

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
AMAZON.COM SERVICES LLC,
AMAZON WEB SERVICES, INC., and
TWITCH INTERACTIVE, INC.
Petitioner

v.

NL GIKEN INC.
Patent Owner

Inter Partes Review No.: IPR2025-00050

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 10,880,592
UNDER 35 U.S.C. §§311-319 AND 37 C.F.R. §§42.1-100, ET SEQ.**

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. STATEMENT OF PRECISE RELIEF REQUESTED	1
III. THE '592 PATENT	1
A. Overview of the '592 Patent.....	1
B. File History	2
C. POSITA	3
D. Claim Construction.....	3
1. “provider” (claims 1-2, 5-6, 11-12)	4
2. “digital moving image content” (claims 1, 6, 11-13)	4
3. “integral program” (claims 1-10).....	4
4. “I/O interface locating the integral program” (claims 1 and 6).....	4
5. “in accordance with” (claims 1 and 6).....	4
6. “TV set computer” (claims 1 and 6)	5
7. “designate” (claims 4, 9, 13).....	5
8. “sub provider” (claim 11)	5
9. “designates an optional part” (claim 13).....	6
E. Patent Owner’s Infringement Contentions	6
IV. GROUND 1: CLAIMS 1-13 ARE OBVIOUS BASED ON WALKER	7
A. Walker	7
B. Claim 1	8
1. [1.pre]	9
2. [1.a]	15
3. [1.b]	18
4. [1.c]	19
5. [1.d]	28
6. [1.e]	28

C.	Claim 2	30
D.	Claim 3	32
E.	Claim 4	33
F.	Claim 5	34
G.	Claim 6	36
	1. [6.pre]	36
	2. [6.a]	36
	3. [6.b]	36
	4. [6.c]	36
	5. [6.d]	37
	6. [6.e]	37
H.	Claim 7	37
I.	Claim 8	37
J.	Claim 9	37
K.	Claim 10	37
L.	Claim 11	38
M.	Claim 12	39
N.	Claim 13	40
V.	GROUND 2: CLAIMS 1-13 ARE OBVIOUS BASED ON CHANG	42
A.	Chang.....	42
B.	Claim 1	44
	1. [1.pre]	45
	2. [1.a]	49
	3. [1.b]	50
	4. [1.c]	52
	5. [1.d]	55
	6. [1.e]	55
C.	Claim 2	56
D.	Claim 3	57

E.	Claim 4	57
F.	Claim 5	58
G.	Claim 6	59
	1. [6.pre]	59
	2. [6.a]	60
	3. [6.b]	60
	4. [6.c]	60
	5. [6.d]	60
	6. [6.e]	60
H.	Claim 7	61
I.	Claim 8	61
J.	Claim 9	61
K.	Claim 10	61
L.	Claim 11	61
M.	Claim 12	63
N.	Claim 13	64
VI.	GROUND 3: CLAIMS 1-13 ARE OBVIOUS BASED ON WALKER IN VIEW OF CHANG	66
A.	Prior Art.....	66
	1. Walker	66
	2. Chang	66
B.	Claim 1	66
	1. [1.c]	67
C.	Claims 2-12	69
D.	Claim 13	70
VII.	DISCRETIONARY DENIAL IS NOT WARRANTED.....	71
A.	35 U.S.C. §314(a) Analysis.....	71
	1. Stay.....	72
	2. Trial Date	72

3.	Parallel Proceeding	72
4.	Issue Overlap.....	73
5.	Same Party	73
6.	Other Considerations	74
B.	35 U.S.C. §325(b) Analysis	75
VIII.	MANDATORY NOTICES UNDER 37 C.F.R. §§42.8(B)(1)-(4).....	76
A.	Real Party-In-Interest	76
B.	Related Matters.....	76
C.	Lead and Backup Counsel.....	76
D.	Service Information.....	77
IX.	CONCLUSION.....	77

INDEX OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 10,880,592 (the “’592 patent”).
1002	Declaration of Dr. Chandrajit Bajaj.
1003	File History of U.S. Patent No. 10,880,592.
1004	U.S. Patent App. Pub. No. 2002/0194619 (“Chang”).
1005	U.S. Patent App. Pub. No. 2005/0160465 (“Walker”).
1006	<i>NL Giken Inc. v. Amazon.com, Inc.</i> , No. 1:24-cv-00028, (D. Del. Oct. 4, 2024) (Exhibit B, NL Giken Initial Infringement Claim Chart for US 10,880,592) (FILED UNDER SEAL).
1007	U.S. District Courts— <i>Combined Civil and Criminal Federal Court Management Statistics</i> (Jun. 30, 2024).
1008	<i>NL Giken Inc. v. Amazon.com, Inc.</i> , No. 1:24-cv-00028, Dkt. 32, 1:24-cv-00028 (D. Del. Jun. 18, 2024) (Joint Scheduling Order).
1009	Concise Oxford English Dictionary (11th ed. 2008) definition of “accordance.”
1010	Amazon Fire TV Product Page (Oct. 14, 2024)
1011	Amazon Fire TV Stick 4k Product Page (Oct. 14, 2024)

CHART OF CLAIMS
[1.pre] A receiving apparatus configured to receive digital moving image contents from outside providers of the digital moving image contents, the outside providers including a first provider providing a digital moving image content in accordance with a program schedule table predetermined by the provider and a second provider providing the digital moving image content independently from the program schedule table, the receiving apparatus comprising:
[1.a] a remote controller that manually selects one of the digital moving image contents provided from the first provider, the selected digital moving image content being an integral program continuing from an opening part to an ending part by way of a midstream part;
[1.b] a tuner that receives the selected digital moving image content at the midstream part of the integral program which is provided by the first provider at the time of selection by the remote controller;
[1.c] an I/O interface that receives from the second provider the digital moving image content including entire data of the digital moving image content from the opening part to the ending part of the integral program same as the integral program received from the first provider, the I/O interface locating the integral program in accordance with information from the tuner at the time of selection by the remote controller;
[1.d] a television display that shows the digital moving image contents from the first provider and the second provider; and
[1.e] a memory in a TV set computer that stores the entire data of the digital moving image content received by the I/O interface.
[2] The receiving apparatus according to claim 1 further comprising a TV set processor that has the television display show a past part of the integral program which has been already provided by the first provider and retrieved from the memory in the TV set computer.
[3] The receiving apparatus according to claim 2, wherein the past part is the opening part of the integral program.
[4] The receiving apparatus according to claim 1 further comprising a control signal receiver that designates a desired part of the same integral program received by the I/O interface.
[5] The receiving apparatus according to claim 1, wherein the memory in the TV set computer keeps information necessary for the TV set computer to locate the integral program same as the integral program received from the first provider.
[6.pre] A receiving apparatus configured to receive digital moving image contents from outside provider system of the digital moving image contents, the

outside provider system being capable of providing a digital moving image content in accordance with a program schedule table predetermined by the provider and providing the digital moving image content independently from the program schedule table, the receiving apparatus comprising:
[6.a] a remote controller that manually selects one of the digital moving image contents provided in accordance with a program schedule table, the selected digital moving image content being an integral program continuing from an opening part to an ending part by way of a midstream part;
[6.b] a tuner that receives the selected digital moving image content at the midstream part of the integral program at the time of selection by the remote controller;
[6.c] I/O interface that receives the digital moving image content provided independently from the program schedule table including entire data of the digital moving image content from the opening part to the ending part of the integral program same as the integral program provided in accordance with a program schedule table, the I/O interface locating the integral program in accordance with information at the time of selection by the remote controller;
[6.d] a television display that shows the digital moving image contents provided in accordance with a program schedule table and the digital moving image content provided independently from the program schedule table; and
[6.e] a memory in a TV set computer that stores the entire data of the digital moving image content received by the I/O interface.
[7] The receiving apparatus according to claim 6 further comprising a TV set processor that has the television display show a past part of the integral program which has been already provided in accordance with a program schedule table and retrieved from the memory in the TV set computer.
[8] The receiving apparatus according to claim 7, wherein the past part is the opening part of the integral program.
[9] The receiving apparatus according to claim 6 further comprising a control signal receiver that designates a desired part of the same integral program received by the I/O interface.
[10] The receiving apparatus according to claim 6 wherein the memory in the TV set computer keeps information necessary for the TV set computer to locate the integral program same as the integral program provided in accordance with a program schedule table.
[11] The receiving apparatus according to claim 1, wherein the first provider includes selectable sub providers, wherein the s remote controller selects the one of the digital moving image contents by means of selecting the sub provider, and

wherein the one of the digital moving image contents is provided by the selected sub provider.

[12] The receiving apparatus according to claim 1, wherein the digital moving image contents is provided by the first provider by streaming technology in accordance with the program schedule table.

[13] The receiving apparatus according to claim 4, wherein the control signal receiver designates an optional part of the digital moving image contents in response to a manual operation.

I. INTRODUCTION

Amazon.com Inc., Amazon.com Services LLC, Amazon Web Services, Inc., and Twitch Interactive, Inc. (collectively, “Petitioner”) petitions for *inter partes* review of U.S. Patent No. 10,880,592 (the “’592 patent,” EX1001). As shown below, the systems described in the ’592 patent were known in the art.

Petitioner certifies that the ’592 patent is available for *inter partes* review, and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

II. STATEMENT OF PRECISE RELIEF REQUESTED

Petitioner requests cancelation of claims 1-13 of the ’592 patent in view of the following grounds:

Ground	Claims	Statutory Basis	Prior Art
1	1-13	35 U.S.C. §103	Walker
2	1-13	35 U.S.C. §103	Chang
3	1-13	35 U.S.C. §103	Walker in view of Chang

III. THE ’592 PATENT

A. Overview of the ’592 Patent

The ’592 patent issued from U.S. Patent Application No. 15/922,926 (the “’926 application”) filed on March 16, 2018, and claims priority to Japanese Application No. 2008-235797, filed September 14, 2008. Accordingly, the ’592 patent’s priority date is no earlier than September 14, 2008. EX1002, ¶42.

The '592 patent relates to a television set that “is capable of receiving both broadcast program from television station and corresponding digital file of the same contents from a server station through internet.” EX1001, Abstract. The patent describes multiple ways that digital image contents can be received, stored, and watched by viewers including by airwaves, recording programming content, receiving content over the Internet, downloading content, and streaming. EX1001, 1:28-56. The patent notes that improvements can be made to digital content receiving apparatuses, so viewers can more easily use such apparatuses to appreciate the multitude of options to receive and view digital contents. EX1001, 1:57-2:03. EX1002, ¶43

The '592 patent attempts to address these concerns by allowing users to enjoy digital content such as a broadcast program that has been tuned into after the content/program has started “from the beginning by means of downloading corresponding digital file of the same contents through internet by an automatic link.” EX1001, Abstract. This solution, however, was well known in the art, as described below. EX1002, ¶44.

B. File History

The examiner never issued a rejection based on the prior art. EX1002, ¶45.

C. POSITA

A person of ordinary skill in the art at the time of filing of the alleged invention in the '592 patent (September 14, 2008) (“POSITA”) would have had a bachelor’s degree in electrical or computer engineering or a comparable field of study, plus approximately two to three years of professional experience with television and digital display systems, distributed multimedia communications, and networked computer systems, or other relevant industry experience. Additional education could substitute for professional experience, and industry experience could substitute for formal education. EX1002, ¶46.

D. Claim Construction

The challenged claims are interpreted using the same standard that is used to construe claims in a civil action in federal district court. 37 C.F.R. §42.100(b). Petitioner does not contend that its proposed constructions are complete constructions of these claims for any other purpose, including for issues that have been raised in the related litigation. Because the asserted prior art discloses embodiments within the indisputable scope of the claims, the Board need not construe the outer bounds of the claims. Any claim terms not listed below should be given its plain meaning to a POSITA.

1. “provider” (claims 1-2, 5-6, 11-12)

The plain meaning includes a television station or media server of digital contents. EX1001, 4:64-67 (“television station 5 and server station 9 as providers of the digital contents.”), 16:55-67. EX1002, ¶48.

2. “digital moving image content” (claims 1, 6, 11-13)

The plain meaning includes digital video, such as digital TV programs, music videos, and movies. EX1001, 1:29-50. EX1002, ¶49.

3. “integral program” (claims 1-10)

The plain meaning includes a program with opening, middle, and ending parts. EX1001, 17:34-36, 18:14-17. EX1002, ¶50.

4. “I/O interface locating the integral program” (claims 1 and 6)

The plain meaning includes the I/O interface identifying the integral program. EX1001, 5:18-22 (I/O interface generally), 7:10-16 (content downloaded at I/O interface using URL (“uniform resource locator”) that identifies the content location), 9:46-54 (URL for designating digital moving image content), 13:58-60 (URL is for “identifying” content). EX1002, ¶51.

5. “in accordance with” (claims 1 and 6)

The plain meaning of this term includes “in conformity with.” EX1009 (Concise Oxford English Dictionary), 3 (“in a manner conforming with”); *Omax Corp. v. Flow Int’l. Corp.*, No. 2:04-cv-02234, 2006 WL 3249190, *8 (W.D.

Wash. Nov. 7, 2006) (“in conformity with”); *Summit 6 LLC v. Rsch. in Motion Corp.*, No. 3:11-cv-367, 2012 WL 12885172, *27 (N.D. Tex. May 21, 2012) (“to conform to”); EX1006, 31-32 (accusing downloading a program with the name of a program shown elsewhere). EX1002, ¶52.

6. “TV set computer” (claims 1 and 6)

The plain meaning includes a processing system located outside of the TV set form factor. The ’592 patent includes no requirement that the computer be inside a TV set. EX1001. Additionally, Giken’s infringement contentions accuse products that do not require the TV set computer to be in the TV including the Amazon Fire TV Stick 4k, which is a USB dongle. EX1006; EX1010; EX1011. EX1002, ¶53.

7. “designate” (claims 4, 9, 13)

The plain meaning, with reference to digital moving image content, includes selecting or identifying the content or its provider, such as by URL. EX1001, 3:22-26 (“designate the digital moving image content by means of selecting the provider, whereby the digital moving image content which is provided by the provider at the time of selection is designated.”), 11:18-21 (“designated with URL”), 11:22-27, 12:15-20, 12:48-51, 13:20-25. EX1002, ¶54.

8. “sub provider” (claim 11)

The plain meaning includes a provider to a provider (construction of provider, §III.D.1), such as a television channel or the provider of a television

channel. EX1001, 4:64-67 (“television station 5 and server station 9 as providers”), 5:22-25 (“channels of television stations”), 6:31-45, 11:11-15, 11:65-12:07, 12:39-45, 12:52-55. EX1002, ¶55.

9. “designates an optional part” (claim 13)

The plain and ordinary includes designating by a processor in response to a user input any part that is not required to be displayed as part of the designated program. *Compare* EX1001, claim 4 (designating part of an integral program) *with* EX1001, claim 13 (designating an optional part of digital moving image contents). The ’592 specification describes an “optional shift” to shift a position of the digital moving image content to start at an optionally shifted position, which can include the beginning of the content. EX1001, 8:19-23. EX1002, ¶56.

E. Patent Owner’s Infringement Contentions

“[P]atent owners may not, like a ‘nose of wax,’ twist the meaning of patent claims one way to avoid a finding of unpatentability and in another way so as to find infringement.” *Ericsson Inc. v. Intellectual Ventures II LLC*, IPR2014-00919, Paper 37 at 9 (PTAB Dec. 7, 2015). In this regard, Patent Owner’s infringement allegations are “probative” of whether Patent Owner is taking “inconsistent positions” between this proceeding and district court litigation and are “relevant of the credibility” of Patent Owner’s “characterization of the [asserted] Patent in this proceeding.” *Id.* at 9-10; *Square, Inc. v. Unwired Planet LLC*, IPR2014-01164,

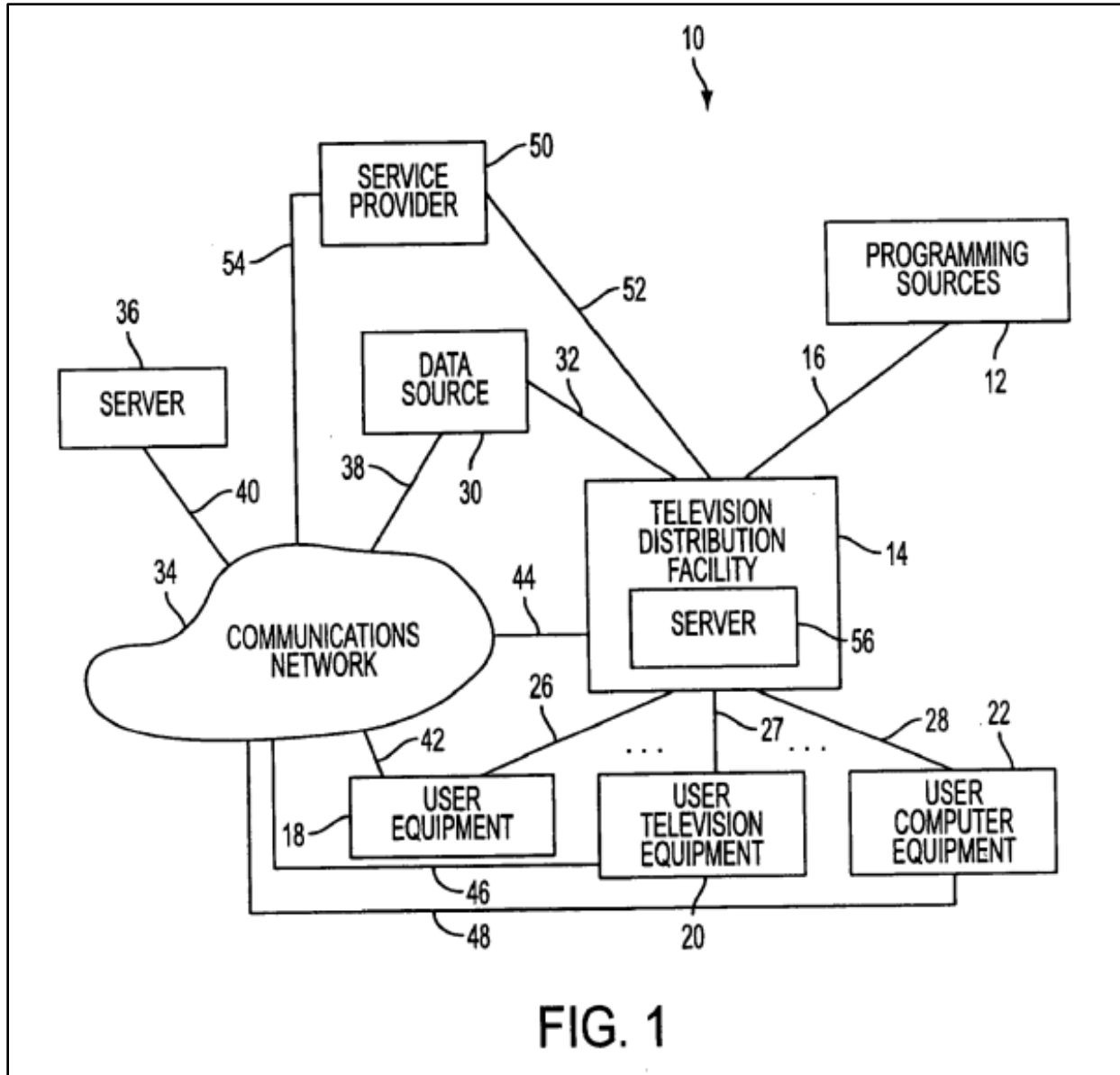
Paper 28 at 37-38 (PTAB Nov. 19, 2015). Accordingly, Petitioner includes Patent Owner's initial infringement contention (EX1006). EX1002, ¶57.

IV. GROUND 1: CLAIMS 1-13 ARE OBVIOUS BASED ON WALKER

A. Walker

U.S. Patent Application Publication No. 2005/0160465 ("Walker") is a publication of U.S. Patent Application No. 10/763,007, filed January 21, 2004, and published July 21, 2005. EX1005, cover page. Walker is prior art under 35 U.S.C. §§102(a), (b), and (e) (pre-AIA). EX1002, ¶58.

Walker discloses an interactive television system in which a user performs playback control functions (e.g., pause, rewind, fast-forward, resume) while watching a broadcast television program. EX1005, Abstract, ¶10. When the user requests such a function, the system may transmit to the user a streaming version of the same programming, which may be controlled with the playback control functions. EX1005, Abstract, ¶11. Figure 1 shows an overview of the system:



EX1005, Fig. 1. EX1002, ¶59.

Walker is analogous art to the '592 patent and was not cited during prosecution of the '592 patent. EX1001, 1-2; EX1003. EX1002, ¶¶60-61.

B. Claim 1

Walker discloses and renders obvious claim 1. EX1002, ¶¶62-90.

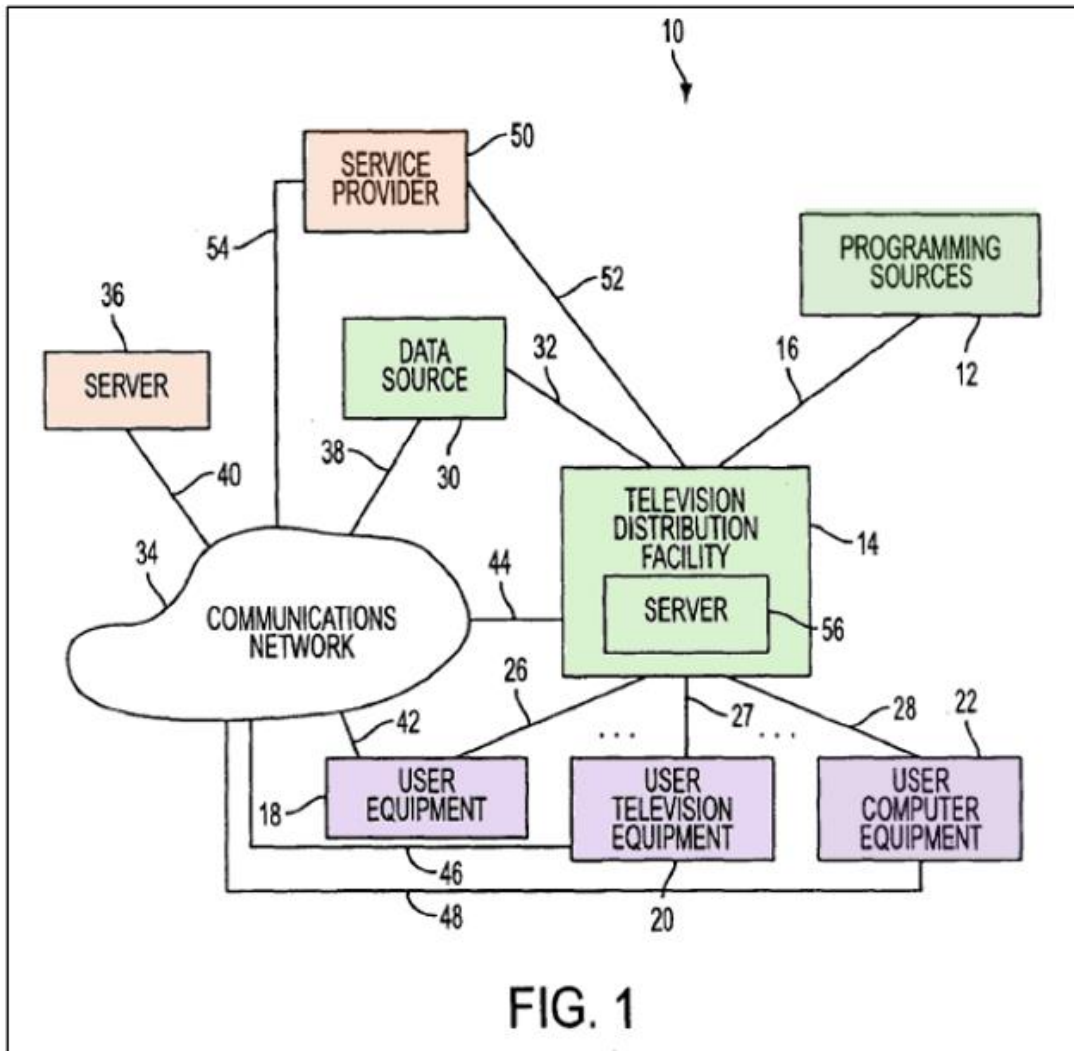
1. [1.pre]

Walker discloses and renders obvious this preamble.¹ EX1002, ¶¶63-67.

Walker discloses *a receiving apparatus* (including, user equipment 18, user television equipment 20, and user computer equipment 22 (colored purple below), and remote control 72 (shown in Fig. 4)) that is *configured to receive digital moving image contents* (digital video, *e.g.*, digital television programming) *from outside providers* (programming sources 12, distribution facility 14 plus data source 30, (colored green below) and server 36 (or alternatively interactive service provider 50) (colored orange below)) *of the digital moving image contents*.

EX1005, Figs. 1-6, ¶¶45-49 and ¶¶55-58 (programming source 12 to facility 14 provides television programming to user equipment 18, 20, and 22), ¶63 (“digital television”), ¶77 (remote control 72), ¶83 (monitor 102), ¶154 (facility 14 provides television programming), ¶159 (server 36 provides streaming content and server 50 provides interactive television such as video on demand content); §III(D)(1)-(2) (constructions of “*provider*” and “*digital moving image content*”).

¹ “Form” appears to be a typographical error of “from.” EX1002, n.1.



EX1005, Fig. 1.

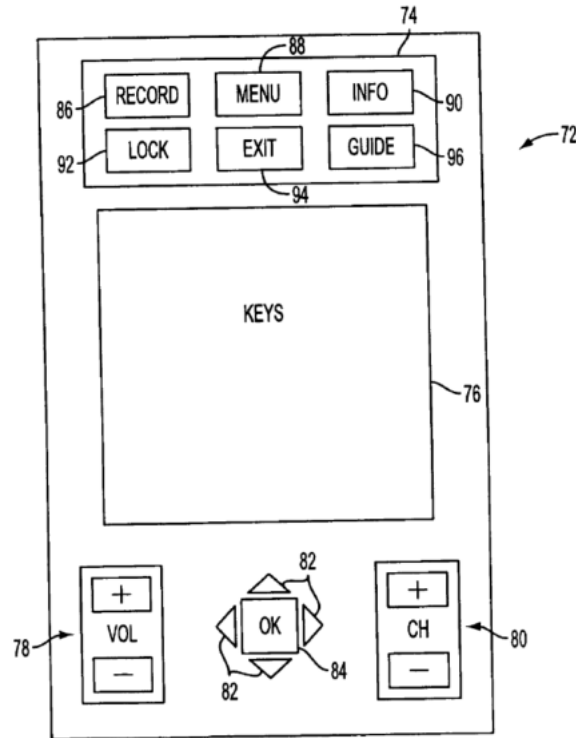
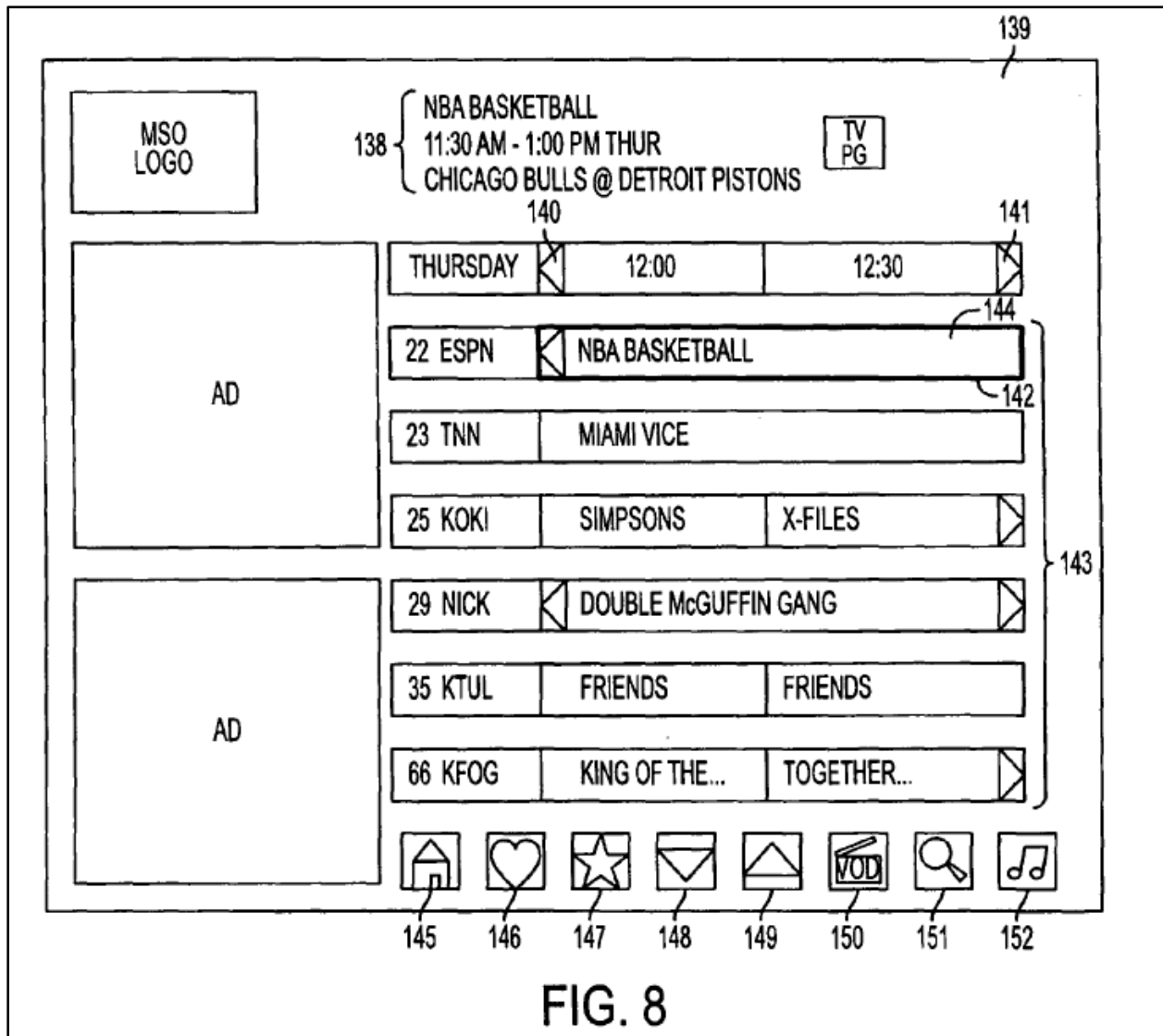


FIG. 4

EX1005, Fig. 4. EX1002, ¶64.

Walker also discloses that *the outside providers include a first provider* (programming source 12, television distribution facility 14, and data source 30, colored green above) *providing a digital moving image content* (digital video, e.g., digital television programming). EX1005, Figs. 1, 27, ¶154 (broadcast), ¶156 (same), ¶161 (television distribution facility broadcasts content by default), ¶185. *The first provider provides the content in accordance with a program schedule table* (program guide) *predetermined by the provider*. EX1005, Figs. 1, 8, ¶50 (“television program guide”), ¶¶51-56, ¶¶97-98 (program guide of Fig. 8), ¶161 (“scheduled programming content”). The program guide is a *program schedule*

table, as shown below in Figure 8. EX1005, ¶¶50, ¶¶97. The programming is *in accordance with* the program guide because the “[p]rogramming content [is] in accordance with a schedule, such that each program begins and ends at specified times,” and the program guide includes the schedule. EX1005, ¶¶154, ¶¶98 (“scheduled broadcast times”), Fig. 8 (showing begin and end times), ¶¶161 (“watch the original broadcast programs in accordance with the pre-determined schedule.”). For example, a user utilizes the program guide to select a television program at the current time. EX1005, ¶¶97-98. The program guide is *predetermined by the [first] provider* because the program guide information comes from data source 30, which is part of *the first provider*. EX1005, Fig. 1, ¶¶50-56.



EX1005, Fig 8. EX1002, ¶65

To the extent Patent Owner argues that 12, 14, and 30 are not a “provider,” there is no disclaimer or definition in the specification requiring a provider to be an integrated hardware/software module. Moreover, it would have been obvious to a POSITA that an option for implementing Walker’s disclosure would be to integrate 12, 14, and 30 in a single module, rather than distributed and inter-networked modules, and so that connections 16, 32, and one of the connections to the

communications network (38 and 44) could be eliminated as redundant. EX1002, ¶66.

Walker also discloses *a second provider* (remote server 36, service provider 50 colored orange in Fig. 1 above) *providing the digital moving image content independently [from] the program schedule table*. EX1005, Fig. 1, ¶58 (VOD and recorded video stored at server 36 or at service provider 50 provided to the user equipment when requested), ¶¶155-157 (stream from “remote server”), ¶¶158-159 (remote server 36 provides the same content via stream), ¶184 (stream from “remote server”). Walker discloses that when a user pauses, then resumes, broadcast programming, the system switches to providing the content via streaming. EX1005, ¶¶10-11, ¶14, ¶¶155-156 (user requests “playback control function” like pause and the receiver switches to streaming), ¶160, ¶164 (user selects pause), ¶165 (user provided with streaming version), ¶166 (user selects resume, which switches to streaming), ¶169 (request to fast-forward also switches to streaming), ¶171, ¶174, ¶186, Figs. 24-25, 27. Walker discloses the streamed version is provided by *second provider* remote server 36. EX1005, Fig. 1, ¶157, ¶159, ¶170, ¶174, ¶184 (“remote server”). The stream may be provided *independently [from] the program schedule table* because, for example, after the user selects “pause,” “[a]lthough the program has been paused ... the distribution facility continues broadcasting the program to all of the other receiving users.”

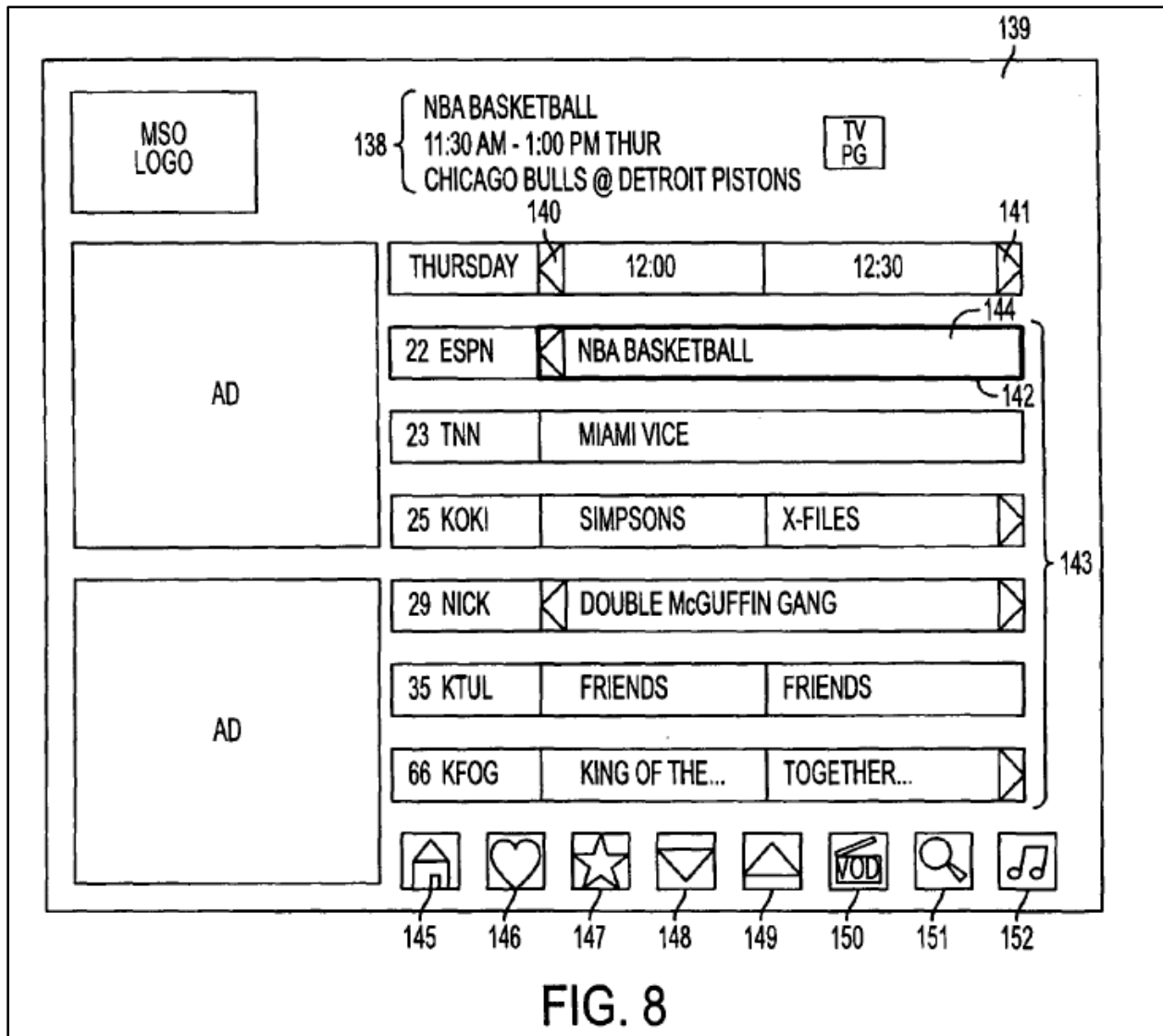
EX1005, ¶¶164-165. “In response to the user selecting to resume viewing the program,” the user equipment switches “to receiving and displaying the streaming program,” and the stream begins “at the same point ... at which the viewer paused the program.” EX1005, ¶166. Thus, the user receives the next part of the programming via the stream *later* than it was broadcast, and the stream therefore is independent of the program guide. Indeed, “individualized streams” are provided to each user to “not affect the broadcast of the original program,” further confirming the streams’ independence from the program guide. EX1005, ¶166, ¶158 (“separate and individualized streams” to users, who view “different portions of the same program”). The users also “receive and display portions of the streaming version of the program *in advance of* the broadcast version,” which also would be independent of the program guide’s schedule. EX1005, ¶169; ¶159 (remote server 36 “re-broadcast” content “later” via “interactive media streams”). EX1002, ¶67.

2. [1.a]

Walker discloses and renders obvious this limitation. EX1002, ¶¶68-70.

Walker discloses *a remote controller* (remote control 72).² EX1005, Fig. 4, ¶¶77, ¶¶82-83. Remote control 72 *manually selects one of the digital moving image contents* (digital video, *e.g.*, television programming) *provided from the first provider* (television distribution facility 14 and data source 30). For example, the user selects a television program using remote control 72 to tune the user equipment 20 to a selected channel using a program guide shown below. EX1005, Figs. 8-10, ¶¶77, ¶83, ¶¶97-98, ¶100, ¶107, ¶109. The user also changes the channel by using the channel up and down keys on the remote control 72. EX1005, ¶77, ¶102.

² User input interface 118 also discloses the recited “remote control” for the same reasons as remote control 72. EX1005, Fig. 6, ¶83, ¶93 (“user input interface 118 may be any suitable interface, such as a...remote control”), ¶95, ¶97, ¶100, ¶102, ¶107, ¶125.



EX1005, Fig 8. EX1002, ¶69.

Walker also discloses *the selected digital moving image content being an integral program* (e.g., television program) *continuing from an opening part to an ending part by way of a midstream part*. Figure 8 discloses, for example, half-hour and one-hour television programs “Friends,” “[The] Simpsons,” and “Miami Vice,” each of which a POSITA would have understood is an *integral program* because it has an opening part, a middle part (midstream part), and an ending part.

EX1005, Fig. 8, ¶¶97-98, ¶100, ¶154 (each program “begins and ends”); §III(D)(3) (construction of “*integral program*”). EX1002, ¶70.

3. [1.b]

Walker discloses and renders obvious this limitation. EX1002, ¶¶71-75.

Walker discloses a *remote controller* (remote control 72) to select *digital moving image content* (digital video, e.g., television programming) that is an *integral program* from *the first provider*. §IV(B)(2) (limitation 1.a). EX1002, ¶72.

Walker also discloses *a tuner* (tuning circuitry) that receives the *digital moving image content* from the *first provider*. For example, user equipment 20 includes set-top box 60, which includes “digital decoding circuitry for receiving digital television ... channels.” EX1005, ¶¶62-63 (“[m]ultiple tuners may be provided”). User computer equipment 22 includes personal computer unit 102 which includes one or multiple “television tuner cards” for receiving analog and digital TV channels as well as streaming content. EX1005, Fig. 5, ¶84. Walker’s user equipment includes “control circuitry 106” that includes “[t]uning circuitry such as ... one or more MPEG-2 decoders or other digital video circuitry, or any other suitable tuning or video circuits.” EX1005, Fig. 6, ¶90, ¶92. EX1002, ¶73.

A POSITA would have understood that the Walker user equipment necessarily (inherently) would include a tuner to tune to a selected disclosed television channel because the programming is provided as “broadcast television

signals.” EX1005, ¶154, Figs. 8-10, ¶98 (“tune to the channel for that program”), ¶99 (“tune to” a channel), ¶102 (“channel ... the user is currently tuned to”), ¶106 (same), ¶109 (“tune the user equipment to that channel”), ¶116 (“tune ... to the channel”), ¶84 (a “tuner card” would decode “digital television channels” received at personal computer unit 98, confirming that a tuner would do the same for the user equipment). EX1002, ¶74.

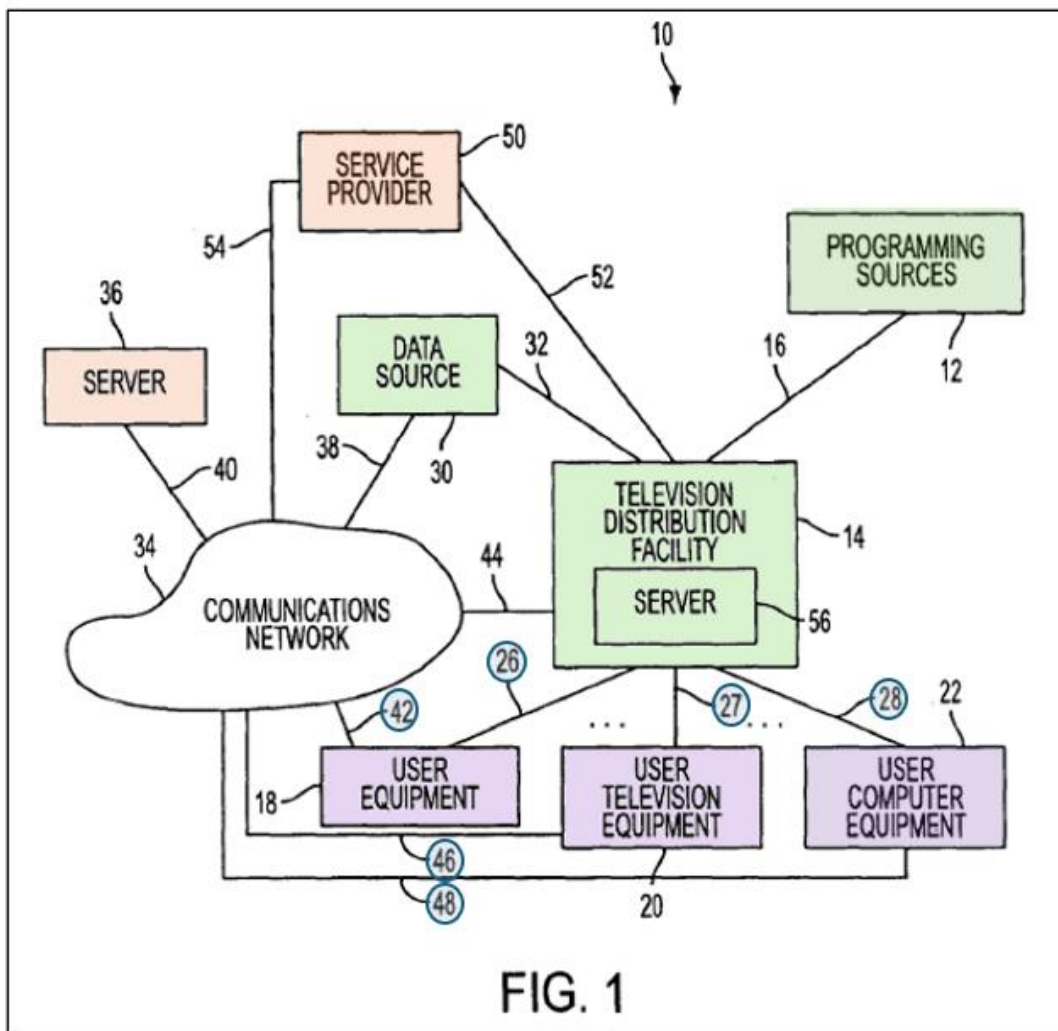
Walker further discloses that a user utilizes the remote control 72 (limitation 1.a) to select a channel without any restriction as to the time at which the user can do so. EX1005. Walker’s disclosure therefore includes doing so during *the midstream part of the integral program*. A POSITA also would have understood the same, and it would have been obvious to configure Walker’s system to configure the remote controller to allow the user to do so (e.g., to allow the user to “channel surf”). For example, it would have been obvious for the user to select “Miami Vice” (on channel 23) halfway through the episode. EX1005, Fig. 8, ¶¶97-98. The *tuner* therefore would receive the selected *digital moving image content* at the *midstream part of the integral program*. EX1002, ¶75.

4. [1.c]

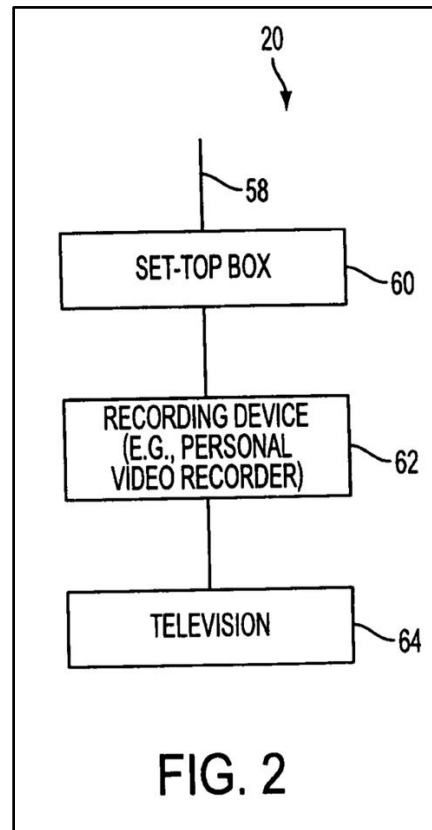
Walker discloses and renders this limitation obvious. EX1002, ¶¶76-84.

Walker discloses *an I/O interface* (user television equipment 18, 20, and 22 via each of input/output interface 58, 104, and 108 connected to communication

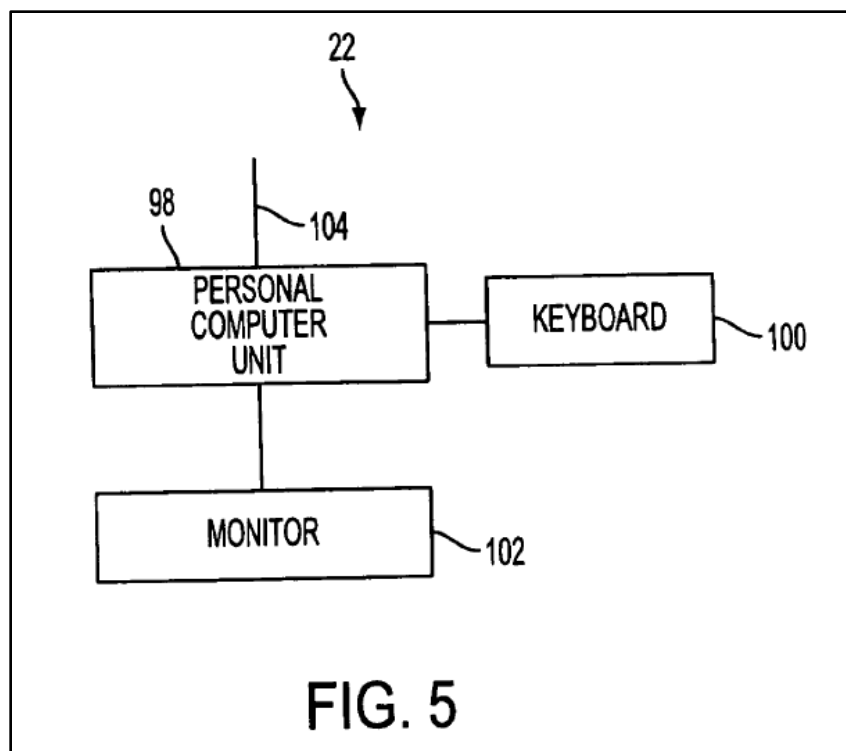
paths 26, 27, 28, 46, 48) that receives from the second provider (remote server 36, service provider 50) the digital moving image content. EX1005, ¶¶91 (user equipment includes “input/output 108” connected to communications paths 42 and 46, and “input/output 108” receive programming from “server 36”), ¶¶83-84, §IV(B)(1) (claim 1, preamble) (the *digital moving image content* is streamed from remote server 36 or service provider 50).



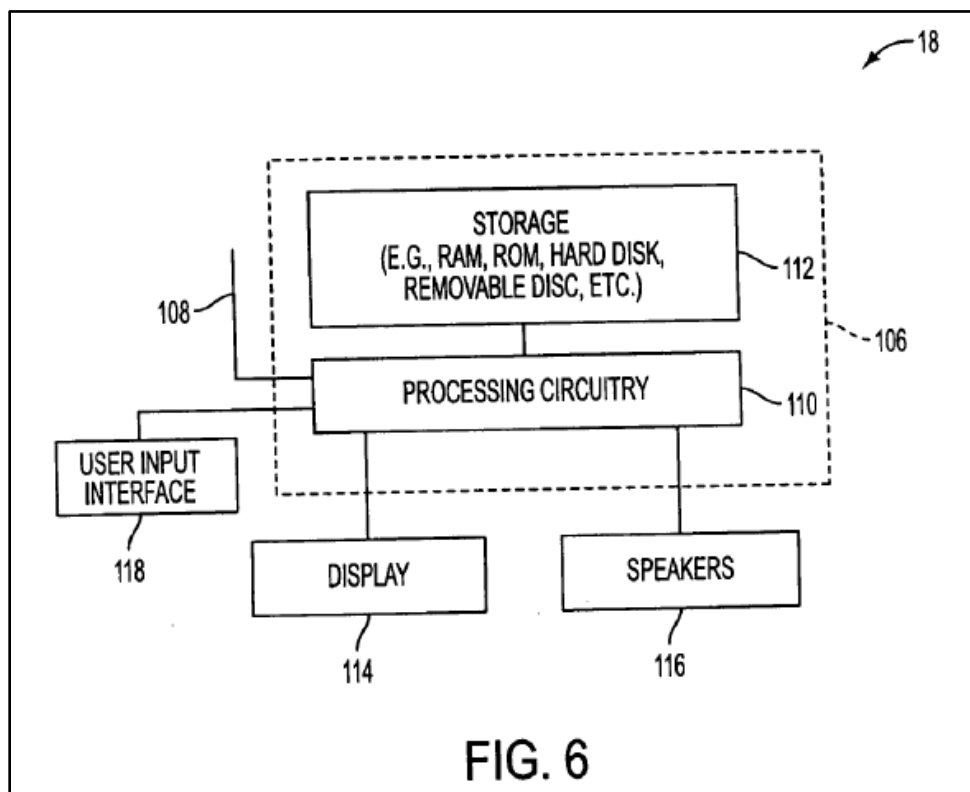
EX1005, Fig. 1 (paths 42, 46, and 48 connecting user equipment 18, 20, and 22 to server 36 and service provider 50 via network 34 and paths 40 and 54).



EX1005, Fig. 2 (showing 58), ¶55, ¶62 (user equipment includes “[i]nput/output 58” connected to communications paths such as path 46, and “programming and other information may be received using input/output 58”).



EX1005, Fig. 5 (showing 104).



EX1005, Fig. 6 (showing 108); EX1002, ¶77.

Walker also discloses that the *digital moving image content* received from server 36 (i.e., streamed) includes the *entire data of the digital moving image content from the opening part to the ending part of the integral program same as the integral program received from the first provider* (programming sources 12, television distribution facility 14, and data source 30). EX1005, ¶174 (“the entire streaming version of the program is transmitted to the user equipment”). A POSITA also would have understood from Walker’s disclosure that the transition from broadcast programming to streaming is “seamless” and “transparent” and that the *digital moving image content* is the same. EX1005, ¶10 (“seamless”), ¶14 (“seamless transition”), ¶75 (“seamlessly pause and resume television”), ¶156 (“switch ... may not be noticed”), ¶166 (“substantially transparent”), ¶169 (same), ¶175 (“without any discrepancy”). A POSITA also would have understood from Walker’s disclosures that the streamed version is provided to allow the user to pause, fast-forward, and resume the content provided via broadcast, and that the content of the streamed version broadcast version is the same because otherwise that functionality would not be possible. EX1005, ¶155 (“The user may control the playback of a given program while they are viewing it by interacting with an interactive streaming media version of the program rather than the original broadcast source.”), ¶156 (In response to requests for playback control “the

interactive television application may switch to displaying an interactive streaming version of the program from displaying the broadcast version.”); §IV(B)(1) (claim 1, preamble) (switching from broadcast to streaming). EX1002, ¶78.

Walker further discloses *the I/O interface* (each of input/output 58, 104, and 108) *locating the integral program*. Specifically, in switching to streaming media, “the user equipment may transmit information” to the remote server, such as “the channel currently being viewed.” EX1005, ¶174. Such information would be sent via *the I/O interface* (each of input/output 58, 104, and 108) because that interface connects the user equipment to the remote server, as described above for this limitation. EX1005, Figs. 2-6. The remote server uses such information to “determine the broadcast program” to stream. EX1005, ¶174. Thus, in transmitting such channel information to the server, *the I/O interface* uses the information to *locate* (identify) to the remote server the *integral program* to be streamed. §III(D)(4) (construction of this limitation). EX1002, ¶79.

Walker also discloses (and a POSITA would understand) that such *locating* is *in accordance with information from the tuner at the time of selection by the remote controller*. Such *locating* using the current channel being viewed is *in accordance with* (e.g., conforms with) *information from the tuner* (tuning circuitry). §III(D)(5) (construction of “*in accordance with*”). Namely, it is *in accordance with* (e.g., conforms with) *information* (the current channel being

watched and the content of that channel) that is *from the tuner* because the tuning circuitry defines what channel is being viewed and extracts the signal corresponding to that channel from the incoming television signal. That *information* also is *from the tuner at the time of selection by the remote controller* because the tuner will have tuned to the selected channel as soon as the user selected it. §IV(B)(2) (limitation 1.a) (selecting channel with remote control). For example, if the channel currently being viewed is channel 2, as Walker discloses in Figures 9-10, the tuning circuitry will have been tuned to channel 2 as soon as the user selected that channel using the remote control 72. EX1002, ¶80.

Additionally, it also would have been obvious to a POSITA that Walker discloses *locating... [the] entire data of the digital moving image content... at the time of selection by the remote controller*. Walker discloses that the streaming version of the program is “buffered and/or stored on the user equipment to improve quality and continuity of the displayed content” (EX1005, ¶157) and that “the entire streaming version of the program is transmitted to the user equipment” (EX1005, ¶174). A POSITA would have understood this to disclose and render obvious that “the entire streaming version” is located when the user selects it on the remote control. A POSITA would have understood that the entire streaming program would be requested (*i.e.*, located/identified) at the time of selection on the remote in order to allow for the immediate use of playback control functions and

ensure that the program is continuously displayed in the event of broadcast disruptions prior to the use of playback controls. EX1005, ¶157. EX1002, ¶81.

It also would have been obvious to a POSITA to have *the I/O interface locating the integral program in accordance with information from the tuner at the time of selection by the remote controller*. Walker already discloses *the I/O interface locating the integral program* using information about the “channel currently being viewed,” as described above. It would have been obvious to a POSITA to, for example, have the user equipment obtain that information from the tuning circuitry at the time of the disclosed user selection of that channel with the remote control 72. §IV(B)(2) (limitation 1.a) (selecting channel with the remote control). Doing so would have been within the skill and knowledge of a POSITA, would have led to predictable results, would have created a reasonable expectation of success, and would have been compatible with Walker. Motivation to do so arises from a POSITA’s understanding that the tuning circuitry defines what channel the user is watching, and therefore the tuning circuitry is a natural and logical source of such information. Motivation to do so also arises from a desire to update that information when it changes, and therefore updating it (i.e., obtaining it from the tuner) upon the user selecting a new channel. Further motivation arises from a desire to implement Walker’s disclosed functionality described above, such

as sending information on the channel being watched to the remote server, in a straightforward and logical manner. EX1002, ¶82.

Alternatively, based on Giken's infringement chart (EX1006), Walker discloses VOD and video recordings that satisfy this limitation. A POSITA would have understood *digital moving image content* (VOD and video recordings) received from server 36 or service provider 50 includes the *entire data of the digital moving image content from the opening part to the ending part of the integral program same as the integral program received from the first provider*. EX1005, Figs. 14-15, ¶¶50-59, ¶120, ¶130, ¶140. Walker also discloses that VOD content and video recorded using a network-based video recorder are stored at service provider 50. EX1005, ¶58. A user selects the VOD or recorded video for playback, utilize playback controls, and even download a full network recorded program to the set top box for later viewing. EX1005, Figs. 14-15, 20-21, ¶¶120-123, ¶¶125-126, ¶¶140-143. A POSITA would have understood Walker discloses *the I/O interface* (user television equipment 18, 20, and 22 via each of input/output interface 58, 104, and 108 connected to communication paths 26, 27, 28, 42, 46, 48) *locating the integral program in accordance with information from the tuner at the time of selection by the remote controller*. As described above, a POSITA would have known that the tuner would receive information at the time of selection including the title of the program and other identifying information, that would

allow the I/O interface to locate the VOD or video recording utilizing the title or other information. EX1005, ¶¶120-123, ¶¶125-126, ¶¶140-143. EX1002, ¶¶83-84.

5. [1.d]

Walker discloses this limitation. Walker discloses a television display (e.g., display 114 of televisions 64/68, displays 154/294/300, and monitor 102) *that shows the digital moving image contents from the first provider and the second provider*. EX1005, Fig. 2 (64), Fig. 3 (68), Fig. 4 (102), Fig. 6 (114), ¶¶62, ¶70, ¶79 (“user’s display screen ... on television 64 or 68”), ¶¶83, ¶90, ¶92 (display 114 “display[s] visual images”), Fig. 9, ¶102 (“display screen 154” of Fig. 9 showing selected program), Fig. 24, ¶164 (screen 294 showing paused video), Fig. 25, ¶173 (“display screen 300” showing streamed video). EX1002, ¶85.

6. [1.e]

Walker discloses and renders obvious this limitation. EX1002, ¶¶86-90.

Walker discloses that the streamed program data is *received by the I/O interface* (each of input/output 58, 104, and 108) of the user equipment. §IV(B)(4) (limitation 1.c). EX1002, ¶87.

Walker also discloses that the streamed data received at the user equipment is “stored on the user equipment.” EX1005, ¶157 (“storing the streamed program”). Walker discloses that the streamed data includes *the entire data of the digital moving image content*. §IV(B)(4) (limitation 1.c); EX1005, ¶174 (“the

entire streaming version of the program is transmitted to the user equipment”).

Walker also discloses that the user equipment includes *memory* (e.g., storage 112) for such storage—“storage 112” includes “[m]emory (e.g., random-access memory and read-only memory), hard drives, ... or any other suitable memory.” EX1005, Fig. 6, ¶92. Storage 112 is part of control circuitry 106, which is part of “illustrative user equipment,” such as user equipment 18 and 20. EX1005, ¶90, ¶92, Fig. 6, Fig. 1. Computer equipment 22 includes personal computer unit 98. EX1005, Fig. 5, ¶¶83-86. Storage in personal computer unit 98 includes memory, a hard drive, DVD drive, CD drive, or other suitable storage device or devices may be used to store video and other content. EX1005, Fig. 5, ¶¶83-86. EX1002, ¶88.

Walker discloses that storage 112 is part of a TV set computer. User equipment 18, 20, and 22 each are a *TV set computer* because each has processing circuitry associated with a TV, for example, personal computer unit 98, “storage 112,” “processing circuitry 110,” “control circuitry 106,” “input/output 108,” and a “user input interface 118” for receiving and displaying television programming. EX1005, Figs. 1, 6, ¶¶90-93; §III(D)(6) (construction of “*TV set computer*”). User equipment 20 also includes “[s]et-top box 60,” which is also a *TV set computer* as it includes “tuners,” “a storage device,” “a processor,” “memory,” “communications circuitry,” and so on. EX1005, Fig. 2, ¶¶62-66. It would have been obvious to a POSITA to use the “storage” (e.g., “[h]ard disk storage”) in set-

top 60 to store the streamed data referenced above. Motivation to do so arises from Walker's disclosure of storing the entire streamed program, described above.

EX1002, ¶89.

To the extent that "TV set computer" is construed as an integrated television, it would have been obvious and well known in the art to a POSITA to include Walker's set top box 60 in a TV set form factor in order to, for example, reduce manufacturing costs and/or save space. EX1005, ¶66; EX1004, ¶17 ("Components of STB 22 may also be incorporated into TV 24 itself, thus eliminating STB 22"). EX1002, ¶90.

C. Claim 2

Walker discloses and renders obvious this claim. §IV(B) (claim 1). EX1002, ¶¶91-96.

Walker discloses *a TV set processor* (each of control circuitry 106, processing circuitry 110, processor of personal computer 98, and the processor of set-top box 60) *that has the television display show a past part of the integral program which has been already provided by the first provider and retrieved from the memory in the TV set computer* (each of user equipment 18, 20, 22, and set-top box 60). Computer equipment 22 includes personal computer unit 98, which includes microprocessors to run the interactive TV application and enable playback of stored programming. EX1005, ¶¶83-86. User equipment 18 and 20 includes

control circuitry 106, processing circuitry 110, and one or more microprocessors.

EX1005, ¶90, ¶92, Fig. 1, Fig. 6. Control circuitry 106 includes turning circuitry, MPEG-2 decoders, digital video circuitry, etc. EX1005, ¶92. User equipment 20 includes “[s]et-top box 60,” which includes “a processor ... to execute software applications,” which a POSITA will understand includes the “interactive television application” that “display[s]” broadcast and streaming content. EX1005, Fig. 2, ¶¶63-64, ¶69 (video signals from set-top box 60 provided to television 64), ¶156. Each of circuitry 106 and 110 and the set-top box processor, are a *TV set* processor because they are located in or associated with user television equipment 20 and/or television 64, as described above. EX1005, Figs 1-2. EX1002, ¶93.

Walker also discloses that streamed and VOD program data stored in its entirety in *the memory in the TV set computer*. §IV(B)(6) (limitation 1.e). Walker further discloses that the user resumes playing a program after pausing it, which plays the streamed version (that may be stored in memory). EX1005, ¶166 (to resume viewing, the user presses “RESUME PROGRAM” or “PLAY PROGRAM,” which switches to the streamed version), ¶185, Fig. 24. Upon doing so, the content being played will be *a past part of the integral program which has been already provided by the first provider* because the broadcast programming will have continued during the pause event. EX1005, ¶165 (“Although the program has been paused by the user on his user equipment, the distribution facility

continues broadcasting the program to all of the other receiving users”). In other words, playback of the stored streamed content is “behind” the broadcast version because of the pause event. EX1005, ¶165 (if the user rejoins the broadcast, “the user will miss portions of the program”). EX1002, ¶94.

Walker discloses that the user pauses and resumes the VOD and streamed version. EX1005 ¶126, ¶167, ¶186, Figs. 25, 27. Doing so again plays *a past part of the integral program which has been already provided by the first provider* for the same reasons. Walker similarly discloses rewinding and restarting the VOD and streamed version, which results in playing the *past part* for the same reasons. EX1005, ¶11, ¶126, ¶156, ¶162, ¶186, Fig. 25. EX1002, ¶95.

Each of the *TV set processors* described above would have *the television display*, described for limitation 1.d, show the streaming content for the reasons described above. For example, the processors execute the “interactive television application” and include digital video circuitry, as described above. Each *TV set processor* would have *the television display* show the *past part of the integral program* for the same reasons. §IV(B)(5) (limitation 1.d) (the television display shows the broadcast and streaming content). EX1002, ¶96.

D. Claim 3

Walker discloses and renders obvious this claim. §§IV(B)-(C) (claims 1-2). Walker discloses *wherein the past part is the opening part of the integral program*.

A POSITA would have understood (and it would have been obvious) that Walker's disclosure of playing the VOD and streamed version after pausing and rewinding includes pausing and resuming during *the opening part of the integral program*, and rewinding to *the opening part of the integral program*. §IV(C) (claim 2).

Walker's disclosure of the "restart" playback control for the streamed version also results in playing *the opening part of the integral program*. EX1005, ¶11 ("restart program"), ¶126, ¶156, ¶162, Fig. 25 (restart button). EX1002, ¶¶97-99.

E. Claim 4

Walker discloses and renders obvious this claim. §IV(B) (claim 1). EX1002, ¶¶100-103.

Walker discloses that a user uses playback controls such as rewind, fast-forward, and restart to navigate to a desired part of the VOD and streamed version (*the same integral program received by the I/O interface*). §IV(C) (claim 2) (describing rewind and restart); EX1005, ¶11, ¶126, ¶162, ¶186, Fig. 25 (fast-forward button), Fig. 27. Such playback is "enacted by the user on a user input device [or] an on-screen menu." EX1005, ¶162, Fig. 25, ¶173. The "user input device" is a "remote control" and is "used to navigate on-screen menus." EX1005, ¶77, ¶166; §IV(B)(3) (limitation 1.b). EX1002, ¶102.

Walker also discloses *a control signal receiver* (IR circuitry or other receiver of control signals from remote control 72).³ User equipment 20 includes set-top box 60, which includes “infrared (IR) ... circuitry for communicating with a remote control.” EX1005, ¶62, ¶65, Fig. 2. A POSITA also will understand that user equipment 18, 20, and 22 necessarily (inherently) includes a receiver to accept control signals from remote control 72 regarding the playback functions above because, otherwise, the disclosed functionality above would not work. Walker therefore discloses (and a POSITA would understand it to be necessarily so) that the *control signal receiver designates the desired part* of the VOD and streamed version by propagating and giving effect to the user’s playback controls such as rewind, fast-forward, and restart to identify the *desired part* of the streamed version. EX1002, ¶103.

F. Claim 5

Walker discloses and renders obvious this claim. §IV(B) (claim 1). EX1002, ¶¶104-108.

As described for limitation 1.e, Walker’s user equipment 18/20/22, and set-top box 60, each are a *TV set computer*, each of which has *memory*. §IV(B)(6)

³ These *control signal receivers* combined with the *TV set processors* of claim 2 also are *control signal receivers* for the same reasons.

(limitation 1.e). As described for limitation 1.c, Walker's user equipment 18, 20, and 22 (which includes set-top box 60) *locates the integral program same as the integral program received from the first provider* by transmitting to the remote servers the current channel. §IV(B)(4) (limitation 1.c). A POSITA would have understood that, for the user equipment to do so, it necessarily (inherently) must store that *information* (the current channel) received from the tuner in its *memory* at least temporarily. For example, it must at least store it in the "random-access memory," of set-top box 60 and user equipment 20. EX1005, Fig. 2, ¶¶64, ¶¶83-86, Fig. 6, ¶¶90, ¶¶92, ¶¶123-126. Otherwise, it would not be able to transmit the information as Walker discloses. §IV(B)(4) (limitation 1.c). EX1002, ¶¶106-107.

Walker also discloses that a user plays *the integral program same as the integral program received from the first provider* (the streamed version) stored in the *memory* of the *TV set computer*, such as after pausing, rewinding, or fast-forwarding. §§IV(C), (E) (claims 2 and 4). A POSITA would have understood that, for the user equipment to do so, it necessarily (inherently) must store *information* (e.g., a pointer to the beginning of the stream) *necessary* for it to *locate* that streamed version; otherwise, it would not be able to distinguish the streamed version from other data stored in the memory. It also would have been obvious for a POSITA to do so as necessary to implement Walker's disclosed functionality. EX1002, ¶108.

G. Claim 6

Walker discloses and renders obvious this claim. EX1002, ¶¶109-115.

1. [6.pre]

Walker discloses and renders obvious this preamble. This preamble is identical to the preamble of claim 1 except for its recitation of an “*outside provider system*” rather than “*outside providers including a first provider ... and a second provider.*” The *first provider* and *second provider* identified in Walker for the preamble of claim 1 collectively satisfy the *outside provider system* of this preamble for the reasons set forth for the preamble of claim 1. §IV(B)(1) (limitation 1.pre). EX1002, ¶110.

2. [6.a]

Walker discloses and renders obvious this limitation. §IV(B)(1)-(2) (preamble, 1.a). EX1002, ¶111.

3. [6.b]

Walker discloses and renders obvious this limitation. §IV(B)(3) (limitation 1.b). EX1002, ¶112.

4. [6.c]

Walker discloses and renders this limitation obvious. §IV(B)(1), (4) (preamble, 1.c). EX1002, ¶113.

5. [6.d]

Walker discloses and renders obvious this limitation. §IV(B)(1), (5) (preamble, 1.d). EX1002, ¶114.

6. [6.e]

Walker discloses and renders obvious this limitation. §IV(B)(6) (limitation 1.e). EX1002, ¶115.

H. Claim 7

Walker discloses and renders obvious this claim. §IV(G) (claim 6); §IV(C) (claim 2); §IV(B)(1) (claim 1, preamble) (Walker discloses *provided in accordance with a program schedule table*). EX1002, ¶116.

I. Claim 8

Walker discloses and renders obvious this claim. §IV(H) (claim 7); §IV(D) (claim 3). EX1002, ¶117.

J. Claim 9

Walker discloses and renders obvious this claim. §IV(G) (claim 6); §IV(E) (claim 4). EX1002, ¶118.

K. Claim 10

Walker discloses and renders obvious this claim. §IV(G) (claim 6); §IV(F) (claim 5); §IV(B)(1) (claim 1, preamble) (Walker discloses *provided in accordance with a program schedule table*). EX1002, ¶119.

L. Claim 11⁴

Walker discloses and renders obvious this claim. §IV(B) (claim 1). EX1002, ¶¶120-124.

Walker discloses that *first provider* (television distribution facility 14 and data source 30) *includes selectable sub providers* that are selectable channels such as ESPN, TNN, “NICK,” FOX, and TNT.⁵ EX1005, Figs. 1, 8, 19a, ¶45, ¶63, ¶77, ¶98, ¶100, ¶159; §III(D)(8) (construction of “*sub provider*”). EX1002, ¶122.

Walker also discloses that *the remote controller* (remote control 72) *selects the one of the digital moving image contents by means of selecting the sub provider* by selecting a channel broadcast from television distribution facility 14. EX1005, Figs. 8-10, ¶98 (selecting a channel from the program guide of Fig. 8), ¶77 (“channel up and down keys”), ¶102; §IV(B)(2) (limitation 1.a) (remote control selecting a channel). EX1002, ¶123.

Walker further discloses that *the one of the digital moving image contents is provided by the selected sub provider* because the channel’s video content is

⁴ The “s” appears to be a typographical error and should be deleted. EX1003, 42. EX1002, n.7.

⁵ The providers of the different channels also are *sub providers* for the same reasons that the different channels are.

provided by the channel (and the channel's provider, such as CNN). EX1005, Figs. 9-10 (showing "video for channel 2"), ¶102 (describing Fig. 9), ¶106 (channel is being displayed), ¶45 (programming provided by programming sources 12), ¶159. EX1002, ¶124.

M. Claim 12

Walker discloses and renders obvious this claim. §IV(B) (claim 1). EX1002, ¶¶125-128.

Walker discloses that *the digital moving image contents* (digital video) of *the first provider* (television distribution facility 14 and data source 30) is provided by *streaming technology*. EX1005, ¶157 (the "television distribution facility" provides "streaming media content"). Also, server 56 is a part of television distribution facility 14 and provides streaming media. EX1005, Fig. 1, ¶61, ¶84 (computer equipment 22 tuner receiving "streaming video content"), ¶159 ("Television distribution facilities may use server 56 ... to deliver interactive media streams to users."). EX1002, ¶127.

Walker also discloses such streaming from *the first provider* that is *in accordance with the program schedule table* (program guide). §IV(B)(1) (claim 1, preamble) (the broadcast version is in accordance with the program guide). Walker discloses that the switch from broadcast programming to streaming is "at substantially the *same time point* between the respective programs such that the

switch to the streaming version may not be noticed by the user.” EX1005, ¶156. In that case, the broadcast version and the streaming version are synced (or substantially synced), and the streaming version therefore is also *in accordance with the program schedule table*. A POSITA also would have understood (and it would have been obvious) that the user may, for example, use playback controls to watch the streaming version at the time point that matches the broadcast version, in which case the streaming version again is provided *in accordance with the program schedule table*. EX1002, ¶128.

N. Claim 13

Walker discloses and renders obvious this limitation. §IV(B) (claim 1); §IV(E) (claim 4) (*the control signal receiver* is IR circuitry or other receiver of control signals from remote control 72).⁶ EX1002, ¶¶129-132.

Walker discloses that the *digital moving image contents* (digital video) include selectable advertisements. EX1005, ¶50 (“[d]ata source 30,” which is part of *the first provider*, “provide[s] advertisements”), ¶96 (“selectable advertisements 137”), ¶99 (“advertisements”), ¶113 (“selectable advertisements 181”), ¶119 (“selectable ... advertisements 206”), Figs. 12, 14. The advertisements are *an*

⁶ The *control signal receivers* combined with the *TV set processors* of claim 2 also are *control signal receivers* for the same reasons.

optional part of the digital moving image contents because they are not part of any integral program (e.g., episode of a television program or movie). EX1005, Figs. 7, 12, 14; §III(D)(9) (construction of “*designates an optional part*”). EX1002, ¶131.

Walker also discloses that the user selects such an advertisement using remote control 72. EX1005, ¶96 (“select the highlighted advertisement using OK key 84,” which is *a manual operation*); Figs. 4, 7. Walker discloses that *the control signal receiver* would receive the resulting signals from remote control 72 because Walker discloses that the “infrared (IR) ... circuitry [is] for communicating with [the] remote control.” EX1005, ¶65. A POSITA would understand (and it would have been obvious) that the *control signal receiver designates* the selected advertisement *in response to the manual operation* of the user pressing the “OK key 84” in order to achieve the disclosed “select[ion]” of the highlighted advertisement. EX1005, ¶96. The control signal receiver necessarily (inherently) does so because otherwise the disclosed “select[ion]” would not occur. EX1002, ¶132.

If Patent Owner argues the portions of Walker cited below relate to different, incompatible embodiments (which they do not), it would have been obvious to a POSITA to combine such embodiments into a single system for providing the ability to receive digital moving image contents from a provider at least because

such embodiments are described in the same prior art reference, are fully compatible with each other, and could be combined with minimal effort to achieve predictable results. EX1002, ¶133.

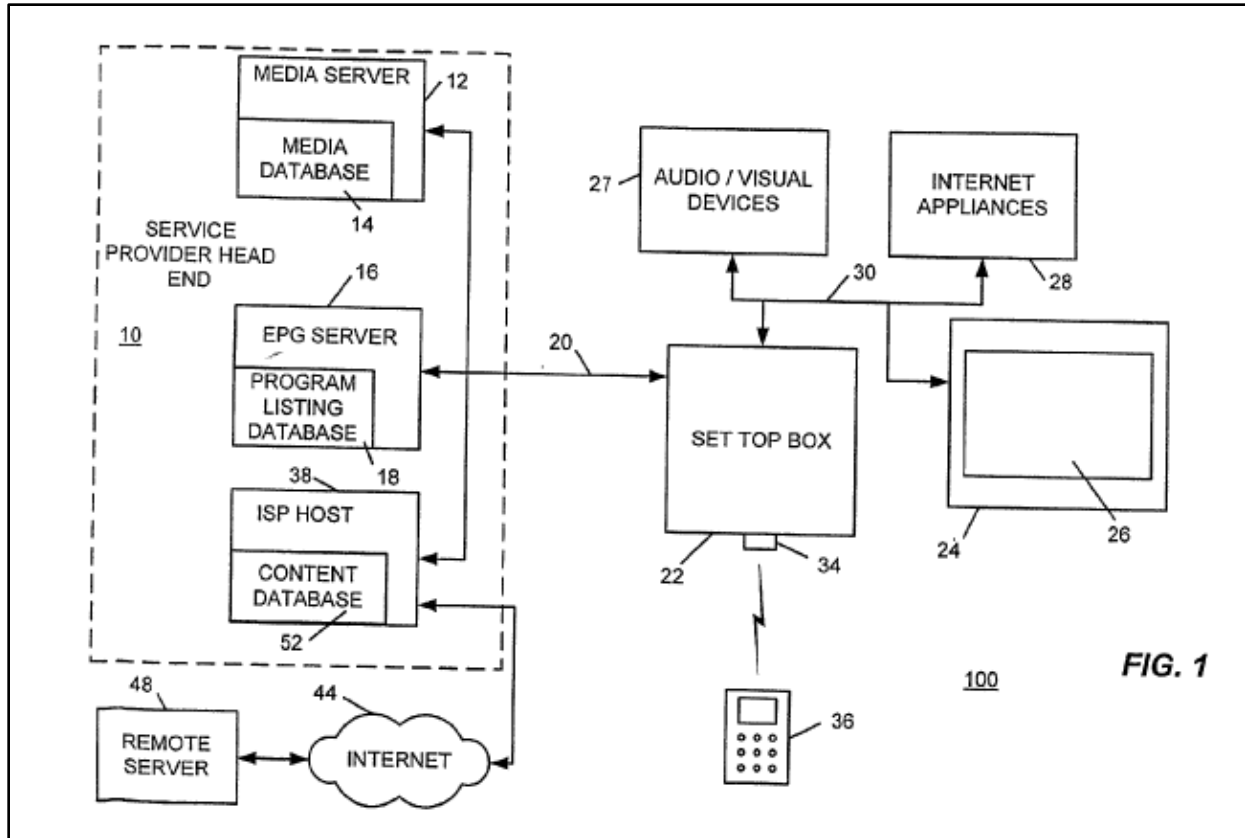
If the Board finds that Walker does not disclose any limitation of the challenged claims, such limitation would have nonetheless been obvious to a POSITA in light of Walker and a POSITA's knowledge. Practicing any limitation of the challenged claims in light of Walker would have been within the knowledge and skill of a POSITA, would have required minimal effort, would have yielded predictable results, would have been fully compatible with the Walker system, and would have been a mere design choice. Motivation to do so arises from at least common sense and the disclosures of Walker set forth above. EX1002, ¶134.

V. GROUND 2: CLAIMS 1-13 ARE OBVIOUS BASED ON CHANG

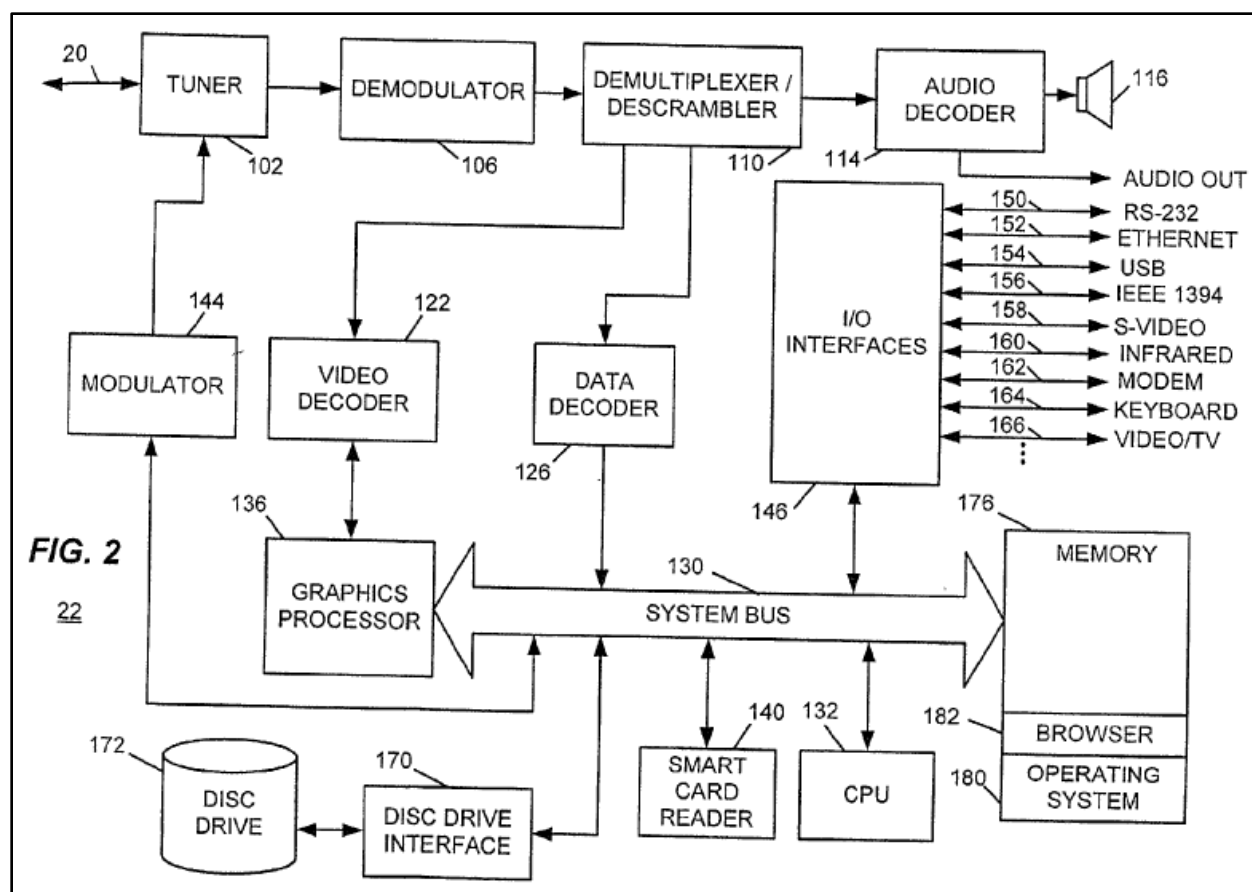
A. Chang

U.S. Patent Application Publication No. 2002/0194619 ("Chang") is a publication of U.S. Patent Application No. 09/882,996, filed June 14, 2001, and published Dec. 19, 2002. EX1004, cover page. Chang is prior art under 35 U.S.C. §§102(a), (b), and (e) (pre-AIA). EX1002, ¶135.

Chang discloses a television set top box that allows a user to designate video being viewed for local storage. EX1004, Abstract. Chang's Figure 1 shows a system overview:



EX1004, Fig. 1, ¶12. Chang's Figure 2 shows the internal structure of set-top box 22:



EX1004, Fig. 2, ¶13. Chang's Figures 3 and 4 show flow charts for designating and downloading a presented "program segment." EX1004, Figs. 3-4, ¶¶14-15. EX1002, ¶¶136-138.

Chang is analogous art to the '592 patent and was not cited during prosecution of the '592 patent. EX1001, 1-2. EX1002, ¶¶139-140.

B. Claim 1

Chang discloses and renders obvious claim 1. EX1002, ¶¶141-161.

1. [1.pre]

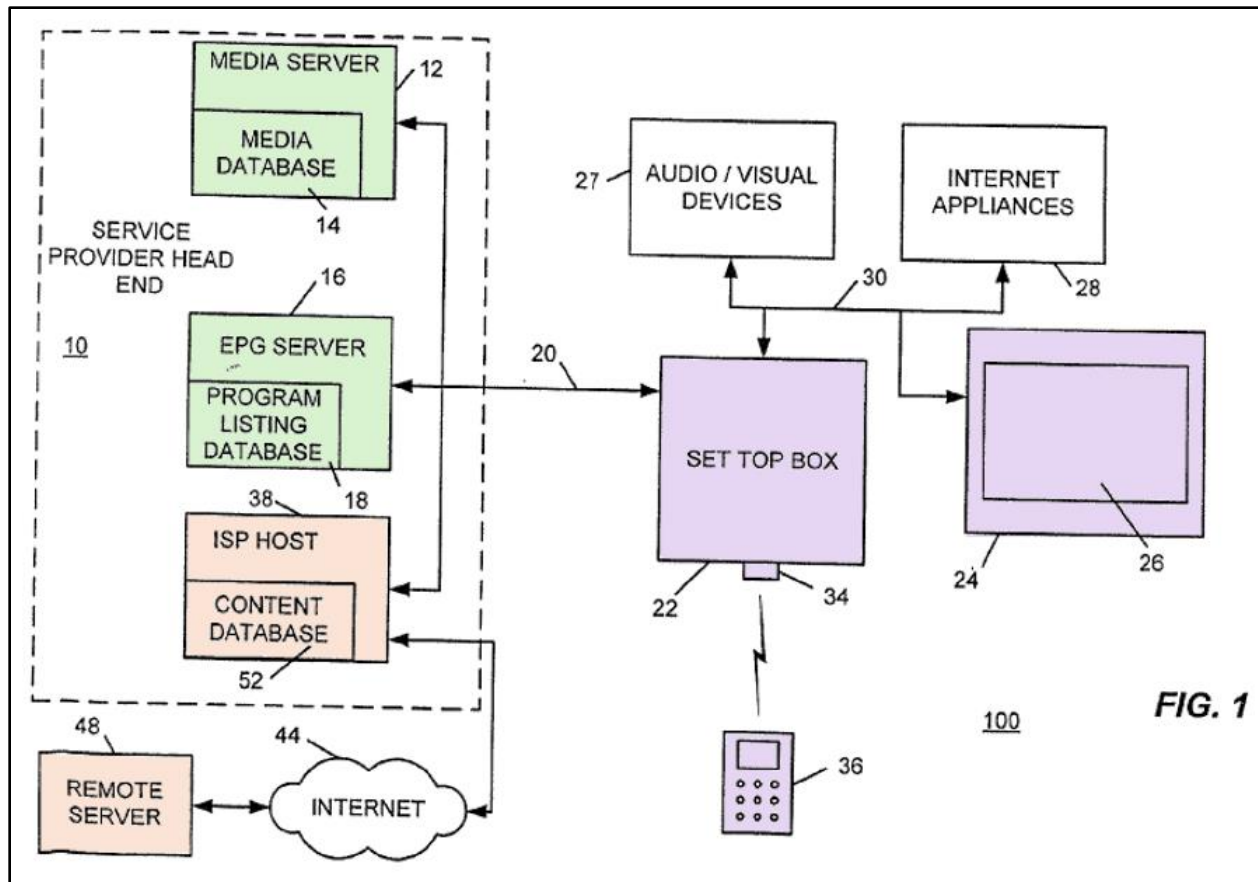
Chang discloses and renders obvious this preamble.⁷ EX1002, ¶¶142-146.

Chang discloses *a receiving apparatus* (collectively, STB 22, television 24, and remote controller 36, colored purple below) that is *configured to receive digital moving image contents* (digital video) *from outside providers* (media server 12 plus EPG server 16, and ISP host 38)⁸ *of the digital moving image contents*. EX1004, Fig. 1, ¶16 (“media server 12, which provides “movies, ... music videos, and other programming” to STB 22), ¶37 (“programming channel broadcast” in “digital broadcast format”), ¶52 (selected video from remote server 48 “streamed to STB 22” upon selection “via Internet 44”), ¶20 (“ISP host 38 provides” Internet access and “various content to STB 22, which may be obtained from a content database 42 [sic, 52]”);⁹ §III(D)(1)-(2) (constructions of “provider” and “digital moving image content”).

⁷ *Supra* n.1.

⁸ ISP host 38 combined with remote server 48 also is an “outside provider” for the same reasons that ISP host 38 is an “outside provider.” EX1002, n.11.

⁹ Chang’s reference to “content database 42” appears to be a typographical error. A POSITA would have understood and found it obvious for Chang to be referring to content database 52. EX1002, n.12.



EX1004, Fig. 1. EX1002, ¶143.

Chang also discloses that *the outside providers* include a *first provider* (collectively, media server 12 and EPG server 16, colored green above) *providing a digital moving image content* (digital video) *in accordance with a program schedule table* (EPG from EPG server 16) *predetermined by the provider*. Media server 12 provides “movies, ... music videos, and other programming” to STB 22.

EX1004, ¶16, Fig. 1. Media server 12 also provides a “programming channel broadcast” such as a “video music channel.” EX1004, ¶37 (the “presented program” is “stored at, e.g., media server 12”), ¶9 (“video music channel”). EPG

server 16 includes a *program schedule table*. EX1004, ¶16 (EPG server generates an EPG), ¶17 (TV 24 displays an EPG). A POSITA would have understood (and found it obvious) that Chang’s programming from media server 12 referenced above is *in accordance with* the EPG because STB 22 identifies a “program segment” by designating a “time” and “programming channel” to the EPG server 16, showing that the programming matches the EPG. EX1004, ¶41, ¶5 (programming is at “scheduled broadcast times”). A POSITA also would have understood (and found it obvious) that the EPG is a *program schedule table* because a program can be identified by time and programming channel, can be displayed on the TV, and can be formatted as an HTML document. EX1004, ¶16, ¶33, ¶41. A POSITA also would have understood (and found it obvious) that the EPG is *predetermined by the [first] provider* because the EPG is generated by the EPG server using data stored in its “program listing database 18,” and the EPG server is part of *the first provider*. EX1004, ¶16, ¶41. EX1002, ¶144.

Chang further discloses that the outside providers include *a second provider* (ISP host 38, shown above in orange)¹⁰ *providing the digital moving image content*

¹⁰ ISP host 38 plus remote server 48, colored orange above, also is *a second provider* because content is provided from remote server 48 utilizing ISP host 38. EX1004, ¶20. EX1002, n.13.

independently from the program schedule table. Chang discloses that a viewer of the programming referenced above has the option to designate a program segment “in its entirety” for the STB to receive that program segment. EX1004, Fig. 3, ¶9, ¶¶36-38, ¶40 (STB requests the user-designated program segment in its entirety), ¶41 (STB receives it in “a parallel transmission”), ¶42, Fig. 4, ¶¶48-52 (user designates program segment, and STB receives it). The selected program segment is “downloaded” and therefore is provided by *second provider* ISP host 38.

EX1004, Fig. 1, ¶20 (ISP host 38 provides Internet access and access to remote server 48), ¶42 (“downloaded”), ¶45 (“downloaded”), ¶52 (provided from “remote server 48 via Internet 44” and “streamed to STB 22 upon selection.”). A POSITA would have understood (and it would have been obvious) that the designated program segment is *provided independently from the program schedule table* (EPG) because it is provided in response to a user designation rather than the occurrence of a time in the EPG, as described above, and is provided over a “parallel” and “different transmission channel” than the “programming channel broadcast.” EX1004, ¶¶41-42, ¶37 ¶9 (“select a viewed video for storage, in its entirety, even after it has begun”). EX1002, ¶145.

It also would have been obvious to a POSITA to have ISP host 38 provide the designated program segment from its “content database 52.” A POSITA could have done so by, for example, storing the program segments in content database 52

just as Chang discloses that “content database 52” stores “video clips.” EX1004,

¶50. Motivation to do so arises from that Chang disclosure, and from a desire to implement Chang’s disclosure of providing designated program segments to the user “via Internet 44” (and ISP host 38) in a logical manner. EX1004, ¶20 (ISP host 38 can obtain content from “content database [52]”), ¶50, ¶33, ¶52. More motivation arises from a desire to cache content closer to the ISP host than the remote server 48, at least for performance reasons. EX1002, ¶146.

2. [1.a]

Chang discloses and renders obvious this limitation. EX1002, ¶¶147-149.

Chang discloses *a remote controller* (remote control 36). EX1004, Fig. 1, ¶19 (“input device 36, such as a remote control”), ¶30 (“input device 36, which may be an IR remote control,”). Device 36 *manually selects one of the digital moving image contents* (digital video of a channel) *provided from the first provider* (media server 12 plus EPG server 16). EX1004, ¶19 (input device 36 “for controlling STB 22”), ¶30 (“commands” from input device 36 to “control the operation of STB 22”); §V(B)(1) (claim 1, preamble) (*digital moving image contents*). A POSITA would have understood (and it would have been obvious) that the remote control 36 selects “a programming channel broadcast ... stored ... at media server 12” because there are multiple channels to which the STB could tune, and the remote control is used to control STB 22. EX1004, ¶37 (“STB 22 is

tuned to a programming channel broadcast”), ¶21 (“discrete channels of programming”), ¶19 (controls STB 22), ¶30. EX1002, ¶148.

Chang also discloses *the selected digital moving image content [from the first provider] being an integral program continuing from an opening part to an ending part by way of a midstream part*. For example, Chang discloses “a music video program segment [that] may include one or more music videos where each music video may form a portion of the program segment.” EX1004, ¶38, ¶44 (a “music video” can be a “portion” of a program segment). A POSITA therefore would have understood that a Chang “program segment” is disclosed as optionally including an entire program (e.g., a half-hour program) with opening, midstream (middle), and ending parts. In the case where the Chang “program segment” is one music video, the video alone has opening, middle, and ending parts and therefore also is an “integral program.” §III(D)(3) (construction of “integral program”). The music video is a “program” in the context of the disclosed “music video channel” at least because it is a complete unit of programming. EX1004, ¶37; EX1002, ¶149.

3. [1.b]

Chang discloses and renders obvious this limitation. Chang discloses a *remote controller* (remote control 36) to select *digital moving image content* (digital video) that is an *integral program* (e.g., music video program or music

video) from *the first provider* (media server 12 plus EPG server 16). §V(B)(2) (limitation 1.a). EX1002, ¶¶150-153.

Chang also discloses *a tuner* (tuner 102) that receives the *digital moving image content* from the *first provider*. EX1004, Fig. 2 (tuner connects to medium 20), ¶16 (medium 20 transmits such content from media server 12 to STB 22), ¶21 (describing tuner 102), ¶25. Because such content includes a *midstream part of an integral program* (§V(B)(2) (limitation 1.a)), tuner also receives such content *at the midstream part*. EX1002, ¶151.

Chang further discloses “a programming channel broadcast” from “media server 12” broadcast in accordance with the schedule of the EPG. EX1004, ¶37; §V(B)(1) (claim 1, preamble); EX1004, ¶5 (“scheduled broadcast times”). A POSITA therefore would have understood (and it would have been obvious) that Chang’s disclosed selecting of such programming with remote control 36, which Chang does not restrict to a particular time and therefore can happen at any time, includes selecting such programming at a time when the midstream part of the selected program was being broadcast. A POSITA also would have understood (and it would have been obvious) that media server 12 would provide the current “programming channel broadcast” at whatever time the user selected it with remote control 36, including selections that happen at the midstream part of a program. EX1004, ¶6 (a “program segment” may have “begun”), ¶9. EX1002, ¶152.

It also would have been obvious to a POSITA to have media sever 12 provide the midstream part of an integral program at the time of selection by remote control 36 because to do otherwise would prevent the user from viewing “a programming channel broadcast” that had already started according to the schedule of the EPG, which defies common sense and contradicts Chang’s disclosures described above. EX1002, ¶153.

4. [1.c]

Chang discloses and renders this limitation obvious. EX1002, ¶¶154-158.

Chang discloses *an I/O interface (modem port 162)¹¹ that receives from the second provider (ISP host 38) the digital moving image content*. STB 22 is coupled to ISP host 38 (which provides content from “content database 52” and “remote server 48”) via “transmission medium 20” “e.g., using a cable modem.” EX1004, Fig. 1, ¶20, ¶27 (“I/O interfaces 146 may include a modem ... having a modem port 162 to facilitate high speed or alternative access to Internet 44” and “port 162 is appropriately coupled to transmission medium 20”); §V(B)(1) (claim 1,

¹¹ Chang’s “I/O interfaces 146” collectively also satisfies the *I/O interface* limitation for the same reasons that modem port 162 does at least because they include modem port 162 and communicate with ISP host 38. EX1004, ¶¶26-27. EX1002, n.14.

preamble) (STB 22 separately receives *the digital moving image content* from ISP host 38). EX1002, ¶155.

Chang also discloses that the *digital moving image content* received at modem port 162 from ISP host 38 includes *entire data of the digital moving image content from the opening part to the ending part of the integral program same as the integral program received from the first provider* (media server 12 plus EPG server 16). During the presentation of a programming channel broadcast, the user has the option to request the “program segment” “in its entirety.” EX1004, ¶9, ¶¶35-38, ¶40, ¶42, Figs. 3-4; §V(B)(1) (claim 1, preamble) (user requests program in its entirety); §V(B)(2) (limitation 1.a) (“program segment” includes an integral program, such as a program of music videos or one music video). STB 22 then receives the requested program segment in its entirety from ISP host 38. EX1004, ¶41, ¶¶51-52, Figs. 1, 3-4; §V(B)(1). EX1002, ¶156.

Chang further discloses *the I/O interface* (modem port 162) *locating the integral program in accordance with information* (identification information) *from the tuner* (tuner 102) *at the time of selection by the remote controller*. Chang’s broadcast programming includes, in its “program data signal,” “identification information” such as a “signal header (e.g., PID) for identifying each segment and/or each portion thereof.” EX1004, ¶37. STB 22 uses the identification information (e.g., PID) to *locat[e]* (identify) the program data being requested.

EX1004, ¶40 (“identification information (e.g., the PID) transmitted along with the program data for identifying the designated program segment (or segment portion)”; §III(D)(4) (construction of this limitation). Such *locating* is *in accordance with information* (the identification information) *from the tuner* (tuner 102) *at the time of selection by the remote controller* because the STB’s internal components receive the information from tuner 102, which receives it as part of the “program data signal” when the user selects a broadcast programming channel using the remote control. EX1004, ¶21 (the tuner receives “programming [] divided into packets, each packet bearing an identifier called a Packet ID (“PID”)), ¶37; §V(B)(3) (limitation 1.b) (tuner 102 receives the broadcast programming); §V(B)(2) (limitation 1.a) (remote control selects broadcast programming). The *locating* also is *in accordance with that information* because it conforms with that information. §III(D)(5) (construction of “*in accordance with*”). EX1002, ¶157.

The STB 22 and its *I/O interface* also *locat[es]* (identifies) the requested program data using “the programming channel that STB 22 is tuned to.” EX1004, ¶¶40-41. Such *locating* is *in accordance with* (e.g., conforms with) *information* (the channel currently tuned to) *from the tuner* (tuner 102) because the tuning circuitry defines what channel is being viewed and extracts the signal corresponding to that channel from the incoming television signal. §III(D)(5) (construction of “*in accordance with*”). It also is *in accordance with* such

information from the tuner at the time of selection by the remote controller because the tuner will have tuned to the selected channel as soon as the user selected it.

§V(B)(2) (limitation 1.a) (selecting channel with remote control). EX1002, ¶158.

5. [1.d]

Chang discloses this limitation. Chang discloses *a television display* (display 26 of television 24) *that shows the digital moving image contents from the first provider* (media server 12 plus EPG server 16) *and the second provider* (ISP host 38). EX1004, Fig. 1, Fig. 2 (“video outputs 166”), ¶17 (“TV 24, such as a digital television, having a display 26 for displaying programming, an EPG, etc.”), ¶29 (“video outputs 166 ... for direct connection to TV 24”), ¶37 (“presenting the program on TV 24”). EX1002, ¶159.

6. [1.e]

Chang discloses this limitation. Chang discloses *a memory* (disc drive 172 and/or memory 176) *in a TV set computer* (STB 22) *that stores the entire data of the digital moving image content received by the I/O interface*. EX1004, ¶31, Figs. 1-2. A POSITA would understand that STB 22 is a *TV set computer* at least because it is a computer associated with, and for, television set 24. EX1004, Figs. 1-2, ¶¶21-35; §III(D)(6) (construction of “TV set computer”). When STB 22 receives the entirety of the designated program data from the second provider (ISP host 38) via *the I/O interface* (modem port 162), it is “stored in disc drive 172.”

EX1004, ¶41 (“STB 22 may store designation(s) received during a viewing session in disc drive 172 or memory 176”), ¶31 (“mass storage disc drive 172 for user storage of content;” describing memory 176). To the extent that “TV set computer” is construed as limited to a computer integrated into in a TV set form factor, Chang discloses that “[c]omponents of STB 22 may be incorporated into TV 24 itself, thus eliminating STB 22.” EX1004, ¶17. EX1002, ¶¶160-161.

C. Claim 2

Chang discloses and renders obvious this claim. §V(B) (claim 1). Chang discloses *a TV set processor (CPU 132) that has the television display show a past part of the integral program which has been already provided by the first provider and retrieved from the memory in the TV set computer (STB 22)*. Chang discloses that a program segment broadcast by the first provider that was requested by the user and downloaded to the STB’s memory (disc drive 172) can be played back from that memory at any time. §§V(B)(2)-(4), (6) (limitations 1.a-c, 1.e) (integral program broadcast by first provider is designated by user and downloaded to memory); EX1004, ¶41, ¶45 (playback “at any selected time”). Chang therefore discloses playing the stored integral program after it was broadcast by the first provider. STB 22 includes *a TV set processor, CPU 132, coupled to disc drive 172*. EX1004, Fig. 2, ¶31. A POSITA would have understood (and it would have been obvious) that when a user plays back a stored integral program, CPU 132 would

have display 26 of the television 24 show the program. EX1004, ¶23 (describing CPU 132). The disclosed playback of the integral program would include *a past part* because at least part of the program had been broadcast by the first provider. EX1004, ¶38 (user designates a program segment during its broadcast), Fig. 3; EX1002, ¶¶162-164.

D. Claim 3

Chang discloses and renders obvious this claim. §§V(B)-(C) (claims 1-2). Chang discloses *wherein the past part is the opening part of the integral program*. A POSITA would have understood (and it would have been obvious) that Chang's disclosure of playing back the downloaded integral program would include playing the program's opening part and that doing so (i.e., playing the program from its beginning) would be the default way to play back the program. §V(C) (claim 2) (playing the past part). EX1002, ¶¶165-167.

E. Claim 4

Chang discloses and renders obvious this claim. §V(B) (claim 1). Chang discloses *a control signal receiver* (receiver 34 plus CPU 132) *that designates a desired part of the same integral program received by the I/O interface*. §§V(B)(4), (6) (limitations 1.c, 1.e) (integral program was downloaded, received by *I/O interface* (modem port 162), and stored on STB 22). STB 22 includes receiver 34 that receives control signals from remote control 36. EX1004, Fig. 1,

¶19, ¶30. A POSITA would understand (and it would have been obvious) that the user would designate a downloaded program for playback, as Chang discloses, using remote control 36. EX1004, ¶19 (remote control is “for controlling STB 22”), ¶41 (downloaded program is “ready for playback”), ¶45 (user playback of downloaded program). A POSITA would understand that the receiver 34 necessarily (inherently) would propagate the playback control signal for a selected program to CPU 132 and, in doing so, would designate the program to be played back. In turn, CPU 132 would output the playback control signal for transmission and, in doing so, would designate the program to be played back. Chang’s disclosure of playing back the entirety of the program is *a desired part*. A playback signal by default and by implication also designates the beginning of the program (another *desired part*) to be played back because playing the program from its beginning is the default way to play it back. EX1002, ¶¶168-170.

F. Claim 5

Chang discloses and renders obvious this claim. §V(B) (claim 1). STB 22 is a *TV set computer*. §V(B)(6) (limitation 1.e). STB 22 uses *information* (a PID) to *locate the integral program same as the integral program received from the first provider*. §V(B)(4) (limitation 1.c). A POSITA would have understood (and it would have been obvious) that *the memory* (which includes memory 176) *in the TV set computer* (STB 22) stores this information at least temporarily for the STB to

generate a request to ISP host 38 to designate the program segment using the PID.

EX1004, Fig. 2, ¶31 (describing memory 176); §V(B)(4) (limitation 1.c). Also, Chang discloses that STB 22 stores program “designation(s) received during a viewing session in ... memory 176” to request and receive the program data corresponding to those designations. EX1004, ¶41. Such designations also are *information necessary for the TV set computer to locate (identify) the integral program ...* because they are used to request a program segment. EX1002, ¶¶171-173.

G. Claim 6

Chang discloses and renders obvious this claim. EX1002, ¶¶174-180.

1. [6.pre]

Chang discloses and renders obvious this preamble. This preamble is identical to the preamble of claim 1 except for its recitation of an “*outside provider system*” rather than “*outside providers including a first provider ... and a second provider.*” The *first provider* and *second provider* identified in Chang for the preamble of claim 1 collectively satisfy the *outside provider system* of this preamble for the reasons set forth for the preamble of claim 1. §V(B)(1). EX1002, ¶175.

2. [6.a]

Chang discloses and renders obvious this limitation. §V(B)(2) (limitation 1.a); §V(B)(1) (claim 1, preamble) (Chang discloses *provided in accordance with a program schedule table*). EX1002, ¶176.

3. [6.b]

Chang discloses and renders obvious this limitation. §V(B)(3) (limitation 1.b). EX1002, ¶177.

4. [6.c]

Chang discloses and renders obvious this limitation. §V(B)(4) (limitation 1.c), §V(B)(1) (claim 1, preamble) (Chang discloses *independently [from] the program schedule table and provided in accordance with a program schedule table*). EX1002, ¶178.

5. [6.d]

Chang discloses and renders obvious this limitation. §V(B)(5) (limitation 1.d), §V(B)(1) (claim 1, preamble) (Chang discloses *provided in accordance with a program schedule table and provided independently [from] the program schedule table*). EX1002, ¶179.

6. [6.e]

Chang discloses and renders obvious this limitation. §V(B)(6) (limitation 1.e). EX1002, ¶180.

H. Claim 7

Chang discloses and renders obvious this claim. §V(G) (claim 6); §V(C) (claim 2); §V(B)(1) (claim 1, preamble) (Chang discloses *provided in accordance with a program schedule table*). EX1002, ¶181.

I. Claim 8

Chang discloses and renders obvious this claim. §V(H) (claim 7); §V(D) (claim 3). EX1002, ¶182.

J. Claim 9

Chang discloses and renders obvious this claim. §V(G) (claim 6); §V(E) (claim 4). EX1002, ¶183.

K. Claim 10

Chang discloses and renders obvious this claim. §V(G) (claim 6); §V(F) (claim 5); §V(B)(1) (claim 1, preamble) (Chang discloses *provided in accordance with a program schedule table*). EX1002, ¶184.

L. Claim 11

Chang discloses and renders obvious this claim.¹² §V(B) (claim 1). EX1002, ¶¶185-188.

¹² *Supra*, n.4.

Chang discloses that *first provider* (media server 12 plus EPG server 16) *includes selectable sub providers* that are different channels.¹³ EX1004, ¶9 (“video music channel”), ¶16, ¶21 (“television channels” and “discrete channels of programming”), ¶37 (“video music channel”), ¶41 (“programming channel(s)"). A POSITA would have understood (and it would have been obvious) that the different channels available from the *first provider* are *sub providers* because they are provided by different entities. §III(D)(8) (construction of “*sub provider*”). For example, MTV is a different provider than CNN. EX1002, ¶187.

A POSITA also would have understood (and it would have been obvious) that *the remote controller* (remote control 36) is used to select *one of the digital moving image contents* (a broadcast programming channel’s digital video content) by *selecting the sub provider* (selecting a channel). EX1004, ¶19 (remote control 36 is for “controlling STB 22”); §V(B)(2) (limitation 1.a). That channel’s video content would be provided by the channel, i.e., *the one of the digital moving image contents is provided by the selected sub provider*. EX1002, ¶188.

¹³ The providers of the different channels also are *sub providers* for the same reasons that the different channels are.

M. Claim 12

Chang discloses and renders obvious this claim. §V(B) (claim 1). EX1002, ¶¶189-192.

Chang discloses that *the digital moving image contents of the first provider is provided in accordance with the program schedule table*. §V(B)(1) (claim 1, preamble). Chang also discloses that media server 12 provides content to STB 22 via a network. EX1004, ¶16 (medium 20 is, for example, a “fiber optic cable network” or “any of a variety of known electronic transmission media”), ¶21 (“programming is divided into packets”), ¶22 (“[v]ideo packets”). A POSITA would understand (and it would have been obvious) that in such embodiments, because the programming from *the first provider* is transmit *in accordance with the program schedule table*, e.g., at “scheduled broadcast times,” it necessarily (inherently) is streamed over the network to STB (e.g., the STB and TV start displaying the content before they receive the entirety of the content). EX1004, ¶5. Otherwise, the video transmission would deviate from the program schedule table because playback could not begin until the entire content was downloaded, which would take a material amount of time, especially over the “wireless” network. EX1004, ¶16. EX1002, ¶191.

It also would have been obvious to a POSITA to stream the content from *the first provider* to STB 22. A POSITA could have done so using known streaming

technology, which Chang discloses. EX1004, ¶52 (“stream[ing]” video to STB 22).

Doing so would have been within the skill and knowledge of a POSITA, would have led to predictable results, would have created a reasonable expectation of success, and would have been compatible with Chang. Motivation to do so comes from Chang’s disclosure of “stream[ing]” video, the common use of streaming technology at the time of the ’592 patent’s supposed priority date (2008), and a desire to implement Chang’s disclosure that the timing of the programming channels from *the first provider* adheres to the *program schedule table* (EPG). EX1004, ¶52; §V(B)(1) (claim 1, preamble) (describing the EPG). EX1002, ¶192.

N. Claim 13

Chang discloses and renders obvious this claim. §V(B) (claim 1); §V(E) (claim 4) (receiver 35 plus CPU 132 is *a control signal receiver*). EX1002, ¶¶193-196.

Chang discloses that the user designates a program segment to download with *a manual operation* of remote control 36. EX1004, ¶40 (STB 22 receives the designation “at receiver 34”), ¶19 (receiver 34 receives signals from remote control 36), Fig. 1. In response, STB 22 designates *an optional part of the digital moving image contents* by designating for download related additional video such as commercials and related music videos. EX1004, ¶43 (“commercial

advertisements” and “other clips (e.g., music videos, artist interviews)”, ¶44 (“commercial”), ¶50 (“other video clips from the same and other artists”); §III(D)(7), (9) (construction of “*designates an optional part*”). A POSITA would have understood (and it would have been obvious) that STB 22 performs such designation using its CPU 132. EX1004, Fig. 2, ¶32. EX1002, ¶195.

A POSITA would understand (and it would have been obvious) that *the first provider* (including media server 112) also would have provided such *optional digital moving image contents* (e.g., related music videos). For example, Chang’s “video music channel” would play other video clips from the same or other artists (i.e., other music videos), and it would have been obvious to do so and for it to play commercial advertisements, artist interviews, etc. EX1004, ¶37. EX1002, ¶196.

If Patent Owner argues the portions of Chang cited above relate to different, incompatible embodiments (which they do not), it would have been obvious to a POSITA to combine such embodiments into a single system for providing the ability to receive digital moving image contents from a provider at least because such embodiments are described in the same prior art reference, are fully compatible with each other, and could be combined with minimal effort to achieve predictable results. EX1002, ¶197.

If the Board finds that Chang does not disclose any limitation of the challenged claims, such limitation would have nonetheless been obvious to a POSITA in light of Chang and a POSITA's knowledge. Practicing any limitation of the challenged claims in light of Chang would have been within the knowledge and skill of a POSITA, would have required minimal effort, would have yielded predictable results, would have been fully compatible with the Chang system, and would have been a mere design choice. Motivation to do so arises from at least common sense and the disclosures of Chang set forth above. EX1002, ¶198.

VI. GROUND 3: CLAIMS 1-13 ARE OBVIOUS BASED ON WALKER IN VIEW OF CHANG

A. Prior Art

1. Walker

§IV(A). EX1002, ¶199.

2. Chang

§V(A). EX1002, ¶200.

B. Claim 1

Walker in view of Chang discloses and renders obvious claim 1. All of the limitations of claim 1 are disclosed by Walker in light of the knowledge of a POSITA. §IV(B) (Walker, claim 1). EX1002, ¶¶201-206.

1. [1.c]

Additionally, Walker in view of Chang discloses and renders obvious this limitation. Walker alone discloses and renders obvious this limitation. §IV(B)(4) (Walker and limitation 1.c). EX1002, ¶¶202-206.

As described above, Walker discloses an *I/O interface* (user television equipment 18, 20, and 22 via each of input/output interface 58, 104, and 108 connected to communication paths 26, 27, 28, 42, 46, 48) that request the streaming version of an *integral program* (e.g., a television program). §IV(B)(4) (limitation 1.c); §IV(B)(2) (limitation 1.a) (integral program). As also described above, Chang discloses *locating* (identifying) an *integral program* (e.g., a television program of music videos) using “identification information” such as a “signal header (e.g., PID) for identifying each segment and/or each portion thereof.” §V(B)(4) (limitation 1.c); §V(B)(2) (limitation 1.a) (integral program). Such *information is from the tuner* in Chang (tuner 102) *at the time of selection by the remote controller* because the STB’s internal components receive the information from tuner 102, which receives it as part of the “program data signal” when the user selects a broadcast programming channel using the remote control. §V(B)(4) (limitation 1.c). EX1002, ¶203.

It would have been obvious to a POSITA to implement this functionality of Chang in the system of Walker. A POSITA would have done so by, for example,

implementing the Walker system such that its *I/O interface* (user television equipment 18, 20, and 22 via each of input/output interface 58, 104, and 108 connected to communication paths 26, 27, 28, 42, 46, 48) requested the streaming version of an *integral program* (e.g., a television program) from Walker's remote server 36, service provider 50, programming services 12, data source 30, television distribution facility 14, server 56, using identification information such as signal header (e.g., PID) that identifies that television program. As in Chang, the identification information (e.g., PID) would be part of the program signal data received by the Walker *tuner* (tuning circuitry). §V(B)(4) (Chang and limitation 1.c); §IV(B)(3) (Walker and limitation 1.b) (tuning circuitry). Such information therefore would be *from the tuner at the time of selection by the remote controller* because the Walker *I/O interface* would receive the information from the Walker tuner, which receives the PID as part of the program signal data when the user selects a channel using the remote control. Doing so would have been would have been well within the skill and knowledge of a POSITA, would have led to predictable results, would not have required undue experimentation, would have had a reasonable expectation of success, and would have been compatible with Walker, doing so also would have been transparent to the user. EX1002, ¶204.

A POSITA would have been motivated to do so for various reasons. Walker discloses that its user equipment transmits to the remote servers and service

providers information to allow the remote servers and service providers to determine the program being broadcast so that the remote servers and service providers in conjunction with the networked data sources can transmit the streaming version. §IV(B)(4) (limitation 1.c); EX1005, ¶174. A POSITA therefore would have been motivated to use information that identifies the program, from Chang's disclosure of "identification information," such as a "signal header (e.g., PID)," accomplishes. Additional motivation arises from Chang's disclosure of using such "identification information" for purposes of identifying a particular program to a server, which also would be how such information is used in Walker. More motivation arises from a desire to identify a program directly (e.g., using a PID) rather than indirectly (e.g., by identifying the channel a viewer is watching) to avoid potential errors in the remote server's determining what program to stream based on the channel identification. EX1002, ¶205.

Accordingly, Walker in view of Chang further discloses and renders obvious this limitation. EX1002, ¶¶202-206.

C. Claims 2-12

Walker in view of Chang and the knowledge of a POSITA discloses and renders obvious claims 2-12. §§IV(B)-(N) (Walker claims 1-12); §VI(B) (Walker in view of Chang, claim 1). Additionally, Walker in view of Chang discloses and renders obvious limitation 6.c for the same reasons that discloses and renders

obvious limitation 1.c. §VI(B)(1) (Walker in view of Chang and limitation 1.c).

EX1002, ¶207.

D. Claim 13

Walker in view of Chang discloses and renders obvious this limitation.

Walker alone discloses and renders obvious this claim. §IV(N) (Walker and claim 13). As described above, Walker discloses that a user may select *an optional part of the digital moving image contents* (an advertisement) using a remote control.

§IV(N) (Walker claim 13). As also described above, Chang discloses that, *in response to* the user using a remote control to designate a program segment to download, Chang's STB 22 designates for download related additional video such as commercials. §V(N) (Chang claim 13). It would have been obvious to a POSITA to apply Chang's designating a commercial for download to the Walker system (to the extent such functionality is not already present in Walker) so that Walker's *control signal receiver* (IR circuitry or other receiver of control signals from remote control 72, optionally combined with the *TV set processors* of claim 2) *designates* the advertisement for download when the user selects it using a remote control. Doing so would have been well within the skill and knowledge of a POSITA, would have led to predictable results, would not have required undue experimentation, would have had a reasonable expectation of success, and would have been fully compatible with Walker. EX1002, ¶¶208-210.

A POSITA would have been motivated to do so for several reasons. Walker discloses that a user may wish to control video with playback controls and discloses doing so by storing the video on the user's equipment. EX1005, ¶9 (desirability of enabling playback control), ¶14, ¶155, ¶157 (store video locally), ¶162 (playback control). Also, a POSITA would have been motivated to download the advertisement to the user's equipment only upon Walker's disclosure of the user selecting the advertisement with the remote control to avoid burdening the user equipment with unnecessary downloads. Thus, to allow user playback control of an advertisement, a POSITA would have been motivated to have the Walker *control signal receiver designate* the advertisement for download upon selection by the user with the remote control. EX1002, ¶211.

Accordingly, Walker in view of Chang further discloses and renders obvious this claim. EX1002, ¶¶208-212.

VII. DISCRETIONARY DENIAL IS NOT WARRANTED

A. 35 U.S.C. §314(a) Analysis

The *Fintiv* factors (enumerated below) weigh against discretionary denial. IPR2020-00019, Paper 11, at 5-6 (PTAB Mar. 20, 2020) (precedential). The “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” dated June 21, 2022 (“Interim Guidance”) and

recent board decisions applying these factors confirm discretionary denial is not warranted here.

1. Stay

Neither party has requested a stay in the parties’ corresponding District of Delaware (“Delaware”) litigation. At worst, this factor is neutral because the Board “will not attempt to predict” how the district court will proceed if a stay has not been requested by either party. *Sand Revolution II, LLC v. Continental Intermodal Group–Trucking LLC*, IPR2019-01393, Paper 24, at 7 (Jun. 16, 2020) (informative).

2. Trial Date

“[W]hen considering the proximity of the district court’s trial date to the date when the PTAB final written decision will be due, the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.” Interim Guidance, 3. Computed in accordance with the Interim Guidance the anticipated trial date is October 2026 (32.9 months from the January 11, 2024, complaint date). EX1007, 1. The trial date in the scheduling order is June 22-26, 2026. EX1008. The deadline for a Final Written Decision is around May 2026. Thus, this factor weighs against a discretionary denial.

3. Parallel Proceeding

In *Sand Revolution II*, the parties had already “exchanged infringement and invalidity contentions, and the district court [had] conducted a *Markman* hearing

and entered a related Order.” *Sand Revolution II* at 10. Despite these facts, the Board found that the third *Fintiv* factor “weighs only marginally, if at all, in favor of exercising discretion to deny institution.” *Id.* If the Delaware litigation proceeds as scheduled, it will be at a similar stage. Moreover, Petitioners seek review in a timely manner, roughly at the same time initial invalidity and infringement contentions are due in the Delaware litigation. EX1008. Accordingly, this factor weighs only marginally, if at all, in favor of a discretionary denial.

4. Issue Overlap

The final written decision is anticipated to precede the earliest expected trial date by around a month and the computed anticipated trial date by around five months. §VII(A)(2) (“Trial Date”). The issues decided during *inter partes* review will be different from the issues decided by the district court due to estoppel. The district court case involves a subset of the claims challenged in the petition. EX1006 (not asserting claims 4, 9, 13). Thus, this factor weighs in favor of institution.

5. Same Party

Because Petitioner and Patent Owner are the parties in the Delaware litigation, and because this Board is likely to reach the merits around the same time as the district court, this factor weighs slightly against discretionary denial. *See NVIDIA Corp. v. Invensas Corp.*, IPR2020-00603, Paper 11, at 23 (PTAB Sept. 3,

2020) (this factor weighs against discretionary denial where district court trial and IPR final written decision are expected “around the same time”). However, members of the Board have noted that *Fintiv* addresses only the scenario in which the petitioner is unrelated to a defendant in a parallel proceeding, finding this should weigh against denying institution, but that *Fintiv* “says nothing about situations in which the petitioner is the same as, or is related to, the district court defendant.” *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00122, Paper 15, at 11 (PTAB May 15, 2020) (APJ Crumbley, dissenting) (noting that disfavoring a “defendant in the district court” is “contrary to the goal of providing district court litigants an alternative venue to resolve questions of patentability”).

6. Other Considerations

Other considerations weigh strongly against a discretionary denial. The challenged claims are clearly invalid, Petitioners have not previously challenged any related patents based on the references relied upon in this petition, and the ’592 patent has never been challenged in a post-issuance proceeding. Were the Board to deny institution, years of district court litigation would be required just to obtain a finding of invalidity. Thus, this factor weighs against a discretionary denial.

In sum, two of the *Fintiv* factors weigh strongly against a discretionary denial, two of the *Fintiv* factors weigh only marginally in favor of a discretionary denial, and one is neutral. Thus, institution should be granted.

Even if the Board were to determine that *Fintiv* factors on balance weigh in favor of denial, institution should nonetheless be granted because this Petition satisfies the compelling merits standards. Interim Guidance at 4; *Vizio, Inc. v. Maxell, Ltd.*, IPR2022-01458, Paper 8, at 62.¹⁴

B. 35 U.S.C. §325(b) Analysis

Applying the two-part framework discussed in *Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate GMBH*, IPR2019-01469, Paper 6, at 7-9 (PTAB Feb. 13, 2020), the Board should not exercise its §325(d) discretion to deny institution.

None of the challenges are substantially the same as those considered during prosecution.

If the challenges herein are found to be based on prior art that is the same as or cumulative to prior art considered by the examiner during prosecution, the examiner has made a clear error in allowing the claims over such prior art. This is at least because the challenges in this Petition satisfy the compelling merits standard, and allowing the claims over such prior art therefore is clear error.

¹⁴ The Board's *Fintiv* framework should be overturned because it (1) exceeds the Director's authority, (2) is arbitrary and capricious, (3) and was adopted without notice-and-comment rulemaking.

VIII. MANDATORY NOTICES UNDER 37 C.F.R. §§42.8(B)(1)-(4)

A. Real Party-In-Interest

Amazon.com, Inc., Amazon.com Services, Inc., and Twitch Interactive, Inc.
are the real parties-in-interest.

B. Related Matters

The '592 patent is subject to the following actions:

- *NL Giken Inc. v. Amazon.com, Inc., et al.*, No. 1:24-cv-00028 (D. Del.).

C. Lead and Backup Counsel

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D. Service Information

Service information for lead and backup counsel is provided in the designation of lead and backup counsel above. Petitioner consents to electronic service to lead and back-up counsel and to:

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IX. CONCLUSION

The Board should find all claims of the '592 patent unpatentable for the reasons discussed in this Petition.

Respectfully submitted,

/s/ Jennifer Librach Nall

U.S. Patent No. 10,880,592
Petition for *Inter Partes* Review

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Petitioner certifies that this petition includes 13,769 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under §42.8, certificates of service, word count, claim listing, and exhibits.

Date: November 25, 2024

/s/ Jennifer Librach Nall

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CERTIFICATE OF SERVICE

The undersigned certifies pursuant to 37 C.F.R. §§42.6(e) and 42.105 that on November 25, 2024, a true and correct copy of the Petition for *Inter Partes* Review of U.S. Patent No. 10,880,592 was served by emailing a copy of same (by agreement) to the following attorneys for Patent Owner:

James Morris - James.Morris@WolfGreenfield.com

Hunter Keeton - Hunter.Keeton@WolfGreenfield.com

A courtesy copy was sent to the below counsel via electronic mail:

WGS-NLGikenv.Amazon@WolfGreenfield.com

Date: November 25, 2024

Respectfully submitted,

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