Nos. 18-1363, 18-1380, 18-1382, 18-1732

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT MOBILE (US) INC.,
Plaintiffs – Appellees,

v.

TELEFONAKTIEBOLAGET LM ERICSSON, ERICSSON INC.,
Defendants – Appellants.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA
CASE NO. 8:14-cv-00341-JVS-DFM
THE HONORABLE JUDGE JAMES V. SELNA

ERICSSON INC., TELEFONAKTIEBOLAGET LM ERICSSON,
Plaintiffs – Appellants,

v.

TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT MOBILE (US) INC.,
Defendants – Appellees.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA
CASE NO. 2:15-cv-02370-JVS-DFM
THE HONORABLE JUDGE JAMES V. SELNA

CORRECTED BRIEF OF KELCE WILSON AS *AMICUS CURIAE* IN SUPPORT OF DEFENDANTS-APPELLANTS

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June 18, 2018

CERTIFICATE OF INTEREST

Counsel for amicus curiae Kelce Wilson, Jacob K. Baron, certifies the following:

I. The full name of every party or amicus represented by me is:

Kelce Wilson.

II. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None.

III. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None.

IV. The names of all law firms and the partners or associates that appeared for the party or amicus curiae now represented by me in the trial court or agency or are expected to appear in this Court (and who have not or will not enter an appearance in this case) are:

None.

V. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

None.

Dated: June 18, 2018

/s/ Jacob K. Baron
Jacob K. Baron

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Page(s)

Other Authorities

INTEREST OF THE *AMICUS CURIAE*

Amicus Curiae Kelce Wilson[1] is a patent attorney with a deep background in Standard Essential Patents. Currently, in private practice, he assists clients with patent prosecution, litigation, and licensing, and also privacy & security matters. Prior to this, Wilson worked nearly 10 years in-house for BlackBerry, on Standard Essential Patent prosecution and licensing teams, and also the patent litigation team. Wilson has no personal interest in the outcome of this litigation, but does have a professional interest in the development of patent law generally, and specifically in the accurate calculation of royalty rates for Standard Essential Patents.

The points made below in this brief come directly from an article that Wilson wrote recently. The article is set to be published in the September 2018 issue of *les Nouvelles*, the journal of the Licensing Executives Society International.

[1] No counsel for a party authored this brief in whole or in part, and no such counsel of a party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than the Amicus Curiae or its counsel made a monetary contribution to its preparation or submission. Wilson files this brief pursuant to a court order.

INTRODUCTION

A Standard Essential Patent ("SEP") is generally defined as a patent that claims an invention that must be used to comply with a technical standard.[2] A technical standard may be, for instance, a 3GPP standard in the cellular industry, or an IEEE standard for some network communication protocols.

Determining whether a patent is truly a SEP is a complex process, requiring both expertise in the technological field and a significant time investment. Moreover, there are significant incentives for companies to over-declare patents as SEPs.

The District Court calculated a royalty rate for Ericsson Inc. and Telefonaktiebolaget LM Ericsson (collectively, "Ericsson") for 4G SEPs using the following equation:

$$Propertional\ Share = \frac{Number\ of\ Unexpired\ SEPs\ owned\ by\ Licensor}{Total\ Number\ of\ SEPs\ in\ the\ Standard}$$

Appx00043. This equation is inadequate because it relies on a denominator, "Total Number of SEPs in the Standard," that very likely overstates the number of true SEPs in the standard. As such, it is likely to result in systematic under-compensation.

[2] *See* Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, 1 INNOVATION POLICY AND THE ECONOMY 119 (2001), http://faculty.haas.berkeley.edu/shapiro/thicket.pdf.

ARGUMENT

VI. DETERMINING WHETHER A PATENT IS STANDARD-ESSENTIAL IS A TIME-INTENSIVE PROCESS

A. In a Standard Essential Patent, Every Element of a Claim Must Map to a Portion of the Standard

The key issue in determining whether a patent is truly a SEP, in many scenarios, is the phrase "must be used." This means that all of the elements of at least one novel and non-obvious patent claim – not just the patent's teaching, but specifically a claim – must map to a coherent portion of a standard that is actually practiced, using the properly accurate definitions for the words in the patent claim language.

Mapping a claim element to a portion of a standard means that any system or method that is accurately described by the legal language used in the claim element, is also accurately described by the technical language used in the particular portion of the standard. Since patent claims typically use legal-oriented language, and the standards use engineering-oriented language, this may mean proposing that the corresponding clauses in the different documents (i.e., the patent and the standard) are effectively equivalent.

B. Claim Mapping Is a Complex and Time-Consuming Process

Claim mapping is a highly-specialized skill that requires simultaneous mastery of legal and technical language, and is therefore a challenging, time-

consuming task.[3] First, the elements of the claim must be mapped to the relevant standard. Here, each element of a claim must be mapped – there can be no unmapped claim elements. This requires studying the claim language carefully to ascertain which terms can affect the scope of the claim coverage; studying the specification to understand how those terms are defined via the description of the invention; studying the patent prosecution history, to ascertain whether any arguments made in order to get the patent allowed (i.e., "prosecution disclaimer") do not unfavorably limit the claim coverage; and studying the relevant standard to understand the complex specific requirements and operation of the system.

Second, any differences in language between the claims and the standard (i.e., legal language in the claims and engineering language in the standard) must be found not to undermine the mapping. That is, despite differences, the language must be effectively synonymous or overlapping, rather than the mapping being an overly-optimistic "fish story."

[3] *See* Donal O'Connel, *Mapping of Patent Claims*, IPEG, (last visited Jun.17, 2018), http://www.ipeg.com/mapping-of-patent-claims/ ("The language and terminology used in patents is rather unique, and somewhat different from that used by technical engineers or product marketing personnel. ... The complexity of the products involved may make this mapping exercise extremely challenging. The product may contains hundreds or thousands of hardware, mechanical and software components. ... Examining the patent claims… is the most obvious approach. However, it can be slow and labour intensive.").

Third, the portions of the standard to which the claim elements are mapped (if they are not contiguous) must be found to coherently fit together to describe some common aspect or operation of the system, rather than being merely a set of disjointed clauses. Fourth, it must be confirmed that the portion of the standard to which the claim elements are mapped is actually required for compliance with the standard. Some patents may map to optional parts of a standard, so showing that those parts are practiced requires additional effort.

VII. THE CLAIM MAPPING PROCESS REQUIRES EXPERTISE

A. Claim Mapping Is Generally Performed by a Dedicated Expert

As discussed, every element of a SEP must be capable of being mapped to a coherent portion of the standard. Companies that pursue SEPs may have dedicated teams of engineers that participate in SSOs and invent improvements to proposed systems as the controlling standard is being developed. These engineers may work with a dedicated set of patent prosecution professionals who have experience with the unique demands of prosecuting SEP patents.

As a draft version of a standard matures toward finalization, it can be subject to changes, often via change requests submitted by competitors who may each be attempting to change the standard to fit their own related patent applications. Thus, whereas prosecution of general patents may be compared with trying to hit a fixed target (precluding easy design-around) from a moving platform (amending the

claims) with constraints on options (supported within the original specification), prosecution of SEPs may be compared with trying to hit a moving target (the standard draft versions) from a moving platform with constraints.

This difficulty more than doubles the workload, perhaps tripling it or even more, in the experience of some practitioners. Some organizations respond to the added difficulties and demands by introducing a dedicated expert, in addition to the inventor/engineer and the patent practitioner. The expert needs to possess a high degree of skill in patent and technology matters, and simultaneously comprehend the legal language of patent claims and the complex language of a technical standard. The expert then creates and revises claim charts that map the current claims against the current version of the standard.

The charts may require updating whenever the claims or standard draft change, and – as a significant level of effort – the expert must be consulted by the patent prosecutor about all potential claim amendments (to overcome prior art) and test whether the proposed amendments can be mapped to the current draft of the standard. If the proposed amendment does not map, another one must be tested, with this iterated until a passing amendment is found, or the hoped-for SEP status is abandoned. Over the course of prosecution (up through patent allowance) and standard development (up through finalization), an expert can easily spend 50 hours or more on the type of process described here, for each patent.

B. Claim Mapping Requires a High Level of Skill

The prior art field for SEPs can be highly crowded in some technologies. As a result, the scope of the legal language of the claims must include the equivalent technical language for the mapped portions of a standard, but it must simultaneously avoid prior art by other inventors who were attempting to solve the same problem at approximately the same time, within the narrow constraints that the solution must function within the system specified by the standard.

Attempting to scope the claims under this situation, in order to properly map them in a claim chart, requires careful analysis by skilled experts. Thus, it is common in SEP litigation to have specialized experts who simultaneously understand all of the underlying technology; the standard drafting process; how to navigate among the different inter-related sections of the standard; how to interpret the peculiar language and terminology used within the standards; how to interpret a patent specification and figures, to identify the likely meaning of the claim terminology; and how to interpret the legal language of patent claims, as defined by the trial court in a claim construction order.

This set of skills can be difficult to locate for some technologies – and priced accordingly. The litigation expert must be ready to defend against a myriad of attacks on the patent, which may include: invalidity; non-infringement as a result of the claim language not mapping to the standard language; non-infringement as a

result of the prosecution disclaimer limiting the scope of the claim language; and non-infringement as a result of ad hoc mapping of claims elements to unrelated sections of standard, rather than a coherent set of passages that together all describe some common aspect or operation of the system.

VIII. A STANDARDS BODY DECLARATION IS INSUFFICIENT TO DEMONSTRATE THAT A PATENT IS TRULY STANDARD ESSENTIAL

The effort described above for litigating patents is far beyond the effort needed to identify patents subject to SSO disclosure obligations. The threshold difference is stark: Some SSO participants have an obligation to "disclose every specific patent which might be essential to a specific specification …"[4] These patents and applications can be of poor quality and declarations may not even require any mapping to be performed at all.

The analysis necessary for a cursory (probably optimistic) determination of whether to declare a patent to a standards body (as a potential SEP) may be made, by properly skilled people, in perhaps as little as half an hour or so. Different companies exercise different degrees of care in making their mappings. Given the

[4] *See* Knut Blind and Tim Pohlman, *Trends in the Interplay of IPR and Standards, FRAND Commitments and SEP Litigation*, LES NOUVELLES, 177 (Sept. 2013) (quoting *The ETSI Rules of Procedure*).

popularity of using proportionality in setting SEP royalty rates,[5] some companies may perceive a financial incentive to over-declare patents that have not been (or could not be) properly charted against the relevant standard. A standards body declaration, therefore, should not be confused with a patent actually being a SEP.

Even if a declared patent is of solid quality, and does map well to a standard, it may only map to an optional portion of the standard. That is, there are sections of some standards that some industry participants may not actually practice – and yet may still claim compliance with the standard.

Another potential misstep in mapping possible SEPS to a standard is the possibility that the mapped portions correspond to devices or systems supplied by different parties (i.e., the mapping of the claim to the standard results in divided infringement, that in the U.S., anyway, may preclude a finding of infringement against the supplier of only one portion of the mapped standard). This is a particular risk in standards for systems that describe interoperability of different nodes on a network. Thus, the patent owner cannot simply rely on a mapping to the standard, but has the additional burden of showing that the mapped portion(s) of the standard are actually practiced by a particular accused system or device.

[5] *See* Eric Stasik, *Royalty Rates and Licensing Strategies for Essential Patents on LTE (4G) Telecommunication Standards*, LES NOUVELLES 114 (Sept. 2010).

IX. INDEPENDENT EXPERTS HAVE A SIGNIFICANT ROLE TO PLAY IN EVALUATING A POTENTIAL STANDARD ESSENTIAL PATENT

Apart from hiring one's own expert to assist with prosecution and litigation tasks, there is also an emerging role for independent experts to evaluate claims of essentiality. This can screen out at least some overly-optimistic self-declarations by the patents' owners. This issue is receiving high-level attention in Japan, with this March 2018 announcement by the Japan Patent Office (JPO):

> We will implement the new operation of the advisory opinion system to determine standard essentiality from April 1 2018. After the thorough consideration, the "Manual of 'Hantei' (Advisory Opinion) for Essentiality Check" is now available to users prior to the implementation of the new operation.[6]

Nearly coinciding with that announcement was the placement on the JPO website of a presentation by a major Japanese consumer electronics company that stated "It is important 'who' judges the essentiality of [an] SEP."[7]

The skills needed for the independent assessment expert to differentiate between true SEPs and overly-optimistic self-declarations are described above, and

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[6] *See* Trial and Appeal Department of the JPO, "*Implementation of the New Operation of Advisory Opinion System to Determine Standard Essentiality and Publication of the 'Manual of "Hantei" (Advisory Opinion) for Essentiality Check*, Japan Patent Office (March 28, 2018), http://www.jpo.go.jp/torikumi_e/t_torikumi_e/hantei_hyojun_e.htm.

[7] *See* Kenichi Nagasawa, *Consideration Factors for SEP License Negotiation*, Japan Patent Office (March 13, 2018), http://www.jpo.go.jp/oshirase/event/setumeikai/pdf/180209_sep_sympo/07.pdf.

include not only the ability to thoroughly understand the technical subject matter (high technical skill), but to simultaneously reliably predict how claim language is likely to be interpreted by a court in a hypothetical patent infringement litigation (specialized legal skill). Additionally, an unbiased and fair assessment is critical to avoid unfairly burdening either the patent owner or potential licensees.

One of the primary advantages for independent SEP evaluation experts is that self-declared SEPs can be analyzed in a setting that is far less expensive than litigation. Potential licensees can obtain the benefit of a review by someone who lacks the financial incentive for a particular outcome of an essentiality analysis, and patent owners with true SEPs may have an easier time convincing potential licensees. This is a positive for companies that attempt to grow SEP portfolios via the careful (and expensive, and time-consuming) prosecution process described above. Their efforts are more likely to be met with agreement on a patent's essentiality by an independent expert. In stark contrast, patent trolls, who allege essentiality for lower-quality patents and rely upon the high cost of litigation to delay an actual "trial by fire" in a full-blown claim construction battle, may find themselves disadvantaged by an independent assessment that undermines allegations of essentiality.

X. THE FORMULA EMPLOYED BY THE DISTRICT COURT IS INADEQUATE

The District Court calculated a royalty rate for 4G SEPs using the following equation:

$$Propertional\ Share = \frac{Number\ of\ Unexpired\ SEPs\ owned\ by\ Licensor}{Total\ Number\ of\ SEPs\ in\ the\ Standard}$$

Appx00043. As discussed, calculating the total number of SEPs in a given standard is a complicated process. For litigation purposes, accurately mapping each element of a claim to the standard is a time-consuming process that requires a significant degree of expertise and, indeed, is generally performed by an expert in the field. By contrast, reliance the number of patents subject to SSO disclosure obligations is likely to overstate the true number of SEPs, given the far lower review requirements and the incentives for companies to over-declare patents as SEPs. A formulation that does not account for these nuances is likely to significantly overstate the true number of SEPs, and therefore to result in systematic under-compensation.

CONCLUSION

For the reasons set forth above, this Court should reject the formula that the District Court used to calculate Ericsson's royalty rate for 4G SEPs.

June 18, 2018

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of June, 2018, I electronically filed the foregoing Brief of Kelce Wilson as *Amicus Curaie* with the Court using the CM/ECF system. All parties to the case have been served through the CM/ECF system in this case.

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CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Federal Circuit Rule 32(a). The brief contains 2,914 words, excluding the parts of the brief exempted by the Federal Rule of Appellate Procedure 32(f).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). The brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14–point Times New Roman.

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