

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

TIR TECHNOLOGIES LIMITED,

Plaintiff,

v.

AMAZON.COM SERVICES LLC, AMAZON
WEB SERVICES, INC., AMAZON
DEVELOPMENT CENTER U.S., INC., AWS
SECURITY ASSURANCE SERVICES LLC,
and AMAZON DATA SERVICES INC.,

Defendants.

Civil Action No. 1:25-cv-00865-RP

JURY TRIAL DEMANDED

**DEFENDANTS' SUPPLEMENTAL PRELIMINARY INVALIDITY CONTENTIONS
AND IDENTIFICATION OF CLAIMS DEFENDANTS CONTEND ARE DIRECTED TO
INELIGIBLE SUBJECT MATTER**

Defendants Amazon.com Services LLC, Amazon Web Services, Inc., Amazon Development Center U.S., Inc., AWS Security Assurance Services LLC, and Amazon Data Services Inc. (collectively, "Amazon" or "Defendants") hereby submit their Supplemental Preliminary Invalidity Contentions and Identification of Claims Defendants Contend are Directed to Ineligible Subject Matter (together, "Supplemental Invalidity Contentions") for U.S. Patent Nos. 8,792,347 ("347 Patent"), 9,800,633 ("633 Patent"), 10,375,444 ("the '444 Patent"), and 10,484,442 ("442 Patent") (collectively, the "Asserted Patents"). Defendants' Supplemental Invalidity Contentions are based upon and limited to those claims Plaintiff Tir Technologies Limited ("Plaintiff" or "Tir") asserted in its September 8, 2025 Disclosure of Asserted Claims and

Infringement Contentions for Defendants (“Infringement Contentions”), as set forth in the table below (collectively the “Asserted Claims”).¹

Table 1: Asserted Patents and Asserted Claims

ASSERTED PATENTS	ASSERTED CLAIMS
'347 Patent	1, 3, 4, 6, 9, 11-12, 14, 17, and 20
'633 Patent	1, 2, 6, 11-12, and 15
'444 Patent	1, 5-8, 12-15, and 19-21
'442 Patent	1, 2, 6, 11-12, and 16

Defendants base these Supplemental Invalidity Contentions upon information in their possession as of the date of service of these contentions. For each Asserted Claim, Defendants: (a) identify each currently known item of exemplary prior art that anticipates each Asserted Claim or renders it obvious; (b) specify whether each item of exemplary prior art anticipates each Asserted Claim and/or renders obvious the applicable Asserted Claim; (c) submit charts identifying where specifically in each item of exemplary prior art each limitation of each Asserted Claim is found; (d) identify illustrative combinations and motivations to combine prior art references where a combination of exemplary prior art renders an Asserted Claim obvious; (e) identify any grounds of invalidity of any of the Asserted Claims based on indefiniteness, enablement, and/or written

¹ Although Tir’s Infringement Contentions purport to reserve the right to assert additional claims other than those listed in its Infringement Contentions, the identified claims are the only claims Tir has charted and are the only claims that are addressed in these Supplemental Invalidity Contentions. The remainder of the Asserted Patents’ claims are not properly asserted. Defendants reserve the right to serve additional Invalidity Contentions if the Court allows Tir to assert additional claims in any supplemental or amended infringement contentions. Defendants do not agree that Tir should be permitted to do so. Nothing herein shall be deemed an admission that Tir’s Infringement Contentions are sufficient or adequately disclose how Defendants allegedly infringe the Asserted Patents.

description under 35 U.S.C. § 112; and (f) identify exemplary grounds for invalidating the Asserted Claims under 35 U.S.C. § 101.

I. RESERVATION OF RIGHTS

Defendants reserve the right to amend, modify and/or supplement this disclosure and Supplemental Invalidity Contentions pursuant to the Scheduling Order. These Supplemental Invalidity Contentions are based on information obtained and currently known to Defendants. The information and documents Defendants produce are provisional and subject to revision. By submitting these Supplemental Invalidity Contentions, Defendants do not waive any of their claims or defenses in this case, including those relating to written description, enablement, indefiniteness, best mode, anticipation, and/or obviousness. References not included in these Supplemental Invalidity Contentions, whether known or not now known, may become relevant based on the claim constructions adopted by the Court, based on any amendment, modification and/or supplement that Tir makes to its Infringement Contentions, and/or based on discovery in this case. Defendants reserve the right to rely upon any prior art, combinations of prior art, motivations to combine, and claim charts, as well as any grounds of invalidity based on 35 U.S.C. §§ 101 or 112, that are now or later identified by Defendants. Defendants' Supplemental Invalidity Contentions are made in a variety of alternatives and do not represent Defendants' agreement with Plaintiff's apparent applications or views as to the meaning, infringement, definiteness, written description support for, or enablement of, any Asserted Claims.

Discovery in this action is in its early stages, the Court has yet to issue a claim construction order for disputed terms in this case, and invalidity of the Asserted Claims will likely be the subject of expert discovery. It is understood that a person of ordinary skill in the art reads a prior art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference,

a person of ordinary skill in the art also relies upon other information including other publications and general scientific, engineering or other relevant knowledge. Defendants reserve the right to rely upon the general scientific, engineering or other relevant knowledge in the field in interpreting the disclosure of the prior art references. In addition, Defendants reserve the right to amend, modify, and/or supplement these Supplemental Invalidity Contentions based upon information obtained during discovery, including but not limited to the identification of additional prior art, as well as in response to any claim construction ruling the Court issues, any position Plaintiff takes, or any expert testimony. For example, Defendants reserve the right to rely on well-known prior art publications, including, but not limited to, standards and specifications for streaming, networking, inter-networking, and mobile devices. Defendants also reserve the right to rely upon other portions of the prior art references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including the basis for modifying or combining the prior art references. Furthermore, Defendants reserve the right to rely upon any admissions relating to prior art found in the intrinsic evidence for the Asserted Patents.

Additionally, Defendants have not had the opportunity to conduct third-party discovery relating to various third-party prior art and expressly reserves the right to amend these contentions subject to third-party discovery. Defendants also intend to rely on inventor admissions concerning the scope of the Asserted Claims or of the prior art relevant to the Asserted Claims.

Defendants have included prior art (and arguments related to the same) that anticipate or renders obvious the Asserted Claims based on Plaintiff's apparent broad claim constructions of certain terms to the extent it can be determined from its Infringement Contentions. Plaintiff's Infringement Contentions are deficient at least because they (1) fail to identify the specific service,

system, product, or component that satisfies particular limitations or portions of limitations; (2) fail to map the specific allegedly infringing service, system, product, or component thereof to the claim limitations; and (3) provide confusing, unclear, and ambiguous contentions, often unsupported by the cited documents. These failures, and other failures, not only demonstrate Plaintiff's failure to meet its burden of proof as to infringement, but also have limited Defendants' ability to understand Plaintiff's position as to the scope of the claims directly relevant to these Supplemental Invalidity Contentions. Defendants expressly reserve the right to further amend, modify and/or supplement these Supplemental Invalidity Contentions as they learn more about Plaintiff's Infringement Contentions, including in the event Plaintiff supplements, modifies and/or amends its Infringement Contentions. Defendants' service of these Supplemental Invalidity Contentions does not represent a waiver of their position or rights to further pursue any relief to which they are entitled as a result of the deficiencies in Plaintiff's Infringement Contentions.

The identification of any patents and/or patent publications as prior art shall be deemed to refer to the application that was submitted for the same (including any provisional application(s)) and to include identification of any foreign counterpart patents and applications as well as international applications. To the extent that such an issue arises, Defendants reserve the right to identify additional teachings in the same references or in other references that anticipate or would have rendered the addition of the allegedly missing limitation to the device or method obvious. Defendants' claim charts submitted as part of these Supplemental Invalidity Contentions cite to particular teachings and disclosures of the prior art as applied to features of the Asserted Claims. Persons having ordinary skill in the art, however, may view an item of prior art generally in the context of other publications, literature, products, and understanding. Accordingly, the cited portions are only examples, and Defendants reserve the right to rely on uncited portions of the

prior art references, on other publications and on expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that a claim limitation is known or disclosed. Where Defendants cite to a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text in the reference relating to the figure. Similarly, where Defendants cite to particular text referring to a figure, the citation should be understood to include the figure and caption as well. Further, for any combination, Defendants reserve the right to rely additionally on information generally known to those skilled in the art and/or common sense.

The references discussed in the 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. The suggested obviousness combinations are sometimes provided in the alternative to Defendants' anticipation contentions and are not meant to suggest that any reference included in the combinations is not by itself anticipatory. A more detailed basis for Defendants' contention that the Asserted Claims are invalid will be set forth in Defendants' expert report(s) on invalidity, to be served in accordance with the Court's Scheduling Order. Furthermore, nothing stated herein shall be treated as an admission or suggestion that Defendants' accused products and/or services meet any limitation of any Asserted Claim. Defendants deny that they infringe any and all claims of the Asserted Patents.

II. IDENTIFICATION OF PRIOR ART

Subject to Defendants' reservations of rights set out above, Defendants identify the following prior art references that anticipate or render obvious each Asserted Claim. In addition to the references cited on the face of the Asserted Patents, the admitted prior art in the specifications of the Asserted Patents, and the prosecution histories of the Asserted Patents, the prior art references, systems, and products listed below disclose the elements of the Asserted Claims either

explicitly, inherently, or via an obvious combination, and may also be relied upon to show the state of the art in the relevant timeframes.

Defendants further incorporate by reference the prior art references related to the Asserted Patents, including without limitation all prior art produced by or otherwise known to Plaintiff and all prior art known to the named inventors, any past or current owner, or any individual substantively involved in the prosecution of any or all of the Asserted Patents.

Defendants contend that at least some of the methods, systems and/or products disclosed in one or more of the prior art references identified here or in the attached exhibits are prior art under both Pre-AIA 35 U.S.C. and AIA 35 U.S.C. §§ 102 and/or 103. Defendants' reference to any particular component, device, machine, or other product in these Supplemental Invalidity Contentions should also be interpreted as a reference to the product itself and any corresponding patents, publications, or product literature that relate to the cited component, device, machine, or other product. As discovery is ongoing, Defendants do not yet have complete information regarding the dates by which some of the cited products were publicly disclosed, used, sold, or offered for sale, the circumstances under which the research, design, and development activities were conducted, and the identities of the particular individuals involved in such activities through publicly available patents, publications, and product literature. Defendants anticipate that the actual dates, circumstances, and identities of individuals will be the subject of third-party discovery during this lawsuit.

Each exemplary printed publication listed below that describes or relates to a prior art system should be understood to discuss the system's capabilities generally and also to discuss specific implementation examples of specific installations of the particular system. To the extent the exemplary references describe various implementations of the same underlying system, that

underlying system is a single reference under both pre-AIA and/or AIA 35 U.S.C. §102. The exemplary references are evidence of the capabilities of the prior art, and each chart provided for a particular prior art reference should be understood to incorporate by reference all printed publications describing or relating to that prior art and all charts provided for those printed publications. In addition, each of the references itself also qualifies as prior art on separate grounds as a publication under both pre-AIA and/or AIA 35 U.S.C. §102. Even if the exemplary references are not treated as a single prior art reference, at the very least it would have been obvious to combine the features described in those references inasmuch as the individual references discuss the same technology.

Concurrently with the service of these Supplemental Invalidity Contentions, Defendants are producing the prior art documents identified herein that may not have previously been produced to Plaintiff. Defendants also incorporate by reference all prior art and Supplemental Invalidity Contentions served by any defendant related to the Asserted Patents in any other proceeding.

Table 2: Patent References

No.	Number and Name	Country of Origin	Issue Date/Date of Publication	Filing Date/Priority Date
1.	2003/0187935 to Agarwalla et al.	US	10/02/2003	12/19/2001
2.	2011/0296046 to Arya et al.	US	12/01/2011	05/28/2010
3.	2010/0088394 to Barbieri et al.	US	04/08/2010	09/02/2008
4.	7,945,573 to Barnes et al.	US	05/17/2011	02/11/2008
5.	2011/0264676 to Belan et al.	US	10/27/2011	04/26/2010
6.	2008/0273591 Brooks et al.	US	11/06/2008	05/04/2007
7.	7,257,640 to Callocchia et al.	US	08/14/2007	04/16/2002
8.	2008/0037578 to Carlson et al.	US	02/14/2008	04/09/2003

No.	Number and Name	Count ry of Orig in	Issue Date/Date of Publication	Filing Date/Priority Date
9.	2010/0017439 to Chen et al.	US	01/21/2010	07/18/2008
10.	2010/0211987 to Chou	US	08/19/2010	02/19/2009
11.	2002/0184403 to Dahlin et al.	US	12/05/2002	04/08/2002
12.	2011/0191445 to Dazzi	US	08/04/2011	01/29/2010
13.	2009/019671 to De Boer et al.	WO	02/12/2009	08/09/2007
14.	2010/0260048 to Dolganow et al.	US	10/14/2010	04/14/2009
15.	2013/0067109 to Dong et al.	US	03/14/2013	09/12/2011
16.	2011/080714 to Elefant et al.	WO	07/07/2011	12/31/2009
17.	2014/0059156 to Freeman, II et al.	US	02/27/2014	08/23/2012
18.	2012/0041970 to Ghosh et al.	US	02/16/2012	08/12/2010
19.	2011/0082946 to Gopalakrishnan	US	04/07/2011	10/06/2009
20.	2011/0047287 to Harrang et al.	US	02/24/2011	08/19/2009
21.	2012/0166574 to Harvell et al.	US	06/28/2012	12/27/2010
22.	2010/0070608 to Hosur	US	03/18/2010	09/10/2008
23.	2010/0185776 to Hosur et al.	US	07/22/2010	01/20/2009
24.	2003/0204605 to Hudson et al.	US	10/30/2003	04/26/2002
25.	2003/003921 to Hvostov et al.	US	02/27/2003	08/23/2001
26.	2010/0268836 to Jabri et al.	US	10/21/2010	03/16/2009
27.	2013/0031211 to Johnson et al.	US	01/31/2013	01/29/2011
28.	2013/0132605 to Kocks et al.	US	05/23/2013	11/23/2011
29.	2010/111261 to Ma et al.	WO	09/30/2010	03/23/2009
30.	2012/0005364 to Ma et al.	US	01/05/2012	03/23/2009
31.	2012/029070739 to Melnyk et al.	US	11/15/2012	07/24/2012
32.	7,359,955 to Menon et al.	US	04/15/2008	03/02/2001
33.	2010/0188976 to Rahman et al.	US	07/29/2010	01/26/2009
34.	2011/127263 to Rowley et al.	WO	10/13/2011	04/07/2010
35.	2005/0223089 to Rhodes	US	10/06/2005	04/05/2004
36.	7,805,515 to Riley	US	09/28/2010	09/20/2004
37.	2009/0310668 to Sackstein et al.	US	12/17/2009	06/11/2008

No.	Number and Name	Country of Origin	Issue Date/Date of Publication	Filing Date/Priority Date
38.	8,412,841 to Swaminathan et al.	US	04/02/2013	08/17/2009
39.	7,894,478 to Ullmann et al.	US	02/22/2011	03/29/2001
40.	2011/0307929 to Youssefmir et al.	US	12/15/2011	06/11/2010
41.	2015/0007239 to Cranman et al.	US	01/01/2015	07/01/2013
42.	2008/0072264 to Crayford	US	03/20/2008	07/30/2007
43.	2012/0311126 to Jadallah et al.	US	12/06/2012	05/30/2011
44.	9,356,824 to Khanal	US	05/31/2016	09/29/2006
45.	2013/0041998 to Kordasiewicz et al.	US	02/14/2013	10/28/2010
46.	2010/0235438 to Narayanan et al.	US	09/16/2010	03/12/2010
47.	20060271559 to Stavrakos et al.	US	11/30/2006	05/22/2006

Table 3: Publication References

No.	Title	Date of Publication	Author(s) and Publisher
1.	LTE Release 9 Technology Introduction White paper	No later than 12/31/2011	Rohde & Schwarz
2.	3GPP TS 27.007 V9.8.0 (2011-12) – AT command set for User Equipment (UE) (Release 9)	No later than 12/31/2011	3 rd Generation Partnership Project (3GPP)
3.	3GPP TS 26.234 version 9.4.0 Release 9 – Protocols and codecs	No later than 10/31/2010	ETSI 3 rd Generation Partnership Project (3GPP)
4.	Overview of 3GPP Release 9 V0.2.1 (2011-04)	No later than 04/30/2011	ETSI MCC department
5.	Adobe HTTP Dynamic Streaming SDK Broadcast API Overview, Edition 3.5	No later than 12/31/2013	Adobe Systems Incorporated
6.	Adobe HTTP Dynamic Streaming SDK Broadcast Sample Applications, Edition 3.5	No later than 12/31/2013	Adobe Systems Incorporated
7.	The Network Providers Business Case For Internet Content Delivery	No later than 12/31/1999	Peter Christy

No.	Title	Date of Publication	Author(s) and Publisher
8.	Akamai Technologies Annual Report 2000	No later than 12/31/2001	George Conrades
9.	Akamai Technologies Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2000	02/09/2001	Securities and Exchange Commission
10.	Akamai Milestones	No later than 04/30/2001	Akamai Technologies, Inc.
11.	Akamai Using P2P for Enhanced Video Delivery	01/26/2010	Ben Homer
12.	Akamai NetSession Interface – FAQ	No later than 11/02/2012	Akamai Technologies, Inc.
13.	The Akamai Network: A Platform for High-Performance Internet Applications	No later than 12/31/2010	Erik Nygren et al.
14.	Akamai: Fast Internet Content Delivery with FreeFlow	No later than 04/30/2000	Akamai Technologies, Inc.
15.	Amazon CloudFront Developer Guide API Version 2012-07-01	No later than 12/31/2013	Amazon Web Services, Inc.
16.	Amazon Web Services – Amazon CloudFront	No later than 05/24/2010	Amazon Web Services, Inc.
17.	Amazon Web Services – Amazon CloudFront – Migrating to Amazon CloudFront	No later than 06/07/2010	Amazon Web Services, Inc.
18.	Amazon Web Services – What’s New? – Amazon CloudFront Adds Access Logging Capability	No later than 06/13/2010	Amazon Web Services, Inc.
19.	CloudFlare is the next-generation CDN	No later than 07/02/2012	CloudFlare, Inc.
20.	CloudFlare Security	No later than 05/05/2012	CloudFlare, Inc.
21.	CloudFlare Analytics	No later than 05/05/2012	CloudFlare, Inc.
22.	The Company Keeping Your Favorite (And Least Favorite) Websites Online	07/30/2014	Kashmir Hill
23.	A Taste of Crispy Squid	1998	Syan Gadde et al.

No.	Title	Date of Publication	Author(s) and Publisher
24.	ISO/IEC DIS 23009-1 – Information Technology – Dynamic adaptive streaming over HTTP (DASH) – Part 1: Media presentation description and segment formats	08/30/2011	Joint Technical Committee ISO/IEC JTC 1
25.	HTTP Streaming of MPEG Media	No later than 10/31/2010	Christian Timmerer et al.
26.	ISO/IEC JTC1/SC29/WG11 N11340 – Requirements on HTTP Streaming of MPEG Media	No later than 04/30/2010	ISO/IEC
27.	ISO/IEC JTC1/SC29/WG11 W13533 – MPEG-DASH: The Standard for Multimedia Streaming over Internet	No later than 04/30/2012	ISO/IEC
28.	IEEE MultiMedia – Multimedia Technology and Practice – Vol. 18, No. 4	No later than 12/31/2011	IEEE
29.	HTTP Live Streaming draft-pantos-http-live-streaming-08	03/23/2012	Ed Pantos
30.	HTTP Live Streaming as a Source Streaming Method	04/29/2012	Bobby Kania et al.
31.	Incapsula introduces ‘Backdoor Protect’ feature in Cloud-based Website Security	01/30/2013	The Hacker News
32.	Incapsula’s Cloud Shields, Accelerates Your System	11/09/2011	Peter Cohan
33.	Protect Your Website, and Boost its Speed, With Incapsula	10/20/2011	Allison Reilly
34.	Microsoft Smooth Streaming	05/21/2015	Christopher Mueller
35.	Microsoft Silverlight – Delivering Live and On-Demand Smooth Streaming	No later than 12/31/2009	Microsoft
36.	Smooth Streaming Microsoft Learn	08/14/2012	Microsoft
37.	Smooth Streaming Architecture	02/10/2009	Alex Zambelli

No.	Title	Date of Publication	Author(s) and Publisher
38.	Open IPTV Forum Release 2 Specification: Volume 2a – HTTP Adaptive Streaming [V2.3]	01/24/2014	Open IPTV Forum
39.	The Open IPTV Forum Status & Future Directions – An Overview	08/15/2011	Nilo Mitra
40.	Open IPTV Forum Release 2 Specification: Volume 1 – Overview [V2.3]	01/24/2014	Open IPTV Forum
41.	Quick Accessible Mobile Video System Based on Pre-Downloading, Pre-Fetching and Streaming Technologies	03/10/2008	Hiroyuki Kasai and Naofumi Uchihara; IEEE International Symposium on Personal, Indoor and Mobile Radio Communications

Table 4: System References

No.	Item Offered for Sale or Publicly Used or Known	Date	Person or Entity
1.	Adobe Flash Media Server 4.5 and Apple iPhone 6 and 6 Plus that implemented HTTP Dynamic Streaming	No later than 02/13/2015	Adobe Inc. and/or Apple Inc.
2.	Agilent Technologies N9083A/W9083A MSR measurement application for the X-Series signal analyzers and/or HTC One XL Android Smartphone that implemented 3GPP TS 27.007 V9.8.0 (2011-12)	No later than 07/18/2012	Agilent Technologies, Inc. and/or HTC Corporation
3.	Agilent Technologies N9083A/W9083A MSR measurement application for the X-Series signal analyzers and/or HTC One XL Android Smartphone that implemented 3GPP TS 27.007 V9.8.0 (2011-12)	No later than 02/13/2015	Agilent Technologies, Inc. and HTC Corporation

No.	Item Offered for Sale or Publicly Used or Known	Date	Person or Entity
4.	Akamai Technologies Content Distribution Network	No later than 06/01/2012	Akamai Technologies, Inc.
5.	Akamai Technologies Content Distribution Network	No later than 07/18/2012	Akamai Technologies, Inc.
6.	Akamai Technologies Content Distribution Network	No later than 02/13/2015	Akamai Technologies, Inc.
7.	Amazon CloudFront Distribution Network	No later than 06/01/2012	Amazon Web Services, Inc.
8.	Amazon CloudFront Distribution Network	No later than 07/18/2012	Amazon Web Services, Inc.
9.	Amazon CloudFront Distribution Network	No later than 02/13/2015	Amazon Web Services, Inc.
10.	Cloudflare Content Distribution Network	No later than 06/01/2012	Cloudflare, Inc.
11.	Cloudflare Content Distribution Network	No later than 07/18/2012	Cloudflare, Inc.
12.	Cloudflare Content Distribution Network	No later than 02/13/2015	Cloudflare, Inc.
13.	Microsoft Windows 10 that implemented ISO/IEC DIS 23009-1 Dynamic Adaptive Streaming over HTTP (DASH)	No later than 02/13/2015	Microsoft Corporation
14.	Microsoft Windows 10 that implemented HTTP Live Streaming (HLS)	No later than 02/13/2015	Microsoft Corporation
15.	Microsoft Windows Embedded Compact 7 that implemented Microsoft Smooth Streaming	No later than 02/13/2015	Microsoft Corporation
16.	Samsung UN55ES8000 Smart TV and/or Philips 8000 series TV that implemented ISO/IEC DIS 23009-1 Dynamic Adaptive Streaming over HTTP (DASH)	No later than 07/18/2012	Samsung Electronics America, Inc. and Funai Electric Co., Ltd.

A. A Chart Identifying Where Specifically in Each Item of Prior Art Each Element of Each Asserted Claim Is Found

Attached hereto as Exhibits A-01 through A-23, B-01 through B-30, C-01 through C-30, and D-01 through D-26 are claim charts identifying examples of where specifically in each item of prior art each element of each Asserted Claim is found. For each claim element found in an item of prior art, Defendants have identified at least one instance of that element. Other instances may also exist but are not identified because of their duplicative nature.

The exhibits hereto identify prior art that expressly or inherently anticipates each Asserted Claim, or that in combination expressly or inherently renders the Asserted Claims obvious. To the extent that any reference identified in the Exhibits does not identify every aspect of an element, the reference still anticipates the Asserted Claim(s) for at least the reason that any such aspect of an element is inherently disclosed. To the extent that the Court finds that a reference does not expressly disclose certain limitations in the Asserted Claims, such limitations would have been inherent and/or obvious.

By mapping the claim language of the Asserted Patents to the references, Defendants do not imply or admit that the claim language satisfies Section 112 of the Patent Act or that the claim language has patentable weight. Citations from the listed references are not a ratification or acceptance of the manner in which Plaintiff applies particular claim elements to the features and functions of the accused products and services. The citations are instead intended to demonstrate that, if certain claim elements are applied against the prior art in the same manner as Plaintiff applies them in its Infringement Contentions, then certain prior art discloses those claim elements to the same extent. The prior art may also disclose these same claim elements if the claim elements are applied differently than in the Infringement Contentions. Nothing in these Supplemental Invalidity Contentions is in any way an admission that the Infringement Contentions correctly

describe the scope of the Asserted Patents or that Defendants infringe the Asserted Patents.

Although not required by the Court's Scheduling Order, exemplar motivations to modify or combine references are stated in Section B, *infra*, and/or are provided by discussions in the cited references, the state of the art discussed in the references, and the knowledge of a person of ordinary skill in the art. Defendants provide these disclosures without prejudice to any arguments or objections concerning the relevance of motivation to combine and reserve the right to expand on these exemplary motivations to combine in their expert report(s).

1. '347 Patent

Each of the prior art references charted by Defendants in Exhibits A-01 through A-23 anticipates and/or renders obvious each Asserted Claim of the '347 Patent under pre-AIA 35 U.S.C. §§ 102-103. Additionally, it would have been obvious to a person of ordinary skill in the art to have combined any of the prior art references charted in Exhibits A-01 through A-23 with each other or to modify the references alone under pre-AIA 35 U.S.C. § 103. A-01 through A-23 are subject to and incorporate by reference all of the issues under pre-AIA 35 U.S.C. §§ 101 and 112 identified in this cover pleading.

Table 5: Prior Art Invalidity Claim Charts for the '347 Patent

Prior Art No.	Prior Art Reference	Anticipation/ Obviousness	'347 - Exhibit
US20110296046	Arya	A/O	A-01
US20080273591	Brooks	A/O	A-02
US7257640	Callocchia	A/O	A-03
US20080037578	Carlson	A/O	A-04
US20100017439	Chen	A/O	A-05

Prior Art No.	Prior Art Reference	Anticipation/ Obviousness	'347 - Exhibit
WO2009019671	De Boer	A/O	A-06
US20100260048	Dolganow	A/O	A-07
US20130067109	Dong	A/O	A-08
WO2011080714	Elefant	A/O	A-09
US20140059156	Freeman	A/O	A-10
US20110082946	Gopalakrishnan	A/O	A-11
US20110047287	Harrang	A/O	A-12
US20030039211	Hvostov	A/O	A-13
WO2010111261	Ma (WIPO)	A/O	A-14
US20100188976	Rahman	A/O	A-15
US20050223089	Rhodes	A/O	A-16
US7805515	Riley	A/O	A-17
US7894478	Ullmann	A/O	A-18
System	Akamai Technologies Content Distribution Network	A/O	A-19
System	Amazon CloudFront Distribution Network	A/O	A-20
System	Cloudflare Content Distribution Network	A/O	A-21
US20120311126A1	Jadallah	A/O	A-22
US20130041998A1	Kordasiewicz	A/O	A-23

2. '633 Patent and the '442 Patent

Each of the prior art references charted by Defendants in Exhibits B-01 through B-30 and C-01 through C-30 anticipates and/or renders obvious each Asserted Claim of the '442 Patent and the '633 Patent under pre-AIA 35 U.S.C. §§ 102-103. Additionally, it would have been obvious to a person of ordinary skill in the art to have combined any of the prior art references charted in Exhibits B-01 through B-30 and C-01 through C-30 with each other or to modify the references alone under pre-AIA 35 U.S.C. § 103. B-01 through B-30 and C-01 through C-30 are subject to and incorporate by reference all of the issues under pre-AIA 35 U.S.C. §§ 101 and 112 identified in this cover pleading.

Table 6: Prior Art Invalidity Claim Charts for the '633 Patent and the '442 Patent

Prior Art No.	Prior Art Reference	Anticipation/ Obviousness	'633/'442 - Exhibit
US20030187935	Agarwalla	A/O	B-01 and C-01
US20100088394	Barbieri	A/O	B-02 and C-02
US7945573	Barnes	A/O	B-03 and C-03
US20110264676	Belan	A/O	B-04 and C-04
US20100211987	Chou	A/O	B-05 and C-05
US20020184403	Dahlin	A/O	B-06 and C-06
US20110191445	Dazzi	A/O	B-07 and C-07
NPL	Gadde	A/O	B-08 and C-08
US20120041970	Ghosh	A/O	B-09 and C-09
US20110082946	Gopalakrishnan	A/O	B-10 and C-10
US20120166574	Harvell	A/O	B-11 and C-11
US20100070608	Hosur (Hosur I)	A/O	B-12 and C-12
US20100185776	Hosur (Hosur II)	A/O	B-13 and C-13
US20030204605	Hudson	A/O	B-14 and C-14
US20100268836	Jabri	A/O	B-15 and C-15

Prior Art No.	Prior Art Reference	Anticipation/ Obviousness	'633/'442 - Exhibit
US20130031211	Johnson	A/O	B-16 and C-16
US9407355	Lerner	A/O	B-17 and C-17
US20120005364	Ma (US)	A/O	B-18 and C-18
US7359955	Menon	A/O	B-19 and C-19
WO2011127263	Rowley	A/O	B-20 and C-20
US20090310668	Sackstein	A/O	B-21 and C-21
US8412841	Swaminathan	A/O	B-22 and C-22
System	Agilent Technologies N9083A/W9083A MSR measurement application for the X- Series signal analyzers and/or HTC One XL Android Smartphone that implemented 3GPP Release 9 Adaptive HTTP Streaming	A/O	B-23 and C-23
System	Akamai Technologies Content Distribution Network	A/O	B-24 and C-24
System	Amazon CloudFront Distribution Network	A/O	B-25 and C-25
System	Samsung UN55ES8000 Smart TV and/or Philips 8000 series TV that implemented Dynamic Adaptive Streaming over HTTP (DASH)	A/O	B-26 and C-26
US20080072264	Crayford	A/O	B-27 and C-27
US9356824	Khanal	A/O	B-28 and C-28
US20100235438	Narayanan	A/O	B-29 and C-29
US20060271559	Stavrakos	A/O	B-30 and C-30

Contemperaneously with these Supplemental Invalidity Contentions, Defendants produce the additional prior art identified in these contentions:

- AMAZON_TIR_PA_00002678 – AMAZON_TIR_PA_00002881.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document (including all Exhibits thereto) has been served upon all counsel of record by electronic mail on February 16, 2026.

/s/ James Young Hurt
James Young Hurt