

# EXHIBIT 12

**SUBJECT TO PROTECTIVE ORDER  
CONTAINS HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY INFORMATION**

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

APPLE INC., a California corporation,

Plaintiff,

vs.

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

Defendant.

CASE NO. 11-cv-01846-LHK

**EXPERT REPORT OF WOODWARD  
YANG REGARDING THE  
INFRINGEMENT OF U.S. PATENT NOS.  
US 7,577,460, US 7,456,893, US 7,698,711  
AND US 7,079,871**

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Apple. In 2011, it was widely publicized that approximately 25% of the iPhone 4's hardware is purchased from Samsung. In 2012, Apple began selling its newest iPad, the iPad HD, using Samsung's touchscreen technology.

**VII. U.S. PATENT NO. 7,577,460**

41. The '460 patent application was filed on July 26, 2006 and issued on August 18, 2009, but claims priority to a Korean application filed on March 31, 1999. The '460 patent is directed to the convergence of three digital technologies—e-mail, digital telephony, and digital photography—on a single device. In particular, the patent is directed to the performance of three core functions on the device: (i) transmitting an email displaying a message only (i.e., without any image); (ii) transmitting an email displaying an image and a message; and (iii) displaying images stored on the device in sequence. As set forth in the background of the invention: "A user can therefore photograph an object or images as needed in business and store the photographs on the device. The MVP (mobile video phone) may also function as a radio transmitter and therefore the user can transmit/receive a desired image without logging into a personal computer (PC)."

42. Claim 1 of the '460 patent claims the performance of these three core functions through performance of a five step method. Using 1999 terminology, the preamble of claim 1 specifies that this claimed method is a "data transmitting method for a portable composite communication terminal which functions as both a portable phone and a camera." However, today in 2012, this preamble can now be more easily described as a data transmitting method for a camera phone. The preamble further specifies that this claimed method "comprises the following steps." I am informed that "comprises" is open-ended transitional language, meaning that infringement requires proof of each of the claimed steps.

43. Claim 1 next describes the performance of the three core functions of a camera phone in five steps (i.e. steps one through five can be found in the '460 patent in column 14; line 27, line 31, line 36, line 38, and line 41, respectively). Although performance of these steps in the recited sequence would certainly infringe the patent, I do not understand claim 1 to require

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that these five claimed steps be performed in sequence. Rather, I understand the patent to permit the performance of the three claimed, core functions in any sequence. Notably, unlike claim 1 of the '893 patent (which is discussed below), the preamble of claim 1 of the '460 patent does *not* specify that the claimed method "consist[s] of the *sequential* steps."

44. Steps one (line 27) and four (line 38) of claim 1 describe transmitting an email with a message only. I understand the patent to require logically the performance of step one before the performance of step four. Specifically, step one of claim 1 requires the device to enter a specific user state (i.e. a "sub-mode") for sending text (i.e. non-image email). In this specific user state, the device is able to receive incoming phone calls and otherwise performs like a regular portable phone. Step four of claim 1 clearly implies that the device in this first sub-mode also has a user interface for inputting the address of the receiving party and the text message, such that the email can actually be transmitted.

45. Steps two (line 31) and five (line 41) of claim 1 describe an alternative method for transmitting an email with a message and an image. I understand the patent to require logically the performance of step two before the performance of step five. Specifically, step two requires that the device enter a second, different specific user state (i.e. "second E-mail transmission sub-mode") for sending email with an image. In this second, different state, or "second sub-mode," the device should allow the display of the most recently captured image from the camera mode. Step two further requires that this second e-mail transmission state is entered through a display sub-mode, in which previously captured and/or stored images can be displayed. Step five of claim 1 requires transmitting an email with an image in the second sub-mode. Similar to step four, step five implies that the device in this second sub-mode also has a user interface for inputting the address of the receiving party and the text message. However, step five also requires that the image displayed also be included in the email that is finally transmitted

46. Step three of claim 1 (line 36) describes a third core function of a camera phone: sequentially displaying the images stored on the device. This is an important core function for

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the device since it enables a user to sequentially browse and select previously captured or other images stored in memory using scroll keys for convenient subsequent email transmission.

**A. Infringement of U.S. Patent No. 7,577,460**

47. I understand that Apple manufactures, sells, offers for sale and/or imports the iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPad 2, and iPod Touch (4<sup>th</sup> Generation). It is my opinion that these products infringe claim 1 of the '460 patent. These '460 Accused Devices include each and every element recited in claim 1, either literally or equivalently. My detailed analysis of how these products infringe claim 1 of the '460 patent is provided in **Exhibit 1** to this Report.

48. Notably, with respect to the infringing features of the '460 Accused Devices, I understand from Apple's interrogatory responses that iOS version 4 software produced by Apple in this case is representative of all commercially released versions of iOS 4 software, namely 4.0, 4.0.1, 4.0.2, 4.1, 4.2, 4.2.1, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 4.2.9, 4.2.10, 4.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, and 4.3.5. I further understand that, for these infringing features, iOS version 5 software produced by Apple in this case is representative of iOS 5.0 and 5.0.1 software. I understand that, with respect to the infringing features of the '460 Accused Devices, there are no material differences between commercially released versions of iOS 4 software and that there are no material differences between commercially released versions of iOS 5.0 and 5.0.1 software. Finally, based on Apple's interrogatory responses, I understand that the relevant software and corresponding source code of all commercially released versions of iOS 4 software have been available and are the same on all '460 Accused Products, with the exception of the iPhone 4S, and that all commercially released versions of iOS 5 software have been available and are the same on all '460 Accused Products.

49. Therefore, it is my understanding that my infringement analysis applies with equal force and relevance for all '460 Accused Products.

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DATED: March 22, 2012

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Woodward Yang", is written over a horizontal line.

Woodward Yang