EXHIBIT H

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Attorneys for Plaintiff and
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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

APPLE INC., a California corporation,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD., a Korean business entity, SAMSUNG ELECTRONICS AMERICA, INC., a New York corporation, and SAMSUNG TELECOMMUNICATIONS AMERICA, LLC, a Delaware limited liability company,

Defendants.

Civil Action No. 11-CV-01846-LHK

PLAINTIFF AND COUNTERCLAIM-DEFENDANT APPLE INC.'S PRELIMINARY CLAIM CONSTRUCTIONS PURSUANT TO PATENT L.R. 4-2

SAMSUNG ELECTRONICS CO., LTD., a Korean business entity, SAMSUNG ELECTRONICS AMERICA, INC., a New York corporation, and SAMSUNG TELECOMMUNICATIONS AMERICA, LLC, a Delaware limited liability company, a California corporation,

Counterclaim-Plaintiff,

v.

APPLE INC., a California corporation,

Counterclaim-Defendants.

PLAINTIFF AND COUNTERCLAIM-DEFENDANT APPLE INC.'S PRELIMINARY CLAIM CONSTRUCTIONS PURSUANT TO PATENT LOCAL RULE 4-2

I. INTRODUCTION

Pursuant to the Northern District of California's Patent Local Rule 4-2 and the Court's Minute Order and Case Management Order (Dkt. No. 187), Plaintiff and Counterclaim-Defendant Apple Inc. ("Apple") hereby provides its preliminary claim constructions for the proposed terms identified by Apple on October 17, 2011, and the proposed terms identified by Samsung Electronics Co., Ltd., Samsung Electronics America, Inc. and Samsung Telecommunications America, LLC (collectively, "Samsung") on October 24, 2011. In addition, for the proposed terms that are governed by 35 U.S.C. § 112(6), Apple identifies the corresponding structures, acts, or materials corresponding to those terms' functions.

Apple bases these constructions upon its current knowledge, understanding, and belief as to the facts and information available as of this date. As Apple has not yet completed its investigation, collection of information, or discovery relating to this action, it expressly reserves the right to supplement, amend, and/or otherwise modify these preliminary claim constructions. Apple also reserves the right to modify and amend these constructions and to supplement the intrinsic and extrinsic evidence supporting its constructions in light of Samsung's belated identification of its proposed terms for construction.

Together with its preliminary claim constructions, and in accordance with Patent Local Rule 4-2(b), Apple is producing extrinsic evidence supporting its claim constructions, bearing

Bates numbers APLNDC-WH-A 0000009635 - APLNDC-WH-A 0000009798. In accordance with the parties' agreement, the exchange of extrinsic evidence from expert witnesses has been deferred until the submission of the Patent Local Rule 4-3 Joint Claim Construction Statement.

I. SAMSUNG PATENTS-IN-SUIT: PRELIMINARY CLAIM CONSTRUCTIONS

U.S. Patent No. 7,386,001

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"radio frame matcher(s)" (claims 1-7, 9-12, and 14-16; 8 and 13 are dependent)	No construction; term is indefinite.	*See* Figures 1 and 2; cols. 3:36 to 6:58.

U.S. Patent No. 7,447,516

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"gain scaling unit" (claim 15)	A device that reduces gain based on a scale factor.	*See* Figure 8, elements 713, 718, 722, and 730. "The data from the gain scalers 722, 718, 713, 730 are multiplexed in the multiplexer 723, is input into a scrambler 724 to be scrambled by a scrambling code $S_{dpch,n}$, and then is RF-converted and transmitted by an RF unit 725." Col. 10:17-20.

U.S. Patent No. 7,698,711

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"applet" (claims 1, 9, and 17)	"An operating system-independent computer program, commonly Java-based, that runs within an application module."	"FIG. 1 is a block diagram of a portable terminal according to an exemplary embodiment of the present invention, in which an MP3 music control processor is not included. Application modules of the portable terminal include at least one applet and each of the application modules, that is each menu of the portable terminal, independently performs multi-tasking." '711 patent specification at Col. 3:8-14 "Examiner suggested to further include the definition 'a music background play object' as 'wherein the music background play objects including an application module includes at least one applet' as argued during the interview to distinct [sic] from the icon as taught by KOKUBO." U.S. Patent Application No. 11/778,466, Examiner's Interview Summary of December 16, 2009, see Continuation Sheet. "The Office did suggest, however, that the inclusion of a limitation further defining the music background play object would distinguish over the prior art of record, though not necessarily be allowable depending on the results of a further search. Specifically, the Office suggested including a limitation indicating that the music background play object includes an application module including at least one applet. Applicant appreciates the Office's suggestion and has amended the independent claims as suggested." U.S. Patent Application No. 11/778,466, Applicant's December 8, 2009 Arguments/Remarks Made in an Amendment at pp. 6-7. "For the specific invention as claimed, a music background play object, wherein the music background play object includes an application module including at least one applet, is included such that

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		an MP3 file can be played in the background while other menu tasks can be executed by the user." *Id*. at p.7. "By use of the music background play object, which is an application module including at least one applet as discussed with reference to para. [0018], the terminal is able to perform multi-tasking. That is, by generating the application module of the music background play object, the music background play object provides an interface for the playing of music, specifically the selecting of an MP3 mode. At the same time, the user is able to execute other menu functions of the device and thus multi-task using the device. It is Applicant's contention that independent claims 1,9 and 17 are allowable based on the unique use of the music background play object, wherein the music background play object includes an application module including at least one applet, alone, and not based on the use of the music background play object in a standby or any other mode. That is, none of the prior art discloses a music background play object, wherein the music background play object includes an application module including at least one applet in any mode of a device. Accordingly, Applicant believes that the claims are in condition for immediate allowance." *Id*. at pp. 7-8. "As suggested by the Office during the interview, this clarifying limitation is not disclosed, taught or suggested by Kokubo. Rather, as acknowledged by the Office in the outstanding rejection, Kokubo merely discloses the generating of 'an icon corresponding to a task (application software)' *col. 2, lines 34-39*; see also col. 13, lines 8-10 ('manually or automatically generated music [music note symbol] icon 10f is displayed.' The generating of the icon by Kokubo is not a disclosure of generating a music background play object, wherein the music background play object includes an application module

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		including at least one applet. That is, Kokubo makes no disclosure that the icon includes an application module, or that the application module includes at least one applet as instantly claimed." *Id*. at pp. 9-10 (italics in original). *See also*, '711 patent claims 1, 9, and 17. *McGraw-Hill Dictionary of Scientific and Technical Terms* (6th Ed., 2003) at p.124: "A small program, typically written in Java." Joan Reitz, *Dictionary for Library and Information Science* (1st Ed., 2004) at p.34: "A small application program written in the Java programming language developed by Sun Microsystems for distribution over the Internet. Applets run on any Java-enabled Web browser independent of platform (Windows, Macintosh, UNIX, etc.*).*" Eliotte Harold, *Java Developer's Resource* (1997) at p11: "What's most special about Java in relation to other programming languages is that it lets you write special programs called applets that can be downloaded from the Internet and played safely within a Web browser." *Id*. at p.12: "Java solves the problem of platform independence by using byte code…. Java programs that have been compiled into bye code still need an interpreter to execute them on any given platform. The interpreter reads the byte code and translates it into the platform's native language on the fly. The most common such interpreter is Sun's program java (with a little j). Since the byte code is completely platform independent, only the interpreter and a few native libraries need to be ported to get Java to run on a new computer or operating system." *Id*.: "Java solves this problem by severely restricting what an applet can do. A Java applet cannot write to your hard disk without your permission. It cannot write to arbitrary addresses in memory and thereby introduce a virus into your computer. It cannot crash your

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		system." *See also*, e.g., Harold at pp. 9-34. Walter Savitch, *Java: An Introduction to Computer Science & Programming* (3rd Ed., 2004), Chapter 13 (italics in original): "The word *applet* sounds as though it might refer to a small apple, but it is supposed to sound like a small application. Thus, applets are just 'little Java programs,' in some sense of the word *little.* However, the character of applets comes not from their size, but from how and where they are run. Applets are Java programs that can be displayed on a Web site and viewed over the Internet. They can also be run on your local computer, without any connection to the Internet." *See also*, *e.g.*, Savitch at Chapter 1, pp. 3-37, and Chapter 13, pp. 795-821. Hoskins, J. and Bluethman, R. *Exploring IBM e-server pSeries* (12th Ed., 2004) at p.226: "Java is an object-oriented programming environment that operates independent of any operating system or microprocessor. Java programs, called applications or applets, can be entirely developed using the compiler, debugger, and applet viewer tools provided in IBM's implementation for the AIX for Java development environment. (C and C++ compilers and tools are not needed to create/run Java-based applets.) The same applets can be dynamically transmitted over a network and run on any client that has been enabled for Java. Because applet execution is platform independent, an applet developed with the AIX 5L tools can be executed on any Java-enabled platform (for example, Solaris)." Healy, M.R., Berger, D.E., Romero, V.L., Aberson, C.L., & Saw, A. Evaluating JAVA applets for teaching on the Internet. *Proceedings of the Scuola Superiore G. Reis Romoli Advances in Infrastructure for e-Business, e-Education, e-Science, and e-Medicine on the Internet International Conference*. (2002) at p.1 "Java applets are computer applications designed for the Internet. Applets are platform-independent, meaning that they can run on any operating system that has a Java Virtual Machine to translate applet bytecodes into appropriate platform- dependent instructions." *See also*, *e.g.*, Healy at

Claim Term (relevant claims)	**Apple's Preliminary Construction**	**Support for Construction**
		pp. 1-5, available online at: http://ccdl.libraries.claremont.edu/cdm4/item_viewer.php?CISOROOT=/irw&CISOPTR=432 Elizabeth Boese, "*Interactive Programming with Java Applets*" (2005) at p.8: "Java is platform independent because the source code is compiled to bytecode, and it's the bytecode that can be used on any platform (operating system)." *Id*., at p.9: "There are two different types of Java programs that we can create: applets and applications. Applets are Java programs embedded into a web page. Applications are stand-alone programs that can be run by themselves." *See also*, Boese at Chapter 1, pp. 7-20 (available online at http://books.google.com/books?id=mEC7H9WxXHEC&pg=PA8&dq=applets+are+ operating +system+ platform+independent&hl=en#v=onepage&q&f=false) Godbole, A. S. and Kahate, A. "*Web Technologies TCP/IP Architecture, and Java Programming*" (2nd Ed., 2002) at p.524: "By virtue of the Java heritage, applets are platform independent." (available online at http://books.google.com/books?id=uEufGycOJRsC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=true)

U.S. Patent No. 7,050,410

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"bit reverse method" (claim 4)	"a method of determining a column by reversing a binary number"	"Columns are reordered according to an inter-column permutation pattern $\{P_1(j)\}j=0, 1, \ldots, C-1)$ shown in Table 1. $P_1(j)$ represents the original column of a j^{th} permuted column and the pattern is derived by a bit reverse method. In the bit reverse method, the binary bit sequence of each number is reversed, e.g., 00➔00, 01➔10, 10➔01, and 11➔11, as shown by the 40 ms TTI row in Table 1. TABLE 1 TTI | Total number of columns | inter-column permutation patterns 10 ms | 1 | {0} 20 ms | 2 | {0, 1} 40 ms | 4 | {0, 2, 1, 3} 80 ms | 8 | {0, 4, 2, 6, 1, 5, 3, 7} (5:38-45).

U.S. Patent No. 7,200,792

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"a first/second deinterleaver" (claims 11-16)	"a deinterleaver that is physically separate from the second/first deinterleaver"	*See* Figs. 2-7, 13, 14a, 14b, 14c, 15; *see also* Claims 1-16. "FIG. 3 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in the same ratio to two physically separated interleaving buffers having a sufficient size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 1/2,

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		according to an embodiment of the present invention;" (8:29-34; *see also* Fig. 3) "FIG. 4 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in a different ratio to two physically separated interleaving buffers having a sufficient size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 3/4, according to an embodiment of the present invention;" (8:35-39; *see also* Fig. 4) "FIG. 5 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in a different ratio to two physically separated interleaving buffers having a minimum size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 3/4, according to an embodiment of the present invention;" (8:41-46; *see also* Fig. 5) FIG. 6 is a flowchart illustrating a process of applying an SMP technique by physically separating an interleaver according to an embodiment of the present invention;" (8:47-49) "The method for improving an interleaver can be divided into one method for separating the interleaver physically and another method for separating the interleaver logically. The physical separation method separates the interleaver into an interleaver for interleaving coded bits with higher priority and an interleaver for interleaving coded bits with lower priority. The logical separation method separates a storage area of a buffer included in one interleaver into an area for storing coded bits with higher priority and an area for storing coded bits with lower priority." (9:46-55; *see also generally* 9:56-12:11)

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		Application as filed December 20, 2002 including claims (*e.g.*, claims 1, 11, 21, 31, 41, 51, 60, 71, 81, 101, 102). Requirement for Restriction dated October 5, 2005, pp. 2-3. Response to Restriction Requirement dated November 7, 2005, pp. 1-6.
"symbol" (claims 11 and 14)	"a modulated pattern in a sequence of such patterns that represents a plurality of bits"	*See* Claims 1, 5, 6, 10, 11, 14. "In an apparatus for data transmission in a communication system, a turbo encoder encodes data bits to generate systematic bits and parity bits, and a rate matcher matches the systematic bits and parity bits. A first interleaver writes the rate-matched systematic bits on a row by row basis, and performs inter-column permutation. A second interleaver writes the rate-matched parity bits on a row-by-row basis, and performs inter-column permutation. A modulator alternatively collects the permutated bits on a column by column basis from the first and second interleavers, and maps collected bits from the first and second interleavers onto one modulation symbol, wherein a size of the first interleaver is equal to a size of the second interleaver." (Abstract) "The interleaved signal undergoes symbol mapping in a digital modulator. Here, if an order of the modulator is increased, the number of bits included in one symbol is also increased. Particularly, in the case of a high-order modulation technique of over 16QAM (16-ary Quadrature Amplitude Modulation), one symbol includes 4 or more information bits, and the information bits can be classified according to their reliability. Here, as to the reliability, in a process of modulating one symbol by a transmitter, a symbol representing two bits in a macro region like the left/right quadrants or upper/lower quadrants on the X/Y-axis has "high reliability," and a symbol representing two bits in a

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		micro region has "low reliability."" (1:60-2:5) "Referring to FIG. 1, input information bits to which CRC (Cyclic Redundancy Check) bits, or error detection data, are added in a CRC generator 110, are provided to a channel encoder 120, and the channel encoder 120 encodes the CRC bit-added input information bits through a predetermined coding process, and outputs coded bits, i.e., systematic bits S and parity bits P. The channel encoder 120 has at least one code rate in order to encode the information bits. The code rate may become 1/2 or 3/4. In addition, when the channel encoder 120 supports a plurality of code rates through symbol puncturing or symbol repetition based on a rate R=1/3 or 1/5 mode code, an operation of selecting a particular code rate from the supportable code rates is required. In FIG. 1, for example, the channel encoder 120 determines a code rate under the control of a controller 160. The coded bits are subject to rate matching in a rate matcher 130. Commonly, the rate matching is performed through repetition and/or puncturing on the coded bits, when a transport channel is subject to multiplexing or the output symbols of the channel encoder 120 are not identical in number to the symbols transmitted over the air. The puncturing or repetition function of the rate matcher 130 is identical to the puncturing or repetition function performed to adjust a code rate of the channel encoder 120, the functions can be united. That is, the channel encoder 120 and the rate matcher 130 can be integrated into one block, but they are separately illustrated in FIG. 1, for the sake of convenience. The coded bits rate-matched by the rate matcher 130 are subject to interleaving in an interleaver 140. The interleaving operation is performed to minimize a data loss even though data is lost during transmission. The interleaved coded bits are subject to symbol mapping in a modulator 150 according to a modulation technique of QPSK (Quadrature Phase Shift Keying), 8PSK (8-ary Phase Shift Keying), 16QAM (16-ary Quadrature Amplitude Modulation) or

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		64QAM. The controller 160 controls a coding operation of the channel encoder 120 and a modulation technique of the modulator 150 according to a current state of a radio channel. In the HSDPA mobile communication system, AMCS (Adaptive Modulation and Coding Scheme) is used for the controller 160 in order to adaptively select one of the modulation techniques QPSK, 8PSK, 16QAM and 64QAM according to the radio environment." (2:10-52) "The SMP technique is a technique for increasing system performance by reducing an error probability of the systematic bits having higher priority than the parity bits. That is, the SMP technique enables the modulator 150 to map the systematic bits with higher priority to the bits with higher reliability among the bits constituting a symbol, and map the parity bits with lower priority to the bits with lower reliability, during symbol mapping based on a predetermined modulation technique. Therefore, in the transmitter of the conventional mobile communication system, it is necessary to improve the interleaver 140 which interleaves coded bits regardless of their priority. That is, in order to apply the SMP technique, the interleaver 140 must be improved such that it can separately interleave the systematic bits and the parity bits." (3:8-22) "FIG. 3 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in the same ratio to two physically separated interleaving buffers having a sufficient size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 1/2, according to an embodiment of the present invention;" (8:29-34; *see also* Fig. 3) "FIG. 4 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in a different ratio to two physically

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		separated interleaving buffers having a sufficient size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 3/4, according to an embodiment of the present invention;" (8:35-39; *see also* Fig. 4) "FIG. 5 is a block diagram illustrating a process of mapping systematic bits and parity bits, applied in a different ratio to two physically separated interleaving buffers having a minimum size, to a 16QAM or 64QAM-modulated symbol in the case where a code rate is 3/4, according to an embodiment of the present invention;" (8:41-46; *see also* Fig. 5) "Meanwhile, examples of applying the SMP technique using the two physically-separated interleavers are illustrated in FIGS. 3 to 5. Referring to FIG. 3, in the case where a code rate is 1/2, and the systematic (S) bits and the parity (P) bits are properly distributed to the two interleavers 250 and 260, the systematic bits and the parity bits can be mapped to H positions with higher reliability and L positions with lower reliability of each symbol by a modulator 280, respectively. Here, the distributor 240 is optional, and the P/S converter 270 simply serves as a multiplexer (MUX). Referring to FIG. 4, in the case where a code rate is 3/4, and the two interleavers 250 and 260 sufficiently receive the systematic bits and the parity bits, an output pattern of the modulator 280 can become optimal as described in conjunction with FIG. 3. Likewise, the distributor 240 in FIG. 4 is also optional. As illustrated in FIG. 4, since two patterns are required for 64QAM, the P/S converter 270 must control its operation according to a modulation order. For example, the P/S converter 270 outputs 1 parity bit per 5 systematic bits for an initial symbol, and outputs 2 parity bits for 4 systematic bits for the next symbol. For an operation proper to the modulation technique and the code rate, the P/S converter 270 plays an important role.

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		Referring to FIG. 5, in the case where a size of a first buffer 250 is smaller than the total number of systematic bits, a second buffer 260 must accept the excessive number of systematic bits. As illustrated, in the case of 16QAM, there is no output pattern which violates a general idea of SMP. However, in the case of 64QAM, some patterns are formed such that the systematic bits can be mapped to the bit positions having higher reliability than the parity bits. The reason is because after the input bits of the second buffer 260 are randomly interleaved, the P/S converter 270 cannot distinguish the systematic bits and the parity bits stored in the second buffer 260. As can be understood from FIGS. 3 to 5, if the size of the buffer (buffer size={the number of systematic bits}+{the number of parity bits}) is minimized, a symbol pattern for the 64QAM cannot be optimally mapped. In other words, in the case where the interleaving buffer is physically separated, if a high-order modulation technique of 64QAM is applied, it is necessary to sufficiently increase the sizes of the two buffers for all code rates, in order to create optimal mapping patterns. However, in the case of the modulation technique with a modulation order of below 16QAM, the optimal mapping patterns can be generated even though the size of the buffer is minimized." (10:17-64) "The coded bits multiplexed by the MUX 720 are applied to the modulator 730. The modulator 730 performs symbol mapping on the multiplexed coded bits. For example, when using a modulation technique of 16QAM, the modulator 730 maps 2 coded bits read from the first read area to the bits with higher reliability (hereinafter, referred to as "first reliability") of a particular symbol. Further, the modulator 730 maps 2 coded bits read from the second read area to the bits with lower reliability (hereinafter, referred to as "second reliability") of the symbol." (13:54-63)

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		"As described above, the present invention provides a method for efficiently performing interleaving in mapping the bits with higher priority to the position with higher reliability of a symbol, thereby preventing an increase in hardware complexity and maintaining compatibility with an existing interleaving technique. Since the SMP technique for differentially mapping reliabilities according to priority shows theoretically sufficient effects, it is very important to realize the SMP technique. The present invention, when applied to a high-speed packet transmission system, especially HSDPA or 1.times.EV-DV system, can be realized through minor modification of an algorithm and minor addition of hardware, while maintaining its gain." (23:36-48) "The smallest unit of data transmission on the medium" *Authoritative Dictionary of IEEE Standards Terms*, p. 1137 (from definition of "symbol").

U.S. Patent No. 7,362,867

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"primary scrambling code" (claims 25-27 and 30)	"a scrambling code that is used for channel separation"	*See* Figs. 1-4. "A code division multiple access mobile communication system (hereinafter, referred to as "CDMA system") uses scrambling codes for the purpose of separating base stations. The European W-CDMA system, UMTS (Universal Mobile Telecommunication System) generates multiple scrambling codes classified into a plural scrambling

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		code group of a predetermined length. As a method for increasing capacity in addition to separation of base stations, which is the objective of using the scrambling codes in the CDMA system, orthogonal codes for multiple scrambling code groups are used to separate channels. That is, when all orthogonal codes for channel separation are used up for a scrambling code group, the mobile communication system may utilize a second scrambling code group to increase the number of available communication links. The UMTS mobile communication system uses a gold sequence with a length of 2^{18}-1 as scrambling codes in order to have multiple scrambling codes (one primary scrambling code and multiple secondary scrambling code in one base station) constituted by multiple scrambling code groups. The gold sequence with a length of 2^{18}-1 includes a group of 2^{18}-1 distinct gold codes. The gold sequences of the same group have a good correlation characteristic with one another. Here, the gold sequence with a length of 2^{18}-1 is divided into 38400 chips and repeatedly used for scrambling. " (1:23-47) "Each base station in the UMTS mobile communication systems has a unique scrambling code called "primary scrambling code" that is used to allow terminals to differentiate each base station from other base stations in the system. Also the each unique scrambling code used for spreading (scrambling) downlink channel signals of each base stations is referred to as "primary scrambling code", and one of the scrambling code group used for scrambling downlink data channels in case that an orthogonal codes is not available using the primary scrambling code is called "secondary scrambling code". The base station user its unique primary scrambling codes for spreading(scrambling) common control channel signals transmitted to all mobile stations with corresponding orthogonal code, for spreading(scrambling) data channel signals transmitted to currently communicating mobile stations with corresponding orthogonal codes which are assigned to each of the data

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		channel signals for downlink channel separation. The base station has its unique primary scrambling codes in order for a mobile station to discriminate the base station from adjacent ones. Namely, the number of the primary scrambling codes used must be large enough, e.g., 512 lest that the mobile station should concurrently detect signals of base stations sharing the same primary scrambling codes. Thus the individual adjacent base stations use distinct primary scrambling codes among the 512 primary scrambling codes. When there exists no more orthogonal code with a primary scrambling code to be allocated for channel separation, the individual base station uses secondary scrambling code selected from its multiple secondary scrambling code groups corresponding to the primary scrambling codes used." (1:48-2:11) "FIG. 1 is a schematic diagram showing the structure of a downlink transmitter in the UMTS mobile communication system. Referring to FIG. 1, upon receiving a dedicated physical control channel DPCCH and dedicated physical data channels DPDCH1, . . . , and $DPDCH_N$, which are previously channel-coded and interleaved, demultiplexers 100-104 (corresponding in number to the number of physical data channels N plus one for the DPCCH) divide the dedicated physical control channel DPCCH and the dedicated physical data channels DPDCH1, . . . , and DPDCHN into I (In-phase) and Q (Quadrature) channels. The I and Q channels separately output from the demultiplexer 101 are fed into multipliers 110 and 111, respectively. The multipliers 110 and 111 multiply the I and Q channels by an orthogonal code 1 for channel separation, respectively, and send the output to a scrambler 120. Similarly, the I and Q channels separately output from the demultiplexers 102 through 104 are subjected to the same operation as described above and fed into N scramblers 124 through 128, respectively. Then, a scrambling code group generator 100 generates secondary scrambling codes corresponding to the scramblers 120, 124 through 128 and outputs them to the

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		corresponding scramblers. Here, the scramblers 120, 124 through 128 multiply the output signals of the corresponding multipliers by the output signals of the scrambling code group generator 100 in a complex mode, to output the real parts of the scrambled signals to a summer 130 and the imaginary parts of the scrambled signals to a summer 135. The summer 130 sums up the real parts of the scrambled signals from the scramblers 120, 124 through 128, while the summer 135 sumps up the imaginary parts." (2:18-48) "FIG. 2 is a schematic block diagram of the scrambling code group generator 100 shown in FIG. 1, which concurrently generates multiple scrambling code groups. Although it is the fact that only primary scrambling codes are to be used for common control channels and data channels, secondary scrambling codes may be used in place of the primary scrambling codes to increase the number of available communication links. For example, if base station A uses primary scrambling code B with available orthogonal codes C-H and all of the orthogonal codes C-H have been assigned to various channels, there are no more available orthogonal codes that can be assigned to new channels if a new terminal wants to communicate with base station A. In that case, instead of using primary scrambling code A, secondary scrambling code Z can be used in place of primary scrambling code A for the new channels, and orthogonal codes C-H can then be assigned to the new channels because the new channels use secondary scrambling code Z instead of primary scrambling code A. Thus, the new channels can be differentiated from the original channels that used the m-sequence codes C-H because the new channels use secondary scrambling code Z instead of primary code A. Thus the base station has to be capable of generating multiple scrambling code groups." (2:49-3:5) "Referring to FIG. 2, the normal scrambling code group generator 100

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		includes a plurality of gold sequence generators 201 and a plurality of delays 203 corresponding to the gold sequence generators 201. Upon receiving control information about the scrambling codes for multiple channels from an upper layer, the gold sequence generators 201 generate scrambling codes, i.e., gold sequence codes based on the control information and output the generated scrambling codes to have an I-channel component. The delays 203 delay the scrambling codes with the I-channel component for a predetermined number of chips and generate delayed scrambling codes having a Q-channel component." (3:6-18) "FIG. 3 is a schematic diagram showing the structure of a downlink receiver in the UMTS mobile communication system. For downlink common control channels, the receiver has to descramble the downlink common control signals which have been scrambled with the primary scrambling codes. Simultaneously, for downlink data channels, the receiver also has to descramble the signal scrambled with the secondary scrambling code when the downlink data channel uses secondary scrambling code. Thus the receiver must have a capacity of generating multiple scrambling codes." (3:19-28) "Referring to FIG. 3, upon receiving signals from the transmitter as shown in FIGS. 1 and 2, the I- and Q-channel components of the received signals are fed into descramblers 310 and 315, respectively. A scrambling code group generator 300 concurrently generates scrambling codes corresponding to the respective channels and outputs them to the descramblers 310 and 315. Then, the descramblers 310 and 315 multiply the receives signals I+jQ by the conjugates of the scrambling codes received from the scrambling code group generator 300 to descramble the received signals, and then output the I- and Q-channel components of the descrambled signals to corresponding multipliers 320, 322, 324 and 326. Here, orthogonal codes assigned to

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		the respective channels are despread at the multipliers 320, 322, 324 and 326 and output to corresponding demultiplexers 330 and 350. The demultiplexers 330 and 350 demultiplex the despread I- and Q-channel components, respectively." (3:29-45) "FIG. 4 is a schematic block diagram of the scrambling code group generator 300 shown in FIG. 3, which concurrently generates multiple scrambling code groups. Although the scrambling code group generator 300 is to use primary scrambling codes for common control channels in fact, it can also use secondary scrambling codes for channels used depending on the users, such as data channels, in case of a lack of available orthogonal codes. Thus the mobile station has to be capable of generating multiple scrambling code groups." (3:46-55) "Referring to FIG. 4, the scrambling code group generator 300 of the receiver includes a plurality of gold sequence generators 401 and a plurality of delays 403 corresponding to the gold sequence generators 401. Upon receiving control information about the scrambling codes for multiple channels from an upper layer, the gold sequence generators 401 generate gold sequence codes corresponding to the control information and output the generated gold sequence codes to have an I-channel component. The delays 403 delay the gold sequence codes with the I-channel component for a predetermined number of chips to generate the gold sequence codes of a Q-channel component." (3:56-67) "In another aspect of the present invention, there is provided an apparatus for generating multiple scrambling codes in a CDMA mobile communication system, which generates one primary scrambling code assigned to a base station and multiple secondary scrambling codes, the apparatus including: a first m-sequence generator having plurality

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		of serial concatenated shift register for generating a first m-sequence; a second m-sequence generator having plurality of serial concatenated shift register for generating a second m-sequence; a first summer for adding the first and second m-sequences to generate the primary scrambling code; at least a masking sections for receiving each of the first m-sequence generator's register values (a_i), multiplying the register values and mask values (k_i) which is determining secondary scrambling code by shifting the first m-sequence and summing the multiplied values ($a_i \times k_i$); adding the second m-sequence with the summed values to generate the secondary scrambling code. In further another aspect of the present invention, there is provided a scrambling code generating apparatus of a downlink transmitter in a UMTS mobile communication system, which uses one primary scrambling code for separation of base stations and multiple secondary scrambling codes for channel separation, the apparatus including: a first m-sequence generator for generating a first m-sequence; a second m-sequence generator for generating a second m-sequence; a first summer for adding the first and second m-sequences to generate the primary scrambling code; a plurality of masking sections, each of the first masking sections for shifting the first m-sequence; and a plurality of second summers, each of the second summers for adding one of the shifted first m-sequences with the second m-sequence, the output of the second summers generating the multiple secondary scrambling codes." (5:4-37) *See generally* Ericsson, "Multiple Scrambling Codes," TSGR1#5(99)724 (June 4, 1999), pp. 1-4. *See generally* 3GPP TS 25.213 v. 2.1.0 (June 1999), §5.2.2. "To mix, in cryptography, in a random or quasi-random fashion." *Modern Dictionary of Electronics*, p. 670 (from definition of

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		"scramble")

U.S. Patent No. 6,928,604

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
"input data frame" (claims 1-4, 6, 10-12, 17-22, and 24)	"a data frame output by the source data encoder"	*See* Figs. 2, 6. "In general, for transmitting packet data, the mobile communication system uses a low data rate of below several tens of Kbps, with a transmission delay from several tens of ms (milliseconds) and requires a BER on the order of 10^{-2} -10^{-4}. For example, if the output frame of the source data encoder 42 is 10 ms long and a permissible delay time permitted in the turbo encoder is 40 ms, it is possible to combine four 10 ms frames output from the source data encoder 42 into one super frame, which will be input to the turbo encoder. Therefore, the error rate of assembled packet data can be decreased." (5:55-65) "For transmitting character, image and moving picture data, the mobile communication system has a permissible transmission delay from several tens of ms to several hundreds of ms and requires a BER of 10^{-6} -10^{-7}. The performance of the turbo encoder is enhanced as the frame length of the input data is increased. However, additional calculations and memory is required in the turbo decoder. There is a trade-off between performance and decoder complexity. In the case of the packet data service, for example, it is possible to satisfy both the required BER and moderate decoder complexity by enabling the CPU

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		46 to generate a sub/super frame control signal for segmenting/combining the output data from the source data encoder 42, of M-bit length, into sub frames or super frames of N-bit length." (5:66-6:13) "For example, in the case where the required transmission delay time is short and the input data frame of the turbo encoder (i.e., the output data frame of the source data encoder 42) is small in size (or length), a uniform interleaver such as a block interleaver or a cyclic shift interleaver is used for the interleaver 52." (7:54-59) "Accordingly, under the control of the CPU 112, the N-FB1122 and the N-FB2124 in the frame buffer 114 alternately receive and store the data output by the N-bit unit from the bit counter 106, and the stored data is decoded by the turbo decoder 116. The decoded data output from the turbo decoder 116 is reconstructed into the frames of the original length by a frame reconstructor 118 which is controlled by the CPU 112, and then output as the user data through a source data decoder 120." (10:34-42)

II. SAMSUNG PATENTS-IN-SUIT: IDENTIFICATION OF THE STRUCTURE(S), ACT(S), OR MATERIAL(S) CORRESPONDING TO THE FUNCTION OF TERMS GOVERNED BY 35 U.S.C. § 112(6)

U.S. Patent No. 7,675,941

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
"header inserter" (claim 10)	No corresponding structure is disclosed.
"one-bit field setter" (claim 10)	No corresponding structure is disclosed.
"LI inserter" (claim 10)	No corresponding structure is disclosed.
"header and LI remover" (claim 10)	No corresponding structure is disclosed.
"reassembler" (claim 10)	No corresponding structure is disclosed.

U.S. Patent No. 7,069,055

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
means for storing Greenwich mean time (GMT) information for each of a plurality of cities; (claim 1)	Function: storing Greenwich mean time (GMT) information for each of a plurality of cities Structure: Figure 1, First memory 111 (e.g., a flash memory), operatively connected to the controller 110 and storing a control program for the controller 110, as well as initial service data and GMT data for each of the major cities in the world "A first memory 111 (e.g., a flash memory), operatively connected to the controller 110, stores a control program for the controller 110, as well as initial service data and GMT data for each of the major cities in the world." Col. 2, ln. 23-26, Fig. 1.
means for receiving a reference time from a signal received from a remote system; (claim 1)	Function: receiving a reference time from a signal received from a remote system Structure: Figure 1, Antenna 124 connected to Duplexer 122, RF Receiver 120, Data Processor 116, Controller 110 "A duplexer 122, connected to an antenna 124, separates a transmission RF signal output from the RF transmitter 121 and a reception RF signal input to the RF receiver 120. A reception audio signal RXA and the reception data RXD output from the RF receiver 120 are transferred to an audio receiver 117 and the data processor 116, respectively." Col. 2, lines 51-56, Fig. 1. "Once the sync channel message is received (positive result in step 26), the controller 110 extracts system time, as well as various other parameters, from the received sync channel message . . ."

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	Col. 3, lines 41-44, Figs. 1, 2A.
means for counting a duration of time that elapses from when said reference time is acquired; (claim 1)	Function: counting a duration of time that elapses from when said reference time is acquired Structure: internal counters of controller 110, including a system time counter "The controller 110 includes internal counters such as a user set time counter and a system time counter. The user set time counter counts the time which elapses from the time set by the user, and a system time counter counts the elapsed time based on the system time received from the base station of the CDMA (Code Division Multiple Access) cellular system." Col. 3, ln. 2-8, Fig. 1.
means for selecting at least one of said plurality of cities (claim 1)	Function: selecting at least one of said plurality of cities Structure: Figure 1, Keypad 114 operatively connected to controller 110 and including a scroll key "A keypad 114, operatively connected to the controller 110, generates key data for setting various operational modes of the mobile telephone, for selecting the city the local time of which the user desires to know, and for dialing the telephone number. The keypad 114 provides the controller 110 with the corresponding key data." Col. 2, ln. 35-41, Fig. 1. "After the calculated local time of the selected city is displayed (step 56), the controller 110 determines whether the user has activated a scroll key to select another city (step 58). If the user activates the scroll key (positive result in step 58), the controller 110 calculates the local time of the next city selected from a displayed city list and displays the calculated time on the display 123 (step 60). The controller 110 then determines whether the scroll key has been activated again (return to step 58). If the scroll key is not activated (negative result in step 58), the controller 110 displays a

Term Governed by 35 U.S.C. § 112(6) **(relevant claim)**	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	message inquiring whether the user wants to terminate 'the world time display mode', and then determines whether the 'world time display mode' has been released by the user (step 62). If the user releases the 'world time display mode' (positive result in step 62), the controller enters into the 'idle mode' (return to step 32 FIG. 2A). On the other hand, if the user elects to continue the 'world time display mode' (negative result in step 62), the controller 110 determines whether the user has activated the scroll key (return to step 58) (i.e., selected another city)." Col. 4, ln. 37-56, Figs. 1, 2A.
and automatically calculating a local time of said selected city, said local time being based on a difference between the GMT of said selected city and the GMT of a present location of said apparatus, said reference time and said elapsed time; and (claim 1)	Function: automatically calculating a local time of said selected city, said local time being based on a difference between the GMT of said selected city and the GMT of a present location of said apparatus, said reference time and said elapsed time Structure: Figure 1, Controller 110 programmed to calculate a local time of said selected city, said local time being based on a difference between the GMT of said selected city and the GMT of a present location of said apparatus, said reference time and said elapsed time "On the other hand, if the 'user time setting mode' is not set (negative result in step 42), the controller 110 determines whether the user has selected a 'world time display mode' (step 46 in FIG. 2B). If the 'world time display mode' is set (positive result in step 46), the controller 110 enters into the 'world time display mode' and determines whether the system time or the user time are set (step 48). If it is determined that neither the system time nor the user time are set (negative result in step 48), the controller 110 displays (via the display 123) an error message notifying the user to set the system time or the user time (step 50) and the controller enters back into the 'idle mode' (return to step 32 in FIG. 2A). On the other hand, if the controller 110 has either acquired the system time from the sync channel message or has the set user time (positive result in step 48), the controller 110 determines whether the user has selected a city for which the user wants to know the local time (step 52). If the user has selected a city (positive result in step 52), the controller 110 calculates the local time of the selected city based on the GMT of the selected city and the GMT of the present location, and either the system time or the user set time and the corresponding elapsed time, and then displays

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
	the calculated time on the display 123 (step 56)." Col. 4, lines 3-25, Figs. 1, 2.
means for outputting said local time. (claim 1)	Function: outputting said local time Structure: Figure 1, Controller 110 and Display 123 "A display 123 displays the world time under the control of the controller 110." Col. 3, ln. 1-2, Fig. 1.

U.S. Patent No. 7,050,410

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
"means for receiving an information bit stream and for outputting an output stream including an information bit stream, a first parity stream, and a second parity stream, by encoding the information bit stream"	Function: receiving an information bit stream and for outputting an output stream including an information bit stream, a first parity stream, and a second parity stream, by encoding the information bit stream Structure: Fig. 1, channel encoder 110; Fig. 2, turbo encoder 110; Fig. 3, turbo encoder 110. "The turbo code used in turbo encoder 110 of FIG. 2 is a systematic code and, thusly, can be separated into a systematic information symbol X_k and parity symbol Y_k and Z_k"

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
(claim 55)	(5:1-3).
"means for performing an interleaving operation in response to the output stream and outputting an interleaved stream" (claim 55)	Function: performing an interleaving operation in response to the output stream and outputting an interleaved stream Structure: Fig. 1, 1st interleaver 120; Fig. 2. 1st interleaver 120. "The 1.sup.st interleaver 120 interleaves encoded symbols at a TTI (Transmission Time Interval) according to the number of input symbols. Interleaving can be considered in two steps. First Step: 1. The total number of columns is determined referring to Table 1 shown below. 2. A minimum integer R_1 is found in an equation given by $K_1 \leq R_1 \times C_1$ (1) where R_1 is the number of rows, K_1 is the length of the input block (total encoded symbols), and C.sub.1 is the number of columns, wherein the number of columns C_1 is 1, 2, 4 or 8 according to TTIs. 3. The input symbols of the 1st-interleaver are sequentially arranged by rows in an rectangular array having R_1 rows and C_1 columns. Second Step: 1. Columns are reordered according to an inter-column permutation pattern $\{P_1(j)\}j=0, 1, \ldots, C-1)$ shown in Table 1. $P_1(j)$ represents the original column of a j^{th} permuted column and the pattern is derived by a bit reverse method. In the bit reverse method, the binary bit sequence of each number is reversed, e.g., 00➔00, 01➔10, 10➔01, and 11➔11, as shown by the 40 ms TTI row in Table 1.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	TABLE 1 TTI | Total number of columns | inter-column permutation patterns 10 ms | 1 | {0} 20 ms | 2 | {0, 1} 40 ms | 4 | {0, 2, 1, 3} 80 ms | 8 | {0, 4, 2, 6, 1, 5, 3, 7} 2. The 1st-interleaver output is a sequence resulting from reading the permuted $R_1 \times C_1$ array by columns. Bits that do not exist in the 1st-interleaver input are excluded from outputting by eliminating 11 defined as $I_1 = R_1 \times C_1 - K_1$ (2) By interleaving using Eqs. 1 and 2, the 1.sup.st interleaver 120 outputs interleaved symbols in a similar pattern as a turbo encoder output pattern, that is, in the pattern of x, y, z, x, y, z, . . . (or x, z, y, x, z, y, . . . with parity symbols z and y exchanged in position)" (5:15-64)
"means for creating at least one radio frame in response to the interleaved stream" (claim 55)	Function: creating at least one radio frame in response to the interleaved stream Structure: Fig. 1, radio frame segmenter 130; Fig. 2, radio frame segmenter 130. "The radio frame segmenter 130 of FIG. 2 segments a frame of 10, 20, 40, or 80 ms into 10-ms radio frame blocks" (7:9-10).
"means for separating the at least one radio frame into a separate information bit stream, a first separate parity stream, and a second separate parity stream" (claim 55)	Function: separating the at least one radio frame into a separate information bit stream, a first separate parity stream, and a second separate parity stream Structure: Fig. 2, DEMUX 141. "Hence, the DEMUX 141 should be able to separate a radio frame received from the radio frame segmenter 130 into symbols x, y, z in a certain order" (8:30-32).

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
"means for bypassing the separate information bit stream and for puncturing a part of the first and second separate parity streams according to a given rate matching rule" (claim 55)	Function: bypassing the separate information bit stream and for puncturing a part of the first and second separate parity streams according to a given rate matching rule Structure: Fig. 2, component rate matcher 142, 143, 144. "The component rate matchers 142, 143, and 144 rate match the information symbol, the first parity symbol, and the second parity symbol from the DEMUX 141, respectively, by puncturing or repetition. The component rate matcher 142 just bypasses the received information symbol without real puncturing, whereas component rate matchers 143 and 144 puncture the received parity symbols according to a preset pattern determined by the ratio of the number of input symbols to the number of output symbols" (17:13-21).

U.S. Patent No. 7,362,867

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
"means for delaying at least one of the primary scrambling codes and secondary scrambling code to produce Q-channel components" (claim 30)	Function: delaying at least one of the primary scrambling codes and secondary scrambling code to produce Q-channel components Structure: Fig. 2, delay 203; Fig. 4, delay 403; Fig. 7, delay 720, 724, 722; Fig. 8, delay 830, 835; Fig. 10, delay 1020, 1024, 1022; Fig. 11, delay 1130, 1135. "The delays 203 delay the scrambling codes with the I-channel component for a predetermined

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	number of chips and generate delayed scrambling codes having a Q-channel component" (3:14-16).

III. APPLE PATENTS-IN-SUIT: PRELIMINARY CLAIM CONSTRUCTIONS

U.S. Patent No. 6,493,002

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
cursor **(claim 14)**	No construction necessary.	
cursor control device **(claim 14)**	No construction necessary.	
programming module **(claim 21)**	No construction necessary.	
at least one of the plurality of display areas and its associated programming module is sensitive to user input **(claim 25)**	No construction necessary.	
independently displayed and independently active **(claim 39)**	No construction necessary.	

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
the first window region and the plurality of independent display areas implemented in a window layer that appears on top of application programming windows that may be generated (claim 50)	No construction necessary.	

U.S. Patent No. 7,469,381

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
displaying an area beyond the edge of the document (claim 1)	No construction necessary.	
electronic document / an edge of the electronic document (claim 1)	No construction necessary.	
first direction	No construction necessary.	

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
(claim 1)		

U.S. Patent No. 7,663,607

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
capacitive monitoring circuitry **(claim 1)**	No construction necessary. This term is not governed by 35 U.S.C. § 112 ¶ 6.	
glass member **(claim 10)**	glass or plastic material	• Col. 10, ll. 37-40 -- "the optically transmissive member 112 is formed from a clear material such as glass or plastic." • Col. 13, ll. 62-64 -- "The lines 152 are generally disposed on one or more optical transmissive members 156 formed from a clear material such as glass or plastic." • Col. 14, ll. 60-63 -- "As mentioned above, the lines in order to form semi-transparent conductors on glass, film or plastic, may be patterned with an ITO material." • Col. 16, ll. 43-47 -- "each of the layers may be formed with various materials. By way of example, each particular type of layer may be formed from the same or different material. For example, any suitable glass or plastic material may be used for

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		the glass members." • J. Strickon Dep. Tr. at 164:19-165:13. • B. Huppi Dep. Tr. at 31:5-21.

U.S. Patent No. 7,812,828

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
mathematically fitting an ellipse to at least one of the pixel groups **(claim 1)**	No construction necessary.	
segmenting each proximity image into one or more pixel groups that indicate significant proximity / segment the proximity image into one or more pixel groups **(claim 1)**	No construction necessary.	
pixel group[s] **(claims 1, 6, 9, 10, 16, 24, 31)**	portion[s] of a proximity image that indicate[s] the proximity data measured at one or more electrodes	• Col. 6, ll. 22-49 -- "complex proximity image processing is necessary to track and identify the parts of the hand contacting the surface at any one time. Compared to passive optical, images, proximity images provide clear indications of where

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
		the body contacts the surface, uncluttered by luminosity variation and extraneous objects in the background." • Col. 8, l. 53 – col. 9, l. 20 -- "collecting into groups those proximity image pixels intensified by contact of the same distinguishable part of a hand;" • Col. 18, ll. 12-15 -- "[i]n the discussion that follows, the proximity data measured at one electrode during a particular scan cycle constitutes one 'pixel' of the proximity image captured in that scan cycle."

U.S. Patent No. 7,844,915

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
scrolling a window having a view associated with the event object **(claim 1)**	No construction necessary.	

U.S. Patent No. 7,853,891

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
any input from a user input device **(claim 1)**	No construction necessary.	
closing the first window **(claim 1)**	No construction necessary.	
in response to a determination that the timer expired **(claim 1)**	No construction necessary.	
starting a timer **(claim 1)**	No construction necessary.	
the first window has been displayed independently from a position of a cursor on the screen **(claim 1)**	No construction necessary.	
closing the first window without user input **(claim 20)**	No construction necessary.	
translucent	No construction necessary.	

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
(claim 20)		

U.S. Patent No. 7,864,163

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
substantially centered (claim 2)	No construction necessary.	

U.S. Patent No. 7,920,129

Claim Term (relevant claims)	Apple's Preliminary Construction	Support for Construction
substantially cover (claim 24)	No construction necessary.	

IV. APPLE PATENTS-IN-SUIT: IDENTIFICATION OF THE STRUCTURE(S), ACT(S), OR MATERIAL(S) CORRESPONDING TO THE FUNCTION OF TERMS GOVERNED BY 35 U.S.C. § 112(6)

U.S. Patent No. 6,493,002

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
means for positioning a cursor on a data display screen (claim 26)	§ 112 ¶ 6 function: Positioning a cursor on a data display screen. § 112 ¶ 6 corresponding structure: One or more of a trackball, a stylus, a mouse, a trackpad, cursor control keys, a keyboard, etc., coupled to a display. (4:45-48, 5:2-3, 6:30-31, 7:2-3, 7:13-14, 7:21; FIG. 1).
means for executing at least one of the plurality of individual programming modules to generate information for display in one of the plurality of display areas in the first window region (claim 26)	§ 112 ¶ 6 function: Executing at least one of the plurality of individual programming modules to generate information for display in one of the plurality of display areas in the first window region. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for executing at least one of the plurality of individual programming modules to generate information for display in one of the plurality of display areas in the first window region. (4:31, 4:45-48, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).

Term Governed by 35 U.S.C. § 112(6) **(relevant claim)**	**Function and Corresponding Structure(s), Act(s), or Material(s)**
means for creating an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions (claims 26, 39)	§ 112 ¶ 6 function: Creating an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for creating an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions. (4:31, 4:45-48, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).
means for determining when said at least one data display area has been selected by the user (claim 39)	§ 112 ¶ 6 function: Determining when said at least one data display area has been selected by the user. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for determining when said at least one data display area has been selected by the user. (4:31, 4:45-48, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).
means for generating user sensitive graphics for display in at least one data display area (claim 39)	§ 112 ¶ 6 function: Generating user sensitive graphics for display in at least one data display area.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	§ 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for generating user sensitive graphics for display in at least one data display area. (4:31, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).
means for initiating a response from said at least one of the plurality of programming modules (claim 39)	§ 112 ¶ 6 function: Initiating a response from said at least one of the plurality of programming modules. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for initiating a response from said at least one of the plurality of programming modules. (4:31, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).
means for positioning a cursor on said data display screen (claim 39)	§ 112 ¶ 6 function: Positioning a cursor on said data display screen. § 112 ¶ 6 corresponding structure: One or more of a trackball, a stylus, a mouse, a trackpad, cursor control keys, a keyboard, etc., coupled to a display. (4:45-48, 5:2-3, 6:30-31, 7:2-3, 7:13-14, 7:21; FIG. 1).
means for indicia generation (claim 50)	§ 112 ¶ 6 function:

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	Indicia generation. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for indicia generation. (4:31, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).
means for window generation and control to create an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions (claim 50)	§ 112 ¶ 6 function: Window generation and control to create an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for window generation and control to create an operating environment for a plurality of individual programming modules associated with different application programs that provide status and/or control functions. (4:31, 4:45-48, 9:27-13:62, 14:55-17:53, 17:56-21:33; FIGS. 1, 4-10).

U.S. Patent No. 7,469,381

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
instructions for displaying a first portion of an electronic document; instructions for detecting a movement of an object on or near the touch screen display; instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement; instructions for displaying an area beyond an edge of the electronic document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected	These terms are not governed by § 112 ¶ 6.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
on or near the touch screen display; and instructions for translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display. (claim 19)	

U.S. Patent No. 7,812,828

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
means for fitting an ellipse to at least one of the pixel groups	§ 112 ¶ 6 function:

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
(claim 24)	Fitting an ellipse to at least one of the pixel groups. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for fitting an ellipse to at least one of the pixel groups using one or more of equations 12-23. (19:1-12, 25:54-27:8; FIGS. 1, 16, 18.)
means for producing a proximity image representing a scan of a plurality of electrodes of a touch sensitive surface (claim 24)	§ 112 ¶ 6 function: Producing a proximity image representing a scan of a plurality of electrodes of a touch sensitive surface. § 112 ¶ 6 corresponding structure: Proximity sensors (e.g., sensors 47 of FIG. 6) coupled with circuitry (e.g., FIGS. 6, 7A) for producing a proximity image representing a scan of a plurality of electrodes of a touch sensitive surface. (13:9-11; 16:4-17:9; FIGS. 1, 6-8.)
means for segmenting the proximity image into one or more pixel groups (claim 24)	§ 112 ¶ 6 function: Segmenting the proximity image into one or more pixel groups. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for segmenting the proximity image into one or more pixel groups using one or more processes of FIG. 18. (19:1-12, 23:8-25:60; FIGS. 1, 16, 18-21.)

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
means for transmitting one or more ellipse parameters as a control signal to an electronic or electromechanical device (claim 29)	§ 112 ¶ 6 function: Transmitting one or more ellipse parameters as a control signal to an electronic or electromechanical device. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for transmitting one or more ellipse parameters as a control signal to an electronic or electromechanical device. (13:63-14:21, 40:57-41:32, 50:14-24, 52:5-32; FIG. 1, 28, 39B, 40B.)
means for fitting an ellipse to at least one of the pixel groups in a plurality [of] successive proximity images (claim 31)	§ 112 ¶ 6 function: Fitting an ellipse to at least one of the pixel groups in a plurality [of] successive proximity images § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for fitting an ellipse to at least one of the pixel groups in a plurality [of] successive proximity images using one or more of equations 12-23. (19:1-12, 25:54-27:8; FIGS. 1, 16, 18.)
means for tracking a change in one or more ellipse parameters through a plurality of time-sequenced proximity images (claim 31)	§ 112 ¶ 6 function: Tracking a change in one or more ellipse parameters through a plurality of time-sequenced proximity images.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	§ 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for tracking a change in one or more ellipse parameters through a plurality of time-sequenced proximity images using one or more of processes 320-346 (FIG. 22) and/or one or more of equations 24-49. (13:15-19; 19:13-32, 27:9-29:4; FIGS. 1, 16, 22.)
means for tracking a path of one or more pixel groups through a plurality of time-sequenced proximity images (claim 31)	§ 112 ¶ 6 function: Tracking a path of one or more pixel groups through a plurality of time-sequenced proximity images. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for tracking a path of one or more pixel groups through a plurality of time-sequenced proximity images using one or more of processes 320-346 (FIG. 22) and/or one or more of equations 24-49. (13:15-19; 19:13-32, 27:9-29:4; FIGS. 1, 16, 22.)

U.S. Patent No. 7,853,891

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
means for closing the first window in response to a determination that the timer expired (claim 51)	§ 112 ¶ 6 function: Closing a first window in response to a determination that a timer has expired. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for closing a window in response to a determination that a timer has expired. (4:28-5:31, 5:54-6:8, 6:21-25, 7:7-50, 8:16-49, 9:7-63; FIGS. 1, 7-11, 13, 14, 16-21).
means for displaying a first window in response to receiving a first input from a user input device of the digital processing system (claim 51)	§ 112 ¶ 6 function: Displaying a first window in response to receiving a first input from a user input device of the digital processing system. § 112 ¶ 6 corresponding structure: A display device coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for displaying a window in response to receiving an input from a user input device. (4:28-5:31, 7:21-50, 8:16-49, 9:7-63; FIGS. 1, 13, 14, 16-21).
means for starting a timer (claim 51)	§ 112 ¶ 6 function: Starting a timer.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	§ 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for starting a timer. (4:28-5:31, 5:54-6:8, 7:21-50, 8:16-49; FIGS. 1, 13, 14).
means for fading out an image of the first window (claim 55)	§ 112 ¶ 6 function: Fading out an image of a window. § 112 ¶ 6 corresponding structure: A display device coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for fading out an image of a window. (4:28-5:31, 6:21-25, 7:21-50, 9:7-63; FIGS. 1, 8-10, 12-14, 20, 21).
means for determining a position on a display of the digital processing system independent of a position of a cursor on the display (claim 64)	§ 112 ¶ 6 function: Determining a position on a display of the digital processing system independent of a position of a cursor on the display. § 112 ¶ 6 corresponding structure: A display device coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for determining a position on a display of the digital processing system independent of a position of a cursor on the display. (2:42-3:14, 4:28-5:31, 7:21-50; FIGS. 1, 16-21).

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
means for restarting the timer in response to receiving a second input for the first window (claim 66)	§ 112 ¶ 6 function: Restarting a timer in response to receiving a second input for a window. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for restarting a timer in response to receiving a second input for a window. (3:8-14, 3:45-50, 4:28-5:31, 7:21-50, 8:26-49, 9:7-63; FIGS. 1, 8-11, 14, 16-21).
means for closing the first window without user input (claim 70)	§ 112 ¶ 6 function: Closing a window without user input. § 112 ¶ 6 corresponding structure: A display device coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for closing a window without user input. (4:28-5:31, 5:54-6:8, 6:21-40, 7:21-50, 8:4-49, 9:34-63; FIGS. 1, 12, 14).
means for displaying a first window (claim 70)	§ 112 ¶ 6 function: Displaying a first window. § 112 ¶ 6 corresponding structure: A display device coupled to one or more special or general purpose processors programmed with

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	special-purpose software to execute an algorithm, the special-purpose software including computer instructions for displaying a window. (4:28-5:31, 5:54-6:8, 7:7-20, 8:26-9:63; FIGS. 1, 7-21).
means for starting a timer (claim 71)	§ 112 ¶ 6 function: Starting a timer. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for starting a timer. (4:28-5:31, 5:54-6:8, 7:21-50, 8:16-49; FIGS. 1, 13, 14).
means for determining whether or not a condition is met (claim 73)	§ 112 ¶ 6 function: Determining whether or not a condition is met. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for determining whether or not a condition is met. (4:28-5:31, 5:54-6:8, 6:21-40, 7:7-20, 8:4-25; FIGS. 1, 12).
means for fading out an image of the first window (claim 74)	§ 112 ¶ 6 function: Fading out an image of a window. § 112 ¶ 6 corresponding structure:

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
	A display device coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for fading out an image of a window. (4:28-5:31, 6:21-25, 7:21-50, 9:7-63; FIGS. 1, 8-10, 12-14, 20, 21).

U.S. Patent No. 7,864,163

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
instructions for determining a first box in the plurality of boxes at the location of the first gesture; instructions for detecting a first gesture at a location on the displayed portion of the structured electronic document instructions for displaying at least a portion of a structured electronic document on the touch screen display instructions for enlarging and translating the structured electronic document so that the	These terms are not governed by 35 U.S.C. § 112 ¶ 6.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
first box is substantially centered on the touch screen display instructions for, in response to detecting the second gesture, translating the structured electronic document so that the second box is substantially centered on the touch screen display instructions for, while the first box is enlarged, detecting a second gesture on a second box other than the first box (claim 50)	
means for determining a first box in the plurality of boxes at the location of the first gesture (claim 52)	§ 112 ¶ 6 function: determining a first box in the plurality of boxes at the location of the first gesture § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for determining a first box in the plurality of boxes at the location of the first gesture. (2:28-3:27; 6:17-22; 18:38-19:30, 20:52-61, 21:9-37; FIGS. 1A-B, 5A-H, 6A-C).
means for detecting a first gesture at a location on the displayed portion of the	§ 112 ¶ 6 function:

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
structured electronic document (claim 52)	detecting a first gesture at a location on the displayed portion of the structured electronic document § 112 ¶ 6 corresponding structure: A touch screen display coupled to one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for detecting a first gesture at a location on the displayed portion of the structured electronic document. (2:28-44; 2:66-3:27; 6:17-22; 7:50-8:47; 10:42-61; 18:38-19:14, 20:24-21:25; FIGS. 1A-B, 5A-H, 6A-C).
means for displaying at least a portion of a structured electronic document on the touch screen display (claim 52)	§ 112 ¶ 6 function: displaying at least a portion of a structured electronic document on the touch screen display § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for displaying at least a portion of a structured electronic document on the touch screen display. (2:28-3:27; 6:17-22; 18:38-21:25; FIGS. 1A-B, 5A-H, 6A-C).
means for enlarging and translating the structured electronic document so that the first box is substantially centered on the touch screen display (claim 52)	§ 112 ¶ 6 function: enlarging and translating the structured electronic document so that the first box is substantially centered on the touch screen display § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for enlarging and

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	translating the structured electronic document so that the first box is substantially centered on the touch screen display. (2:28-3:27; 6:17-22; 18:38-20:23, 21:10-40; FIGS. 1A-B, 5A-H, 6A-C).
means for, in response to detecting the second gesture, translating the structured electronic document so that the second box is substantially centered on the touch screen display (claim 52)	§ 112 ¶ 6 function: in response to detecting the second gesture, translating the structured electronic document so that the second box is substantially centered on the touch screen display § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for, in response to detecting the second gesture, translating the structured electronic document so that the second box is substantially centered on the touch screen display. (2:28-44; 2:66-3:13; 6:17-22; 18:38-21:25; FIGS. 1A-B, 6A-C).
means for, while the first box is enlarged, detecting a second gesture on a second box other than the first box (claim 52)	§ 112 ¶ 6 function: while the first box is enlarged, detecting a second gesture on a second box other than the first box § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for, while the first box is enlarged, detecting a second gesture on a second box other than the first box. (2:28-44; 2:66-3:13; 6:17-22; 18:38-21:25; FIGS. 1A-B, 6A-C).

U.S. Patent No. 7,844,915

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	Function and Corresponding Structure(s), Act(s), or Material(s)
means for creating an event object in response to the user input (claim 15)	§ 112 ¶ 6 function: Creating an event object in response to the user input. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for creating an event object in response to the user input. (1:59-67, 2:37-42, 4:29-6:37, 12:30-32, 21:10-56, 22:5-16, 22:42-48; FIGS. 1, 13, 32, and 33A-C).
means for determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation (claim 15)	§ 112 ¶ 6 function: Determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation. (1:59-67, 2:22-29, 2:37-42, 4:29-6:32, 6:37-48, 6:57-60, 9:61-11:13, 12:19-14:40, 21:10-56, 22:5-16,

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	22:42-48; FIGS. 1, 7-10, 13, 14, 32, and 33A-C).
means for issuing at least one scroll or gesture call based on invoking the scroll or gesture operation (claim 15)	§ 112 ¶ 6 function: Issuing at least one scroll or gesture call based on invoking the scroll or gesture operation. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for issuing at least one scroll or gesture call based on invoking the scroll or gesture operation. (1:59-67, 2:22-29, 2:37-42, 4:29-6:32, 6:46-48, 9:61-11:13, 12:19-28, 12:34-37, 13:21-50, 21:10-56, 22:5-16, 22:42-48; FIGS. 1, 7-10, 13, 14, 32, and 33A-C).
means for receiving, through a hardware device, a user input on a touch-sensitive display of the apparatus (claim 15)	§ 112 ¶ 6 function: Receiving, through a hardware device, a user input on a touch-sensitive display of the apparatus. § 112 ¶ 6 corresponding structure: One or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for receiving, through a hardware device, a user input on a touch-sensitive display of the apparatus. (1:59-67, 2:37-42, 4:29-6:32, 6:33-36, 12:19-13:40, 21:10-56, 22:5-16, 22:42-48; FIGS. 1, 13, 14, 32, and 33A-C).
means for responding to at least one gesture call, if issued, by scaling the view associated with the event object based on	§ 112 ¶ 6 function: Responding to at least one gesture call, if issued, by scaling the view associated with the event object

Term Governed by 35 U.S.C. § 112(6) **(relevant claim)**	**Function and Corresponding Structure(s), Act(s), or Material(s)**
receiving the two or more input points in the form of the user input (claim 15)	based on receiving the two or more input points in the form of the user input. § 112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for responding to at least one gesture call, if issued, by scaling the view associated with the event object based on receiving the two or more input points in the form of the user input. (1:59-67, 2:22-29, 2:37-42, 4:29-6:32, 6:57-60, 8:4-25, 12:19-14:40, 18:25-19:61, 20:50-21:56, 22:5-16, 22:42-48; FIGS. 1, 4, 13-15, 16A-C, 28-29, 30A-B, 32, and 33A-C).
means for responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object (claim 15)	§ 112 ¶ 6 function: Responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object. § 112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object. (1:59-67, 2:37-42, 4:29-6:32, 6:46-56, 8:4-25, 9:61-11:13, 18:25-19:61, 20:50-21:56, 22:5-16, 22:42-48; FIGS. 1, 4, 7-10, 28, 29, 30A-B, 32, and 33A-C).
means for rubberbanding a scrolling region displayed within the window by a predetermined maximum displacement when the scrolling region exceeds a window edge	§ 112 ¶ 6 function: Rubberbanding a scrolling region displayed within the window by a predetermined maximum displacement when the scrolling region exceeds a window edge based on the scroll.

Term Governed by 35 U.S.C. § 112(6) (relevant claim)	**Function and Corresponding Structure(s), Act(s), or Material(s)**
based on the scroll (claim 16)	§ 112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for rubberbanding a scrolling region displayed within the window by a predetermined maximum displacement when the scrolling region exceeds a window edge based on the scroll. (1:59-67, 2:11-21, 2:37-42, 4:29-6:32, 7:46-8:3-25, 8:61-9:60, 18:25-19:61, 20:50-21:56, 22:5-16, 22:21-26, 22:42-48, 22:53-58; FIGS. 1, 3, 4, 6A-D, 28, 29, 30A-B, 32, and 33A-C).
means for attaching scroll indicators to a content edge of the window (claim 17)	§ 112 ¶ 6 function: Attaching scroll indicators to a content edge of the window. § 112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for attaching scroll indicators to a content edge of the window. (1:59-67, 2:37-42, 4:29-6:32, 6:61-67, 8:4-25, 11:14-46, 18:25-19:61, 20:50-21:56, 22:5-16, 22:37-41, 22:42-48, 22:67-23:4; FIGS. 4, 11, 28, 29, 30A-B, 32, and 33A-C).
means for attaching scroll indicators to the window edge. (claim 18)	§ 112 ¶ 6 function: Attaching scroll indicators to the window edge. §112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for attaching scroll indicators to the window edge. (1:59-67, 2:37-42, 4:29-6:32, 6:61-

Term Governed by 35 U.S.C. § 112(6) **(relevant claim)**	**Function and Corresponding Structure(s), Act(s), or Material(s)**
	67, 8:4-25, 11:14-46, 18:25-19:61, 20:50-21:56, 22:5-16, 22:37-41, 22:42-48, 22:67-23:4; FIGS. 4, 11, 28, 29, 30A-B, 32, and 33A-C).
means for responding to at least one gesture call, if issued, by rotating a view associated with the event object based on receiving a plurality of input points in the form of the user input (claim 20)	§ 112 ¶ 6 function: Responding to at least one gesture call, if issued, by rotating a view associated with the event object based on receiving a plurality of input points in the form of the user input. § 112 ¶ 6 corresponding structure: A display coupled with one or more special or general purpose processors programmed with special-purpose software to execute an algorithm, the special-purpose software including computer instructions for responding to at least one gesture call, if issued, by rotating a view associated with the event object based on receiving a plurality of input points in the form of the user input. (1:59-67, 2:26-29, 2:37-42, 4:29-6:32, 7:4-10, 8:4-25, 14:25-48, 18:25-19:61, 20:50-21:56, 22:5-16, 22:42-48; FIGS. 4, 17, 28, 29, 30A-B, 32, and 33A-C).

Dated: October 31, 2011

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CERTIFICATE OF SERVICE

I, Deok Keun Matthew Ahn, hereby certify that on October 31, 2011, true and correct copies of **PLAINTIFF AND COUNTERCLAIM-DEFENDANT APPLE INC.'S PATENT L.R. 4-2 PRELIMINARY CLAIM CONSTRUCTIONS** were served on the following counsel of record at the addresses and manner indicated:

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