

Exhibit 111

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

APPLE INC. and NeXT SOFTWARE INC.
(f/k/a NeXT COMPUTER, INC.),

Plaintiffs,

v.

MOTOROLA, INC. and MOTOROLA
MOBILITY, INC.

Defendants.

Case No. 10-CV-662 (BBC)

JURY TRIAL DEMANDED

PLAINTIFFS' AMENDED INVALIDITY CONTENTIONS

Pursuant to the Court's Preliminary Pretrial Conference Order, and the Parties' agreement, Plaintiffs and Counter-Defendants Apple Inc. and NeXT Software Inc., (collectively referred to as "Apple") hereby provide their joint amended Invalidation Contentions with respect to the claims identified by Defendants Motorola, Inc. and Motorola Mobility, Inc. ("Motorola").

Apple received Motorola's Infringement Contentions on March 18, 2011. Apple objects to Motorola's Infringement Contentions as vague and ambiguous, and no position that Apple takes about the disclosure of the prior art in these Invalidation Contentions should be viewed as an admission that any portion of the accused products practices any portion of the asserted claims. These Invalidation Contentions are based on claim constructions implied by Motorola's infringement allegations, as set forth in its Infringement Contentions, and/or claim constructions that may be adopted by the Court in this matter. Nothing in these Invalidation Contentions should be understood or deemed to be an express or implied admission or contention with respect to the proper construction of any terms contained within the asserted claims. Apple will offer its

proposed claim constructions in accordance with the Court's Preliminary Pretrial Conference Order and the agreement of the parties. Apple further reserves its right to amend or supplement these contentions in light of the Court's claim construction order(s) in this case or other proceedings involving the patents-in-suit.

With respect to each asserted claim and based on its investigation to date, Apple hereby: (a) identifies in Appendices A-F materials that define the scope and content of the prior art, including each currently known item of prior art that either anticipates or renders obvious any asserted claim; (b) provides in Exhibits A1-A13, B1-B7, C1-C20, D1-D9, E1-E8, and F1-F22 exemplar prior art references (or a combination of several of the same) that anticipate each asserted claim or render it obvious; (c) submits charts, also in Exhibits A1-A13, B1-B7, C1-C20, D1-D9, E1-E8, and F1-F22, identifying where each element of each asserted claim is disclosed, described, or taught in the exemplar prior art references; and (d) identifies below the grounds for invalidating asserted claims based on indefiniteness, lack of enablement, or insufficient written description under 35 U.S.C. §§ 101 and 112.

Apple reserves the right to amend these Invalidity Contentions. The information herein and the accompanying documents that Apple produces are provisional and subject to further revision as follows: Apple expressly reserves the right to amend these disclosures and the associated document production should Motorola provide any information that it failed to provide in its Infringement Contentions or should Motorola amend its Infringement Contentions in any way. Further, because discovery is still in the early stages, including discovery directed to third parties, and because Apple has not yet completed its search for and analysis of relevant prior art, Apple reserves the right to amend and/or supplement the information provided herein, including identifying and relying upon additional references, should Apple's further search and

its analysis yield additional information or references. Apple reserves the right to revise its ultimate contentions concerning the invalidity of the asserted claims, which may change depending upon the Court's construction of the asserted claims, any findings as to the priority date of the asserted claims, and/or positions that Motorola or its expert witness(es) may take concerning the level of ordinary skill in the art, claim construction, infringement, and/or invalidity issues.

Apple has provided detailed invalidity charts with respect to numerous references for each of the patents-in-suit. Additionally, Apple reserves the right to cite to any of the art identified in the attached appendices or exhibits in support of its invalidity arguments. Apple specifically reserves the right to rely on art cited in the file histories of the patents-in-suit, either alone or in combination with other art, and notes that Motorola is aware of both the scope and content of that art. Apple reserves the right to supplement its invalidity charts to include any of the art identified herein, either alone or in combination with other art.

Prior art not included in this disclosure, whether known or not known to Apple, may become relevant. In particular, Apple is currently unaware of the extent, if any, to which Motorola will contend that limitations of the asserted claims are not disclosed in the prior art identified by Apple. To the extent that such an issue arises, Apple reserves the right to identify additional teachings in the same references or in other references that anticipate or would have made the addition of the allegedly missing limitation to the disclosed device or method obvious.

Apple's claim charts attached to the Invalidity Contentions cite to particular teaching and disclosures of the prior art as applied to the features of the asserted claims. However, a person having ordinary skill in the art generally may view an item of prior art in the context of other publications, literature, products and understanding. As such, the cited portions are only

examples, and Apple reserves the right to rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that a claim limitation is known or disclosed. Apple further reserves the right to rely on uncited portions of the prior art references, other publications, and testimony to establish bases for combinations of certain cited references that render the asserted claims obvious.

The references identified herein and in the exhibits attached to the Invalidity Contentions 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. Suggested obviousness combinations are provided in the alternative to Apple's anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory or that any particular limitation is missing from a particular reference.

Apple further reserves the right to contend that the asserted claims are invalid under 35 U.S.C. § 102(f) in the event Apple obtains evidence through discovery that the inventor named in the asserted patents did not invent the subject matter claimed therein.

The Invalidity Contentions are further subject to revision and amendment pursuant to Federal Rules of Civil Procedure 26(e) and Orders of record in this matter and to the extent appropriate in light of further investigation and discovery regarding the defenses, including but not limited to Motorola's disclosure of its claim construction positions, the Court's construction of the claims at issue, and/or positions that Motorola or its expert witness(es) may take concerning claim interpretation, infringement, and/or invalidity issues. To the extent the contentions reflect constructions of claim elements consistent with or implicit in Motorola's Infringement Contentions, no inference is intended nor should any be drawn that Apple agrees

with Motorola's constructions, and Apple expressly reserves the right to contest such claim constructions. Apple offers these contentions in response to Motorola's Infringement Contentions and without prejudice to any position they may ultimately take as to any claim construction issues.

INVALIDITY CONTENTIONS

I. Invalidity Arguments

Subject to Apple's reservation of rights, Apple identifies in the attached appendices each item of prior art that anticipates and/or renders obvious one or more of the asserted claims of the patents-in-suit. The patents/applications, publications, and systems identified are also relevant for their showing of the state of the art and reasons and motivations for making improvements, additions, and combinations.

Discovery is ongoing, and Apple's prior art investigation and third party discovery are therefore not yet complete. Apple reserves the right to present additional items of prior art under 35 U.S.C. § 102(a), (b), (e), and/or (g), and/or § 103 located during the course of discovery or further investigation. For example, Apple has or expects to issue subpoenas to third parties believed to have knowledge, documentation, and/or corroborating evidence concerning some of the prior art listed in this and the following sections and/or additional prior art. These third parties include without limitation the authors, inventors, or assignees of the references listed in these disclosures. In addition, Apple reserves the right to assert invalidity under 35 U.S.C. § 102(c), (d) or (f) to the extent that discovery or further investigation yield information forming the basis for such invalidity.

Apple believes that no showing of a specific motivation is required to combine the references as disclosed these contentions, including in the charts attached hereto. There was a reason to make each combination, each combination of art would have produced no unexpected

results, and each combination at most would simply represent a known alternative to one of ordinary skill in the art. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 414-18 (2007) (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like a pieces of a puzzle." *Id.* at 420-21.

Nevertheless, in addition to the information contained elsewhere in these contentions and in particular in the Exhibits, Apple identifies additional motivations and reasons to combine the cited art. Multiple teachings, suggestions, and/or reasons to modify any of the references and/or to combine any two or more of the references come from many sources, including the prior art (specific and as a whole), common knowledge, common sense, predictability, expectations, industry trends, design incentives or need, market demand or pressure, market forces, that something is obvious to try, the nature of the problem faced, and/or knowledge possessed by one of ordinary skill. In addition, it would have been obvious to try combining the prior art references identified because there were only a finite number of predictable solutions and/or because known work in one field or endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. The combination of prior art references identified in these contentions would have been obvious because the combination represents the known potential options with a reasonable expectation of success. Additionally, one of ordinary skill in the art would have been motivated to create combinations identified in these contentions using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another

to obtain predictable results; and/or teaching, suggestion, or motivation in the prior art generally. Also, market forces in the industry, and the desire to improve features and performance, would motivate the addition of features to systems as they become available, become smaller, become less expensive, become more commonly used, provide better performance, reduce costs, size or weight, or predictably achieve other clearly desirable results.

Apple reserves the right to provide contentions regarding secondary consideration issues relating to obviousness or non-obviousness at a later date, as this is an issue on which Motorola bears the initial burdens of production and proof.

A. The '559 Patent

1. Anticipation and Obviousness

Appendix A contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '559 patent. Attached as Exhibits A1 - A13 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix A. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

2. Invalidity under 35 U.S.C. § 112

One or more claims of the '559 patent fail to satisfy one or more of the requirements of 35 U.S.C. § 112 as follows:

Claims 1, 3, 4, and 5 are invalid for lack of written description and/or lack of enablement because the patent provides no teaching as to how to generate a preamble using a non-periodic outer code, and one of ordinary skill, upon reading the '559 patent, would not conclude that the inventors had in their possession a system or method for generating a preamble sequence using a non-periodic outer code..

Claim 5 is also invalid for indefiniteness, lack of written description, and/or enablement because, for all values of $j > 0$, the index of $s_j(k - jP)$ is negative whenever $k < jP$. Yet each $s_j(k)$ is only defined from $k = 1$ to P (or from 0 to $P - 1$). The patent provides no guidance as to how to handle negative indices of $s_j(k)$. Thus, the equation is undefined whenever $k < jP$, which is the case for any nonzero value of j , and one of ordinary skill in the art would not understand what is claimed.

3. Invalidity under 35 U.S.C. § 101

Each of the asserted claims is invalid under 35 U.S.C. § 101 because it encompasses nothing more than an abstract idea or mathematical formula.

B. The '230 Patent

1. Anticipation and Obviousness

Appendix B contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '230 patent. Attached as Exhibits B1 - B7 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference

disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix B. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

2. Invalidity under 35 U.S.C. § 112

One or more claims of the '230 patent fail to satisfy one or more of the requirements of 35 U.S.C. § 112 as follows.

Claims 6–8 are indefinite, are not enabled, and/or lack written description under 35 U.S.C. § 112 to the extent they contain the terms “receiving at least one parameter comprising a long term energy value for the frame of information,” “extracting from the recovered signal at least one parameter comprising a long term energy value for the frame of information,” or “extracting from the speech coded information at least one parameter comprising a long term energy value for a frame of information” because the patent provides no teaching as to how a non-transmitted long term energy value is received or extracted.

3. Invalidity under 35 U.S.C. § 101

Each of the asserted claims is invalid under 35 U.S.C. § 101 because it encompasses nothing more than an abstract idea or mathematical formula.

C. The '898 Patent

1. Anticipation and Obviousness

Appendix C contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '898 patent. Attached as Exhibits C1 - C20 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix C. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

2. Invalidity under 35 U.S.C. § 112

One or more claims of the '898 patent fail to satisfy one or more of the requirements of 35 U.S.C. § 112 as follows:

Claim 1 and its dependents are invalid for indefiniteness, lack of written description, and/or enablement because the patent provides no teaching as to how the number of the plurality of the units remaining is adjusted based on one or more channel resources, and one of ordinary skill in the art would not understand what is meant by adjusting the number of the plurality of units remaining based on one or more channel resources.

D. The '712 Patent

1. Anticipation and Obviousness

Appendix D contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '712 patent. Attached as Exhibits D1 - D9 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix D. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

2. Invalidity under 35 U.S.C. § 101

Each of the asserted claims is invalid under 35 U.S.C. § 101 because it encompasses nothing more than an abstract idea or mathematical formula.

3. Invalidity under 35 U.S.C. § 112

One or more claims of the '712 patent fail to satisfy one or more of the requirements of 35 U.S.C. § 112 as follows:

Claim 17 is invalid for lack of written description and/or lack of enablement because the patent provides no teaching of an overflow sequence number that is communicated on the physical layer, and one of ordinary skill, upon reading the '712 patent, would not conclude that

the inventors had in their possession a method for providing cryptographic protection of a data stream that involves communicating an overflow sequence number on the physical layer.

E. The '193 Patent

1. Anticipation and Obviousness

Appendix E contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '193 patent. Attached as Exhibits E1 - E8 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix E. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

2. Invalidity under 35 U.S.C. § 112

One or more claims of the '193 patent fail to satisfy one or more of the requirements of 35 U.S.C. § 112 as follows:

All asserted claims are invalid for lack of written description and/or lack of enablement because the patent provides no teaching of a method of authentication in a system that is not a cellular telephone communication system, and one of ordinary skill, upon reading the '193 patent, would not conclude that the inventors had in their possession a method of authentication in a system that is not a cellular telephone communication system.

F. The '516 Patent

1. Anticipation and Obviousness

Appendix F contains a listing of the prior art references that anticipate and/or render obvious one or more asserted claims of the '516 patent. Attached as Exhibits F1 - F22 are charts identifying where specifically in each respective item of prior art, or specific prior art combinations, each element of the asserted claims is found. Each anticipatory prior art reference disclosed, either alone or in combination with other prior art, renders the asserted claims invalid as obvious. In particular, each anticipatory prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified in Appendix F. To the extent Motorola contends that any of the anticipatory prior art fails to disclose one or more limitations of the asserted claims, Apple reserves the right to identify other prior art that would supply any such limitation(s) which, when combined with the contested anticipatory prior art, would render the claimed subject matter obvious.

Dated: May 17, 2011

Respectfully submitted,
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*Attorneys for Plaintiffs Apple Inc.
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CERTIFICATE OF SERVICE

I declare that I am employed with the law firm of Covington & Burling LLP, One Front Street, San Francisco, California 94111. I am not a party to the within cause, and I am over the age of eighteen years. I further declare that on May 17, 2011, I caused to be served, on all counsel of record, a copy of :

PLAINTIFFS' AMENDED INVALIDITY CONTENTIONS

BY U.S. MAIL by placing a true copy thereof enclosed in a sealed envelope with postage thereon fully prepaid, addressed as follows, for collection and mailing in accordance with the firm's ordinary business practices. I am readily familiar with the practice for collection and processing of mail, and know that in the ordinary course of business practice that the document(s) described above will be deposited with the U.S. Postal Service on the same date as sworn to below.

BY ELECTRONIC SERVICE by electronically mailing a true and correct copy through the electronic mail system to the email address(es) set forth in the service list below.

BY OVERNIGHT DELIVERY by placing a true copy thereof enclosed in a sealed envelope with overnight delivery fees provided for, addressed as follows, for collection by Federal Express in accordance with ordinary business practices. I am readily familiar with the practice for collection and processing of correspondence for overnight delivery and know that in the ordinary course of business practice the document(s) described above will be deposited by an employee or agent in a box or other facility regularly maintained by Federal Express for collection on the same day that the document(s) are deposited.

BY PERSONAL SERVICE by placing a true copy thereof enclosed in a sealed envelope to be delivered by messenger to the offices of the addressee(s) (and left with an employee or person in charge of addressee's office), as stated below, during ordinary business hours.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on May 17, 2011, at San Francisco, California.

/s/ Christine Saunders Haskett
Christine Saunders Haskett