IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

MULTIMEDIA TECHNOLOGIES PTE. LTD., Plaintiff, v. VIZIO, INC., Defendant.	Civil Action No. 2:23-CV-00124-JRG

DEFENDANT'S INVALIDITY CONTENTIONS

I. INTRODUCTION

Pursuant to Rule 3-3 of the Local Patent Rules ("P. R.") of the Eastern District of Texas, Defendant VIZIO Inc. ("VIZIO" or "Defendant") hereby provides its Invalidity Contentions with respect to the claims identified by Plaintiff Multimedia Technologies Pte. Ltd. ("MMT" or "Plaintiff") in its Disclosure of Asserted Claims and Infringement Contentions under Patent Rule 3-1, served on July 20, 2023 ("Infringement Contentions"), in the above captioned case. Plaintiff asserts infringement of the following claims:

U.S. Patent No.	Asserted Claims
9,055,255 ("'255 Patent")	1-4, 6-13, 15-20
9,232,168 ("'168 Patent")	1-7, 10-15
9,247,174 ("'174 Patent")	1-5, 7, 10-13
9,510,040 ("'040 Patent")	1-4, 11-15, 21
9,578,384 ("'384 Patent")	1, 3-4, 6-9
10,419,805 ("'805 Patent")	1-4, 6-18
9,426,527 ("'527 Patent")	1-11
9,185,325 ("'325 Patent")	1-8
9,215,393 ("'393 Patent")	1-20
9,077,928 ("'928 Patent")	1-4, 8-13, 15-20

Pursuant to P. R. 3-3 and 3-4, Defendant hereby provides its invalidity contentions and related documents pertaining only to the asserted claims as identified by Plaintiff in its Infringement Contentions. With respect to each asserted claim and based on its investigation to date, Defendant hereby: (a) identifies each currently known item of prior art that either anticipates or renders obvious each asserted claim; (b) specifies whether such prior art anticipates each asserted claim or renders it obvious; (c) submits a chart identifying where each element in each asserted claim is disclosed, described, or taught in the prior art, including for each element that is governed by pre-AIA 35 U.S.C. § 112, ¶ 6 and/or 35 U.S.C. § 112(f), the identity of the structure(s), act(s), or material(s) in each item of prior art (if any) that performs the claimed function; and (d) identifies the grounds for invalidating asserted claims based on indefiniteness under pre-AIA 35 U.S.C. § 112, ¶ 2 and/or 35 U.S.C. § 112 (b), or non-enablement or lack of written description under pre-AIA 35 U.S.C. § 112, ¶ 1 and/or 35 U.S.C. § 112 (a). Defendant further relies on and incorporates all prior art references cited in and/or on the cover of the Asserted Patents and their respective prosecution histories, including, for supporting the obviousness of any asserted claim.

In addition, based on its investigation to date, Defendant hereby produces the documents currently in its possession, custody, or control required to accompany these Invalidity and Subject-Matter Eligibility Contentions pursuant to P. R. 3-4.

II. RESERVATION OF RIGHTS

As stated above, pursuant to P. R. 3-3 and 3-4, Defendant hereby provides disclosures and related documents pertaining only to the asserted claims identified by Plaintiff in its Infringement Contentions. Defendant reserves the right to modify, amend, or supplement these Invalidity Contentions to show the invalidity of any additional claims that the Court may allow Plaintiff to later assert. The Local Patent Rules and the Court's Docket Control Order contemplate that these

Invalidity Contentions be prepared and served in response to Plaintiff's Infringement Contentions, but Plaintiff's Infringement Contentions are insufficient in that they lack proper and complete disclosure as to how Defendant allegedly infringes each element of the asserted claims. As such, Defendant reserves the right to modify, amend, and/or supplement these Invalidity Contentions should the Court permit Plaintiff to correct, clarify, amend, and/or supplement its Infringement Contentions.

Defendant's Invalidity Contentions and selection of documents accompanying them are based on information currently available to Defendant and are subject to further revision. For example, Plaintiff (or its counsel) may be in possession of prior art that has not been disclosed to Defendant. As another example, because discovery has only recently begun, Defendant reserves the right to amend or supplement the information provided herein, including identifying and relying on additional references.

To the extent that these Invalidity Contentions reflect or otherwise embody particular constructions of terms or phrases in the asserted claims, Defendant is not proposing any such constructions as proper constructions of those terms or phrases. Various positions put forth in these Invalidity Contentions are predicated on Plaintiff's incorrect and/or overbroad interpretation of its claims in its Infringement Contentions provided to Defendant. These Invalidity Contentions are not intended to, and do not necessarily, reflect Defendant's interpretation of the true and proper scope of the asserted claims. Defendant reserves the right to adopt claim construction positions that differ from any position in this document. Defendant also objects to any attempt by Plaintiff to infer any purported claim constructions from any identification of potential prior art.

In those instances where Defendant asserts that the asserted claims are invalid under 35 U.S.C. § 112 (*e.g.*, no written description, not enabled, and/or indefinite), Defendant has applied the prior art in accordance with its assumption that Plaintiff contends such asserted claims (1) are definite, (2) have written description support, and (3) are enabled, as evidenced by Plaintiff's Infringement Contentions. As such, Defendant's Invalidity Contentions do not represent its agreement or view as to the meaning, definiteness, written description support for, or enablement of any asserted claim.

For the avoidance of doubt, these Invalidity Contentions and accompanying documents are not intended to reflect Defendant's claim construction contentions, which will be disclosed in accordance with the Court's Docket Control Order.

Defendant's Invalidity Contentions may change depending on the Court's construction of the asserted claims, any findings as to the priority date of the asserted claims, and/or positions that Plaintiff or its experts may take concerning claim construction, infringement, and/or invalidity issues. Prior art not included in this disclosure, whether known or unknown to Defendant, may become relevant. In particular, Defendant is currently unaware of the extent, if any, to which Plaintiff will contend that limitations of the asserted claims are not disclosed in the prior art identified by Defendant, or will contend that any of the identified references do not qualify as prior art. To the extent that such an issue arises, Defendant reserves the right to identify other references that, *inter alia*, would have made the addition of the allegedly missing limitation to the disclosed device or method obvious.

The identification of any patent or patent publication shall be deemed to include any counterpart patent or application filed, published, or issued anywhere in the world. The citation to any specifications published by standard-setting organizations shall be deemed to include any

product that implements such specifications and that would qualify as prior art under 35 U.S.C. § 102, *e.g.*, under Sections 102(a), 102(b), or 102(g)(2).

Defendant's claim charts cite to particular teachings and disclosures of the prior art as applied to features of the asserted claims. Persons having ordinary skill in the art, however, may view an item of prior art in the context of other publications, literature, products, and understanding. As such, the cited portions are only exemplary, and Defendant reserves the right to rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that the prior art discloses a claim limitation. Defendant further reserves the right to rely on uncited portions of the prior art references, other publications, and testimony to establish bases for combinations of certain cited references that render the asserted claims obvious. Further, for any combination, Defendant reserves the right to rely additionally on information generally known to those skilled in the art or common sense.

The references discussed in the claim charts may disclose the elements of the asserted claims explicitly or inherently, or they may be relied upon to show the state of the art in the relevant time frame. The suggested obviousness combinations are provided in the alternative to Defendant's anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

Defendant reserves the right to challenge patentability of the asserted claims under pre-AIA 35 U.S.C. § 102(f) and/or 35 U.S.C. § 102(b) in the event Defendant obtains evidence that the named inventor of the Asserted Patents did not invent the subject matter claimed in the Asserted Patents or is not the sole inventor of the Asserted Patents. Should Defendant obtain such evidence, it will provide the name of the person(s) from whom and the circumstances under

which the invention or any part of it was derived. Defendant further reserves the right to assert that the Asserted Patents are unenforceable due to inequitable conduct.

Because discovery has just recently begun, Defendant anticipates that additional prior art and invalidity bases may be found. Defendant's investigation and analysis of the prior art is continuing, and thus Defendant reserves the right to supplement, amend, and/or revise the information provided herein as Defendant conducts further investigation and/or analysis, including identifying, charting, and relying on additional references.

Additionally, in view of likely third-party discovery that will be taken, Defendant reserves the right to present additional items of prior art under 35 U.S.C. §§ 102 (pre-AIA or post-AIA) and/or § 103 located during discovery or further investigation, and to assert contentions of invalidity under, for example, 35 U.S.C. §§ 102(c), (d), or (f). For example, Defendant may issue subpoenas to third parties believed to have knowledge, documents, and/or other evidence concerning invalidity of one or more of the Asserted Claims.

In addition to the positions and prior art identified in these Invalidity Contentions (including the accompanying invalidity claim charts), Defendant also incorporates by reference all invalidity contentions, prior art[1], and invalidity claim charts (including, without limitation, all anticipation positions, obviousness positions (including all prior art combinations and motivations to combine), indefiniteness positions, written description positions, and nonenablement positions) concerning one or more of the Asserted Patents, as disclosed at any time. This includes without limitation disclosures in previous or related litigation, in United States Patent & Trademark Office ("USPTO") proceedings, by the Plaintiff, by any other parties

[1] Prior art appearing in the file histories of the Asserted Patents is not required to be separately produced by Defendant under P.R. 3-4(b).

accused of patent infringement by the Plaintiff, or by the named inventors or any individuals associated with the prosecution and/or post-grant review of the Asserted Patents.

III. IDENTIFICATION OF PRIOR ART PURSUANT TO P.R. 3-3(A)

Pursuant to P. R. 3-3(a), and subject to Defendant's reservation of rights, Defendant identifies each item of prior art that at least evidences the obviousness of one or more of the asserted claims. In its Infringement Contentions, Plaintiff provided the following priority dates for the Asserted Patents: August 17, 2012. Without admitting the validity of this priority date, Defendant uses this priority date for the purposes of these Invalidity Contentions.

In the following sections, Defendant identifies each prior art patent by its number, country of origin, and date of issue, each non-patent prior art publication by, where possible, its title, date of publication, and author and/or publisher, and each prior art system currently known to Defendant by, where possible, its name and date of sale, use, or knowledge. Defendant reserves the right to identify additional non-patent and non-publication prior art systems that were sold, offered for sale, used, etc. prior to the priority date to the extent any such systems becomes known during discovery.

Defendant further relies on and incorporates all prior art references cited in and/or on the cover of the Asserted Patents and their respective prosecution histories, including for supporting the obviousness of any asserted claim. Defendant further relies on and incorporates by reference, as if originally set forth herein, all invalidity positions, and all associated prior art and claim charts, disclosed to Plaintiff by present or former defendants in any lawsuits or other proceedings or by potential or actual licensees to any of the asserted claims. Defendant hereby discloses and identifies as if originally set forth herein, all prior art references listed and/or asserted in the above as invalidating prior art against each of the asserted claims.

A. Identification of Prior Art to the Asserted Patents[2]

1. ’255 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
Korean Patent Application Publication KR2006/0078225	KR	Song et al.	12/30/2004	07/05/2006	KR2006 / 0078225
61/668054 Provisional Appl’n to US 8,918,411	US	Latif	07/05/2012	12/23/2014	Latif Provisional
8,918,411	US	Latif	08/07/2013 (filed) / claims priority to provisional application filed 07/05/2012	12/23/2014	Latif
9,239,837	US	Chardon	10/28/2011 (filed) / claims priority to provisional application filed 04/29/2011	01/19/2016	Chardon
9,319,734	US	Hong	04/05/2013	04/19/2016	Hong
2007/0028183	US	Ostojic	08/30/2005 (filed) / claims priority to provisional application filed 07/27/2005	02/01/2007	Ostojic
2008/0167127	US	Turkstra	01/05/2007	07/10/2008	Turkstra
2011/0231484	US	Burgess	03/22/2011	09/22/2011	Burgess

[2] To the extent a reference listed in Section II(A) is not referred to specifically in the charts accompanying this disclosure, such reference is indicative of the state of the art as of the priority date of the patent for which it is listed.

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
2012/0096355	US	Vallone	12/22/2011 (filed) / claims priority to application filed 12/19/2007	04/19/2012	Vallone
2013/0135357	US	Rhee	08/03/2011 (PCT filed)	05/30/2013	Rhee
2011/0219395	US	Moshiri	05/20/2011 (filed) / claims priority to provisional application filed 08/29/2006	09/08/2011	Moshiri
WO 01/82596	PCT	Simons	04/25/2000	11/01/2001	Simons
WO 12/102568	PCT	Choi	01/27/2011 (PCT filed)	08/02/2012	Choi

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
aTV Flash	aTV Flash (black) 1.2 Now Available (Apple TV)	01/17/2012	aTV Flash
Healing Digital	Healing Digital HSS852 Owner's Manual	2010	HSS852
Lee - ACM	Balancing the Power of Multimedia Information Retrieval and Usability in Designing Interactive TV	10/22/2008	Lee
Palmetto Rural Telephone Cooperative Inc. (PRTC)	The Future of Television Entertainment has Arrived – PRTC Digital TV: Your Guide to PRTC's Digital TV & Whole Home DVR Service, Powered By Microsoft Mediaroom.	02/25/2012	PRTC
Ku	SnapStream's Beyond TV 3 0 The Must-have Home Multimedia Software - The TV in Beyond TV - Live TV & Timeshifting	05/12/2004	Ku
LG	Plasma TV Service Manual, Model 50PZ550	2011	Plasma TV Service Manual, Model 50PZ550

Author / Publisher	Reference Title	Publication Date	Short Name
LG	Owner's Manual, LED LCE TV / LCD TV Plasma TV	2010	LG's Owner's Manual
LG	Model 60PZ550 60" Class 3D 1080p Plasma TV	2011	Model 60PZ550 60" Class 3D 1080p Plasma TV
Booredatwork.com	y2mate.is - LG PZ550 3D Plasma TV W_DLNA Review_ Booredatwork-sTKzYCK3AG8-720p-1694663361 https://www.youtube.com/watch?v=sTKzYCK3AG8	05/16/2011	LG PZ550 3D Plasma TV

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
LG Smart TVs including LG PZ550 3D Plasma TV	At least by December 2010	LG	LG PZ550

2. '168 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
7,190,478	US	Caffary, Jr.	05/29/2002 (filed) / claims priority to provisional application filed 05/25/2001	03/13/2007	Caffary, Jr.
7,673,240	US	Morgan	01/03/2007 (filed) / claims priority to provisional application filed 12/30/2005	03/02/2010	Morgan

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
8,243,017	US	Broderson	October 12, 2006	August 14, 2012	Broderson
9,158,440	US	Lider	08/01/2012	10/13/2015	Lider
9,456,130	US	Kim	01/04/2013	09/27/2016	Kim
61/583609 Provisional App'n to US9,456,130	US	Kim	01/06/2012	09/27/2016	Kim
2007/0028183	US	Ostojic	08/30/2005	02/01/2007	Ostojic
2008/0301734	US	Goldeen	05/28/2007	12/04/2008	Goldeen
2009/0064020	US	Morris	08/30/2007	03/05/2009	Morris
2009/0222771	US	Eibl	03/03/2009	09/03/2009	Eibl
2010/0162319	US	Pipenbrink	12/23/2008	06/24/2010	Pipenbrink
2010/0262995	US	Woods	09/30/2009 (filed) / claims priority to provisional application filed 04/10/2009	10/14/2010	Woods
2011/0035707	US	Kitayama	08/05/2010	02/10/2011	Kitayama
2012/0117601	US	Yeh	09/13/2011	05/10/2012	Yeh
2012/0229374	US	Kobayashi	03/09/2012	09/13/2012	Kobayashi
2012/0311504	US	Van Os	02/16/2012	12/06/2012	Van Os
2013/0019263	US	Ferren	06/29/2012	01/17/2013	Ferren
2013/0174035	US	Grab	12/30/2011	07/04/2013	Grab
2013/0347033	US	Grab	06/22/2012	12/26/2013	Grab
2014/0137157	US	Alba	10/01/2013 (filed) / claims priority to provisional application filed 02/28/1997	03/15/2014	Alba
WO 2007/128394	PCT	Goebel	04/20/2007 (PCT filed)	11/15/2007	Goebel

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
Apple TV	Video apple-tv-3rd-generation-1080p-unboxing-demo https://www.youtube.com/watch?v=i_GUuJyyyRQ	03/15/2012	Apple TV
Samsung Smart TV	Samsung SMART TV Review https://www.youtube.com/watch?v=DUq8Bhs3ByA	04/26/2011	Samsung Smart TV
SHARP AQUOS QUATTRON TV	y2mate.is - HOW TO SETUP SHARP AQUOS QUATTRON TV REVIEW PT4-2YmcQz83xQg-720p-1694662365 https://www.youtube.com/watch?v=2YmcQz83xQg	06/01/2012	SHARP AQUOS QUATTRON TV
Samsung 55" UE55D7000 3D LED TV	y2mate.is - Unboxing Samsung 55 UE55D7000 3D LED TV 2011 D7000 D8000 Part 2-zokiDtmClF8-480pp-1694662006 https://www.youtube.com/watch?v=zokiDtmClF8	08/06/2011	Samsung 55" UE55D7000 3D LED TV

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
Samsung Smart TVs including Samsung D8000 Smart TV	At least by January 2011	Samsung	Samsung D8000
Microsoft Office 2007	At least by January 30, 2007	Microsoft	Office 2007

3. ’174 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
2003/0162493	US	Kim	01/09/2003	08/28/2003	Kim
2009/0089835	US	Watanabe	05/01/2008	04/02/2009	Watanabe
2009/0094643	US	Pickelsimer	05/23/2008	04/09/2009	Pickelsimer
2010/0281500	US	Uemichi	05/28/2008	11/04/2010	Uemichi
2010/0319028	US	Park	05/12/2010	12/16/2010	Park
2011/0004904	US	Green	09/15/2010	01/06/2011	Green
2011/0055871	US	Bi	08/28/2009	03/03/2011	Bi

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
2011/0219395	US	Moshiri	05/20/2011	09/08/2011	Moshiri
2013/0290848	US	Billings	08/16/2012	10/31/2013	Billings
WO 98/37695	PCT	Defreese	02/19/1997	08/27/1998	Defreese

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
VIZIO Inc.	VIZIO Models E3D320VX, E3D420VX, E3D470VX User Guide	2012	VIZIO E3D420VX
VIZIO Inc.	[YT2mp3.info] - 3183. VIZIO E3D320VX 32-Inch Class Theater 3D LCD HDTV Review _ VIZIO E3D320VX 32-Inch Class... https://www.youtube.com/watch?v=CTE1gdYBoT0	05/05/2010	VIZIO E3D320VX
Lee/ACM	Balancing the Power of Multimedia Information Retrieval and Usability in Designing Interactive TV	10/22/2008	Lee
Magic TV / Pixel Magic Systems, Ltd.	Magic TV Owner's Guide	2009	Magic TV
Redondo-Garcia / Int'l J of Semantic Computing	ONTOTV: An Ontology-Based System for the Management of Information About Television Contents	2012	ONTOTV
Sumiyoshi / IEEE	CurioView: TV Recommendations Related to Content Being Viewed	2010	CurioView
Panasonic	Owner's Manual for TC-L37E5X, TC-L42E5X, and TC-L47E5X	2012	Panasonic
VIZIO, Inc.	VIZIO M420NV User Manual	02/23/2010	VIZIO M420NV
Western Digital	WD TV Live; WD TV Live Plus HD Media Players, User Manual	2010	WD TV Live

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
VIZIO Smart TVs including VIZIO E3D320VX/	At least as of March 2011	VIZIO	VIZIO E3D320VX/ E3D420VX/E3D470VX TV

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
E3D420VX/E3D470VXTV			
VIZIO Smart TVs including VIZIO M420NV TV	At least as of February 23, 2010	VIZIO	VIZIO M420NV TV
Panasonic TC-L37E5X. TC-L42E5X. TC-L47E5X TV	At least as of 2011	Panasonic	Panasonic TV
WD TV Live/Live Plus HD Media Players	At least as of May 2012	Western Digital	WD TV
Magic TV	At least as of 2009		Magic TV

4. ’040 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
61/583,609	US	Kim	01/06/2012	01/06/2012	Kim
1020110113883	KR	LG	10/04/2010	10/04/2010	LG
8,307,302	US	Takaki	05/14/2009	11/06/2012	Takaki
8.365.230	US	Chane	09/19/2002	01/29/2013	Chane
9,270,963	US	Schmidt	04/30/2009	02/23/2016	Schmidt
9,779,097	US	Arriola	04/09/2012	10/03/2017	Arriola
2002/0059610	US	Ellis	05/23/2001	05/16/2002	Ellis
2008/0167127	US	Turkstra	01/05/2007	07/10/2008	Turkstra
2009/0094197	US	Fein	10/04/2007	04/09/2009	Fein
2009/0204929	US	Baurmann	02/07/2008	08/13/2009	Baurmann
2010/0064318	US	Tsou	03/17/2009	03/11/2010	Tsou
2011/0179139	US	Starkenburg	03/31/2011	07/21/2011	Starkenburg
2011/0219395	US	Moshiri	05/20/2011	09/08/2011	Mochiri
2012/0054794	US	Kim	03/09/2011	03/01/2012	Kim
2012/0204201	US	Cassidy	07/11/2011	08/09/2012	Cassidy
2013/0057764	US	Choi	06/28/2012	03/07/2013	Choi
2013/0176415	US	Kim	01/04/2013	07/11/2013	Kim

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
Palmetto Rural Telephone Cooperative (PRTC)	The Future of Television Entertainment has Arrived-PRTC Digital TV – Your Guide to PRTC's Digital TC & Whole Home DVR Service	05/2012	PRTC
Western Digital	WD TV Live Hub Media Center – User Manual	05/2012	WD TV
LG Smart TV	y2mate.is - LG Smart TV explained at CES 2011-IKjsVWwWhMU-720p-1694664111 https://www.youtube.com/watch?v=IKjsVWwWhMU	01/07/2011	LG Smart TV
LG Smart TV internet connected TV	y2mate.is - LG Smart TV internet connected TVs at CES 2011 Which first look review-hKlqJm6nj_8-1080pp-1694664327 https://www.youtube.com/watch?v=hKlqJm6nj_8	01/06/2011	LG Smart TV internet connected TV

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
LG Smart TVs	At least as of January 2011	LG	LG Smart TV and/or LG Consumer Product Show
WD TV Live/Live Plus HD Media Players	At least as of May 2012	Western Digital	WD TV
PRTC Digital TV	At least as of February 25, 2012	Palmetto Rural Telephone Cooperative	PRTC Digital TV

5. '384 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
8,365,235	U.S.	Hunt	September 5, 2008 (filed) claiming priority to	June 18, 2009 (published) / January 29, 2013 (issued)	Hunt

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
			Provisional application filed December 18, 2007		
2012/0233640	U.S.	Odryna	March 8, 2012 (filed) / claims priority to provisional application filed November 15, 2011	September 13, 2012	Odryna
2013/0285937	U.S.	Billings	April 17, 2012 (filed); claims priority to provisional application filed April 27, 2012	October 13, 2013	Billings
2013/0014159	U.S.	Wiser	April 17, 2012 (filed); claims priority to provisional application filed April 14, 2008	January 10, 2013	Wiser
2012/00054679	U.S.	Ma	May 16, 2011 (filed); claims priority to provisional application filed August 31, 2010	March 1, 2012	Ma
2012/0266069	U.S.	Moshiri	December 28, 2010 (PCT filed)	October 18, 2012	Moshiri
2008/0155613	U.S.	Benya	December 22, 2006	June 26, 2008	Benya
2013/0332838	U.S.	Naggar	June 11, 2012	December 12, 2013	Naggar

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
2011/0289067	U.S.	Jordan	September 3, 2010; claims priority to provisional applications filed May 18, 2010	November 24, 2011	Jordan
7,631,323	U.S.	Green	December 7, 2005	December 8, 2009	Green
2010/0199219	U.S.	Robert	December 30, 2009	August 5, 2010	Robert
2009/0177989	U.S.	Jeffrey	January 14, 2008	July 9, 2009	Jeffrey

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
Boxee Box	The Boxee Box By D-link	2010	Boxee Box
Metuki, et al.	Infinite Content Within Reach_Using 3D Body-Based Interaction to Enhance Content Discovery	05/05/2012	Metuki, et al.
Mitchell	LG 55LW9800 Nano Full LED THX 3D LCD HDTV - ecoustics.com	09/12/2011	Mitchell
Netgear	NeoTV PRO ™ Streaming Player	04/20/2012	Netgear
Netgear II	Netgear NeoTV Streaming Player NTV200 User Manual	02/2012	Netgear II
Cattaneo - NoTube	D6.4 NoTube Integrated System 3rd Prototype	10/26/2011	Cattaneo - NoTube
Netgear III	NTV200S_DS_20Apr12	04/20/2012	Netgear III
Panasonic	Panasonic TH-L32C30K; TH-L32C30M; TH-L32C30T; TH-L32C30X; – Operating Instructions LCD TV	06/16/2011	Panasonic
Rettinger - Samsung	Samsung D8000 Smart TV SmartHub Demo - YouTube	05/24/2011	Rettinger - Samsung
TiVo	TiVo_Brochure_Generic_75HD	03/12/2011	TiVo
Netflix	UnoTelly_Guide: How to use Netflix outside the US	07/06/2011	Netflix
Western Digital	WD_TV_Hub - User Manual	2012	Western Digital
Netgear NeoTV NTV200	Video netgear-neotv-ntv200-streaming-player-first-time-power-up-setup-overview https://www.youtube.com/watch?v=mY43B1Vhv1w	12/30/2011	Netgear NeoTV NTV200

Author / Publisher	Reference Title	Publication Date	Short Name
Netgear NeoTV	Video netgear-neotv-pro-streaming-player-ntv200s-walkthrough-first-time-power-up https://www.youtube.com/watch?v=DXyN1rzft1A	07/14/2012	Netgear NeoTV
Netgear NTV200 NeoTV	Video netgear-ntv200-neotv-streaming-player https://www.youtube.com/watch?v=cauleDEkkaY	10/06/2011	Netgear NTV200 NeoTV
Apple TV	y2mate.is - Apple TV Netflix-a-5QP69VQQ8-720p-1694736656 https://www.youtube.com/watch?v=a-5QP69VQQ8	09/30/2010	Apple TV

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
VIZIO TVs having applications such as Netflix and Vudu including VIZIO TVs identified in https://hdguru.com/vizios-2011-hdtv-line/ including VIZIO Internet Apps and https://www.zdnet.com/article/vizio-introduces-new-line-of-led-backlit-lcd-hdtvs-sizes-range-from-16-to-72/ including VIZIO Internet Apps.	At least as of January 20, 2011	VIZIO	VIZIO HDTVs
Samsung TVs having applications such as Netflix and Vufu including Samsung UN55D8000 LED LCD HDTV and other TVs in UNC8000 series.	At least as of April 18, 2011	Samsung	Samsung TVs
NeoTV Pro Streaming Player including NeoTV NTV200 and	At least as of December 30, 2011	Netgear	NeoTV

6. ’805 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
100947887	KR	Park	06/30/2008	03/07/2010	Park
10-20090036386	KR	Korean	10/09/2007	04/14/2009	Korean

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
20100065850	KR	Lee	2008-12-09	2010-06-17	Lee II
20110022377	KR	Lee	2009-08-27	2011-03-07	Lee III
20120084457	KR	Jung	2011-01-20	2012-07-30	Jung
20120057028	KR	Park	2010-11-26	2012-06-05	Park II
2011/0282949	US	Leon	2011-05-05	2011-11-17	Leon
2005/0228806	US	Seth	2005-03-15	2005-10-13	Seth
WO12/091322	PCT	Kim	2011-12-13	2012-07-05	Kim
61/736692 Provisional Application	US	Visosky	12/13/2012	12/13/2012	Visosky
5,253,275	US	Yurt	04/02/1992	10/12/1993	Yurt
5,666,645	US	Thomas	04/26/1995	09/09/1997	Thomas
6,305,018	US	Usui	10/28/1999	10/16/2001	Usui
10,048,745	US	Wu	09/30/2010	08/14/2018	Wu
2002/0133822	US	Yang	03/13/2001	09/19/2002	Yang
2007/0136445	US	Sweatt	09/08/2006	06/14/2007	Sweatt
2011/0078735	US	Gorsuch	09/30/2009	03/31/2011	Gorsuch
2011/0209170	US	Schein	05/04/2011	08/25/2011	Schein
2012/0005605	US	White	09/16/2011	01/05/2012	White
2012/0136902	US	Oyarzabal	11/30/2010	05/31/2012	Oyarzabal
2013/0263184	US	Melnychenko	03/28/2012	10/03/2013	Melnychenko
WO02/039742	PCT	Myers	11/08/2000	05/16/2002	Myers
WO03/084218	PCT	Allen	03/29/2002	10/09/2003	Allen
WO11/043534	PCT	Lee	09/29/2009	04/14/2011	Lee

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
O'Sullivan, et al.	Improving the Quality of the Personalized Electronic Program Guide	2004	O'Sullivan
Kerne	Meta-Metadata: A Metadata Semantics Language for Collection Representation Applications	10/26/2010	Kerne

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
VIZIO TVs	At least as of 2011	VIZIO	VIZIO HDTVs
LG TVs including LG60LS5700, 55LW5700.AAU	At least as of 2011	LG	LG Product(s)
Samsung Smart TVs	At least as of 2011	Samsung	Samsung Smart TV

7. '527 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
8,027,999	US	Coffman	02/25/2008	09/27/2011	Coffman
8,209,729	US	Phillips	04/20/2006	06/26/2012	Phillips
8,464,293	US	Carr	12/31/2008	06/11/2013	Carr
9,973,817	US	Ellis	06/30/2010	05/15/2018	Ellis
2005/0228806	US	Haberman	03/15/2005	10/13/2005	Haberman
2008/0092168	US	Logan	08/20/2007	04/17/2008	Logan
2008/0163328	US	Philbin	12/29/2006	07/03/2008	Philbin
2008/0320515	US	Sloo	06/24/2007	12/25/2008	Sloo
2009/0144768	US	Nagaraja	12/04/2007	06/04/2009	Nagaraja
2010/0257561	US	Maissel	06/03/2008	10/07/2010	Maissel
2011/0145856	US	Agarwal	12/14/2009	06/16/2022	Agarwal
2011/0161242	US	Chung	12/28/2009	06/30/2011	Chung
2011/0167084	US	Bovenschulte	03/18/2011	07/07/2011	Bovenschulte
2013/0018878	US	Sansom	09/03/2010	01/17/2013	Sansom

Prior Art Systems

System Name	Date of Offer / Use / Disclosure	Relevant Person / Entity	Short Name
VIZIO TVs	At least as of 2011	VIZIO	VIZIO HDTVs
LG TVs including LG60LS5700, 55LW5700.AAU	At least as of 2011	LG	LG Product(s)
Samsung Smart TVs	At least as of 2011	Samsung	Samsung Smart TV

8. ’325 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
8,395,235	US	Hunt	09/05/2008 (filed); claims priority to Provisional application filed 12/18/2007	06/18/2009 (published) / 01/29/2013 (issued)	Hunt
9,973,817	US	Ellis	06/30/2010	05/15/2018	Ellis
2004/0128691	US	Egawa	09/10/2003	07/01/2004	Egawa
2005/0283803	US	Kimura	06/11/2005	12/22/2005	Kimura
2007/0150828	US	Tsukada	12/26/2006	06/28/2007	Tsukada
2007/0157249	US	Cordray	12/29/2005	07/05/2007	Cordray
2008/0172615	US	Igelman	06/06/2007	07/17/2008	Igelman
2010/0017713	US	Igarashi	02/24/2009	01/21/2010	Igarashi
2010/0031193	US	Stark	04/27/2009	02/04/2010	Stark
2010/0257561	US	Maissel	06/03/2008	10/07/2010	Maissel
2011/0002593	US	Takao	08/27/2010 (PCT filed)	01/06/2011	Takao
2011/0058788	US	Asao	11/05/2010	03/10/2011	Asao
2011/0162009	US	Adimatyam	12/28/2009	06/30/2011	Adimatyam
2011/0312375	US	Kim	11/03/2010	12/22/2011	Kim
2012/0054679	US	Ma	05/16/2011 (filed); claims priority to provisional application filed 08/31/2010	03/01/2012	Ma
2014/0157149	US	Nishizawa	02/24/2014	06/05/2014	Nishizawa
2014/0201632	US	Kunigita	04/10/2012	06/17/2014	Kunigita
2014/0223480	US	Berry	02/02/2013	08/07/2014	Berry
61/593995 Provisional Appl of US 2014/0223480	US	Bickell	02/02/2012	08/07/2014	Bickell

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
Mede8er MED500X2	Play Folder; Play Video from Cover Art; Watched Indicator; Mede8er MED500X2 User Manual	11/21/2011	Mede8er MED500X2
aTV Flash	aTV Flash (black) 1.2 Now Available (Apple TV)	01/17/2012	aTV Flash

Prior Art Systems

System Name	Title	Author	Short Name
VIZIO TVs having applications such as Netflix and Vudu including VIZIO TVs identified in https://hdguru.com/vizios-2011-hdtv-line/ including VIZIO Internet Apps and https://www.zdnet.com/article/vizio-introduces-new-line-of-led-backlit-lcd-hdtvs-sizes-range-from-16-to-72/ including VIZIO Internet Apps.	At least as of January 20, 2011	VIZIO	VIZIO HDTVs

9. '393 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
JPH08275138A	JP	Sakurai	3/31/1995	10/18/1996	Sakurai
2004-297442	JP	Kawaguchi	3/27/2003	10/21/2004	Kawaguchi
JPH2006-60547	JP	Minematsu	8/20/2004	3/2/2006	Minematsu
2418321	UK	Huang	9/19/2004	3/22/2006	Huang
2455705	UK	Vijayarajan	12/7/2007	6/24/2009	Vijayarajan
4,893,248	US	Pitts	2/6/1987	01/091990	Pitts
5,701,183	US	Bellemare	12/21/1995	12/23/1997	Bellamare
5,819,156	US	Belmont	1/14/1997	10/6/1998	Belmont
7,266,726	US	Ladd	11/24/2003	9/4/2007	Ladd
7,301,658	US	Henry	4/19/2002	11/27/2007	Henry
7,490,045	US	Flores	6/4/2001	2/10/2009	Flores
2006/0026655	US	Perez	7/30/2004	2/2/2006	Perez
2006/0156327	US	Dolph	1/11/2005	7/13/2006	Dolph
2008/0059390	US	Cox	5/2/2007	3/6/2008	Cox
2010/0083015	US	Yokota	7/29/2009	4/1/2010	Yokota

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
2010/0175098	US	Zustak	3/2/2010	7/8/2010	Zustak
2011/0265111	US	Shrum Jr.	4/26/2010	10/27/2011	Shrum
2011/0296453	US	Srinivasan	5/31/2010	12/1/2011	Srinivasan
2013/0198767	US	Wang	1/30/2012	8/1/2013	Wang
2013/0276035	US	Walker	03/13/2013 (filed); 07/30/2012 (priority)	10/17/2013	Walker
2015/0296245	US	Toh	06/26/2013 (filed); 06/26/2012 (priority)	10/15/2015	Toh
61/677,243	US	Walker	07/30/2012		Walker Provisional

Non-Patent Prior Art Publications

Author Publisher	Reference Title	Publication/Use Date	Short Name
Yeh et al.	An innovative application over Communications-as-a-Service: network-based multicast IPTV audience measurement	09/21/2011	Yeh

10. ’928 Patent

Prior Art Patents, Applications, and Publications

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
EP1096382	EU	McCreesh	10/26/2000	5/2/2001	McCreesh
WO 2012/150602	PCT	Rathod	5/3/2011	11/8/2012	Rathod
2004-297442	JP	Kawaguchi	3/27/2003	10/21/2004	Kawaguchi
5,857,190	US	Brown	6/27/1996	1/5/1999	Brown
6,124,877	US	Schmidt	12/8/1997	9/26/2000	Schmidt
6,530,085	US	Del Sesto	4/30/1998	3/4/2003	Del Sesto
6,704,929	US	Ozer	8/18/1999	3/9/2004	Ozer

Patent/ Application/ Publication	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
7,117,531	US	Fukasawa	8/7/2001	10/3/2006	Fukasawa
7,301,658	US	Henry	4/19/2002	11/27/2007	Henry
7,490,045	US	Flores	6/4/2001	2/10/2009	Flores
8,561,096	US	Dulac	1/8/2003	10/15/2013	Dulac
8,776,100	US	Jarman	7/22/2010	7/8/2014	Jarman
9,706,158	US	Eyer	1/5/2011	7/11/2017	Eyer
2002/0032904	US	Lerner	5/25/2001	3/14/2002	Lerner
2002/0152460	US	Soloff	5/8/2001	10/17/2002	Soloff
2008/0235348	US	Dasgupta	3/23/2007	9/25/2008	Dasgupta
2010/0088408	US	Asai	10/5/2009	4/8/2010	Asai
2007/0074258	US	Wood	9/20/2005	3/29/2007	Wood
2011/0320583	US	Parker	6/24/2010	12/29/2011	Parker
2012/0079518	US	Wan	9/23/2010	3/29/2012	Wan
2013/0198767	US	Wang	1/30/2012	8/1/2013	Wang
2013/0276035	US	Walker	03/13/2013 (filed); 07/30/2012 (priority)	10/17/2013	Walker
61/677,243	US	Walker	7/30/2012		Walker Provisional

IV. INVALIDITY DUE TO ANTICIPATION AND/OR OBVIOUSNESS PURSUANT TO P.R. 3-3(B) AND (C)

In accordance with P. R. 3-3(b) and (c), prior art references anticipating or rendering obvious some or all of the asserted claims are listed in the tables below.

A full citation to each reference is in the Tables above, along with the "Short Name" used to identify each reference throughout this disclosure. The following tables list (i) each anticipating prior art reference, (ii) the asserted claims anticipated by each anticipating reference, (iii) for each anticipating reference, the chart identifying where specifically in that reference each element of each asserted claim is found.

The art cited in the claim charts is illustrative and not exhaustive. Further, these claim charts provide illustrative citations to where each element may be found in the prior art references. The cited references may contain other disclosures of each claim element as well, and

Defendant reserves the right to argue any claim elements of the asserted claims are disclosed in non-cited portions of these references. Similarly, where Defendant cites to a patent figure in the charts, it incorporates the accompanying specification text describing that figure and vice-a versa.

1. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’255 Patent

Exhibit	Prior Art Reference
INV-255-A1	LG PZ550
INV-255-A2	KR2006/0078225
INV-255-A3	PRCT
INV-255-A4	Turkstra
INV-255-B	Lee
INV-255-B	Vallone
INV-255-B	HSS852
INV-255-B	Latif
INV-255-B	Ku
INV-255-B	Ostojic
INV-255-B	Chardon
INV-255-B	Rhee
INV-255-B	Moshiri
INV-255-B	Simons
INV-255-B	Choi

2. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’168 Patent

Exhibit	Prior Art Reference
INV-168-A1	Lider
INV-168-A2	Samsung D8000
INV-168-A3	Ferren
INV-168-A4	Alba
INV-168-B	Morgan
INV-168-B	Broderson
INV-168-B	Caffary, Jr.
INV-168-B	EIBL
INV-168-B	Woods
INV-168-B	Goebel
INV-168-B	Office 2007

3. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’174 Patent

Exhibit	Prior Art Reference
INV-174-A1	Sumiyoshi
INV-174-A2	Green
INV-174-A3	Billings
INV-174-A4	Pickelsimer
INV-174-A5	Uemichi
INV-174-A6	MagicTV
INV-174-A7	Moshiri
INV-174-B	Park
INV-174-B	Lee
INV-174-B	VIZIO
INV-174-B	Kim
INV-174-B	Redondo-Garcia
INV-174-B	Bi
INV-174-B	WD
INV-174-B	Defreese
INV-174-B	Panasonic
INV-174-B	Watanabe
INV-174-B	VIZIO II

4. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’040 Patent

Exhibit	Prior Art Reference
INV-040-A1	Ellis
INV-040-A2	WD TV
INV-040-A3	Starkenburg
INV-040-A4	Hyeon
INV-040-A5	Moshiri
INV-040-A6	PRTC Digital TV
INV-040-A7	Choi
INV-040-A8	Kim
INV-040-A9	Baurmann
INV-040-A10	LG Consumer Product Show
INV-040-B	Arriola
INV-040-B	Fein
INV-040-B	Tsou
INV-040-B	Kim
INV-040-B	Chane
INV-040-B	Turkstra
INV-040-B	Schmidt
INV-040-B	Takaki

Exhibit	Prior Art Reference
INV-040-B	Cassidy

5. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’384 Patent

Exhibit	Prior Art Reference
INV-384-A1	VIZIO HDTVs
INV-384-A2	Samsung TVs
INV-384-A3	Hunt
INV-384-A4	Odryna
INV-384-A5	NeoTV
INV-384-B	Billings
INV-384-B	Wiser
INV-384-B	Ma
INV-384-B	Moshiri
INV-384-B	Benya
INV-384-B	Naggar
INV-384-B	Jordan
INV-384-B	Green

6. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’805 Patent

Exhibit	Prior Art Reference
INV-805-A1	Allen
INV-805-A2	Melnychenko
INV-805-A3	Schein
INV-805-A4	Lee
INV-805-A5	O’Sullivan
INV-805-B	Gorsuch
INV-805-B	Kerne
INV-805-B	Myers
INV-805-B	Oyarzabal
INV-805-B	Sweatt III
INV-805-B	Thomas
INV-805-B	Usui
INV-805-B	White
INV-805-B	Wu
INV-805-B	Yang
INV-805-B	Yurt

7. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’527 Patent

Exhibit	Prior Art Reference
INV-527-A1	Chung
INV-527-A2	Haberman
INV-527-A3	Sansom
INV-527-A4	Carr
INV-527-B	Coffman
INV-527-B	Logan
INV-527-B	Sloo
INV-527-B	Nagaraja
INV-527-B	Philbin
INV-527-B	Agarwal
INV-527-B	Bonvenschulte
INV-527-B	Maissel
INV-527-B	Phillips

8. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’325 Patent

Exhibit	Prior Art Reference
INV-325-A1	VIZIO HDTVs
INV-325-A2	Ellis
INV-325-A3	Adimatyam
INV-325-A4	Tsukada
INV-325-B	Takao
INV-325-B	Igelman
INV-325-B	Kimura
INV-325-B	Ma
INV-325-B	Cordray
INV-325-B	Hunt
INV-325-B	Egawa
INV-325-B	Kim
INV-325-B	Kunigita

9. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’393 Patent

Exhibit	Prior Art Reference
INV-393-A1	Belmont
INV-393-A2	Cox
INV-393-A3	Dolph
INV-393-A4	Sakurai
INV-393-A5	Shrum
INV-393-A6	Toh

Exhibit	Prior Art Reference
INV-393-B	Kawaguchi
INV-393-B	Minematsu
INV-393-B	Huang
INV-393-B	Vijayarajan
INV-393-B	Pitts
INV-393-B	Bellemare
INV-393-B	Ladd
INV-393-B	Henry
INV-393-B	Flores
INV-393-B	Perez
INV-393-B	Yokota
INV-393-B	Zustak
INV-393-B	Srinivasan
INV-393-B	Wang
INV-393-B	Walker
INV-393-B	Walker Provisional
INV-393-B	Yeh

10. Prior Art Anticipating and/or Rendering Obvious the Asserted Claims of the ’928 Patent

Exhibit	Prior Art Reference
INV-928-A1	Ozer
INV-928-A2	Wang
INV-928-A3	Wan
INV-928-A4	Soloff
INV-928-A5	Eyer
INV-928-A6	Jarman
INV-928-B	Kawaguchi
INV-928-B	Brown
INV-928-B	Schmidt
INV-928-B	Del Sesto
INV-928-B	Fukasawa
INV-928-B	Henry
INV-928-B	Flores
INV-928-B	Dulac
INV-928-B	Lerner
INV-928-B	Dasgupta
INV-928-B	Wood
INV-928-B	Asai
INV-928-B	Parker
INV-928-B	Walker
INV-928-B	Walker Provisional
INV-928-B	Rathod

Exhibit	Prior Art Reference
INV-928-B	McCreesh

To the extent that prior art identified by Defendant as anticipating is found not to anticipate, the prior art establishes that the claimed subject matter was obvious to a person of ordinary skill in the art at the time of the alleged invention. To the extent not anticipated, no asserted claim goes beyond combining known elements to achieve predictable results or does more than choose between clear alternatives known to those of skill in the art.

Even if a particular claim element is not expressly found in one of the charted references above, those charted references render the relevant asserted claims obvious without the need to combine with any other references, having in mind the information generally known to those skilled in the art, common sense, and/or routine innovation. Accordingly, Defendant discloses each of the references cited above in Section IV as rendering obvious the asserted claims as shown in the charts referenced above.

In addition, the charted references in combination with one or more of the other charted references (as identified below and in the accompanying claim charts) render obvious the asserted claims. As explained in the accompanying charts, it would have been obvious to a person of skill in the art at the time of the alleged invention of the asserted claims to combine the various references cited herein so as to practice the asserted claims. In addition to the specific combinations of prior art and the specific combinations of groups of prior art disclosed, Defendant reserves the right to rely on any other combination of any prior art references disclosed herein. Defendant further reserves the right to rely upon combinations disclosed within the prosecution history of the references cited herein. These obviousness combinations reflect Defendant's present understanding of the potential scope of the claims that Plaintiff appears to be

advocating and should not be construed as Defendant's acquiescence to Plaintiff's interpretation of the patent claims.

One or more combinations of the prior art references identified above pursuant to P. R. 3-3(a) would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior art references identified above pursuant to P. R. 3-3(a) because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. In addition, the combination of the prior art references identified above pursuant to P. R. 3-3(a) would have been obvious because the combination represents the known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior art references identified above pursuant to P. R. 3-3(a) includes the interrelated teachings of multiple prior art references; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the asserted claims; the existence of a known need or problem in the field of the endeavor at the time of the invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and: (1) the nature of the problem being solved, (2) the express, implied, and inherent teachings of the prior art, (3) the knowledge of persons of ordinary

skill in the art, (4) the fact that the prior art is generally directed towards associating images with their content, and (5) the predictable results obtained in combining the different elements of the prior art. Additionally, one would be motivated to address at least the alleged problems or achieve the purported objectives identified in the descriptions of the Asserted Patents.

Any reference or combination of references that anticipates or makes obvious an asserted independent claim also makes obvious any asserted claim dependent on that independent claim because every element of each dependent claim was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. Accordingly, Defendant contends that each asserted claim would have been obvious not only by the combinations explicitly defined in these contentions, but also by any combination of references that renders obvious an asserted claim.

Numerous prior art references, including those identified above pursuant to P. R. 3-3(a) and in the claim charts reflect common knowledge and the state of the prior art prior to the priority dates of the Asserted Patents. As it would be unduly burdensome to create detailed claim charts for the thousands of invalidating combinations, Defendant has provided illustrative examples of such invalidating combinations below and in the charts attached hereto. For at least the reasons described above and below in the examples provided as well as in the attached claim charts, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any combination of those identified in the attached claim charts, to meet the limitations of the asserted claims. As such, Defendant's inclusion of exemplary combinations does not preclude Defendant from identifying other invalidating combinations as appropriate.

B. Identification of Combinations of Prior Art Rendering the Asserted Claims Obvious

The asserted claims are rendered obvious by single references when combined with the knowledge of a person of ordinary skill in the art, combinations of references, and combinations of references when combined with the knowledge of a person of ordinary skill in the art as explained herein and in the exhibits attached hereto.

For each charted reference, the invalidity charts identify specific additional charts/references that it may be combined with under 35 U.S.C. § 103.

C. Motivation to Combine

In *KSR*, the Supreme Court emphasized that an idea that is the result of ordinary innovation, ordinary skill, or common sense should not be patentable. *See KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398 (2007). The Supreme Court held that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 420-21. Although a patent challenger is not required to show that one of ordinary skill in the art would have had a specific motivation to combine prior art references, such a showing may be helpful to the obviousness analysis. *Id.* at 418; *see also id.* at 402.

One of skill in the art would have been motivated to combine the references identified herein because, for example, the identified combinations fall into one or more of the following categories:

- A combination of elements known in the prior art according to known methods to yield a predictable result;
- A combination that is a simple substitution of one or more known elements for another to obtain a predictable result;
- A combination that involves using a known technique to improve a similar device or method in the same way;

- A combination that involves applying a known technique to a known device or method ready for improvement to yield a predictable result;
- A combination that results from a finite number of identified, predictable solutions with a reasonable expectation of success, such that the solution was one which was "obvious to try";
- A combination that results from known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and
- A teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention.

Further, the Federal Circuit has held that a motivation to combine references may be implicit for patents claiming an "improvement":

> [A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the "improvement" is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even commonsensical—we have held that there exists in these situations a motivation references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him capable of combining the prior art references.

DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1368 (Fed. Cir. 2006). The prior art references identified herein explicitly or implicitly refer to other prior art references, share common authors or inventors, were published in the same journals, presented at the same conferences, were presented as proposals to standards working groups, and/or were developed at common companies, schools, or organizations, all of which would motivate one of skill in the art to combine them. As such, detailed motivations to combine can be found in each exhibit of the charted references. These references are also within the fields of the Asserted Patents and are directed to similar subject matter within those fields. Additionally, any products, devices, or processes described in the references existed and/or were invented before or

during the period in which the claimed inventions were developed, providing further motivation to combine them.

To the extent Plaintiff challenges a combination of prior art with respect to a particular element, Defendant reserves all rights to supplement these contentions to further specify the motivation to combine the prior art. Defendant may rely on cited or uncited portions of the prior art, other documents, and/or expert testimony to establish that a person of ordinary skill in the art would have been motivated to modify or combine the prior art so as to render the claims invalid as obvious.

D. There Is No Evidence of Any Indicia of Nonobviousness

There is no evidence of any indicia of nonobviousness, including any long-felt but unsolved need; copying; failure of others; commercial success due to the patented invention; no industry praise; no unexpected results; no industry skepticism and no licensing. Each is addressed in turn below:

No long felt but unsolved need. There was no long-felt but unsolved need that the Asserted Claims solve. The concepts described in the Asserted Patents were all well known before the alleged invention dates of the Asserted Patents as evidenced by the patents themselves, their file histories and references cited therein, and the prior art identified herein, including those identified in the above-referenced Exhibits. In addition, there was no long felt but unsolved need because there is nothing particularly compelling about the claimed methods, systems, and apparatus.

No copying. Plaintiff has provided no credible evidence that the alleged inventions of the Asserted Patents were copied or that any functionality that practices the Asserted Patents was copied. Copying "requires evidence of efforts to replicate a specific product." *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). Here, Plaintiff has not, and cannot, show that

Defendant copied any product that embodies the Asserted Patents. Further, evidence of copying is "not sufficient to demonstrate nonobviousness of the claimed invention" where, as here, there is a "substantial question of validity raised by the prior art references" cited by Defendant. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1366 (Fed. Cir. 2001). As explained in detail in these contentions, the Asserted Patents are rendered obvious by the prior art. Thus, Plaintiff cannot show any nexus between any alleged copying and the merits of the claimed inventions of the Asserted Patents.

No failure of others. Although "[n]onobviousness is suggested by the failure of others to find a solution to the problem which the patents in question purport to solve," *Symbol Techs., Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1578 (Fed. Cir. 1991), this is not such a case. As explained in detail in these contentions, the alleged inventions or the Asserted Patents were well known in the art, the claimed technology straightforward and predictable.

No commercial success. Plaintiff has not provided any evidence that any alleged success of its products or any other products is due to the alleged inventions claimed in the Asserted Patents. A patentee bears the burden of demonstrating that the relevant commercial success is attributable to the claimed invention "as opposed to other economic and commercial factors unrelated to the technical quality of the patented subject matter." *Cable Elec. Prods, Inc. v. Genmark, Inc.*, 770 F. 2d 1015, 1027 (Fed. Cir. 1985). Here, Plaintiff has not shown and cannot show that Defendant's success is due to the alleged invention of the Asserted Patents. The commercial success of the accused product is unrelated to the purported inventions of the Asserted Patents. Furthermore, if any commercial success is due to any of the concepts disclosed in the Asserted Patents, those concepts are also present in the prior art and thus are irrelevant to the question of obviousness. *See Tokai Corp. v. Easton Enterprises, Inc.*, 632 F.3d 1358, 1369-70

(Fed. Cir. 2011) ("If commercial success is due to an element in the prior art, no nexus exists."); *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) ("Where the offered secondary consideration actually results from something other than what is both claimed and novel in the claim, there is no nexus to the merits of the claimed invention."); *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) ("[I]f the feature that creates the commercial success was known in the prior art, the success is not pertinent.").

No industry praise. Plaintiff has presented no evidence of industry praise for the alleged inventions of the Asserted Patents or any functionality that allegedly practices the Asserted Patents. To the extent any praise is related to any functionality that allegedly practices the Asserted Patents, that praise is not due to the allegedly novel features of the Asserted Patents, but instead only to features present in the prior art, which is not a sufficient nexus to be relevant to the question of industry praise for purposes of obviousness. *See Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008).

No unexpected results. There is no evidence of any unexpected results when the elements of the Asserted Claims were combined. Instead, as discussed above, the concepts claimed in the Asserted Patents were already combined or would have been obvious to combine in the same manner as the Asserted Claims. These prior art systems and products, as described in in these contentions, disclosed the same combinations of elements, and the same results of such combinations, that are recited in the Asserted Claims of the Asserted Patents. Thus, there were no unexpected results that arose from combining the well-known elements in the Asserted Claims of the Asserted Patents.

No industry skepticism. Plaintiff has presented no evidence that others were skeptical before the alleged invention date of the Asserted Patents, nor can it. In fact, there was no industry

skepticism concerning the claimed concepts that predates the Asserted Patents. Instead, many companies and individuals were already using the concepts claimed in the Asserted Patents. Thus, there was no industry skepticism that using or combining these well-known prior art concepts would be viable; others in the field were already combining them in the same manner as arranged in the Asserted Claims.

Simultaneous Invention. Individuals working independently of the Asserted Patents' named inventor(s) simultaneously or near-simultaneously invented the alleged invention of the Asserted Claims of the Asserted Patents. Such evidence supports a finding that the Asserted Claims would have been obvious to a person of ordinary skill in the art at the time of the invention. *See Geo. M. Martin Co. v. Alliance Mach. Sys.*, 618 F.3d 1294, 1305 (Fed. Cir. 2010) ("Independently made, simultaneous invention, made within a comparatively short space of time, are persuasive evidence that the claimed apparatus was the product only of ordinary mechanical or engineering skill.") (citing *Concrete Appliances Co. v. Gomery*, 269 U.S. 177, 184 (1925)) (internal quotations omitted); *see also Ecolochem, Inc. v. So. Cal. Edison Co.*, 227 F.3d 1361, 1379 (Fed. Cir. 2000).

V. INVALIDITY UNDER 35 U.S.C. § 112 PURSUANT TO P.R. 3-3(D)

The following Invalidity Contentions set forth below, pursuant to P. R. 3-3(d), are subject to revision and amendment pursuant to Federal Rule of Civil Procedure 26(e) and the Orders of record in this matter to the extent appropriate in light of further investigation and discovery regarding the defenses below, the Court's construction of the claims at issue, and/or the review and analysis of expert witnesses.

A. Indefiniteness under 35 U.S.C. § 112

Claims are indefinite under 35 U.S.C. § 112(b) and/or pre-AIA 35 U.S.C. § 112, ¶ 2 when they "fail to inform, with reasonable certainty, those skilled in the art about the scope of the

invention." *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). To the extent an asserted apparatus claim includes both apparatus and method limitations, that claim is invalid for indefiniteness under § 112[3] because it fails to identify or notify the public of what constitutes direct infringement. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005).

35 U.S.C. § 112 also requires that the claimed subject matter be what "the inventor or a joint inventor regards as the invention." "Where it would be apparent to one of skill in the art, based on the specification, that the invention set forth in a claim is not what the patentee regarded as his invention, we must hold that claim invalid under § 112, paragraph 2." *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002).

In addition to Defendant's reservation of rights stated above, Defendant notes that the Court's Docket Control Order contemplates that all indefiniteness issues be brought to the Court's attention through the *Markman* briefing process, Defendant's detailed arguments as to indefiniteness will be presented at that time, through the *Markman* meet and confer and briefing processes. Moreover, Defendant's contentions are based on the manner in which Plaintiff is alleging infringement, to the extent such allegations are apparent from Plaintiff's infringement contentions, which are deficient in a number of respects.

B. Lack of Enablement/Written Description Under 35 U.S.C. § 112

35 U.S.C. § 112(a) and/or pre-AIA 35 U.S.C. § 112, ¶ 1 requires that the specification contain a written description of the invention. To satisfy the written description requirement, the specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention at the time of

[3] Unless otherwise noted, references to § 112 refers to pre-AIA and corresponding portions of current 35 U.S.C. § 112.

filing the patent application. *See generally Ariad Pharm., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336 (Fed. Cir. 2010) (en banc). "[T]he hallmark of written description is disclosure." *Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361-62 (Fed. Cir. 2011) (citation omitted). The test for whether a specification adequately describes an invention is "whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. . . . [T]he test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. . . . [It] is a question of fact." *Ariad Pharms., Inc.*, 598 F.3d at 1351; *Boston Scientific*, 647 F.3d at 1362. Moreover, "it is the specification itself that must demonstrate possession." *Ariad Pharms., Inc.*, 598 F.3d at 1352.

The enablement requirement of § 112 demands that the patent specification enable "those skilled in the art to make and use the full scope of the claimed invention without 'undue experimentation.'" *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)). "To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation." *MagSil Corp. v. Hitachi Global Storage Techs.*, 687 F.3d 1377, 1380-81 (Fed. Cir. 2012) (citation omitted). "[T]he scope of the claims must be less than or equal to the scope of the enablement." *Nat'l Recovery Tech., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1196 (Fed. Cir. 1999).

Certain claims of the patents-in-suit are not supported by the written description and are not enabled.

C. The Following Claims and Limitations are Invalid Under 35 U.S.C. § 112

1. ’255 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’255 Patent	Claims 1, 3, 10, 12, 13, 19, 20	“associated with,” and “a processor associated with the intelligent television/TV,” “substantially simultaneously,” “substantially an entire area of a screen of the TV,” “determine/determining, by the processor and in response to receiving the first live TV application input, a first live TV application feature/a live application feature to present via the display,” “global panel feature/input,” “determine/determining, by the processor and in response to receiving the home screen input, a global panel feature to present via the display,” “the processor”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’255 Patent	Claims 19, 20,	“input device”	The term requires construction as a means-plus-function limitation under 35 U.S.C. § 112 ¶ 6.
’255 Patent	Claims 7, 16	“manager,” and “provider”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

2. ’168 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’168 Patent	Claims 1, 4, 11, 13	“associated with,” “receiving, by a processor of the intelligent television, a selection associated with a first navigation bar in the user interface of the intelligent television,” “can contain,” “cannot contain,” “determining if a second user interface, associated with the selection, can contain a second navigation bar,” “if a second user interface, associated with the selection, can contain a second navigation bar, rendering a horizontal navigation bar as the second navigation bar in the second user interface,” “user interface device,” and “if a second user interface, associated with the selection, cannot contain a second navigation bar, rendering a different user interface device for the second navigation bar in the second user interface”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’168 Patent	Claims 1, 4, 11, 13	“user interface device”	The term requires construction as a means-plus-function limitation under 35 U.S.C. § 112 ¶ 6.
’168 Patent	Claims 5, 13	“too large,” “user interface device,” and “if the second navigation bar is too	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
		large for the second user interface, the processor renders different user interface device"	to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
'168 Patent	Claims 7, 14	"is needed," "is not needed," and "determining if a drop-down navigation bar is needed;"	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

3. '174 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
'174 Patent	Claims 1, 10	"associated with," "receiving/receives a first directional input via the input device associated with the television," "determining/determines, based on a first direction associated with the first directional input, a second content panel to display via the television in the application panel interface"	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
'174 Patent	Claims 1, 10	"input device"	The term requires construction as a means-plus-function limitation under 35 U.S.C. § 112 ¶ 6.
'174 Patent	Claims 2, 11	"representative of," "retrieving/retrieve, from a memory, a first image that is representative of the at least one of content source and the content information"	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
			lacks written description and enabling support.
’174 Patent	Claim 4	“associated with,” “determining, based on a second direction associated with the second directional input, a third content panel to display via the television.”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’174 Patent	Claim 5, 13	“associated with,” “displaying/display, via the television, the content information associated with the determined source”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’174 Patent	Claim 7	“associated with,” and “wherein the second content information comprises information associated with TV series episode content information”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

4. ’040 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’040 Patent	Claims 1, 11, 21	“associated with,” “indication associated with a selection by a user,” “highlighted as being associated,” “wherein at least one of the sources is highlighted as being associated with the first content information”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’040 Patent	Claims 2, 12	“associated with,” “identifying a user associated with the received indication,” “retrieving one or more settings associated with the identified user,” “retrieving, from memory, content information associated with the identified user”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’040 Patent	Claims 3, 13	“associated with,” “identifying a user associated with the received indication,” “retrieving, from memory, one or more settings associated with the identified user,” “retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user;”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’040 Patent	Claims 4, 14	“associated with,” “receiving a second indication associated with a selection by a user”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

5. ’384 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’384 Patent	Claims 1, 3-4, and 6-9	The phrases and/or terms: “a master view,” “a characteristic,” “a collection view,” “determining, by the processor, if the selection in the collection view is for a series or one of a movie or single show,” “a navigation to view VOD content is an ordered set of user interfaces,” “a top level,” “a bottom level,” and “two user-selectable devices.”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the “navigation” limitation in claim 1, and the “user-selectable devices” limitation in claim 6, are recited as performing functions (*i.e.*, viewing VOD content and viewing a collection view, respectively), but lack a structure for performing those stated function. These terms therefore require construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(f); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the specification fails to disclose any

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
			corresponding structure for performing the required functions associated with these limitations, all Challenged Claims and/or claim 6 are invalid as indefinite under pre-AIA 35 U.S.C. ¶ 112, ¶ 2 and/or 35 U.S.C. § 112(b).
’384 Patent	Claim 6	The phrases and/or terms: “a master view,” “user-selectable devices,” and “a collection view.”	This claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

6. ’805 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’805 Patent	Claims 1-2, 10-11, 17-18	“content provider module” and “subservice	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’805 Patent	Claims 3, 12	“serve one or more applications of the TV with EPG information in a read-only format”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’805 Patent	Claims 4, 13	“the media data provider is configured to provide media metadata personalized for a user”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’805 Patent	Claims 6, 15	The phrases and/or terms: “provide a real-time view of media sources,” “maintain a list of connected media sources”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’805 Patent	Claim 7	“the media browser maintains a non-permanent storage”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’805 Patent	Claims 9, 16	“other contents”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

7. ’325 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’325 Patent	1-8	The phrases and/or terms: “providing, by a processor of the intelligent television, a first catalog view,” “at least three different items of VOD content on a display,” “have a watched status,” “a first user interface device,” “sort,” “a first selection of the first user interface device,” “select between the three watched statuses,” “a second catalog view of one or more different items of VOD content,” “each with the first one of,” “displayed with,” “a second selection of the first user interface device,” “the at least three different items of VOD content of the first catalog view,” “a second one of the not watched status, the partially watched status, and the fully watched status,” “a third catalog view of one or more different items of VOD content,” and “each with the second one of.”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the “a first user interface device” limitation is recited as performing a function (*i.e.*, sorting VOD content), but lacks a structure for performing its stated function. It therefore requires construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(f); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the specification fails to disclose any corresponding structure for performing the required functions associated with these limitations, all Challenged Claims are invalid as indefinite under pre-AIA 35 U.S.C. ¶ 112, ¶ 2 and/or 35 U.S.C. § 112(b).

8. ’527 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’527 Patent	Claims 1, 7	wherein the first view is sorted based on at least three of the metadata characteristics	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’527 Patent	Claim 7	“An intelligent television system comprising: … a processor in communication with the memory, the processor that: executes a VOD data service … receives content … determines metadata … creates a file … stores the metadata … receives a criteria … executes a user interface …”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

9. ’393 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’393 Patent	Claims 1, 10, 16	“determining that a new reporting period has begun” “determines that a new reporting period has begun” “determining that a new reporting period has begun”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’393 Patent	Claims 1, 16	“the processor formatting a report having at least one attribute of the television” “formatting a report having at least one attribute of the television”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’393 Patent	Claims 1, 16	“wherein the report comprises a set of Claim data associated with substantially static attributes of the television’ “formatting a report having at least one attribute of the television, wherein the report comprises a set of core data associated with substantially static attributes of the television”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’393 Patent	Claims 1, 10, 16	“the processor determining that a new transmission period has begun” “determines that a new transmission period has begun” “determining that a new transmission period has begun”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’393 Patent	Claims 1, 10, 16	“the processor determining that the stored report is unsent” “determines that the stored report is unsent” “determining that the stored report is unsent”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’393 Patent	Claims 1, 10, 16	“determining one or more of if the report was successfully transmitted and if the report was successfully received” “determines one or more of if the report was successfully transmitted and if the report was successfully received” “determining one or more of if the report was successfully transmitted and if the report was successfully received”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’393 Patent	Claims 2, 11	“formatting the report with first-time data, the first-time data being associated with a first power-up of the television” “the processor formatting the report with first-time data, the first-time data being associated with a first power-up of the television”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’393 Patent	Claims 3, 12	“ upon determining the report contains first-time data, omitting the deleting of the report from the non-volatile memory” “upon determining the report contains first-time data, omitting the deleting of the report from the non-volatile memory”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’393 Patent	Claims 11-15		Claims 11-15 are invalid for lack of definiteness because they improperly mix more than one class of patentable subject matter (method and apparatus). *See*, *e.g.*, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). More specifically, claims 11-15 recite methods but depend from claim 10, which recites an apparatus.
’393 Patent	Claims 17-20		Claims 17-20 are invalid for lack of definiteness because they improperly mix more than one class of patentable subject matter (method and apparatus). *See*, *e.g.*, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). More specifically, claims 17-20 recite methods but depend from claim 16, which recites an non-transitory computer medium.

10. ’928 Patent

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’928 Patent	Claim 1	“one or more of capturing and receiving data associated with usage of a television including one or more of activity data, application data, application manager data, system time/date information and activity data associated with another component of the television; storing the data”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’928 Patent	Claim 1	“determining whether a report is a first report associated with a first power-up of the television” /	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’928 Patent	Claim 1	“determining a report number for the report, the report number usable to estimate when the report was generated”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’928 Patent	Claim 1	“generating the report by aggregating the one or more of the captured and received data and appending the determined report number to the report, wherein the first report is formatted to include first report information, and subsequent reports include customized information”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’928 Patent	Claim 1		Claim 1 is invalid for lack of definiteness because it improperly mixes more than one class of patentable subject matter (method and apparatus). *See*, *e.g.*, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). Additionally, dependent claims 2-4 are likewise indefinite since they depend from claim 1.
’928 Patent	Claim 2	“upon completion of the transmitting of the report, receiving a failure indicator associated with transmitting the report”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’928 Patent	Claims 3, 11	‘wherein capturing the data further comprises capturing a most used application activity of the television” “wherein the activity monitor identifies a most used activity of the television”	The claims are invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
’928 Patent	Claim 8	“wherein capturing the data further comprises capturing an uninstalled application activity of the television”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
’928 Patent	Claim 9	“an activity monitor”	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the “activity monitor” limitation is recited as performing a function (*i.e.*, “identify usage activity of a television, the usage activity represented by one or more of activity data, application data, application manager data, system time/date information and usage activity data associated with another component of a television, and store information associated with the usage activity in the storage device”), but lacks a structure for performing its stated function. It therefore requires construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(f); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the specification fails to disclose any corresponding structure for

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
			performing the required function associated with the "an activity monitor," Claims 9-15 are invalid as indefinite under pre-AIA 35 U.S.C. ¶ 112, ¶ 2 and/or 35 U.S.C. § 112(b).
'928 Patent	Claim 9	"a report generator"	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the "report generator" limitation is recited as performing a function (*i.e.*, "access the information in the storage device and generate a usage report, the usage report including report number information, the report number information usable to estimate when the report was generated, as determined by assessing whether the report is a first report or a subsequent report, the first report being associated with a first power-up of the television and wherein the first report is formatted to include first report information, and subsequent reports include customized information"), but lacks a structure for performing its stated function. It therefore requires construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(b); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
			specification fails to disclose any corresponding structure for performing the required function associated with the "a report generator," Claims 9-15 are invalid as indefinite under pre-AIA 35 U.S.C. ¶ 112, ¶ 2 and/or 35 U.S.C. § 112(b).
'928 Patent	Claim 9	"wherein the activity monitor is operable to identify usage activity of a television, the usage activity represented by one or more of activity data, application data, application manager data, system time/date information and usage activity data associated with another component of a television, and store information associated with the usage activity in the storage device"	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
'928 Patent	Claim 9	"wherein the report generator is operable to access the information in the storage device and generate a usage report, the usage report including report number information, the report number information usable to estimate when the report was generated, as determined by assessing whether the report is a first report or a subsequent report, the first report being associated with a first power-up of the television and wherein	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
		the first report is formatted to include first report information, and subsequent reports include customized information; and wherein the transmitter is operable to transmit the usage report to a receiver"	
'928 Patent	Claim 16	"a television operable to execute at least one application"	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support.
'928 Patent	Claim 16	" an activity monitor operable to monitor usage activity of the television"	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the "activity monitor" limitation is recited as performing a function (*i.e.*, "monitor usage activity of the television"), but lacks a structure for performing its stated function. It therefore requires construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(b); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the specification fails to disclose any corresponding structure for

Asserted Patent	Asserted Claim(s)	Claim Term(s)	Invalidity Under 35 U.S.C. § 112
			performing the required function associated with the "an activity monitor," Claims 16-20 are invalid as indefinite under pre-AIA 35 U.S.C. § 112 ¶ 2 and/or 35 U.S.C. § 112(b).
'928 Patent	Claim 16	"a report generator operable to access the stored information and generate a report, the report including report number information determined by assessing whether the report is a first report associated with a first power-up of the television or a subsequent report associated with customized information, the report number information being usable to estimate when the report was generated"	The claim is invalid under 35 U.S.C. § 112(a) and/or (b) or pre-AIA 35 U.S.C. § 112 ¶¶ 1, 2 because the claim limitations fail to inform those skilled in the art about the scope of the invention with reasonable certainty and/or lacks written description and enabling support. In addition, the "report generator" limitation is recited as performing a function (*i.e.*, "operable to access the stored information and generate a report"), but lacks a structure for performing its stated function. It therefore requires construction as a means-plus-function limitation under pre-AIA 35 U.S.C. § 112 ¶ 6 and/or 35 U.S.C. § 112(b); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Because the specification fails to disclose any corresponding structure for performing the required function associated with the "a report generator," Claims 16-20 are invalid as indefinite under pre-AIA 35 U.S.C. ¶ 112, ¶ 2 and/or 35 U.S.C. § 112(b).

VI. SECTION 101 DEFENSES

The asserted claims of the Asserted Patents are invalid because they do not constitute patentable subject matter under 35 U.S.C. § 101. Section 101 broadly provides that "[w]however invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. However, this section "contains an important implicit exception: laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014); *see also Bilski v. Kappos*, 561 U.S. 593, 601 (2010) (citation omitted). The asserted claims in this case all claim a patent ineligible abstract idea.

A section 101 analysis consists of a "two-step analytical framework to identify patents that, in essence, claim nothing more than abstract ideas." *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1347 (Fed. Cir. 2016).

First, the Court must determine whether the claims are "directed to" a patent-ineligible concept, such as an abstract idea. *Alice*, 134 S. Ct. at 2355. Courts "treat[] analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146 (Fed. Cir. 2016). Method claims that describe concepts "long practiced in our society" have also been found to be directed to an abstract idea. *Intell. Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369-70 (Fed. Cir. 2015); *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("The concept of data collection, recognition and storage is undisputedly well-known. Indeed, humans have always performed these functions."). And, "the essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under

§ 101, especially in the area of using generic computer and network technology to carry out economic transactions." *Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1356 (Fed. Cir. 2016).

Second, the claim limitations are examined for an "inventive concept." *Alice,* 134 S. Ct. at 2355. "The prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment," *Id.* at 2358, nor is it sufficient to "append[] . . . well-understood, routine, conventional activities previously engaged in by workers in the field." *Intell. Ventures I LLC v. Symantec Corp.,* 838 F.3d 1307, 1313 (Fed. Cir. 2016) (quotation omitted). Ultimately, "[c]laims that amount to nothing significantly more than an instruction to apply [an] abstract idea . . . using some unspecific, generic computer and in which each step does no more than require a generic computer to perform generic computer functions do not make an abstract idea patent-eligible." *Id.* at 1315 (quotations and citations omitted); *see In re TLI Commc'ns LLC Patent Litig.,* 823 F.3d 607, 613 (Fed. Cir. 2016).

The asserted claims of the Asserted Patents recite unpatentable subject matter under 35 U.S.C. § 101 as detailed in Defendant's Subject Matter Eligibility Contentions, shown in the table below:

Patent	**Exhibit**
'255 Patent	Exhibit INV-255-C
'168 Patent	Exhibit INV-168-C
'174 Patent	Exhibit INV-174-C
'040 Patent	Exhibit INV-040-C
'384 Patent	Exhibit INV-384-C
'805 Patent	Exhibit INV-805-C
'527 Patent	Exhibit INV-527-C
'325 Patent	Exhibit INV-325-C
'928 Patent	Exhibit INV-928-C
'393 Patent	Exhibit INV-393-C

Pursuant to Section (b) of the Court's Standing Order Regarding Subject Matter Eligibility Contentions, in addition to the references and materials identified above in Sections III and IV, Defendant further identifies the following documents and materials upon which Defendant may rely for the purposes of demonstrating that each of the Asserted Claims do not qualify as patent-eligible subject matter.

Prior Art Patents, Applications, and Publications

Patent	Country of Origin	First Named Inventor	Filing Date/Priority Date	Published/Issued Date	Short Name
5,905,521	US	Gatto	11/06/1995	05/18/1999	Gatto
4,315,309	US	Coli	06/25/1979	02/9/1982	Coli
4,454,575	US	Bushaw	12/29/1980/	06/12/1984	Bushaw
4,4545,576	US	McInroy	05/18/1981	06/12/1984	McInroy
5,423,033	US	Yuen	09/30/1992	06/06/1995	Yuen
5,539,822	US	Lett	04/19/1994	07/23/1996	Lett
5,654,747	US	Ottesen	12/29/1994	08/05/1997	Ottesen
6,047,319	US	Olsen	07/17/1996	04/04/2000	Olson
7,380,031	US	Jones	12/21/2005	05/27/2008	Jones
9,277,249	US	Guzman	07/24/2012	03/01/2016	Guzman
2006/0195856	US	Solomon	02/25/2005	08/31/2006	Solomon

Non-Patent Prior Art Publications

Author / Publisher	Reference Title	Publication Date	Short Name
Stallionzo	Smart TV History: What Year Did Smart TV Come Out?	2007	Stallionzo
Magid – LA Times	WebTV May Not Be for Everyone, but It's a Step in the Right Direction	09/30/1996	Magid
MSN TV - Wikipedia	MSN TV	n/d	MSN TV - Wikipedia
Mohammadi	HP MediaSmart TV	11/12/2007	Mohammadi
Murph	LG to release first HDTVs that instantly stream movies from Netflix	01/05/2009	Murph
Reuters Staff	Netflix and VIZIO to stream films to high-def TVs	01/07/2009	Reuters
Fermosa	VIZIO's Wireless TV Connects to the Web Through New 'Widget Stream'	01/08/2009	Fermosa
Google TV - Wikipedia	Google TV (operating system)	2010	Google TV - Wikipedia

Author / Publisher	Reference Title	Publication Date	Short Name
Netflix	Netflix Help Center - How to use Netflix on your Apple TV	n/d	Netflix
Apple TV	Wikipedia Apple TV	2007	Apple TV
Levy – Science & Tech	Graphical User Interface Computing	n/d	Levy
Wikipedia	History of the graphical user interface - The history of the graphical user interface, understood as the use of graphic icons and a pointing device to control a computer, covers a five-decade span of incremental refinements, built on some constant core principles.	n/d	Wikipedia
Reimer – Ars Technica	A History of the GUI Have you ever wondered about the genealogy of the graphical user interface.	05/04/2005	Reimer
Windows 95	GUIs	n/d	Windows 95
Verge Staff	Apple, IOS: A VISUAL HISTORY	09/16/2013	Verge Staff
Apple Wiki	Apple TV (1st generation)	2007	Apple Wiki
Hackett	The Original Apple TV: Ushering in a New Era of Entertainment	11/14/2017	Hackett
Tarr	Samsung UN55D8000 LED LCF HDTV – First Review	04/18/2021	Tarr
Katzmaier	Samsung UNC7000 series LED-based LCD	03/09/2010	Katzmeier
Tarr II	VIZIO ADDS NEW HDTV MODELS FOR THE HOLIDAY SEASON	10/02/2012	Tarr II
King	VIZIO introduces new line of LED backlit LCD HDTVs; sizes range from 16" to 72." VIZIO has unleashed details of its new LCD HDTV catalog at CES 2010, and they've got 37 new displays in the XVT and M Series lines, ranging from 16-inch to 72-inch wide-angle screens.	01/07/2010	King
Wilkinson	VIZIO M3D650SV 3D LED-LCD TV	02/14/2012	Wilkinson
Wiley - LCD TV	VIZIO XVT472SV TV Review: LCD LED HDTV		Wiley - LCD TV
Tarr III	VIZIO'S 2011 HDTV LINE	02/03/2011	Tarr III
Nielson	Celebrating 95 Years of Innovations		Nielson History
TIVO	Form 10-K for Fiscal Year Ended January 31, 2008		TIVO 10-K

Prior Art Systems

System Name	Title	Author	Short Name
VIZIO M3D650SV 3D LED-LCD TV	N/A	N/A	VIZIO M3D650SV 3D LED-LCD TV
VIZIO XVT472SV	N/A	N/A	VIZIO XVT472SV
VIZIO'S 2011 HDTV	N/A	N/A	VIZIO'S 2011 HDTV
Samsung UNC7000	N/A	N/A	Samsung UNC7000
Samsung UN55D8000 LED LCF HDTV	N/A	N/A	Samsung UN55D8000 LED LCF HDTV
Apple TV	N/A	N/A	Apple TV
Windows 95	N/A	N/A	Windows 95
HP MediaSmart TV	N/A	N/A	HP MediaSmart TV
MSN TV	N/A	N/A	MSN TV
Google TV	N/A	N/A	Google TV
Netflix	N/A	N/A	Netflix
Nielson	N/A	N/A	Nielson
TIVO	N/A	N/A	TIVO

VII. P.R. 3-4 DOCUMENT PRODUCTION

A. Documents Related to the Accused Products/Instrumentalities Under P.R. 3-4(a)

Pursuant to P. R. 3-4(a), Defendant has produced documents bates labeled VIZIO-MMT-00000192-131016, VIZIO-MMT-00139643-143550 and will continue to produce, documentation sufficient to show the operation of the Accused Products that Defendant understands are accused of infringement.

B. Documents Related to Prior Art Under P.R. 3-4(b)

Pursuant to P. R. 3-4(b), Defendant is producing concurrently herewith documents bates labeled VIZIO-MMT-00131017-00139642, reflecting the prior art references identified above and/or in the attached charts in connection with Defendant's P. R. 3-3(a) disclosures. Defendant further reserves the right to supplement their accompanying P.R. 3-4(b) document production

should it later discover additional prior art documents, information, testimony, prior art systems and related documentation, and/or software or hardware code, including but not limited to information provided by third parties after the date of service of these Invalidity Contentions.

Dated: September 28, 2023

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was served on September 28, 2023, via electronic mail to all counsel of record who are deemed to have consented to electronic service per Local Rule CV-5(d).

/s/ Steven W. Hartsell