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

HBCU MESSAGING US LP, Plaintiff, v. APPLE, INC., Defendant.	CASE NO. 1:24-cv-01199-ADA

DEFENDANT APPLE INC.'S PRELIMINARY INVALIDITY CONTENTIONS

MOFO-6795574

I. INTRODUCTION

Pursuant to the Agreed Scheduling Order (ECF No. 49), Defendant Apple, Inc. provides these Preliminary Invalidity Contentions to Plaintiff HBCU Messaging US LP ("plaintiff" or "HBCU Messaging") with respect to U.S. Patent Nos. 8,918,127 ("the '127 patent"), 11,012,827 ("the '827 patent"), 11,089,450 ("the '450 patent"), 11,653,182 ("the '182 patent"), 11,653,183 ("the '183 patent"), 11,991,600 ("the '600 patent"), and 11,991,601 ("the '601 patent") (collectively, the "Asserted Patents"). Plaintiff's May 13, 2025 Infringement Contentions assert the following claims of the Asserted Patents against Apple:

- '127 patent, claim 1
- '827 patent, claims 1 and 9
- '450 patent, claim 6
- '182 patent, claim 17
- '183 patent, claims 20 and 30
- '600 patent, claim 1
- '601 patent, claim 26

(Collectively, the "Asserted Claims")).

A. Claim Construction

The Court has not yet construed any of the terms in the Asserted Claims of the Asserted Patent. These Preliminary Invalidity Contentions are served in view of Apple's current understanding of the Asserted Claims, without the benefit of claim construction proceedings in this action. Accordingly, Apple does not take any position herein regarding the proper scope or construction of the Asserted Claims. To the extent that Apple's contentions reflect, imply, or suggest a particular interpretation or construction of any claim element or term, Apple does not adopt, advocate, or acquiesce to such an interpretation or construction. Apple's contentions therefore should not be relied upon as a statement of Apple's proposed claim constructions or as any admission regarding the proper scope of the claims. Nor do these Preliminary Invalidity

Contentions constitute any admission by Apple that any accused products or services, including any current or past versions of those products or services, are covered by any Asserted Claim.

These Preliminary Invalidity Contentions may consider HBCU Messaging's apparent interpretations of the Asserted Claims as reflected in HBCU Messaging's Infringement Contentions. Accordingly, any assertion herein that a particular limitation is disclosed by a prior art reference or references may be based in part on HBCU Messaging's apparent interpretation, but is not intended to be, and is not, an admission by Apple that any such construction is supportable or correct, or that any claim terms of the Asserted Claims are not invalid under 35 U.S.C. § 112 for being indefinite, failing to satisfy the written description requirement, or failing to satisfy the enablement requirement. Moreover, nothing in these Preliminary Invalidity Contentions should be construed as an admission or a waiver by Apple of any particular construction of any claim term. Further, Apple specifically denies that HBCU Messaging's apparent claim constructions are supportable or correct.

B. Ongoing Discovery and Disclosures

These Preliminary Invalidity Contentions are based on Apple's current knowledge and understanding of the Asserted Claims and review of prior art items as of the date of service, and are made without the benefit of discovery regarding the parties' claim construction contentions, any expert discovery, any third-party discovery, and any claim construction opinion or order by the Court. What's more, HBCU Messaging has failed to serve Infringement Contentions that comply with the Court's Order Governing Proceedings or that put Apple on notice of HBCU Messaging's infringement theories, which prejudices Apple's ability to adequately prepare its defenses. Accordingly, these Preliminary Invalidity Contentions are provided without prejudice to Apple's right to revise, amend, correct, supplement, modify, or clarify the same. Apple also reserves the right to complete their investigation and discovery of the facts, to produce subsequently discovered information, and to introduce such subsequently discovered information at the time of any hearing or trial in this action.

These Preliminary Invalidity Contentions are also based at least in part on Apple's current understanding of the Asserted Claims in view of HBCU Messaging's Infringement Contentions, which fail to provide Apple with requisite notice of HBCU Messaging's infringement theories. If HBCU Messaging amends its Infringement Contentions to address any deficiency therein, or for any other reason, Apple reserves the right to amend or supplement these Preliminary Invalidity Contentions.

Apple further reserves the right to supplement and amend these Preliminary Invalidity Contentions and its accompanying document production based on further investigation, analysis, and discovery, Apple's consultation with experts and others, and contentions or court rulings on relevant issues such as claim construction and priority dates. For example, since fact discovery has not yet begun, deposing the alleged inventors may reveal information that affects the disclosures and contentions herein. In addition, Apple has not completed discovery from third parties who have information concerning the prior art cited herein and possible additional art, including additional evidence regarding prior art system disclosed herein.

Because Apple is continuing its search for and analysis of relevant prior art and seeking discovery from third parties with information concerning the prior art cited herein and possible additional art, Apple reserves the right to revise, amend, and/or supplement the information provided herein, including identifying, charting, and/or relying upon additional prior art references, relevant disclosures, and bases for these Preliminary Invalidity Contentions. Additional prior art, disclosures, and invalidity grounds, whether or not cited in this disclosure and whether known or not known to Apple, may become relevant as investigation, analysis, and discovery continue, and following claim construction proceedings in this case.

These Preliminary Invalidity Contentions also incorporate by reference all bases for invalidity identified in subsequent pleadings and discovery responses in this case, all prior art and bases for invalidity discussed in the German Infringement Litigation and Nullity Action, all bases for invalidity in any post grant proceedings (*e.g.*, *inter partes* review) involving the Asserted Patents or related patents, and any bases of invalidity identified during the prosecution

of the Asserted Patents, as well as all related patents and/or patent applications. Apple further incorporates by reference all admissions regarding the Asserted Patent including, but not limited to, admissions in the specification of the Asserted Patents and the prosecution of the Asserted Patents and related patents and/or patent applications.

These Preliminary Invalidity Contentions further incorporate by reference (1) any and all prior art identified in documents produced by HBCU Messaging to Apple in this case; (2) any and all materials regarding invalidity that should have been produced to Apple but have not been produced to date, to the extent that any exist; (3) any prior art of which a named inventor of the Asserted Patents is aware and/or on which he, she, and/or HBCU Messaging contends the alleged invention(s) of the Asserted Patents builds upon or improves; and (4) any and all admissions by HBCU Messaging and/or a named inventor regarding the Asserted Patents including, but not limited to, admissions in the specifications of the Asserted Patents and the prosecution of the Asserted Patents and related patents and/or patent applications. In addition, these Preliminary Invalidity Contentions incorporate all prior art identified and invalidity contentions served in any related litigation, including any petitions for *inter partes* review of the Asserted Patents and all prior art and invalidity contentions from the German Infringement Litigation and Nullity Action.

II. PRIORITY DATE OF THE ASSERTED PATENT AND CLAIMS

HBCU Messaging has the burden to show entitlement to the asserted priority date that is earlier than the filing date of the Asserted Patents. HBCU Messaging's May 13, 2025 Infringement Contentions fail to identify any alleged priority date for each Asserted Claim. HBCU Messaging has not and cannot meet its burden to show entitlement to any priority date earlier than the filing date of the Asserted Patents. Moreover, the Asserted Patents are unenforceable under the doctrine of prosecution latches. Apple reserves the right to modify, amend, or supplement its Preliminary Invalidity Contentions with additional prior art references if any Asserted Claim is shown to not be entitled to the alleged priority date or if HBCU Messaging alleges any other priority date for any of the Asserted Claims.

III. PRIOR ART IDENTIFICATION AND INVALIDITY CLAIM CHARTS

The accompanying invalidity claim charts (identified in Section IV below) cite to particular teachings and disclosures of the prior art references as applied to elements 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 exemplary and are intended to put HBCU Messaging on notice of the basis for Apple's contentions. Apple has endeavored to identify relevant portions of the references, but the references may contain additional support for particular claim limitations. Apple reserves the right to rely on uncited portions of the prior art references, other documents, and/or operational systems, as well as fact and expert testimony, to provide context or to aid in understanding the cited portions of the references and interpreting the teachings of the prior art and to establish bases for combinations of certain cited references that render the Asserted Claims obvious. Apple also reserves the right to rely on any prior art system referenced, embodied, or described in any of the prior art references identified herein, or which embodies any of the prior art references identified herein.

Moreover, Apple reserves the right to rely on inventor admissions concerning the scope of the prior art relevant to the Asserted Patents found in, *inter alia*, the prosecution history of the Asserted Patents or related patents and/or patent applications, any testimony or declarations of the named inventors concerning the Asserted Patents or related patents, and any papers or evidence submitted by HBCU Messaging in connection with this litigation, any other pending or future litigation brought by HBCU Messaging involving the Asserted Patents or related patents, any future *ex parte* reexamination proceedings involving the Asserted Patents or related patents, or any post grant proceedings (e.g., *inter partes* review) involving the Asserted Patents or related patents. Apple also may establish what was known to a person having ordinary skill in the art through treatises, published industry standards, other publications, products, and/or testimony.

Where the invalidity claim charts (identified in Section IV below) cite to a particular figure in a reference, the citation should be understood to encompass the caption of the figure

and other text relating to and/or describing the figure. Similarly, where the invalidity claim charts cite to particular text referring to a figure, the citation should be understood to include the figure and related figures as well.

The prior art references listed herein and in the accompanying invalidity claim charts may disclose the elements of the Asserted Claims explicitly and/or inherently. The prior art references are also relevant for their showing of the state of the art and reasons and motivations for making improvements, additions, and combinations. The suggested obviousness combinations are provided in the alternative to Apple's anticipation contentions and are not to be construed to suggest that any reference is not itself anticipatory.

Further, the combinations of prior art references contained herein demonstrating the obviousness of the Asserted Patents under 35 U.S.C. § 103 are merely exemplary and are not intended to be exhaustive. All such combinations are intended to include and be in view of the knowledge of a person of ordinary skill in the art. Additional obviousness combinations of the identified prior art references are possible, and Apple reserves the right to use any such combination(s) in this litigation. In particular, Apple is currently unaware of the extent to which HBCU Messaging may contend that limitations of any particular claim(s) are not disclosed in the art that Apple has identified as anticipatory. To the extent that HBCU Messaging does so, Apple reserves the right to identify other evidence or references that anticipate or render obvious the particular claim(s).

Nothing in these contentions should be treated as an admission that any of Apple's accused instrumentalities meet any limitation of the Asserted Claims. Apple denies infringement of the Asserted Claims. To the extent that any prior art references identified by HBCU Messaging contains a claim element that is the same as or similar to an element in an accused instrumentality, based on a claim construction inferred from HBCU Messaging's Infringement Contentions, inclusion of that reference in these Preliminary Invalidity Contentions is not a waiver by Apple of any claim construction or non-infringement position, nor is it an admission

or suggestion by Apple that any accused instrumentality satisfies the limitations of the Asserted Claims under a proper construction of those claims.

IV. PRELIMINARY INVALIDITY CONTENTIONS FOR THE ASSERTED PATENTS

A. Prior Art References[1]

1. Prior Art Patents and Publications

Apple identifies the following prior art patents and printed publications, which anticipate the Asserted Claims under 35 U.S.C. §§ 102(a), (b), (e), and/or (g), and/or render the Asserted Claims obvious under 35 U.S.C. § 103, either alone or in combination.

Prior Art	Date of Issue / Publication	Effective Filing Date
U.S. Patent No. 7,248,857 ("Richardson")	7/24/2007	2/27/2004
U.S. Pub No. 2007/0060177 ("Major")	3/15/2007	2/27/2004
U.S. Pub No. 2007/0254681 ("Horvath")	11/1/2007	5/1/2006
U.S. Pub No. 2006/0281474 ("Domville")	12/14/2006	6/9/2005
U.S. Patent No. 7,702,342 ("Duan")	4/20/2010	4/29/2005
U.S. Patent No. 6,430,604 ("Ogle")	8/6/2002	8/3/1999
KR 20060077401 ("Kim")	12/30/2011	12/30/2004
WO 2004/061583 A2 ("Tsampalis")	07/22/2004	12/08/2003
WO 2001041477A1 ("Lee")	06/07/2001	12/01/2000

[1] To the extent one or more prior art patents, publications, or systems are identified in the claim charts attached hereto but are not included in the tables and lists below, those prior art patents, publications, or systems are also prior art to the Asserted Patents.

Prior Art	Date of Issue / Publication	Effective Filing Date
U.S. Patent No. 6,978,136 ("Jenniges")	12/20/2005	7/15/2002
RFC 3824: Using E.164 numbers with the Session Initiation Protocol (SIP), Peterson ("RFC 3824")	June 2004	June 2004
U.S. Pub No. 2005/0243978 ("Son")	11/3/2005	4/14/2004
EP 2136517A1 ("Pokeila")	12/23/2009	06/19/2008
U.S. Pub No. 2005/0037762 ("Gurbani")	2/17/2005	8/15/2003
U.S. Patent No. 7,720,056 ("Lohtia")	5/18/2010	10/19/2004
EP 1732277 ("Domville EP")	12/13/2006	6/9/2005
U.S. Patent No. 7,428,580 ("Hullfish")	9/23/2008	11/26/2003
EP 1569395A1 ("Major EP")	8/31/2005	2/27/2004
U.S. Patent No. 6,175,622 ("Chiniwala")	1/16/2001	2/10/1998
U.S. Patent No. 6,801,781 ("Provost")	10/5/2004	10/31/2000
EP 1887747B1 ("Myllynen")	8/8/2012	5/6/2003
U.S. Patent No. 8,006,190 ("Quoc")	8/23/2011	10/31/2006
U.S. Patent No. 8,064,906 ("Bonner")	11/22/2011	10/21/2005
U.S. Patent No. 8,165,086 ("Gallagher")	4/24/2012	4/18/2006
U.S. Patent No. 7,310,329 ("Vieri 329")	12/18/2007	10/22/2001

Prior Art	Date of Issue / Publication	Effective Filing Date
UK Pub. No. 2,432,482 ("Beaumont")	5/23/2007	11/18/2005
U.S. Patent No. 8,880,612 ("Thenthiruperai")	11/4/2014	12/16/2004
U.S. Patent No. 6,678,524 ("Hansson")	1/13/2004	5/31/2000
U.S. Pub. No. 2006/0056309 ("Maaniitty")	3/16/2006	8/18/2003
U.S. Patent No. 7,236,472 ("Lazaridis")	6/26/2007	9/16/2003
U.S. Patent No. 6,529,737 ("Skinner")	3/4/2003	3/1/1999
U.S. Patent No. 9,577,966 ("Dorsey")	2/21/2017	7/23/2007
U.S. Patent No. 7,171,190 ("Ye")	1/30/2007	6/25/2003
U.S. Patent No. 9,167,401 ("Helferich")	10/20/2015	9/19/1997
U.S. Patent No. 7,702,738 ("Ahopelto")	4/20/2010	8/9/2006
U.S. Pub No. 2008/0051120 ("Vieri Pub")	2/28/2008	10/22/2001
U.S. Patent No. 6,941,345 ("Kapil")	9/6/2005	12/3/1999
U.S. Patent No. 6,714,987 ("Amin")	3/30/2004	11/5/1999
KR100654049 ("Kim 049")	12/5/2006	12/29/2005
U.S. Patent No. 6,940,844 ("Purkayastha")	9/6/2005	10/17/2003
U.S. Pub No. 2006/0286984 ("Bonner")	12/21/2006	6/16/2005

Prior Art	Date of Issue / Publication	Effective Filing Date
U.S. Patent No. 8,478,277 ("Jiang")	7/2/2013	2/18/2003
U.S. Patent No. 8,229,480 ("Bantukul")	7/24/2012	4/20/2006
U.S. Patent No. 7,649,877 ("Vieri 877")	1/19/2010	10/22/2001
U.S. Patent No. 7,353,991 ("Esplin")	4/8/2008	2/21/2006
U.S. Patent No. 10,901,611 ("Ligh")	1/26/2021	4/25/2008
U.S. Patent No. 7,450,664 ("Agarwal")	11/11/2008	8/14/2002
U.S. Patent No. 7,953,395 ("Richardson 395")	5/31/2011	2/27/2004
U.S. Patent No. 8,819,145 ("Gailloux")	8/26/2014	10/8/2007
U.S. Patent No. 8,533,272 ("Alicherry")	9/10/2013	1/30/2007
WO 2006/029331A2 ("Henderson")	3/16/2006	9/8/2004
U.S. Patent No. 2005/0210112 ("Clement")	9/22/2005	3/18/2004
U.S. Pub No. 2002/0087634 ("Ogle Pub")	7/4/2002	8/3/1999
U.S. Patent No. 7,702,315 ("Engstrom")	4/20/2010	10/15/2002
U.S. Patent No. 7,930,208 ("Sharman")	4/19/2011	3/30/2007
DE 10127360 ("Jerbi")	12/12/2002	6/6/2001
U.S. Patent No. 9,408,077 ("Fish")	8/2/2016	6/16/2006

Prior Art	Date of Issue / Publication	Effective Filing Date
U.S. Pub No. 2008/0215990 ("Sellen")	9/4/2008	3/1/2007
EP 1404092A1 ("Gkikas")	3/31/2004	9/27/2002
U.S. Patent No. 8,934,872 ("Hull")	1/13/2015	8/16/2001
JP2007259397 ("Fukushima")	10/4/2007	2/24/2006
U.S. Pub No. 2007/0093256 ("Cha")	4/26/2007	12/30/2003
U.S. Pub No. 2005/0197142 ("Major 142")	9/8/2005	2/27/2004
U.S. Pub No. 2007/0087766 ("Hardy")	4/19/2007	10/14/2005
The GSM System for Mobile Communications, Michel Mouly ("Mouly")	January 1, 1992	
Qi et al., 2004, July, *Multimedia Messaging Service* ("Qi")	July 2004	

2. Prior Art Systems and Products

Apple also identifies the following prior art products or systems, which invalidate the Asserted Claims under 35 U.S.C. §§ 102(a), (b), and/or (g), and/or render the Asserted Claims obvious under 35 U.S.C. § 103, either alone or in combination.

Prior Art	Short Name	Date of Use, Sale, Offer for Sale, or Invention
Apple iChat	"iChat"	At least as early as August 2002
AOL AIM Instant Messenger	"AIM"	At least as early as 2004
Yahoo! OneConnect	"OneConnect"	At least as early as 2007

Prior Art	Short Name	Date of Use, Sale, Offer for Sale, or Invention
Jabber	"Jabber"	At least as early as 2004
Microsoft Skype	"Skype"	At least as early as 2006
Trillian Instant Messenger	"Trillian"	At least as early as 2002
Blackberry Messenger	"Blackberry"	At least as early as 2005
Microsoft MSN Messenger	"MSN"	At least as early as 2005
Palm Treo 750v	"Palm"	At leas as early as January 2006
Vodafone 804SS	"804SS"	At least as early as March 2006
Vodafone 904SH	"904SH"	At least as early as April 2006
Nokia 7650	"Nokia"	At least as aerly as January 2002
SoftBank 911T Handset	"SoftBank"	At least as early as March 2007
MobileAccess T250 Phone	"MobileAccess"	At least as early as January 1999
LG KF700 Mobile Phone	"LG"	At least as early as February 2008

Discovery is not yet complete and Apple continues to investigate these and other prior art products and systems and thus may uncover additional documentation and evidence regarding their operation and functionality.[2] Apple may also rely on physical samples, executable software, or source code as evidence of the relevant functionality of these prior art products and

[2] Per the Scheduling Order (ECF No. 49), fact discovery does not open until January 21, 2026. Once fact discovery opens, Apple will serve third party subpoenas with discovery requests related to these prior art products and systems and will diligently amend or supplement these Preliminary Invalidity Contentions after it receives additional information and evidence related to these prior art products and systems.

systems. Apple will make available for inspection any additional documentation and evidence and any physical samples of products, systems, or software listed above, and/or any source code therefor, that it has in its possession or that becomes available in the future during discovery.

3. The Accused Functionality

Apple denies that the accused Messages and Apple Cash functionality, or any other Apple products, services, or functionalities, infringe any valid or enforceable claim of the Asserted Patents. As discussed above, HBCU Messaging has not and cannot meet its burden to show entitlement to any priority date earlier than the filing date of the Asserted Patents. Accordingly, by maintaining that the accused Messages and Apple Cash functionality infringes, HBCU Messaging is admitting that the same functionality would render the Asserted Patents invalid as anticipated under the theories set forth by HBCU Messaging in its May 13, 2025 Infringement Contentions. *Upsher-Smith Labs., Inc. v. Pamlab, L.L.C.*, 412 F.3d 1319, 1322 (Fed. Cir. 2005) ("A century-old axiom of patent law holds that a product which would literally infringe if later in time anticipates if earlier.") (citation omitted); accord *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889) ("That which infringes, if later, would anticipate if earlier."); *see also Vanmoor v. Wal-Mart Stores, Inc.*, 201 F.3d 1363, 1366 (Fed. Cir. 2000) (affirming invalidity of patent based on the patentee's own infringement allegations because accused product was placed on-sale before critical date of the invention).

The accused Messages and Apple Cash functionality was also publicly disclosed and in commercial use at least a year before either the effective filing date of the alleged invention in the Asserted Patents or the date on which the alleged invention in the Asserted Patents was purportedly disclosed to the public. *See* 35 U.S.C. § 273. For example, the accused Messages functionality was publicly disclosed and released in 2011, 2 years before the earliest filing date of the Asserted Patents. Moreover, iChat—the predecessor to iMessage—was released in August 2002, before the filing date and alleged priority date of all Asserted Patents.

Apple also has numerous patents and publications related to the accused Messages and Apple Cash functionality that pre-date the earliest priority date of the Asserted Patents. Apple identifies examples of these references in the chart below.

Reference	Date of Issue / Publication	Effective Filing Date
U.S. Pub. No. 20080051120	2/28/2008	10/22/2001
U.S. Patent No. 7,649,877	1/19/2010	10/22/2001
U.S. Patent No. 7,706,511	4/27/2010	10/22/2001
U.S. Patent No. 6,529,737	3/4/2003	3/1/1999
U.S. Pub. No. 20140308978	10/16/2014	11/29/1994
U.S. Patent No. 7,702,738	4/20/2010	8/9/2006
U.S. Patent No. 6,108,325	8/22/2000	12/9/1997
U.S. Pub. No. 20090143007	6/4/2009	11/30/2007
U.S. Patent No. 8,254,828	8/28/2012	11/30/2007
U.S. Pub. No. 20090170492	7/2/2009	12/28/2007
U.S. Patent No. 10,554,272	2/4/2020	6/22/2004
U.S. Patent No. 7,343,561	3/11/2008	12/19/2003
U.S. Patent No. 7,860,935	12/28/2010	12/28/2007
U.S. Patent No. 7,574,479	8/11/2009	1/24/2006
U.S. Pub. No. 20080254770	10/16/2008	4/11/2007
U.S. Patent No. 8,464,315	6/11/2013	4/3/2007
U.S. Patent No. 7,080,132	7/18/2006	1/19/2001
U.S. Pub. No. 20080307511	12/11/2008	4/3/2007
U.S. Patent No. 7,581,101	8/25/2009	4/3/2007
U.S. Patent No. 7,751,837	7/6/2010	4/11/2007

Reference	Date of Issue / Publication	Effective Filing Date
U.S. Pub. No. 20070194113	8/23/2007	2/21/2006
U.S. Patent No. 7,353,991	4/8/2008	2/21/2006
U.S. Patent No. 8,370,913	2/5/2013	3/16/2007
U.S. Patent No. 8,46,7812	6/18/2013	6/25/2004
U.S. Pub. No. 20130023250	1/24/2013	11/30/2007
U.S. Patent No. 8,417,180	4/9/2013	11/30/2007
U.S. Patent No. 7,009,990	3/7/2006	4/23/1998
U.S. Patent No. 6,941,345	9/6/2005	12/3/1999
U.S. Patent No. 7,546,083	6/9/2009	1/24/2006
U.S. Patent No. 7,861,206	12/28/2010	11/29/2002
U.S. Patent No. 8,331,987	12/11/2012	4/19/2007
U.S. Patent No. 7,551,555	6/23/2009	8/13/2003
U.S. Pub. No. 20080259829	10/23/2008	4/19/2007
U.S. Pub. No. 20060281474	12/14/2006	6/9/2005
U.S. Patent No. 8,166,138	4/24/2012	6/29/2007
U.S. Patent No. 6,801,781	10/5/2004	10/31/2000
U.S. Pub. No. 20070263735	11/15/2007	4/2/2004
U.S. Patent No. 7,660,862	2/9/2010	8/9/2006
U.S. Patent No. 7,774,419	8/10/2010	11/2/2006
U.S. Patent No. 7,457,641	11/25/2008	11/24/2004
U.S. Patent No. 7,876,840	1/25/2011	4/2/2004
U.S. Pub. No. 20070105508	5/10/2007	4/2/2004
U.S. Patent No. 11,743,375	8/29/2023	6/28/2007

Reference	Date of Issue / Publication	Effective Filing Date
U.S. Patent No. 11,122,158	9/14/2021	6/28/2007
U.S. Pub. No. 20140105176	4/17/2014	9/14/2006
U.S. Patent No. 9,485,698	11/1/2016	9/14/2006
U.S. Patent No. 8,743,709	6/3/2014	6/12/2006
U.S. Patent No. 10,348,654	7/9/2019	5/2/2003
U.S. Patent No. 10,623,347	4/14/2020	5/2/2003

4. State of the Art and Admitted Prior Art

The Asserted Patents themselves acknowledge that many aspects of the alleged invention were already known in the art. The Asserted Patents note that SMS as well as several other wireless messaging technologies were already known, including EMS, MIM, MMS, and Internet Protocol (IP)-based messaging. '127 patent, 1:29-62. The Asserted Patents acknowledge that "[a]lthough SMS is extremely popular, one of its biggest drawbacks is that an SMS message can only carry a small amount of data." *Id*., 1:34-36. The Asserted Patents explain that "[t]here are several messaging services that provide an extension to SMS" and provide examples of alternatives to SMS for wireless communications, including sending an outgoing message as one or more IP packets. *See, e.g.*, *id*., 1:59-61, *see also id*., 2:24-27. The Asserted Patents acknowledge the benefits of "Mobile Instant Messaging (MIM) technology[, which] enables mobile devices to engage in real-time, instant messaging via an IP data network." '600 patent, 2:25-28. In other words, the Asserted Patents acknowledge the benefits of IP-based (packet-switched) instant messaging over SMS, yet explain that these different protocols could be used as alternative / fallback protocols. '127 patent. 1:44-49 (explaining that it was known that "[a]n SMS message sent by a mobile user is first delivered to the user's network SMSC before being routed to the recipient" and that "if the recipient's network is operated by a different provider or employs a different wireless standards, the message may pass more through more than one SMSC or SMSC gateway before reaching its final destination.")

Accordingly, the Asserted Patents admit that a person of skill in the art would have been aware of problems associated with simply using SMS for wireless messaging and would have looked to alternatives, such as EMS, MIM, MMS, and Internet Protocol (IP)-based messaging. The Asserted Patents highlight the benefits of IP-based messaging and admit that it was already known that a recipient's network may be operated by different providers or employ different wireless standards, so different transmission modes may be used for outgoing messages depending on the types of messages the recipient would have been able to receive. All of this would have been known by at least persons of ordinary skill in the art—as well as the general public—before the Asserted Patents' earliest priority date.

Indeed, many prior art systems were in existence well-before the priority date of the asserted patents that solves these same problems associated with simply using SMS or offering only one transmission mode. For example, there were numerous instant messaging systems dating back to at least the 1990s that offered solutions to these problems. *See, e.g.*, AIM, OneConnect, Jabber, Skype, MSN, Palm, Blackberry Messenger, and iChat. These IP-based systems all offered the benefits over SMS discussed in the Asserted Patent, while also affording users the option to send messages via SMS as a fallback position if, for example, the recipient was not online or a user of that instant messaging platform.

B. Identification of Anticipation and Obviousness Combinations

Pursuant to P. R. 3–3(b) and (c), Apple provides the following exemplary charts identifying examples of prior art and prior art combinations that anticipate and/or render obvious each of the asserted claims of the Asserted Patents. Apple's investigation, analysis, and review of these references is ongoing. Apple will provide updated claim charts as necessary and as they are available.

Exhibit	Invalidity Chart Reference(s)
1	Domville
2	Horvath

Exhibit	Invalidity Chart Reference(s)
3	Kim
4	Lee
5	Richardson
6	Tsampalis
7	Major
8	RFC 3824
9	OneConnect
10	AIM
11	Blackberry
12	MSN
13	Palm
14	Skype
15	Ogle
16	Trillian

In the Exhibits attached hereto, where Apple cites to a particular figure in a prior art reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the figure in addition to the figure itself. Conversely, where a cited portion of text refers to a figure, the citation should be understood to include the figure as well. Additional evidence regarding the features and elements of the prior art reference may be provided by witness testimony, or by additional documents that describe the prior art reference that are discovered through the course of ongoing discovery.

To the extent any of the prior art references in the attached exhibits are deemed not to disclose one or more limitations of the asserted claims, each of the prior art references in the

attached exhibits can be used in combination with any one or more of the references identified in these contentions, including those disclosed in the attached exhibits, to render the asserted claims invalid under 35 U.S.C. §103. For example, Apple identifies the following non-exhaustive combinations that render the Asserted Claims obvious under 35 U.S.C. § 103:

- Domville alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Horvath alone or in combination with at least one of Domville, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Kim alone or in combination with at least one of Horvath, Domville, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Lee alone or in combination with at least one of Horvath, Kim, Domville, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Richardson alone or in combination with at least one of Horvath, Kim, Lee, Domville, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Tsampalis alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Domville, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Major alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Domville, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;

- RFC 3824 alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, Domville, OneConnect, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- OneConnect alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, Domville, AIM, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- AIM alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, Domville, Blackberry, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Blackberry alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Domville, MSN, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- MSN alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, Domville, Palm, Skype, Ogle, Trillian and/or the admitted prior art;
- Palm alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Domville, Skype, Ogle, Trillian and/or the admitted prior art;
- Skype alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Domville, Ogle, Trillian and/or the admitted prior art;
- Ogle alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Domville, Skype, Trillian and/or the admitted prior art;
- Trillian alone or in combination with at least one of Horvath, Kim, Lee, Richardson, Tsampalis, Major, RFC 3824, OneConnect, AIM, Blackberry, MSN, Palm, Domville, Skype, Ogle and/or the admitted prior art.

These obviousness combinations are provided in the alternative to Apple's anticipation and single-reference obviousness contentions and are not to be construed to suggest that any reference included in the combination is not itself anticipatory or would not render the Asserted Claims obvious in light of the knowledge of a person having ordinary skill in the art. Apple also hereby incorporates by reference the prior art, invalidity grounds, and expert testimony submitted in connection with any related proceedings related to the Asserted Patents, including any future *ex parte* reexamination proceedings involving the Asserted Patents or related patents, or any post grant proceedings (e.g., *inter partes* review) involving the Asserted Patents or related patents.

1. Motivations to Combine, Reasonable Expectation of Success, and Obviousness

The ultimate determination of whether an invention is or is not obvious is a legal conclusion based on underlying factual inquires including "(1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." *Miles Labs., Inc. v. Shandon, Inc.*, 997 F.2d 870, 877 (Fed. Cir. 1993); *see also Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). The U.S. Supreme Court's decision in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415–16 (2007), reaffirmed *Graham* and further held that a claimed invention can be obvious even if there is no teaching, suggestion, or motivation for combining the prior art to produce that invention. In summary, *KSR* holds that patents based on new combinations of elements or components already known in a technical field may be found to be obvious. *See generally KSR*, 550 U.S. 398. Specifically, the Court in *KSR* rejected a rigid application of the "teaching, suggestion, or motivation [to combine]" test. *Id*. at 418–19.

"In determining whether the subject matter of a patent claim is obvious, neither the particular motivation or the avowed purpose of the patentee controls. What matters is the objective reach of the claim." *Id*. at 419. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id*. at 420. In particular, in *KSR*, the

Supreme Court emphasized the principle that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." Id. at 416. A key inquiry is whether the "improvement is more than the predictable use of prior art elements according to their established functions." Id. at 417.

Apple generally contends that the Asserted Claims of the Asserted Patents would have been obvious because they, at most, only slightly modify a known solution to a common issue at the time or merely arrange old elements, with each performing the same function that had previously been known, to perform and yield no more than what one of ordinary skill would expect from such an arrangement. The Asserted Patents claim many generic elements of methods and/or systems for using SMS as a fallback messaging protocol for an IP-based messenger. For example, as discussed above, the Asserted Patents admit that problems related to SMS (*e.g.*, limited amount of data that can be sent and requiring that the message pass through one or more gateways before reaching the final destination if the recipient uses a different provider or employs a different wireless standard) were already known, and that alternative messaging services already existed (*e.g.*, Mobile Instant Messaging and IP-based messaging generally, MMS EMS, etc.).

The Asserted Patents also highlight the benefits of IP-based instant messaging (*i.e.*, real-time instant messaging via an IP data network instead the more limited SMS-based messaging that traverses through a cellular network) while also acknowledging a shortcoming of that type of messaging standing alone: it "require[s] users to maintain a persistent connection with the Internet during a chat session." '600 patent, 2:29-31. It would have been obvious, in order to maintain a persistent communication session, to therefore use SMS as a fallback messaging service if the recipient loses connection with the Internet during a chat session or is not a subscriber to a particular instant messaging service. It would also have been obvious to provide the sender with a visual indication of what type of messaging service was used.

All of the Asserted Claims of the Asserted Patents are also obvious based on one or more combinations of the prior art references above. The accompanying claim charts explain how

different portions of each prior art reference discloses each limitation of the Asserted Claims. To the extent HBCU Messaging argues that any particular prior art reference lacks any feature, a person of ordinary skill in the art as of the Asserted Patents' priority date would at a minimum have been motivated to modify the reference to include the allegedly missing feature(s), or to combine it with other references that include that feature. Apple also hereby incorporates by reference any motivations to combine discussed in any related proceedings related to the Asserted Patents or any related patents, including the German Infringement Litigation, the Nullity Action, any future *ex parte* reexamination proceedings involving the Asserted Patents or related patents, or any post grant proceedings (e.g., *inter partes* review) involving the Asserted Patents or related patents.

One of ordinary skill in the art, at the time of the purported inventions of the Asserted Claims, would have been motivated to combine the teachings of these references and would have had a reasonable expectation of success, as set forth in the combinations above, because these references relate to common objectives and subject matter, and for at least the reasons set forth herein, in the attached claim charts, in the prior art references themselves, and based on the knowledge of one of ordinary skill in the art. The references share commonalities in terms of their general subject matter as well as the types of equipment and/or approaches used. Further, some of the prior art references explicitly or implicitly reference each other, share common authors or inventors, and/or were developed at common companies, schools, or organizations, which would have motivated one of skill in the art to combine them. For example, these references are directed to the fields of instant messaging and wireless communication. These references also identify and address many of the same technical issues (*e.g.*, the shortcomings of using one messaging technology alone) and suggest similar solutions to those issues (*e.g.*, using a fallback messaging technology). Moreover, all the references disclose different transmission modes for wireless communication (including IP-based messaging via a packet switched base station and SMS messaging via a cellular network), determining a particular transmission mode, determining whether a recipient is a subscriber to a particular messaging service, selecting and

sending via a particular transmission mode depending on whether the recipient is a subscriber, and providing a visual indication depending on the type of messaging service used.

For example, from a motivation to combine perspective, one of ordinary skill in the art would have recognized that IP-based instant messaging systems and SMS-based wireless communication systems serve overlapping and complementary functions in the domain of wireless communication. For example, as admitted by the Asserted Patents, Instant Messaging technology enables real-time communication with a larger amount of data than SMS, while browser SMS offers the ability to send messages to a recipient if that recipient is not a subscriber to a particular instant messaging service or does not have a persistent connection to the Internet. In light of the shared goal of ensuing a persistent communication session, it would have been natural for a person of ordinary skill to combine the real-time, instant messaging of IP-based messaging systems with the persistence and reliability provided by SMS. This combination would offer enhanced messaging capabilities by leveraging multiple possible transmission modes (including additional transmission modes, such as MMS, EMS, WPAN transmission, WLAN transmission, and PSMS) to provide a mobile device with enhanced messaging capabilities while also ensuring the ability to maintain a reliable and persistent communication session depending on the ability of the recipient to receive messages via a particular transmission mode.

Additionally, industry trends in the late 1990's and early 2000's showed a surge in interest in Instant Messaging platforms (e.g., AIM, ICQ, MSN Messenger, Trillian, Jabber) and an interest in expanding these instant messaging services into the field of traditional mobile (SMS communication, providing further incentives for integrating these different transmission modes as fallbacks for persistent communication sessions and to provide a user with enhanced messaging capabilities. *See, e.g.*, Son, [0004] ("Message services for mobile communication terminals can be broadly divided into instant message (IM) services, multimedia message services (MMS), and short message services (SMS). As instant message clients are being installed in mobile communication terminals, instant message services based on wired Internet technology are being expanded into the field of mobile communications.").

A person of ordinary skill in the art would have also had a reasonable expectation of success in combining these technologies because they operate within well-understood and standardized messaging protocols and architectures. Short Messaging Service, for example, uses standardized communication protocols that were originally defined in 1986 as part of the Global System for Mobile Communications (GSM) series of standards. GSM Doc 28/85 "*Services and Facilities to be provided in the GSM System*" rev2, June 1985. SMS-based messaging functionality for mobile devices has been known and well-understood since the 1980s. *See* Hillebrand, Trosby, Holley, Harris: *SMS the creation of Personal Global Text Messaging*, Wiley 2010; *see also* Friedhelm Hillebrand, *GSM and UMTS, the creation of Global Mobile Communication*, Wiley 2002. Instant Messaging Technology has also been known, well-understood, and widely used since at least the 1980s and into the 1990s, and its precursors date back to the 1960s. *See, e.g.*, Encyclopedia Britannica, *Instant Messaging*, Larson; *see also* ICQ, AIM, and MSN prior art systems. Many of these systems were integrated into mobile devices for wireless communication through the late 1990s and into the early 2000s.

Given the well-known, standardized messaging protocols available, the evolving modularity of different messaging systems, and the increased presence and popularity of mobile devices for wireless communication, a skilled artisan would have expected that combining elements of these different messaging services would not only be feasible but also yield predictable improvements in wireless communication without requiring undue experimentation. For example, many instant messaging services (e.g., AIM, MSN, Blackberry Messenger, Trillian, iChat) were already integrated into mobile devices and could use traditional SMS-based messaging that was already available on the mobile device as a fallback, enabling a straightforward technical path toward synthesizing these systems and confirming that it was both anticipated and technically achievable in at least the early 2000s. The open-source nature of many Instant Messaging systems (e.g., Jabber) would have also lowered implementation barriers, allowing for rapid prototyping and integration.

A person of ordinary skill in the art would have been motivated to make the foregoing combinations to provide a messaging service for use in a wireless device with multiple transmission modes and that could determine a particular transmission mode depending on the capabilities of the recipient to receive messages. Further, the prior art references explicitly or implicitly reference other prior art references, are within the field of the asserted patents and are directed to similar subject matter within the field. Additionally, the references, and any products, devices, or processes described in the references, existed and/or were invented in the same time period providing further motivation for combination.

For instance, a person of ordinary skill in the art would have found it obvious, been motivated to combine, and would have had a reasonable expectation of success in combining the teachings of either Horvath, Major, or Domville with the instant messaging prior art systems listed above (e.g., AIM, OneConnect, Skype, MSN, BlackBerry, Trillian, and/or Palm). Horvath, Major, and Domville all emphasize the shortcomings with traditional SMS and IP-based instant messaging systems standing alone and explicitly teach combining these different delivery mechanisms to provide enhancements to communication systems. *See, e.g.*, Horvath, [0004] ("One problem with the traditional way of transmitting SMS messages discussed above is that the circuit services network is primarily used for voice services. The circuit services network is unnecessarily burdened with SMS traffic."); Major ("Without GPRS, a GSM network cannot provide for the communication of e-mail messages in a conventional manner. . . . Unlike e-mail, SMS messaging does not involve the use of e-mail-like data fields but rather only a single message field for the entering/reading of the text message."); Domville ("IMS application servers offer the possibility of deploying feature-rich services to users. To enable legacy messaging services, such as SMS, to take advantage of the possibilities offered, the conventional message handling scheme is modified such that the SMS, or other message, is delivered to an application server (such as a 3GPP IMS application server) in the recipient's home network rather than to the recipient's currently registered MSC or SGSN."). Horvath, Major, and Domville all expressly suggest integrating SMS and IP-based messaging as fallback transmission

modes to address the shortcomings of each messaging technology standing alone. *See, e.g.*, Horvath, [0004] (teaching "utilize[ing] a packet data network for transmission of SMS messages" to address the shortcomings of SMS); Major, [0006]–[0007] ("Unlike e-mail, SMS messaging does not involve the use of e-mail-like data fields but rather only a single message field for the entering/reading of the text message . . . Beneficially, SMS can also be used for delivering e-mail messages"); Domville ("If for any reason the delivery fails,. . . . the Messaging CC or the Personal Communicator may deliver the message or a derivative message over a different mechanism. . . . For example, the Messaging CC or the Personal Communicator may deliver the message or a derivative message over an IP network to the recipient terminal via WiFi or to a PBX (eg as a text to speech derivate message) or to a personal computer (eg as an email). In this way the message need not be delivered to the user terminal as an SMS, but may be delivered in some other format or not at all."). A person of skill in the art would have looked to any of AIM, OneConnect, Skype, MSN, BlackBerry, Trillian, and/or Palm as instant messaging systems that could be incorporated to address the object of the inventions described in Horvath, Major, and Domville, as these instant messaging systems were all known and widely used during the relevant time period. All these references are directed to the same field and address the same set of problems related to wireless communication (i.e., using SMS and IP-based messaging as alternative transmission modes). *Tech Pharm. Servs., LLC v. Alixa Rx LLC*, No. 4:15-cv-766, 2017 WL 3318247, at *3 (E.D. Tex. Aug. 3, 2017). This aligns with the KSR rationale of combining prior art elements according to known methods to yield predictable results. The Graham factors also support such combination: the scope and content of the prior art all relate to these same fields; the differences between the prior art and the claimed invention are minimal for this specific element; and the level of ordinary skill in the art would likely find the combination obvious. A person of ordinary skill in the art would have had a reasonable expectation of success for such combination for the same reasons discussed above.

A person of ordinary skill in the art would have found it obvious, been motivated to combine, and would have had a reasonable expectation of success in combining the teachings of

either Kim or Ogle with the instant messaging prior art systems listed above (e.g., AIM, OneConnect, Skype, MSN, BlackBerry, and/or Palm) for similar reasons. Kim and Ogle explicitly incorporate by reference these popular instant messaging systems, including AOL Instant Messenger and Yahoo! Messenger. *See, e.g.*, Kim (discussing different instant messaging platforms, including ICQ, MSN, Internet Relay Chat); Ogle, 1:21-33. Kim and Ogle also both expressly describe shortcomings with instant messaging systems standing alone (i.e., that the messages cannot be delivered if a recipient is not online or a subscriber to that instant messging service. *See* Kim, Abstract ("The present invention relates to an instant messaging method of a mobile communication terminal, and particularly, when a message is transmitted to an offline user among a plurality of users registered to the terminal for transmitting and receiving an instant message (IM)."); Ogle, Abstract ("In existing instant messaging systems, messages cannot be delivered to an intended recipient unless the recipient is currently logged on to an instant messaging system."). To address this shortcoming, Ogle and Kim teach using alternative message delivery mechanisms as fallbacks. Kim, Abstract ("The present invention relates to an instant messaging method of a mobile communication terminal which enables a user to transmit a message through SMS by searching for a telephone number of the user."); Ogle, Abstract ("users may register one or more alternative message delivery mechanisms (such as pagers, cell phones, etc.) through which they are available as an alternative to an instant messaging system." *Id*. In other words, Kim and Ogle explicitly teaches combining the transmission mode of instant messaging systems with the transmission mode SMS/cell phones. A person of ordinary skill in the art would have had a reasonable expectation of success for such combination for the same reasons discussed above. Moreover, a person of ordinary skill in the art would have found it obvious to combine and had had a reasonable expectation of success for combining the teachings of Ogle related to using email as an alternative delivery mechanism when a subscriber to a messaging system is offline (e.g., "e-mail as an alternative to an IMS," Ogle, 8:20-8:23), for example, to enhance the messaging capabilities and ensure consistent reachability and messaging capabilities for the prior art systems discussed above. Further a person of ordinary skill in the art

would have found it obvious to combine and had had a reasonable expectation of success for combining the teachings of Ogle related to queuing messages when the recipient is not connected to the messaging server, for example, to again ensure consistent reachability and delivery of messages. See, e.g., Ogle, 1:52-1:58 ("E-mail systems merely accept electronic messages, and store them for delivery. There is no real-time awareness of whether the message recipient is currently logged on and able to receive the message. Instead, the message is stored until such time as the user logs on to the e-mail system and receives his waiting messages."); 5:42-5:45 ("The gateway computer 46 may also be coupled 49 to a storage device (such as data repository 48)").

A person of ordinary skill in the art would have further found it obvious, been motivated to combine, and would have had a reasonable expectation of success in combining the admitted prior art with the teachings of the prior art patents, publications, and systems discussed above. The admitted prior art teaches all of the core concepts directed at messaging services, such as the various standard transmission modes (e.g., SMS, packet switched messaging, instant messaging, email, EMS, MMS), conventional networking and cellular infrastructure and networking technology (e.g., base stations, WLANS), conventional wireless devices and access points, conventional cellular networking technology (e.g., base stations). There was a significant focus on enhancing traditional messaging capabilities, like instant messaging services and SMS, in the early 2000's. moreover, with the increased use in mobile wireless devices, there was an increased focus on combining and enhancing traditional SMS delivery mechanisms with additional message transmission modes, many of which may have already been available on mobile clients (e.g., instant messaging systems like Blackberry, AIM, and MSN). All of these technologies were already well-established and implemented into mobile wireless devices. In order to enhance traditional messaging capabilities of mobile devices, a person of ordinary skill in the art would have looked to these various prior art patents, publications, and systems and found it obvious to use these messaging transmission modes as fallback options for traditional SMS or IM transmission modes. Combining these technologies would have provided increased

reliability and consistency for messaging. Moreover, all of these digital communication technologies are standardized and inherently compatible.

V. GROUNDS OF INVALIDITY OTHER THAN ANTICIPATION OR OBVIOUSNESS

The Asserted Claims are also invalid for failure to meet one or more of the requirements of 35 U.S.C. § 112. Apple reserves the right to amend, supplement, and/or otherwise modify these Preliminary Invalidity Contentions with respect to grounds of invalidity other than anticipation or obviousness. Due in part to HBCU Messaging's failure to sufficiently identify (a) the full scope of the accused instrumentalities and (b) where HBCU Messaging contends that each element of the Asserted Claims is found within each instrumentality, Apple lacks a complete understanding of HBCU Messaging's alleged infringement and/or claim construction positions. If and when HBCU Messaging develops an infringement and/or claim construction theory that implicates infringement by Apple, Apple reserves the right to argue that the specification does not enable and/or provide a written description for such an interpretation or that such an interpretation renders the claim indefinite. The Court has not yet construed any terms, phrases, or clauses of the Asserted Claims, and HBCU Messaging has not yet provided any validity contentions in response to Apple's Preliminary Invalidity Contentions. In particular, HBCU Messaging has not identified any way in which it disputes that the Asserted Claims are invalid under 35 U.S.C. § 112. Moreover, Apple's discovery and investigation in connection with this lawsuit is ongoing, and these grounds are based on information obtained to date. Accordingly, Apple reserves the right to amend, supplement, and/or otherwise modify these Preliminary Invalidity Contentions. Apple further reserves the right to rely on expert reports or testimony and any third-party discovery.

Apple lists below exemplary grounds upon which Apple presently contends the Asserted Claims of the Asserted Patents are invalid for failure to meet one or more of the requirements of 35 U.S.C. § 112. Apple identifies at least the following grounds of invalidity based on

inadequate written description under 35 U.S.C. § 112(a), lack of enablement under 35 U.S.C. § 112(a), and indefiniteness under 35 U.S.C. § 112(b) for the Asserted Claims. These grounds are identified based on knowledge currently in Apple's possession. A more detailed basis for Apple's written description, enablement, and/or indefiniteness defenses will be set forth in Apple's claim construction briefs and expert reports on invalidity, to be served in accordance with the Agreed Scheduling Order (ECF No. 49). Further investigation may uncover additional grounds for invalidity, and Apple reserves the right to supplement these disclosures to include all additional grounds.

A. Lack of Written Description and Lack of Enablement Under 35 U.S.C. § 112

Pursuant to 35 U.S.C. § 112(a), a patent specification:

> shall contain a written description of the invention, and of the manner and process of making and using it, 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[.]

The Federal Circuit has held that this language creates two closely related, yet separate requirements for a specification: (i) a written description of the invention ("written description") and (ii) a written description of the manner and process of making and using the invention ("enablement"). *See Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1344 (Fed. Cir. 2010) (*en banc*).

To satisfy the written description requirement, the description must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharm., Inc. v. Eli Lilly and Co*., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (internal citation omitted). 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) (internal citation omitted). Actual "possession" or reduction to practice outside of the specification is not enough. Instead, the specification itself must demonstrate possession.

While the written description requirement does not demand any particular form of disclosure, 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).

To satisfy the enablement requirement of 35 U.S.C § 112, the disclosure "must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'" *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (citations omitted). 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." *Id.* at 1366. 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).

Apple provides below an exemplary list of claim elements for which there is inadequate written description and/or lack of enablement under U.S.C. § 112(a). For example, certain claim limitations fail to describe an invention understandable to a skilled artisan at the time of the invention and/or fail to show that the inventor actually possessed the invention claimed. *See Ariad*, 598 F.3d at 1351. As a further example, certain claims are invalid because the specification fails to teach those skilled in the art at the time of the alleged invention how to

make and use the full scope of the claimed invention without undue experimentation. *See ALZA Corp. v. Andrx Pharms., LLC*, 603 F.3d 935, 940 (Fed. Cir. 2010). As an additional example, certain claim limitations encompass any and all structures or acts for performing a recited function, including those beyond what their applicant(s) invented, such that the specification fails to provide a scope of enablement commensurate with the scope of the claim as asserted. *See Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12–13 (1946). As yet another example, certain claims are invalid for failing to enable the full scope of the invention as defined by the claims. *See Amgen Inc. v. Sanofi*, 143 S. Ct. 1243, 1254 (2023) ("If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent's specification must enable a person skilled in the art to make and use the entire class.").

In addition, and without limitation, the Asserted Claims taken as a whole (rather than only as the sum of its individual limitations) are invalid for lack of written description and enablement. *See, e.g., Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1346–51 (Fed. Cir. 2013). As described below, by way of example, a person of ordinary skill in the art at the time of the alleged invention would not understand that the named inventors of the '958 patent were in possession of the claimed subject matter as of the effective filing date, nor would the patent's disclosure have enabled one skilled in the art at the time of the alleged invention to practice the Asserted Claims without undue experimentation.

Any deficiencies that render claims invalid for written description and/or enablement under 35 U.S.C. § 112 also infect and thereby invalidate any and all claims depending therefrom.

In addition to the claim as a whole, **Appendix A** sets forth examples of claim elements, or portions thereof, of the claims in the Asserted Patents are not supported by the written description and/or are not enabled under 35 U.S.C. § 112(a):

These elements discussed in **Appendix A** fail to meet the written description requirement and/or are not enabled. The Asserted Patents would not convey to one of skill in the art that, as of the filing date, the inventor had possession of the claimed subject matter. Nor would the Asserted Patents teach one of ordinary skill in the art how to practice these claim elements

without undue experimentation. To the contrary, the Asserted Patents recite only generic components in the embodiments disclosed. Additionally, the claims containing these limitations are invalid for failing to enable the full scope of the invention as defined by the claim.

B. Indefiniteness Under 35 U.S.C. § 112

Below is an exemplary list of claim elements[3] that are indefinite and/or render claims that include such elements indefinite under 35 U.S.C. § 112(b). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); *see also Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1348 (Fed. Cir. 2002) (quoting *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1377 (Fed. Cir. 2000) ("[F]irst, [the claim] must set forth what 'the applicant regards as his invention' and second, it must do so with sufficient particularity and distinctness, i.e., the claim must be sufficiently, 'definite.'") (second alteration in original)).

Because Apple's investigation, prior art search, analysis, discovery, and trial preparation are still ongoing, Apple expressly reserves the right to amend, supplement, and/or otherwise modify these Preliminary Invalidity Contentions, including by identifying and providing additional evidence and arguments that the Asserted Claims are indefinite under 35 U.S.C. § 112(b) following any constructions HBCU Messaging proposes or the Court adopts.

Any deficiencies that render claims invalid for indefiniteness under 35 U.S.C. § 112(b) also infect and thereby invalidate any and all claims depending therefrom.

Appendix A further sets forth examples of the claim elements, or portions thereof, used in the Asserted Patents are indefinite under 35 U.S.C. § 112(b) for failure to inform, with reasonable certainty, those skilled in the art about the scope of the invention:

[3] Any discrepancy between the language included in the bullets of this paragraph and the language of the corresponding claim element is inadvertent, and it is Apple's contention that the claim element is not adequately described and/or enabled under 35 U.S.C. § 112(a) and/or is indefinite under 35 U.S.C. § 112(b).

As used in the context of the claim language, the claim elements discussed in Appendix A are indefinite for failure to inform, with reasonable certainty, those skilled in the art about the scope of the invention as claimed. Based on Apple's present understanding of HBCU Messaging's Infringement Contentions, at least one or more of these claim terms, phrases, and limitations are indefinite because they are inconsistent with and/or broader than the alleged invention disclosed in the specification and during prosecution, and given HBCU Messaging's apparent construction of the claims, any person of ordinary skill in the art at the time of the invention would not understand what is claimed with reasonable certainty, even when the claims are read in light of the specification and prosecution history.

VI. SUBJECT MATTER INELIGIBILITY CONTENTIONS – INELIGIBLE SUBJECT MATTER UNDER 35 U.S.C. § 101

Pursuant to this Court's Standing Order Governing Proceedings (OGP) 4.4—Patent Cases ("Standing Order") and the Agreed Scheduling Order (ECF No. 49), Apple serves Preliminary § 101 Subject Matter Ineligibility Contentions ("Ineligibility Contentions") attached hereto as **Appendix B** addressing how the Asserted Claims of the Asserted Patents are invalid. Apple reserves the right to amend or supplement these Preliminary Ineligibility Contentions if: (1) HBCU Messaging amends its infringement contentions; or (2) the Court's Claim construction ruling so requires.

The information provided should not be deemed an admission regarding the scope of any claims or the proper construction of those claims or any terms contained therein. Apple's claim construction disclosures will be provided as required by the Scheduling Order. Nothing contained in these Ineligibility Contentions should be understood or deemed to be an express or implied admission or contention with respect to the absence of factual disputes relating patent ineligibility, the absence of a need for construction of any terms in an asserted claim, any proper construction of any terms in an asserted claim, or alleged infringement of that claim. There is no claim construction issue or factual issue that precludes the Court finding that the claims of the asserted patents are patent-ineligible. Nothing in these disclosures should be treated as an

admission that Apple is obligated to produce documentation not under its custody or control, or that can be obtained from some other source that is more convenient, less burdensome and/or less expensive, or for which the burden or expense outweighs its likely benefit. Apple expressly reserves the right to revise, amend, and/or supplement their disclosures and document production should additional documentation become available.

Apple's Ineligibility Contentions address only the Asserted Claims. Apple reserves the right to supplement these contentions if HBCU Messaging asserts infringement of any claim other than the Asserted Claims.

Apple's discovery and investigations in this lawsuit are ongoing, and therefore, Apple reserves the right to revise, amend, and/or supplement these Ineligibility Contentions as discovery progresses and as they discovers additional information. Discovery is ongoing, and Apple's prior art investigation and third-party discovery are in the initial stages. Apple reserves the right to revise, amend, and/or supplement the information provided herein, including identifying, and relying on additional references, should Apple further search and analysis yield additional information or references, consistent with the Court's, Judge Albright's Order Governing Proceedings, and the Federal Rules of Civil Procedure. In particular, Apple reserves the right to rely on, and Apple incorporates by reference into its Ineligibility Contentions, all prior art identified by Apple in conjunction with its Invalidity Contentions. Apple also reserves the right to amend, modify, or supplement these Ineligibility Contentions to include prior art under 35 U.S.C. §§ 102 and 103 identified in its Invalidity Contentions. Apple reserves the right to rely on all documents produced by Apple, as well as HBCU Messaging, any predecessors in interest, the named inventors, and any other third parties, as discovery is ongoing.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served on all counsel of record via the Court's ECF system on July 15, 2025.

/s/ Silvia Specht
Silvia Specht