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Federal Circuit Clarifies Conditions for Standard Essential Patents in LTE Technologies

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Standard Essential Patents (SEP) are patents that claim inventions needed to comply with a technical standard e.g., the 3G or LTE standards in mobile telecommunications technology. A SEP can benefit the patentee when licensed to standard implementers (e.g., on fair, reasonable, and non-discriminatory (FRAND) terms) and by allowing the patentee to rely on the standard to determine infringement by an accused product that complies with the standard. Although many patents are declared SEPs as part of a standard setting process, a patent can be also declared to be standard essential as to an organization that does not participate in a standard setting process.

The U.S. Court of Appeals for the Federal Circuit recently clarified the conditions that must be met for claims of a patent to be standard essential in the context of LTE technologies in *INVT SPE LLC v. International Trade Commission (ITC)*. Specifically, the Federal Circuit found that claims of the patent at issue are not essential to the LTE standard itself because "[the patentee] has failed to show that the accused LTE-compliant devices have the capability required by the claims."

Background: The ITC Found Noninfringement of INVT's Patents Under a Theory of Standard Essential Claims

The patent at issue was INVT's U.S. Patent No. 7,848,439, directed to a communication apparatus for improving spectrum usage rate through an adaptive modulation and coding technique.

Claim 1 of the '439 patent recites, in relevant part:

1. A communication apparatus comprising: …

[c] a parameter information transmission section that transmits, to a communicating party, parameter information indicating the modulation parameters and the coding parameters decided at the parameter deciding section;

[d] a receiving section that receives a signal containing data modulated and encoded on a per subband group basis at the communicating party using the modulation parameters and the coding

parameters of the parameter information transmitted at the parameter information transmission section;

[e] a data obtaining section that demodulates and decodes the received signal received at the receiving section on a per subband group basis using the modulation parameters and the coding parameters decided at the parameter deciding section, and obtains the data contained in the received signal; and …

INVT alleged infringement of the '439 patent's claims by certain personal electronic devices capable of wireless communication and pursued relief at the U.S. International Trade Commission (ITC).

In its determination, the ITC found noninfringement by the accused devices with claims directed to actual operation rather than capability. Further, the ITC found that the accused devices did not infringe the claims under a theory of the claims being standard essential to practicing the LTE standard. INVT appealed.

The Federal Circuit Confirms That INVT's Claims Are Not Standard Essential Despite Finding That the Claims Were Directed to Capability, Not Actual Operation

The Federal Circuit decision was authored by Judge Chen and joined by Judges Newman and Taranto, agreeing with INVT that the claims of the '439 patent were directed to capability, not actual operation. But the Federal Circuit ultimately upheld the ITC determination of noninfringement, finding that INVT still did not prove that the accused devices have the claimed capability.

INVT argued that the claims require "only that the accused LTE-compliant devices are capable of receiving, from a base station, data modulated and encoded with the same parameters decided by the user device, and capable of demodulating and decoding that data using those parameters."

The Federal Circuit agreed, analogizing the facts at issue to *Finjan, Inc. v. Secure Computing Corp.*, in which the Federal Circuit held that "non-method claims describe capabilities without requiring that any software components be 'active' or 'enabled,'" and *Silicon Graphics, Inc. v. ATI Techs.*, in which the Federal Circuit held that an "apparatus claim directed to a computer, claimed in functional terms, is nonetheless infringed so long as the product is 'designed 'in such a way as to enable a user of that [product] to utilize the function . . . without having to modify [the product].'" Here, the Federal Circuit found that the claims of the '439 patent "recite a device with the capability of performing the recited functions when in operation without any modification or further programming."

The Federal Circuit found that in the claims, "the receiving section in limitation [d] and the data obtaining section in limitation [e] require receiving and handling a data signal from the base station that is modulated and encoded using parameters that were decided by the user device." The Federal Circuit, however, also states that "proof of reasonable capability of performing claimed functions requires, at least as a general matter, proof that an accused product—when put into operation—in fact executes all of the claimed functions at least some of the time or at least once in the claim-required environment" and was not persuaded by INVT's arguments that "under the LTE standard, a user device ever receives and handles such a data signal" or that "the accused products receive such a data signal."

INVT argued that the claims "are standard essential because, under the LTE standard, all LTE-

compliant devices must be capable of receiving, demodulating, and decoding data using any of the available modulation and coding parameters in LTE, including parameters originally decided by the LTE-compliant user device." But the Federal Circuit notes that "sometimes, 'an industry standard does not provide the level of specificity required to establish that practicing that standard would always result in infringement'" and found that INVT did not provide appropriate evidence to show that "an LTE standard-compliant user device is capable of meeting the claimed functional language when that device is put into operation under the standard, and that the claims are essential to the LTE standard."

The Federal Circuit Asserts That in Determining Whether a Claim Directed to a User Device Is Infringed, Operation of a Base Station Should Be Considered When the User Device's Capability Is Dependent on the Base Station's Capability

In evaluating infringement, the Federal Circuit "further construe[d] the asserted '439 patent claims to clarify that determining a user device's capability involves analyzing a base station's operation," agreeing that the base station is "part of the infringement analysis" even though it is not included in the asserted claims. Since the claim requires that the user device "handle and process" a data signal that "must be modulated and encoded with specific parameters" by a separate base station, the "base station is part of 'the environment' in which the user device must function."

The Federal Circuit found that "because INVT failed to provide any evidence showing that a base station in fact ever sends the user device a data signal that is modulated and encoded using parameters that the user device decided, INVT has failed to prove the required capability." The Federal Circuit found INVT's two record citations to experts' testimony do "not show that the *base station*, *operating under the LTE standard*, ever selects the same parameters chosen by the user device, and that a *standard-compliant user device* ever receives data modulated and encoded with the claimed parameters" (emphasis added).

Conclusion and Lessons

The Federal Circuit affirmed the ITC determination of noninfringement, finding that INVT did not prove that the '439 patent's claims cover the accused LTE-compliant devices. This case provides several lessons in how to verify whether a patent is actually essential to the standard.

First, the Federal Circuit emphasized that "[a SEP] covers every possible implementation of a standard." In other words, if a standard-compliant device can be implemented in a manner other than that required by a claim (of an alleged SEP), the claim is not standard essential.

Second, when considering all possibilities of implementation, a standard-compliant device must implement the features of the claim at issue, including any features not identified in the standard itself. For example, in a claim directed to a device that communicates with another device and "handles and processes" data received from the other device, the asserted standard-compliant device must operate as recited in the claimed features.

Third, if a claim is directed to a first device whose capability is dependent on a second device, in order for the claim to be infringed both the first standard-compliant device and the second standard-compliant device (on which the first standard-compliant device's capability is dependent) must operate as recited in the claimed features. Patent practitioners can draft claims to avoid this situation

(e.g., reduce the dependency between devices) by putting fewer limitations on the second device or communications between the two devices.

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