



Standards and Intel Business

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Intel actively contributes to standards because they are important to our business in many ways: enabling global supply chains, delivering interoperable solutions to markets, and supporting investments in innovations on widely adopted technologies.

Intel's business is global – providing leading technology products and solutions to address the needs of worldwide customers and bringing to markets the latest advancements of technology innovations. Standards are a foundation for Intel business objectives in supporting interoperable ecosystems, delivering high-quality and cost efficient solutions as well as contributing to important global issues.

Voluntary industry-led technology standards have been a fundamental factor in the growth of all modern industries. Technology standards facilitate interoperability, enabling Intel and ecosystem partners to provide customers choice for products and services which are both compatible and have innovative features. Intel incorporates technology standards into our hardware and software products to support our customers' platforms ranging from notebooks, mobile devices to data servers and new market platforms such as autonomous vehicles which are also built on standards. As an example of the important role of standards in technology platforms, a research paper concluded that the typical notebook computer is built on over 500 standards.

Intel participates in over 250 standards and industry groups worldwide including industry alliances, regional standards organizations, international industry standards groups and formal international standards bodies. Intel employees participate in standards organizations as technical experts and in leadership roles. They work together with industry stakeholders to develop standards which address global market needs for a broad range of applications including: wireless communication, data networking, cloud computing, server/storage systems, multimedia, IoT systems etc. Examples of industry-led organizations include: IEEE, IETF, W3C and USB-IF. Intel is also an active contributor in regional and formal international standards organizations including: CCSA, ETSI, CENELEC, IEC, ISO/IEC JTC 1 and ITU.

In addition to technology standards, Intel contributes to the development and adoption of many other standards which support Intel business objectives. These include standards which address global environment issues, best practices for corporate governance and business operation as well as consumer product safety.

Global Standards

We live in an increasingly interconnected world, a world that seems to be shrinking as technology binds us closer together. Technology happens on a global scale – it spans (and sometimes ignores) national boundaries. Much content, whether news, movies or music, is created for a global audience and enjoyed worldwide. Technology products, such as smartphones and computers, are expected by users to work in almost any part of the world. New services, such as cloud computing or social media, are offered to individuals and entities worldwide.

Industry has organized itself to develop products using global supply chains. The most sophisticated and advanced consumer products are created through collaborative efforts by companies and their employees spread across many different countries.

In this environment, global standards (also known as international standards) have never been more important. What are global standards? The Information Technology Industry Council (ITI) says that "global standards share three important characteristics: respond to the need of global markets; demonstrate relevance through voluntary worldwide adoption and implementation; and they are products of standardization processes that are consensus-based, transparent and industry-led with participation open to any interested party". In the third triennial review of the Agreement on Technical Barriers to Trade, the World Trade Organization has defined six criteria for International Standards Development Organizations: transparency, openness, impartiality and consensus, effectiveness and relevance, coherence and development dimension. These definitions make it clear that a broad range of organizations develop global or international standards.

Considering the importance of global standards to technology users and producers, it is incumbent upon industry, governments and individuals to turn their attention toward developing and using the best global standards possible. By embracing global standards, all stakeholders can promote competition, minimize barriers to trade, and encourage innovation with broad benefits for the world's population.

Standards and Patents

The high-technology industry today faces a grave threat from patent owners that make industry-wide commitments to license their patents on fair, reasonable, and nondiscriminatory ("FRAND") terms but later renege on their promises. This form of patent abuse threatens to upend a standards system that has played a great role in promoting innovation in high technology. Abuses of FRAND commitments are now imposing substantial costs on the industry, and pose a significant risk to competition, innovation, consumer welfare and economic progress.

Cooperative standard-setting has played a critical role in promoting innovation. The joint development of standards allows products from different manufacturers to work and communicate with one another. Standards protect both manufacturers and consumers from the risk that their products will be incompatible with other manufacturers' products. This assurance of compatibility, in turn, promotes investment in standard-compliant products and results in greater innovation and more competition. These benefits of standard-setting reflect the ability of manufacturing companies to rely on patent holders' commitments to license on FRAND terms the patents that must be practiced to comply with industry standards, known as standard-essential patents ("SEPs"). The assurance of obtaining licenses on fair, reasonable and non-discriminatory ("FRAND") terms, like the assurance of compatibility, reduces the risk of investing in standard-compliant products, and thereby promotes their development, manufacture and sale. The continued success of this system thus depends on the ability of standard implementers to rely on these licensing commitments that ensure fair, reasonable and non-discriminatory terms. The recent and ongoing wave of breaches of FRAND commitments poses a vital threat to this system by increasing the cost of making, selling, and using standard-compliant products.

Standard-setting organizations ("SSOs") have developed FRAND commitments to prevent SEP holders from exploiting the unearned market power that they otherwise would gain as a consequence of the adoption of a standard by ensuring that royalties and other terms in SEP licenses will be fair, reasonable, and non-discriminatory. The FRAND commitment is an industry-devised solution to prevent SEP holders from exploiting standard implementers after patented technologies are incorporated into standards and manufacturers are compelled to use them to maintain product compatibility. In particular, in exchange for constraints on the commercial exploitation of patents for which a commercial market might not have existed absent the standard, SEP holders that make FRAND commitments gain the ability to obtain reasonable royalties from a large body of standard implementers. Without the constraint of a FRAND commitment, SEP holders would have the same power as a monopolist that faces no competition.

Intel Patent Licensing Practices for Industry Standards

Intel participates in a wide range of standard-setting organizations ("SSOs") to advance industry-wide growth and technology development.

Consistent with its participation in SSOs, Intel may voluntarily commit to license its patents that are "essential" for compliance with a standard on fair, reasonable and non-discriminatory ("FRAND" or "RAND") terms. Intel sees FRAND licensing as requiring a balanced approach that respects intellectual property rights while promoting key benefits of standard setting such as economic feasibility and widespread adoption of the standard. Intel understands FRAND commitments have at least the following implications:

- A commitment to license every user or implementer of the relevant standard, and such license may not be conditioned on licensing patents that are not essential for that standard;
- Injunctions and other exclusionary remedies should not be available on FRAND committed patents except in limited circumstances;
- A FRAND royalty should reflect a number of factors including a royalty based on the smallest salable unit that practices the standard, the technical value of the patented technology compared to alternatives available during the standard-setting process, and the overall royalty that could reasonably be charged for all patents essential to the standard; and
- FRAND commitments follow the transfer of a patent to subsequent owners.

In negotiating FRAND terms, Intel expects its prospective contracting parties to agree to a balanced approach that includes these principles. For example, a balanced approach does not include consideration of non-representative licenses, licenses that are a product of unacceptable coercion or that contain non-FRAND terms.

Intel has also filed public commentaries that describe these FRAND principles.

Inquiring about obtaining a patent license

If you are interested in inquiring about a patent license from Intel, please contact us at email: standards.licensing@intel.com