digital moving image contents from a provider of

the digital moving image contents, the receiving method comprising:

134. As discussed above in [1pre], Cordray discloses “*receiv[ing] digital moving image contents from a provider of the digital moving image contents*” in that the user equipment device 108, 110, 112 is a receiving apparatus that can receive media content from programming sources 102, distribution facility 104, server 130, or service provider 142. EX1005, FIG. 1.



EX1005, FIG. 1 (annotated).

135. Cordray further discloses a “*receiving method configured*” for the same in that it describes one or more methods corresponding to the operation of Cordray’s system and apparatus. EX1005, FIGS. 1, 6, 18-20, Abstract (“Systems and methods for monitoring a user’s viewing progress of media in a series are provided.”). For example, FIGS. 18-20 of Cordray are flowcharts of “illustrative processes.” EX1005, FIGS. 18-20, [0030]-[0032]. *See also* analysis for limitations [1pre]-[1e], above.

- ii. ***[5a] “a step of executing, by a computer processor, instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation;”***

136. Cordray discloses this limitation because the processing circuitry 606 of Cordray performs this step, as addressed in [1a].

- iii. ***[5b] “a step of keeping information necessary for the executing step to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;”***

137. Cordray discloses this limitation as addressed in [1b].

- iv. ***[5c] “a step of controlling the keeping step to keep the information in response to a termination of viewing the viewed part and control the executing step to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;”***

138. Cordray discloses or suggests this limitation because the monitoring application executing on the processing circuitry 606 of Cordray performs this step, as addressed in [1c].

- v. ***[5d] “a step of receiving the designated succeeding part of the digital moving image contents in response to the designation by the executing step; and”***

139. Cordray discloses this limitation because the input/output and/or tuner and/or decoding circuitry of Cordray’s user equipment performs this step, as addressed in [1d].

- vi. ***[5e] “a step of displaying the succeeding part of the digital moving image contents received by the receiving step.”***

140. Cordray discloses this limitation because the display 610 of Cordray performs this step, as addressed in [1e].

f. Claim 6

- i. ***[6] “The receiving method according to claim 5, wherein the executing step is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”***

141. Cordray discloses this limitation because Cordray’s processing circuitry 606 performs this step as addressed in [2].

g. Claim 7

- i. [7] “The receiving method according to claim 5, wherein the executing step is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.”*

142. Cordray discloses this limitation because Cordray’s processing circuitry 606 performs this step as addressed in [3].

h. Claim 8

- i. [8] “The receiving method according to claim 5, wherein the receiving method is further configured to designate an optional part of the digital moving image contents in response to the manual operation.”*

143. Cordray discloses this limitation because Cordray’s processing circuitry 602 and input/output 604 perform this step as addressed in [4].

i. Claim 9

- i. [9pre] “A receiving system configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being commutatively connected to the receiving system, the receiving system comprising:”⁵*

⁵ See footnote 3 above regarding the claim term “the provider being commutatively connected to the receiving apparatus.”

144. To the extent the preamble is a limitation, Cordray discloses this limitation as discussed with respect to [1pre]. A user equipment device is a “*receiving system*” because, as shown and described with reference to FIG. 6, “user equipment devices 108, 110, and 112 may receive media (such as television, music, web pages, etc.).” EX1005, FIGS. 1-3, 5, 6, [0042].

- ii. [9a] “*a processor executing instructions to designate a part of the digital moving image contents from the provider automatically or in response to a manual operation;*”

145. Cordray discloses this limitation as addressed in [1a].

- iii. [9b] “*a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;*”

146. Cordray discloses this limitation as addressed in [1b].

- iv. [9c] “*a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and control the processor to automatically designate a succeeding part of the digital moving image contents when the viewing starts again;*”

147. Cordray discloses this limitation as addressed in [1c].

- v. [9d] “*a receiver of the designated succeeding part of the digital moving image contents in*

**response to the designation by the processor;
and”⁶**

148. Cordray discloses this limitation as addressed in [1d].

- i. [9e] “a display configured to display the succeeding part of the digital moving image contents received by the receiver.”*

149. Cordray discloses this limitation as addressed in [1e].

j. Claim 10

- i. [10] “The receiving system according to claim 9, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”*

150. Cordray discloses this limitation as addressed in [2].

k. Claim 11

- i. [11] “The receiving system according to claim 9, wherein the processor is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.”*

151. Cordray discloses this limitation as addressed in [3].

l. Claim 12

- i. [12] “The receiving system according to claim 9, wherein the processor is configured to designate*

⁶ See footnote 5 above.

an optional part of the digital moving image contents in response to the manual operation.”

152. Cordray discloses this limitation as addressed in [4].

B. Challenge 2: Claims 1-12 are unpatentable over Cordray in view of Wiser

153. As addressed with respect to Ground 1, Cordray in view of ordinary skill in the art reads on all limitations of the Challenged Claims of the '968 Patent as interpreted to cover “bookmarking.”

154. To the extent that the Board agrees with Patent Owner’s interpretation in Litigation that the claims of the '968 Patent cover “finding the next chapter or episode,” all Challenged Claims of the '968 Patent are also obvious over Cordray in view of Wiser as set forth in this Ground 2.

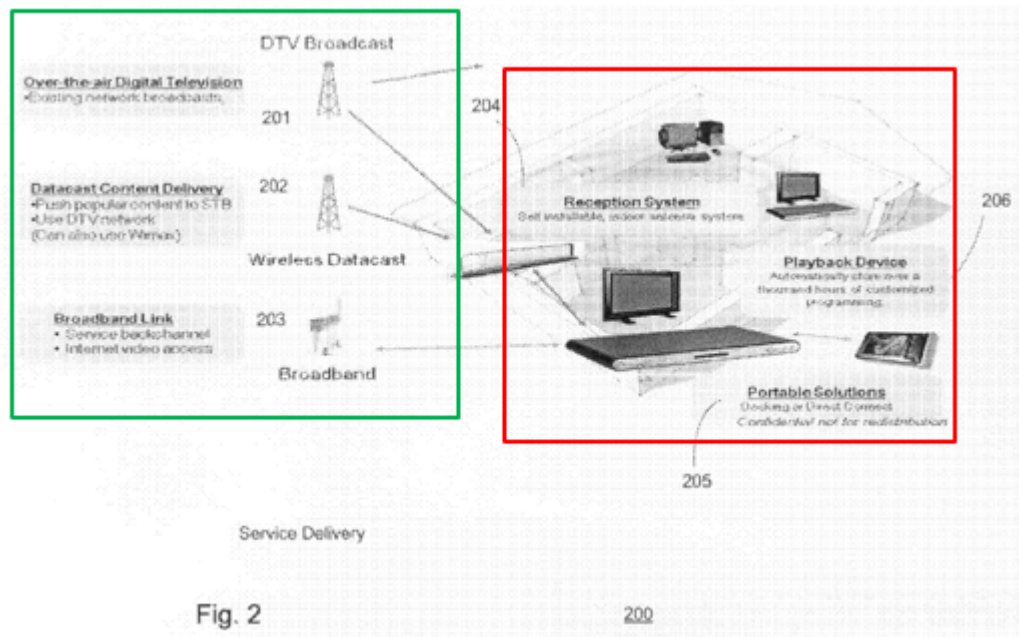
1. The Wiser Reference

155. Wiser, titled “Viewer Interface for a Content Delivery System,” was filed on April 14, 2008, and published on February 4, 2010. EX1008, (43), (54). Wiser was not cited or identified during prosecution of the '968 Patent. EX1001, (56); EX1002.

156. As background, Wiser explains that “[i]n addition to television programming content and on-demand movie content, viewers are also increasingly interested in viewing audio and visual data such as video clips posted by others for sharing on the Internet. There is currently not one service provider available in the

158. As shown, “affiliates” (109), which may include a “local broadcast network belonging to a nation-wide broadcast network (*e.g.* ABC, CBS, NBC, etc.),” provide both “linear” (*i.e.* synchronous) and “non-linear” (asynchronous) digital moving image content (*e.g.* television shows) to various users. EX1006, [0077]-[0079]. Content is available over typical digital broadcast implementations, or over a network such as the Internet. Users receive the digital content through a receiving apparatus that comprises a “receiver controller/set-top-box (STB).” *Id.*, [0069].

159. FIG. 2 illustrates the various delivery and reception options:



EX1006, FIG. 2.

160. As to each receiver controller STB, FIG. 6 provides a block diagram:

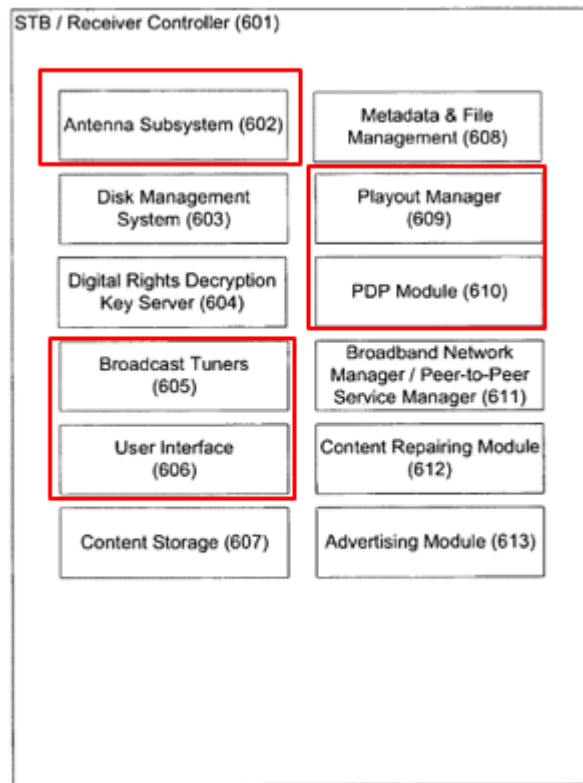


Fig. 6

EX1006, FIG. 6.

161. As shown, each receiver controller/STB contains an antenna subsystem (602), broadcast tuners (605), a playout manager (609) and a PDP Module (610). PDP stands for “Predictive Delivery and Personalization.” *Id.*, [0108]. Each receiver controller/STB also includes a user interface (UI). *Id.*, FIG. 6.

162. An exemplary screenshot of the user interface 2800 is shown in FIG. 28:

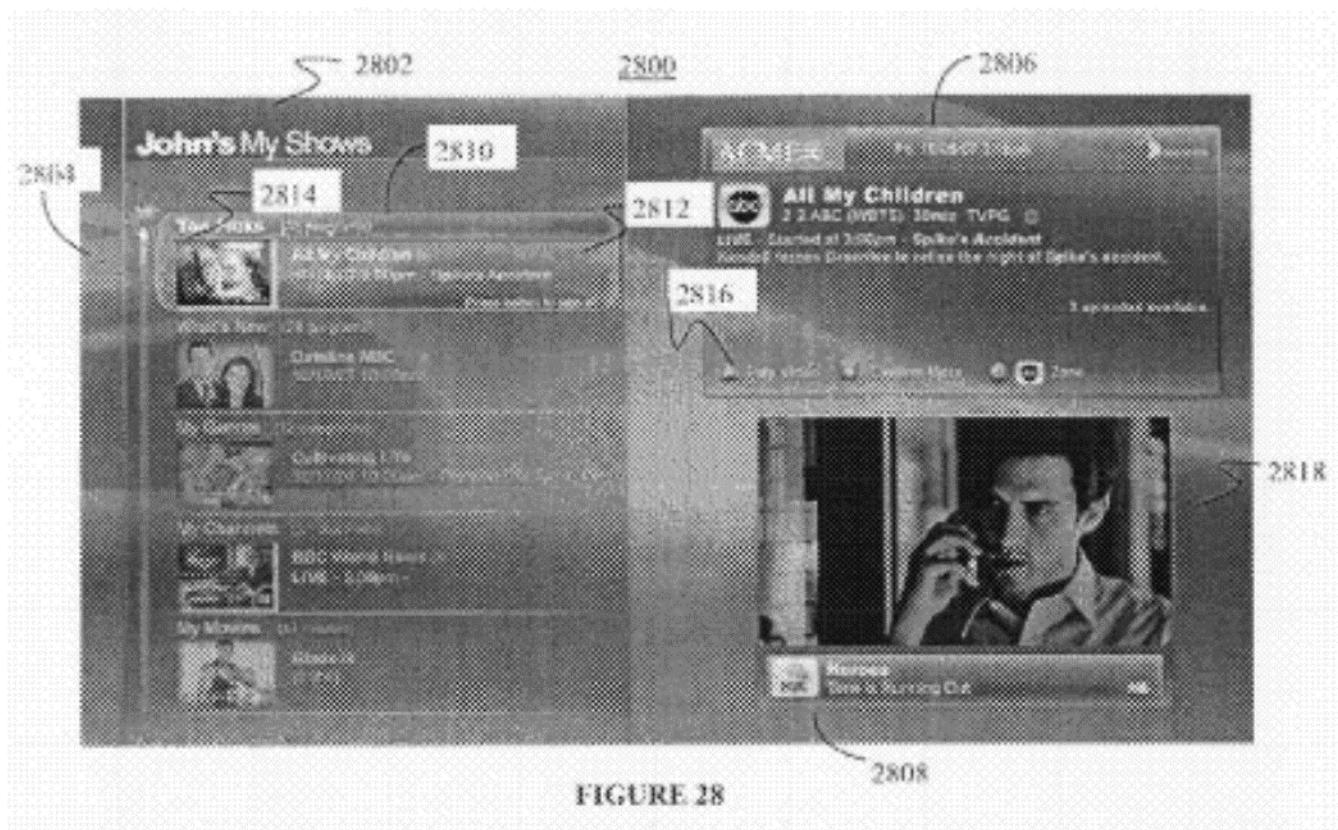


FIGURE 28

EX1006, FIG. 28.

163. FIG. 28 of Wiser, depicted above, displays a menu screen called “John’s My Shows,” which “presents contents specifically tailored for the user John.” EX1006, [0270]. UI 2800 shown in FIG. 28 is designed to “maintain viewer engagement.” *Id.*, [0335]. As Wiser explains, “UI 2800 provides for a smooth transition between the time viewers sign off from their personal profiles and when they later return to their personal profiles.” *Id.* This can include automatically tuning to the viewers’ most recently watched live channel, or to “resume playing” an unfinished recorded program or movie rental (*i.e.*, bookmarking). *Id.*

164. In addition, “UI 2800 also provides for a smooth transition from one content to another when a viewer finishes watching a selected content with or without viewer intervention” (*i.e.*, “chapter selection”). *Id.*, [0336]. Wiser explains:

[W]hen a program from the “My Top Shows” stack 3202 finishes playing, the next program from stack 3202 will automatically begin to play if the viewer makes no other selections. Similarly, when a program from the ‘My Channels’ stack or the “My Scheduled TV” stack finishes playing, the next program from that stack may automatically begin to play if the viewer makes no other selections.

Id. Thus, the system disclosed in Wiser can automatically begin playing the next portion of designated content (episode, etc.) without any user action

2. Motivation to Combine Cordray and Wiser

165. A POSITA would have found it obvious, and indeed would have been motivated, to combine the teachings of Cordray and Wiser.

166. Cordray describes a “media delivery system [that] allows users at user equipment ... to view media content at virtually any user-selected time.” EX1005, [0099]. Cordray’s system is able to “track and report a user’s progress through a series of related programming, such as a broadcast television series or a set of

movie sequels,” thus allowing the user to “efficiently navigate media selections and easily identify media that they may desire.” EX1005, [0006], [0033].

167. Cordray’s system “may create and maintain user media profiles that track the user’s progress through user selected series of programming, episode by episode, show by show, or game by game.” EX1005, [0102]. Information in the media profile is utilized by Cordray’s system to allow immediate access to the next portion of content in the series. Thus, for example, “[a] user may highlight any entry in progress column 1206 to automatically present the next unwatched episode in the series on the user equipment.” *Id.*, [0127]. Moreover, “if a user at the user equipment has watched only episodes 1 and 2 of the series ‘24’ on the FOX® network via VOD or DVR services,” the system may assemble additional content including “the next unwatched episode in the series (*i.e.*, episode 3).” EX1005, [0115]. In that instance, to “present the next unwatched episode in the series,” a user may interact with a display screen by selecting a “watch button,” as shown in FIG. 14. *Id.*, FIG. 14, [0128].

168. To the extent Patent Owner argues that Cordray does not explicitly disclose automatically beginning play of a “next episode,” a POSITA looking at Cordray’s system would have recognized that requiring a user to perform the extra step of “highlight[ing] any entry” in a progress column or selecting a “watch

button” or could result in a poorer experience for a user because it interrupts the user’s viewing of “media content [that] may be serial in nature,” where “[s]erial programming is any programming containing a temporal component, such as a recommended order of viewing.” EX1005, [0005]. A POSITA would understand that some users may consider serial programming to be one long show, and would prefer to see the episodes one after another directly, with no required manual intervention, such as pressing a “watch button” after each episode completes. Moreover, this extra step of pressing a “watch button” after each episode may cause the user to lose interest in viewing, and the user might take that opportunity between episodes to stop watching or switch over to a different program. From the perspective of a content provider or creator of the serial programming, who would prefer that the user keep watching its programming rather than switching to another provider’s programming, it would be desirable to keep the user engaged. A POSITA would thus be motivated to look for technology that addresses these issues in Cordray’s system.

169. Wiser’s automatic-next-content play feature provides just that technical solution. With Wiser’s feature, when one program finishes playing, “the next program from [a] stack may automatically begin to play if the viewer makes no other selections.” EX1008, [0336]. It would have been obvious to a POSITA to

modify Cordray's system to include the automatic-next-content play feature of Wiser in order to enhance the experience of the user and to keep the user engaged with the programming content.

170. Cordray and Wiser both relate to content or media delivery systems. EX1008, [0003] ("content delivery system"); EX1005, [0099] ("media delivery system"). Because the automatic-next-content play feature improves Wiser's content delivery system, a POSITA would have found it obvious to include the same feature in Cordray to provide the same improvement. All of the constituent techniques are already present in Cordray—*i.e.*, tracking a user's progress through serial programming, identifying the next episode, and making the next episode available for play. EX1005, [0105]-[0107], [0115]. Wiser simply plays the next episode without a specific prompt to (and response from) the user. I have been informed that: "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill." Indeed, a similar motivation for this combination is found in Wiser itself. Wiser's technology "may be designed to maintain viewer engagement by facilitating fast access to another program or content of relevance upon termination of viewing of a particular program. For example, a series of

different content can be programmed in advance to be displayed in series, one after another, in accordance with the viewer's preference." EX1008, [0269].

171. Moreover, Wiser's teaching of a "smooth transition" to the succeeding content by playing without user input would be obvious to try with the system of Cordray and would have had more than a reasonable expectation of success, because, as stated above, the constituent techniques underlying tracking and resuming play in both Cordray and Wiser are the same. Accordingly, it would have obvious to combine the unprompted play-next-content of Wiser with the play-next-chapter functionality in the system of Cordray

3. Detailed Invalidity Analysis

a. Claim 1

- i. [1pre] "A receiving apparatus configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being commutatively connected to the receiving apparatus, the receiving apparatus comprising,"⁷:*

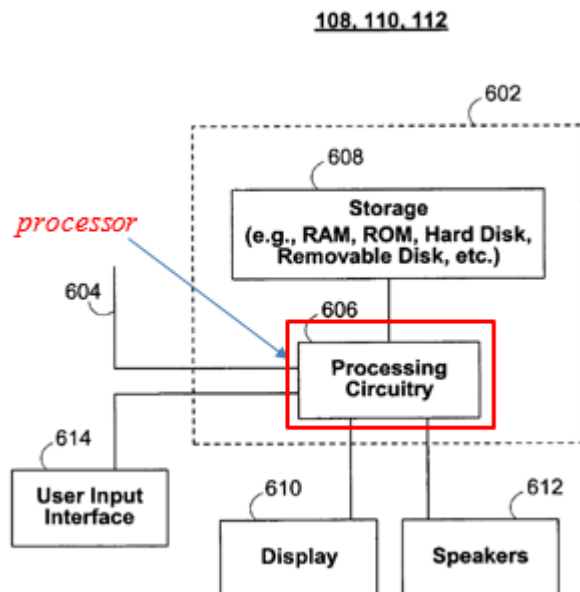
172. To the extent the preamble is a limitation, Cordray discloses this limitation, as addressed in Ground 1.

- ii. [1a] "a processor executing instructions to designate a part of the digital moving image*

contents in the provider automatically or in response to a manual operation;

173. Cordray discloses this limitation, as addressed in Ground 1 with respect to “bookmarking” and further addressed below with respect to “chapter selection”.

174. Cordray discloses a “*processor executing instructions*” in that user equipment devices 108, 110, 112 include processing circuitry 606:



EX1005, FIG. 6 (annotated). “Control circuitry 602 may be based on any suitable processing circuitry 606 such as processing circuitry based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, etc.” *Id.*, [0097]. Control circuitry 602 (including processing circuitry 606) “executes instructions for an interactive media guidance application or other

interactive application (*e.g.*, web browser) from memory.” *Id.* The monitoring application “may . . . be integrated with an existing interactive media guidance application, such as an interactive television program guide.” *Id.*, [0036].

Additionally, the monitoring application is “implemented at least partially on user equipment.” *Id.*, [0058]. As a POSITA would understand, processing circuitry 606 would be executing the instructions for the monitoring application on the user equipment.

175. To the extent that Patent Owner has argued that the “*part of the digital moving image contents*” to be “*designate[d]*” must be a “next chapter or episode” in a series of content, Cordray discloses a “*processor executing instructions to designate*” such next chapter or episode.

176. In order to keep track of “the user’s current viewing progress” through a series of video or television programming content stored at a TV station, distribution facility, or server (“*digital moving image contents in the provider*”), the monitoring application may indicate a portion (“*designate a part*”) of the contents as viewed (or not yet viewed) by way of a “progress indicator” maintained in a “media profile record 710” associated with the user. EX1005, FIG. 7B, [0105]-[0108] (“media profiles...track the user’s progress through user selected series of programming, episode by episode, show by show”).

177. The media profile record may be maintained and “stored locally on the user equipment” in memory by the monitoring application. *Id.*, [0058]. FIG. 7B shows an exemplary format for the media profile record:

digital moving image contents *Designations*

712 714 716 718

710

PROGRAM_ID	PROGRESS	POSITION	LAST ACTION
prog_id0001	1,3	null	SK
prog_id0002	2,4	36:09	WA
prog_id0003	2,1	12:18	SC
prog_id0004	1,6	null	SK
prog_id0005	3,2	17:49	BP

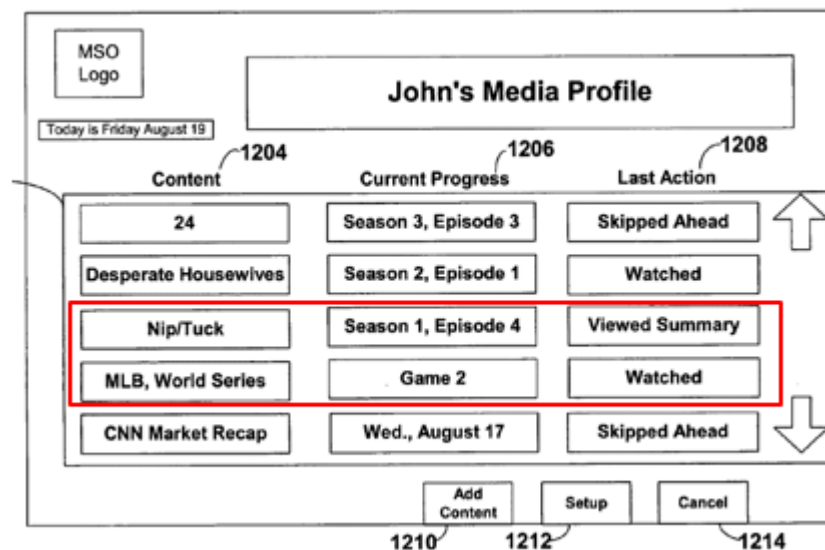
EX1005, FIG. 7B (annotated).

178. Media profile record 710 includes a program column 710, a progress column 714, and a position column 716. EX1005, FIG. 7B, [0107]. For each program in column 712, “[p]rogress column 714 may contain the user’s current viewing progress” within a series of related programs—*e.g.*, “season number” and “episode number.” EX1005, [0105], [0107].

179. Cordray discloses that the “*designat[ion]*” of a “*part of the digital moving image contents*” (*e.g.*, next chapter or episode) can be made “*automatically.*” For example, “[w]hen the user has completed viewing an episode

in the series, the interactive media monitoring application may update the appropriate entry in the user's media profile to reflect the completion of the episode." EX1005, [0102]. For example, "[a]s a user completes an episode of a season of '24,' the user's media profile may be automatically updated to reflect this event." EX1005, [0160]. Thus, the monitoring application can "*automatically*" update ("*designate*") a "*part of the digital moving image contents in the provider*" (e.g. a chapter or episode) of the season of '24.' Because the monitoring application is updating the progress indicator without a need for user input, the "*designation*" is made "*automatically*."

180. An exemplary user's view of this process is shown in, e.g., FIG. 12:



EX1005, FIG. 12.

181. FIG. 12 shows the current viewing status for a series, such as “Season 1, Episode 4” of *Nip/Tuck* or “Game 2” of the World Series. As the narrative explains, “[p]rogress column 1206 may display the next episode for the user to watch. A user may highlight any entry in progress column 1206 to automatically present the next unwatched episode in the series on the user equipment.” *Id.*, [0127].

182. Additionally, a next chapter or episode can be “*designate[d]*” “*in response to a manual operation.*” As the specification states, “[t]he user may wish to change the user’s viewing progress if the user watched an episode in the series at a location not monitored by the interactive media monitoring application.” EX1005, FIG. 12, [0128]. To make this change, “[t]he user may highlight the appropriate indicator in progress column 1206 and press an appropriate command (*e.g.*, the left or right arrows on remote control 400 of FIG. 4) to change the progress indicator associated with the series.” *Id.*

183. Thus, Cordray discloses [1a] regardless of whether the claims are interpreted to cover “bookmarking,” “finding the next chapter or episode” or both

- iii. [1b] “*a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;*”**

184. Cordray alone, or, alternatively, in combination with Wiser, discloses this limitation.

digital moving image contents

Designations

712 714 716 718

710

PROGRAM_ID	PROGRESS	POSITION	LAST ACTION
prog_id0001	1,3	null	SK
prog_id0002	2,4	36:09	WA
prog_id0003	2,1	12:18	SC
prog_id0004	1,6	null	SK
prog_id0005	3,2	17:49	BP

EX1005, FIG. 7B (annotated). In particular, the “progress indicator 714” within media profile record 710 “*keeps information necessary for the processor to automatically designate*” the next chapter or episode for play.

186. In the co-pending Litigation, Patent Owner has suggested that limitation [1b] is met by automatically starting play of a next chapter or episode, *without any action by the user*: “[W]hen a user reaches the end of an episode in a TV series, the Apple Accused Products automatically designate the next episode for playback, including via auto-playing the next episode.” EX1009, p. 4 (emphasis added). Petitioner does not agree with Patent Owner’s apparent interpretation. Nonetheless, to the extent that Patent Owner argues in this proceeding that limitation [1b] requires automatically playing the succeeding portion of content without any action by the user, and to the extent Patent Owner argues that such feature is not explicitly disclosed in Cordray, such feature is explicitly disclosed or taught in Wiser. EX1008, FIG. 28, [0066], [0270], [0335]-[0336].

187. Wiser “describes a method and system of delivering audio visual programming data” to a user. EX1008, [0066]. FIG. 28 of Wiser displays a menu screen called “John’s My Shows,” which “presents contents specifically tailored for the user John.” EX1008, [0270].

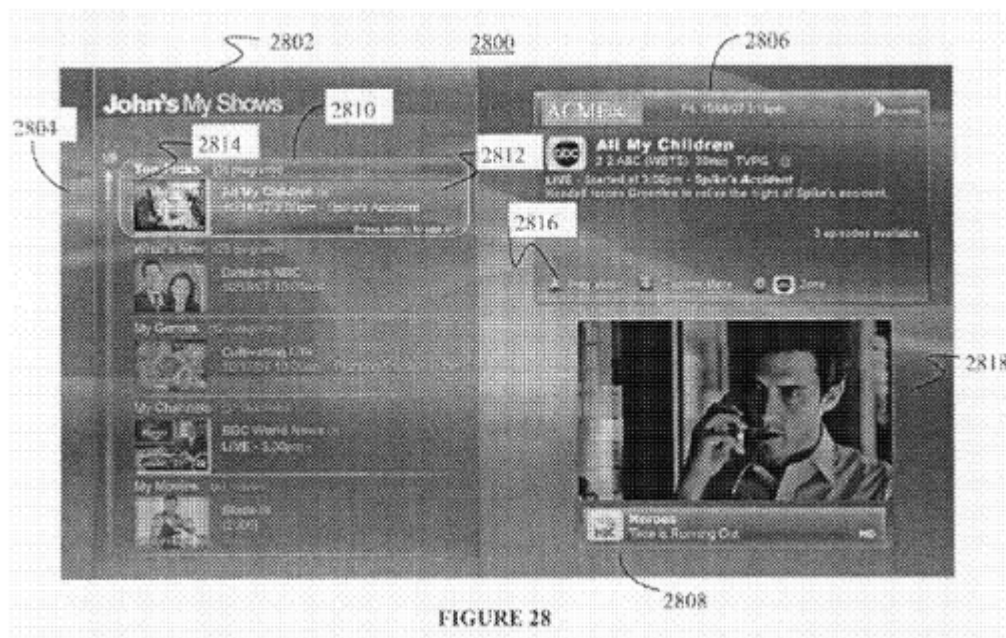


FIGURE 28

EX1008, FIG. 28.

188. UI 2800 of FIG. 28 illustrates a design feature of Wiser—it is “designed to maintain viewer engagement” by, *inter alia*, automatically playing the next program or item of content. *Id.*, [0335]-[0336]. UI 2800 “provides for a smooth transition from one content to another when a viewer finishes watching a selected content with or without viewer intervention” (*i.e.*, “chapter selection”). *Id.*, [0336]. Wiser describes as examples:

[W]hen a program from the ‘My Top Shows’ stack 3202 finishes playing, the next program from stack 3202 will automatically begin to play if the viewer makes no other selections. Similarly, when a program from the ‘My Channels’ stack or the ‘My Scheduled TV’ stack

finishes playing, the next program from that stack may automatically begin to play if the viewer makes no other selections.

Id. Accordingly, Wiser discloses the feature of automatically playing or starting the succeeding part of the digital moving image content, without user input.

189. It would have been obvious to a POSITA to combine the automatic-next-content play feature taught in Wiser with the Cordray's system for all of the reasons discussed in the Motivation to Combine section above.

190. Thus, Cordray, alone or in combination with Wiser, discloses [1b].

- iv. **[1c] “a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and control the processor to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;”**

191. Cordray discloses this limitation, as addressed in Ground 1 and above. The monitoring application running on the processing circuitry in the user equipment is a “*designation software controller*” configured as claimed.

- v. **[1d] “a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor; and”**

192. Cordray discloses this limitation, as addressed in Ground 1.

- vi. *[1e] “a display configured to display the succeeding part of the digital moving image contents received by the receiver.”*

193. Cordray discloses this limitation, as addressed in Ground 1.

b. Claim 2

- i. *[2] “The receiving apparatus according to claim 1, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”*

194. Cordray discloses this limitation, as addressed in Ground 1.

c. Claim 3

- i. *[3] “The receiving apparatus according to claim 1, wherein the processor is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.”*

195. Cordray discloses this limitation, as addressed in Ground 1.

d. Claim 4

- i. *[4] “The receiving apparatus according to claim 1, wherein the processor is configured to designate an optional part of the digital moving image contents in response to the manual operation.”*

196. Cordray discloses this limitation, as addressed in Ground 1.

e. Claim 5

- i. [5pre] “A receiving method configured to receive digital moving image contents from a provider of the digital moving image contents, the receiving method comprising.”**

197. To the extent the preamble is a limitation, Cordray discloses this limitation, as addressed in Ground 1.

- ii. [5a] “a step of executing, by a computer processor, instructions to designate a part of the digital moving image contents in the provider automatically or in response to a manual operation;”**

198. Cordray discloses this limitation because the processing circuitry 606 of Cordray performs this step, as addressed in [1a].

- iii. [5b] “a step of keeping information necessary for the executing step to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;”**

199. Cordray, alone or in combination with Wiser, discloses this limitation because the memory or storage 608 of Cordray’s user equipment, alone or as modified according to the teaching of Wiser, perform this step as addressed in [1b].

- iv. [5c] “a step of controlling the keeping step to keep the information in response to a termination of viewing the viewed part and control the executing step to automatically designate the succeeding part of the digital moving image contents when the viewing starts again;”**

200. Cordray discloses or suggests this limitation because the monitoring application executing on the processing circuitry 606 of Cordray performs this step, as addressed in [1c].

- v. **[5d] “a step of receiving the designated succeeding part of the digital moving image contents in response to the designation by the executing step; and”**

201. Cordray discloses or teaches this limitation because the input/output and/or tuner and/or decoding circuitry of Cordray’s user equipment performs this step, as addressed in [1d].

- vi. **[5e] “a step of displaying the succeeding part of the digital moving image contents received by the receiving step.”**

202. Cordray discloses this limitation because the display 610 of Cordray performs this step, as addressed in [1e].

f. Claim 6

- i. **[6] “The receiving method according to claim 5, wherein the executing step is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”**

203. Cordray discloses or teaches this limitation because Cordray’s processing circuitry 606 performs this step as addressed in [2].

g. Claim 7

- i. [7] “The receiving method according to claim 5, wherein the executing step is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.”*

204. Cordray discloses this limitation because Cordray’s processing circuitry 606 performs this step as addressed in [3].

h. Claim 8

- i. [8] “The receiving method according to claim 5, wherein the receiving method is further configured to designate an optional part of the digital moving image contents in response to the manual operation.”*

205. Cordray discloses this limitation because Cordray’s processing circuitry 606 performs this step as addressed in [4].

i. Claim 9

- i. [9pre] “A receiving system configured to receive digital moving image contents from a provider of the digital moving image contents, the provider being commutatively connected to the receiving system, the receiving system comprising:”⁸*

⁸ See footnote 4 above regarding the claim term “*the provider being commutatively connected to the receiving apparatus.*”

206. To the extent the preamble is a limitation, Cordray discloses this limitation as discussed with respect to [1pre]. A user equipment device is a “*receiving system*” because, as shown and described with reference to FIG. 6, “user equipment devices 108, 110, and 112 may receive media (such as television, music, web pages, etc.).” EX1005, FIGS. 1-3, 5, 6, [0042].

- ii. [9a] “a processor executing instructions to designate a part of the digital moving image contents from the provider automatically or in response to a manual operation;”**

207. Cordray discloses this limitation as addressed in [1a].

- iii. [9b] “a memory that keeps information necessary for the processor to automatically designate a succeeding part of the digital moving image contents to a viewed part of the digital moving image contents;”**

208. Cordray, alone or in combination with Wiser, discloses this limitation as addressed in [1b].

- iv. [9c] “*a designation software controller configured to control the memory to keep the information in response to a termination of viewing the viewed part and control the processor to automatically designate a succeeding part of the digital moving image contents when the viewing starts again;*”**

209. Cordray discloses or suggests this limitation as addressed in [1c].

- v. [9d] *“a receiver of the designated succeeding part of the digital moving image contents in response to the designation by the processor; and”*⁹

210. Cordray discloses or teaches this limitation as addressed in [1d].

- vi. [9e] *“a display configured to display the succeeding part of the digital moving image contents received by the receiver.”*

211. Cordray discloses this limitation as addressed in [1e].

j. **Claim 10**

- i. [10] *“The receiving system according to claim 9, wherein the processor is configured to designate the part of the digital moving image contents by selecting the provider, wherein the part of the digital moving image contents is provided by the selected provider.”*

212. Cordray discloses this limitation as addressed in [2].

k. **Claim 11**

- i. [11] *“The receiving system according to claim 9, wherein the processor is configured to designate a part of the digital moving image contents provided by the provider by streaming technology in accordance with a program schedule table.”*

213. Cordray discloses this limitation as addressed in [3].

l. **Claim 12**

- i. [12] *“The receiving system according to claim 9, wherein the processor is configured to designate*

⁹ See footnote 5 above.

***an optional part of the digital moving image
contents in response to the manual operation.”***

214. Cordray discloses this limitation as addressed in [4].

C. Secondary Considerations

215. Based on my review of the '968 Patent and its prosecution history, I note that no secondary considerations of non-obviousness were identified in connection with the Challenged Claims.

216. I am not separately aware of any evidence of commercial success, skepticism, failure of others, industry praise, unexpected results, or the like. Instead, as discussed above, it is my opinion that the subject matter covered by the Challenged Claims of the '968 Patent was known in the art.

Conclusion and Declaration

The findings and opinions set forth in this declaration are based on my work and examinations to date. I may continue my examinations. I may also receive additional documentation and other factual evidence over the course of this proceeding that will allow me to supplement and/or refine my opinions. I reserve the right to add to, alter, or delete my opinions and my declaration upon discovery of any additional information. I reserve the right to make such changes as may be deemed necessary. In signing this declaration, I recognize that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board (“PTAB” or “Board”) of the USPTO. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: 28 August,

By: 
Andrew Lippman