

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

TOUCHSTREAM TECHNOLOGIES, INC.,	§	
	§	
<i>Plaintiff,</i>	§	
	§	
v.	§	Civil Case No. 6:21-cv-569-ADA
	§	
GOOGLE LLC,	§	JURY TRIAL DEMANDED
	§	
<i>Defendant.</i>	§	
	§	

DEFENDANT’S PRELIMINARY INVALIDITY CONTENTIONS

Defendant Google LLC (“Google” or “Defendant”), by their attorneys, make these Invalidation Contentions concerning U.S. Patent Nos. 8,356,251 (the “’251 patent”), 8,782,528 (the “’528 patent”), and 8,904,289 (the “’289 patent”) (collectively, the “Asserted Patents”), to Plaintiff Touchstream Technologies, Inc. (“Plaintiff” or “Touchstream”) in connection with the above-referenced action, pursuant to the Court’s Scheduling Order entered by the Court (Dkt. 21) and the Court’s Order Governing Proceedings – Patent Case.

Defendant’s Preliminary Invalidation Contentions herein reflect Defendant’s knowledge as of this early date in the present action. Defendant reserves the right, to the extent permitted by the Court and the applicable statutes and rules, including but not limited to the Court’s Order Governing Proceedings – Patent Case, to modify and/or supplement the Preliminary Invalidation Contentions in response to becoming aware of additional prior art or information regarding prior art, any modification or supplementation of Touchstream’s Infringement Contentions, any claim construction by the Court, or as otherwise may be appropriate.

The Scheduling Order and the Order Governing Proceedings – Patent Case contemplate that these Preliminary Invalidation Contentions would be prepared and served in response to

Touchstream's Infringement Contentions. Touchstream's Infringement Contentions, however, are deficient at least insofar as they fail to articulate how any single accused product, system, or application (or its use) infringes each and every element of any of the asserted claims, and Defendant reserves the right to amend the Preliminary Invalidity Contentions in response to any permissible supplementation or amendment of Touchstream's Infringement Contentions. Due to Touchstream's failure to provide proper and complete disclosure of its Infringement Contentions, under the Order Governing Proceedings – Patent Case, Defendant reserves the right to seek leave from the Court to amend these Invalidity Contentions should Touchstream be allowed by the Court to amend its Infringement Contentions or its apparent claim constructions. Defendant also reserves the right to amend these Invalidity Contentions in light of positions that Touchstream or its expert witness may assert concerning claim construction, infringement, and/or invalidity issues.

Defendant's Exhibits attached hereto cite to particular teachings and disclosures of the prior art as applied to features of the asserted claims. However, persons having ordinary skill in the art generally may view an item of prior art in the context of other publications, literature, products, and understanding. As such, the cited portions of prior art identified herein are exemplary only. Defendant may rely on the entirety of the prior-art references listed herein, including un-cited portions of those prior-art references, and on other publications and expert testimony shedding light on those prior-art references, including 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 will also rely on documents, products, testimony, and other evidence to establish bases for and motivations to make combinations of certain cited references that render the asserted claims obvious. Defendant may rely upon corroborating documents, source code, products,

testimony, and other evidence including materials obtained through further investigation and third-party discovery of the prior art identified herein that describes the invalidating features identified in these Contentions; evidence of the state of the art in the relevant time period (irrespective of whether such references themselves qualify as prior art to the Asserted Patents), including prior art listed on the face of the Asserted Patents and/or disclosed in the specification; and/or expert testimony to provide context to or aid in understanding the cited portions of the identified prior art.

The references discussed in the Exhibits herein disclose the elements of the asserted claims explicitly or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. To the extent the attached claim charts cite to a reference for each element or limitation of an asserted claim, Defendant contends that such reference anticipates that claim and/or, in the alternative, render the claim obvious. In addition, to the extent that the attached claim charts cite to additional references, Defendant contends, in the alternative, that the asserted claim is rendered obvious for the reasons set forth herein and/or in the attached charts. To the extent suggested obviousness combinations are included in the attached claim charts, they 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.

For purposes of these Preliminary Invalidity Contentions, Defendant identifies prior-art references and provides element-by-element claim charts based, in part, on the apparent claim constructions advanced by Touchstream in its Infringement Contentions.

To the extent that these Preliminary 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 Preliminary Invalidity Contentions are predicated on Touchstream's incorrect and overbroad interpretation of its claims as evidenced by its Infringement Contentions provided to Defendant. These Preliminary Invalidity Contentions are not intended to, and do not necessarily, reflect Defendant's interpretation of the true and proper scope of the asserted claims. Nothing stated herein shall be treated as an admission or suggestion that Defendant agrees with Touchstream regarding either the scope of any of the asserted claims or the claim constructions advanced in the Infringement Contentions. Defendant reserves the right to adopt claim construction positions that differ from or even conflict with the positions put forth in this document.

In those instances where Defendant asserts 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 Touchstream contends such asserted claims (1) are definite, (2) have written description support, and (3) are enabled, as evidenced by Touchstream's Infringement Contentions. As such, Defendant's Preliminary Invalidity Contentions do not represent its agreement or view as to the meaning, definiteness, written description support for, or enablement of any asserted claim. Moreover, nothing in these Preliminary Invalidity Contentions shall be treated as an admission that any of Defendant's accused technology meets any limitations of the claims. The citation of prior art herein and the accompanying Exhibits are not intended to reflect Defendant's claim construction contentions, which will be disclosed in due course in accordance with the Scheduling Order, and may instead reflect Touchstream's apparent (and potentially erroneous) claim constructions based on its Infringement Contentions.

Pursuant to the Order Governing Proceedings – Patent Case, Defendant has provided disclosures and related documents pertaining only to the asserted claims as identified by

Touchstream in its Infringement Contentions. Defendant will further supplement its document production should it later find additional, responsive documents, such as documents produced by third-parties. Much of the art identified below reflects common knowledge and the state of the art prior to the filing date of the Asserted Patents.

Each of the asserted claims of the Asserted Patents are anticipated by and/or obvious in view of one or more items of prior art identified herein, alone or in combination. Specific examples of this anticipation and obviousness, along with the motivation to combine the prior art, are set forth in Section IV.

In addition to the prior art identified below and the accompanying invalidity claim charts, Defendant also incorporates by reference as if set forth herein any additional invalidity contentions, identified prior art, or invalidity claim charts or arguments already disclosed or that will be disclosed at any later date in the present, parallel, or related litigation, foreign or domestic, by Defendant or any other individual or entity to any other litigation or U.S. Patent & Trademark Office (“USPTO”) proceeding involving the asserted patents or any related patent, including, without limitation, any invalidity contentions, applications, or petitions drafted, served, or filed (or that will be drafted, served, or filed) by any party, including those in any co-pending current, past or future litigations (including, for example, by Vizbee, Inc.). For example, 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 Touchstream by present or former defendants in any lawsuits or other proceedings or by potential or actual licensees to any of the asserted claims. Moreover, Defendant incorporates by reference

any prior art identified and/or invalidity claim charts set forth in any petition, application or submission to the USPTO involving and/or challenging the validity of the Asserted Patents, including, but not limited, in any *inter partes review* petitions and/or proceedings involving the Asserted Patents. 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 of the Asserted Patents.

I. PRIORITY

In its Infringement Contentions, Touchstream contends that each of the asserted claims of the Asserted Patents are entitled to a priority date of April 21, 2011. To the extent that Touchstream is permitted to modify, and in fact modifies in any manner, the alleged date to which the Asserted Patents are entitled to priority, Defendant reserves the right to respond and challenge that date to the extent required by law to satisfy its burden. Without admitting the priority of that early priority date, Defendant uses April 21, 2011 as the priority date for the purposes of these Preliminary Invalidity Contentions.

II. STATE OF THE ART

The references discussed in the Exhibits herein may be relied upon to show the state of the art in the relevant time frame. This prior art identification is only exemplary and is not in any way intended to limit the scope of what one of ordinary skill in the art would have understood at the relevant time period of the alleged invention or the breadth of the state of the art to which the alleged invention of the Asserted Patents relate. Defendant reserves the right to rely upon additional prior art, information, testimony, and/or knowledge to demonstrate what one of ordinary skill in the art would have understood prior to the date of the alleged invention of the asserted claims of the Asserted Patents.

III. IDENTIFICATION OF PRIOR ART

In addition to the prior art identified in the prosecution history of the Asserted Patents, Defendant intend to rely upon the prior art identified below in support of these Invalidity Contentions pursuant to the Court's Order Governing Proceedings – Patent Case. In these Contentions, Defendant provides the full identity of each item of prior art, including: (1) each patent by its patent number, country of origin, and date of issue; (2) each non-patent publication by its title, date of publication, and, where feasible, author and publisher; (3) 35 U.S.C. § 102(b) prior art by the item offered for sale or publicly used or known, the date the offer or use took place or the information became known, and the identity of the person or entity which made the use or which made and received the offer, or the person or entity which made the information known or to whom it was made known; (4) 35 U.S.C. § 102(f) prior art by the name of the person(s) from whom and the circumstances under which the invention or any part of it was derived; and (5) 35 U.S.C. § 102(g) prior art by the identities of the person(s) or entities involved in and the circumstances surrounding the making of the invention before the patent applicant(s), based on currently available information.

Defendant's identification of patents and publications as prior art herein and in the attached claim charts under 35 U.S.C. §§ 102(a), (b), (e), and/or (g) and § 103 includes the publications themselves as well as the use of the products, devices, and systems described therein. Although Defendant's investigation continue, information available to date indicates that such products, devices, and systems were known or used in the country before the alleged invention of the claimed subject matter of the asserted claims, and/or were invented by another who did not abandon, suppress, or conceal, before the alleged invention of the claimed subject matter of the asserted claim. Upon information and belief, these prior art products, devices, and systems and their

associated references anticipate and/or render obvious each of the asserted claims. Defendant further intends to rely on inventor admissions concerning the scope of the prior art relevant to the Asserted Patents found in, inter alia, the prosecution history of the Asserted Patents and any related patents, patent applications, and/or re-examinations; any deposition testimony of the named inventor on the Asserted Patents; and the papers filed and any evidence submitted by Touchstream in conjunction with this litigation.

Defendant reserves the right to rely upon additional evidence of invalidity obtained from third-parties in the future. In addition, Defendant reserves the right to assert invalidity under 35 U.S.C. § 102(c) or (d) to the extent that further investigation and discovery yield information forming the basis for such claims.

A. Prior Art Patents

Defendant contends the following prior art patents anticipate or render obvious one or more asserted claims of the Asserted Patents under 35 U.S.C. §§ 102(a), (b), and/or (e) or 35 U.S.C. § 103:

Ex.	Patent No.	Country of Origin	Issue/Publication Date	Short Title
A	2009/0298535	U.S.	December 3, 2009	Klein
B	8,060,631	U.S.	June 11, 2009	Collart
C	2009/0019492	U.S.	January 15, 2009	Grasset
D	2009/0270085	U.S.	October 29, 2009	Jones
E	8,789,086	U.S.	July 22, 2014	McCoy
F	7,551,918	U.S.	June 23, 2009	Bowen
G	8,238,887	U.S.	August 7, 2012	Filipov
H	8,014,768	U.S.	September 6, 2011	Ackley

I	2011/0138429	U.S.	June 9, 2011	Schade
J	2010/0241699	U.S.	September 23, 2010	Muthukumara- samy
J	9,680,886	U.S.	May 22, 2014	Arunachalam
K	8,544,046	U.S.	September 24, 2013	Gran
L	WO 2011/078879	WIPO/PCT	June 30, 2011	Al-Shaykh
M	9,490,998	U.S.	November 8, 2016	Danciu
N	2012/0144416	U.S.	June 7, 2012	Wetzer
K	WO 2010/151284	WIPO/PCT	December 29, 2010	Al-Shaykh 2
X	8,644,757	U.S.	February 4, 2014	Curcio
X	7,383,229	U.S.	June 3, 2008	Jacoby
X	8,739,294	U.S.	May 27, 2014	Risan
X	2006/0085823	U.S.	April 20, 2006	Bell
X	8,614,625	U.S.	December 24, 2013	Alsina
X	2009/0320065	U.S.	December 24, 2009	Sloo
X	8,918,812	U.S.	December 23, 2014	Hayward
X	61/450,472 (9,258,609)	U.S.	February 9, 2016	Odryna
X	2012/0151509	U.S.	June 14, 2012	McCarthy
X	7,136,709	U.S.	November 14, 2006	Arling

X	WO 2008/070050	WIPO/PCT	June 12, 2008	Chapweske
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B. Prior Art Publications

Defendant contends the following publications anticipate or render obvious one or more asserted claims of the Asserted Patents under 35 U.S.C. §§ 102(a) and/or (b) or 35 U.S.C. § 103:

Ex.	Title	Author/Publisher	Publication Date	Short Title
	See patent publications above			

C. Prior Art Systems

Defendant contends the following prior art systems anticipate or render obvious one or more asserted claims of the Asserted Patents under 35 U.S.C. §§ 102(a), (b), and/or (g), or 35 U.S.C. §103:

System	Relevant Dates	Persons/Entities Involved	Short Title
YouTube Remote and Google TV	2010-2011	Google	YouTube Remote and Google TV
TwonkyMedia and/or TwonkyManager and related products and systems	2009-2011	Twonky Media, PacketVideo	Twonky
Zelfy Peel	2010-2011	Zelfy, Peel Technologies	Zelfy Peel

D. Prior Art under 35 U.S.C. § 102(f)

Defendant will assert that the Asserted Patents are invalid under 35 U.S.C. § 102(f) in the event Defendant obtains evidence that the named inventor of the Asserted Patents did not alone invent the subject matter claimed in the Asserted Patents. Should Defendant obtain such evidence,

Defendant will provide the name of the person(s) from whom and the circumstances under which the invention or any part of it was derived.

E. Prior Art under 35 U.S.C. § 102(e) and 35 U.S.C. § 102(g)

At present, Touchstream has neither adequately alleged nor provided sufficient evidence of a conception date for the Asserted Patents earlier than the claimed priority date on the face of the Asserted Patents. Should the Court permit Touchstream to provide evidence of an earlier conception date, Defendant reserves the right to assert that any of the § 102(a) prior art is § 102(e) and/or § 102(g) prior art.

Defendant contends that each of the disclosures in Sections III.A. (list of prior art patents), III.B. (list of prior art publications), and III.C. (list of prior art systems) constitute prior inventions to the asserted claims as detailed above.

IV. INVALIDITY UNDER 35 U.S.C. §§ 102 AND 103

In addition to and including the prior art disclosed in the Exhibits incorporated by reference herein, each of the asserted claims of the Asserted Patents are anticipated by and/or obvious in view of one or more of items of prior art identified above in Sections III.A. (list of prior art patents), III.B. (list of prior art publications), and/or III.C. (list of prior art systems), alone or in combination.

Furthermore, along with the references disclosed in these contentions, the exhibits thereto, the Asserted Patents and their prosecution history, and the common sense and understanding of those in the relevant field at the time of the alleged invention, invalidity may be demonstrated by the live testimony of relevant witnesses, who will be identified in accordance with the case schedule and as discovery in this matter opens and proceeds. Such witnesses may be used, among other purposes, to discuss issues of prior art systems, prior art references, and the knowledge of one of ordinary skill in the art at the time of the alleged invention. Although information may be

identified through discovery as this case proceeds, such witnesses may include at least the following individuals: YouTube Remote and Google TV – Daniel Danciu, Yaniv Bernstein, Ramona Bobohalma, Oliver Heckmann, Jasmine Langridge, Alin Sinpalean, and other current or former employees or representatives of Defendant; Twonky, TwonkyManager, and related products and systems – Christian Gran, Andreas Zisowsky, Ralph Neff, Magdalena Leuca Espelien, Osama Al-Shaykh, Dann Wilkens, and other former employees or representatives of PacketVideo and/or TwonkyMedia; and Peel – Thirumalai Arunachalam, Balamurugan Krishnan, Hong Wu, Leslie Andrew Prock, Gregory Charles Lindley, Sivasubramanian Muthukumarasamy, Christopher Steven Lock, Avinash Shetty, and other current or former employees or representatives of Peel and/or Zelfy. For other prior art systems identified by Defendant herein, Defendant are serving or will serve subpoenas for documents and testimony related to products, patents and/or publications, and specifically reserves the right to supplement its Contentions following additional discovery received. Defendant further intends to seek discovery regarding the above-mentioned prior art systems, in addition to other systems, including, but not limited to, for instance, AppleTV, AirTunes, Plex, and MacMini from Apple and the Roku Streaming Stick from Roku, and other systems that may be related to the Asserted Patents and printed publication references disclosed in these contentions.

One or more combinations of the prior art references identified above pursuant to the Court's Order Governing Proceedings – Patent Case 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 the Court's Order Governing Proceedings – Patent Case 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 the Court's Order Governing Proceedings – Patent Case 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 the Court's Order Governing Proceedings – Patent Case includes the interrelated teachings of multiple prior art references; the effects of the demands known to the design community or present in the marketplace; the complimentary and overlapping subject matter of the prior-art references; 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 control of media on a display or content presentation device, including through use of a server to transport media control information, (5) the fact that the prior art generally is employed on similar mobile devices, televisions, or other audio or display devices and utilize standard components, including data receivers and transmitters, processors, displays, speakers, servers, databases, and other

components; (6) the fact that many of the prior-art references refer to other references; and (7) 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 description 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 herein and in the claim charts reflect common knowledge and the state of the prior art prior to the priority date of the Asserted Patents. As it would be unduly burdensome to create detailed claim charts for such 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.

Defendant has attached Exhibits containing claim charts identifying examples of prior art that anticipate and/or render obvious each asserted claim of the Asserted Patents. Specifically, to the extent the attached claim charts cite to a reference for each element or limitation of an asserted claim, Defendant contends that such reference anticipates that claim. In addition, Defendant contends, in the alternative, that each asserted claim is rendered obvious for the reasons set forth in this document and the attached charts.

Invalidity Charts
Exhibit A – Klein
Exhibit B – Collart
Exhibit C – Grasset
Exhibit D – Jones
Exhibit E – McCoy
Exhibit F – Bowen
Exhibit G – Filipov
Exhibit H – Ackley
Exhibit I – Schade
Exhibit J – Zelfy Peel
Exhibit K – Twonky
Exhibit L – Al-Shaykh
Exhibit M – YouTube Remote and Google TV
Exhibit N - Wetzler
Exhibit X – Secondary References

To the extent that Touchstream contends that any one of the primary references does not disclose one or more elements of the asserted claims, it would have been obvious to combine the primary references in the Invalidity Charts with one or more references, including, for example, Klein, Collart, Grasset, Jones, McCoy, Bowen, Filipov, Ackley, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, Wetzler, YouTube Remote and Google TV, Twonky, Zelfy Peel as discussed more fully below.

As detailed in the Invalidity Charts and in this document, the asserted claims of the Asserted Patents are obvious in view of the state of the prior art alone and/or in combination with the references described in the above-referenced Exhibits as well as the references and disclosures described below. The alleged “inventions” claimed in the asserted claims of the Asserted Patents would have been obvious because the prior art, common knowledge, and the nature of the problems, viewed through the eyes of a person ordinarily skilled in the art, suggested the claimed elements. A person of ordinary skill in the relevant fields would have possessed knowledge and skills rendering him or her capable of combining the prior art references with knowledge in the field and common sense. Moreover, the asserted claims represent well-known combinations of familiar and pre-existing elements, yielding only predictable results.

For example, to the extent that any reference does not explicitly describe or teach assigning, by a server system, a synchronization code to the display device, receiving at the server a message that includes the synchronization and/or information associated with an identification code, and/or storing a record establishing an association between the personal computing device and the display or content presentation device based on the synchronization or identification code, such usage of a synchronization or identification code would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary

creativity. In addition, the use of synchronization and/or identification codes, including to facilitate synchronization between devices (including personal computing devices and display or presentation devices) was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of simplification of the synchronization process, minimize network bandwidth (as transmission of a code would require minimal bandwidth), and to ensure the consistency of data between distributed devices. Moreover, a person of ordinary skill would understand the benefits of permitting the server more control over the transmission of synchronized data, which would in turn allow the server to debug errors in the system and create improvements in the synchronization process. Exemplar references that disclose such features include, but are not limited to: Klein, Collart, McCoy, Filipov, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Curcio, McCarthy, Odryna, Arling, Wetzer.

As another example, to the extent that any reference does not explicitly describe or teach specifying a file, including a video file, to be acted upon, such an identification over a networked connection would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the identification of the file, including as intended for playback on a display or presentation device was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of allowing display or other presentation devices to display or otherwise present a particular media file on the intended presented device. Moreover, a person of ordinary skill would understand the benefits of specifying the particular file along with the command to ensure more accurate control for user of the personal computing device, as the user can specify the file, rather than the server just assuming that a

particular file (e.g., the file currently being played, files being queued for playing later, etc.) needs to be controlled. Thus, such combination would ensure operational accuracy of the server as well as the overall system. Exemplar references that disclose such features include, but are not limited to: Klein, Collart, Jones, McCoy, Bowen, Filipov, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Risan, Bell, Alsina, Sloo, Odryna, Wetzler, McCarthy, Arling, Chapweske.

As another example, to the extent that any reference does not explicitly describe or teach the identification of a particular media player for playing content, such identification received and/or used by the display or presentation device, including wherein the media player is a computer application operable to present content and control presentation of the content, such an identification of a media player over a networked connection would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the identification of media players, including for identification of a particular player among a plurality of media players was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of allowing display or other presentation devices to load or otherwise execute a particular software application for playing and/or displaying specified content. Moreover, a person of ordinary skill would understand the benefits of the identification of the media player by the personal computing device which would ensure more accurate control for the user of the personal computing device, as the user can identify a preferred media player to be loaded or otherwise executed at the display or presentation device. Exemplar references that disclose such features include, but are not limited to: Collart, Jones, McCoy, Schade, Muthukumarasamy, Gran,

Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Wetzer, Jacoby, Risan, Alsina, Sloo, Odryna, Hayward, McCarthy, Arling, Chapweske.

As another example, to the extent that any reference does not explicitly describe or teach the identification of the location of the particular media player, obtaining the particular media over a network from a content provider, loading the player, and/or executing code using the player, such an identification and subsequent provision over a networked connection and use would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the identification and acquisition of media players over a network, including for identification and use of a particular player among a plurality of media players was well-known in the art, as evidenced by its use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of allowing display or other presentation devices to obtain, load, and/or otherwise execute a particular application for playing and/or displaying specified content. Moreover, a person of ordinary skill in the art would understand the benefits of identifying the location of the media player (and the subsequent obtainment of such media player) because the user of the personal computing device would have more control in identifying the media player by way of the media player's location, which would also reduce the processing required (e.g., processing required to find the media player) by the server and/or presentation device. A person of ordinary skill in the art would also understand the benefit to the content presentation device of obtaining the media player as it allows the content presentation to execute several different media players, while the content presentation device can maintain a lean architecture which does not necessarily need to maintain all media players at all times. Exemplar references that disclose such features include, but are not limited to: Collart, McCoy, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google

TV, Twonky, Zelfy Peel, Wetzler, Jacoby, Risan, Alsina, Sloo, Odryna, Hayward, McCarthy, Arling, Chapweske.

As another example, to the extent that any reference does not explicitly describe or teach that the content to be presented via the display device and/or content presentation device include an interactive video games, streaming media, audio, multimedia content, and/or images, such media content would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the identification and acquisition of various types of media content over a network, including such media content that may be displayed and/or presented via media players was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of facilitating a display or other presentation device to obtain over a network and display and/or otherwise present such media as identified by a user. Exemplar references that disclose such features include, but are not limited to: Klein, Collart, Grasset, Jones, McCoy, Bowen, Filipov, Ackley, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Jacoby, Risan, Bell, Alsina, Sloo, Hayward, Odryna, Wetzler, McCarthy, Arling, Chapweske.

As another example, to the extent that any reference does not explicitly describe or teach a universal playback or action control command, converting the universal playback control command into corresponding programming code, and/or identifying programming code corresponding to the action control command (including based on the set of protocols or application programming interfaces) and subsequently executing the code, such conversion, identification, and/or execution would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In

addition, the conversion to and/or identification of programming code, including as intended for execution by a particular media player for controlling the playback of media on the player was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result of facilitating a display or other presentation device to obtain control information over a network as directed by a user where the commands are customized for a particular software application (using a look-up table, library, API, or other mapping functionality). Exemplar references that disclose such features include, but are not limited to: Klein, Collart, Grasset, Jones, McCoy, Bowen, Filipov, Ackley, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Odryna, Wetzer, McCarthy, Arling.

As another example, to the extent that any reference does not explicitly describe or teach loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the media player, such application of protocols or APIs would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the loading of protocols and/or APIs based on the media player, including as intended for identification of programming codes (or conversion to such codes) for execution by a particular media player for controlling the playback of media on the player was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result, for example, of facilitating a display or other presentation device to obtain control information over a network as directed by a user where the commands are customized for a particular software application (e.g., through use of a set of protocols, APIs, or other mapping functionality). Moreover, a person of ordinary skill in the art would understand the benefit of storing the APIs or protocols in a library because libraries

can make access of large data simple and user-friendly, increase user engagement, facilitate easy data management, allow security by securing the library collectively rather than each API or protocol individually, and allow insights about different APIs or protocols from a single location (i.e., library). Exemplar references that disclose such features include, but are not limited to: Collart, Grasset, Jones, McCoy, Filipov, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Wetzler, Alsina, Odryna, McCarthy, Arling.

As another example, to the extent that any reference does not explicitly describe or teach storing, in a database associated with the server system, information for transmission to or retrieval by the display device, such a database or related storage would have been obvious to a person of ordinary skill in the art in view of the teachings of the reference and her background knowledge and ordinary creativity. In addition, the storage of information in a database, including as intended for receipt by or transmission to a display or presentation device, was well-known in the art, as evidenced by its repeated use for this purpose in the field. Indeed, such a combination would have yielded the predictable result, for example, of facilitating a display or other presentation device to obtain information regarding media files, media players, and control information over a network as directed by a user where the information and commands are processed by and stored at the server. Moreover, a person of ordinary skill in the art would understand the benefit of storing the information for receipt by or transmission to a display or presentation device because the database can make access of large data simple and user-friendly, increase user engagement, facilitate easy data management, allow security by securing the information collectively rather than information from each message individually, and allow insights about different requests (including specified files, media players, or control commands) from a single location (i.e., the database). Exemplar references that disclose such features include, but are not limited to: Klein, Collart, Grasset,

McCoy, Schade, Muthukumarasamy, Gran, Al-Shaykh, Danciu, YouTube Remote and Google TV, Twonky, Zelfy Peel, Bell, Sloo, Odryna, Wetzler, McCarthy, Arling.

In addition, a person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Klein to (a) allow usage of “smart phones that are enabled as remote controls [to] overcome transmission technologies that otherwise operate with a limited range, for example 20 feet from a television” (*see* Klein at ¶ 20) so as to allow “monitoring and control of the content being viewed in the home or elsewhere” (*see* Klein at ¶ 52), and (b) use “systems that employ soft (i.e., virtual) buttons (e.g., programmable buttons) [that] allow flexibility in providing users with their preferences” (*see* Klein at ¶ 52).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Collart to harness the advantages of Collart, such as those described by Collart at 1:36-54 (presented below):

“The present embodiments provide methods and systems for use in providing access to content and coordinating media devices. For example, a secondary media device can be coordinated with a primary media device so that content accessed or inputted through the secondary device is relevant to and/or associated with content accessed or played back through the primary device. The coordination, in part, allows a user to take advantage of the benefits and functionalities provided through the secondary device that are not available through the primary device, while maintaining a coordination between the primary and secondary devices. For example, televisions (TV) typically do not include a keyboard, and supplying alphanumeric characters to the TV can be difficult (e.g., using a remote control with limited buttons, using a virtual keyboard through a remote control, or other such non-user friendly interfaces). Alternatively, a computer typically has a keyboard that allows a user to quickly and accurately type out alphanumeric characters. In some implementations, the present embodiments coordinate the TV with a computer so that the user can take advantage of at least the keyboard of the computer to enter alphanumeric characters that can be forwarded for, at least, display on the TV (and/or to other multimedia devices and/or users as fully described below). Entries or actions performed at the secondary device provide a virtual command or control that is communicated through the coordination to be utilized by the primary device.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Grasset to avoid problems that arise when “one user ... store[s] media content on a myriad of devices (from portable video devices and cell phones to handheld computers and set-top boxes).” *See* Grasset at ¶ 1. For example, “[a] problem arises when a user’s devices have different sets of requirements and restrictions regarding the type and format of media content that may be delivered to or from a given device. Therefore, sharing media content between a variety of devices can quickly become unwieldy. Another problem arises because consumer electronics, such as portable devices, are prone to failure or loss, which may lead to loss of important, expensive, and sometimes irrecoverable, media content.” *See* Grasset at ¶ 1. A person of ordinary skill in the art would could extend one or more of primary references (noted in Exhibits A-N) to harness Grasset’s advantages of “provid[ing] an easy and automatic backup of media content stored on a source device so that, in case of failure or loss of the source device, the media content may be recovered from the mirrored copy, [and/or] enabl[ing] service enhancements such as support for new and future coding formats that may be severely limited in device-based systems.” *See* Grasset at ¶ 3.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Jones to, for example, “[1.] allow the user to access certain devices when the user is away from where the device is located[,] [f]or example, the user may wish to set his recording devices while away from home,” (*see* Jones at ¶ 6), “[2.] consolidate the functions of various electronic entertainment devices and provide the user easy access to the contents, without having an additional remote control to a household already cluttered with them[,] ... [3.] provide more advanced functions to help the users manage their media contents[, and] ...

[4.] overcome the range limitations of [some] universal remote controls to allow the user to access the devices remotely.” *See Jones at ¶ 6.*

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with McCoy to, for example, allow the display device to become “a shared device that is viewed by several users [and] ... permit this sharing without excessively raising hardware costs.” McCoy at 3:48-51.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Bowen to, for example, extend the primary reference to operate in “circumstances when a mobile user will be very interested in a current broadcast television offering that he can only view on his mobile device because of his current location. For example, the user may be away from home or not have access to a regular television yet still have some idle time to enjoy a live television broadcast. In such situations, the user can use his mobile device to select and view a live broadcast program. In many of these instances, the user may not have enough time to watch the entire program. Or, the program is of particular interest to the user that he wishes he could enjoy it at a later time on a larger screen at a higher resolution such as a standard television or even a notebook computer.” *See Bowen at 1:24-36.* Thus, the combination of references would advantageously provide a “mechanism that allows the user to simultaneously direct the mobile video broadcast from the source to both his mobile device and an alternate device such as a home media server for later consumption.” *See Bowen at 1:38-42.*

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Filipov to, for example, overcome particular drawbacks of prior art that may be common to both the primary reference and Filipov, as explained by Filipov at 5:1-34:

“A system in accordance with this disclosure enables a mobile phone to act as an intelligent remote control to control a media rendering device to output content from the Internet. Prior art systems may require a dedicated software application running on the media rendering device for the media rendering device to render the content from the Internet. For example, each source of content may require a distinct software application running on the media rendering device. With the disclosed system, content providers can send content to a media rendering device without requiring a specific software application to be deployed at the media rendering device. A system in accordance with the disclosure need not necessarily store content from a content provider on a mobile phone or on a gateway processor. Content may be streamed to the media rendering device and so issues regarding ownership and distribution of the content may be addressed more easily. Content providers need not send the content to a location that is out of their control. Content providers thus have more control over distribution of content.

Other prior art systems may require a user to open a browser using their television. Many televisions do not have a browser and/or the user interface to type in a URL into a browser tends to be poor. A system in accordance with the disclosure can provide a typical television experience with the addition of content from the Internet that would otherwise only be available through a browser and may not have been encoded for the purpose of being displayed on a television. As a mobile phone may be used as the intelligent remote control, a system in accordance with the disclosure may provide a more personal experience. Prior art set top boxes may be shared by multiple users whereas mobile phones may be personalized to a user. Moreover, as the mobile phone is portable, a user can bring his control of content to any media rendering device.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Ackley to, for example, “create location-based multimedia and game applications with a shared user interface” (*see* Ackley at 1:34-45) that can serve “crowds of people” (*see* Ackley at 1:28) rather than just “twenty-or so people” (*see* Ackley at 1:23-24). In addition, a combination with Ackley would “enable large audiences upwards of 800 people to simultaneously play a game displayed on an IMAX screen. What makes this idea important is that the IMAX venue would not have to purchase, install, distribute or maintain the game controllers for all those people. This cost savings makes new and exciting interactive multimedia shows financially feasible. New shows could easily be developed for this system.” *See* Ackley at 2:11-19. Additionally, Ackley would allow one “to interact with features or applications on one’s home

computer. A set top box, or video recorder such as a Tivo or ReplayTV unit could be controlled or directed to record remotely through the use of one's mobile phone. In general, any device connected to a network could be remotely operated through commands on a mobile phone.” *See* Ackley at 2:19-26.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Schade to, for example, improve the content that is transmitted to, and displayed on, the display device. For example, Schade at ¶ 9 discloses that “[a] VFA configured server can extract multi-media content from, for example, an Internet resource, in an IP Data Network transmissible format. The VFA functionality can repackage the IP Data Network transmissible format multi-media content in a transport stream format suitable for transmission over a cable television communication network (e.g., MPEG-TS). The VFA functionality may also process and selectively repackage the multi-media content at a higher quality than the original signal, such as higher resolution or higher bit rate. The VFA functionality may also selectively format the content for differing display aspect ratios, such as 16:9.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Muthukumarasamy to, for example, “enable[] consumers... to [among other things] ... share their media experiences with an internet community or social network” (*see* Muthukumarasamy at ¶ 26), “provide consumers with direct access to media content choices that are available for them in a user-friendly way” (*see* Muthukumarasamy at ¶ 27), “enable[] a device-agnostic and source-agnostic entertainment experience” (*see* Muthukumarasamy at ¶ 27), and in general “significantly increase consumer satisfaction” (*see* Muthukumarasamy at ¶ 70).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Arunachalam to, for example, “enable[] consumers... to [among other things] ... share their media experiences with an internet community or social network” (*see* Arunachalam at 3:15-19), “provide consumers with direct access to media content choices that are available for them in a user-friendly way” (*see* Arunachalam at 3:30-31), “enable[] a device-agnostic and source-agnostic entertainment experience” (*see* Arunachalam at 3:32-39), and in general “significantly increase consumer satisfaction” (*see* Arunachalam at 11:17-22).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Gran to, for example, harness one or more of the following advantages of Gran, as noted by Gran at 6:11 – 7:11.

“It is, therefore, an advantage of the present invention to provide a system and a method for controlling media rendering in a network using a mobile device.

Another advantage of the present invention is to provide a system and a method for managing, controlling and/or rendering media in a network using remote access.

And, another advantage of the present invention is to provide a system and a method for managing, controlling and/or rendering media in a network using a remote user interface.

Yet another advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that enable a user to control media rendering from multiple storage devices and/or multiple servers in the network.

Still further, an advantage of the present invention is to provide a system and a method for controlling media rendering in a network that use a mobile device as a control point in the network without the need for specialized software to be installed on the mobile device.

Yet another advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that enables device queues to be shared between multiple users in a home network.

Still further, an advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that have an always-on, always-available control element located in the multimedia-capable home network.

And, another advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that

have a control element hosted on a fixed, non-mobile device connected directly to the home network.

Still further, an advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that have a control element capable of communicating with and controlling standard UPnP AV media servers and standard UPnP AV media rendering devices in the home network.

Another advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that enables multiple device queues to be created, managed, controlled, and rendered independently to different media rendering devices connected to the home network.

Yet another advantage of the present invention is to provide a system and a method for managing, controlling and/or rendering media in a network that expose control interfaces that enable one or more mobile devices to control functional capabilities of a control element.

Still further, an advantage of the present invention is to provide a system and a method for managing, controlling and/or rendering media in a network that enables a mobile device to control media servers, media rendering devices and device queues entirely via a control interface between the mobile device and a control element.

And, another advantage of the present invention is to provide a system and a method for controlling media rendering in a network using a mobile device that does not require the mobile device to have direct communication with the home network or with the media servers and media rendering devices connected to the home network.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Al-Shaykh to, for example, harness one or more of the following advantages of Al-Shaykh, as noted by Al-Shaykh at pg. 16, l. 2 to pg. 19, l. 24:

“It is, therefore, an advantage of the present invention to provide a system and a method for transferring media content from a mobile device to a home network.

Another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which display persistent, visible controls on the mobile device for rendering the media content on a rendering device in the home network.

And, another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which use the mobile device to display persistent, visible status of rendering of the media content by a rendering device in the home network.

Yet another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network

which present controls and status in a media application executed by the mobile device.

Still further, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which enable a user to use the mobile device to start and stop external rendering of the media content currently selected in a media application executed by the mobile device.

And, another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which provide controls on the mobile device to enable a user to select a rendering device.

Yet another advantage of the present invention is to provide a system and a method, for transferring media content from a mobile device to a home network which use the mobile device to indicate a target rendering device appropriate for the media content currently selected in a media application on the mobile device.

Still further, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which use the mobile device to indicate and/or correct a network problem which prevents external rendering.

And, another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which combine controls and status on the mobile device in a compact, minimal form.

Still further, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which use the same presentation of controls and status in multiple media applications on a mobile device.

Another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which remove the need for a user to select a rendering device.

Yet another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which enables a user to send the media content from an application on the mobile device to an external rendering device by invoking a single control in a single step on the mobile device.

Still further, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which minimize the delay to send the media content from an application on the mobile device to an external rendering , device .

Another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which control transfer of the media content using a compact arrangement of one, two, or three functional elements displayed on the mobile device.

Yet another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network

which add a set of controls and indications to any media application on the mobile device.

Still further, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which continuously update an indication of a current target rendering device based on changes in the media content, changes in available rendering devices, and settings and preferences established by a user.

Another advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which supplement a generic mobile device media application which lacks media transfer and sharing capabilities with a set of controls and indications for media transfer and sharing.

Moreover, an advantage of the present invention is to provide a system and a method for transferring media content from a mobile device to a home network which provide an intuitive picture of media flowing from a media transfer control to a target rendering device.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Danciu to, for example, allow for instances where “the remote control and the controlled device ... may not need to be connected to the same local area network, nor in physical proximity to each other” (*see* Danciu at 4:52-55) and allow for “pairing of a nearly limitless number of remote controls and controlled devices” (*see* Danciu at 4:55-57).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Al-Shaykh 2 to, for example, benefit from one or more of the following advantages of Al-Shaykh 2, as noted by Al-Shaykh 2 at pg. 14, l. 22 to pg. 16, l. 23:

“It is, therefore, an advantage of the present invention to provide a system and a method for managing and/or rendering internet multimedia content in a network. Another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that enable rendering devices in the network to access the complete collection of internet multimedia content. And, another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that render the internet multimedia content in a home network without downloading the internet multimedia content to a media server in the home network.

Yet another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that access the complete collection of the internet multimedia content using a web browser interface.

Still further, an advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that enable the user to send the internet multimedia content to any compatible rendering device in the network.

And, another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that implement a user interface which combines web browsing tasks with the tasks of selecting, managing and controlling rendering devices in the network.

Yet another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that organize and manage both the internet multimedia content and locally stored multimedia content to provide access to all multimedia content of interest to the user. Still further, an advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that may be implemented as a "plug-in" to an existing web browser.

And, another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that interpret and apply digital rights management technology for explicitly protected multimedia content. Still further, an advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that detect, display and enforce terms of use associated with the internet multimedia content.

Another advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network which detect advertising content associated with the internet multimedia content and/or ensure that the advertising content is displayed effectively and/or appropriately in the network.

Yet another advantage of the present invention is to

- provide a system and a method for managing and/or rendering internet multimedia content in a network that find, retrieve, bookmark and/or organize the internet multimedia content in a web browser and provide access to the internet multimedia content to rendering devices, control points and/or multimedia clients .

Moreover, an advantage of the present invention is to provide a system and a method for managing and/or rendering internet multimedia content in a network that determine which of the rendering devices in the network are capable of rendering specific multimedia content.”

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Curcio to, for example, “improve fidelity (e.g.,

by means of stereo or surround sound, larger video screens, individual zooming capabilities)[,] ... provide for automatic configuration of user terminals ..., [allow] joint control of all user terminals from a single master user terminal, ... dynamically reconfigure[e a] mosaic rendering group to add and/or remove user terminals temporarily or permanently, ... use motion sensing for controlling the rendering on individual and/or all user terminals[, and] ... organize the rendering of media signals across several devices to improve fidelity.” *See* Curcio at 18:60 – 19:6.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Jacoby to, for example, create “a system wherein different viewers can consume different media streams and the providers of those streams can accurately track the consumption of the media streams, for billing, monitoring, planning, statistics tracking, and other purposes.” *See* Jacoby at 3:19-23.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Risan to, for example, (a) “prevent unauthorized access to copyrighted media content” (*see* Risan at 11:13-20), (b) allow easy addition of new media player applications (e.g., Risan at 12:38-48 discloses, *inter alia*, that “when new media player applications are developed, their signatures can be readily added to the signature list via an update of CCM”), (c) “provide a deterrent against modifications made to the skin” (*see* Risan at 15:65 – 16:13), (d) “effectively disable[e] unauthorized saving/recording of media files” (*see* Risan at 17:13-36), (e) “provide[] an efficient means to transmit media content, in terms of statistical distribution over time and does not overload the communication network(s)” (*see* Risan at 35:15-34), (f) ensure that “communication network systems of the Internet 201 do not become overly congested” (*see* Risan at 39:22-33) (g) “obviate[e] the need to compress the media file” (*see* Risan at 41:1-5) which ensures that “the user will no longer need to suffer through poor quality output

as a result of severely compressed media files” (*see* Risan at 41:6-8), (h) “provide[] for continued interoperability with new and updated operating systems, advancements in electronic technology, communication technologies and protocols, and the like” (*see* Risan at 45:14-33), (i) allow “th[e] technology [to be] backward compatible with media storage device drives manufactured subsequent to and including the year 1982” (*see* Risan at 45:41-43), (j) implement encryption of “the media files ... disposed on a media storage device ... [which] is particularly advantageous for demonstration (demo) versions of media files, beta test versions, and the like” (*see* Risan at 46:16-28), (k) “enable municipalities, counties, states, and other governmental agencies to increase revenue, thus possibly realizing a reduction in a deficit associated with a government” (*see* Risan at 63:13-26), and/or (l) “track the sharing, generate royalties applicable to a receiving computer system and associated with a particular instance of media” (*see* Risan at 66:30-41).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Bell to, for example, enable “communicat[ion of a smaller amount of data] with a latency lower than the latency involved with a larger amount of data” while conveying the same amount of information (*see* Bell at ¶ 13; *see also* Bell at ¶ 50).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Alsina to, for example, enhance security by implementing the encryption aspects described by Alsina. *See, e.g.*, Alsina at 1:49-57, 5:55 – 6:40, and 8:7-30.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Sloo to, for example, implement seamless “techniques ... to allow a client to control content output by one or more other clients. For example, a user may navigate to a website and locate a particular television program of interest. The user may then specify that the particular television program is to be output and where that particular television

program is to be output. For instance, a user may specify one or more client devices in the user's household, e.g., a television and a living room, a display device located in the refrigerator in a kitchen, and so on. In this way, a user is provided with techniques that unify content interaction between the user's devices.” *See* Sloo at ¶ 14.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Hayward to, for example, “collect[] data from the use of an embedded media player ... to evaluate the popularity of a media file, the relevance of a media file to a search query (when the file is identified to the user as a result of a search), and to identify the interest level of users with respect to content that surrounds an media player embedded within a web page” (*see* Hayward at 1:52-65) and/or “display[] the video data in an uncropped manner, providing more viewable video, minimizing picture distortion” (*see* Hayward at 1:66 – 2:12).

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Odryna to, for example, address the drawbacks of “an array of products which do not fully cross-integrate.” *See* Odryna at ¶ 10. The combination would also implement Odryna’s techniques to advantageously provide “a platform which 1) lists available media across different providers; 2) groups the media based on the end product information, rather than source feed structure; 3) lists media availability across all physical display devices; ... 4) allows control and selection from one device of any available media to play back on any available device.” *Id.* The combination would further have the “ability ... for a service provider to program in business rules regarding the proffered choice of media for a consumer based on their own business desires.” *Id.*

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Wetzer to, for example, “facilitate[e] presentation of

information to users in a user-friendly manner and enable enhanced user interaction with various types of information.” *See* Wetzer at ¶ 10. Such presentation can obviate the drawbacks of traditionally poor experience because “1) the quality of the information delivery is varied; and 2) users are required to learn how to use each device in order to receive their desired information.” *See* Wetzer at ¶ 7.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with McCarthy to, for example, “allow content providers and advertisers the ability to measure the opportunity and reach of their messaging at an individual basis instead of being limited to household-level tracking.” *See* McCarthy at ¶ 43. In addition, the combination would allow implementations that, for example, “improve[] the viewing experience for the individual and enhances the advertising experience by ensuring advertisements are relevant and actionable.” *See* McCarthy at ¶ 9.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Arling to, for example, establish “a system and method that functions to enable advanced home control features such as location based control setup and operation, network enabled legacy appliances and system integration, save and recall capabilities for appliance and media states, generic command based appliance controls, dynamic/complex macro command generation, and Internet based control capabilities from remote locations.” *See* Arling at 1:40-56.

A person of ordinary skill in the art would be motivated to combine one or more of primary references (noted in Exhibits A-N) with Chapweske to, for example, “offer[] a user the opportunity to present a higher-quality version of [a] media file” to be presented by a media player. *See* Chapweske at Abstract and ¶ 4. *See also* Chapweske at ¶¶ 5-7, 12, 16-20, 23, 24, and 28.

Additional reasons that a person of ordinary skill in the art would have been motivated to combine the identified prior art are provided in the Exhibits attached hereto.

The obviousness combinations set forth in these Contentions reflect Defendant's present understanding of the potential scope of the claims that Touchstream appears to be advocating and should not be seen as Defendant's acquiescence to Touchstream's interpretation of the asserted claims. Defendant reserves the right to amend or supplement these Contentions regarding anticipation or obviousness of the asserted claims as appropriate under the applicable Rules, including in response to further information from Touchstream or information discovered during discovery. Touchstream has not identified what elements or combinations it alleges were not known to one of ordinary skill in the art at the time. Therefore, for any claim limitation that Touchstream alleges is not disclosed in a particular prior art reference, Defendant reserves the right to assert that any such limitation is either inherent in the disclosed reference or obvious to one of ordinary skill in the art at the time in light of the same, or that the limitation is disclosed in another of the references disclosed above and in combination would have rendered the asserted claim obvious.

In addition, persons of ordinary skill in the art generally read a prior-art reference as a whole and in the context of other publications and literature. Thus, to understand and interpret any specific statement or disclosure within a prior art reference, such persons would rely on other information within the reference, along with other publications and their general scientific knowledge. As noted above, Defendant will rely upon the prior art references identified herein in their entirety, including un-cited portions.

Additionally, any reference or combination of references that anticipates or renders obvious an asserted independent claim also renders 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.

Defendant puts forth the below exemplary combinations that further demonstrate the obviousness of the asserted claims. Defendant is currently unaware of the extent, if any, to which Touchstream will contend that limitations of the claims at issue are not disclosed in the art identified by Defendant as anticipatory. To the extent that an issue arises with any such limitation, Defendant reserves the right to identify other references that would have made obvious the additional allegedly missing limitation to the disclosed device or method of operation.

In addition to the specific combinations of prior art and the specific combinations of groups of prior art disclosed, Defendant reserve 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 Touchstream appears to be advocating and should not be construed as Defendant's acquiescence to Touchstream's interpretation of the patent claims.

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 to combine prior art references even absent any hint of

suggestion in the 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. These references are also within the field of the Asserted Patents and are directed to similar subject matter within that field. 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 Touchstream 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.

V. INVALIDITY UNDER 35 U.S.C. § 101

In addition to and including the grounds of invalidity set forth in the Invalidity Contentions incorporated by reference herein, Defendant contends that all asserted claims of the Asserted Patents are invalid under 35 U.S.C. § 101 because the claims are directed to an abstract idea and fail to describe an inventive concept. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). For instance, all asserted claims of the Asserted Patents are generally directed for Section 101 purposes and under Touchstream's apparent constructions at controlling the playback of

media/content over a networked infrastructure. This concept is abstract under *Alice* and covers a familiar scenario where a person watching television directs a co-watcher to change the channel on the television and/or change the type of media being viewed (such as by turning on a DVD or CD player using the same entertainment system). Furthermore, the patent and claims add no inventive concept and merely append wholly generic computing components (e.g., display device, content presentation device, personal computing device, server system, media player) to an abstract idea that users of entertainment systems have performed for decades. Moreover, as shown herein, control playback of media/content over a network infrastructure, including via a server was widely known years before the Asserted Patents were filed including in and through YouTube Remote and Google TV, TwonkyMedia, Peel and other media systems discussed herein.

VI. INVALIDITY UNDER 35 U.S.C. § 112

In addition to and including the grounds of invalidity set forth in the Invalidity Contentions incorporated by reference herein, Defendant contends that the asserted claims of the Asserted Patents are invalid under 35 U.S.C. § 112, paragraphs one and/or two for at least the following reasons.

A. Lack of Written Description and/or Enablement under 35 U.S.C. §112(1)

35 U.S.C. § 112, ¶ 1 requires that the specification contain a written description of the invention. “[T]he hallmark of written description is disclosure.” *Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361-62 (Fed. Cir. 2011). 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” *Ariad Pharms.*,

Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*); see also *Boston Scientific*, 647 F.3d at 1362.

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). “[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).

With respect to how to implement limitations of the alleged inventions of the asserted claims, the Asserted Patents do not provide any substantial disclosure beyond that found in the prior art, including the prior-art items identified in these Invalidity Contentions. As a result, Touchstream cannot contend that (1) the Asserted Patents would have enabled a person of ordinary skill to make the alleged inventions within the full scope of the asserted claims, while contending that (2) the prior art does not. To the extent Touchstream contends that any of the prior art does not provide an enabling description of the alleged inventions, the Asserted Patents also fails to provide an enabling disclosure of the alleged inventions.

The disclosure of the Asserted Patents fail to enable those skilled in the art to make and use the full scope of the claimed inventions without undue experimentation at least with respect to the following limitations, thereby rendering invalid each claim where the limitation appears:

- “programming code to control playing of the video contention on the display device by the particular media player”
- “programming code corresponding to the action control command, wherein the programming code is for controlling presentation of the content by the content presentation device using the particular media player”
- “The method of claim 1 including: checking, in the server system, the identity of the media player identified in the one or more signals from the personal computing device; loading an appropriate set of protocols or application programming interfaces from a

library based on the identity of the media player; and converting the command from the personal computing device into corresponding code to control the media player.”

- “wherein the video content is an interactive video game”
- “wherein the video content is streaming media”
- “wherein the one or more messages, taken together, include information associated with a [synchronization code / unique identification code] assigned to the content presentation device”
- “using the information associated with the [synchronization code / unique identification code] to store a record establishing an association between the personal computing device and the content presentation device”
- “content presentation device”
- “action control command for the presentation of the content on the content presentation device”

The specification fails to provide an adequate written description as to least the following claim elements rendering invalid each claim in which the element appears:

- “programming code to control playing of the video content on the display device by the particular media player”
- “programming code corresponding to the action control command, wherein the programming code is for controlling presentation of the content by the content presentation device using the particular media player”
- “The method of claim 1 including: checking, in the server system, the identity of the media player identified in the one or more signals from the personal computing device; loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the media player; and converting the command from the personal computing device into corresponding code to control the media player.”
- “wherein the video content is an interactive video game”
- “wherein the video content is streaming media”
- “wherein the one or more messages, taken together, include information associated with a [synchronization code / unique identification code] assigned to the content presentation device”
- “using the information associated with the [synchronization code / unique identification code] to store a record establishing an association between the personal computing device and the content presentation device”

- “content presentation device”
- “action control command for the presentation of the content on the content presentation device”

B. Indefiniteness under 35 U.S.C. § 112(2)

Claims are indefinite under 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.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

Moreover, a claim term is indefinite where the claims, specification, and prosecution history do not “convey with reasonable certainty the measure of [a given variable] to be used.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015) (holding that “having a molecular weight of...” was indefinite as there were at least three different ways of measuring molecular weight and the intrinsic record did not convey which measure to use); *see also Honeywell Int’l, Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1339-40 (Fed. Cir. 2003) (holding indefinite a claim including a numeric limitation, “melting point elevation,” without disclosing which of multiple methods of measuring that number should be used).

In addition to Defendant’s reservation of rights stated above, Defendant notes that the Court’s Scheduling Order contemplates that all indefiniteness issues be brought to the Court’s attention through the *Markman* briefing process (*see* Dkt. 21). Defendant’s detailed arguments as to indefiniteness will be presented at that time, through the *Markman* meet and confer and briefing process.

At least claims 1, 2, 5, 6, and 7 of the ’251 patent are invalid as indefinite pursuant to 35 U.S.C. § 112, ¶ 2 because the terms “video file,” “video content,” “converting the command from the personal computing device into corresponding code to control the media player,” “wherein the video content is an interactive video game,” “universal command,” and “wherein the video content

is streaming media” are indefinite because the specification “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

At least claims 1, 11, 12, and 14 of the ’528 patent are invalid as indefinite pursuant to 35 U.S.C. § 112, ¶ 2 because the terms “content presentation device,” and “action control command” are indefinite because the specification “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

At least claims 1, 2, 6, and 8 of the ’289 patent are invalid as indefinite pursuant to 35 U.S.C. § 112, ¶ 2 because the terms “content presentation device,” and “action control command” are indefinite because the specification “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

VII. DOCUMENT PRODUCTION

A. Documents Related to Accused Instrumentalities Under the Court’s Order Governing Proceedings – Patent Case

Because of deficiencies in Touchstream’s Infringement Contentions required by the Court’s Order Governing Proceedings – Patent Case, Defendant still does not know with any clarity what of Defendant’s functionality Touchstream is accusing. With the express reservations of rights to supplement its disclosures, and based on its current understanding of Touchstream’s Infringement Contentions, Defendant has produced and continues to produce technical documentation sufficient to show the operation of functionalities that Defendant understands are accused of infringement. Defendant will continue to produce technical documents, including making source code available for inspection, in accordance with the Court’s Order Governing Proceedings – Patent Case and once a Protective Order with appropriate review protocols are in place.

B. Documents Related to Prior Art Under Order Governing Proceedings – Patent Case

Pursuant to the Court's Order Governing Proceedings – Patent Case, Defendant is producing concurrently with these Invalidity Contentions documents Bates labeled, reflecting the prior art references identified above and/or in the attached charts in connection with Defendant's disclosures.

Dated: October 22, 2021

By: /s/ Michael C. Hendershot
Michael C. Hendershot

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CERTIFICATE OF SERVICE

I declare that I am employed with the law firm of Jones Day, whose address is 901 Lakeside Avenue, Cleveland, Ohio 44114. I am over the age of eighteen years and not a party to the within-entitled action.

On **October 22, 2021**, I served a copy of:

**DEFENDANT’S PRELIMINARY INVALIDITY CONTENTIONS,
AND EXHIBITS A – N, X**

BY ELECTRONIC SERVICE [Fed. R. Civ. P. 5(b)] by electronically mailing a true and correct copy through Jones Day’s electronic mail system to the e-mail addresses set forth below:

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I declare under penalty of perjury under the laws of the State of California and the United States of America that the foregoing is true and correct.

Executed this 22nd day of October, 2021, at Cleveland, Ohio.

/s/ Irene M.A. Karfes

Irene M.A. Karfes
Paralegal