

Promoting Competition and Innovation:

What You Need to Know about the IEEE Standards Association's

Antitrust and Competition Policy

Antitrust and competition laws throughout the world rest on the premise that competition in the provision of products and services is the best way to ensure that consumers and other users receive maximum innovation and quality at the lowest possible prices. But sometimes effective competition requires a measure of cooperation among competing firms.

Standards development is one of those areas. Standards development serves one part of the IEEE's mission – advancement of global prosperity by fostering technological innovation – but it can do so only if the standards development is conducted consistent with the antitrust and competition laws that regulate the nature and extent of cooperation in which competitors can legitimately engage.

The IEEE-SA is an international membership organization that provides a standards program serving the global needs of industry, government, and the public. A violation (or claims of violation) of competition laws will jeopardize what all participants are working so hard to build; will impede the IEEE mission; and may expose participants and their employers to the risk of imprisonment and other criminal penalties, civil remedies, and significant litigation costs. Even if a competition-law case or investigation is ultimately dropped, that will often happen only after the parties have spent considerable resources in responding to information requests and defending against the claims.

The IEEE-SA wants to help all of its participants avoid competition-law problems. Many IEEE-SA participants receive antitrust/competition-law compliance training from their employers, and IEEE-SA participants should always consult with their own or their company counsel when they have competition-law-related questions. This brochure is not intended to replace that competition-law training, advice, or other competition-law-related resources that participants may have available to them; rather, this brochure is intended to highlight the competition-law risks that are most pertinent to standards development and to explain the IEEE-SA's policies with respect to competition law matters.

1. General Background

What are the antitrust and competition laws? In the U.S., it is called “antitrust law,” and elsewhere it is called “competition law.” But regardless of the label, most countries have substantially similar laws regarding this matter. Generally speaking, most of the world prohibits agreements and certain other activities that unreasonably restrain trade.

What is monopolization? Monopolization is the obtaining of a monopoly – the ability to obtain profit by restricting output and selling at a higher price – through wrongful means. For example, a company might unlawfully convert its patents into monopoly power by misleading

other participants in the standards organization into incorporating the company's patented technology into a standard under the false impression that no patents were involved.

What are some examples of agreements that unreasonably restrain trade? Competition authorities throughout the world uniformly condemn actions that are referred to as “naked restraints on trade” – that is, agreements that do nothing more than limit competition between competitors. The classic examples that could arise in the standards process – and the kinds of violation that most frequently result in significant jail time for the participants – include:

- price fixing (for example, where standards participants or other competitors agree on the prices that they will charge for compliant products);
- output restrictions (for example, where standards participants or other competitors agree on how much of a compliant product they will each produce);
- allocations of customers or territories (for example, where competitors agree on where or to whom they will each sell compliant products).

Other kinds of violations can also arise in the standards process. For example, selecting one technology for inclusion in a standard is lawful, but an agreement to prohibit standards participants (or implementers) from implementing a competing standard or rival technology would be unlawful – although as a practical matter, a successful standard may lawfully achieve this result through the workings of the market.

So is it okay to talk about prices or output levels in an IEEE-SA meeting as long as we don't reach an agreement? No, it's not okay. First, you can't always control where the discussion will go – it may end up in undesired areas. Second, if agreeing on the subject would be unlawful (such as the respective selling prices of compliant products), then that subject should not be discussed. And third, it's not up to you to decide whether your words and conduct amount to an agreement – in the U.S., that decision gets made by a judge using the peculiar rules of evidence that only courts use and by a jury that is unlikely to know anything about your industry or business. The whole question about your actions will come up after the fact, and with the sure vision of hindsight, any questionable discussion or debate could be seen to have led to a tacit if not an explicit agreement that is prohibited by law. Do not put the IEEE, your company, your colleagues in the standards community, or yourself at risk by discussing these topics.

So can we discuss costs of components or patent licenses? The IEEE-SA permits certain discussion of costs, subject to some important limitations. See [subclause 5.3.10.3](#) of the [IEEE Standards Board Operations Manual](#) and *Section 2* and *Section 4* of these Guidelines.

What else can we discuss? The IEEE wants you to have the maximum flexibility to discuss topics relevant to developing a standard while also adhering to certain rules designed to minimize risk. It is impossible to identify all the topics that you *can* discuss, but here are some that you *cannot* discuss:

- prices at which products or services implementing the standard should be sold (“price” includes discounts, terms, and other conditions of sale);

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- profits or profit margins;
- individual companies' market shares or sales territories;
- allocation of customers, markets, production levels, or territories; or restricting the customers to whom, or territories in which, a company may sell or resell products;
- using standards or certification programs to exclude suppliers or competitors from the marketplace for any reason other than cost-performance or technical considerations;
- conditioning the implementation of a standard on the implementer's use of products or services from a particular supplier [such as requiring use of a particular manufacturer's components or requiring implementers to use a particular service provider(s) for compliance certification];
- bidding (or terms of bids) or refraining from bidding to sell any product or service;
- any matter which restricts any company's independence in setting prices, establishing production and sales levels, choosing the markets in which it operates, or the manner in which it selects its customers and suppliers.

In addition to topics that are prohibited on purely competition-law grounds, certain topics are not productively discussed in technical standards-development meetings. The [IEEE-SA Standards Board Operations Manual](#) prohibits discussion of these topics as well:

- The status or substance of ongoing or threatened litigation;
- The essentiality, interpretation, or validity of patent claims;
- Desirable versus undesirable terms of patent licenses;
- Specific patent license terms or other intellectual property rights, other than distribution of Accepted Letters of Assurance as permitted under the IEEE-SA patent policy (see [section 6.2](#) of [IEEE-SA Standards Board Bylaws](#)). (*For guidance on this topic, see section 2 below.*)

What if our meetings occur outside the U.S.? Whose law governs? Most countries will apply their antitrust and competition laws to any conduct that has a substantial effect in their country, regardless of where that conduct took place. The IEEE-SA's Antitrust and Competition Law Policy applies to IEEE-SA activities wherever the meetings occur.

2. Cost Discussions

Discussion of the cost of inputs necessary to create a compliant implementation of a standard are treated differently from discussions of prices at which compliant implementations

can or should be sold. There is no useful or appropriate reason to discuss selling prices of implementations – each implementer of the standard should use its own independent business judgment to make that decision. In contrast, there is a legitimate reason to discuss costs of inputs used in implementation.

Different technical approaches may have different benefits, and a sensible comparison may involve an understanding of whether or not the technical differences would justify the cost differential (if known). Nevertheless, as a matter of policy, the IEEE-SA recommends that meetings of technical experts remain just that – technical meetings. While technical meetings should remain focused on the complexity, performance, and quality implications of proposals, they should also permit sufficient discussion to enable participants to understand the *relative* cost differentials (or to be able to take information back to their respective companies to have that kind of discussion and analysis internally).

With regard to the costs of inputs used in implementing a standard, the only permitted discussion is the degree to which such costs may differ. Examples of permissible discussion topics would include differences in comparative component costs, operating costs, licensing costs, or the aggregate of such costs. The importance of this restriction on discussion is reinforced by the understanding that participants in the development of a standard often come from multiple stages of the supply chain (e.g., the input cost of a component to a system manufacturer is the output price of a component supplier).

Thus, in standards development technical activities, participants may discuss the relative costs (in terms, for example, of percentage increases or decreases) of different proposed technical approaches in comparison with the relative technical performance increases or decreases of those proposals. However, participants are not to discuss any specific patent licensing terms and conditions (including any pricing information).

Discussion of relative costs in technical standards-development meetings should be presented in a way that can be substantiated and that permits other participants to replicate the cost analysis. Participants are reminded that false or misleading cost comparisons carry their own legal risks. Moreover, actual costs may well differ from one implementer to another.

There may be costs associated with patent claims identified in an Accepted Letter of Assurance (or “Accepted LOA,” which is defined in [subclause 6.1](#) of the [IEEE-SA Standards Board Bylaws](#)). Those costs may be included in comparisons when appropriate but only on a relative basis, subject to the procedural and other direction discussed in these guidelines. However, specific licensing fees, terms, and conditions, or the meaning, validity, or essentiality of the patents with which they are connected are not permissible topics of discussion. For examples of permissible relative cost comparisons, see *Section 4*.

A patent-holder’s disclosure of its maximum royalties and other licensing fees and terms is completely voluntary. Patent-holders who have not voluntarily disclosed maximum terms shall not be coerced into disclosure.

Thus, participants, through either discussions or relative cost comparisons, shall not criticize any particular Accepted LOAs for not providing specific maximum terms or coerce any

patent holder into supplying such terms. Nevertheless, a participant or a comparison may state that some cost elements of a particular technology approach are not known (because maximum terms have not been included in an Accepted LOA).

The IEEE-SA believes that, as a general matter, having more information – including cost information – is better than having less. This does not mean that cost should be the sole or exclusive factor in technology selection. Relative costs can be a factor in technology selection, as can the absence of cost information. Nonetheless, the IEEE-SA has not created any policy expectation, endorsement, or presumption in favor of selecting a technical approach for which a patent holder has disclosed its maximum fees and terms. Participants in IEEE-SA standards-development activities are free to exercise their own judgment as to whether a proposal with higher known relative costs (including costs of potentially Essential Patent Claims) is or is not superior to a proposal with lower known relative costs (including costs of potentially Essential Patent Claims).

Again, participants should never discuss the price at which compliant products may or will be sold, or the specific licensing fees, terms, and conditions being offered by the owner of a potential Essential Patent Claim. With respect to disclosures made to the IEEE-SA in the context of its standards-development activities, disclosure of maximum licensing fees, terms, and conditions is completely voluntary and may only occur through LOAs submitted directly to IEEE-SA. Technical considerations should generally remain the primary focus of discussions in IEEE-SA standards-development technical activities.

3. Some Practical Guidelines

Written Meeting Agenda: Due process is best served with written agendas available in advance of standards meetings. Each IEEE-SA meeting must be preceded by a notice and proposed agenda made available to prospective participants. This is to notify the participants of the time and place of the meeting and the nature of the business to be conducted.

Written Minutes of Meetings: Minutes of meetings should be prepared and made available consistent with the [IEEE Standards Companion](#).

Informal Meetings and Other Communications. Topics that are prohibited from discussion on competition-law grounds at any formal IEEE-SA meetings shall not be discussed in e-mail reflectors or other electronic communications provided under the auspices of the IEEE-SA. Likewise, those topics should not be discussed in hallway conversations, luncheons, social events, or in any gathering held in connection with IEEE-SA standards-development activities (unless the only people present are all employees of the same company).

No Agreements to Comply. IEEE-SA standards are voluntary. There should be no agreement to implement them or to adhere to them or any discussions as to when participants will begin to offer products conforming to the standards. Participants involved in IEEE-SA's standardization activities must adhere to IEEE-SA Procedures and Patent Policies.

Customer Surveys and Statistical Programs. Individual participants may make presentations about broad market potential or market requirements for informational purposes.

No IEEE-SA standards group may engage in, direct, or encourage its members to engage in surveys of customers or gathering of statistical data about market requirements, markets, or customers without appropriate review by IEEE-SA legal counsel (which is arranged through the IEEE-SA Staff Liaison for your working group or technical committee).

Importance of Chair. Participants are expected to comply with IEEE-SA policies, but the chair of the working group, task group, or other standards-development meeting plays a significant role in facilitating this compliance. The chair should ensure that the Call for Patents is announced at the beginning of every standards-development meeting (whether conducted in person or by telephone). Using the [patent slide-set](#) (including the competition-law cautions) is the preferred method for this announcement. During a meeting, the chair should ensure both that the discussion does not stray into impermissible topics and that IEEE-SA policies are not improperly used to suppress permissible discussions. The chair should also encourage participants not to remain silent if impermissible discussions do occur.

4. Some Examples

The following are examples to assist presenters, participants, and chairs in understanding permissible comparisons of relative costs (including costs for potentially Essential Patent Claims). There may be other permissible forms of comparing relative costs, and these examples are not intended to exclude other permissible comparisons.

These examples use the term “Accepted Letter of Assurance” (or the shorter form “Accepted LOA”). That term is [defined](#) in the [IEEE-SA Standards Board Bylaws](#) and is used in the [IEEE-SA Standards Board Operations Manual](#).

The particular presentation formats used here are not intended as a mandatory template for all presentations. For example, each of these examples uses titles associated with the technological substance of the proposal. Proposal names should be fair and accurate, but the IEEE-SA does not dictate any particular nomenclature for technology proposals. Proposals will sometimes be identified with a particular company or companies. Where a proposal is identified with a single company, it is still permissible to make statements about the relative costs (of patents or other cost elements) for that technology, even if the only known potentially Essential Patent Claims for that technology are owned by a single company.

A presentation that references any Accepted LOA should always indicate that Accepted LOAs may contain other material terms and that participants should consult the Accepted LOAs for a complete statement of terms disclosed (if any). A presentation that references any Accepted LOA should also state that there may be other potentially Essential Patent Claims that have not been identified or for which no statement of assurance has been received.

Example 1.

For “Amber-Teal Technology Proposal,” there is a single Accepted Letter of Assurance, and in the Accepted LOA the submitter has voluntarily disclosed that it will not seek more than a maximum one-time licensing fee of US \$5,000. For “Blue Technology Proposal,” there are two Accepted LOAs, and in these Accepted LOAs the submitters have voluntarily disclosed that they will not seek more than, respectively, maximum one-time licensing fees of US \$5,000 and US \$15,000, resulting in a cumulative one-time licensing fee of US \$20,000. There are Accepted LOAs for “Chartreuse Technology Proposal” and “Green Technology Proposal,” and in these Accepted LOAs the submitters have not stated maximum licensing rates or fees. A presenter could present the information as follows:

	Amber-Teal Technology Proposal	Blue Technology Proposal	Chartreuse Technology Proposal**	Green Technology Proposal
Optics	$2n$	$3n$	$4n$	$1.6n$
Silicon	$3q$	$4q$	$2q$	q
Known Costs of potentially Essential Patent Claims*	x	$4x$	not known***	not known***

* Presentations shall include a disclaimer, such as “Based on ‘Not to Exceed’ Costs disclosed in Accepted LOAs on file with the IEEE-SA. Accepted LOAs may contain other material terms not discussed in this presentation. For a complete list of Accepted LOAs, including a complete statement of terms disclosed (if any), see <http://standards.ieee.org/db/patents/index.html>. In addition, this comparison discloses costs only for patent claims that have been identified as potentially essential. Other Essential Patent Claims may exist for which a Letter of Assurance has not been received.”

** In this example, each proposal is identified by words describing the technology. If the “Chartreuse Technology Proposal” had instead been identified as the “Company C Proposal,” it would still be permissible to make the statement that “maximum costs of potentially Essential Patent Claims” for the Company C Proposal are “not known.” (The IEEE-SA does not require or encourage that a proposal be identified with a specific company or companies.)

*** See note above. A comparison can note that maximum licensing terms for a proposal are not known even if there is only one Accepted LOA (that does not disclose maximum terms) on file with the IEEE-SA.

Example 2.

There is a single Accepted LOA for “Green Technology Proposal,” and in its Accepted LOA the submitter has voluntarily disclosed that it will not seek more than a maximum one-time

licensing fee of US \$5,000. There are two Accepted LOAs for “Blue Technology Proposal,” and in these Accepted LOAs the submitters have voluntarily disclosed that they will not seek more than, respectively, maximum one-time licensing fees of US \$5,000 and US \$15,000, resulting in a cumulative one-time licensing fee of US \$20,000. There are no Accepted LOAs for “Aquamarine and Fuchsia Technology Proposal,” although information for non-IP costs is available (and, in this example, are significantly greater than non-IP costs for the two proposals for which there are Accepted LOAs). The information could be presented as follows:

	Green Technology Proposal	Blue Technology Proposal	Aquamarine and Fuchsia Technology Proposal
Optics	$2n$	$3n$	$30n$
Silicon	$3q$	$4q$	$9.5q$
Known Costs of potentially Essential Patent Claims*	x	$4x$	none**

* Presentations shall include a disclaimer, such as “Based on ‘Not to Exceed’ Costs disclosed in Accepted LOAs on file with the IEEE-SA. Accepted LOAs may contain other material terms not discussed in this presentation. For a complete list of Accepted LOAs, including a complete statement of terms disclosed (if any), see <http://standards.ieee.org/db/patents/index.html>. In addition, this comparison discloses costs only for patent claims that have been identified as potentially essential. Other Essential Patent Claims may exist for which a Letter of Assurance has not been received.”

** Technology believed to be in public domain, but participants should verify.

Note: The table in Example 2 would also apply where the Accepted LOA for the “Aquamarine and Fuchsia Technology Proposal” states that the submitter will offer licenses on a “royalty-free” basis (sometimes also called RAND-Z or “RAND-zero royalty”).

Example 3.

There is a single Accepted LOA for “Green Technology Proposal,” and in its Accepted LOA the submitter has voluntarily disclosed that it will not seek more than a maximum one-time licensing fee of US \$5,000. There is a single Accepted LOA for “Blue Technology Proposal,” and in its Accepted LOA the submitter has voluntarily disclosed that it will not seek more than a maximum royalty rate of 1.6% of sales. There is a single Accepted LOA for “Aquamarine and Fuchsia Technology Proposal,” and in its Accepted LOA the submitter has not disclosed any maximum licensing rates. If it is not possible to provide a meaningful relative cost comparison between a one-time fee and a percentage of sales rate, then this information could be presented as follows:

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	Green Technology Proposal	Blue Technology Proposal	Aquamarine and Fuchsia Technology Proposal
Optics	$2n$	$3n$	$1.2n$
Silicon	$3q$	$4q$	$2.2q$
Known Costs of potentially Essential Patent Claims*	known	known	not known

- * Presentations shall include a disclaimer, such as “Based on ‘Not to Exceed’ Costs disclosed in Accepted LOAs on file with the IEEE-SA. Accepted LOAs may contain other material terms not discussed in this presentation. For a complete list of Accepted LOAs, including a complete statement of terms disclosed (if any), see <http://standards.ieee.org/db/patents/index.html>. In addition, this comparison discloses costs only for patent claims that have been identified as potentially essential. Other Essential Patent Claims may exist for which a Letter of Assurance has not been received.”