IEEE★USA

POSITION STATEMENT

Patent-Eligible Subject Matter Under 35 U.S.C. § 101

Adopted by the IEEE-USA Board of Directors (22 Oct. 2019)

IEEE-USA supports a patent system that protects and preserves innovations in all technology sectors--including software, computer-implemented systems, medical devices, diagnostic, treatment, dosing methods, pharmaceuticals, manmade materials, and isolated or improved versions of materials that exist in nature only in impure form. Decisions on subject matter eligible for patent protection --the kind and type of inventions to be so protected – should be made under predictable rules. Categories of subject matter eligible for protection under U.S. patent laws, stated in 35 U.S.C. §101 ("any … process, machine, manufacture, or composition of matter, or any … improvement thereof"), should be broad enough to include all innovations that include technological content. The "subject matter" requirement of §101 is a gating filter that excludes from the patent system such areas as the fine arts, social sciences, unembodied abstract ideas, laws of pure science with no application, and the like. Patent-eligible subject matter is only one requirement among many in the patent system. Subject matter eligibility inquiries should not be conflated with, confused, or diluted by concerns for prior art, obviousness, quality of disclosure, or definiteness of claiming.

Patent protection is an essential property interest for entrepreneurs and inventors. Patent protection serves to help attract investment. Investment is essential; and often, it is the most constrained input, in the process of turning ideas into products and businesses. A strong patent system provides individuals, startups, small companies, and large companies alike with a sustainable competitive advantage. It allows a return on investment in research and development. The United States has built its technological successes, in large part, on the strength of its patent system, and its ability to protect wide areas of inventive subject matter. Unless patent protection is available in all such areas, some R&D efforts will offer too little incentive to investors, resulting in a loss of U.S. technological momentum; and eventually, leading to a loss of jobs and a weakening of the national economy.

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The eligible subject matter requirement is separate and distinct from the other requirements for patentability in the *U.S. Patent Act,* which serve as specific filters based on other parameters. These specific filters include novelty and non-obviousness over the prior art, written description, enablement, utility requirements, and definiteness of claiming. These specific filters protect the public by ensuring that inventors genuinely disclose their inventions to the public; the scope of resulting patents is not overbroad; and the public's rights to use pre-existing technology, and to conduct research, are not impaired.

To implement these broad objectives, IEEE-USA believes the following:

1. To function effectively, patent law must provide a legal and commercial level of certainty. The law of subject matter eligibility must be sufficiently objective to enable businesses and innovators to have reasonable expectations as to patentability; examiners to apply the subject matter tests predictably; and judges to apply the tests consistently. For that reason, subject matter eligibility under §101 must be based on claim language, using the same precision and evaluation, as under any other requirement of the *U.S. Patent Act*. The courts have applied informal concepts, such as "the invention," "inventive concept," "directed to," and "technical contribution," subjectively and imprecisely. Unnecessary subjectivity and imprecision imparts uncertainty that undermines a robust, commercially predictable patent system.

2. Judicial exceptions to patent eligibility, such as "laws of nature," "natural phenomena," and "abstract ideas," should be replaced; or bound with precision and certainty, so that they apply only to claims expressly reciting such subject matter--without additional elements that constitute an "actual application" of such subject matter--and that entirely preempt all embodiments of the law, phenomenon, or idea. An actual application of such eligible subject matter should be sufficient to meet the subject matter requirement of §101. IEEE-USA favors subject matter eligibility of computer-related inventions, so long as the patent's claims recite actual participation of a computer, or other real-world "machine."

3. Conflating patent-eligible subject matter with novelty attributes of old vs. new concerns, and other patentability requirements, such as "new," "useful," "long prevalent," "conventional," "fundamental," "generic," "inventive concept," "well known," "routine" (and discounting subject matter properties, such as "machine") creates immense uncertainty.

4. Section 101 need not address every patentability problem. A patent is valid only if it meets *all* statutory requirements of patentability, including utility, eligible subject matter, novelty, non-obviousness, written description, enablement, and definiteness.

5. IEEE-USA favors the patent eligibility of research tools, which significantly contribute to innovation. R&D policies should not be enacted through §101 exclusions, which affect all patents, and all uses, in an overbroad manner.

IEEE-USA favors implementing these broad objectives through either legislation, or decisions by the courts.

This statement was developed by IEEE-USA's Intellectual Property Committee, and represents the considered judgment of a group of U.S. IEEE members with expertise in the subject field. IEEE-USA advances the public good, and promotes the careers and public policy interests of nearly 180,000 engineering, computing and allied professionals who are U.S. members of the IEEE. The positions taken by IEEE-USA do not necessarily reflect the views of IEEE, or its other organizational units.