APEX STANDARDS

US 10,484,915 - Two Failed IPR Attempts: Samsung v Ericsson & Apple v Ericsson

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Apple v Ericsson
PTAB IPR2022-00348
Unclassified
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Ericsson, a leading telecommunications gear supplier and a holder of a significant number of 5G Standard Essential Patents, owns the US patent 10,484,915. This patent has been a focal point of contention and the subject of several legal challenges, each revealing different strategies employed by tech giants Samsung and Apple.

On January 1, 2021, Ericsson initiated legal action against Samsung in the United States Court of Appeals for the Federal Circuit, case No. 2021-1565. The court document identified Samsung Electronics and relevant subsidiaries as defendants.

Subsequently, on March 12, 2021, Samsung filed an Inter Partes Review (IPR) case against the Ericsson patent under the identifier IPR2021-00644, as part of ongoing negotiations over standard essential patent fees. Samsung contended that claims 1-3, 6-10, and 13-15 of the patent were unpatentable, citing the principles of obviousness. They supported this argument with references to Agiwal, US pre-grant publication 20170251460-A1, in conjunction with 3GPP TS 36.331 (Ground 1) and Agiwal in view of 3GPP TS 36.331 and Murray (Ground 2). Notably, they pointed out that Agiwal-Prov1, which aligns with the challenged claims of the patent, is fully incorporated in Agiwal, as per the Dynamic Drinkware analysis.

However, on May 19, 2021, Samsung's move to file a Motion to Terminate in their Inter Partes Review (IPR) case against Ericsson's patent marked a surprising turn of events in the ongoing patent dispute. The motion was filed two months after Samsung initiated the IPR case. The specifics of Samsung's Motion to Terminate are not entirely clear. However, it typically involves a request to the Patent Trial and Appeal Board (PTAB) to terminate an ongoing IPR proceeding. These motions are generally accompanied by reasons such as the parties reaching a settlement, the petitioner deciding not to pursue the case, or other strategic considerations. In Samsung's case, the PTAB sanctioned the motion, which effectively ended the IPR proceedings against Ericsson's patent. The PTAB often approves such motions to dismiss if it determines that it would serve the interest of efficiency and help to minimize unnecessary costs. It also has the advantage of preserving the Board's resources and the parties' resources and promoting a quick and inexpensive resolution to the dispute.

Meanwhile, Ericsson had also been entangled in patent negotiations with Apple, which escalated to a court case on October 6, 2021. Ericsson accused Apple of engaging in unfair negotiation practices, asserting that Apple's approach of evaluating individual licenses rather than a global portfolio was a tactic aimed at reducing royalty rates. Ericsson began discussions with Apple in late 2020 to establish a new cross-license agreement, but Apple held firm that Ericsson's practices violated Fair, Reasonable, and Non-Discriminatory (FRAND) terms.

Ericsson, anticipating litigation from Apple, lodged a complaint against them in the U.S. District Court for the Eastern District of Texas. Ericsson sought a declaratory ruling that they were prepared to offer Apple standard essential patent licenses on FRAND terms. Ericsson further argued that Apple was intentionally attempting to devalue Ericsson's essential 5G patents, aiming to reduce royalty payments.

Four months later, on February 15, 2022, Apple filed an IPR case (IPR2022-00348) against Ericsson's patent. Similar to Samsung, Apple used the same prior art as Samsung but presented a distinct strategy.

The patent in question relates to wireless communication, specifically methods and devices for random access procedures in new carrier types. Random access procedures are crucial in establishing a connection between a device (such as a smartphone) and a base station in a wireless communication network.

In Apple's case, Agiwal (US-20170251460) was again introduced as the primary prior art, which discloses methods utilizing random access techniques for wireless device connectivity to a base station in a wireless communication system, which aligns with the challenged claims of the patent. Apple argued that the methods in Agiwal rendered the claims of the '915 patent obvious, which, would invalidate the patent.

However, Apple's argument deviated from Samsung's in several key areas. Apple didn't just focus on the disclosed random access methods in Agiwal; it also examined their applicability to the handover process. The handover process in wireless communication is the transition of an ongoing call or data session from one channel connected to the core network to another.

Petitioner: Apple Patent Owner: Ericsson Case: IPR2022-00348	Intended Prior Art (Agiwal) as the basis for the assertion under 35 U.S.C. § 102(a) on the ground of IPR2022-00348 with specific references to EX-1005 and EX-1006		
Document 1 US-10,484,915-B2 Ericsson Priority: 2018-12-06 Granted: 2019-11-19	Document 2 US-2017/0251460-A1 Samsung Priority: 2017-02-27 Publication: 2017-08-31	Prior Art Anticipation	Potentially Nuanced Difference in Meaning
...receiving an RRC connection reconfiguration message from a source network node... the target cell is different than the source cell and comprises one or more beams...	...identifying a first downlink (DL) reception (RX) beam based on a measurement on a beam measurement signal; identifying a first uplink (UL) transmission (TX) beam corresponding to the identified first DL RX beam...	Both involve the process of identifying beams from a certain cell or source.	Document 1 refers to receiving a message that helps identify the beams while Document 2 refers to identifying beams based on measurements of a signal.
...accessing the target cell using the identified at least one beam.	...transmitting at least one random access preamble for an RX sweeping at a base station, using the identified first UL TX beam based on a first power.	Both involve an action being performed using the identified beam(s), such as accessing a cell or transmitting a preamble.	The actions are different: Document 1 is about accessing a cell, Document 2 is about transmitting a preamble.
...wherein the target cell is associated with a second network node, the second network node being different than the source network node.	N/A	Not anticipated	N/A
...wherein the access information comprises Random Access Channel (RACH) information.	...at least one of a number of the at least one random access preamble, a maximum value for a retransmission of the at least one random access preamble, or a first value for power ramping is configured by a radio resource control (RRC) signaling.	Both excerpts refer to details related to access information or configurations.	The specifics of the information or configuration differ.
...wherein accessing the target cell using the identified at least one beam comprises accessing the target cell using a contention based random access procedure.	...identifying whether a random access response (RAR) is received in response to the at least one random access preamble...	Both involve a procedure related to random access, either accessing a cell or receiving a response.	The specific processes differ: Document 1 is about the procedure to access a cell, while Document 2 is about receiving a response to a preamble.
...a wireless device for handover comprising: a wireless interface configured to receive an RRC connection reconfiguration message...	An apparatus in a wireless communication system, the apparatus comprising: a transceiver configured to transmit and receive signals...	Both excerpts describe the hardware components of a wireless device or apparatus, including interfaces or transceivers for sending and receiving signals.	The specifics of the devices and their configurations are different.
...processing circuitry configured to identify at least one beam transmitted from the target cell...	...at least one processor configured to: identify a first downlink (DL) reception (RX) beam based on a measurement on a beam measurement signal...	Both involve processing equipment that is configured to identify certain beams.	Document 1 refers to identifying a beam from a target cell, while Document 2 refers to identifying a downlink reception beam based on a measurement.
...an input and output interface configured to receive input information and provide output information...	N/A	Not anticipated	N/A
...a power source configured to provide power to the wireless interface, processing circuity and input and output interface...	N/A	Not anticipated	N/A

Detailed claim charting done by Apex Standards experts. While both 10484915 and 20170251460 discuss methods related to wireless communication systems, there are distinct differences that render them not entirely similar. Firstly, 10484915 is primarily focused on the process of a wireless device performing a handover between network nodes, while 20170251460 discusses the method of performing random access by an apparatus in a wireless communication system, a considerably different subject. The handover process in 10484915 involves receiving an RRC connection reconfiguration message from a source network node, which includes identification of a target cell and access information associated with it. On the other hand, 20170251460 does not engage with the concept of a handover at all. Instead, it delves into the identification of downlink and uplink beams based on signal measurements, and the transmission of a random access preamble. Moreover, the devices described in the documents differ. 10484915 outlines a wireless device configured for handovers, while 20170251460 focuses on an apparatus equipped for transmitting and receiving signals. It is also worth noting that several aspects discussed in 10484915, such as the association of the target cell with a second network node, are not addressed in 20170251460. These nuanced differences in the subjects, procedures, and devices discussed render 20170251460 not entirely anticipatory for 10484915, therefore further solidifying validity of the Ericsson patent.

Apple provided a detailed analysis of Agiwal's handover method, examining its beamformed random access procedure in depth. They focused on how the user equipment (UE) identifies the best downlink (DL) transmit (TX) and corresponding receive (RX) beams. In wireless communication, beamforming is a signal processing technique used to control the directionality of the reception or transmission of a signal on an antenna array.

Apple's argument rested on the premise that the details in Agiwal would have rendered the '915 claims as obvious to a person of ordinary skill in the art. In patent law, an invention is considered non-obvious (and thus patentable) if someone skilled in the relevant field of technology would not have found the invention obvious at the time it was made.

Apple followed a similar Dynamic Drinkware analysis, stating that Agiwal-Prov1 is incorporated in its entirety in Agiwal. The Dynamic Drinkware doctrine refers to a principle related to the use of provisional applications as prior art.

This detailed argument by Apple underlines a different approach to challenging the patent's claims compared to Samsung's, emphasizing a more intricate and exhaustive analysis of the patent and the prior art. Despite these efforts, the PTAB later denied Apple's petition, concluding that Apple had not met the burden of proof in showing the unpatentability of the patent's claims. Ultimately, on November 1, 2022, the PTAB denied Apple's IPR request, upholding the validity of Ericsson's patent. The PTAB found that Apple had not established a reasonable likelihood that it would succeed in demonstrating the unpatentability of the challenged claims. The Board also determined that Apple had not shown that Agiwal is entitled to Agiwal-Prov1's filing date, discrediting Apple's application of the Dynamic Drinkware analysis.

The disputes between Ericsson, Samsung, and Apple illustrate the complexity and intricate nature of patent law. Ericsson found its patent 10,484,915 under challenge from Samsung and Apple. Samsung's challenge led to an Inter Partes Review, which was abruptly terminated, potentially due to an external settlement. Apple, on the other hand, pursued a detailed argument, focusing on the handover process described in the Agiwal prior art.

Despite their differing strategies, both Samsung and Apple's challenges failed to undermine the validity of Ericsson's patent. The PTAB's decisions underscore the uniqueness of each IPR case and the importance of presenting comprehensive, strategic, and detailed arguments. Apple's case, in particular, highlights the high standard of evidence required to invalidate a patent, even when similar arguments and strategies have been adopted as in a previous case.

Throughout these disputes, Ericsson has maintained its stance on offering standard essential patent licenses on fair, reasonable, and non-discriminatory terms. As the cases unfolded, it became evident that Ericsson's patent strategy was robust enough to withstand challenges from two significant players in the tech industry. As such, these cases provide valuable insights into the strategic maneuvers and legal complexities involved in patent disputes within the realm of wireless communication systems.

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