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Re: Hitachi Patent Assertions

Dear Sirs,

This letter follows up on our meeting of April 13, 2015, and is in further response to Hitachi's correspondence of April 9, 2015, as well as the previous meeting and correspondence to Apple regarding U.S. Patent Nos. 5,396,443, 8,311,389, 6,748,317, 6,898,078, and 8,214,459. As discussed below and during the meeting of April 13, Apple has reviewed each of the patents identified by Hitachi Maxell, and does not believe that a license is necessary for these patents. Apple's additional positions responsive to Hitachi's latest arguments on each patent are summarized below.

**1. U.S. Pat. No. 5,396,443 (the '443 patent)**

The '443 patent expired in October of 2013. In prior correspondence, Hitachi alleged that certain features of the iPhone 4/5 series and iPad / iPad2 / iPad mini series infringe claim 1 of the patent. In its April 9 letter, Hitachi further alleged that dependent claims 22-24 are infringed. Hitachi argues that the display in these devices is set to a non-power saving state if a user finger is detected near the screen during a power saving state and that the screen is set in the power saving state if the user finger is distant from the screen for a predetermined period of time. For at least the reasons set forth below, Apple does not believe it needs a license to the '443 patent.

As Apple has explained before, the accused devices do not detect the "approach" of a user's finger. The touch screen detects "touch" or contact. Therefore, the claimed "detecting means" is not present. Because claims 22-24 depend from claim 1, those claims too are not infringed.

Hitachi provided an illustration of an iPhone's ability to sense a large metal box being placed proximal to the touch screen but without touching the screen. Apple's position is that a metal box is not a user finger or user-associated medium of the type intended to be used with the touchscreens in Apple's accused products. The size and electro-magnetic characteristics of a metal box are significantly different than those of a finger, a stylus, or the like. During the April 13 meeting, Hitachi represented that it had obtained similar results using a user's finger and that it

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would provide those results to Apple. Apple will consider any such additional information when provided. However, Apple's position is that the touchscreens in Apple's products are not designed to detect the "approach" of a finger (or other user object) to the screen, only touch or contact.

Hitachi further argues that touch falls within the scope of the claimed "detecting means" because it was not disclaimed during prosecution and the "phrase 'at least approach' includes both an approach of the finger and contact of the finger as a result of the approach." As Apple explained, the claim language "at least approach" makes clear that of the possible things that could be detected with respect to a user-associated medium, the claimed "detecting means" must at the very least be able to detect whether a user associated medium approaches the housing. The "detecting means" must be able to detect "at least approach" in order to meet the claim language. A detecting means that only detects touch but not approach fails to meet the claim limitation.

Further, as Apple pointed out, the fact that detecting approach and contact are different is an interpretation of the ordinary meaning of those terms in light of the specification. As Apple's letter of March 10<sup>th</sup> stated:

The **ordinary meaning** of detecting approach does not encompass detecting contact. The specification makes this distinction repeatedly referring to when the user associated medium "approaches **or** comes in contact" with the detecting means as distinct alternatives throughout the description. See e.g., Abstract ("sensor for detecting the approach **or** contact"); ("approach **or** contact detection sensor"); ("an approach detection type **or** a contact detection type tablet"); ("which can effect **both** the approach detection and the contact detection"); ("the approach or contact detection function are **both** used"). Accordingly, the claims are limited to the approach-detecting function, not both approach and contact detection.

Thus, even without considering disclaimer, the ordinary meaning of the terms as used in the specification and claims of the '443 patent, limits the claims scope to detecting approach, not contact.

Hitachi also argues that the dimming of the screen before entering sleep mode in Apple's iOS products is a "power saving state" because "Apple products can have numerous 'states,' and the dimming of the screen brightness moves the devices from one 'state' (i.e., a non-dimmed state) to another, lower power, 'state' (i.e., a dimmed state)." But this argument is circular. As Apple noted, Apple's power saving state is its sleep mode. The temporary dimming of the screen brightness is not a "dim state" or "power saving state" as the claims require because it is not a "state" at all; it is a user interface feature. As Apple pointed out, power consumption in a device varies for many reasons during normal operation. That does not make each change in power consumption is a change between a power saving and non-power saving "states" *or vice versa* as the '443 patent uses that term. Hitachi ignores all the ways in which devices can vary the power consumption during normal operation (i.e., non-power saving state). The '443 patent does not support Hitachi's argument that just because more or less power is consumed during a particular operation that a claimed "state" is entered.



Apple has also provided prior art that invalidates the asserted claims, including the US Patent No. 5,189,393 to Charles Hu ("Hu"). In its latest letter, Hitachi argued that "Hu's dual sensor is designed to react when an object is moving away from the sensors" and thus it does not disclose "a detecting means for detecting whether a user-associated medium at least approaches at least a part of a housing of said apparatus." During the April 13 meeting, Hitachi acknowledged that the ultrasonic and infrared sensors of Hu are precisely the type of sensors the '443 patent discloses. However, Hitachi attempts to distinguish the sensors based on the "intended use" for the sensors of Hu, to detect moving away instead of approach. First, as Hitachi previously argued the "intention for incorporating the elements of the patented invention" is irrelevant; Hu discloses the same sensors. The claims in the '443 patent are apparatus claims that cover structure capable of performing the claimed function. The structure disclosed in Hu and the '443 patent is exactly the same. Further, Hu is not limited to detecting moving away, or entering a room, or moving sideways across the sensors. Hu discloses detecting motion, which includes motion in the direction of the sensor, or approach. One of skill in the art would understand motion to include moving towards a sensor, which would cause the same type of doppler shift that the ultrasonic sensor of Hu (and the one disclosed in the '443 patent) would detect. Accordingly, Hitachi's distinctions of Hu fail.

Hitachi additionally argues that Hu does not disclose the subject matter of dependent claims 22-24, limiting the claimed "control object" to an LCD. As discussed during the meeting of April 13, controlling an LCD brightness as a means of conserving power was well known by 1992. For example, U.S. Patent No. 4,980,836 to Carter et al. ("Carter") discloses a power saving "standby mode" in a computer system that sets an LCD in a power saving state after a period of inactivity: "[i]f the timer counts down to zero, then the system is considered inactive and power is removed from ..., the LCD, and miscellaneous circuitry, ... ." Carter, col. 2:18-21. Similarly, European Patent Application Publication Number EP0456012 A2 ("012"), discloses a "display control device for reducing power consumption" in which "[w]hen detecting the counter signal on the signal line 5a, the display control circuit 6 delivers ... the backlight control signal ... so that ... the backlight of the LCD panel 4 is switched off, thus causing the display of the LCD panel 4 to be turned off (Steps S6 - S7)." See '012 at [0023]; see also, U.S. Pat. No. 5,428,790 ("Thus power is applied only to each section when needed, leaving each section powered down (i.e., turned off) when it is not needed. ... First, for the display, the power supply circuit 32 as shown in FIG. 2 can be turned off. Also, the LCD driver chips 36 which drive the actual display 70 can be disabled.") Thus, based on the prior art, it would have been obvious to use the sensors of Hu to "detect the presence of people in a room for the purpose of automatically turning on lights or other devices" including LCD screens as claimed in claims 22-24 of the '443 patent by controlling its energizing or power supply circuits.

Lastly, Hitachi argues that the prior art Macintosh PowerBook 140 fails to anticipate claim 1 of the '443 patent because "its keyboard does not detect approach or touch; it detects only keyboard activation, requiring mechanical displacement of a physical contact switch." However, as explained by Apple, Hitachi misses the point. The "contact switch" of the keyboard under each key detects contact of a user-associated medium, the keyboard's key, with the housing, the electrical contact connected to the computer's circuitry. Thus, the keyboard detects "touch" as described in the '443 patent. Thus, to the extent Hitachi asserts its claims cover detecting "touch" as a way of "at least approaching," the PowerBook 140 anticipates the claims, including the LCD limitations of claims 22-24; the PowerBook 140 included a "backlit Supertwist" LCD that was turned off in sleep mode. Moreover, contrary to Hitachi's suggestion, keyboards do not necessarily require mechani-



cal contact to detect a key. See, e.g., U.S. Patent No. 3,668,697 (June 6, 1972) (“Noncontacting Keyboard”).

Further, to the extent the normal operation of a touchscreen, which Hitachi argues is inherently able to detect touch without actual touch, is encompassed by the claims, that was also known before the ‘443 patent’s earliest priority date. For example, the art cited by Apple in the letter of March 10, showed that using touch screens of the types accused by Hitachi with computer systems, such as the PowerBook 140, was obvious and well known in the art by 1992. See e.g., U.S. Patent No. 4,733,222 (issued in 1988) (“Typically an electrode has one or more enlarged portions or plates, hereafter called tabs, which furnish a capacitor plate to complete a capacitive coupling between the electrode and the body of an operator, and thereby to system ground, when the tab **or the area overlying the tab** is touched by a finger of the operator.”); see also, U.S. Patent No. 4,290,052 (issued in 1981) (disclosing a touch-pad with “‘touch’ electrodes, is adhesively fastened to the surface of the transparent, insulative substrate (formed of glass and the like) **opposite that surface contactable by user personnel.**”) Accordingly, using touchpads that can respond to user touch without actual contact and in combination with the disclosed Sleep Mode in the PowerBook 140 would render obvious the ‘443 patent as Hitachi asserts it.

In addition, there are numerous other references expressly disclosing using touch detection through a touch screen as the basis for triggering power savings modes in a computer system, such as the PowerBook 140. For example, touch pads capable of detecting proximity of a user-associated medium, such as a stylus, were well known and used in computing devices. See U.S. Patent No. 5,347,295 (“The present invention addresses the problem of controlling such a computer through a stylus. ... The present invention senses when the stylus is **in proximity to or in contact with** the front surface of the computer.”) This reference acknowledges that the prior art “[c]ertain systems substitute a stylus for a mouse” and expressly teaches the combination of “the used [sic] of proximity sensing in the notebook computer of the invention.” Touch pads or panels capable of sensing both touch and proximity were well known. See, e.g., U.S. Pat. No. 5,103,085 (“a proximity detector and switch is relatively simple in construction and circuitry, and highly accurate and sensitive in use. The principal circuitry can be used for detecting presence of an object to produce a binary output, i.e. as a switch, or a continuous output for determining the proximity of an object. ... The system thus produces a signal which can be used for touch detection, for communicating the binary proximity state to electric devices, computers and modems. These may be used to control displays of information, thus giving a user control of the displays by touch selection.”). Thus, combining a proximity sensing stylus with the PowerBook 140 would have been obvious.

Moreover, using touch pad input instead of a keyboard as a way to control power states on a computer system was also known in the prior art. For example, U.S. Patent No. 5,175,854 teaches a microprocessor-based system in which “[t]he processor may invoke the sleep mode in battery operate applications to conserve capacity when an absence of activity is detected. The auxiliary chip may subsequently be restarted by a high to low transistion [sic] on the PBRST\* input via human interface by a keyboard, **touch pad**, etc.” Col. 9:31-37 (emphasis added). Similarly, U.S. Patent No. 4,972,496 discloses a “keyboardless computer system” in which “[a]s long as there is no contact by stylus 35 at position 38 or any other position on plate 34, no current flows and power consumption is minimal. ... the invention makes stand-by power requirements minimal.” Thus, when the stylus touches the screen, the systems’ power consumption increases, which Hitachi alleges is a non-power saving state, while when the stylus is distant from the system, power con-



sumption decreases, resulting in what Hitachi alleges is a power saving state. A similar system that increases power consumption when detecting an approaching user-associated medium is disclosed in U.S. Patent No. 4,672,154 ("For example, inductive coupling between a power source associated with the digitizer tablet could be used to couple AC signals into a sensing circuit located in the cordless pen, which rectifies the induced signals to produce the DC levels necessary to operate the pen circuitry.")

For at least these reasons, we believe that the asserted claims of the '443 patent are both not infringed and invalid, and therefore that no license is needed.

## 2. U.S. Pat. No. 8,311,389 (the '389 patent)

Hitachi alleges that Apple's iPhone 4/5 series and iPad / iPad 2 / iPad mini and iPad Air series infringe claim 5 of the '389 patent based on their ability to download and play rental movies from the iTunes store. The '389 patent has a priority date of December 13, 2000.

Apple's iOS devices do not fall within the scope of the claims of the '389 patent. As previously pointed out by Apple, the claim language requires receiving and recording "audio/video information." Downloading and storing mpeg-encoded data files is not receiving and recording audio/video information. The applicants specifically amended the claims to recite "audio/video" information instead of "digital" information. Moreover, the only embodiment disclosed in the specification relates to the broadcasting of television signals. If the claims were interpreted to cover downloading data files, enablement and written description invalidity issues would apply.

Hitachi provided several cites to the specification of the '389 patent alleging that it "discloses that MPEG digital audio/video information is transmitted and stored." But the claims require "a receiver **which receives** audio/video information." None of the citations provided show a receiver that receives digital MPEG files. The specification cites Hitachi provided referred to either the broadcasting station (col. 5:18-25); how the signals may be recorded in a recording medium (col. 7:10); or to storage of control information, not audio/video signal (col. 17:41); or to reproduction-only embodiments without the recording elements of the claim (col. 17:51). The other citations Hitachi provided are not relevant: col. 4:67- col. 5:3 discusses broadcasting via satellite or cable, and col. 5:46-47 discloses that "audiences" can request information via a telephone line and it is broadcast via satellite as VOD. None of these citations have anything to do with receiving or downloading data files. To the contrary, the fact that the received audio/video information is ultimately stored as digital data in a hard disk or the like shows that the received information itself was not in such a format because prior to storing it, the received information is converted to a format suitable for storing: "The RF tuner 5 on the receiving side **receives** and demodulates the transmitted **information** and thereafter, the recording circuit 2 **converts it into a signal suitable for recording on a recording medium** and the recording/reproducing unit 6 records the converted signal." Col. 5:3-7. Thus, it is clear that the audio/video information is received in a format that is not suitable for recording (cannot be an MPEG file) and needs to be converted before storing.

Additionally, Apple's devices do not infringe the claims of the '389 patent because none of the rental periods limit the retention of the rented movie files on a recording medium. In its April 9 letter, Hitachi notes that "the '389 Patent controls reproduction using two different kinds of time restriction information for different targets, i.e. a first period **for retaining the audio/video information on a recording medium**, and a second period for enabling reproduction." Neither the 30-



day period nor the 24 hour period in Apple's movie rentals affect the retention of the movie files on a recording medium. For example, movie files for rented movies remain stored on an iMac's hard drive past the 30-day rental period, even if the movie is no longer available for reproduction on iTunes.

Further, the claims, as Hitachi asserts them, are invalid over the prior art. As previously stated, U.S. Patent No. 5,400,402 renders the claims obvious as now asserted by Hitachi because the allegedly missing two-time-period access limitation was well known in the prior art by December 2000. This is shown for example in U.S. Patent No. 5,023,741. Hitachi argues that this reference fails to disclose the two time periods being "partially overlapped." But this is an obvious situation that could arise in the system described in the '741 patent. As Apple explained, the '741 patent teaches that in a typical rental arrangement, "[f]or example, the duplicator using a password not available to either the distributor or rental agent may program the IC module 64 to provide a play limit **at the end of six months.**" At the same time, the "rental agent may interrogate and reset a transaction counter in the IC module 64" for each rental. Thus, each rental would provide time limit for the tape but if a rental is made at or near the end of the distributor's six month period, the IC module 64 would prevent reproduction even if the rental period was not over. This is a "partially overlapped" scenario contemplated and obvious in view of the '741 patent.

In any case, it is abundantly clear that U.S. Pat. No. 5,629,980 ("Stefik") teaches any partially overlapped time-period scenario covered by the claims of the '389 patent. Hitachi alleged that Stefik fails to disclose a "duration" for the first time period. As discussed during our meeting in April, Stefik discloses the first time period in several ways.

First, with respect to any particular download, the Expiration Date in the digital work provides a duration during which reproduction is enabled starting with the time when the digital work is downloaded and ending at the Expiration Date. The claim expressly requires measuring an "elapsed time **from the recording** of the audio/video information" and does not require the first period to have any specific starting time. A person of ordinary skill in the art reading Stefik would understand that before downloading a digital work, it cannot be reproduced. The Stefik specification is clear on this point: "The period **starts on the first access** and ends after the duration has passed or the expiration date is reached, whichever comes first." Thus, the potential period for reproduction begins with the first access and ends when the elapsed time from the recording to the medium reaches either the Expiration Date (first period) or the end of the Use Duration (second period), which ever comes first.

Second, Stefik also discloses yet another "duration" that controls the reproduction of digital works. Stefik discloses a "Loan Transaction" that includes an additional "loan period." Col. 35:32-33 ("The maximum duration of the loan is determined by an internal parameter of the digital work.") In the Loan Transaction, digital works are subject to their time restrictions per the rights specification. Col. 35:52-56. In addition, "[i]f the time period of the loan is exhausted ... [t]he requester automatically deactivates its copies of the digital work. It terminates all current uses and erases the digital work copies from memory." Col. 36:16-22. Therefore, in addition to the Expiration Date, the "loan period" provides another disclosure of the claimed "first period" for each loan transaction and unlike Apple's movie rentals, the rental period in Stefik controls the retention of the digital works on the storage medium; the system of Stefik "erases the digital work copies" at the end of the rental period.





Hitachi's April 9 letter also argued that Stefik does not disclose "a time restriction for retaining the digital work on the repository." This argument is not only incorrect as shown above (erasing of digital works at the end of the loan period), but also irrelevant because the only "right" controlled by the claims of the '389 patent is the reproduction right. The apparatus of the claims enables or disables "reproduction" based on the time periods. The claims do not recite any way to control the retaining of the audio/video information on the recording medium.

Accordingly, Stefik clearly anticipates at least claim 5 of the '389 patent.

### 3. U.S. Pat. No. 6,748,317 ("the '317 patent")

Hitachi alleges that Apple's iPhone 4/5 series and iPad / iPad 2 / iPad mini and iPad Air series infringe claims 1, 15, and 17 of the '317 patent through the "walking directions" feature available in Apple Maps. The '317 patent claims priority to July 12, 1999.

After Apple noted that unlike the claimed requirements, Hitachi's allegations of infringement failed to disclose all the claim elements in a single display, Hitachi's April 9 letter provided new screen shots purporting to show the required claim elements in a single display. The new screen shots showed features that do not appear to be present in Apple's iOS 8. Because we were unable to reproduce the screen shots, during our April 13 meeting Hitachi agreed to provide additional information regarding how the screen shots were generated. Apple will review those and provide its response.

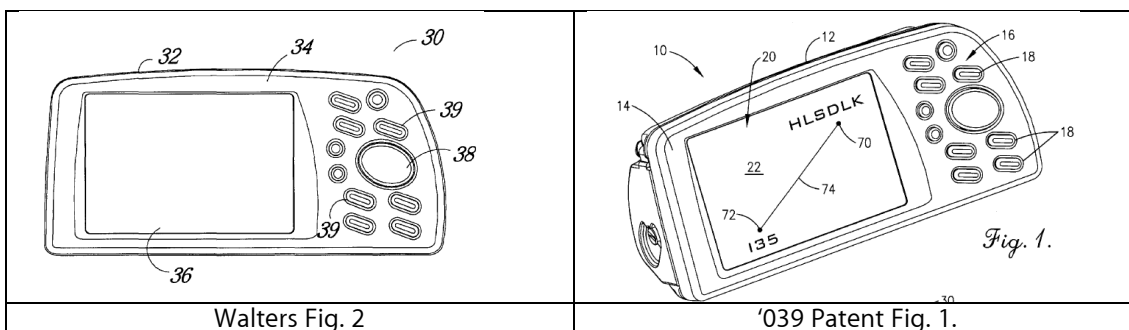
Hitachi further argues that the prior art reference provided by Apple, U.S. Pat. No. 6,222,485 to Walters and U.S. Patent No. 6,133,853 to Obradovich, do not anticipate claims 1, 15, and 17. First, Hitachi argues that neither Walters or Obradovich disclose both claimed devices for getting location information and for getting direction information. As noted by Apple, this conclusion is incorrect. Contrary to Hitachi's argument, the claims do not require a "compass/gyro-type device" as the device for getting direction information. Instead, the claims require "a device for getting location information denoting a present [sic] place of said portable terminal" and "a device for getting a direction information denoting an orientation of said portable terminal." As Hitachi admits, both Walters and Obradovich disclose GPS devices, which provide location information denoting a present place. In addition, both references disclose another device, a processor in Walters and a microprocessor in Obradovich, which calculate direction information denoting an orientation of the terminal. In Walters, the processor uses GPS data and coordinates from adjacent points in the cartographic data to calculate the "desired heading orientation" which is used to adapt the display of the device "so as to make the desired heading the top of the heading." '485 patent, col. 2:19-26. Obradovich, in addition to the GPS receiver, also discloses a microprocessor (e.g., Fig. 4) that displays the computed heading information on the devices display in real time. These are the types of devices expressly disclosed by the '317 patent to obtain direction information. The '317 patent discloses that a "device for getting direction information" can include "a control unit for analyzing sensor-measured data, thereby calculating direction information." '317 patent, col. 9:55-59. Thus, both Obradovich and Walters disclose both claimed devices. Note also, that combining orientation sensors, such as gyroscopes, compasses, or other sensors for obtaining orientation, with a GPS sensor in a portable terminal was also not new by July of 1999. To the extent that combination were an actual requirement of the claims, other prior art would apply. See, e.g., U.S. Patent No. 6,043,778 (Dec. 29, 1997) titled "Navigation system and orientation system incorporating solar sighting"; see also, e.g., U.S. Patent No. 5,146,231 (Oct. 4, 1991) titled "Electronic di-



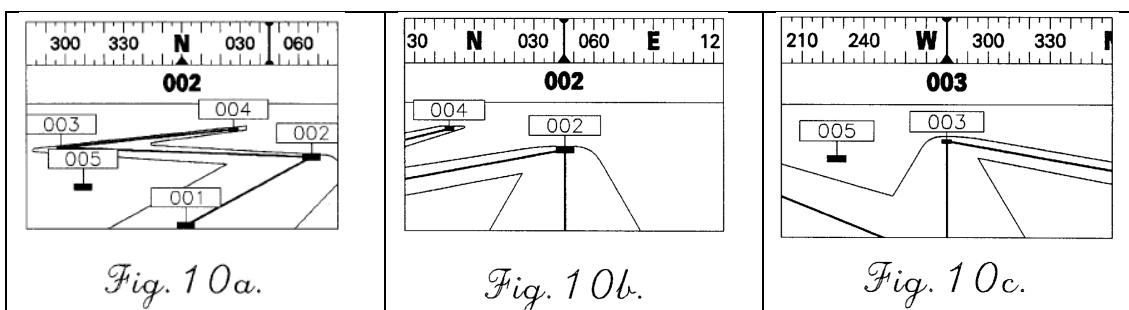
rection finder"; U.S. Patent No. 5,266,958 (Nov. 27, 1992) titled "Direction Indicating Apparatus and Method."

During the April 13 meeting, Hitachi additionally argued that the GPS-based orientation disclosed in Walters and Obradovich is different than that of the '317 patent because if the devices are not moving or if device's orientation is changed with respect to the direction of travel, that orientation would not be reflected in the systems of Obradovich and Walters. No such limitations appear in the asserted claims. Instead, the asserted claims of the '317 patent claim "getting direction information denoting **an orientation** of said portable terminal" and changing the display "...according to a change of said direction of said portable terminal orientation for walking navigation." Thus, the direction information of both prior art references invalidate the asserted claims.

Hitachi further noted that Walters failed to disclose the subject matter of claims 15 and 17 of the '317 patent. However, as Apple noted during the April 13 meeting, the additional limitations in these dependent claims do not add any novel features to the independent claim. For example, Walters is a patent assigned to Garmin Corporation. The additional limitations in dependent claims 15 and 17 are disclosed in many other prior art references, including several patents commonly assigned to Garmin Corporation that would be obvious to combine with the Walters reference. For example, U.S. Patent No. 6,076,039 discloses a device that looks just like the embodiment depicted in Walters' Figure 2, but also displaying a route with current location, and icons for beginning and ending points as in claim 17:



Another Garmin patent, U.S. Patent No. 5,936,553, similarly show displays of routes with curved lines, direction of movement by the arrow (compass heading arrows), symbols denoting starting and ending points and present place on the route:







Accordingly, Apple does not believe it infringes the claims of the '317 patent or that they are valid and hence Apple does not need a license to the '317 patent.

#### 4. U.S. Pat. No. 6,898,078 ("the '078 patent")

Hitachi alleges that the iPhone 4 series infringe claim 1 of the '078 patent. The '078 patent claims priority to April 23, 1997.

Apple maintains its position that the claims of the '078 patent are invalid because they recite new matter that was not disclosed in the original application and similarly the claims lack written description support in the specification due to the introduction of the "I/O device" limitation during prosecution.

In addition, claim 1 is invalid over the prior art. As Apple has previously explained, U.S. Pat. No. 5,931,929 (EP 0853414) to Tran anticipates all the elements of claim 1. Hitachi argues, despite the express disclosure in the '929 patent, that it does not "disclose or suggest sending electric power with respect to said I/O device to the docking station via the connector." As previously pointed out by Apple, the '929 patent specification specifically discloses sending and receiving electric power through the connector: "Connection to the elements of the docking station 11 is by the multiconductor plug-in connector 12 which conveys **both logic voltages and power supply voltages to and from** the docking station." Col. 6, lines 4-7. Hitachi tries to overcome this express disclosure in the '929 patent using several failed arguments.

First, Hitachi argues that because the laptop computer of Tran is powered from the docking station when docked, somehow this prevents power from being sent and received through the connector 12. As Apple previously noted, that the laptop is powered from the docking station is irrelevant. If that is not the case, Hitachi's alleged infringement fails; Apple's iPhone and dock clearly do not meet this requirement because the iPhone is powered from the Dock when docked. But, in any case, the specification of the '929 patent expressly states that power supply voltages are conveyed to and from the docking station. Despite this clear disclosure, Hitachi argues that "Tran did not disclose or suggest coupling the power supply from the laptop to the docking station because the description in Tran makes it completely unnecessary." However, the claims do not require directly "coupling the power supply from the laptop to the docking station." Instead, the claims require that the "information processing unit ... sends and receives an electric power and a signal with respect to said I/O device via said ... docking connector ...." This is precisely what Tran discloses.

Hitachi argues that the understanding of one of skill in the art must be taken into consideration when reading Tran. Apple agrees. As explained during our April 13 meeting, one of skill in the art would know that I/O devices, such as mouse 63 or keyboard 16 in Tran, are routinely powered through their interface cables and connectors. For example, Revision 1.0 of the Universal Serial Bus (USB) specification, dated January 15, 1996 (which would have been known to one of skill in the art by April of 1997) specifies that "USB transfers signal **and power** over a four wire cable, shown in Figure 4-2." See USB 1.0 at 29 (emphasis added). Tran further describes that "[c]onnections 61 from the plug-in 12' to the speakers 14, **the keyboard 16**, the monitor 17, the printer 18, and other devices such as a disk drive 62 and **mouse 63** are **internally wired**." Col.



6:10-13. Thus, the express disclosure of the '929 patent of sending logic and power supply voltages to and from the docking station through connector 12, particularly when read in the context of one of skill in the art, discloses the claimed sending and receiving of electric power. Even if there was some uncertainty on this point looking at the Tran specification alone, which there is none, when combined with the USB 1.0 specification, the case for obviousness is clear.

Hitachi also argues that the cited disclosure of Tran "does not mention a power supply but instead supply voltages used together with logic voltages. Electric power and voltage are not the same." First, this argument is wrong because the cited passage does mention "**power supply voltages**." Second, to the extent Hitachi attempts to distinguish the use of the term "voltage" from the term "power" as somehow indicating that a voltage cannot provide the electric energy necessary to operate, for example, an I/O device, this distinction is also wrong. Hitachi's own patents, illustrative of how these terms are used in the art, repeatedly refer to "voltages" as the conveying of the electrical energy to operate a device. For example, the '443 patent describes "[w]hen the display device 506 is formed of the liquid crystal display device with the back light, a brightness of the back light (not shown) is reduced or the back light is **turned off** by lowering or interrupting **the power supply voltage** of the back light" and further "[w]hen the information processing apparatus is connected with the file apparatus 514 such as the floppy disk apparatus, the hard disk apparatus and the optical disk apparatus, **the supply of the voltage** to a drive motor (not shown) of the file apparatus 514 is stopped." Similarly, the USB specification refers to voltage "to deliver power to devices": "The cable also carries VBus and GND wires on each segment to deliver power to devices. VBus is nominally +5 V at the source." This is precisely the description Hitachi points to in Tran, describing the low voltage cable (cable 40) that carries logic-level voltages **and supply voltages** at low level to for example power the keyboard and mouse. Any person of skill in the art would know that electric power ("P") is a function of voltage ("V") and resistance ("R"), i.e.,  $P=V^2/R$ . A power supply provides the voltage and the resistance is determined by the load or device being powered. As shown in the following marked up version of Tran's Figure 5, power supply voltages are carried from the power supply (and battery) of the laptop to the keyboard and mouse. Once the mouse and keyboard are operated (as loads to the power supply with some resistance R), current flows through the low-voltage wires (40), out through connector 12, to internal wires (16) and keyboard (16) and mouse (63) to power those devices:

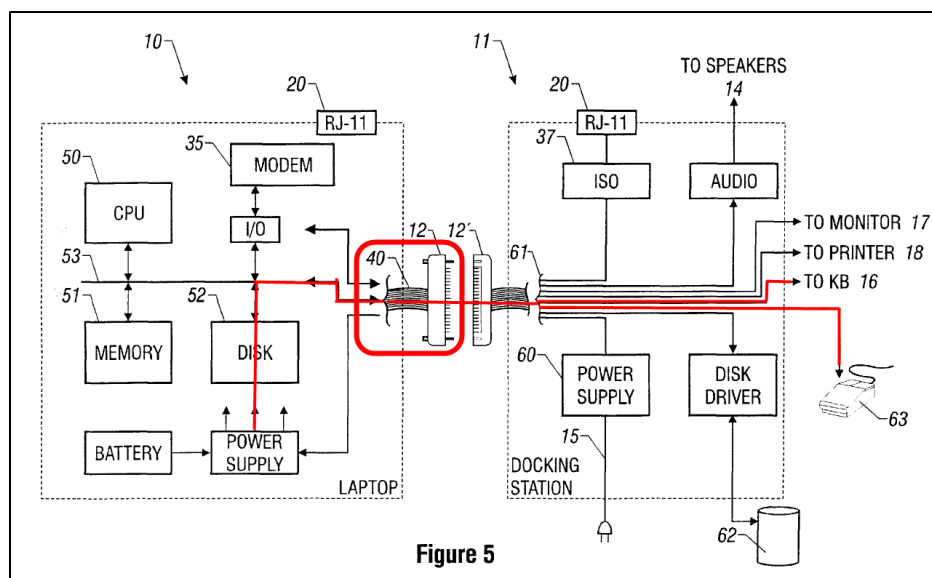


Figure 5

Of note is that contrary to Hitachi's suggestion, the docking station power supply (60) does not power and is not shown connected to any of the other components of the docking station. Specifically as to the keyboard and mouse components, this is no surprise because as was well known in the art, those components are powered through their serial interface connections to the CPU, e.g., USB or PS/2.

Claim 2 of the '078 patent simply requires that the system includes "a battery for storing the electric power which is sent and received via said information processing unit side docking connector." As Tran discloses, the laptop includes a battery that stores the electric power that powers the laptop along with the power supply. Col. 5:67 to 6:1. As is known, the battery power is the same "low voltage" power supply voltage that is sent and received through connector 12. *See, e.g.,* col. 3:58-61 ("the connections within the laptop computer 10 and the docking station 11 are at computer operating voltages, e.g., 3 V to 12 V DC.")

Thus, the '929 patent clearly anticipates claims 1 and 2 of the '078 patent.

#### 5. U.S. Pat. Nos. 8,214,459 ("the '459 patent") & 8,892,688 ("the '688 patent").

Hitachi alleges that Apple's iPhone 4/5 series and iPad / iPad 2 / iPad mini and iPad Air series in combination with the Apple TV infringe claim 1. Hitachi now also alleges that the iPhone 5 with iOS 7 infringes claims 3 and 4 of U.S. Patent No. 8,892,688 ("the '688 patent").

As Apple explained, the alleged portable terminal of claim 1 of the '459 patent, the iOS device, as made and sold by Apple does not include "an operation unit" or "user operation input unit" that receives a first user operation, a second user operation, and a third user operation as required by claim 1 of the '459 patent and claim 3 of the '688 patent. Moreover, by including the '688 patent in its allegations, Hitachi appears to accept that the accused Apple TV cannot correspond to the claimed "external device" because the Apple TV cannot display video content and therefore it



cannot be the external device of claim 1 of the '459 patent.

Hitachi also argues that the prosecution disclaimers made to overcome the Stolznick prior art are not a clear disavowal of claim scope because Stolznick was distinguished on other grounds. While Stolznick may have also been distinguished on other grounds, the applicants did state that "[n]ew claims 22-34 are believed to be **patentably distinct over the art of record for the following reasons**. ... As described in the present application, the subject matter described in the application **directly transmits the content and the information indicating the content display state from the current terminal to other (external) terminal** and completes the display of content on the current terminal." See 18/8/2011 Response at 7-8. Thus, Apple disagrees with Hitachi's characterizations, which contradict the record of this clear disclaimer.

The '459 patent and the '688 patent claim priority to September 26, 2007. By then, the content display switching claimed in these patents was well known. Prior art anticipates claim 1 of the '459 patent and claims 3 and 4 of the '688 patent. For example, U.S. Pat. No. 7,987,491 (filed on May 8, 2003) clearly discloses all the limitations of claim 1, particularly as Hitachi asserts the claim. Claim 3 of the '688 patent includes a subset of the elements of claim 1 of the '491 patent and therefore the same analysis applies.

Hitachi argues that the '491 patent (to Reisman) fails to anticipate "elements F and G" of claim 1 because "termination of a session in Reisman is not a termination of the display of the video content in the '495 Patent." Hitachi argues that "Reisman does not disclose or suggest the 'termination of the display of content'." Hitachi also argues that the "synchronization feature" of Reisman cannot allow for the second user operation to operate the video content after transfer and termination of display because the synchronized operation of Reisman does not terminate the session. As Apple explained during the April 13 meeting, Hitachi is wrong on all accounts.

The '491 patent discloses that what it refers to as "terminating" a session does not require actually terminating but includes the termination of display. For example, the '491 patent describes that "[m]uch of the discussion herein is oriented to the case of independent systems, and often **refers to the case of sessions being terminated at a source device set after transfer to a destination device set**, and of being established at the destination. From the perspective just described, however, it will be apparent that in a centrally controlled system or **in a fully synchronized system** that gives the virtual effect of centralization, detailed implementation of the methods described might be such that **the session might only appear to be terminated**. Such might be the case, for instance, where just one underlying session is maintained, one that is to be presented in different views to each device set, but which is **no longer to be presented** to the user on the source device set. Similarly, establishment of the newly transferred session might just be a matter of making it visible. Except where stated otherwise or clear from context, such references to session termination or establishment should be understood as including embodiments in which it is **just the appearance of the session that is terminated** or established." Col. 93:37-55. Thus, it is clear that Reisman teaches terminating the display of a session in a first device when transferring to a second device and while keeping the sessions synchronized.

During the April 13 meeting, Hitachi raised questions as to whether Reisman disclosed remote control operations questioning whether a UI for a remote control on the transferring device set was disclosed. Indeed, Reisman does provide such disclosure. In general terms, Reisman describes:



if the optional tracking/synchronization feature is provided and selected ... the source session might normally remain active and be kept in synchronization with the destination session, which might be instantiated with the same resources active, and with equivalent session state. In the usual case, user action might be permitted at either device set, and could trigger an event transfer with the essential state information to replicate the effect of that event at the other device set, just as if the user action had occurred there.

Col. 89:10-19. In addition, specifically with respect to remote control functionality, Reisman describes, for example, the use of PC to act as a control remote to a STB:

Such relay via the head-end can involve transfers **in either direction**. In addition to state transfers from the STB to the PC, **user commands at the PC could drive actions at the STB**, again with simple software enhancements that can be provided at conventional STBs and head-end servers. Aside from the advanced case of general ITV or hypermedia session transfer, simpler transfers could permit the PC (or any other Internet-connected device) **to serve essentially as a remote control to the STB for specific functions**, such as, for example, channel changes, camera angle or other viewing option changes, PPV or VOD requests, and provision of EPG functions **at the PC that control operation of the STB**. This method of relay through the wide area network is also applicable to the more general relay of TV-related signals (streams) from a STB to other intelligent devices that is described below (for transmission via IP over local facilities).

Col. 68:64 – col. 69:12; *see also*, Fig. 8.

Hitachi also argued that the remote control function from a PDA disclosed in Reisman “does not provide any teaching or disclosure regarding the control of the terminated session or its content.” Again, Hitachi misapprehends the ‘491 patent’s teachings on this point. The ‘491 patent describes the transfer of sessions between two independent systems or device sets. *See, e.g.*, Fig. 2a. So for example, a device set may be a TV with a remote connected to a set top box and another device set may be a monitor, keyboard, and PC system. *Id.* However, with respect to a PDA with remote control capabilities for an ITV system, a hybrid system is disclosed. As the ‘491 patent discloses, “a PDA acting as an independent but coordinated browser in conjunction with an ITV system could be considered independent and a separate device set in that use (being a peer processor), but to the extent that it also serves directly in emulation of a standard remote to the ITV system by sending standard remote control commands as activated by a user (as a simple I/O device), that use could be considered dependent in relation to the ITV system controller and thus part of the ITV device set.” Col. 27:29-37. Thus, in this embodiment, after the PDA acting as an independent device set transfers a session to an ITV system, even if the session is not synchronized, the PDA continues to be able to control (receive second user input) the ITV system as part of the ITV device set. Thus, this embodiment is an alternative disclosure of the claimed portable terminal of the ‘459 patent and ‘688 patent independent from and in addition to the synchronized session operation discussed above.

In addition, with respect to claim 4 of the ‘688 patent, the ‘491 patent also teaches, or at least



suggests, the additional limitations in that claim. Claim 4 recites displaying “a first indication” for inputting a user operation to cause the external display to begin displaying the video content and replacing that “first indication” to “a second indication” for inputting the user operation that causes the video content from the external display to be displayed in the portable terminal. The ‘491 patent teaches the “first indication” as one of several possible trigger events, including for example a hyperlink: “A transfer request to transfer the browser session A1 to system B is initiated by reception of some trigger event (step 610). Typical trigger events include a user request to re-target an ending resource or to duplicate the current resource to the target system, whether to a new window or an existing window. Alternative events include link attribute coding as specified by a target attribute (following the model HTML) or a show attribute (following the XLink model) which may be triggered on link activation, or on load, as specified by an actuate attribute.”

Similarly, the ‘491 patent describes upon transferring a synchronized session to a second system, replacing the “first indication” (e.g., a hyperlink on a page/window) with “a second indication” such as a minimized window, icon, entry in a task list: “In a centralized embodiment (real or virtual), the same effect might be achieved by simply removing the co-session from view. This might appear as a complete removal, or be presented using other techniques. Such techniques might **include minimization of the corresponding window** so as to leave a vestigial representation **such as an icon in a taskbar or an entry in a task list**. This might also be thought of in terms of “opening” and “closing” of sessions, or more precisely, of session presentations.” Col. 93:64 – col. 94:5. The ‘491 patent further explains that the devices can include a control panel: “Control panel 920, which might also be thought of as, a dashboard, **may take any desired format**, with the example here showing a hierarchical tree control for selecting among a set of enhancement resources, in this case using the common convention of a ‘+’ at the left of a group item indicating that there are multiple items that can be revealed in an expanded view, by clicking the + sign, and a ‘-’ that can be clicked to hide such a sub-item list. Alternatives **might use buttons, icons, or images, or other indication and selection methods**. The list of resources might be restricted to currently open windows or might include links to additional resources. For example, visual distinctions such as color or font style might indicate whether recently viewed resource windows are currently active. Thus, the user might use either the **taskbar buttons** or the control panel entries to select among open resource windows.” Col. 135:50-65. Thus, the control panel can include the icons or taskbar buttons used to minimize the session as a way to input control commands. The ‘491 patent describes for example user input to trigger a session “pull”: “The alternative case, which can be provided as a complementary feature, could permit the user to act from the target device to trigger a ‘pull.’ In this case, instead of system B waiting to receive a transfer request, a command on the as-yet-uncoordinated PC could actively request the transfer from the TV, signaling to the TV’s exporter **to send a state record back**.” Col. 39:41-47. Thus, claim 4 is also disclosed in Reisman.

Accordingly, because Apple does not infringe the ‘459 patent or the ‘688 patent and they are invalid, Apple does not believe a license is required.





Based on our analysis, it does not appear that Apple is using any technology covered by the Hitachi patents.

Sincerely,

A handwritten signature in blue ink, appearing to read "H Mewes", is located below the word "Sincerely,".

Heather Mewes  
Senior Counsel, IP Transactions  
IP & Licensing Group