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United States Patent and Trademark Office
Mail Stop CFO
P.O. Box 1450
Alexandria, VA 22313–1450

Submitted via email to: fee.setting@uspto.gov

ATTENTION: Brendan Hourigan
In re: Fee Setting

On behalf of Telefonaktiebolaget LM Ericsson (“Ericsson”), I am pleased to submit the following comments in response to the Federal Register notice of August 1, 2018, regarding the Patent Public Advisory Committee Public Hearing on the Proposed Patent Fee Schedule. I attended and presented testimony at that hearing on September 6th; the comments that follow summarize my testimony with respect to the proposed changes to the issue and maintenance fees. In addition, brief comments are provided with respect to proposed changes to the Inter Partes Review (IPR) fees.

Ericsson is a Swedish multinational networking and telecommunications company headquartered in Stockholm. The company was founded in 1876, employs 95,000 people, and operates in over 180 countries. Ericsson is dedicated to research and innovation, leading the development of cellular technology – from 2G to 5G. Around 15 percent of Ericsson’s annual global revenue is invested in research and development and Ericsson has the largest portfolio in the industry, with over 45,000 granted patents (global). Ericsson actively licenses its patent portfolio and is one of only a handful of companies to have booked over \$1 billion annually from patent licensing.

Ericsson’s interest in the proposed changes stems from its significant ongoing investment in research and development and patent protection for its inventions. Ericsson has been a major contributor to the development of global standards for mobile telecommunications for more than 30 years and has invested tens of billions of dollars in this effort. The patents that Ericsson obtains are often a proxy for its technical contributions to various telecommunications standards.



The cost to build and maintain Ericsson’s global patent portfolio is substantial and, therefore, the proposed changes to the patent issue and maintenance fees could have a significant financial impact on Ericsson’s patent and licensing strategy. Furthermore, the continued viability of Ericsson’s investment in standards development and wireless communication implementations depends upon licensing agreements regarding such patented technology. In many instances, these licensing agreements are a result of determining patent validity before the PTAB. As a result, Ericsson is a major participant in America Invents Act (AIA) trials, both as a petitioner and as a patent owner; thus, the proposed changes to those fees is also of special importance to Ericsson.

Patent Issue and Maintenance Fees

As stated in the Patent Fee Proposal Executive Summary (emphasis added): “Where appropriate, set fees so that, **during patent prosecution**, an applicant pays individual fees *at points in time where he/she has more information to make a decision about proceeding with the patent process.*”

Comment: It is no less important to set fees so that, **after allowance**, a patentee can pay fees at points in time *where sufficient information is available to make an appropriate decision about the commercial merits of obtaining/maintaining a patent.* One of the stated rationales for the proposed substantial increases to the issue fee and first maintenance fee is the apparent belief that “technology lifecycles [have grown] shorter” and, therefore, “it is important that USSPTO not rely too heavily on fees paid late in the life of a patent.” It is not believed that technology life cycles have grown shorter in the telecommunications field; although it may seem so, due to the frequent announcement of new mobile phone models, the standards defining each successive generation of wireless communications are the product of many years of research and development and the collaborative efforts of many industry participants. It is not uncommon for Ericsson to be granted patents on inventions related to technical contributions to a standard prior to the final version; as such, some granted patents do



not read on the final standard and, therefore, may not have any commercial value. Furthermore, some granted patents may not read on the final standard but do relate to specific implementations of the standard that may not be developed or commercialized until after publication of the final standard. The stated rationale of the Office may also not hold true for many other industries, such as pharmaceuticals which typically have long product development and regulatory approval times. Therefore, it is not believed that shifting the burden of fee increases to the issue and first maintenance fees is warranted and will have detrimental financial impacts on many patentees.

Issue Fee Change: According to the proposed fee structure, the fees to obtain a basic patent [file/search/exam/issue] will increase by 11%; “[to] encourage innovation, the entry fees [file/search/examination] will increase at a smaller rate (6%), with the larger portion of the increase [issue fee (20%)] only paid after a patent has been allowed.

Comment: As noted *supra*, many applicants do not know whether an invention will have commercial value at the time of entry; that is often also true at the time of issue.

Maintenance Fee Changes: Although, in total, maintenance fees are proposed to increase by *only* 7%, “1st stage maintenance fees will see the largest increase [25%], in order to help USPTO recover costs earlier in the life of the patent.” The 2nd and 3rd maintenance fees are proposed to increase by 4%.

Comment: Shifting a substantial portion of full-life maintenance fees to the 1st fee can force many patentees to incur substantial costs *prior to having* sufficient information to make an appropriate decision about the commercial merits of maintaining a patent. Weighting the increases more heavily to the 2nd and 3rd maintenance fees will result in the additional costs being borne more likely by those patentees who have realized commercial value from their patent(s). Furthermore, many patentees with large portfolios, such as Ericsson, periodically prune their portfolios to maintain only those patents for which they have realized, or still expect to realize, some commercial or license value. The process to evaluate such large portfolios can require a significant number of man-hours, and thus internal costs; by shifting the burden of the maintenance fee



increases to the first maintenance fee, such patentees will have to undertake an additional pruning process and possibly incur substantial costs *prior to having* sufficient information to make an appropriate decision about the commercial merits of maintaining a patent.

It is believed that the USPTO can generate the desired projected revenues from issue and maintenance fees based on an alternative fee structure that does not have the noted potential negative financial impacts, particularly on holders of large patent portfolios. Reproduced below is a table of the current and proposed issue and maintenance fees for a large entity.

Description	Current Fees	Proposed Fees	Increase/(Decrease)	Percentage Change
	Large Entity Fee	Large Entity Fee	Large Entity Fee	Large Entity Fee
Utility Issue Fee	\$1,000	\$1,200	\$200	20%
For Maintaining an Original or Any Reissue Patent, Due at 3.5 years	\$1,600	\$2,000	\$400	25%
For Maintaining an Original or Any Reissue Patent, Due at 7.5 years	\$3,600	\$3,760	\$160	4%
For Maintaining an Original or Any Reissue Patent, Due at 11.5 years	\$7,400	\$7,700	\$300	4%
Total Maintenance Fees	\$12,600	\$13,460	\$860	7%
Total (Issue+Maintenance)	\$13,600	\$14,660	\$1,060	8%

As can be seen, the total full-life maintenance fees are equivalent to a 7% increase, while the aggregate of issue and maintenance fees reflect an increase of 8%.

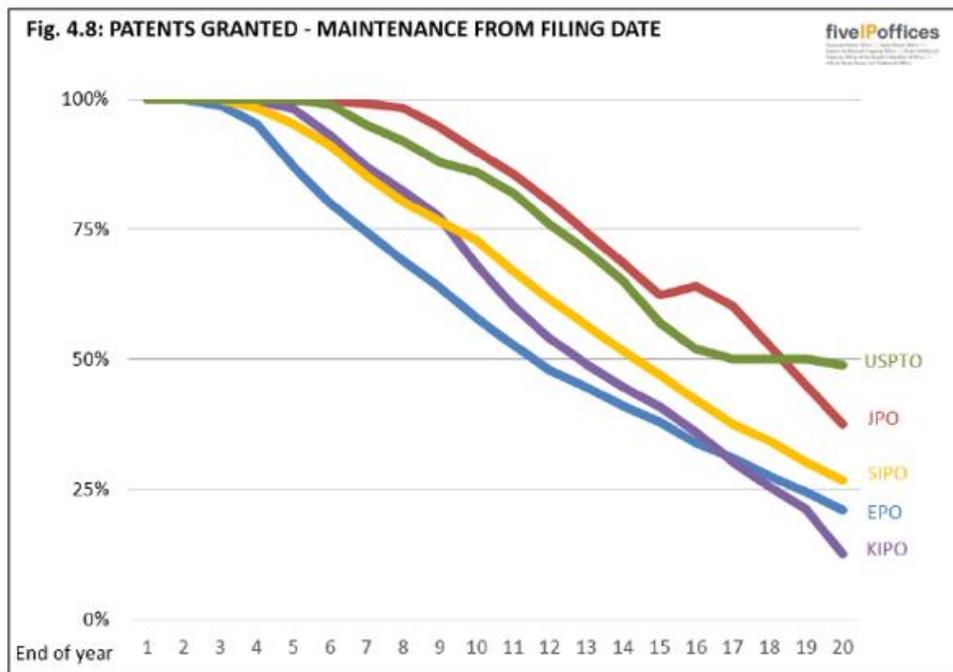
As an alternative to the proposed issue and maintenance fee increases, the table below suggests an alternative. According to the alternative proposal, the issue fee will increase by 7%,

Description	Current Fees	Alternative Proposed Fees	Increase/(Decrease)	Percentage Change
	Large Entity Fee	Large Entity Fee	Large Entity Fee	Large Entity Fee
Utility Issue Fee	\$1,000	\$1,070	\$70	7%
For Maintaining an Original or Any Reissue Patent, Due at 3.5 years	\$1,600	\$1,680	\$80	5%
For Maintaining an Original or Any Reissue Patent, Due at 7.5 years	\$3,600	\$3,850	\$250	7%
For Maintaining an Original or Any Reissue Patent, Due at 11.5 years	\$7,400	\$8,060	\$660	9%
Maintenance Fees	\$12,600	\$13,590	\$990	8%
Total (Issue+Maintenance)	\$13,600	\$14,660	\$1,060	8%

roughly in line with the Office's other proposed fee increases to maintain pace with inflation. The

suggested maintenance fee increases, rather than imposing a substantial 25% increase on the first maintenance fee, imposes a progressive increase of the first, second and third maintenance fees of 5%, 7% and 9%, respectively. Under this proposal, the total full-life maintenance fees are equivalent to an 8% increase, while the aggregate of issue and maintenance fees reflect an increase of 8% - which is identical to the aggregate of those fees under the USPTO’s proposal. As such, the Office is likely to generate the same revenue from issue and maintenance fees without imposing additional financial burdens on patentees who have not, early in the patent life cycle, realized any commercial or license value from their patents.

Finally, it is considered what the impact of non-payment of maintenance fees might have on the expected revenues under the Office’s proposed fee increases and the exemplary alternative proposal described *supra*. Most patentees will forego the payment of maintenance fees when a patent no longer has actual or potential commercial or license value. Figure 4.8 from



the IP5 Statistics Report (2016) illustrates the proportions of patents granted by each office (USPTO, JPO, SIPO, EPO and KIPO) that are maintained for differing lengths of time from filing date; the EPO proportion represents a weighted average ratio of the maintenance of the validated European patents in the 38 EPC states. Over 50 percent of the patents granted by the



USPTO are maintained for at least 19 years from filing, compared to 18 years at the JPO, 14 years at the SIPO, 12 years at the KIPO and 11 years at the EPO. In addition to patentees' behavior, the differences can be partially explained by differences in the procedures, such as a multinational maintenance system (EPO), deferred examination (JPO, KIPO, SIPO) and a stepped maintenance payment schedule (USPTO). The USPTO payment schedule is somewhat hidden because the data are shown on a time basis (by year after application) that is different from the time basis used for collection of the fees (by year after patent grant). In general, Figure 4.8 illustrates that about 25% of U.S. patents are abandoned (*i.e.*, maintenance fees not paid) when either the second or third maintenance fee comes due.

The table below illustrates whether the proposed alternative issue and maintenance fees will have an impact on potential revenues compared to the Office's proposed changes to those fees, based on a weighted average of the expected payment of first, second and third maintenance fees; it is assumed that 95% of U.S. patentees pay the first maintenance fee, 75% pay the second maintenance fee, and 50% pay the third maintenance fee. As can be seen by

Description	Current Fees		Proposed Fees		Alternative Proposed Fees				Difference Between Proposals	
	Large Entity Fee	Large Entity Fee	Percentage Paid	Weighted Average	Large Entity Fee	Percentage Paid	Weighted Average	Dollars	Percentage	
Utility Issue Fee	\$1,000	\$1,200	100%	\$1,200	\$1,070	100%	\$1,070	(\$130)	-13%	
For Maintaining an Original or Any Reissue Patent, Due at 3.5 years	\$1,600	\$2,000	95%	\$1,900	\$1,680	95%	\$1,596	(\$304)	-19%	
For Maintaining an Original or Any Reissue Patent, Due at 7.5 years	\$3,600	\$3,760	75%	\$2,820	\$3,850	75%	\$2,888	\$68	2%	
For Maintaining an Original or Any Reissue Patent, Due at 11.5 years	\$7,400	\$7,700	50%	\$3,850	\$8,060	50%	\$4,030	\$180	2%	
Maintenance Fees	\$12,600	\$13,460		\$8,570	\$13,590		\$8,514	(\$57)	-1%	
Total (Issue+Maintenance)	\$13,600	\$14,660		\$9,770	\$14,660		\$9,584	(\$187)	-1%	

comparison of the yellow-highlighted data, the difference between the proposals is vanishingly small; *i.e.*, the aggregate issue and maintenance fees, accounting for diminishing payments of the successive fees, is relatively equal under both the Office's proposal and the alternative proposed herein.

In summary, with respect to the proposed increases to the issue and maintenance fees, Ericsson proposes that the Office shift a greater burden of those fees to the second and third maintenance fees. The benefits of doing so include: 1) patentees are more likely to have realized commercial value of patented inventions (sale/licensing) when larger fees come due; 2) patentees, particularly those having large portfolios, can avoid substantial costs associated with



an additional portfolio pruning process within only a few years after patent issue; and 3) aggregate issue and maintenance fee revenue should be substantially equal to that achievable under the Office's proposed fee changes.

Finally, Ericsson provides brief comments on the proposed changes to the IPR fees. Ericsson agrees with the rationale presented in the letter from Director Iancu to the PPAC dated August 8, 2018, that fees should be more closely aligned with anticipated costs to the Office and that the "PTAB will no longer be able to institute on less than all claims challenged in a petition, leading to significant additional work". Rather than the significant across-the-board fee increases, however, Ericsson proposes that fees be closely aligned with the number of claims, by lowering the excess claim threshold (*e.g.*, three to five claims) and increasing the excess claim fees after that threshold is reached. This proposed cost structure will likely reduce the number of claims that would have otherwise been challenged (and reviewed by PTAB) under an excess claim threshold of twenty claims.

We appreciate the opportunity to provide these comments and thank the USPTO for its consideration.

Sincerely,

A handwritten signature in black ink that reads "Roger S. Burleigh". The signature is written in a cursive style.

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