

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ROKU, INC.	§	
	§	
Plaintiff,	§	C.A. No. 21-1035 (MN)
	§	
v.	§	
	§	
ALMONDNET, INC. and	§	
INTENT IQ, LLC,	§	
Defendants.	§	

ROKU’S PRELIMINARY INVALIDITY CONTENTIONS

Pursuant to the Scheduling Order (D.I. 41), Plaintiff Roku, Inc. (“Roku”) hereby provides its Preliminary Invalidity Contentions (“Invalidity Contentions”), which includes the accompanying appendix and claim charts, to Defendants AlmondNet, Inc. and Intent IQ, LLC (collectively, “AlmondNet”).

I. INTRODUCTION

As disclosed in its August 26, 2022 Infringement Contentions, AlmondNet asserts the following patents and claims in this case:

- U.S. Patent No. 8,677,398 (“the ’398 Patent”)— claims 13–25;
- U.S. Patent No. 10,715,878 (“the ’878 Patent”)— claims 1–2, and 5–9;
- U.S. Patent No. 7,822,639 (“the ’639 Patent”)— claims 24, 29–32, 40, and 44;
- U.S. Patent No. 8,244,586 (“the ’586 Patent”)— claims 1, 3–5, and 7–9;
- U.S. Patent No. 10,026,100 (“the ’100 Patent”)— claims 1–11, and 13–14;
- U.S. Patent No. 10,628,857 (“the ’857 Patent”)— claims 1–9, and 11;
- U.S. Patent No. 8,566,164 (“the ’164 Patent”)— claims 1–2, and 5–14;
- U.S. Patent No. 8,595,069 (“the ’069 Patent”)— claims 1–6, and 8–17; and
- U.S. Patent No. 10,321,198 (“the ’198 Patent”)— claims 1–6, and 8–17.

The patents identified above are together referred to herein as the “Asserted Patents.”

Roku notes that the list of patent claims asserted by AlmondNet in its August 22, 2022 Infringement Contentions is not co-extensive with the set of patent claims at issue identified in Roku’s claims for declaratory judgment of non-infringement and invalidity (which includes patent claims AlmondNet has before accused Roku and/or Roku-acquired Dataxu of infringing) (*see generally* Roku’s Complaint at D.I. 1), which set includes the following additional claims:

- U.S. Patent No. 8,677,398 (“the ’398 Patent”)— claim 26;
- U.S. Patent No. 10,715,878 (“the ’878 Patent”)— claims 3–4, and 10–23;
- U.S. Patent No. 7,822,639 (“the ’639 Patent”)— claims 1–8, 10, 13–14, 21–23, 25–28, 36–37, 43, 45, and 47;
- U.S. Patent No. 8,244,586 (“the ’586 Patent”)— claims 2, 11–13, 16–17, and 20–22;
- U.S. Patent No. 10,026,100 (“the ’100 Patent”)— claims 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, and 41–42; and
- U.S. Patent No. 8,566,164 (“the ’164 Patent”)— claim 3.

These Invalidity Contentions pertain to and address all the following claims which are at issue between Roku and AlmondNet (collectively, “Asserted Claims”):

- U.S. Patent No. 8,677,398 (“the ’398 Patent”)— claims 13–26;
- U.S. Patent No. 10,715,878 (“the ’878 Patent”)— claims 1–23;
- U.S. Patent No. 7,822,639 (“the ’639 Patent”)— claims 1, 8, 10, 13–14, 21–32, 36–37, 40, and 43–47;
- U.S. Patent No. 8,244,586 (“the ’586 Patent”)— claims 1–5, 7–9, 11–13, 16–17, 20–22;
- U.S. Patent No. 10,026,100 (“the ’100 Patent”)— claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42;
- U.S. Patent No. 10,628,857 (“the ’857 Patent”)— claims 1–9, and 11;
- U.S. Patent No. 8,566,164 (“the ’164 Patent”)— claims 1–3, and 5–14;

- U.S. Patent No. 8,595,069 (“the ’069 Patent”)— claims 1–6, and 8–17; and
- U.S. Patent No. 10,321,198 (“the ’198 Patent”)— claims 1–6, and 8–17.

“Asserted Claims” collectively refers to the above claims unless reference to “Asserted Claims” is made specifically with reference to particularly identified one or more of the Asserted Patents and/or Asserted Claims.

As further detailed in and supported by these Invalidity Contentions, Roku contends that each of the Asserted Claims is invalid under at least 35 U.S.C. §§ 101, 102, 103, and/or 112.¹

II. AMENDMENT/SUPPLEMENTATION

To the extent that the Court later allows AlmondNet to amend its infringement contentions and/or assert one or more claims other than the Asserted Claims, Roku reserves the right to modify, amend, or supplement these Invalidity Contentions accordingly to, for example, show the invalidity of any such newly asserted claims.

These Invalidity Contentions are based on Roku’s current understanding of the Asserted Claims and AlmondNet’s apparent view of the scope of those claims as shown, for example, in AlmondNet’s Infringement Contentions. A *Markman* Order in this case has not yet been issued, and in no way shall these Invalidity Contentions be taken as any admission or acquiescence by Roku as to the proper scope of the Asserted Claims and/or proper claim constructions of terms and phrases recited in those claims. By identifying prior art that anticipates and/or renders obvious the Asserted Claims, Roku does not admit that the claim limitations are capable of construction and do not adopt AlmondNet’s apparent claim constructions or admit the accuracy of any particular

¹ References to Title 35 of the United States Code are to statutes prior to amendment under the America Invents Act (AIA), as the Asserted Patents have effective filing dates prior to applicable AIA effective dates.

claim construction.² Roku reserves all rights to later challenge or oppose any claim constructions advanced by AlmondNet and to present claim construction positions of its own.

Roku further reserves the right to revise these Invalidity Contentions in view of the Court's construction of terms and phrases recited in one or more of the Asserted Claims, additional information obtained during discovery, additional infringement theories put forth by AlmondNet during fact and/or expert discovery, any findings as to the priority date(s) of the Asserted Claims, and/or positions that AlmondNet, its fact witnesses, or its expert witness(es) may take concerning claim construction, infringement, and/or invalidity issues.

Roku further reserves the right to supplement its accompanying document production should it later discover additional prior art documents, information, testimony, prior art systems and related documentation, and/or software or hardware code, including information provided by third parties after the date of service of these Invalidity Contentions.

Roku may further rely on inventor admissions concerning the scope or state of the prior art relevant to the Asserted Claims, the patent prosecution histories of the Asserted Patents, related patents and/or patent applications, any deposition or trial testimony of the named inventor on the Asserted Patents, and the papers filed and any evidence produced or submitted by AlmondNet in connection with this case or other related litigation. Roku reserves the right to contend that one or more of the Asserted Claims are invalid under 35 U.S.C. § 102(f) in the event Roku obtains evidence that the named inventor did not invent the subject matter in the Asserted Claims.

² Roku does not concede that AlmondNet's constructions are correct, but rather asserts the well-established principle that whatever infringes a claim if later in time anticipates if earlier in time. *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001). Thus, where AlmondNet for purposes of its infringement case alleges that a feature of an accused product meets a particular limitation recited in one or more of the Asserted Claims, then that feature should it be found in the prior art would also cause that limitation to be met for invalidity purposes.

Prior art not included in these Invalidity Contentions, whether known or not known to Roku, may become relevant. In particular, Roku is currently unaware of the extent, if any, to which AlmondNet will contend that limitations of the Asserted Claims are not disclosed in the prior art identified in these Invalidity Contentions. Accordingly, Roku reserves the right to identify other references that would disclose the allegedly missing limitation(s) of the claimed method, device, or system.

The references identified in these Invalidity Contentions, which include the attached claim charts, may disclose the elements of the Asserted Claims explicitly and/or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. References identified in these Invalidity Contentions, as well as the “References Cited” on the face of the Asserted Patents and any publications cited within the body of the Asserted Patents, may be used to illustrate, but not limit the scope of, the state of the art to which the Asserted Patents pertain (*i.e.*, at a time prior to the date of alleged inventions of the Asserted Claims of the Asserted Patents). Moreover, Roku reserves the ability to rely on later identified sources of information, including but not limited to witness testimony and other discovery, to establish the state of the art in the relevant time frame pertaining to the Asserted Patents.

Because fact discovery is in its earliest stages at the time of these Invalidity Contentions, Roku anticipates that additional prior art and invalidity bases may be found, including but not limited to through third party discovery. Roku’s investigation and analysis of the prior art is continuing, and thus Roku reserves the right to supplement, amend, and/or revise the information provided herein as Roku conducts further investigation and/or analysis, including identifying, charting, and relying on additional references.

Additionally, in view of likely third-party discovery that will be taken, Roku reserves the

right to present additional items of prior art under 35 U.S.C. §§ 102(a), (b), (e), and/or (g) and/or § 103 located during discovery or further investigation, and to assert contentions of invalidity under 35 U.S.C. §§ 102(c), (d), or (f). For example, Roku has issued and expects to issue additional subpoenas to third parties believed to have knowledge, documents, and/or other evidence relating to or supporting invalidity of one or more of the Asserted Claims. Roku further reserves the right to rely on, cite to, and/or seek in this case prior art or invalidity information (including testimony) provided in response to one or more subpoenas issued in one or more other proceedings involving one or more of the Asserted Patents.

Roku reserves the right to supplement or otherwise amend these Invalidity Contentions in response to any relevant discovery provided by third parties, AlmondNet, opening or rebuttal expert reports, fact or expert depositions, or in response to any claim construction ruling(s) issued by this Court (regardless of how and when such ruling is made). Roku also reserves the right to supplement or otherwise amend these Invalidity Contentions in response to any rebuttal evidence disclosed by AlmondNet or as otherwise may be necessary or appropriate under the circumstances.

In addition to the positions and prior art identified in these Invalidity Contentions (including the accompanying invalidity claim charts), Roku also incorporates by reference all invalidity contentions, prior art, and invalidity claim charts (including, without limitation, all anticipation positions, obviousness positions (including all prior art combinations and motivations to combine), indefiniteness positions, and non-enablement positions) concerning one or more of the Asserted Patents, as disclosed at any time, including in previous or related litigation or United States Patent & Trademark Office (“USPTO”) proceedings, to AlmondNet, including to the named inventor and any individuals associated with the prosecution and/or post-grant review of one or more of the Asserted Patents. For example, Roku incorporates by reference as if fully set forth

herein the grounds, positions, arguments, and expert declarations supporting invalidity in the following and any other post-grant proceedings involving one or more of the Asserted Patents:

- *Inter Partes* Review Case No. 2017-01299 (U.S. Patent No. 8,677,398)
- *Inter Partes* Review Case No. 2022-00773 (U.S. Patent No. 8,677,398)
- *Inter Partes* Review Case No. 2022-01236 (U.S. Patent No. 8,677,398)
- *Inter Partes* Review Case No. 2022-01420 (U.S. Patent No. 8,677,398)
- *Inter Partes* Review Case No. 2022-01315 (U.S. Patent No. 10,715,878)
- *Inter Partes* Review Case No. 2022-01505 (U.S. Patent No. 10,715,878)
- CBM Review Case No. 2017-00046 (U.S. Patent No. 7,822,639)
- *Inter Partes* Review Case No. 2022-00928 (U.S. Patent No. 7,822,639)
- *Inter Partes* Review Case No. 2022-01453 (U.S. Patent No. 7,822,639)
- CBM Review Case No. 2017-00047 (U.S. Patent No. 8,244,586)
- *Inter Partes* Review Case No. 2022-00929 (U.S. Patent No. 8,244,586)
- *Inter Partes* Review Case No. 2022-01454 (U.S. Patent No. 8,244,586)
- *Inter Partes* Review Case No. 2022-00953 (U.S. Patent No. 8,566,164)
- *Inter Partes* Review Case No. 2022-01506 (U.S. Patent No. 8,566,164)
- *Inter Partes* Review Case No. 2022-00959 (U.S. Patent No. 8,595,069)
- *Inter Partes* Review Case No. 2022-00960 (U.S. Patent No. 10,321,198)
- *Inter Partes* Review Case No. 2022-01507 (U.S. Patent No. 10,321,198)

Roku further incorporates by reference as if fully set forth herein the grounds, positions, arguments, and expert declarations supporting invalidity in any future post-grant proceedings involving any of the Asserted Patents.

Roku also incorporates by reference the prior art and invalidity contentions with respect to the Asserted Patents that were disclosed to AlmondNet in:

- *AlmondNet, Inc. and Intent IQ, LLC v. Samsung Electronics Co., Ltd., Samsung*

Electronics America, Inc., AdGear Technologies Inc., WDTX Case No. 6:21-cv-00891

- *AlmondNet, Inc. and Intent IQ, LLC v. Meta Platforms, Inc.*, WDTX Case No. 6:21-cv-00896-ADA
- *AlmondNet, Inc. and Intent IQ, LLC v. Microsoft Corporation*, WDTX Case No. 6:21-cv-00897-ADA
- *AlmondNet, Inc. and Intent IQ, LLC v. Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc.*, WDTX Case No. 6:21-cv-00898-ADA

Further, Roku intends to rely on inventor admissions concerning the scope of the prior art relevant to the Asserted Patents found in the patents themselves, the patent prosecution histories of the Asserted Patents and related patents and/or patent applications, any deposition testimony of the named inventors on the Asserted Patents, testimony from third party prior art authors, inventors, and witnesses, and the papers filed and any evidence submitted by AlmondNet in conjunction with this litigation.

III. IDENTIFICATION OF PRIOR ART

Subject to Roku's reservation of rights, in addition to the references cited in the post-grant review proceedings identified above and the references cited on the face of the Asserted Patents, any foreign counterparts, and any patents or applications that claim priority to, from, or are the basis for a claim of priority of an Asserted Patent, the admitted prior art in the specifications and prosecution histories of the Asserted Patents, Roku herein identifies prior art references and products that may disclose the elements of the Asserted Claims either explicitly, inherently, or via an obviousness combination and may also be relied upon to show the state of the art in the relevant timeframe. The exhibit numbers in the first column of the chart below represent the claim charts attached as part of these Invalidity Contentions that relate to the respective prior art references. The claim charts set forth where in the prior art references each element of the Asserted Claims is found.

Exhibit Number	Patent or Publication Number³	Country of Origin	Date of Filing/ Issuance
398-1 878-1	U.S. Patent No. 7,062,469 to Meyers et al. (“Meyers”)	US	Filed: January 2, 2001 Published: July 4, 2002 Issued: June 13, 2006
398-2 878-2	U.S. Patent No. 7,900,229 to Dureau et al. (“Dureau”)	US	Filed: October 15, 2002 Published: April 15, 2004 Issued: March 1, 2011
398-3 878-3	U.S. Patent No. 7,962,603 to Morimoto et al. (“Morimoto”)	US	Filed: June 6, 2000 Issued: June 14, 2011
398-4 878-4	U.S. Patent No. 8,015,184 to Zito et al. (“Zito”)	US	Filed: April 11, 2005 Published: April 27, 2006 Issued: September 6, 2011
398-5 878-5 164-1 069-1 198-1	U.S. Patent No. 8,180,674 to Madhavan et al. (“Madhavan”)	US	Filed: Oct. 3, 2006 Published: April 3, 2008 Issued: May 15, 2012
398-6 878-6 164-2 069-2 198-2	U.S. Patent No. 8,402,356 to Martinez et al. (“Martinez 356”)	US	Filed: Nov. 22, 2006 Published: May 22, 2008 Issued: March 19, 2013
398-7 878-7 164-3 069-3 198-3	U.S. Patent No. 8,468,578 to Lu et al. (“Lu”)	US	Filed: Dec. 30, 2002 Issued: June 18, 2013
398-8 878-8	U.S. Patent No. 8,621,064 to Campbell et al. (“Campbell”)	US	Filed: March 28, 2007 Published: October 2, 2008 Issued: December 31, 2013

³ To the extent that a patent application publication is relied on for invalidity purposes, any issued patent on that application is equally applicable as prior art for at least those invalidity purposes (and for at least those disclosures cited in the publication). Similarly, to the extent that an issued patent is relied on for invalidity purposes, any publication of the application underlying that patent is equally applicable as prior art for at least those invalidity purposes (and for at least those disclosures cited in the issued patent).

Exhibit Number	Patent or Publication Number³	Country of Origin	Date of Filing/ Issuance
398-9 878-9	U.S. Patent No. 8,880,677 to Julia et al. (“Julia”)	US	Filed: January 3, 2006 Published: August 31, 2006 Issued: November 4, 2014
398-10 878-10 164-4 069-4 198-4	U.S. Patent No. 9,110,903 to Martinez et al. (“Martinez”)	US	Filed: November 22, 2006 Published: May 22, 2008 Issued: August 18, 2015
398-11 878-11 164-5 069-5 198-5	U.S. Patent Application Publication No. 2007/0157247 to Cordray et al. (“Cordray”)	US	Filed: Dec. 29, 2005 Published: July 5, 2007
398-12 878-12 164-6 069-6 198-6	Jambo System (“Jambo”) ⁴		At least by December 29, 2005
398-13 878-13 164-7 069-7 198-7	DoubleClick System (“DoubleClick”) ⁵		At least by July 2006
164-8 069-8 198-8	U.S. Publication No. 2008/0281697 to Whitehead (“Whitehead”)	US	Filed: June 29, 2007 Priority: May 11, 2007 Published: Nov. 13, 2008
164-9 069-9 198-9	U.S. Patent No. 9,495,682 to Vallier (“Vallier”)	US	Filed: August 31, 2006 Published: March 6, 2008 Issued: Nov. 15, 2006

⁴ See Exhibit 398-15 for a listing of currently known references that describe the Jambo System, which are referred to herein as the Jambo References.

⁵ See Exhibit 398-16 for a listing of currently known references that describe the DoubleClick System, which are referred to herein as the DoubleClick References.

Exhibit Number	Patent or Publication Number³	Country of Origin	Date of Filing/ Issuance
639-1 586-1 100-1 857-1	U.S. Patent No. 6,324,519 to Elderling (“Elderling”)	US	Filed: Mar. 12, 1999 Issued: Nov. 27, 2001
639-2 586-2 100-2 857-2	U.S. Patent No. 7,039,699 to Narin et al. (“Narin”)	US	Filed: May 2, 2000 Issued: May 2, 2006
639-3 586-3 100-3 857-3	U.S. Patent No. 6,334,111 to Carrott et al. (“Carrott”)	US	Filed: October 6, 2000 Issued: December 25, 2001
639-4 586-4 100-4 857-4	U.S. Patent Application Publication No. 2008/ 0077478 to Kim et al. (“Kim”)	US	Filed: October 31, 2007 Published: March 27, 2008
639-5 586-5 100-5 857-5	U.S. Patent Publication No. 2004/0068477 to Gilmour et al. (“Gilmour”)	US	Filed: January 12, 2001 Priority: October 31, 2000 Published: April 8, 2004
639-6 586-6 100-6 857-6	Engage System (“Engage”) ⁶		At least by November 28, 2000
639-7 586-7 100-7 857-7	U.S. Patent No. 8,566,154 to Merriman et al. (“Merriman 154”)	US	Filed: Feb. 26, 2002 Priority: June 16, 1997 Issued: Oct. 22, 2013

Roku further identifies as prior art any and all actual products and systems, as disclosed in the identified prior art references, that were known, used, or sold prior to the applicable filing dates of the Asserted Patents. Roku’s investigation of such products and systems is ongoing and it

⁶ See Exhibit 639-6 for a listing of currently known references that describe the Engage System, which are referred to herein as the Engage References.

reserves the right to seek discovery and supplement its invalidity contentions based on information learned about those products and systems. To the extent that such products and systems are as described in corresponding prior art publications, those products and systems are invalidating for the same or similar reasons that the corresponding prior art publication is invalidating. In certain cases, due to the substantial relation between a publication and a corresponding product or system, the combination of such prior art should be treated as a single reference for purposes under 35 U.S.C. § 102.

Roku further identifies the art in Appendix 1 and provided in its production as relevant to the state of the art for the Asserted Patents.

Roku continues to investigate each of the above identified prior art, including through potential discovery needed to be obtained via third party subpoenas, and reserves the right to supplement these contentions and accompanying claim charts after further investigation.

IV. STATEMENTS AS TO ANTICIPATION AND OBVIOUSNESS

Roku contends that certain prior art references below anticipate one or more Asserted Claims under 35 U.S.C. § 102 and that to the extent the identified prior art references do not anticipate the Asserted Claims, those claims are invalid as obvious under 35 U.S.C. §103. Each anticipatory prior art reference disclosed herein, either alone or in combination with other prior art, also renders the Asserted Claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information generally known to persons skilled in the art at the time of the alleged invention, and/or (2) any of the other anticipatory prior art references. To the extent that AlmondNet contends that any of the anticipatory prior art fails to disclose one or more limitations of the Asserted Claims, Roku contends that any difference between the reference and the corresponding patent claims would have been obvious to one of ordinary skill in the art. Moreover, to the extent AlmondNet contends that any prior art reference does not expressly

disclose a limitation in an Asserted Claim, such limitations would have been inherent and/or obvious. Thus, Roku's identification of anticipatory references should be interpreted as both reflecting anticipation by the reference as well as invalidity due to single reference obviousness, to the extent that AlmondNet contends that any limitation is missing.

As stated above, Roku incorporates by reference all other invalidity contentions (including contentions regarding claims or claim terms being indefinite) related to the Asserted Patents served on or otherwise made known to AlmondNet, whether past or future, including but not limited to the invalidity grounds presented in the covered business method and *inter partes* review proceedings referenced above.

In *KSR International Co. v. Teleflex, Inc.*, the United States Supreme Court held that, among other things, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” 127 S. Ct. 1727, 1739 (2007); *see also id.* at 1731 (“[A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.”). In particular, a patent is obvious where “the content of the prior art, the scope of the patent claim, and the level of ordinary skill are not in material dispute, and the obviousness of the claim is apparent in light of these factors.” *Id.* at 1745–46. The Supreme Court found that “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 1731.

Moreover, the Court recognizes that market pressures will motivate a person of ordinary skill to survey known art for solutions to problems. *Id.* at 1732 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable

solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp.”). When a person of ordinary skill uses an identified, predictable solution to solve a problem, “it is likely the product not of innovation but of ordinary skill and common sense.” *Id.*

In addition, when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. *Id.* at 1740. If a person of ordinary skill can implement a predictable variation, 35 U.S.C. § 103 bars its patentability. *Id.* The rationale to combine or modify prior art references is significantly stronger when references seek to solve similar problems, come from the same field, and correspond well. *In re Inland Steel Co.*, 265 F.3d 1354, 1362 (Fed. Cir. 2001).

Although the law does not require evidence of motivation to combine, motivation exists to combine one or more of the references disclosed herein with each other. Beyond specific motivations identified herein, motivation to modify a particular reference or to combine any two or more of the identified references comes from (a) the nature of the problem being solved, (b) the teachings of the prior art, (c) the knowledge of persons of ordinary skill in the art, (d) the fact that all of the references teach systems, apparatuses, and methods related to the subject matter and address the same technical issues described in the Asserted Patents, and (e) one would be motivated by considerations of efficiency, effectiveness, convenience, cost-savings, and accessibility, to combine the various teachings. Additionally, one would be motivated to address the alleged problems or achieve the purported objectives identified in the Background sections of the Asserted Patents.

Roku contends that the Asserted Claims are invalid, at least under Plaintiff’s apparent claim constructions, as follows:

A. U.S. Patent No. 8,677,398

- Claims 13–19 and 21–26 are anticipated by Meyers.
- Claims 13–26 are obvious in view of Meyers and any one or combination of Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–24 and 26 are anticipated by Dureau.
- Claims 13–26 are obvious in view of Dureau and any one or combination of Meyers, Madhavan, Morimoto, Zito, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–24 and 23–26 are anticipated by Morimoto.
- Claims 13–26 are obvious in view of Morimoto and any one or combination of Meyers, Madhavan, Dureau, Zito, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–23 and 26 are anticipated by Zito.
- Claims 13–26 are obvious in view of Zito and any one or combination of Meyers, Madhavan, Dureau, Morimoto, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–26 are obvious in view of Madhavan and any one or combination of Meyers, Dureau, Morimoto, Zito, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–24, 26 are anticipated by Martinez 356.
- Claims 13–26 are obvious in view of Martinez 356 and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–26 are anticipated by Lu.
- Claims 13–26 are obvious in view of Lu and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–26 are anticipated by Campbell.
- Claims 13–26 are obvious in view of Campbell and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–26 are anticipated by Julia.

- Claims 13–26 are obvious in view of Julia and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 13–26 are anticipated by Martinez.
- Claims 13–26 are obvious in view of Martinez and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Cordray, Jambo, and DoubleClick.
- Claims 13–18, 20–23, and 26 are anticipated by Cordray.
- Claims 13–26 are obvious in view of Cordray and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Jambo, and DoubleClick.
- Claims 13–26 are anticipated by Jambo.
- Claims 13–26 are obvious in view of Jambo and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, and DoubleClick.
- Claims 13–26 are anticipated by DoubleClick.
- Claims 13–26 are obvious in view of DoubleClick and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, and Jambo.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '398 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Meyers (“System and Method for Public Wireless Network Access Subsidized by Dynamic Display Advertising”), Dureau (“Convergence of Interactive Television and Wireless Technologies”), Morimoto (“System and Method for Identifying Individual Users Accessing a Web Site”), Zito (“Method and

Apparatus for a Search-Enabled Remote Control Device”), Madhavan (“Targeting of Advertisements Based on Mutual Information Sharing Between Devices Over a Network”), Martinez 356 (“Methods, Systems and Apparatus for Delivery of Media”), Lu (“Establishing Access Controls in a Premise-Based Environment”), Campbell (“System and Method for Associating a Geographic Location with an Internet Protocol Address”), Julia (“System and Method for Delivering Content to Users on a Network”), Martinez (“Method, System and Apparatus for Using User Profile Electronic Device Data in Media Delivery”), Cordray (“Systems and Methods for Managing Content”), Jambo References, DoubleClick References, Baum (“Methods and Apparatus for Determining the Port and/or Physical Location of an IP Device and For Using That Information”), Damick (“Router-Host Logging”), and Varghese (“System and Method for Fraud Monitoring, Detection, and Tiered User Authentication”) references as prior art to the ’398 Patent (collectively referred to herein as the “398 References”). To the extent that any of the identified prior art for the ’398 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 398 References and/or knowledge about the systems disclosed in the 398 References (e.g., the content management/ advertising systems of Vignette, Google, Yahoo!, Jambo, AT&T, DoubleClick, Nokia, OpenTV, AOL, Qualcomm Connected Experiences, or Equate Systems). All of the 398 References relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, all of the 398 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the ’398 Patent.

As detailed in these contentions, all the elements of the asserted claims of the ’398 Patent

were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

B. U.S. Patent No. 10,715,878

- Claims 1–3, 6–10, 12–15, 17–19, and 21–22 are anticipated by Meyers.
- Claims 1–23 are obvious in view of Meyers and any one or combination of Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–8 and 10–23 are anticipated by Dureau.
- Claims 1–23 are obvious in view of Dureau and any one or combination of Meyers, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–5, 8–10, 12–16, 19, and 21–22 are anticipated by Morimoto.
- Claims 1–23 are obvious in view of Morimoto and any one or combination of Meyers, Dureau, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–7 and 10–23 are anticipated by Zito.
- Claims 1–23 are obvious in view of Zito and any one or combination of Meyers, Dureau, Morimoto, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are obvious in view of Madhavan and any one or combination of Meyers, Dureau, Morimoto, Zito, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are anticipated by Martinez 356.
- Claims 1–23 are obvious in view of Martinez 356 and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are anticipated by Lu.
- Claims 1–23 are obvious in view of Lu and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.

- Claims 1–23 are anticipated by Campbell.
- Claims 1–23 are obvious in view of Campbell and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are anticipated by Julia.
- Claims 1–23 are obvious in view of Julia and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are anticipated by Martinez.
- Claims 1–23 are obvious in view of Martinez and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–7, 10–23 are anticipated by Cordray.
- Claims 1–23 are obvious in view of Cordray and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo, and DoubleClick.
- Claims 1–23 are anticipated by Jambo.
- Claims 1–23 are obvious in view of Jambo and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, and DoubleClick.
- Claims 1–23 are anticipated by DoubleClick.
- Claims 1–23 are obvious in view of DoubleClick and any one or combination of Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, and Jambo.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '878 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Meyers, Dureau, Morimoto, Zito, Madhavan, Martinez 356, Lu, Campbell, Julia, Martinez, Cordray, Jambo References, DoubleClick References, Baum, Damick, and Varghese references as prior art to the '878 Patent (collectively referred to herein as the "878 References"). To the extent that any of the identified prior art for the '878 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 878 References and/or knowledge about the systems disclosed in the 878 References (e.g., the content management/ advertising systems of Vignette, Google, Yahoo!, Jambo, AT&T, DoubleClick, Nokia, OpenTV, AOL, Qualcomm Connected Experiences, or Equate Systems). All of the 878 References relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, all of the 878 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the '878 Patent.

As detailed in these contentions, all the elements of the asserted claims of the '878 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

C. U.S. Patent No. 7,822,639

- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Eldering.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Eldering and any one or combination of Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Narin.

- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Narin and any one or combination of Eldering, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Carrott.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Carrott and any one or combination of Eldering, Narin, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Kim.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Kim and any one or combination of Eldering, Narin, Carrott, Gilmour, Engage, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Gilmour.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Gilmour and any one or combination of Eldering, Narin, Carrott, Kim, Engage, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are anticipated by Engage.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Engage and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Merriman 154.
- Claims 1–8, 10, 13–14, 21–31, 36–37, 40, and 43–47 are anticipated by Merriman 154.
- Claims 1–8, 10, 13–14, 21–32, 36–37, 40, and 43–47 are obvious in view of Merriman 154 and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Engage.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '639 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, CBM petition materials, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Eldering (“Advertisement

Auction System”), Narin (“Tracking Usage Behavior in Computer Systems”), Carrott (“Method for Allocating Commissions Over the Internet Using Tags”), Kim (“Systems and Methods for Interactively Delivering Advertisement Units to a Web Browser”), Gilmour (“Method and System to Publish the Results of a Search of Descriptive Profiles Based on Respective Publication Policies Specified by Owners of the Descriptive Profiles, and a Profile Service Provider”), Engage References, and Merriman 154 (“Network for Distribution of Re-Targeted Advertising”) references as prior art to the ’639 Patent (collectively referred to herein as the “639 References”). To the extent that any of the identified prior art for the ’639 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 639 References and/or knowledge about the systems disclosed in the 639 References (e.g., the content management/ advertising systems of Expanse Networks, Microsoft, Google, Careau & Co., Interpols Network Inc., Inforonics, Webloyalty.com, and Fujitsu). All of the 639 References relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, all of the 639 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the ’639 Patent.

As detailed in these contentions, all the elements of the asserted claims of the ’639 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

D. U.S. Patent No. 8,244,586

- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Eldering.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Eldering and any

one or combination of Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154.

- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Narin.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Narin and any one or combination of Eldering, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Carrott.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Carrott and any one or combination of Eldering, Narin, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Kim.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Kim and any one or combination of Eldering, Narin, Carrott, Gilmour, Engage, and Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Gilmour.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Gilmour and any one or combination of Eldering, Narin, Carrott, Kim, Engage, and Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Engage.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Engage and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are anticipated by Merriman 154.
- Claims 1–5, 7–9, 11–13, 16–17, 20–22 are obvious in view of Merriman 154 and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Engage.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '586 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, CBM petition materials, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Eldering, Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154 references as prior art to the '586 Patent (collectively

referred to herein as the “586 References”). To the extent that any of the identified prior art for the ’586 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 586 References and/or knowledge about the systems disclosed in the 586 References (e.g., the content management/ advertising systems of Expanse Networks, Microsoft, Google, Careau & Co., Interpol Network Inc., Inforonics, Webloyalty.com, and Fujitsu). All of the 586 References relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, all of the 586 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the ’586 Patent.

As detailed in these contentions, all the elements of the asserted claims of the ’586 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

E. U.S. Patent No. 10,026,100

- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Eldering.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Eldering and any one or combination of Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Narin.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Narin and any one or combination of Eldering, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Carrott.

- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Carrott and any one or combination of Eldering, Narin, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Kim.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Kim and any one or combination of Eldering, Narin, Carrott, Gilmour, Engage, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Gilmour.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Gilmour and any one or combination of Eldering, Narin, Carrott, Kim, Engage, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Engage.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Engage and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are anticipated by Merriman 154.
- Claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, 41–42 are obvious in view of Merriman 154 and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Engage.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '100 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, any future IPR proceedings, and the obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Eldering, Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154 references as prior art to the '100 Patent (collectively

referred to herein as the “100 References”). To the extent that any of the identified prior art for the ’100 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 100 References and/or knowledge about the systems disclosed in the 100 References (e.g., the content management/ advertising systems of Expanse Networks, Microsoft, Google, Careau & Co., Interpols Network Inc., Inforonics, Webloyalty.com, and Fujitsu). All of the 100 References relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, all of the 100 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the ’100 Patent.

As detailed in these contentions, all the elements of the asserted claims of the ’100 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

F. U.S. Patent No. 10,628,857

- Claims 1–9 and 11 are anticipated by Eldering.
- Claims 1–9 and 11 are obvious in view of Eldering and any one or combination of Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–9 and 11 are anticipated by Narin.
- Claims 1–9 and 11 are obvious in view of Narin and any one or combination of Eldering, Carrott, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–9 and 11 are anticipated by Carrott.
- Claims 1–9 and 11 are obvious in view of Carrott and any one or combination of Eldering, Narin, Kim, Gilmour, Engage, and Merriman 154.
- Claims 1–9 and 11 are anticipated by Kim.
- Claims 1–9 and 11 are obvious in view of Kim and any one or combination of

Eldering, Narin, Carrott, Gilmour, Engage, and Merriman 154.

- Claims 1–9 and 11 are anticipated by Gilmour.
- Claims 1–9 and 11 are obvious in view of Gilmour and any one or combination of Eldering, Narin, Carrott, Kim, Engage, and Merriman 154.
- Claims 1–9 and 11 are anticipated by Engage.
- Claims 1–9 and 11 are obvious in view of Engage and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Merriman 154.
- Claims 1–9 and 11 are anticipated by Merriman 154.
- Claims 1–9 and 11 are obvious in view of Merriman 154 and any one or combination of Eldering, Narin, Carrott, Kim, Gilmour, and Engage.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '857 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, any future IPR proceedings, and the obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Eldering, Narin, Carrott, Kim, Gilmour, Engage, and Merriman 154 references as prior art to the '857 Patent (collectively referred to herein as the "857 References"). To the extent that any of the identified prior art for the '857 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 857 References and/or knowledge about the systems disclosed in the 857 References (e.g., the content management/ advertising systems of Expanse Networks, Microsoft, Google, Careau & Co., Interpols Network Inc., Inforonics, Webloyalty.com, and Fujitsu). All of the 857 References relate to targeting specific content, including advertisements,

to specific users based on information collected about the users (and/or their devices). Thus, all of the 857 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the '857 Patent.

As detailed in these contentions, all the elements of the asserted claims of the '857 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

G. U.S. Patent No. 8,566,164

- Claims 1–3 and 5–14 are obvious in view of Madhavan and any one or combination of Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–3 and 5–14 are anticipated by Martinez 356.
- Claims 1–3 and 5–14 are obvious in view of Martinez 356 and any one or combination of Madhavan, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–3, 5–6, and 9–14 are anticipated by Lu.
- Claims 1–3 and 5–14 are obvious in view of Lu and any one or combination of Madhavan, Martinez 356, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–3 and 5–14 are anticipated by Martinez.
- Claims 1–3 and 5–14 are obvious in view of Martinez and any one or combination of Madhavan, Martinez 356, Lu, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–3, 5–8, 10, 12, and 14 are anticipated by Cordray.
- Claims 1–3 and 5–14 are obvious in view of Cordray and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–3 and 5–14 are obvious in view of Jambo and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, DoubleClick, Whitehead, and Vallier.

- Claims 1–3 and 5–14 are obvious in view of DoubleClick and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Whitehead, and Vallier.
- Claims 1–3 and 5–14 are anticipated by Whitehead.
- Claims 1–3 and 5–14 are obvious in view of Whitehead and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and Vallier.
- Claims 1–3 and 5–14 are obvious in view of Vallier and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and Whitehead.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '164 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Madhavan (“Targeting of Advertisements Based on Mutual Information Sharing Between Devices Over a Network”), Martinez 356 (“Methods, Systems and Apparatus for Delivery of Media”), Lu (“Establishing Access Controls in a Premise-Based Environment”), Martinez (“Method, System and Apparatus for Using User Profile Electronic Device Data in Media Delivery”), Cordray (“Systems and Methods for Managing Content”), Jambo References, DoubleClick References, Whitehead (“Systems and Method for Using Video Services Records to Provide Targeted Marketing Services”), Vallier (“Converged Marketing Architecture and Related Research and Targeting Methods Utilizing Such Architectures”), Varghese (“System and Method for Fraud Monitoring, Detection, and Tiered User Authentication”) and Beyda (“Audience Matching Network with Performance Factoring and Revenue Allocation”) references as prior art to the '164 Patent

(collectively referred to herein as the “164 References”). To the extent that any of the identified prior art for the ’164 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 164 References and/or knowledge about the systems disclosed in the 164 References (e.g., the content management/ advertising systems of Microsoft, Yahoo!, Jambo, DoubleClick, and AOL). With the exception of Varghese, the 164 References all relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, these 164 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the ’164 Patent.

A person of ordinary skill in the art would have been motivated to apply Varghese’s teachings of using a device identifier, including device identity information of various types (e.g., cookie, IP address) in the content delivery systems of the remainder of the 164 References to produce the obvious, beneficial, and predictable results of improved device identification, which enables improved tracking of user behavior and targeted advertisement based thereupon. Varghese is analogous prior art to the other 164 References because it is in the same field of network-based applications including resource control. Varghese’s teachings also provide flexible design choices regarding device identity to fit the needs of a particular application. Combining Varghese with any of the other 164 References would have produced predictable results.

As detailed in these contentions, all the elements of the asserted claims of the ’164 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

H. U.S. Patent No. 8,595,069

- Claims 1–6 and 8–17 are obvious in view of Madhavan and any one or combination of Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Martinez 356.
- Claims 1–6 and 8–17 are obvious in view of Martinez 356 and any one or combination of Madhavan, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–4, 6, 8, and 11–17 are anticipated by Lu.
- Claims 1–6 and 8–17 are obvious in view of Lu and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Martinez.
- Claims 1–6 and 8–17 are obvious in view of Martinez and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–6, and 8–12, and 14–17 are anticipated by Cordray.
- Claims 1–6 and 8–17 are obvious in view of Cordray and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Jambo, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are obvious in view of Jambo and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are obvious in view of DoubleClick and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Whitehead.
- Claims 1–6 and 8–17 are obvious in view of Whitehead and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and Vallier.
- Claims 1–6 and 8–17 are obvious in view of Vallier and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and Whitehead.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '069 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and de Heer references as prior art to the '069 Patent (collectively referred to herein as the "069 References"). To the extent that any of the identified prior art for the '069 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 069 References and/or knowledge about the systems disclosed in the 069 References (e.g., the content management/ advertising systems of Microsoft, Yahoo!, Jambo, DoubleClick, and AOL). With the exception of Varghese, the 069 References all relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, these 069 References concern technology in the same field, and they all address the same or similar problem to that purported to be addressed by the '069 Patent.

A person of ordinary skill in the art would have been motivated to apply Varghese's teachings of using a device identifier, including device identity information of various types (e.g., cookie, IP address) in the content delivery systems of the remainder of the 069 References to produce the obvious, beneficial, and predictable results of improved device identification, which enables improved tracking of user behavior and targeted advertisement based thereupon. Varghese

is analogous prior art to the other 069 References because it is in the same field of network-based applications including resource control. Varghese's teachings also provide flexible design choices regarding device identity to fit the needs of a particular application. Combining Varghese with any of the other 069 References would have produced predictable results.

As detailed in these contentions, all the elements of the asserted claims of the '069 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

I. U.S. Patent No. 10,321,198

- Claims 1–6 and 8–17 are obvious in view of Madhavan and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo References, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Martinez 356.
- Claims 1–6 and 8–17 are obvious in view of Martinez 356 and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo References, DoubleClick, Whitehead, and Vallier.
- Claims 1–4, 6, 8, and 11–17 are anticipated by Lu.
- Claims 1–6 and 8–17 are obvious in view of Lu and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo References, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Martinez.
- Claims 1–6 and 8–17 are obvious in view of Martinez and any one or combination of Madhavan, Martinez 356, Lu, Cordray, Jambo References, DoubleClick, Whitehead, and Vallier.
- Claims 1–6, 8–12, and 14–17 are anticipated by Cordray.
- Claims 1–6 and 8–17 are obvious in view of Cordray and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Jambo References, DoubleClick, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are obvious in view of Jambo and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, DoubleClick, Whitehead,

and Vallier.

- Claims 1–6 and 8–17 are obvious in view of DoubleClick and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Whitehead, and Vallier.
- Claims 1–6 and 8–17 are anticipated by Whitehead.
- Claims 1–6 and 8–17 are obvious in view of Whitehead and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo References, DoubleClick, and Vallier.
- Claims 1–6 and 8–17 are obvious in view of Vallier and any one or combination of Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo References, DoubleClick, and Whitehead.

To be clear, the foregoing listing is not intended to be exhaustive of all grounds which the claims of the '198 Patent are invalid. Rather, the listing is intended to be illustrative of the various grounds establishing invalidity, in connection with any additional grounds evident from the prior art disclosures identified in the claim charts, IPR proceedings, and obviousness rationale set forth herein.

Obviousness Rationale

Above and in the attached claim charts, Roku has identified the Madhavan, Martinez 356, Lu, Martinez, Cordray, Jambo, DoubleClick, and de Heer references as prior art to the '198 Patent (collectively referred to herein as the "198 References"). To the extent that any of the identified prior art for the '198 Patent is deemed not to disclose one or more limitations, one of ordinary skill in the art would have been motivated to combine such prior art with the knowledge of one of skill in the art and/or any one or more of the other 198 References and/or knowledge about the systems disclosed in the 198 References (e.g., the content management/ advertising systems of Microsoft, Yahoo!, Jambo, DoubleClick, and AOL). With the exception of Varghese, the 198 References all relate to targeting specific content, including advertisements, to specific users based on information collected about the users (and/or their devices). Thus, these 198 References concern

technology in the same field, and they all address the same or similar problem to that purported to be addressed by the '198 Patent.

A person of ordinary skill in the art would have been motivated to apply Varghese's teachings of using a device identifier, including device identity information of various types (e.g., cookie, IP address) in the content delivery systems of the remainder of the 198 References to produce the obvious, beneficial, and predictable results of improved device identification, which enables improved tracking of user behavior and targeted advertisement based thereupon. Varghese is analogous prior art to the other 198 References because it is in the same field of network-based applications including resource control. Varghese's teachings also provide flexible design choices regarding device identity to fit the needs of a particular application. Combining Varghese with any of the other 198 References would have produced predictable results.

As detailed in these contentions, all the elements of the asserted claims of the '198 Patent were known in the prior art, and it would have been obvious to one of ordinary skill to combine the elements in the claimed arrangement under the rationale set forth in *KSR*, and particularly because the prior art arises out of the same industry.

V. CLAIM CHARTS WITH SPECIFIC REFERENCES TO PRIOR ART

Invalidity claim charts identifying exemplary citations to and disclosures in the references identified in Section III *supra* as to the Asserted Claims of the Asserted Patents are provided in attached Exhibits 398-1 to 398-13 (the '398 Patent), Exhibits 878-1 to 878-13 (the '878 Patent), Exhibits 639-1 to 639-7 (the '639 Patent), Exhibits 586-1 to 586-7 (the '586 Patent), Exhibits 100-1 to 100-7 (the '100 Patent), Exhibits 857-1 to 857-7 (the '857 Patent), Exhibits 164-1 to 164-9 (the '164 Patent), Exhibits 069-1 to 069-9 (the '069 Patent), and Exhibits 198-1 to 198-9 (the '198 Patent).

Where a reference discloses, either expressly or inherently, each of the limitations of a

particular claim, that references anticipates that claim. To the extent that a reference is deemed not to have disclosure for a particular claim limitation, Roku contends that that reference can be combined with one or more other references shown in the relevant chart as disclosing that claim limitation, based on what would have been obvious to one of ordinary skill in that art and/or for at least the reasons provided in Roku's invalidity contentions.

Roku has identified relevant portions and/or features of the prior art. However, the identified prior art may contain additional disclosures of the claim limitations, regardless of whether cumulative with identified portions. Roku may rely on uncited portions or features of the identified prior art, other documents, and expert testimony, to provide context or to aid in understanding the identified prior art and the state of the art. Citations to a particular figure in a reference include the caption and description of the figure and any text relating to the figure. Similarly, citations to particular text referring or relating to a figure include the figure and caption as well.

Throughout the invalidity claim chart Exhibits, Roku provides examples of where references disclose subject matter recited in preambles of the Asserted Claims, regardless of whether the preambles limit the claims. Roku reserves the right to argue that the preambles are or are not limitations. Further, where an entry in a claim chart corresponding to a given limitation refers back to the discussion of another claim, the entry incorporates all evidence cited for the other claim.

Correspondence between claim language of the Asserted Patents and disclosures in prior art references shall not imply or be taken as any admission regarding whether the claim language has patentable weight or meets the requirements of 35 U.S.C. § 112.

VI. GROUNDS OF INVALIDITY UNDER 35 U.S.C. § 112

Roku identifies below the limitations that render the Asserted Claims invalid based on indefiniteness under 35 U.S.C. § 112, ¶ 2, lack of enablement under 35 U.S.C. § 112, ¶ 1, or lack of written description under 35 U.S.C. § 112, ¶ 1. These contentions shall not be construed as an admission that any claim construction advanced by Roku is in any way inconsistent, flawed, or erroneous. Nor should these contentions prevent Roku from advancing claim construction and/or non-infringement positions in lieu of, or in addition to, its invalidity positions. Roku's contentions under 35 U.S.C. § 112 may depend on the Court's claim constructions, inventor testimony, as well as AlmondNet's asserted claim scope. Thus, Roku reserves the right to supplement the grounds under 35 U.S.C. § 112 rendering one or more claim invalid.

A claim is invalid for indefiniteness under 35 U.S.C. § 112, ¶ 2 if the claim "when read in light of the specification delineating the patent, and the prosecution history, fail[s] 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).

35 U.S.C. § 112, ¶ 1, includes both an enablement and written description requirement. See 35 U.S.C. § 112, ¶ 1 ("The specification shall contain a written description . . . of the manner and process of making and using [the invention] in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.").

To satisfy the enablement requirement of 35 U.S.C. § 112, ¶ 1, the disclosure "must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'" *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008). Moreover, "[i]t is the specification, not the knowledge of one skilled in the art that must supply the novel

aspects of the invention in order to constitute adequate enablement.” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997). The Federal Circuit has enumerated several factors to consider in determining whether a disclosure would require “undue experimentation”: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

To satisfy the written description requirement under 35 U.S.C. § 112, ¶ 1, the specification must “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). In other words, the test for sufficiency 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. *Id.*

The test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed. “Whether the written description requirement is satisfied is a fact-based inquiry that will depend on the nature of the claimed invention and the knowledge of one skilled in the art at the time an invention is made and a patent application is filed.” *Carnegie Mellon Univ. v. Hoffmann La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008).

Actual “possession” or reduction to practice outside of the specification is not enough. Rather, as stated above, it is the specification itself that must demonstrate possession. And while the description requirement does not demand any particular form of disclosure, *Carnegie Mellon*

Univ., 541 F.3d at 1122, or that the specification recite the claimed invention *in haec verba*, a description that merely renders the invention obvious does not satisfy the requirement, *Lockwood v. Am. Airlines*, 107 F.3d 1565, 1571–72 (Fed. Cir. 1997).

Roku contends that each of the following limitations renders its respective claim invalid for lack of enablement, lack of written description, and/or for indefiniteness:

A. “Electronic Indicia”/ “Indicated”

- “based on first electronic profile data associated with an electronic identifier of a first device, automatically causing, with the computer system, an action to be taken with respect to a second device that is indicated at the time of the action by an electronic identifier electronically associated with the first device identifier” (’398 Patent, claim element 13(a))
- “automatically generating and storing electronic indicia of the association between the first and second device identifiers based on automatically recognizing that, before the action, each of the first and second devices was connected, independently of the other, to the common local area network . . .” (’398 Patent, claim element 14(ii))
- “wherein the electronic indicia of the electronic association include or reference indicia of the common IP address or portion thereof” (’398 Patent, claim 18)
- “wherein the electronic indicia of the electronic association comprise one or more electronic records in a database accessible to the computer system” (’398 Patent, claim 23)
- “wherein the electronic indicia of the electronic association comprise one or more tags or cookies readable by the computer system that are stored on the first device or second device” (’398 Patent, claim 24)
- “wherein the electronic indicia of the electronic association include no personally identifiable information pertaining to a user of the first device or second device (’398 Patent, claim 26)

B. “At Least in Part On At Least a Portion”

- “wherein the action comprises automatically causing, with the computer system, a selected advertisement to be directed to the second device, wherein the advertisement is selected based at least in part on at least a portion of the first electronic profile data” (’398 Patent, claim 22)

- “wherein the automatic action comprises selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device” (’878 Patent, claim 6)
- “the automatic action comprises (A) selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device” (’878 Patent, claim 11)
- “wherein the automatic action that the computer system is programmed to take comprises selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device” (’878 Patent, claims 17 & 20)
- “to take automatic action comprising (A) selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device” (’878 Patent, claim 23)

C. “Computer-Causing...” / “Computer-Determining”/ “Computer-Facilitating...”/ “Computer-Charging”/ “Automatically Causing...” / “Causing...”/ “Automatically Facilitating...” / “Facilitating...”/ “Automatically Recognizing. . .”

- “automatically computer-causing . . .”/ “computer-causing . . .” (’639 Patent, claim elements 1(c), 10, 20(i), 20(ii), 23(ii), 24(a), 24(c), 24(e), 43, 45)
- “computer-determining . . .”/ “computer-determined. . .” (’639 Patent, claim elements 1(b), 4, 5, 6, 13, 22, 24(c), 45, 46, 47; ’586 Patent, claim elements 1(b), 11(c))
- “computer-facilitating . . .”/ “automatically facilitating. . .” (’639 Patent, claim elements 1(b), 24(d))
- “computer-charging . . .” (’639 Patent, claims 21, 45)
- “automatically causing . . .” and “causing...” (’586 Patent, claims 1, 8, 9, 11 and 20; ’164 Patent, claim elements 1(a))
- “automatically facilitating . . .” and “facilitating . . .” (’586 Patent, claims 1 and 11)
- “automatically recognizing . . .” (’164 Patent, claim element 1(d), 3(iv); ’069 Patent, claim elements 1(c), 3(iii))

D. “Without Any Expression of the Visitor’s Consent to Divulge Information”

- “wherein part(a) further comprising computer-placing the tag without any expression of the visitor’s consent to divulge information” (’639 Patent, claim 2)
- “wherein part (a) further comprises automatically creating the records using the tag without any expression of the visitor’s consent to divulge information” (’639 Patent, claim 3)
- “part (a) comprises computer-placing the tag without any expression of the visitor’s consent to divulge information” (’639 Patent, claim element 23(i))
- “wherein the system is programmed to perform a method further comprising automatically placing the tag without any expression of the visitor’s consent to divulge information” (’586 Patent, claim 2)

E. “Premium Price”/ “Usual Price”/ “Usual Second-Site Advertising Price”/ “First Price”

- “wherein part (c) comprises computer-causing the proprietor of the first Internet site to receive a portion of a premium price, as compared to the usual price charged for advertising on the second Internet site . . .” (’639 Patent, claim 18 (from which claims 20–23 depend))
- “wherein part (c) comprises computer-causing the proprietor of the first Internet site to receive a part of the premium above the usual second-site advertising price” (’639 Patent, claim 20(i))
- “. . . to receive an advertising price that is lower than the premium price paid by the third-party advertiser but higher than the usual second-site advertising price” (’639 Patent, claim 20(ii))
- “further comprising a third-party facilitator computer-charging the third-party advertiser the premium price and retaining a portion of the premium price” (’639 Patent, claim 21)
- “first price” (’639 Patent, claim elements 24(e), 24(f), 32; ’586 Patent, claim elements 11(e), 11(f); ’100 Patent claim elements 1(preamble), 1(f), 1(g), 15 (preamble), 15(f), 15(g), 29 (preamble), 29(f), 29(g); ’857 Patent, claim elements 1(preamble), 1(d), 1(e))
- “wherein the system is programmed to perform a method wherein part (c) comprises causing the proprietor of the first Internet site to receive a portion of a premium price, as compared to the usual price charged for advertising on the second Internet site, paid by the third-party advertiser for causing the targeted advertisement to be computer-transferred to the

computers that have been computer-determined, using the tags and the records, to have visited the first Internet site” (’586 Patent, claim 8)

- “wherein part (c) comprises causing the proprietor of the first Internet site to receive a part of the premium above the usual second-site advertising price” (’586 Patent, claim element 9(i))
- “further comprising causing the proprietor of the second Internet site to receive an advertising price that is lower than the premium price paid by the third-party advertiser but higher than the usual second-site advertising price” (’586 Patent, claim element 9(ii))

F. “Third Party Advertisers Who Are Prepared . . .”

- “. . . through a facilitator that has access to the third-party advertisers, who are prepared to pay fees for advertising their products or services on the Internet” (’639 Patent, claim 25)

G. “Conducted Some Specific Action”

- “The method of claim 24 wherein part (a) is done with respect to visitor computers that have conducted some specific action on the first Internet site.” (’639 Patent, claim 31)

H. “Relates to Content . . .”

- “wherein the subject matter of the advertisements relates to content of the first Internet site but not to content of the second Internet site” (’639 Patent, claim 37)
- “wherein the system is programmed to perform a method wherein the subject matter of the advertisements relates to content of the first Internet site but not to content of the second Internet site” (’586 Patent, claim 17)
- “the subject matter of the other advertisements relates to content of the first Internet site but not to content of the second Internet site” (’586 Patent, claim element 22(ii))
- “wherein the subject matter of the advertisement relates to content of the first Internet site but not to content of the second Internet site” (’100 Patent, claims 14, 28, 42; ’857 Patent, claim 11)

I. “In Conjunction With . . .”

- “The method of claim 24 wherein computer-determining, using the tags and the electronic records, which visitor computers have visited the first Internet site is done by the operator of the second Internet site in conjunction with a facilitator.” (’639 Patent, claim 40)

- “wherein the system is programmed to perform a method wherein the act of part (b) is done by the system in conjunction with a computer operated by a proprietor of the second Internet site” (’586 Patent, claim 5)
- “later, with the first computerized apparatus, in conjunction with a second computerized apparatus controlling ad space on the second Internet site . . .” (’100 Patent, claim element 15(d))

J. “Depends on Differences . . .”

- “wherein which online advertisement is delivered to which online user interface device depends on differences between the first user profile and the second user profile” (’164 Patent, claim element 3(v))

VII. INVALIDITY UNDER 35 U.S.C. § 101

While the scope of subject matter eligible for patenting under 35 U.S.C. § 101 is broad, abstract ideas, mental processes, and natural phenomena are not patent-eligible because they are “the basic tools of scientific and technological work.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). To apply the abstract idea exception to patent eligibility, courts employ a two-step analysis:

- (1) determine whether the claims at issue are directed to a patent-ineligible concept; and
- (2) if so, determine whether the claim has an “inventive concept”—“an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217–218 (2014) (quoting *Mayo*, 566 U.S. at 72, 77–79).

The Federal Circuit has repeatedly held that targeted advertising claims do not meet patent eligibility requirements under the *Alice* framework. See *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1358, 1366 (Fed. Cir. 2021) (ruling as ineligible under § 101 patent claims for “providing a mobile phone user with targeted information (i.e., advertisements) that is deemed relevant to the user based on data gathered from the user’s television”); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1362–63 (Fed. Cir. 2020); *In re Morsa*, 809 F. App’x 913,

916–917 (Fed. Cir. 2020); *Bridge & Post, Inc. v. Verizon Commnc'ns, Inc.*, 778 F. App'x 882, 887, 891 (Fed. Cir. 2019); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014); *see also Affinity Labs of Texas, LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (“‘[C]ustomizing information based on . . . information known about the user’ is an abstract idea.”); *see also VideoShare, LLC v. Google, Inc.*, No. 13-cv-990 (GMS), 2016 WL 4137524, **8–10 (D. Del. Aug. 2, 2016) (ruling ineligible patents directed to streaming associated video content (including advertisements) where claims “merely recite conventional computer components or functions that involve the use of a computer network, such as the Internet”); *see also OpenTV, Inc. v. Netflix Inc.*, 76 F. Supp. 3d 886, 894 (N.D. Cal. 2014) (even if limited to online context, “plaintiffs have not shown how the claims describe anything more than the abstract idea of attempting to provide as much appropriately-selected content to users as possible, based on predictions as to their online availability and other information gathered about them”); *Morsa v. Facebook, Inc.*, 77 F. Supp. 3d 1007, 1014 (C.D. Cal. 2014 (claims drawn to two abstract ideas—targeted advertising and a bidding system to determine how ads are displayed—held abstract because they did not have any particular concrete or tangible form).

Further, the Federal Circuit’s recent decision in *PersonalWeb Technologies LLC v. Google LLC* is instructive. Nos. 2020-1543, 2020-1553, 2020-1554, 2021 WL 3556889 (Fed. Cir. Aug. 12, 2021). In that case, the Federal Circuit affirmed the Northern District of California’s judgment on the pleadings that patent claims relating to “data-processing systems that assign each data item a substantially unique name that depends on the item’s content—a content-based identifier” were invalid as covering patent-ineligible subject matter under § 101. *Id.* at *1. The patents were directed at a three-step process: “(1) using a content-based identifier generated from a ‘hash or message digest function,’ (2) comparing that content-based identifier against something else, [that is,]

another content-based identifier or a request for data; and (3) providing access to, denying access to, or deleting data.” *Id.* at *3 (citations omitted). The Federal Circuit held that each of the three steps reflected a concept it had already described as abstract and rejected PersonalWeb’s argument that they were not abstract because they claimed a new way of locating and distributing data in a computer network that provided efficiency benefits. *Id.* at *6. Specifically, the Federal Circuit noted that the “asserted efficiency improvements are not different in kind from those that would accrue in the library analogue—for example, using content-based identifiers to purge duplicate books.” *Id.*

In addition to the contentions noted below, Roku hereby incorporates by reference as if fully set forth herein its Motion to Dismiss and briefing in support (D.I. 24, D.I. 25, and D.I. 31), which detail Roku’s contentions as to why the ’398, ’878, ’164, ’069, and ’198 Patents are invalid under 35 U.S.C. § 101. Specifically, each claim addressed therein is not directed to patent-eligible subject matter. Further, Roku notes that its aforementioned Motion to Dismiss specifically provided § 101 arguments as to identified claims that are representative of other claims, to which those § 101 arguments equally apply.

A. U.S. Patent No. 7,822,639

Roku contends that the asserted claims of the ’639 Patent—specifically, claims 1–8, 10, 13–14, 21–32, 40, and 43–47—are invalid under 35 U.S.C. § 101 because each is directed at an abstract idea. Specifically, each of claims 1–8, 10, 13–14, 21–32, 40, and 43–47 of the ’639 Patent is directed at the abstract idea of creating electronic records of tags for users based on internet browsing activity and delivering targeted advertisements to those users and then distributing revenue derived from the targeted advertisements.

Further, the aforementioned claims of the '639 Patent do not recite an inventive concept – that is, each of those claims fails to amount to significantly more than a patent upon the abstract idea itself. The following claim elements were well-understood, routine, and conventional:

Claim 1:

- “automatically creating records of a multitude of visitor computers that visit a first Internet site using a tag on each of such visitor computers”
- “automatically facilitating direction of at least one off-site advertisement to visitor computers visiting a second Internet site”
- “determining using tags and records, that the visitor computers have visited the first Internet site”
- “off-site advertisement[s that concern] at least one offering of a third-party advertiser that has paid to display said advertisement on visitor computers that have visited the first Internet site”
- “[off-site advertisements that have] displayable subject matter that is targeted to visitors of the first Internet site based on visitor profile information connected to the tag”
- “automatically computer-causing the first Internet site to receive revenue from the off-site advertisement being directed to the visitor computers that have visited the first Internet site”

Claim 2:

- “computer-placing the tag without any expression of the visitor’s consent to divulge information”

Claim 3:

- “automatically creating the records using the tag without any expression of the visitor’s consent to divulge information”

Claim 4:

- “computer-determining that each of the visitor computers recorded using the tag has visited a predetermined part of the first Internet site”

Claim 5:

- “computer-determining that each of a multitude of visitor computers that visit the first Internet site has performed a certain activity while on the first Internet site”

Claim 6:

- “computer-determining that each of the visitor computers recorded using the tag has conducted some specific action at a select location on the first Internet site”

Claim 7:

- “computer-placing cookies on the visitor computers”

Claim 8:

- “proprietor of the first Internet site [performing acts of (a) and (b)]”

Claim 10:

- “proprietor of the first Internet site automatically computer-causing the proprietor of the second Internet site to receive revenue from direction of the advertisements to the visitor computers that visit the second Internet site”
- “that have been computer-determined, using the tags and records, to have visited the first Internet site”

Claim 13:

- “offsite advertisements are directed to the visitor computers that have been computer-determined, using the tags and records, to have visited the first Internet site, to be displayed using web television”

Claim 14:

- “offsite advertisement is computer-directed to a browser page of the computers, which browser page also contains content of the second Internet site”

Claim 18 (from which claims 20–23 depend):

- “computer-causing the proprietor of the first Internet site to receive a portion of a premium price, as compared to the usual price charged for advertising on the second Internet site, paid by the third-party advertiser for causing the targeted advertisement to be computer-transferred to the computers that have been computer-determined, using the tags and the records, to have visited the first Internet site”

Claim 20 (from which claim 21 depends):

- “computer-causing the proprietor of the first Internet site to receive a part of the premium above the usual second-site advertising price”
- “computer-causing the proprietor of the second Internet site to receive an

advertising price that is lower than the premium price paid by the third-party advertiser but higher than the usual second-site advertising price”

Claim 21:

- “third-party facilitator computer-charging the third-party advertiser the premium price and retaining a portion of the premium price”

Claim 22:

- “computer-placing cookies as a result of computer-determining that the visitor computer visiting the first Internet site has performed a certain activity while on the first Internet site”

Claim 23:

- “computer-placing the tag without any expression of the visitor’s consent to divulge information”
- “computer-causing the proprietor of the first Internet site to receive the revenue for the advertisement being computer-directed to a browser page of the visitor computers, which browser page also contains content of the second Internet site”

Claim 24:

- “creation of electronic records of visitor computers that visit a first Internet site”
- “using a tag on each of said visitor computers”
- “delivery to visitor computers visiting a second, different Internet site of advertisements sold, for a first price, for placement on visitor computers that have visited the first Internet site”
- “causing the proprietor of the second Internet site to receive revenue from direction of the advertisements to the visitor computers visiting the second Internet site as a consequence of computer-determining, using the tags and said electronic records, that such visitor computers have visited the first Internet site”
- “revenue received by the second Internet site is in an amount less than the first price for the advertisements”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 25:

- “proprietor of the first Internet site selling the advertisements through a facilitator

that has access to the third-party advertisers, who are prepared to pay fees for advertising their products or services on the Internet”

Claim 26:

- “facilitator is an advertising agency”

Claim 27:

- taking action “by the operator of the first Internet site”

Claim 28:

- “computer-placing cookies on the visitor computers”

Claim 29:

- taking action based on “visitor computers that visit a specific location of the first site”

Claim 30:

- taking action based on “visitor companies that visit the first Internet site for a predetermined amount of time”

Claim 31:

- taking action based on “visitor computers that have conducted some specific action on the first Internet site”

Claim 32:

- “first price is calculated on a per-impression basis”

Claim 40:

- “visitor computers have visited the first Internet site is done by the operator of the second Internet site in conjunction with a facilitator”

Claim 43:

- “wherein the advertisements are directed to the visitor computers determined to have visited the first Internet site by computer-causing the advertisements to be transferred to the visitor computers for display on a browser page, which browser page also contains content of the second Internet site”

Claim 44:

- “advertisements are directed to the visitor computers determined, using the tags and the electronic records, to have visited the first Internet site, for display using web television”

Claim 45:

- wherein receiving revenue is based on “computer-causing the proprietor of the second Internet site to receive the revenue and . . . computer-charging the third-party advertisers for causing direction of the advertisements to the visitor computers that visit the second Internet site and that have been computer-determined, using the tags and the electronic records, to have visited the first Internet site”

Claim 46:

- “advertisements are directed to the visitor computers based only on . . . computer-determining, using the tags and the electronic records, which visitor computers have visited the first Internet site, without using profile information outside the tags and records”

Claim 47:

- “the proprietor of the first Internet site selling the advertisements and causing some of the advertisements to be displayed while the visitor computers are visiting the first Internet site”
- where directing the “others of the advertisements sold by the proprietor of the first Internet site” . . . occurs because the computer has determined “using the tags and said electronic records, that such visitor computers visited the first Internet site”

Finally, 639 References described or charted in these Invalidity Contentions with respect to the '639 Patent demonstrate that the claim elements identified above were well-understood, routine, and conventional. In addition, Appendix 1 identifies additional references that demonstrate that the claim elements identified above were well-understood, routine, and conventional.

B. U.S. Patent No. 8,244,586

Roku contends that the asserted claims of the '586 Patent—specifically, claims 1–5, 7–9, 11–13, 16–17, and 20–22—are invalid under 35 U.S.C. § 101 because each is directed at an

abstract idea. Specifically, each of claims 1–5, 7–9, 11–13, 16–17, and 20–22 of the '586 Patent is directed at the abstract idea of creating electronic records of tags for users based on internet browsing activity and delivering targeted advertisements to those users and then distributing revenue derived from the targeted advertisements.

Further, the aforementioned claims of the '586 Patent do not recite an inventive concept – that is, each of those claims fails to amount to significantly more than a patent upon the abstract idea itself. The following claim elements were well-understood, routine, and conventional:

Claim 1:

- “creating records of a multitude of visitor computers that visit a first Internet site”
- “using a tag on each of said visitor computers”
- “automatically facilitating direction of at least one off-site advertisement to visitor computers visiting a second Internet site”
- “using the tags and the records”
- “visitor computers that have visited the first Internet site and has displayable subject matter that is targeted to visitors of the first Internet site based on visitor profile information connected to the tag”
- “causing the first Internet site to receive revenue from the off-site advertisement being directed to the visitor computers that have visited the first Internet site”

Claim 2:

- “automatically placing the tag without any expression of the visitor’s consent to divulge information”

Claim 3:

- “placing cookies on the visitor computers”

Claim 4:

- “a computer operated by the proprietor of the first Internet site”

Claim 5:

- “a computer operated by a proprietor of the second Internet site”

Claim 7:

- “cause the proprietor of the second Internet site to receive revenue from direction of the advertisements to the visitor computers that visit the second Internet site”

Claim 8:

- “causing the proprietor of the first Internet site to receive a portion of a premium price, as compared to the usual price charged for advertising on the second Internet site”

Claim 9:

- “causing the proprietor of the first Internet site to receive a part of the premium above the usual second-site advertising price”

Claim 11:

- “creation of electronic records of visitor computers that visit a first Internet site”
- “using a tag on each of said visitor computers”
- “delivery to visitor computers visiting a second, different Internet site of advertisements sold, for a first price, for placement on visitor computers that have visited the first Internet site”
- “causing the proprietor of the second Internet site to receive revenue from direction of the advertisements to the visitor computers visiting the second Internet site as a consequence of computer-determining, using the tags and said electronic records, that such visitor computers have visited the first Internet site”
- “revenue received by the second Internet site is in an amount less than the first price for the advertisements”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 12:

- “system in conjunction with a computer operated by the proprietor of the first Internet site”

Claim 13:

- “computer-placing cookies on the visitor computers”

Claim 16:

- “controlled by the proprietor of the first Internet site”

Claim 17:

- “subject matter of the advertisements relates to content of the first Internet site but not to content of the second Internet site”

Claim 20:

- “causing the proprietor of the second Internet site to receive the revenue”
- “causing direction of the advertisements to the visitor computers that visit the second Internet site and that have been computer-determined, using the tags and the electronic records, to have visited the first Internet site”

Claim 21:

- “controlled by the proprietor of the first Internet site”
- “proprietor has sold the advertisements”
- “causing some of the advertisements to be displayed while the visitor computers are visiting the first Internet site”
- “wherein the act of part(b) is done with respect to others of the advertisements that have been sold by the proprietor of the first Internet site”

Claim 22:

- “placing cookies on the visitor computers that visit the first Internet site”
- “subject matter of the other advertisements relates to content of the first Internet site but not to content of the second Internet site”

Finally, 586 References described or charted in these Invalidity Contentions with respect to the '586 Patent demonstrate that the claim elements identified above were well-understood, routine, and conventional. In addition, Appendix 1 identifies additional references that demonstrate that the claim elements identified above were well-understood, routine, and conventional.

C. U.S. Patent No. 10,026,100

Roku contends that the asserted claims of the '100 Patent—specifically, claims 1–11, 13–14, 15–17, 19, 21, 23–25, 27–31, 33, 35, 37–39, and 41–42 are invalid under 35 U.S.C. § 101 because each is directed to an abstract idea. Specifically, each asserted claim of the '100 Patent is directed at the abstract idea of at the abstract idea of creating electronic records of tags for users based on internet browsing activity and delivering targeted advertisements to those users and then distributing revenue derived from the targeted advertisements.

Further, the aforementioned claims of the '100 Patent do not recite an inventive concept – that is, each of those claims fails to amount to significantly more than a patent upon the abstract idea itself. The following claim elements were well-understood, routine, and conventional:

Claim 1:

- “first computer controlled by a proprietor of a first Internet site”
- “proprietor has sold, for a first price, placements of an electronic advertisement on other Internet sites, which advertisement is directed to an offering of a third-party advertiser”
- “placing a cookie [with a first computer] on each of a plurality of visitor computers visiting the first Internet site”
- “detecting those user computers of the plurality of visitor computers that have conducted a specific predetermined action on the first Internet site”
- “storing information, accessible through the cookie on that visitor computer, indicating that the visitor computer has conducted the predetermined specific action”
- “. . . detecting visitor computers visiting the second Internet site that have the cookie and with the first computer using the information accessible through the cookie to help identify those of the visitor computers visiting the second Internet site that have conducted the specific predetermined action on the first Internet site”
- “communicating with the second computer to cause the second computer to direct the electronic advertisement to those of the visitor computers that have been identified . . . as having conducted the specific predetermined action on the first

Internet site, for display in ad space on the second Internet site by the identified visitor computers”

- “causing a proprietor of the second internet site to receive revenue . . . in an amount less than the first price, for display of the advertisement”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 2:

- “the specific predetermined action on the first Internet site comprises a response to a particular question provided via the visitor computer on the first Internet site”

Claim 3:

- “the specific predetermined action on the first Internet site comprises a reaction via the visitor computer to a predetermined aspect of the first Internet site”

Claim 4:

- “the specific predetermined action on the first Internet site comprises remaining on the first Internet site for a predetermined amount of time”

Claim 5:

- “the specific predetermined action on the first Internet site comprises an interest expressed while visiting a section of the first site”

Claim 6:

- “storing information in the cookie”

Claim 7:

- “storing information in a database linked to the cookie”

Claim 8:

- “second computer dropping content of the advertisement into a browser of the visitor computer”

Claim 9:

- “second computer directing a browser of the visitor computer to fetch the ad”

Claim 10:

- “advertisement is directed for display . . . using web television”

Claim 11:

- “revenue is calculated on a CPM basis”

Claim 13:

- “second computer . . . is controlled by an agency with a contract with the proprietor of the second Internet site”

Claim 14:

- “subject matter of the advertisement relates to content of the first Internet site but not to content of the second Internet site”

Claim 15:

- “first computerized apparatus controlled by a proprietor of a first Internet site”
- “proprietor has sold, for a first price, placements of an electronic advertisement on other Internet sites, which advertisement is directed to an offering of a third-party advertiser”
- “placing a cookie [with a first computer] on each of a plurality of visitor computers visiting the first Internet site”
- “detecting those user computers of the plurality of visitor computers that have conducted a specific predetermined action on the first Internet site”
- “storing information, accessible through the cookie on that visitor computer, indicating that the visitor computer has conducted the predetermined specific action”
- “. . . detecting visitor computers visiting the second Internet site that have the cookie and with the first computerized apparatus using the information accessible through the cookie to identify those of the visitor computers visiting the second Internet site that have conducted the specific predetermined action on the first Internet site”
- “communicating with the second computerized apparatus to cause the second computerized apparatus to direct the electronic advertisement to those of the visitor computers that have been identified . . . as having conducted the specific predetermined action on the first Internet site, for display in ad space on the second Internet site by the identified visitor computers”

- “causing a proprietor of the second internet site to receive revenue . . . in an amount less than the first price, for display of the advertisement”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 16:

- “the specific predetermined action on the first Internet site comprises a response to a particular question provided via the visitor computer on the first Internet site”

Claim 17:

- “the specific predetermined action on the first Internet site comprises a reaction via the visitor computer to a predetermined aspect of the first Internet site”

Claim 19:

- “the specific predetermined action on the first Internet site comprises an interest expressed while visiting a section of the first site”

Claim 21:

- “storing information in a database linked to the cookie”

Claim 23:

- “second computerized apparatus directing a browser of the visitor computer to fetch the ad”

Claim 24:

- “advertisement is directed for display by the identified visitor computers using web television”

Claim 25:

- “revenue is calculated on a CPM basis”

Claim 27:

- “second computerized apparatus . . . is controlled by an agency with a contract with the proprietor of the second Internet site”

Claim 28:

- “subject matter of the advertisement relates to content of the first Internet site but

not to content of the second Internet site”

Claim 29:

- “first computerized apparatus controlled by a proprietor of a first Internet site”
- “proprietor has sold, for a first price, placements of an electronic advertisement on other Internet sites, which advertisement is directed to an offering of a third-party advertiser”
- “placing a cookie [with the first computerized apparatus] on each of a plurality of visitor computers visiting the first Internet site”
- “detecting those user computers of the plurality of visitor computers that have conducted a specific predetermined action on the first Internet site”
- “storing information, accessible through the cookie on that visitor computer, indicating that the visitor computer has conducted the predetermined specific action”
- “. . . detecting visitor computers visiting the second Internet site that have the cookie and with the first computerized apparatus using the information accessible through the cookie to identify those of the visitor computers visiting the second Internet site that have conducted the specific predetermined action on the first Internet site”
- “communicating with the second computerized apparatus to cause the second computerized apparatus to direct the electronic advertisement to those of the visitor computers that have been identified . . . as having conducted the specific predetermined action on the first Internet site, for display in ad space on the second Internet site by the identified visitor computers”
- “causing a proprietor of the second internet site to receive revenue . . . in an amount less than the first price, for display of the advertisement”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 30:

- “specific predetermined action on the first Internet site comprises a response to a particular question provided via the visitor computer on the first Internet site”

Claim 31:

- “specific predetermined action on the first Internet site comprises a reaction via the visitor computer to a predetermined aspect of the first Internet site”

Claim 33:

- “specific predetermined action on the first Internet site comprises an interest expressed while visiting a section of the first site”

Claim 35:

- “storing information in a database linked to the cookie”

Claim 37:

- “directing a browser of the visitor computer to fetch the ad”

Claim 38:

- “wherein the advertisement is directed for display by the identified visitor computers using web television”

Claim 39:

- “wherein the revenue is calculated on a CPM basis”

Claim 41:

- “wherein the second computerized apparatus . . . is controlled by an agency with a contract with the proprietor of the second Internet site”

Claim 42:

- “subject matter of the advertisement relates to content of the first Internet site but not to content of the second Internet site”

Finally, 100 References described or charted in these Invalidity Contentions with respect to the ’100 Patent demonstrate that the claim elements identified above were well-understood, routine, and conventional. In addition, Appendix 1 identifies additional references that demonstrate that the claim elements identified above were well-understood, routine, and conventional.

D. U.S. Patent No. 10,628,857

Roku contends that the asserted claims of the ’857 Patent—specifically, claims 1–9 and 11 are invalid under 35 U.S.C. § 101 because each is directed to an abstract idea. Specifically, each

asserted claim of the '857 Patent is directed at the abstract idea of at the abstract idea of creating electronic records of tags for users based on internet browsing activity and delivering targeted advertisements to those users and then distributing revenue derived from the targeted advertisements.

Further, the aforementioned claims of the '857 Patent do not recite an inventive concept – that is, each of those claims fails to amount to significantly more than a patent upon the abstract idea itself. The following claim elements were well-understood, routine, and conventional:

Claim 1:

- “first computer controlled by a proprietor of a first Internet site”
- “proprietor has sold, for a first price, placements of an electronic advertisement on other Internet sites, which advertisement is directed to an offering of a third-party advertiser”
- “second computer controlled by an agency under contract with the proprietor of the second Internet site”
- “detecting visitor computers visiting the second Internet site that have visited a first Internet site and that have a cookie that: i. is stored on the visitor computer as a consequence of said visitor computer having visited the first Internet site; and ii. allows access to information in a database accessible to the first computer”
- “using the information in the database to identify those of the visitor computers visiting the second Internet site that have conducted a specific predetermined action on the first Internet site”
- “communicating with the second computer to cause the second computer to direct the electronic advertisement . . . for display in ad space on the second Internet site by the identified visitor computers”
- “causing a proprietor of the second Internet site to receive revenue . . . in an amount less than the first price, for display of the advertisement”
- “proprietor of the first Internet site retains at least part of the difference between the first price and the revenue received by the proprietor of the second Internet site”

Claim 2:

- “the specific predetermined action on the first Internet site comprises a response

to a particular question provided via the visitor computer on the first Internet site”

Claim 3:

- “the specific predetermined action on the first Internet site comprises a reaction via the visitor computer to a predetermined aspect of the first Internet site”

Claim 4:

- “the specific predetermined action on the first Internet site comprises remaining on the first Internet site for a predetermined amount of time”

Claim 5:

- “the specific predetermined action on the first Internet site comprises an interest expressed by visiting a section of the first site”

Claim 6:

- “second computer dropping content of the advertisement into a browser of the visitor computer”

Claim 7:

- “second computer directing a browser of the visitor computer to fetch the ad”

Claim 8:

- “advertisement is directed for display by the identified visitor computers using web television”

Claim 9:

- “revenue is calculated on a CPM basis”

Claim 11:

- “subject matter of the advertisement relates to content of the first Internet site but not to content of the second Internet site”

Finally, 857 References described or charted in these Invalidity Contentions with respect to the '857 Patent demonstrate that the claim elements identified above were well-understood, routine, and conventional. In addition, Appendix 1 identifies additional references that

demonstrate that the claim elements identified above were well-understood, routine, and conventional.

VIII. DOCUMENT PRODUCTION

In connection with these Invalidity Contentions, Roku makes the following productions:

- DEL_PA_0000001-0017261 (including prior art referenced in the Invalidity Contentions⁷).

Roku's search for prior art references, additional documentation, and/or corroborating evidence concerning prior art systems and devices is ongoing. Accordingly, Roku reserves the right to supplement its production during the course of discovery as it obtains additional prior art references, documentation, and/or corroborating evidence concerning invalidity.

⁷ AlmondNet already produced the prosecution histories of the Asserted Patents and therefore Roku has not duplicated that production. Roku further contends that any of the prior art produced in connection with these Invalidity Contentions may be used to show the state of the art.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on September 29, 2022, the foregoing and accompanying documents have been served on all counsel of record.

/s/ Wasif H. Qureshi

Wasif H. Qureshi