Dear Mr. Lindsay:

This letter responds to your request on behalf of the Institute of Electrical and Electronics Engineers, Inc. ("IEEE") and its Standards Association ("IEEE-SA") for a business review letter from the Department of Justice pursuant to our Business Review Procedure, 28 C.F.R. § 50.6. You have requested a statement of the Department’s antitrust enforcement intentions with respect to a proposed patent information policy that will allow patent holders to publicly commit to specific restrictions on their future licensing terms and conditions for the use of patents that are essential to IEEE standards. This proposed change in IEEE’s patent information policy is designed to better ensure that any willing licensee can implement IEEE standards and that IEEE standards will become widely adopted.

I. IEEE and IEEE-SA

IEEE is a non-profit professional association with over 385,000 members whose technical interests cover the fields of aerospace systems, computers, telecommunications, biomedical engineering, electric power, and consumer electronics. IEEE has long been involved with technological collaborative standard-setting activities in the United States. IEEE was formed in

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1963 as a result of a merger between the American Institute of Electrical Engineers, formed in 1884, and the Institute of Radio Engineers, formed in 1912. Standards development was a major part of both of IEEE’s predecessor institutions, and IEEE-SA has continued that tradition by establishing more than 900 standards, with more than 400 standards currently in development. The standards issued by IEEE-SA are used in fields and industries including information technology, power and energy, instrumentation and measurement, mobile and stationary batteries, nanotechnology, organic electronics, telecommunications, and transportation safety. Many IEEE standards have been developed to enhance the interoperability of communications products. One important example is the 802® series of standards for local and metropolitan area wireless and wired networks. Ethernets, token rings, wireless local area networks (“LANs”), and bridging and virtual bridged LANs, for example, are widely used today because they allow users to reliably access and share information over communications systems by interconnecting many compatible products manufactured by different producers.

Two processes for developing standards are used within IEEE-SA. The first involves all interested qualified individuals who each may vote on the decisions made in the standard-setting process. More recently, IEEE-SA has set some standards using a corporate-based program in which each materially interested participating corporation, educational institution, or government agency has one vote on the decisions made in the standard-setting process.

The IEEE-SA standards-setting process begins when a member of an IEEE Technical Society or Council sponsors a new standardization project. After determining that there is sufficient interest among IEEE members for such a standard, the sponsor appoints a study group chair who submits a project authorization request (“PAR”) to the IEEE-SA Standards Board. If the project is approved, an official working group is formed and is given four years to draft a standard. When the draft standard is complete, it must be approved by a balloting group made up of interested IEEE members. At least seventy-five percent of the balloting group must vote

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2 Id.


4 IEEE Standards Companion, supra note 3; see IEEE-SA STANDARDS BOARD BYLAWS, supra note 3, § 5.2.3.

5 IEEE Standards Companion, supra note 3; see IEEE-SA STANDARDS BOARD BYLAWS, supra note 3, § 5.2.3.

on the draft standard and seventy-five percent of these votes must be affirmative. A failed ballot may be recirculated after addressing negative comments in order to gain the required approval. Even after the 75/75 requirement has been met, the working group must respond to all negative comments. A ballot-approved draft standard is then submitted to the IEEE-SA Standards Board which approves the standard after confirming that the draft standard is within the scope of the PAR and that the working group has followed the procedural rules designed to achieve consensus.

In order to "produce standards that any willing implementer can use and that will become widely adopted," IEEE seeks to ensure that licenses for patent claims that are essential to implement an IEEE standard are broadly available on reasonable terms. IEEE-SA’s current patent policy is found in the IEEE-SA Standards Board Bylaws and its Standards Board Operations Manual. This policy requires working group chairs to begin every working group meeting to develop IEEE standards by informing participants that they should disclose any patent claims or patent applications that might be essential to implement the standard they are drafting. The working group chair asks those who may hold potentially essential patents to state, in writing, either (1) that they will not enforce their essential patent claims used to implement the standard, or (2) that they will license the essential patent claims to implement the standard on reasonable and nondiscriminatory ("RAND") terms. The IEEE-SA Standards Board will

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7 IEEE-SA STANDARDS BOARD OPERATIONS MANUAL, supra note 6, § 5.4.3.1.

8 IEEE Standards Companion, supra note 3; see IEEE-SA STANDARDS BOARD OPERATIONS MANUAL, supra note 6, § 5.4.3.1–2.

9 See IEEE-SA STANDARDS BOARD OPERATIONS MANUAL, supra note 6, § 5.6.2.4.

10 There are several opportunities for appeal. Working group members may appeal to the sponsoring committee if they believe the process has been unfair and members of the balloting group may appeal to the Standards Board. IEEE-SA STANDARDS BOARD BYLAWS, supra note 3, § 5.4.


12 IEEE-SA STANDARDS BOARD OPERATIONS MANUAL, supra note 6, § 6.3.2.

consider these commitments, or lack thereof, when deciding whether to approve a draft standard.\textsuperscript{14}

IEEE-SA represents that it has encountered two difficulties in relying on patent holders' commitments to license on RAND terms. First, commitments to license essential patent claims on RAND terms are inherently vague. Such ambiguities in RAND commitments can lead to litigation that can delay the introduction of standardized products. Patent holders may also demand higher licensing fees than they could have profitably demanded before the standard was set, and such higher royalty payments could result in higher prices for consumers.\textsuperscript{15} Second, IEEE-SA is concerned that its current prohibition of any discussion related to licensing terms within working groups prevents its members from making "sensible cost-benefit comparisons" when voting on competing technological proposals.\textsuperscript{16} IEEE-SA believes that the uncertainty about future licensing terms impedes the ability of IEEE-SA working group members to make decisions on a consensus basis, as is required by IEEE-SA procedures.\textsuperscript{17}

II. The Proposed IEEE-SA Patent Information Policy

IEEE-SA has decided to change its policy to give patent holders the option to publicly disclose and commit to the most restrictive licensing terms (which may include the maximum royalty rate) they would offer for patent claims\textsuperscript{18} that are found to be essential to the standard.\textsuperscript{19}

\textsuperscript{14} IEEE-SA Business Review Request, \textit{supra} note 11, at 2. Based on conversations with you, it is our understanding that the Standards Board will defer approval of a draft standard until some response has been received from the patent holder.

\textsuperscript{15} IEEE-SA Business Review Request, \textit{supra} note 11, at 2–3.

\textsuperscript{16} \textit{Id.} at 5.

\textsuperscript{17} \textit{Id.; IEEE-SA Standards Board Operations Manual}, \textit{supra} note 6, § 5.3.3; IEEE-SA Standards Board Bylaws, \textit{supra} note 3, § 2.1 ("The approval and publication of an IEEE standard implies that the document represents a consensus of the parties who have participated in its development and review. Since every attempt is made to involve all interests in the activity, it can be presumed that the document represents a consensus of interests concerned with the scope of the standard. Consensus is established when, in the judgment of the IEEE-SA Standards Board, substantial agreement has been reached by directly and materially affected interest categories. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution."); IEEE, Imperative Principles of the Standards Process (n.d.), http://standards.ieee.org/faqs/ImperativePrinciples.ppt.

\textsuperscript{18} Patent claims are defined as "one or more claims in issued patent(s) or pending patent application(s)." \textit{Inst. of Elec. & Elecs. Eng'rs, Inc., IEEE-SA Standards Board Bylaws} § 6.1 (rev. 2006), \textit{in} Letter from Michael A. Lindsay, Dorsey & Whitney LLP, to Frances Marshall, Special Counsel for Intellectual Prop., U.S. Dep't of Justice (Feb. 21, 2007) [hereinafter IEEE-SA Proposed
In addition, IEEE working group members will be allowed to discuss within certain limits the relative costs and benefits of alternative technologies within technical standard-setting meetings.

Commitments to licensing terms for potentially essential patent claims will be made using an IEEE-SA Letter of Assurance ("LOA") form. The proposed policy specifies that the licensing commitments made in an LOA will bind future holders of the patent as well as affiliates of the patent holder, unless they are specifically excluded from the LOA. Each LOA will also apply to amendments, corrigenda (corrections to printing errors), editions, or revisions of the existing standard. IEEE-SA anticipates that the proposed policy changes will have positive effects. Creating greater clarity about a patent holder's future licensing requirements may decrease the chances that litigation will delay the implementation of an IEEE standard and improve the ability of working groups to reach consensus, thus allowing standardized products to reach consumers more quickly. IEEE-SA states that these changes also may result in lower prices for consumers of standardized products.20

A. Patent Licensing Commitments

If the working group chair learns that access to a patent claim might be necessary to implement a proposed standard, it must request a licensing assurance from the patent holder or the patent applicant.21 A patent holder can choose to respond to a request from IEEE in one of five ways.22 First, it may either choose not to provide any licensing information, by not submitting an LOA or submitting a letter stating that it is unwilling or unable to make any commitment about its future licensing intentions. Choosing this option, however, results in a

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STANDARDS BOARD BYLAWS).

19 A patent claim is essential if its use is "necessary to create a compliant implementation" of the proposed standard when "there was no commercially or technically feasible non-infringing alternative." IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.1.

20 See IEEE-SA Business Review Request, supra note 11, at 5.

21 IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.2; INST. OF ELEC. & ELECS. ENG'RS, INC., IEEE-SA STANDARDS BOARD OPERATIONS MANUAL § 6.3.2 (rev. 2006), in Letter from Michael Lindsay to Frances Marshall, supra note 18 [hereinafter IEEE-SA PROPOSED STANDARDS BOARD OPERATIONS MANUAL]. It is our understanding that a patent holder also may submit an LOA on its own accord. The term "patent holder" as used in this letter refers to an individual or organization that has, or will have, the legal right to license a patent claim that is potentially essential to an IEEE standard.

22 See IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.2.
At the time the draft standard is published, IEEE will announce that essential patent claims may exist for which no LOA has been received.24

Second, after a reasonable and good faith inquiry, a putative patent holder may submit an LOA stating that it is not aware that it owns, controls, or otherwise has the ability to grant a license to any patent claims that might become essential to the IEEE standard.25 Such a reasonable and good faith inquiry does not require a patent holder to search its patent portfolio. Rather, it involves contacting individuals associated with the company who have been involved with the development of the standard.26

Third, a patent holder may submit an LOA stating that it will not assert any claims against anyone who uses its essential patented technology to implement the standard. Such a nonassertion LOA may not include any conditions.27

Fourth, a patent holder may submit an LOA stating that it has patents that might be essential to the IEEE standard and that it is willing to license the essential claims of those patents to those seeking to implement the standard either “without compensation” or under “reasonable rates” with all other terms and conditions on a RAND basis.28

Fifth, if a patent holder commits to license its essential patent claims under RAND terms, it may voluntarily augment its LOA by including details about those terms for each essential claim. Such details may include a not-to-exceed license fee or rate commitment, other material licensing terms, or a sample licensing agreement.29

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24 IEEE-SA STANDARDS BOARD OPERATIONS MANUAL, supra note 6, § 6.3.2.

25 IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.2 (“The Submitter of the Letter of Assurance may, after Reasonable and Good Faith Inquiry, indicate it is not aware of any Patent Claims that the Submitter may own, control, or have the ability to license that might be or become Essential Patent Claims.”).

26 Id. § 6.1.

27 Id. § 6.2(a).

28 Id. § 6.2(b).

29 Id. § 6.2(b)(i)–(iii).
The patent holder may choose to provide a blanket LOA that covers all patent claims that are potentially essential to the proposed standard. Or, the patent holder may provide different LOAs for each potentially essential patent claim. A patent holder may also submit multiple LOAs for each potentially essential patent claim, each of which will be binding. Thus, a patent holder may offer alternative assurances to potential licensees and each potential licensee may choose to invoke whichever LOA it finds most advantageous during subsequent bilateral licensing negotiations. Having submitted one LOA, a submitter is obliged to submit additional LOAs if it learns during the standard-setting process that it owns, controls, or has the ability to license any other patent claims that might be essential to the same IEEE standard.

B. Timing

If an individual or organization chooses to submit an LOA, it must do so before the proposed standard is approved by the Standards Board, although the Standards Board requests that LOAs be submitted as soon as it is “reasonably feasible” to do so.

C. Submission and Acceptance

To submit an LOA, a patent holder simply mails the completed LOA form to the IEEE-SA’s Patent Committee Administrator, who then records the date the LOA is received and ensures that the LOA is materially completed on the appropriate IEEE form. The Patent Committee Administrator also determines whether the signatory to an LOA has authority to bind the patent holder. Once the Patent Committee Administrator has approved an LOA, it is posted on the IEEE-SA website.

D. Duration of the LOA Commitment

After an LOA is accepted by IEEE-SA, it is irrevocable and applies from the date the standard is approved by the IEEE-SA Standards Board to the date the standard is withdrawn. The commitments in an LOA are binding on the patent holder and all of its affiliates, except those that have been specifically excluded, and on any assignees or transferees of the underlying

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30 IEEE-SA PROPOSED STANDARDS BOARD OPERATIONS MANUAL I, supra note 21, § 6.3.4. A potential licensee may not invoke a blanket LOA if an LOA specific to that claim was filed on the same date. Blanket LOAs will apply to after-acquired essential patent claims unless the prior patent holder had already submitted an LOA for those claims. Id.

31 Id.

32 IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.2.

33 Id.

34 IEEE-SA PROPOSED STANDARDS BOARD OPERATIONS MANUAL I, supra note 21, § 6.3.
patent claims.\textsuperscript{35} If the application of the technology remains the same and the patent claims remain essential, the LOA will also apply to amendments, corrigenda, editions, or revisions of the existing standard.\textsuperscript{36}

E. Use of the Licensing Information in the LOA During the Standard-Setting Process

IEEE-SA working group members will have access to all accepted LOAs, but working group members will not discuss specific licensing terms at standards-development meetings.\textsuperscript{37} Working group members, may, however, discuss the relative costs of the proposed technological alternatives, and these costs may include the relative costs of licensing the essential patent claims needed to implement the technologies under consideration.\textsuperscript{38}

F. Enforcement of an LOA

By signing an LOA, the submitter “acknowledge[s] that users and implementers” of the proposed standard “are relying or will rely upon and may seek enforcement of the terms of th[e]
The IEEE-SA’s policy does not provide for any enforcement role for IEEE-SA or IEEE.  \(^{40}\)

III. Agency Analysis

The Department analyzes the competitive effects of standard-setting activities under the rule of reason unless the standard-setting process is being “used as a sham to cloak naked price fixing or bid rigging.”\(^{41}\) We examine both the expected competitive benefits of IEEE’s proposed patent policy and its potential to restrain competition.

The Department recently announced through a business review letter that it did not intend to take enforcement action against the proposed patent policy of another standards-development organization (“SDO”)—VMEbus International Trade Association (“VITA”). In that letter the Department recognized the potential competitive benefits of collaborative standard setting:

Interoperability standards can enable consumers to share information with each other and to interconnect compatible products from different producers. In addition, the collaborative standard-setting process can enable industry participants to share knowledge and develop a “best-of-breed” product or process. Especially in industries with network effects, the collaborative standard-setting process can enlarge markets by overcoming coordination failures among those interested in developing and using the standard so that the products are available to, and used, by more consumers.\(^{42}\)

The Department noted that working group members may be able to choose among various technological options during the standard-setting process, but once the technological choice is made, and particularly once the standard has been commercially adopted, it can be time consuming and expensive to adopt a different technology. As a result, the owner of a technology incorporated in a final standard may be able to negotiate licensing terms more favorable to itself than it could have negotiated before the standard was set when competitive alternatives may have been available without “the expense and delay of developing a new standard around a different technology.”\(^{43}\)

\(^{39}\) LETTER OF ASSURANCE, supra note 23, at § F.

\(^{40}\) See id.


\(^{42}\) Id. at 7.

\(^{43}\) Id. at 8.
The Department concluded that a policy that requires patent holders to disclose and commit to their most restrictive licensing terms would permit SDO members to make more informed decisions when setting a standard because they would be able to compare alternative technologies based on differences in cost in addition to technical merit. The Department stated:

Requiring patent holders to disclose their most restrictive licensing terms in advance could help . . . preserve[1] the benefits of competition between alternative technologies that exist during the standard-setting process. Currently, VITA working group members choose between alternative technologies primarily based on technical merit. They generally have little information about how eventual licensing terms for alternative technologies are likely to differ. Under the proposed policy, each working group member also will be able to compare the most restrictive licensing terms associated with each alternative technology, including freely-available public domain technologies, when deciding which technology to support for inclusion in the draft VSO specification. Disclosure of this information, enforced by the requirement that nondisclosed patents be licensed royalty-free, permits the working group members to make more informed decisions when setting a standard. . . .

The disclosure of each patent holder’s most restrictive licensing terms would allow working group members to evaluate substitute technologies on both technical merit and licensing terms. Working group members are likely to use this information when deciding which technologies to include in the standard. This use likely will create incentives for each patent holder to compete by submitting declarations that will increase the chances that its patented technology will be selected.44

Although the proposed IEEE-SA policy does not require patent holders to publicly commit to their most restrictive licensing terms during the standard-setting process, the ability to make such commitments could generate similar benefits as patent holders may compete to offer the most attractive combination of technology and licensing terms.

In addition, IEEE-SA working group members may make better informed decisions by considering potential licensing fees when weighing the relative costs of technological alternatives in addition to their technical merits. Moreover, the increased predictability of licensing terms, created by LOA commitments and the knowledge that such commitments bind the patent holder’s affiliates and any future patent assignees, could lead to faster development, implementation, and adoption of a standard as well as fewer litigated disputes after a standard is set.

44 Id. at 9.
The proposed patent information policy permits voluntary commitments to most restrictive licensing terms, but prohibits discussion of specific licensing terms within IEEE-SA standards development meetings. Based on your statements, we understand that this prohibition extends to joint negotiations of licensing terms within standards development meetings. The Department observes in this regard that IEEE’s current policies permit limited discussions of costs related to proposed standards. Such discussion, could, in certain circumstances, rise to the level of joint negotiation of licensing terms. You have not requested, and we are not providing, the Department’s views on joint negotiations that might take place inside or outside such standards development meetings or IEEE sponsored meetings.

The proposed IEEE-SA policy will prohibit standard setters from discussing the prices at which standardized products would be sold. The Department likely would challenge under section 1 of the Sherman Act any activities that reduced competition by using IEEE-SA’s proposed patent policy as a cover to fix the prices of downstream standardized products. The Department would also be likely to challenge efforts by patent holders to rig their LOAs by agreeing on the licensing terms they will disclose to IEEE-SA. IEEE-SA should continue its efforts to educate those who set standards under its auspices about the consequences of such activities.

IV. Conclusion

IEEE-SA has an important role in setting many standards in a vast array of technical fields. These standards promote and enable competition in the products and services that conform to IEEE-SA standards. IEEE-SA’s proposed patent information policy is a sensible effort to preserve competition between technological alternatives before the standard is set in order to alleviate concern that commitments by patent holders to license on RAND terms are not

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45 See IEEE-SA PROPOSED STANDARDS BOARD BYLAWS, supra note 18, § 6.2; supra note 37 and accompanying text; see also IEEE-SA PROPOSED STANDARDS OPERATIONS MANUAL II, supra note 37, § 5.3.8.2.

46 IEEE-SA Business Review Request, supra note 11, at 6, 8.


48 IEEE-SA Business Review Request, supra note 11, at 6; IEEE-SA PROPOSED STANDARDS BOARD OPERATIONS MANUAL II, supra note 37, §§ 5.3.8.2, 5.3.8.3.

49 See IEEE, Instructions for the WG Chair (Feb. 2006), http://standards.ieee.org/board/pat/pat-slideset.ppt.
sufficient to avoid disputes over licensing terms or litigation that may delay the implementation of IEEE-SA’s future standards.

Practical consideration may lead some SDOs to prefer not to implement patent policies like those proposed by IEEE-SA or by VITA. Some SDOs, for example, may conclude that required or voluntary disclosure of and commitments to most restrictive licensing terms before a standard is set would decrease participation in standard-setting activities by patent holders. Experimentation and competition among SDOs regarding the breadth and depth of member licensing commitment obligations or options should help SDOs and their members determine which methods ultimately provide the best platforms for collaborative standard setting.50

The Department has no present intention to take antitrust enforcement action against the conduct you have described. This letter expresses the Department’s current enforcement intention. In accordance with our normal practices, the Department reserves the right to bring an enforcement action in the future if the actual operation of the proposed conduct proves to be anticompetitive in purpose or effect.

This statement is made in accordance with the Department’s Business Review Procedure, 28 C.F.R. § 50.6. Pursuant to its terms, your business review request and this letter will be made publicly available immediately, and any supporting data you submitted will be made publicly available within thirty days of the date of this letter, unless you request that part of the material be withheld in accordance with paragraph 10(c) of the Business Review Procedure.

Yours sincerely,

Thomas O. Barnett

50 See Gerald F. Masoudi, Deputy Assistant Attorney Gen., U.S. Dep’t of Justice, Efficiency in Analysis of Antitrust, Standard Setting, and Intellectual Property, Remarks at the High-Level Workshop on Standardization, IP Licensing, and Antitrust 15 (Jan. 18, 2007), available at http://www.usdoj.gov/atr/public/speeches/220972.pdf (“There certainly is no affirmative requirement in antitrust law that businesses must create a RAND, disclosure, or ex ante licensing system. Doing nothing remains an option, and may be a viable option in view of the fact that there are many self-correcting mechanisms within traditional standard setting approaches. It may be reasonable to conclude that reputational constraints are enough to prevent hold-up strategies in some industries, or that simple economic incentives – those who hold up a standard too much could delay or kill the standard, which would deprive them of royalties – would suffice. Or perhaps an SDO may recognize the benefits of a policy like VITA’s, yet conclude that those benefits are not enough to compensate for the additional personnel, costs, and delays that such a policy may require.”).