In particular, James does not disclose the "timestamp" limitation required in every asserted claim of the '867 patent. *Id.* at Q&A 560. The "time stamp" in James is an "absolute count of time" rather than a "count measured from the last cycle synch point." *Id.* at Q&A 561. The only mention of the "time stamp" in James is this single description. *Id.* James fails to disclose when within a "cycle start communication" the "time stamp," if present, would be transmitted. *Id.* James does not disclose whether this "time stamp" would contain the count value at the beginning of the "cycle start communication," the actual point of transmission of the "time stamp" (as done in the '867 patent asserted claims), or some other reference point. *Id.* at Q&A 562. This lack of disclosure is significant because the purpose of the "timestamp" in the '867 patent is to accurately reflect the value of the transmitter *timer at the time of transmission.* *Id.* at Q&A 563. Thus, the specific value represented by the timestamp relative to the transmitter timer is important. *Id.* In James, it is completely unclear what the "time stamp" represents, and therefore James cannot disclose the "timestamp" of the '867 patent. *Id.*

James likewise does not disclose the "adjusted timestamp" limitations in the '867 patent. *Id.* at Q&A 564. At best, James suggests that an "internal clock" within a "unit" could be adjusted gradually based on unspecified "time information." *Id.*; RX-1335 (James '029) at col. 4, lns. 20-24.

James is therefore fundamentally different from the system in the '867 patent. *Id.* at Q&A 565. James is directed toward wired computer bus interconnects in which all units are connected to one another. *Id.* This is different from the '867 patent, which discloses wireless local area networks where "stations" can only "communicate with each other via the access point." *Id.*

Complainants' expert Dr. Katti testified that a person of ordinary skill in the art attempting to overcome the deficiencies of prior art systems would specifically be motivated not to combine such references with any reference, including James, that was directed to synchronization on an wired interconnect bus using bit-by-bit arbitration access. *Id.* at Q&A 569.

James does not disclose "a radio modem capable of periodically receiving a transmission signal from a transmitter" as required by every asserted claim of the '867 patent. *Id.* at Q&A 566. The only communication disclosed in James is wired communication that does not use a radio modem. *Id.*

James does not disclose the claim element "the transmission signal including a timestamp field, the timestamp field including a timestamp having a value m for synchronizing the receiver counter with a transmitter time, wherein the timestamp represents a value m within a count sequence of the transmitter timer" and similar elements as required by every asserted claim of the '867 patent. *Id.* at Q&A 572. The "time stamp" in James does not match the timestamp in the '867 patent for the reasons discussed above. Further, the "count of the cycle start delay" also does not correspond to the "timestamp" in the '867 patent. *Id.* at Q&A 573. It is not clear from James that the "cycle start delay" represents the value in a transmitter timer. *Id.* James refers to a "master clock," but does not state that the "cycle start delay" represents a value in the master clock. *Id.* James also does not disclose any other transmitter timer. *Id.* Accordingly, the "count of the cycle start delay" does not meet any party's proposed construction of "timestamp." *Id.*

James does not disclose the claim element "wherein the timestamp accounts for delays due to a busy signal on a medium access protocol" as explicitly required by the '867 patent and as implicit in the "timestamp" limitation. *Id.* at Q&A 574. The cycle start delay disclosed in

James equals a delay due to the cycle master unit waiting for the absence of communications on the interconnect among any of the units. *Id.* Nothing in James discloses "a busy signal on a medium access protocol," which Respondents' expert Dr. Heegard testified is unique to CSMA systems. *See id.* As discussed above, medium access in James is governed by "bit-by-bit arbitration," not by the absence of a CSMA busy signal on the medium. *Id.* Again, the deterministic, wired communication protocol of James is strikingly different from the wireless communication protocol of the '867 Patent where all transmissions are subject to unpredictable delays. *Id.* at Q&A 575.

James does not disclose the claim element "wherein the transmission signal further includes a header field, which is transmitted before the timestamp field and the traffic pending field" in the '867 patent. *Id.* at Q&A 576. The term "traffic pending field" in the '867 patent has a specific function of indicating for which stations data packets are buffered. *Id.* at Q&A 576; JX-0005 ('867 patent) at col. 5, lns. 7-8. Even if this is not an explicit, binding definition of "traffic pending field," it would be clear to one of skill in the art that the term "traffic pending field" includes specific information about data being buffered, stored, or transmitted. CX-1641C (Katti RWS) at Q&A 576. Respondents point to nothing in James that satisfies this description.

James does not disclose the claim element "wherein the header field includes type data indicating a type of the transmission signal" in the '867 Patent. *Id.* at Q&A 577. To the extent James discloses a header field, the "arbitration number and address" is not "type data indicating a type of the transmission signal." *Id.* The "arbitration number and address" in James identifies the priority of the signal and its destination, not its "type," and confirms that the medium access system of James is different from the CSMA system of the '867 patent. *Id.*

James does not disclose the claim element "circuitry for adjusting a value, based on the timestamp, at which a count sequence begins at the receiver timer" or similar limitations in the '867 Patent. *Id.* at Q&A 578. James suggests that the "internal clock" within a "unit" could be adjusted gradually based on unspecified "time information." *Id.* This is far from an enabling disclosure of "circuitry for adjusting a value, based on the timestamp, at which a count sequence begins." *Id.*

James does not disclose the claim element "wherein the receiver counter commences a synchronizing count sequence beginning at the adjusted value" in the '867 patent because James fails to disclose circuitry for adjusting a value. *Id.* at Q&A 579.

James does not disclose the claim element "an adder for adding a compensation factor to the value at which the count sequence begins" in the '867 patent because Respondents have identified nothing in James that would meet this limitation. *See id.* at Q&A 580.

James does not disclose the claim element "wherein the timestamp accounts for a delay between a start of a process to transmit the transmission signal and an actual time of transmitting the transmission signal," and similar elements in the '867 patent. *Id.* at Q&A 581. James fails to disclose when within a "cycle start communication" the "time stamp," if present, would be transmitted or if this "time stamp" would contain the count value at the beginning of the "cycle start communication," the actual point of transmission of the "time stamp" as done in the '867 Patent asserted claims, or some other reference point. *Id.* Further, the "count of the cycle start delay" does not qualify as a "timestamp" for the reasons discussed above. *Id.*

James does not disclose the claim element "wireless local area network receiver" in the '867 patent. *Id.* at Q&A 582. To the extent the term "wireless local area network receiver" is limiting, this element is not disclosed in James. *Id.* As discussed above, James is limited to

wired applications, and a person of ordinary skill in the art would therefore not understand James to disclose any wireless applications, let alone a wireless local area network receiver. *Id.*

Respondents have not identified anything in James that would disclose the claim element "wherein the receiver retrieves the timestamp." *Id.* at Q&A 583.

James does not disclose the claim element "circuitry for adjusting the value at which the count sequence begins" in the '867 patent for the reasons described above with respect to the similar claim element. *Id.* at Q&A 5884.

Therefore, it is determined that Respondents have not shown that James anticipates the asserted claims of the '867 patent.

d. U.S. Patent No. 5,371,734 ("Fischer")

Respondents argue that that U.S. Patent No. 5,371,734 ("Fischer") anticipates asserted claims 20, 23-24, 26-28, 33-35, 38 and 40 of the '867 patent. *See* Resps. Br. at 215-17. Respondents do not substantively discuss Fischer in their post-hearing brief, however, and for this reason alone it is determined that Respondents have not proved anticipation. *See id.* Nevertheless, the record evidence also shows that Fischer does not disclose all limitations of the '867 claims identified above.

Fischer is directed to a MAC[58] technique in a wireless LAN[59] for selectively activating and deactivating transmitters and receivers to extend operation when battery powered. CX-1641C (Katti RWS) *Id.* at Q&A 590. The evidence shows that Fischer explicitly teaches away from the CSMA framework described in the '867 patent. *Id.* at Q&A 591.

[58] "MAC" is an acronym for "medium access control."

[59] "LAN" is an acronym for "local area network."

Fischer identifies TDMA and CSMA as possible MAC protocols, highlighting the differences between TDMA and CSMA. *Id.* at Q&A 593; RX-0405 (Fischer '734) at col. 2, ln. 63 – col. 3, ln. 56. Fischer also identifies a third protocol, called Packet Reservation Multiple Access ("PRMA"), which is similar to TDMA. CX-1641C (Katti RWS) at Q&A 593; RX-0405 (Fischer '734) at col. 3, ln. 57 – col. 4, ln. 22. Fischer chooses a hybrid of TDMA and PRMA in order to avoid the "problems of avoiding collisions and saturation that affect CSMA." RX-0405 (Fischer '734) at col. 5, lns. 19-25. For these reasons, Fischer teaches away from the invention of the '867 patent, which is directed toward a CSMA system. CX-1641C (Katti RWS) at Q&A 594.

As in all TDMA-type systems, the communication cycles disclosed in Fischer are predetermined. *Id.* at Q&A 595. For example, Fischer states "[a]ll intervals of the communication cycle 70 take place within the limits of predesignated assigned times established by the hub." RX-0405 (Fischer '734) at col. 13, lns. 12-14. Fischer also discloses that

> [b]ecause all frames, both outbound and inbound, occur at predetermined times, the remotes 66 are able to determine in advance approximately when to expect frames transmitted from the hub and when to transmit frames to the hub. As a consequence of the predictable times when frames may be both received and transmitted, the remotes can power their radio interfaces down to preserve power at other times.

RX-0405 (Fischer '734) at col. 13, lns. 29-26.

Fischer is in direct contrast with the teachings and asserted claims of the '867 Patent. *See* CX-1641C (Katti RWS) at Q&A 598. Fischer fails to disclose several of the asserted claim elements, including (1) a timestamp field – and hence a timestamp that represents a count sequence value at the time of transmission, (2) adjusting a timestamp – and hence commencing a count at an adjusted timestamp, (3) using a compensation factor for an adjustment, and (4) a

timer interval field. *Id.* at Q&A 599. Basic elements within the '867 patent such as a "timestamp" that represents a "count sequence" in a "transmitter timer," a "receiver timer" that can be synchronized from a "timestamp" (whether "adjusted" or not), or a "transmission signal" subject to delays occurring at the time of transmission are also not disclosed in Fischer. *Id.* at Q&A 600. Complainants' expert Dr. Katti therefore testified that a person of ordinary skill in the art trying to develop a MAC layer timing synchronization method and apparatus such as that disclosed in the '867 patent would not be motivated to look to Fischer. *Id.* at Q&A 604.

Fischer does not disclose the claim element "the transmission signal including a timestamp field, the timestamp field including a timestamp having a value m for synchronizing the receiver counter with a transmitter timer," or similar claim elements required by every asserted claim of the '867 patent. *Id.* at Q&A 606. Further, Fischer does not disclose a "timestamp" because that term is limited to CSMA systems as disclosed in the '867 patent. As discussed above, Fischer explicitly teaches away from a CSMA system that would use a timestamp. Inasmuch as Fischer fails to disclose a timestamp, Fischer likewise fails to disclose the claim element "the timestamp represents a value m within a count sequence of the transmitter timer" *Id.* at Q&A 607.

Fischer does not disclose the claim element "the timestamp accounts for delays due to a busy signal on a medium access protocol," as required explicitly or implicitly in every asserted claim of the '867 patent. *Id.* at Q&A 608. Nothing in Fischer demonstrates a "busy signal" on the medium. *Id.* at Q&A 609. Again, Fischer explicitly teaches away from the CSMA framework, which may involve busy signals, and instead teaches a TDMA/PRMA hybrid that relies on predesignated assigned times to manage communication among multiple units. *Id.* at Q&A 608-609. In light of the testimony from Respondents' expert Dr. Heegard that the term

"busy signal" is uniquely defined in the '867 patent as pertaining to CSMA systems only, a non-CSMA system such as James cannot disclose this limitation.

Fischer does not disclose the claim element "circuitry for adjusting a value, based on the timestamp, at which a count sequence begins at the receiver timer" in of the '867 patent. *Id.* at Q&A 611. Inasmuch as Fischer fails to disclose a timestamp, Fischer cannot disclose circuitry for adjusting a value based on a timestamp. *Id.*

For similar reasons, Fischer does not disclose the following claim elements: "the receiver counter commences a synchronizing count sequence beginning at the adjusted value," "circuitry for commencing the synchronizing count sequence after the transmission signal is completely received," and "circuitry for commencing the synchronizing count sequence after a CRC data in the received transmission signal is checked." *Id.* at Q&A 611-614.

Fischer does not disclose the claim element "the count sequence representing a value m at the time of transmission of the transmission signal." *Id.* at Q&A 615. Inasmuch as Fischer does not disclose a timestamp for the reasons discussed above, James cannot disclose this additional limitation. *Id.*

Finally, Fischer does not disclose a "traffic pending field" or a "timer interval field" because of the fundamental differences between Fischer and the '867 patent. *See id.* at Q&A 616.

Therefore, it is determined that Respondents have not shown by clear and convincing evidence that Fischer anticipates any asserted claim of the '867 patent.

e. U.S. Patent No. 4,337,463 ("Vangen")

Respondents argue that U.S. Patent No. 4,337,463 ("Vangen") anticipates asserted claims 26-32, 47, 49, 52-56, and 58-59 of the '867 patent. Resps. Br. at 212-14. Respondents do not

substantively discuss Vangen in their post-hearing brief, however, and for this reason alone it is determined that Respondents have not proved anticipation. *See id.* Nevertheless, the record evidence also shows that Vangen does not disclose all limitations of the '867 claims identified above.

Vangen is directed to a "time synchronization transmitter-receiver system to be used between a master station and a remote station" for applications such as the "electric utility industry" that desires to "accurately record the time of day of electric meter readings" even if events occur such as "power outages or brief power interruptions which may delay time clock data or perhaps destroy time clock data altogether." RX-0311 (Vangen '463) at col. 1, lns. 6-23. Vangen accomplishes this by having a "master station transmitter" send "a timing information signal addressed to a particular remote station." RX-0311 (Vangen '463) at col. 2, lns. 3-6.

Vangen does not disclose the claim element "a radio modem capable of periodically receiving a transmission signal from a transmitter" as required by every asserted claim of the '867 patent. CX-1641C (Katti RWS) at Q&A 624. Vangen does not use the word "modem" and therefore no "radio modem" is disclosed, regardless of Vangen's references to radio communication. *Id.*

Vangen does not disclose the claim element "wherein the compensation factor compensates for propagation delay at the receiver." *Id.* at Q&A 625-626. Vangen does not mention "propagation delay" or disclose any delay related to any "propagation delay at the receiver." *Id.*

Vangen does not disclose the claim element "a wireless local area network receiver." *Id.* at Q&A 627-628. To the extent the claim term "a wireless local area network receiver" is limiting, Vangen does not disclose this claim element. *Id.* Vangen does not disclose a receiver

in anything resembling a "wireless local area network" as that term would be understood by a person of ordinary skill in the art. *Id.*

Vangen does not disclose the claim element "wherein the receiver retrieves the timestamp." *Id.* at Q&A 629-630. There is no specific disclosure in Vangen as to how the alleged timestamp is retrieved. *Id.*

Therefore, it is determined that Respondents have not shown by clear and convincing evidence that Vangen anticipates any asserted claim of the '867 patent.

f. U.S. Patent No. 5,295,154 ("Meier")

Respondents argue that U.S. Patent No. 5,295,154 ("Meier") anticipates asserted claims 20, 23-24, 26, 29-30, 32-35, 37-40, 47, 49-55, and 60-61 of the '867 patent. Resps. Br. at 217-19. Respondents do not substantively discuss Meier in their post-hearing brief, however, and for this reason alone it is determined that Respondents have not proved anticipation. *See id.* Nevertheless, the record evidence also shows that Meier does not disclose all limitations of the '867 claims identified above.

Meier is directed to routing data through a network of intermediate base stations in a radio data communication system. CX-1641C (Katti RWS) at Q&A 637. Meier describes his invention as one that can "route data efficiently dynamically, and without looping," can "make the routing of the data transparent to the RF terminals" and will be "capable of handling RF terminal mobility and lost nodes with minimal impact on the entire RF data communication system." RX-0394 (Meier '154) at col. 2, lns. 26-36.

Meier discloses a "multiple-hop communications system" composed of "one or more host computers and multiple gateways, bridges, and RF terminals." *Id.* at col. 1, lns. 53-55. Meier discloses a host computer communicates over a wired network with wireless base stations and a

"gateway 20 which acts as the root node for the spanning tree of the RF data network of the present invention." *Id.* at col. 2, lns 50-53. The "gateway" communicates through either "hard-wired" links or "RF" links to "bridges" and these "bridges" can further communicate with other "bridges" and simultaneously "RF terminals" which are "non-bridging stations." *Id.* at Fig. 1, col. 2, lns. 45-65. In Meier, "[a]ll messages are routed along branches of the spanning tree," which is "rooted at the gateway 20," and the "[s]panning tree organization is facilitated with a HELLO protocol which allows nodes to determine the shortest path to the root before attaching to the spanning tree." *Id.* at col. 3, lns. 19-20; col. 9, lns. 64-68.

Meier discloses that the "HELLO protocol" resides within the "network layer" of the system, which is distinct from the "Data Link Control (DLC) layer" and its sub-layer for "Medium Access Control (MAC)". *Id.* at col. 7, ln. 61 – col. 8, lns. 53. As discussed above, the '867 patent discloses a MAC protocol, which is distinct from the network layer. CX-1641C (Katti RWS) at Q&A 642. Accordingly, Meier is of little relevance to the MAC protocol issues addressed by the '867 patent. *Id.*

In addition to operating at a completely different layer from the system of the '867 patent, Meier discloses a deterministic communication protocol that contrasts with the claimed invention in the '867 patent. One aspect of the "HELLO protocol" in Meier is the broadcast of "hello messages," also called "HELLO packets" elsewhere in Meier, in discrete "hello slots" at "calculated intervals" during which "Nodes refrain from transmitting during busy hello slots." RX-0394 (Meier '154) at col. 7, ln. 68 – col. 8, ln. 2. Meier further discloses that these "HELLO packets" include such information as "a 'seed' value used to calculate the time of the next hello message," "a hello slot displacement," and a "pending message list." *Id.* at col. 10, lns. 5-36.

The RF terminals in the Meier system know when to expect these "HELLO packets" because all nodes "can execute the algorithm i times to determine the time (and seed) if [sic] the i-th hello message from the transmitter." *Id.* at col. 13, lns. 33-35. Furthermore, Meier discloses that "Repeater nodes learn which hello slots are busy and refrain from transmitting during busy hello slots." If a busy hello slot is encountered, "the next free slot is used and a hello 'displacement' field indicates the offset from the calculated slot. Cumulative delays are not allowed (i.e., contention delays during the i hello transmission do not effect [sic] the time of the i+1 hello transmission)." *Id.* at col. 13, lns. 22-24.

Thus, transmission of the HELLO packets is predetermined. CX-1641C (Katti RWS) at Q&A 647. "HELLO packets" are transmitted at random intervals, but their "hello times" of transmission are entirely deterministic within the network layer count of "slots" for all nodes in the network many intervals in advance of their actual transmission. *Id.* at Q&A 648. HELLO packets are only transmitted in "hello slots," which are separated by regular intervals. *Id.* If there is an attempt to transmit a HELLO packet during a busy slot, it will be transmitted on the next slot instead. *Id.* Thus, a HELLO packet is always transmitted one of a number of predetermined slots, similar to a TDMA system. *Id.*

This deterministic communication is consistent with the fact that precise timing synchronization at the MAC layer is not essential to the operation of the network layer. *Id.* at Q&A 649. One important function of the "HELLO packets" in Meier, beyond the core function of organizing an optimal spanning tree, is the "pending message" feature by which the "network layer" notifies "SLEEPING nodes" that it will try to send such terminals any stored messages. *Id.* at Q&A 650; RX-0394 (Meier '154) at col. 13, lns. 51-64. This function, however, operates at the network layer, whereas the '867 patent is directed toward the MAC layer, and the precise

MAC-layer timing of the '867 patent is neither necessary for the operation of the Meier system nor enabled by Meier itself. CX-1641C (Katti RWS) at Q&A 651-652; RX-0394 (Meier '154) at col. 8, lns. 20-23; col. 13, lns. 51-64; col. 15, lns. 46-60.

Meier is therefore not consistent with the teachings of the '867 patent. *Id.* at Q&A 654. Meier fails to disclose virtually any of the asserted claim elements, including a timestamp field (and hence a timestamp that represents a count sequence value at the time of transmission), adjusting a timestamp (and hence commencing a count at an adjusted timestamp), using a compensation factor for an adjustment, a radio modem, a timer interval field, and accounting for delays due to a busy signal on a medium access protocol. *Id.* at Q&A 655.

Thus, Complainants' expert Dr. Katti testified that, because of all of these factors teach away from dependence on MAC layer timing synchronization, a person of ordinary skill in the art attempting to develop a MAC layer timing synchronization method and apparatus such as that disclosed in the '867 patent would specifically be motivated not to consider a network layer spanning tree optimization reference such as Meier in order to obtain the inventions embodied in the '867 patent. *Id.* at Q&A 659.

The "hello displacement field" does not correspond to the "timestamp" in the asserted '867 claims because it is not disclosed as a "count sequence" in a "transmitter timer." *Id.* at Q&A 656. There is also no disclosure of any "receiver timer" that in any way synchronizes to the "hello 'displacement' field." *Id.* Accordingly, Meier does not disclose the claim element "the transmission signal including a timestamp field, the timestamp field including a timestamp having a value m for synchronizing the receiver counter with a transmitter timer, wherein the timestamp represents a value m within a count sequence of the transmitter timer" or similar elements as required by every asserted claim of the '867 patent. *Id.* at Q&A 661.

The hello slot displacement value also does not account for delays due to a busy signal on a medium access protocol. *Id.* at Q&A 662-664. Inasmuch as Meier fails to disclose a "timestamp," Meier necessarily fails to disclose the claim element "wherein the timestamp accounts for delays due to a busy signal on a medium access protocol." *Id.* Further, Meier fails to address the specific problem of a "busy signal on a medium access protocol" addressed by the '867 patent. *Id.* Whereas the delays in the '867 patent are unpredictable due to traffic on the medium, the HELLO messages in Meier are sent in discrete, predetermined "hello slots." *Id.* If a busy slot is chosen, the next free slot is used. *Id.* This is different from a "busy signal." *Id.* A "busy signal" indicates that the medium is busy for some undetermined amount of time. *Id.* The slots disclosed in Meier are discrete, and therefore the timing of a transmission signal is always deterministic, *i.e.*, if a busy slot is encountered the signal simply moves on to the next slot. *Id.*

Respondents have not identified anything in Meier that discloses the claim element "wherein the header field includes type data indicating a type of the transmission signal." *Id.* at Q&A 665-666.

Meier does not disclose the claim element "circuitry for adjusting a value, based on the timestamp, at which a count sequence begins at the receiver timer." *Id.* at Q&A 667-668. Inasmuch as Meier fails to disclose a timestamp, it necessarily fails to disclose any other claim element relying on a timestamp. *Id.* Also, Meier cannot disclose any other claim element that includes an "adjusted value," because there is no adjusted value based on a timestamp. *Id.*

For similar reasons, Meier fails to disclose the following claim elements: "the receiver counter commences a synchronizing count sequence beginning at the adjusted value," "an adder for adding a compensation factor to the value at which the count sequence begins," and "wherein

the compensation factor compensates for propagation delay at the receiver." *Id.* at Q&A 669-671.

Respondents have not identified anything in Meier that meets the limitation "wherein the transmission signal further includes a timer interval field, and the timer interval field includes timer interval data indicating an interval between periodic transmissions of transmission signals including traffic pending field." *Id.* at Q&A 672-673.

Meier does not disclose the claim element "wherein the receiver retrieves the timestamp" in the '867 patent because nothing in Meier specifically discloses the manner in which the timestamp is retrieved and used by the receiver. *Id.* at Q&A 674-675.

Therefore Respondents have not shown by clear and convincing evidence that Meier anticipates any asserted claim of the '867 patent.

3. Obviousness

a. Motorola WIN/White in Combination with Other Prior Art References

Respondents allege that the Motorola WIN/White system in combination with other prior art references renders obvious the asserted claims of the '867 patent.[60] *See* Resps. Br. at 221-23; GR12 Filing at 24-43. Respondents, however, failed to brief these combinations in a substantive manner. *See* Resps. Br. at 221-23. Therefore, it is determined that Respondents have not shown by clear and convincing evidence that Motorola WIN/White in combination with other art renders obvious the asserted claims of the '867 patent.

[60] Respondents also argue that Motorola WIN/White alone renders obvious the '867 asserted claims. *See* GR12 Filing at 43. Respondents did not brief this argument, however. *See* Resps. Br. at 219-23. Accordingly, it is determined that Respondents have not established that Motorola WIN/White renders any asserted '867 claim obvious.

b. James in Combination with Other Prior Art References

Respondents allege that James in combination with other prior art references renders obvious the asserted claims of the '867 patent.[61] *See* Resps. Br. at 223; GR12 Filing at 24-43. Respondents, however, failed to brief these combinations in a substantive manner. *See* Resps. Br. at 223. Therefore, it is determined that Respondents have not shown by clear and convincing evidence that James in combination with other art renders obvious the asserted claims of the '867 patent.

c. Secondary Considerations

Complainants argue that secondary considerations demonstrate that the asserted claims of the '867 patent are not obvious. *See* Compls. Br. at 538-41. Specifically, it is argued that evidence of commercial success, long felt but unmet need, failure of others, copying, and praise for the invention weighs against a finding of obviousness. The evidence adduced by Complainants, however, fails to establish the requisite nexus between the secondary considerations and the '867 patent. Moreover, inasmuch as Respondents have not shown by clear and convincing evidence that the asserted claims are anticipated or rendered obvious in light of the cited prior art references, the secondary considerations play only a minor role in the validity analysis of the '867 patent.[62]

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[61] Respondents also argue that James alone renders obvious the '867 asserted claims. *See* GR12 Filing at 43. Respondents did not brief this argument, however. *See* Resps. Br. at 219-23. Accordingly, it is determined that Respondents have not established that James renders any asserted '867 claim obvious.

[62] In any event, the discussion of the validity of the '867 patent is provided in the alternative, inasmuch as it has been determined that the asserted claims of the '867 patent are not infringed.

4. Indefiniteness

Respondents argue that the asserted claims of the '867 patent are invalid under 35 U.S.C. § 112 for indefiniteness.[63] *See* Resps. Br. at 226 (citing RX-0006C (Heegard WS) at Q&A 1787-1823). Based on the record evidence, it is determined that Respondents have not shown that the asserted claims are indefinite.

With respect to the limitation "the traffic pending field" in claim 23, Respondents argue this limitation is indefinite because "[t]he term 'the' before a claim term refers to the antecedent of the claim term, but there is no prior antecedent for 'the traffic pending field.'" Resps. Br. at 227. A person of ordinary skill in the art, however, would recognize that claim 23 contains a typographical error and construe "the traffic pending field" as "a traffic pending field." CX-1641C (Katti RWS) at Q&A 793. The term "traffic pending field" without the article is well defined. *See, e.g.*, JX-0005 ('867 patent) at col. 5, lns 7-8.

Respondents also argue that "claims 20, 34, and 47 are indefinite for failing to define any structural relationship between the 'receiver counter' and the 'radio modem.' The claims require no relationship between those elements, and thus, it is unclear to a person of art how the relationship affects the scope of the claims." Resps. Br. at 227-28. Complainants' expert Dr. Katti testified that a person of ordinary skill in the art would understand how to construct a device with a radio modem and receiver counter as recited in these claims. CX-1641C (Katti

[63] Respondents also argue that the asserted claims of the '867 patent are invalid under 35 U.S.C. § 112 for lack of written description and lack of enablement. *See* Resps. Br. at 226. The issues of lack of written description and lack of enablement with respect to the '867 patent, however, were not identified in the GR12 Filing as issues to be addressed in this Initial Determination. *See* GR12 Filing at 15-44. Accordingly, the administrative law judge declines to make any findings with respect to these issues.

RWS) at Q&A 794-795. These claims do not require any "relationship" between the radio modem and the receiver counter, only that these components be present in the device. *Id.*

Therefore, Respondents have not shown that any asserted '867 claim is invalid for indefiniteness.[64]

IX. Domestic Industry

A. General Principles of Law

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found "only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established." 19 U.S.C. § 1337(a)(2). Section 337(a) further provides:

> (3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned—
>
> (A) significant investment in plant and equipment;
>
> (B) significant employment of labor or capital; or
>
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

These statutory requirements consist of an economic prong (which requires certain activities)[65] and a technical prong (which requires that these activities relate to the intellectual

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[64] The GR12 Filing indicates that this Initial Determination should address whether all asserted '867 claims are invalid for indefiniteness. *See* GR12 Filing at 43-44. Respondents, however, only briefed claims 20, 23, 34, and 47. *See* Resps. Br. at 226-28. Accordingly, the administrative law judge declines to make any findings with respect to the other asserted claims.

[65] The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. *See Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm'n Op. at 39 n.17 (Apr. 14,

property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 13 (May 16, 2008) ("*Stringed Musical Instruments*"). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm'n Op. at 5 (July 22, 2011) ("*Navigation Devices*").

"With respect to section 337(a)(3)(A) and (B), the technical prong is the requirement that the investments in plant or equipment and employment in labor or capital are actually related to 'articles protected by' the intellectual property right which forms the basis of the complaint." *Stringed Musical Instruments* at 13-14. "The test for satisfying the 'technical prong' of the industry requirement is essentially same as that for infringement, i.e., a comparison of domestic products to the asserted claims." *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). "With respect to section 337(a)(3)(C), the technical prong is the requirement that the activities of engineering, research and development, and licensing are actually related to the asserted intellectual property right." *Stringed Musical Instruments* at 13.

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that "whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by

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2010) ("We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).") (citing *Bally/Midway Mfg. Co. v. U.S. Int'l Trade Comm'n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as "when a significant and unusual development occurred after the complaint has been filed." *See Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm'n Op., at 5-6 (Jan. 20, 2012) ("[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.").

the intellectual property right concerned is not evaluated according to any rigid mathematical formula." *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 27 (Feb. 17, 2011) ("*Printing and Imaging Devices*") (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm'n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines "the facts in each investigation, the article of commerce, and the realities of the marketplace." *Id.* "The determination takes into account the nature of the investment and/or employment activities, 'the industry in question, and the complainant's relative size.'" *Id.* (citing *Stringed Musical Instruments* at 26).

With respect to section 337(a)(3)(C), whether an investment in domestic industry is "substantial" is a fact-dependent inquiry for which the complainant bears the burden of proof. *Stringed Musical Instruments* at 14. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the "substantial investment" requirement of this section. *Id.* at 25. There is no need to define or quantify an industry in absolute mathematical terms. *Id.* at 26. Rather, "the requirement for showing the existence of a domestic industry will depend on the industry in question, and the complainant's relative size." *Id.* at 25-26.

When a complainant relies on licensing[66] to demonstrate the existence of a domestic industry pursuant to section 337(a)(3)(C), the Commission has explained the showing required of the complainant as follows:

> Complainants who seek to satisfy the domestic industry requirement by their investments in patent licensing must establish that their asserted investment activities satisfy three requirements of section 337(a)(3)(C).

[66] A recent Federal Circuit opinion confirms that a finding of domestic industry under section 337(a)(3)(C) can be supported by licensing activities alone. *InterDigital Commc'ns, LLC v. Int'l Trade Comm'n*, 690 F.3d 1318, 1329-30 (Fed. Cir. 2012).

> First, the statute requires that the investment in licensing relate to "its exploitation," meaning an investment in the exploitation of the asserted patent. 19 U.S.C. § 1337(a)(3)(C) . . . . Second, the statute requires that the investment relate to "licensing." 19 U.S.C. § 1337(a)(3)(C) . . . . Third, any alleged investment must be domestic, i.e., it must occur in the United States. 19 U.S.C. § 1337(a)(2), (a)(3). Investments meeting these requirements merit consideration in our evaluation of whether a complainant has satisfied the domestic industry requirement. Only after determining the extent to which the complainant's investments fall within these statutory parameters can we evaluate whether complainant's qualifying investments are "substantial," as required by the statute. 19 U.S.C. § 1337(a)(3)(C). If a complainant's activity is only partially related to licensing the asserted patent in the United States, the Commission examines the strength of the nexus between the activity and licensing the asserted patent in the United States.

Navigation Devices at 7-8 (footnotes omitted).

In *Navigation Devices*, the Commission held that, "[w]here the complainant's licensing activities and investments involve a group of patents or a patent portfolio, the complainant must present evidence that demonstrates the extent of the nexus between the asserted patent and the complainant's licensing activities and investments." *Navigation Devices* at 9. The Commission provided a non-exhaustive list of factors it may consider to establish the strength of the nexus, including (1) the number of patents in the portfolio, (2) the relative value contributed by the asserted patent to the portfolio, (3) the prominence of the asserted patent in licensing discussions, negotiations and any resulting license agreement, and (4) the scope of technology covered by the portfolio compared to the scope of the asserted patent. *Id.* at 10. "A showing that the asserted patent is relatively important within the portfolio is not required to show a nexus between that patent and the licensing activities . . . but may be one indication of the strength of the nexus." *Id.* at 11.

For the purposes of satisfying the domestic industry requirement a patentee can rely on the activities of a licensee. *See, e.g.*, *Certain Electronic Devices, Including Handheld Wireless*

Communications Devices, Inv. Nos. 337-TA-673, 337-TA-667, Order No. 49C at 4-5 (Oct. 15, 2009).

B. Complainants' Investments in Licensing the Asserted Patents

Complainants argue that they have made substantial investments in the exploitation of each of the patents-in-suit through Complainants' U.S.-based licensing activities that are dedicated to, among others, the patents-in-suit. Compls. Br. at 547-70; Compls. Reply at 170-89. Respondents oppose a finding of domestic industry. Resps. Br. at 516-43; Resps. Reply at 153-57.

The record evidence shows that each asserted patent was developed in-house at Complainants' facilities, or their predecessor's. CX-1598C (Salute WS) at Q&A 22, Q&A 28, Q&A 39; CX-1595C (Kerr WS) at Q&A 218, Q&A 223, Q&A 231. In the past, LSI manufactured platforms that practiced the '663 Patent, and LSI unveiled the first video technology platform compliant with the ITU-T H.264/MPEG-4 Advanced Video Coding (AVC) standard. CX-1598C (Salute WS) at Q&A 28-38.

The record evidence also shows that [ ] major companies have taken a license to the asserted patents[67] and, since 2008, the licenses covering one or more of the asserted patents have

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[67] Complainants have licensed the asserted patents as part of long-term licensing agreements with major technology companies, including, among others, [ ] CX-0949C (LSI-Agere 4th Response to 2nd Rog. Set, Aug. 31, 2012), CX-0027C ([ ] PLA); CX-0693C ([ ] PLA); CX-0034C ([ ] PLA Amendment); CX-0398C ([ ] PLA); CX-0036C ([ ] PLA); CX-0038C ([ ] PLA); CX-0039C ([ ] PLA); CX-0026C ([ ] PLA); CX-0704C ([ ] PLA); CX-0042C ([ ] PLA); CX-0667C ([ ] PLA); CX-0668C ([ ] PLA); CX-0028C ([ ] PLA); CX-0672C ([ ] PLA); CX-0694C ([ ] PLA); CX-0673C ([ ] PLA); CX-0674C ([ ] PLA); CX-0035C ([ ] PLA); CX-0695C ([ ] PLA); CX-0677C ([ ] PLA); CX-0682C ([ ] PLA); CX-0684C ([ ] PLA); CX-0703C ([ ] PLA); CX-0669C ([ ] PLA);

generated [ ] in revenue and are expected to generate an additional [ ] CX-1598C (Salute WS) at Q&A 197-198; CX-0400C; CX-0761C. To further capitalize on the asserted "exemplary" patents and others in their vast portfolio, Complainants have established and continue to maintain a licensing practice in the United States, which employs [ ] individuals in several facilities across the United States. CX-1598C (Salute WS) at Q&A 57-59, Q&A 199-209; CX-1599C (Waskiewicz WS) Q&A 23-54.

Complainants have adduced evidence showing that they own a 600,000-square-foot office complex in Allentown, Pennsylvania for administration, licensing, and engineering. CX-0921 (2011-02-28 LSI 10-K) at 17. This facility houses Complainants' licensing business unit, including a reverse engineering laboratory. CX-1598C (Salute WS) at Q&A 59; CX-0712C. Complainants additionally lease office space in two buildings in Milpitas, California for corporate headquarters, administration (including licensing), and engineering. CX-0921 (2011-02-28 LSI 10-K) at 17; CX-1598C (Salute WS) at Q&A 59; CX-0712C. Complainants also own approximately 330,000 square feet of space across two facilities in Fort Collins and Colorado Springs, Colorado for sales and engineering operations, and approximately 330,000 square feet of space in Wichita, Kansas for engineering, administration (including licensing), and training. *Id.* As of the end of fiscal year 2010, Complainants held approximately $205 million in long-lived assets in North America, primarily in the United States, out of a total of approximately $223 million worldwide. CX-0921 (2011-02-28 LSI 10-K) at 77.

CX-0670C ([ ] PLA); CX-0698C ([ ] PLA); CX-0705C ([ ] Agreement); CX-0676C ([ ] PLA); CX-0696C ([ ] PLA); CX-0681C ([ ] PLA Amendment); CX-0678C ([ ] PLA); and CX-0025C ([ ] PLA).

The evidence shows that Complainants' business operation is divided into separate units with specific goals and objectives. Included in these units is [

]" CX-1568C; CX-1595C (Kerr WS) at Q&A 205-208; CX-1599C (Waskiewicz WS) at Q&A 23-37. [

] CX-1598C (Salute WS) at Q&A 104; CX-1599C (Waskiewicz WS) at Q&A 52-54; CX-1595C (Kerr WS) at Q&A 212. [

] CX-1599C (Waskiewicz WS) at Q&A 52-54.

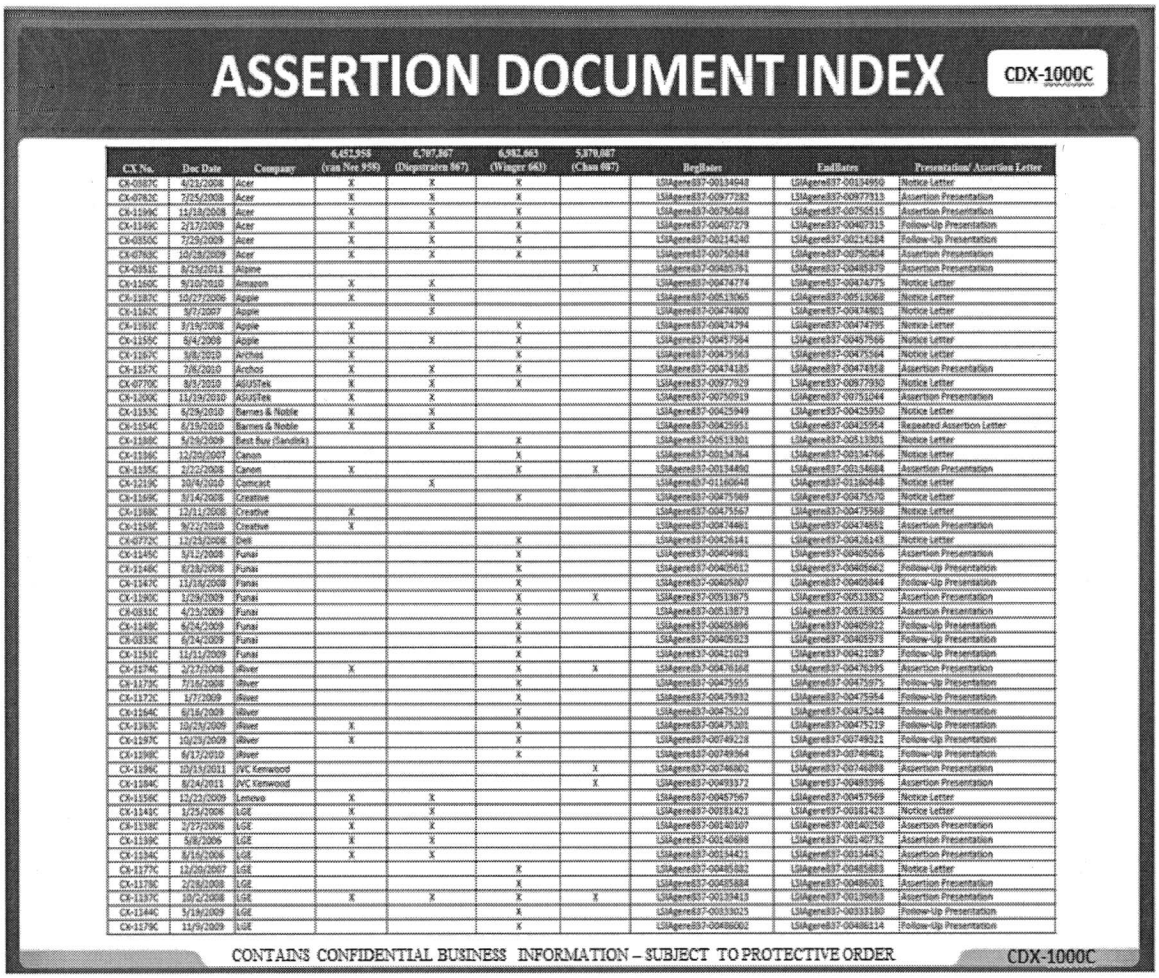
Complainants have shown that the [ ] has a dedicated facility located in Allentown, Pennsylvania, and occupies approximately [ ] square feet for offices and laboratory space to accommodate [ ] professionals dedicated to licensing. CX-1598C (Salute WS) at Q&A 58-60; CX-1595C (Kerr WS) at Q&A 80; CX-0712C. [ ] has invested over [ ] on its continuing licensing operations in the United States since 2008, including over [ ] in salary and benefits for its dedicated employees. CX-1595C (Kerr WS) at Q&A 214. Over this same period, [ ] has generated approximately [ ] in licensing revenue, and Complainants claim that more than [ ] of this total was derived from licenses covering one or more of the asserted patents. *Id.*

Within the engineering facility in Allentown, [ ] has invested nearly [ ] in equipment dedicated to engineering activities devoted to licensing Complainants' patent

portfolio. CX-1598C (Salute WS) at Q&A 209. Likewise, Complainants have invested [ ] purchasing consumer products to determine whether such products utilize the technology covering the asserted patents or others in Complainants' vast portfolio. CX-1598C (Salute WS) at Q&A 207; CX-0769C. All of [ ] investments are dedicated to licensing Complainants' patent portfolio, which includes the asserted patents. CX-1599C (Waskiewicz WS) at Q&A 52-54.

The testimonial evidence shows that [ ] is responsible for all communications and negotiations related to licensing. CX-1598C (Salute WS) at Q&A 104; CX-1599C (Waskiewicz WS) at Q&A 52-54; CX-1595C (Kerr WS) at Q&A 212. [ ] conduct internal investigations of potential licensees' products and, if warranted, it can and does send out notices to potential licensees informing them of the possibility of obtaining a license. CX-1598C (Salute WS) at Q&A 213-539; CX-1599C (Waskiewicz WS) at Q&A 55-111; CX-1595C (Kerr WS) at Q&A 309; *see* CDX-1000C (listing assertion documents that specifically identify the asserted patents).

With respect to the requirement that the licensing expenditures have a nexus to the asserted patents, Complainants have identified [ ] licensing negotiations (events) that identify the asserted patents. CX-1598C (Salute WS) at Q&A 213-539; CX-1599C (Waskiewicz WS) at Q&A 55-111; CX-1595C (Kerr WS) at Q&A 309; *see* CDX-1000C (listing assertion documents that specifically identify the asserted patents). Upon reviewing each of the [ ] assertion documents, Dr. Kerr identified which asserted patent was specifically identified in the following demonstrative:



ASSERTION DOCUMENT INDEX

CDX-1000C

CX No.	Doc Date	Company	6,452,958 (van Nee 958)	6,797,867 (Dispotraten 867)	6,982,663 (Winger 663)	5,870,087 (Chen 087)	BegBates	EndBates	Presentation/ Assertion Letter
CX-0387C	4/23/2008	Acer	X	X	X		LSIAgere837-00134948	LSIAgere837-00134959	Notice Letter
CX-0762C	7/25/2008	Acer	X	X	X		LSIAgere837-00977282	LSIAgere837-00977313	Assertion Presentation
CX-1199C	11/18/2008	Acer	X	X	X		LSIAgere837-00750468	LSIAgere837-00750515	Assertion Presentation
CX-1149C	2/17/2009	Acer	X	X	X		LSIAgere837-00407279	LSIAgere837-00407315	Follow-Up Presentation
CX-0350C	7/29/2009	Acer	X	X	X		LSIAgere837-00214240	LSIAgere837-00214284	Follow-Up Presentation
CX-0763C	10/28/2009	Acer	X	X	X		LSIAgere837-00750348	LSIAgere837-00750404	Assertion Presentation
CX-0353C	8/25/2011	Alpine				X	LSIAgere837-00485791	LSIAgere837-00485879	Assertion Presentation
CX-1160C	9/10/2010	Amazon	X	X			LSIAgere837-00474774	LSIAgere837-00474775	Notice Letter
CX-1187C	10/27/2006	Apple	X	X			LSIAgere837-00513065	LSIAgere837-00513068	Notice Letter
CX-1162C	9/7/2007	Apple		X			LSIAgere837-00474800	LSIAgere837-00474801	Notice Letter
CX-1161C	9/19/2008	Apple	X		X		LSIAgere837-00474794	LSIAgere837-00474795	Notice Letter
CX-1155C	9/4/2008	Apple	X	X	X		LSIAgere837-00457564	LSIAgere837-00457566	Notice Letter
CX-1167C	9/8/2010	Archos	X		X		LSIAgere837-00475563	LSIAgere837-00475564	Notice Letter
CX-1157C	7/6/2010	Archos	X	X	X		LSIAgere837-00474185	LSIAgere837-00474358	Assertion Presentation
CX-0770C	8/3/2010	ASUSTek	X	X	X		LSIAgere837-00977929	LSIAgere837-00977930	Notice Letter
CX-1200C	11/19/2010	ASUSTek	X	X			LSIAgere837-00750919	LSIAgere837-00751044	Assertion Presentation
CX-1153C	6/29/2010	Barnes & Noble	X	X			LSIAgere837-00425949	LSIAgere837-00425950	Notice Letter
CX-1154C	8/19/2010	Barnes & Noble	X	X			LSIAgere837-00425951	LSIAgere837-00425954	Repeated Assertion Letter
CX-1188C	5/29/2009	Best Buy (Sandisk)			X		LSIAgere837-00513301	LSIAgere837-00513301	Notice Letter
CX-1186C	12/20/2007	Canon			X		LSIAgere837-00134764	LSIAgere837-00134766	Notice Letter
CX-1135C	2/22/2008	Canon	X		X	X	LSIAgere837-00134890	LSIAgere837-00134684	Assertion Presentation
CX-1219C	10/4/2010	Comcast		X			LSIAgere837-01160648	LSIAgere837-01160648	Notice Letter
CX-1169C	3/14/2008	Creative			X		LSIAgere837-00475569	LSIAgere837-00475570	Notice Letter
CX-1168C	12/11/2008	Creative	X				LSIAgere837-00475567	LSIAgere837-00475568	Notice Letter
CX-1158C	9/22/2010	Creative	X				LSIAgere837-00474481	LSIAgere837-00474851	Assertion Presentation
CX-0772C	12/23/2008	Dell			X		LSIAgere837-00426141	LSIAgere837-00426143	Notice Letter
CX-1145C	3/12/2008	Funai			X		LSIAgere837-00404981	LSIAgere837-00405056	Assertion Presentation
CX-1146C	8/28/2008	Funai			X		LSIAgere837-00405612	LSIAgere837-00405662	Follow-Up Presentation
CX-1147C	11/18/2008	Funai			X		LSIAgere837-00405807	LSIAgere837-00405844	Follow-Up Presentation
CX-1190C	1/29/2009	Funai			X	X	LSIAgere837-00513875	LSIAgere837-00513952	Assertion Presentation
CX-0331C	4/23/2009	Funai			X		LSIAgere837-00513875	LSIAgere837-00513905	Assertion Presentation
CX-1148C	6/24/2009	Funai			X		LSIAgere837-00405896	LSIAgere837-00405922	Follow-Up Presentation
CX-0333C	6/24/2009	Funai			X		LSIAgere837-00405923	LSIAgere837-00405973	Follow-Up Presentation
CX-1151C	11/11/2009	Funai			X		LSIAgere837-00421029	LSIAgere837-00421087	Follow-Up Presentation
CX-1174C	2/27/2008	iRiver	X		X	X	LSIAgere837-00476168	LSIAgere837-00476395	Assertion Presentation
CX-1173C	7/16/2008	iRiver			X		LSIAgere837-00475955	LSIAgere837-00475971	Follow-Up Presentation
CX-1172C	1/7/2009	iRiver			X		LSIAgere837-00475932	LSIAgere837-00475954	Follow-Up Presentation
CX-1164C	6/16/2009	iRiver			X		LSIAgere837-00475220	LSIAgere837-00475244	Follow-Up Presentation
CX-1163C	10/29/2009	iRiver	X		X		LSIAgere837-00475201	LSIAgere837-00475219	Follow-Up Presentation
CX-1197C	10/29/2009	iRiver	X		X		LSIAgere837-00749228	LSIAgere837-00749321	Follow-Up Presentation
CX-1198C	6/17/2010	iRiver			X		LSIAgere837-00749364	LSIAgere837-00749401	Follow-Up Presentation
CX-1196C	10/15/2011	JVC Kenwood				X	LSIAgere837-00746802	LSIAgere837-00746898	Assertion Presentation
CX-1184C	8/24/2011	JVC Kenwood				X	LSIAgere837-00493372	LSIAgere837-00493396	Assertion Presentation
CX-1159C	12/22/2009	Lenovo	X	X			LSIAgere837-00457567	LSIAgere837-00457569	Notice Letter
CX-1141C	1/25/2006	LGE	X	X			LSIAgere837-00181421	LSIAgere837-00181423	Notice Letter
CX-1138C	1/27/2006	LGE	X	X			LSIAgere837-00140197	LSIAgere837-00140250	Assertion Presentation
CX-1139C	5/8/2006	LGE	X	X			LSIAgere837-00140698	LSIAgere837-00140792	Assertion Presentation
CX-1134C	8/16/2006	LGE	X	X			LSIAgere837-00134411	LSIAgere837-00134451	Assertion Presentation
CX-1177C	12/20/2007	LGE			X		LSIAgere837-00485083	LSIAgere837-00485083	Notice Letter
CX-1178C	2/28/2008	LGE			X		LSIAgere837-00485884	LSIAgere837-00486001	Assertion Presentation
CX-1137C	10/2/2008	LGE	X	X	X	X	LSIAgere837-00139413	LSIAgere837-00139453	Assertion Presentation
CX-1144C	5/19/2009	LGE			X		LSIAgere837-00333025	LSIAgere837-00333180	Follow-Up Presentation
CX-1179C	11/9/2009	LGE			X		LSIAgere837-00486002	LSIAgere837-00486214	Follow-Up Presentation

CONTAINS CONFIDENTIAL BUSINESS INFORMATION – SUBJECT TO PROTECTIVE ORDER

CDX-1000C

ASSERTION DOCUMENT INDEX

CDX-1000C

CX No.	Doc Date	Company	6,452,958 (van Nee 958)	6,707,867 (Diepstraten 867)	6,982,663 (Winger 663)	5,870,687 (Chan 687)	BegBates	EndBates	Presentation/ Assertion Letter
CX-1181C	3/11/2008	Lite-On			X		LSIAgere837-00486214	LSIAgere837-00486393	Assertion Presentation
CX-1182C	10/29/2008	Lite-On			X		LSIAgere837-00486574	LSIAgere837-00486639	Assertion Presentation
CX-1180C	1/13/2009	Lite-On			X		LSIAgere837-00486115	LSIAgere837-00486168	Follow-Up Presentation
CX-1170C	3/14/2008	Microsoft	X		X		LSIAgere837-00475571	LSIAgere837-00475572	Notice Letter
CX-1205C	5/12/2008	Microsoft	X		X		LSIAgere837-01085583	LSIAgere837-01085789	Assertion Presentation
CX-1165C	1/6/2009	Microsoft	X				LSIAgere837-00475268	LSIAgere837-00475293	Follow-Up Presentation
CX-1166C	10/8/2009	Microsoft	X		X		LSIAgere837-00475294	LSIAgere837-00475312	Follow-Up Presentation
CX-1215C	6/28/2011	Mitsubishi				X	LSIAgere837-01093443	LSIAgere837-01093444	Notice Letter
CX-1140C	10/4/2007	Motorola	X				LSIAgere837-00177317	LSIAgere837-00177830	Assertion Presentation
CX-1192C	10/25/2007	Motorola		X			LSIAgere837-00524253	LSIAgere837-00524258	Notice Letter
CX-1208C	9/12/2008	Motorola		X			LSIAgere837-00786717	LSIAgere837-00786724	Notice Letter
CX-1142C	11/10/2008	Motorola	X	X			LSIAgere837-00181710	LSIAgere837-00181721	Follow-Up Presentation
CX-1191C	3/30/2009	Motorola	X	X			LSIAgere837-00517466	LSIAgere837-00517478	Assertion Presentation
CX-1195C	4/1/2010	MSI	X	X			LSIAgere837-00746636	LSIAgere837-00746637	Notice Letter
CX-1204C	2/21/2008	Nikon	X	X	X	X	LSIAgere837-00790309	LSIAgere837-00790414	Assertion Presentation
CX-1150C	5/13/2011	Nintendo		X			LSIAgere837-00407421	LSIAgere837-00407422	Notice Letter
CX-1202C	10/27/2011	Nintendo		X			LSIAgere837-00751296	LSIAgere837-00751364	Assertion Presentation
CX-1508C	1/9/2006	Nokia	X	X			LSIAgere837-01086840	LSIAgere837-01086858	Assertion Presentation
CX-0758C	6/15/2006	Nokia	X	X			LSIAgere837-00182496	LSIAgere837-00182507	Follow-Up Presentation
CX-0760C	4/3/2007	Nokia	X	X			LSIAgere837-00182399	LSIAgere837-00182425	Follow-Up Presentation
CX-0759C	1/30/2008	Nokia	X	X			LSIAgere837-00517990	LSIAgere837-00518002	Follow-Up Presentation
CX-0764C	3/15/2007	Panasonic	X				LSIAgere837-00337853	LSIAgere837-00337448	Follow-Up Presentation
CX-0765C	8/1/2007	Panasonic	X				LSIAgere837-00233599	LSIAgere837-00233446	Follow-Up Presentation
CX-0766C	1/16/2008	Panasonic	X				LSIAgere837-00234199	LSIAgere837-00234238	Follow-Up Presentation
CX-0767C	8/24/2009	Panasonic			X		LSIAgere837-00751565	LSIAgere837-00751627	Follow-Up Presentation
CX-0766C	1/25/2010	Panasonic			X		LSIAgere837-00480363	LSIAgere837-00480468	Follow-Up Presentation
CX-1557C	12/11/2008	Panasonic			X		LSIAgere837-01093823	LSIAgere837-01094004	Follow-Up Presentation
CX-1171C	6/21/2011	Pandigital	X	X			LSIAgere837-00475648	LSIAgere837-00475649	Notice Letter
CX-1188C	9/23/2008	Philips			X		LSIAgere837-00486640	LSIAgere837-00486691	Follow-Up Presentation
CX-1185C	9/30/2009	Philips				X	LSIAgere837-00493740	LSIAgere837-00493866	Assertion Presentation
CX-1206C	1/27/2009	Pioneer			X		LSIAgere837-01088045	LSIAgere837-01088079	Assertion Presentation
CX-1193C	2/6/2008	Pioneer	X	X	X		LSIAgere837-00527723	LSIAgere837-00527724	Notice Letter
CX-1186C	1/27/2010	Pioneer			X		LSIAgere837-00493867	LSIAgere837-00493905	Follow-Up Presentation
CX-1214C	3/31/2010	Pioneer	X	X	X		LSIAgere837-01093191	LSIAgere837-01093195	Follow-Up Presentation
CX-1209C	5/27/2010	Pioneer			X		LSIAgere837-01092985	LSIAgere837-01093014	Assertion Presentation
CX-1194C	11/16/2011	Samsung			X		LSIAgere837-00534188	LSIAgere837-00534388	Assertion Presentation
CX-1213C	6/9/2010	Samsung		X			LSIAgere837-01093173	LSIAgere837-01093190	Assertion Presentation
CX-1189C	3/6/2008	Sandisk	X		X		LSIAgere837-00513304	LSIAgere837-00513504	Notice Letter
CX-1143C	5/13/2008	Sharp			X		LSIAgere837-00272236	LSIAgere837-00272237	Notice Letter
CX-1207C	8/25/2009	Sharp			X		LSIAgere837-01089321	LSIAgere837-01089442	Assertion Presentation
CX-1210C	12/16/2009	Sharp			X		LSIAgere837-01093035	LSIAgere837-01093040	Follow-Up Presentation
CX-1211C	1/26/2010	Sharp			X		LSIAgere837-01093041	LSIAgere837-01093074	Follow-Up Presentation
CX-1208C	3/30/2010	Sharp			X		LSIAgere837-01092674	LSIAgere837-01092682	Follow-Up Presentation
CX-1152C	7/20/2011	Sharp				X	LSIAgere837-00422207	LSIAgere837-00422282	Assertion Presentation
CX-1216C	10/12/2011	Sharp				X	LSIAgere837-01130822	LSIAgere837-01130830	Follow-Up Presentation
CX-1212C	8/9/2010	Sony			X		LSIAgere837-01093117	LSIAgere837-01093118	Notice Letter
CX-1217C	10/22/2010	Sony				X	LSIAgere837-01130891	LSIAgere837-01130979	Assertion Presentation
CX-1218C	11/17/2011	Sony				X	LSIAgere837-01130960	LSIAgere837-01131038	Assertion Presentation
CX-1175C	5/29/2008	Target (Sandisk)	X		X		LSIAgere837-00477037	LSIAgere837-00477037	Notice Letter
CX-1159C	9/21/2011	Velocity Micro	X	X	X		LSIAgere837-00474652	LSIAgere837-00474766	Assertion Presentation
CX-1176C	5/29/2009	Wal-Mart (Sandisk)	X		X		LSIAgere837-00477084	LSIAgere837-00477085	Notice Letter
CX-1133C	6/1/2005	Yamaha	X	X			LSIAgere837-00134166	LSIAgere837-00134284	Assertion Presentation

CONTAINS CONFIDENTIAL BUSINESS INFORMATION - SUBJECT TO PROTECTIVE ORDER

CDX-1000C

The foregoing efforts to license the asserted patents resulted in licenses with numerous companies, including [ ] CX-0027C ([ ] PLA); CX-0036C ([ ] PLA); CX-0038C ([ ] PLA); CX-0039C ([ ] PLA); CX-0026C ([ ] PLA); CX-0682C ([ ] PLA); CX-0703C ([ ] PLA); CX-0696C ([ ] PLA); and CX-0025C ([ ] PLA). Complainants therefore argue that "there is a clear nexus between these licensing efforts, the asserted patents and the executed license agreement." Compls. Br. at 556. Complainants further argue that "a strong nexus between the relevant licenses and the asserted patents is further established by the fact that three of the four asserted patents (the van Nee '958, the Diepstraten

'867 and the Winger '663 patents) are standard essential patents." Compls. Br. at 556 (citing CX-1598C (Salute WS) at Q&A 28-38, Q&A 46-49; CX-0069).

While Complainants do not allocate expenses based on patents, Complainants' expert Dr. Kerr opined that a substantial portion of Complainants' licensing investments are allocable to licensing activities related to one or more of the asserted patents. Using licensing negotiation documents (events), Dr. Kerr made a conservative estimate of the amount of investment allocable to licensing the asserted patents. CX-1595C (Kerr WS) at Q&A 307-379.

Dr. Kerr estimates that since 2008 Complainants invested at least [ ] in employee costs in licensing activities related to one or more of the asserted patents. CX-1595C (Kerr WS) at Q&A 343-379. More specifically, Dr. Kerr allocated the amount invested to each separate asserted patent. These amounts are as follows: [ ] for the '958 patent, [ ] for the '867 patent, [ ] for the '087 patent, and [ ] for the '663 patent. CX-1595C (Kerr WS) at Q&A 343-379.

Complainants also adduced evidence showing significant litigation costs associated with licensing the asserted patents. In particular, the asserted patents have been the subject of litigation involving [ ] Sony Corporation ("Sony"), Vizio Incorporated ("Vizio"), and SanDisk Incorporated ("SanDisk"). CX-1598C (Salute WS) at Q&A 554-556. Although Complainants have litigated the asserted patent against other companies in order to license, Complainants are not relying on all expenditures relating to all litigations. *See* Compls. Br. at 326.

For example, Complainants [ ] filing litigation against Sony in August 2006. *See* CX-0778C; CX-408 (*Agere Systems Inc. v. Sony Corp.*, No. 2:06-CV-0079-TJW, First Am. Compl. (E.D. Tex. Aug. 8, 2006)). In that

litigation, ten Agere patents were initially asserted and one patent was dropped from the litigation, leaving nine patents in total asserted against Sony. Among the patents Agere asserted against Sony were the '867 and '958 patents. *Id.* Shortly after the court found that Sony infringed the asserted Diepstraten '867 patent, Sony [ ] asserted patents. *See* CX-1617; CX-0025C [(

] CX-0025C; CX-0026C. The record shows that Complainants incurred roughly [ ] in costs related to the Sony litigation, including attorney fees and related expenses. CX-1595C (Kerr WS) at Q&A 383-390. Giving equal weight to the patents asserted against Sony suggests that Complainants invested approximately [ ] each on litigation related to the '867 and '958 patents. CX-1595C (Kerr WS) at Q&A 390.

Similarly, [ ] initiating litigation against Vizio in 2010. CX-0801C ([ ]); CX-0802C ([ ]); CX-0803C ([ ]); CX-0804C ([ ]) [ ] Complainants were filed suit against Vizio, in the United States District Court of the Central District of California, Western Division. CX-1595C (Kerr WS) at Q&A 391-402; *see LSI Corporation v. Vizio Inc.*, No. 8:10-cv-01602AG-AJW (C.D. Cal. Oct. 20, 2010)). In that litigation, Complainants asserted a total of eight patents, including the '087 patent. The Vizio litigation settled, [

] CX-0794C. Complainants have addused

evidence showing that they incurred approximately [ ] in costs related to the Vizio litigation, including attorney fees and related expenses. Giving equal weight to each of the patents asserted in the Vizio litigation suggests an allocation of Complainants' investment to be approximately [ ] related to the '087 patent. CX-1595C (Kerr WS) at Q&A 402; CX-0806C (LSI Outside Counsel Expenses); CX-0795C (Vizio Legal Invoices Part 1); CX-0796C (Vizio Legal Invoices Part 2); CX-0797C (Vizio Legal Invoices Part 3); CX-0798C (Vizio Legal Invoices Part 4).

Finally, Complainants tried to license the asserted Winger '663 patent to SanDisk. CX-1189C. After receiving Complainants' letter requesting to meet to license the Winger '663 patent, San Disk filed a declaratory judgment action on, among other patents, the Winger '663 patent. CX-0100 (*SanDisk Corp. v. LSI Corp.*, No. 3:09-cv-02737-WHA, Complaint (N.D. Cal. June 19, 2009)). The litigation ended [

] CX-0696C. In the course of defending the lawsuit brought by SanDisk, LSI incurred litigation expenses of approximately [ ] CX-1595C (Kerr WS) at Q&A 403-407; CX-0806C (LSI Outside Counsel Expenses); CX-0799C (SanDisk Legal Invoices Part 1); CX-0800C (Sandisk Legal Invoices Part 2). Giving an equal weight to each of the eight patents LSI asserted against SanDisk suggests that Complainants have spent approximately [ ] in litigation related costs per patent, including the '663 patent. CX-1595C (Kerr WS) at Q&A 407.

With respect to Complainants' overall investment in licensing the asserted patents, Dr. Kerr therefore estimates that Complainants have invested more than [ ] in recent years in employee-related costs, litigation costs, and travel expenses attributable to activities involving one or more of the asserted patents. CX-1595C (Kerr WS) at Q&A 380-470; CDX-1012C

(allocating [ ] to license the '087 patent, [ ] for the '958 patent, [ ] for the '867 patent, and [ ] for the '663 patent).

Respondents argue that Complainants have not shown that the claimed licensing expenses have the required nexus with the asserted patents. Resps. Br. at 534-40. As for the question of whether the amounts invested by Complainants are "substantial" such that they satisfy the domestic industry requirement of section 337, Respondents argue that Complainants have not shown "substantial" investment in licensing the asserted patents. *See* Resps. Br. at 523-34, 540-41. Respondents argue, *inter alia*, that Complainants' claimed employee costs are unsubstantiated, that Complainants' claimed travel expenses and costs are inflated, that Complainants cannot rely on their outside counsel litigation expenses, and that Complainants use inconsistent time periods to measure the alleged domestic industry. *See id.* at 523-532. Respondents' arguments, however, are not persuasive.

The evidence adduced by Complainants regarding licensing communications with third parties that specifically reference the asserted patents establishes that there is indeed a nexus between Complainants' investments in its licensing program and the asserted patents. With respect to the question of whether these investments are "substantial," the Commission has adopted "a flexible approach whereby a complainant whose showing on one or more of the three section 337(a)(3)(C) requirements is relatively weak may nevertheless establish that its investment is 'substantial' by demonstrating that its activities and/or expenses are of a large magnitude." *Navigation Devices* at 15. In this case, even looking to Dr. Kerr's conservative estimate of employee costs attributable to licensing the asserted patents—even excluding litigation expenses—one finds an investment of [ ]. This estimate excludes expenditures for other items such as litigation and travel costs. *See* CX-1595C (Kerr WS) at Q&A 343-470.

Under that more conservative estimate, Complainants' investments in the domestic exploitation of the asserted patents are still "of a large magnitude" and are, therefore, substantial.

Consequently, it is determined that the domestic industry requirement is satisfied under 19 U.S.C. § 1337(a)(3)(C).

C. [ ] Domestic Investments in Products Licensed from Complainants

Complainants also argue that they have shown that a domestic industry related to the asserted WiFi patents (*i.e.*, the '958 and '867 patent) is also established through Complainants' licensee [ ]") significant investments in plant, equipment, employment of labor, capital, engineering, and/or research and development in the United States relating to products that comply or are compatible with the IEEE 802.11b, 802.11g, and/or 802.11n standards. *See* Compls. Br. at 570-73.

The record evidence shows that [

], entered into a licensing agreement with Complainants. CX-0036C (

]). As part of that agreement, [ ] agreed to license [ ] The [

] The [ ] license [

] *See*

CX-0758C ([ ]); CX-1508C ([

)]; CX-0759C ([ ]); CX-0760C ([

]). Complainants state that they have received over [

] under the [ ] licensing agreement, and that they are due to receive [

] Compls. Br. at 572.

The record evidence also shows that [ ] has significant investments in the United States relating to [ ] As [ ] corporate representative testified, all of [ ] licensed [ ] are in compliance or interoperable with any of the IEEE 802.11b, 802.11g, or 802.11n standards. *See* JX-028C ([ ] Dep.) at 30-31, 42-43; CX-649-58. [ ] recently represented to the Commission in its complaint for Inv. No. [ ] that [ ] currently employs [ ] people throughout the United States, including over [ ] facilities across the United States who are involved in engineering and research and development at an annual cost of over [ ]. *See* [.] The record evidence shows that approximately [

] JX-028C ([ ] Dep.) at 102-104. [ ] has designed several licensed 802.11 compliant [ ] in the United States, including the [ ]. *Id.* [ ] employees in [

] developed features and services for its Wi-Fi enabled [

] JX-028C ([ ] Dep.) at 102-104.

With respect to [ ] WiFi products, Complainants argue that "[s]uch licensed products are, at minimum, more likely than not, and indeed highly likely, to infringe at least Claims 32 and 35 of the '958 Patent and Claims 20, 23-24, 26-28, 32-35, 37-40, 47, 49-52, and 58-61 of the '867 Patent." Compls. Br. at 572 (citing CX-1643C (Negus RWS) at Q&A 11; Q&A 42). Complainants further argue: "Accordingly, [ ] licensed products are highly

likely to infringe Claims 32 and 35 of the '958 Patent and Claims 20, 23-24, 26-28, 32-35, 37-40, 47, 49-52, and 58-61 of the '867 Patent and, therefore, satisfy the technical prong of the domestic industry requirement." *Id.* It is argued that "a domestic industry exists with respect to the asserted WiFi patents (the '958 and '867 Patents) through the significant domestic investments made by licensee [ ] in plant, equipment and labor in the research, design, and development of articles ([ ]) that practice the asserted WiFi patents." Compls. Br. at 573.

Complainants, however, have not adduced evidence to show that the [ ] products in question satisfy the technical prong with respect to the '958 and '867 patents. Complainants instead generally allege, without evidentiary support, that [ ] has 802.11 compliant products that are "more likely than not" and "highly likely" to practice the Wi-Fi patents at issue. *See* Compls. Br. at 573. Such a statement is not enough to prove that the [ ] products practice the '958 and '867 patents. Therefore, it is determined that Complainants have not shown that the domestic industry requirement is satisfied based on [ ] investments in the United States.

X. Unenforceability

Respondents argue that the '663, '958 and '867 patents are unenforceable. The administrative law judge has determined that no infringement has been established with respect to the asserted claims of those patents. Thus, it will not be necessary to determine whether those patents are unenforceable, unless some or all of the non-infringement findings are reversed. Consequently, the following analysis of Respondents' unenforceability affirmative defenses is provided in the alternative. Respondents argue that the '663, '958 and '867 patents are unenforceable, as follows:

> Respondents argue that Complainants have breached their RAND[68] (*i.e.*, reasonable and non-discriminatory) obligations with respect to the '663 patent rendering it unenforceable against Funai.[69] GR12 Filing at 9.
>
> Respondents argue that Complainants have breached their RAND obligations with respect to the '958 patent, rendering it unenforceable against either Funai or Realtek. GR12 Filing at 15.
>
> Respondents argue that Complainants are contractually and/or equitably estopped from asserting the '958 patent and/or seeking an exclusion order. GR12 Filing at 15.
>
> Respondents argue that Complainants' predecessor Lucent breached a duty to disclose U.S. Pat. App. No. 09/064,188 to the IEEE, rendering the '958 patent unenforceable. GR12 Filing at 15.
>
> Respondents argue that Complainants are equitably estopped from asserting the '958 patent against Realtek. GR12 Filing at 15.
>
> Respondents argue that Complainants have breached their RAND obligations with respect to the '867 patent, rendering the patent unenforceable against Funai and Realtek. GR12 Filing at 44.
>
> Respondents argue that Complainants are contractually and/or equitably estopped from asserting the '867 patent and/or seeking an exclusion order. GR12 Filing at 44.
>
> Respondents argue that Complainants' predecessor Lucent breached a duty to disclose U.S. Pat. App. No. 08/155,661 to the IEEE, rendering the '867 patent unenforceable. GR12 Filing at 44.
>
> Respondents argue that Complainants are equitably estopped from asserting the '867 patent against Realtek. GR12 Filing at 44.

Thus, Respondents' unenforceability arguments form the following categories: (A) Failure to Satisfy RAND Obligations; (B) Contractual and/or Equitable Estoppel; (C) Breach of Duty to

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[68] The terms RAND and FRAND (*i.e.*, fair, reasonable and non-discriminatory) appear to be used interchangeably in the record and in case law.

[69] As discussed above, the '663 patent is asserted only against Funai.

Disclose SEPs (*i.e.*, standard-essential patents) to the IEEE (*i.e.*, Institute of Electrical and Electronics Engineers); and (D) Equitable Estoppel As to Realtek.[70]

A. RAND Obligations; Contractual and/or Equitable Estoppel

1. Summary of the Parties' Arguments

In section XI of their post-hearing brief, Respondents detail their RAND defenses, which concern the '958, '867 and '663 patents. Resps. Br. at 543-62. The aforementioned patents must be SEPs in order for any RAND obligations to arise.[71] Accordingly, Respondents begin their RAND-specific defenses by arguing that the '958, '867 and '663 patents are, in fact SEPs, and that Complainants do not deny their RAND obligations in connection with these patents. *Id.* at 554; Resps. Reply at 157. Specifically, it is argued that the '663 patent is required to practice the ITU-T H.264 standard, and that the '958 and '867 patents are necessary to practice the IEEE 802.11 Wi-Fi standard. Resps. Br. at 544. Furthermore, it is argued that all three patents are encumbered by RAND obligations. With respect to the '663 patent, Respondents argue that LSI's predecessor-in-interest declared to the ITU that it would grant a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis and on reasonable terms and conditions. *Id.* With respect to the '958 and '867 patents, Respondents argue that Agere promised the IEEE that it would grant a license to an unrestricted number of applicants on a worldwide nondiscriminatory basis and on reasonable terms and conditions. *Id.* Respondents further argue that the commitments to provide RAND licenses are irrevocable during the life of

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[70] Respondents' arguments in category (B) are included in the same portion of their brief relating to their RAND defenses (A), and indeed their related contractual and/or equitable estoppel arguments follow from alleged failures to meet RAND obligations. *See* GR 12 Filing at 15, 44; Resps. Br. at 555. Categories (A) and (B) are, therefore, addressed together, below.

[71] Respondents' arguments concerning Complainants' alleged breach of a duty to disclose SEPs to the IEEE are addressed separately in Respondents' brief, and are addressed separately below.

the standards. *Id.* at 544-45 (citing, *inter alia*, *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 884 (9th Cir. 2012) and *Microsoft Corp. v. Motorola, Inc.*, 854 F. Supp. 2d 993, 999 (W.D. Wash. 2012)).

Respondents state, "[a]rguably Complainants waived their right to request an exclusion order relief by entering into a contract to license their standard essential declared patents on RAND terms." Resps. Br. at 546 (citing, *inter alia*, *Microsoft*, 696 F.3d at 884 (9th Cir. 2012) ("Moreover, even if Motorola did not breach its contract, then, however the RAND rate is to be determined under the ITU standards, injunctive relief against infringement is arguably a remedy inconsistent with the licensing commitment.") and *Microsoft Corp. v. Motorola, Inc.*, No. 10-1823, 2012 WL 5993202, at *6 (W.D. Wash. Nov. 30, 2012)). They argue, "At a minimum, however, [Complainants] cannot breach those contracts and obtain the relief sought here." *Id.*

Respondents argue that, in general, Complainants' RAND position is untenable, and that the testimony of Complainants' expert is flawed. Resps. Br. at 546-48. It is argued that Complainants' RAND position makes no sense because it does not account for licensing terms actually agreed to by Complainants, [

] Resps. Reply at 158. More specifically, Respondents argue that Complainants' offers to Realtek and Funai are inconsistent with determined RAND rates for the standards at issue. They argue that Complainants have made "blatantly unreasonable" offers that violate RAND obligations. Respondents point to the fact that Complainants made [

]" offers to Funai and Realtek ([

] Thus, it is argued, for a [ ] television, this would result in a "RAND" royalty of

[ ] to Complainants. Yet, Respondents argue, in litigation involving other parties and patents, but the same standards, a district court has found that a true RAND rate would be between 0.555 and 16.389 cents per unit, and a RAND rate for the eleven 802.11 patents was between 0.8 and 19.5 cents per unit. Respondents argue that the Commission should decline to enforce the patents at issue. Resps. Br. at 546, 548-50, 558 (citing *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR (W.D. Wash. Apr. 25, 2013)). Respondents also make separate arguments specific to Realtek, and specific to Funai.

With respect to Realtek, Respondents argue that in addition to [

] Resps. Br. at 550 (quoting RX-1326C). Respondents argue that **[**

] *Id.* at 551 (citing CX-1330C).

Indeed, [

] Further, it is argued that [

] Resps. Br. at 551-52; Resps. Reply at 162-63. An offer such as that of Complainants, Respondents argue, also discriminates against Realtek because it

[ ] They argue that

[

] Resps. Br. at 552-53 (citing RX-0010C (Carmichael WS) at Q&A 199-203; RX-1876C ([ ]); RX-1316C ([ ]); RX-1135C ([ ])).

Respondents argue that, in fact, [ ] It is argued that [

] Resps. Br. at 554 (citing RX-0010C (Carmichael WS) at Q&A 136, 146-147; CX-1599C (Waskiewicz WS) at Q&A 231; Waskiewicz Tr. 181-182; Carmichael Tr. 1480-1481). In fact, they argue, [

] *Id.* at 554-55 (citing RX-1324C ([ ])).

Respondents draw upon concepts both of contract and estoppel law. They argue that Realtek is a third-party beneficiary to all entities, including Agere, [

] Resps. Br. at 555 (citing *Microsoft*, 696 F.3d at 884 (cited for the proposition that Motorola's contract with the ITU is enforceable by Microsoft, a third-party beneficiary); *Microsoft*, 854 F. Supp. 2d at 999 (cited for the proposition that Microsoft, as a member of the IEEE, was a third-party beneficiary of Motorola's commitments to the IEEE); *ESS Tech., Inc. v. PC–Tel, Inc.*, No. C-99-20292 RMW, 1999 WL 33520483, at *4 (N.D. Cal. Nov. 4, 1999) (cited for the proposition that the third-party beneficiary of contract between an

SSO and the defendant, who held essential patents, had properly stated a claim for specific performance of the agreement requiring the defendant to license patents on RAND terms)).

It is further argued that [

] Resps. Br. at 555-56 (citing RX-0011C (Chen WS) at Q&A 37-38; RX-1327C (List of Realtek Patents and Patent Applications); RX-1328C (Realtek Sales Data) [ ]

Respondents argue that Complainants reneged on their RAND commitments by [

] and further, even though [

] Complainants' refusal to license Realtek, as well as a "blatantly unreasonable license offer," it is argued, each constitutes a breach of Complainants' agreement to license the '958 and '867 patents to all applicants on RAND terms. Respondents request that it be found that the '867 and '958 patents are unenforceable and/or that Complainants are estopped from obtaining relief based on those patents. Resps. Br. at 561-62, 556.

With respect to Funai, Respondents argue that Complainants and Funai [

] and that Funai relied during this period on Complainants' obligations as holders of purportedly standards-essential patents to offer RAND licenses to those patents and expected RAND terms to be offered to it. Resps. Br. at 556-57. It is argued that Complainants never made Funai an offer consistent with their RAND

obligations, and that "[s]uch behavior constitutes both unclean hands and patent misuse, rendering the '958, '867 and '663 patents unenforceable against Funai."[72] *Id.* It is argued that "Complainants have unclean hands, because their failure to offer RAND terms represents unconscionable acts that injured Realtek and Funai and took unfair advantage of the purported standards-essential nature of the patents." *Id.* (citing *New Valley Corp. v. Corp. Prop. Assocs. 2 & 3 (In re New Valley Corp.)*, 181 F.3d 517, 522-23 (3d Cir. 1999). It is argued that "Complainants have misused their standards-essential patents by seeking impermissibly to broaden their physical or temporal scope with anticompetitive effect. *Id.* (citing *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1339 (Fed. Cir. 2006)). Specifically, it is argued, "Complainants insist that licensees pay their royalties [

]" Further, Respondents argue, "[c]omplainants' unclean hands and misuse of the standard-essential patents nullifies their ability to enforce them in this investigation." *Id.* at 557.

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[72] In order for competitive behavior to amount to patent misuse, one must impermissibly broaden the scope of the patent grant with anticompetitive effect. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1339 (Fed. Cir. 2006). While there are some specific practices that have been identified by the courts as constituting patent misuse *per se*, allegedly anticompetitive practices are often evaluated under the "rule of reason" to determine whether they impose an unreasonable restraint on competition. *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179, 1185 (Fed. Cir. 2005). Patent misuse, which is an extension of the doctrine of unclean hands, must be proven by clear and convincing evidence. *See B. Braun Med., Inc. v. Abbot Labs.*, 124 F.3d 1419, 1427 (Fed. Cir. 1997); *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1374 (Fed. Cir. 2007).

Respondents offer little legal analysis in their brief of the facts vis-à-vis the legal doctrines of unclean hands and patent misuse. Indeed, Complainants argue that Respondents present some of their unenforceability arguments as a moving target. *See* Compls. Br. at 364-65 n.53, 442 n.68. The administrative law judge was not a party to the exchanges among counsel that are discussed by Complainants. Nevertheless, there is discontinuity among Respondents' prehearing briefing, the parties' joint Ground Rule 12 Filing (which, for example, does not mention a specific patent misuse defense), and Respondents' post-hearing brief.

More specifically, with respect to Funai and the '663 patent, Respondents argue that the rate offered to Funai overvalues the patent and is therefore unreasonable. Indeed, it is argued, based on expert testimony, that "the value of the '663 patent would have been zero or close to zero." Resps. Br. at 558. With respect to Funai and the '958 and '867 patents, it is argued that the rate offered to Funai was discriminatory because the only offer made by LSI and Agere to Funai, [

] for Funai's products; yet, even assuming [ ] royalty rate were reasonable (which Respondents do not) it was much higher than rates previously agreed to between Agere and [ ] *Id.* at 558-61.

Complainants oppose any finding that they have failed to satisfy RAND obligations with respect to any asserted patent, or that the asserted patents are unenforceable for any other reason.[73] They oppose any finding that the '958 and '867 patents are unenforceable due to breach of contract, equitable estoppel or any other legal theory set forth by Respondents. *See* Compls. Br. at 422-53, 542; Compls. Reply at 157-63, 164-70. They oppose any finding that the '663 patent is unenforceable. *See* Compls. Br. at 364-68; Compls. Reply at 157-64.

With respect to the '958 and '867 patents and the potential licensing of Funai, Complainants argue that LSI provided Funai with its [ ] RAND proposal for its entire WLAN patent portfolio, which includes the '958 patent and the '867 patent. It is argued that the evidence demonstrates that [

[73] Respondents do not allege that the '087 patent (asserted against Funai) is unenforceable. *See* GR12 Filing; Compls. Br. at 200 (citing CX-0905C (Funai Answer to Amended Complaint), CX-0906C (Funai Amended Answer to Amended Complaint), and CX-0917C (Funai Answer to 2nd Amended Complaint)).

]

Compls. Br. at 439 (citing, *inter alia*, CX-1599C (Waskiewicz WS) at Q&A 36-37, Q&A 112-144, Q&A 139-40; Waskiewicz Tr. 157-62, 177, 182, 192-193 200-201; Carmichael Tr. 1435; CX-0348C ([ ]) at 2-3; CX-0349C ( ] [ ]) at 14-16; CX-1078C ([ ]) at 19; CX-1006C ([ ]).

For example, Complainants argue, LSI's initial proposal to [ ] was the same as the proposal that LSI made to Funai [ ] Like Funai, it is argued, [ ] sells televisions that contain 802.11 wireless LAN functionality. Yet, it is argued, unlike Funai,[ ] negotiated a license to LSI's WLAN patent portfolio. Consequently, it is argued, the evidence demonstrates that LSI's initial RAND WLAN proposal to Funai was a non-discriminatory and reasonable starting point for further licensing negotiations. Compls. Br. at 439-40 (citing Leonard Tr. 1393, 1396-1401; CX-0348C ([ ]) at 2-3; CX-0349C ([ ]) at 16; CX-1084C ([ ]) at 88; CX-0349C ([ ]) at 16; CX-1642C (Kerr RWS) at Q&A 55-56; CX-1634 ([ ]); CX-1599C (Waskiewicz WS) at Q&A 73-85; CX-1115C ([ ]) at 2, 19-21, 27-35).

Complainants argue that Funai has failed to establish that the proposed terms of LSI's opening RAND proposal for its WLAN patent portfolio, which includes the '958 patent and the '867 patent, were an unreasonable starting point for negotiations. In fact, they argue, LSI's initial proposal to Funai contained [ ] which was well within the range of [ ]royalty rates contained in the license agreements negotiated by

[ ] Compls. Br. at 440-41 (citing Leonard Tr. 1345, 1348-1350, 1356-1362; 1398-1401; CX-0349C ([ ]) at 16; CX-0349C ([ ]) at 16)). In fact, it is argued, [ ], offered to Funai, is a reasonable starting point for negotiations as demonstrated by LSI's license with [ ], which negotiated a license to the '958 and '867 patents for various products, including TVs with 802.11 wireless LAN functionality, after receiving LSI's opening RAND WLAN license proposal. Additionally, Complainants reiterate that LSI has successfully negotiated several other licenses after providing its[ ] RAND WLAN proposal to potential licensees. Compls. Br. at 441 (citing, *inter alia*, CX-1599C (Waskiewicz WS) at Q&A 9-23, Q&A 38-39, Q&A 73-85; CX-1115C ([ ]) at 2, 19-21, 27-35; CX-1642C (Kerr RWS) at Q&A 22-82, Q&A 100; CX-1598C (Salute WS) at Q&A 104-194, Q&A 213-539).

Furthermore, Complainants argue, a comparison between high-level terms of an opening proposal and the final terms of executed licenses is insufficient because there are several substantial terms in the executed license agreements, which were negotiated based on the specific considerations of each licensee. Compls. Br. at 441 (citing, *inter alia*, CX-1599C (Waskiewicz WS) at Q&A 145-173; CX-1642C (Kerr RWS) at Q&A 117-130; Leonard Tr. 1356; Carmichael Tr. 1446-1451, 1457-1459; Kerr Tr. 2048-2049, 2055-2056 2113-2115; CX-0035C ([ ] PLA) at 19, 20; CX-0028C ([ ] PLA) at 6-8). For example, it is argued, the [ ] license agreements do not include TVs, such as those sold by Funai or [ ], as licensed products, and the final negotiated terms of the [ ] licenses are also very different from one another. Compls. Br. at 440 (citing, *inter alia*, Leonard Tr. 1354-1356; CX-1642C (Kerr RWS) at Q&A 117-130; CX-1599C (Waskiewicz WS)

at Q&A 162-173; Carmichael Tr. 1446-1459. Thus, Complainants argue, even if a comparison to [ ] licenses were proper, the evidence shows that an opening [ ] royalty rate of [ ] is an objectively reasonable opening proposal in view the [ ] royalty rates contained in the [ ]) license agreements, and because it was possible that the final [ ] royalty rate for Funai could have been lower than [ ] through further negotiations. *Id.* at 442.

With respect to the '958 and '867 patents and specifically the potential licensing of Realtek, Complainants argue that [

.] Compls. Br. at 444 (citing CX-1599C (Waskiewicz WS) at Q&A 114-144; CX-1058 [ ]; CX-1006C ([ ])). It is argued that LSI's [ ] RAND WLAN proposal [

]" *Id.* at 444-45 (citing CX-1599C (Waskiewicz WS) at Q&A 224-228; CX-1006C ([ ]) at 2).

Complainants argue that in response, [ ] even though the negotiation of a RAND license contemplates "give-and-take" negotiation between the patent holder and potential licensee. Compls. Br. at 445 (citing Leonard Tr. 1337-1338; *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2012 WL 2030098, at *11 (W.D. Wash. June 6, 2012) ("[T]he language of Motorola's agreements with the IEEE . . . envisions a negotiation between the parties towards a resulting RAND license.")). It is argued that [