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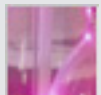
Innovation for inventions

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Open collaboration

↳ [Open Source as Prior Art](#)
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The IP marketplace](#)
(24:53 min, 5.8MB)



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Reinventing the invention system

Thomas Jefferson was the first U.S. patent examiner, and the system he helped develop 200 years ago has served very well. In the past few years, however, the outdated practices and funding models established in the country's earliest days have begun to struggle to accommodate today's invention community.

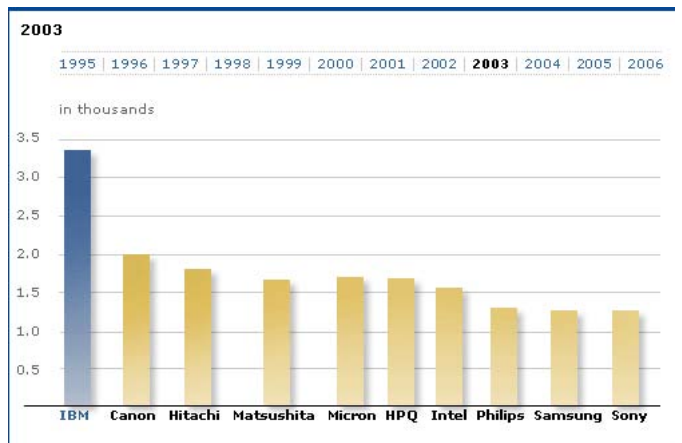
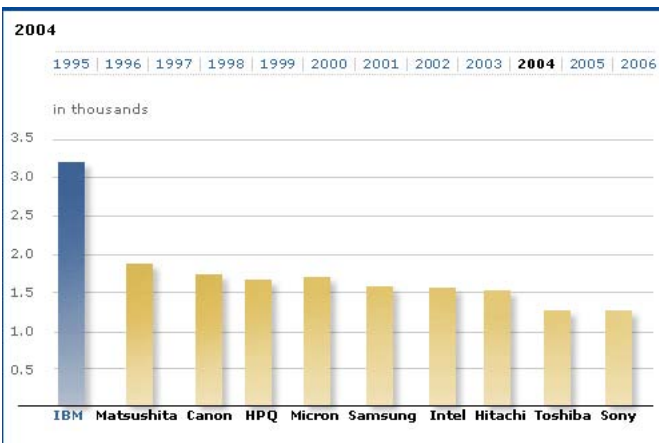
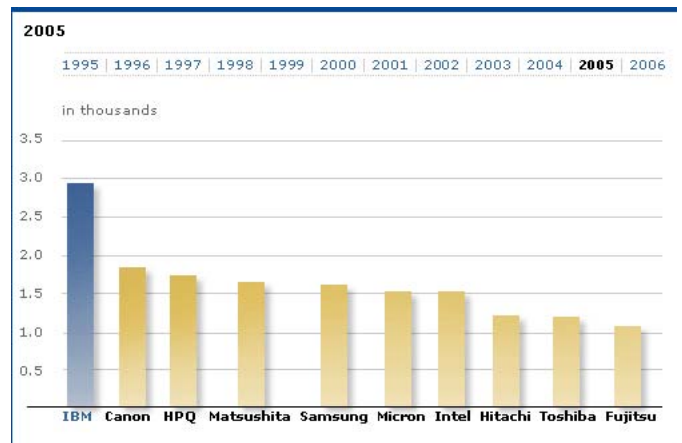
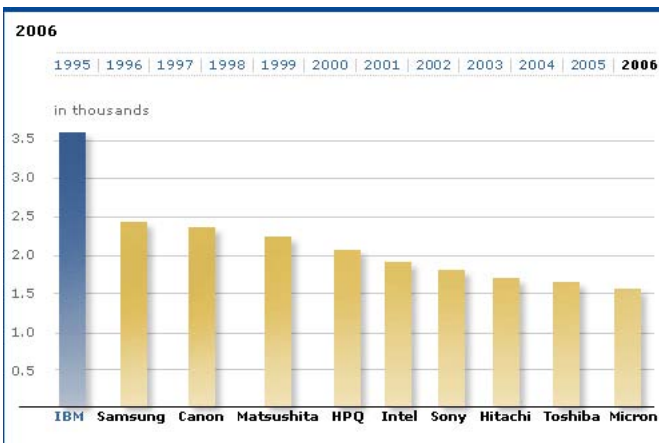
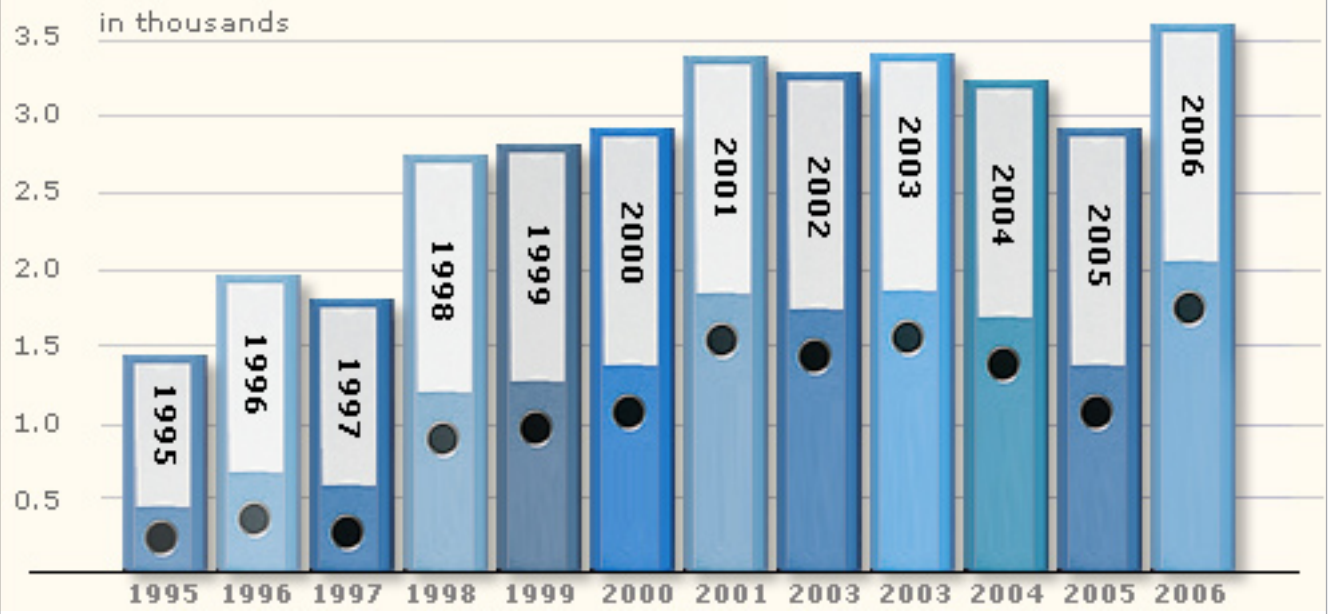
Many inventors and legal experts think reforming the patent system is among the more important innovations currently under discussion in business and scientific circles—and the U.S. Patent and Trademark Office itself agrees. And so does the company that's earned more patents than any other for each of the last 14 years.

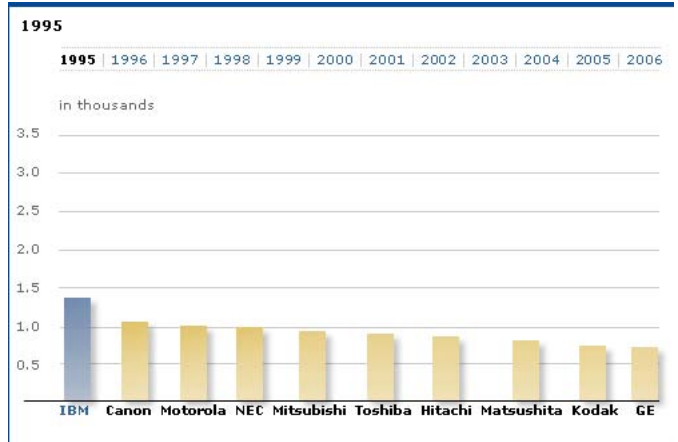
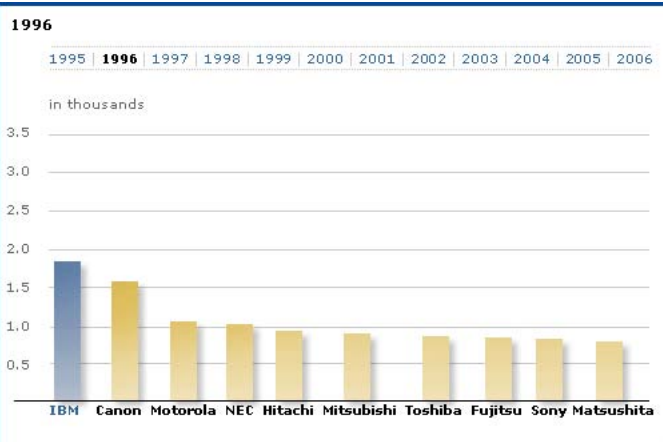
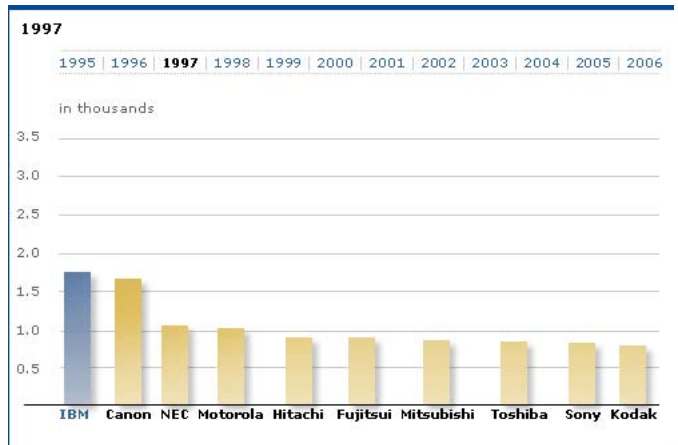
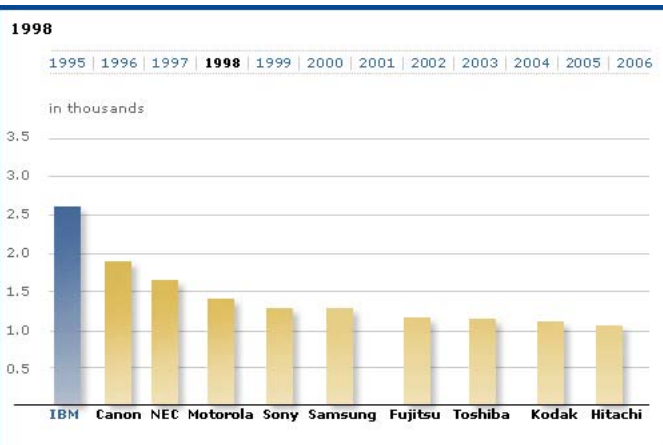
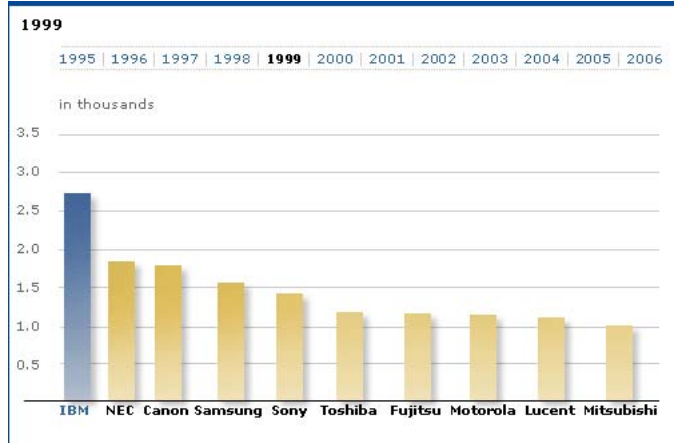
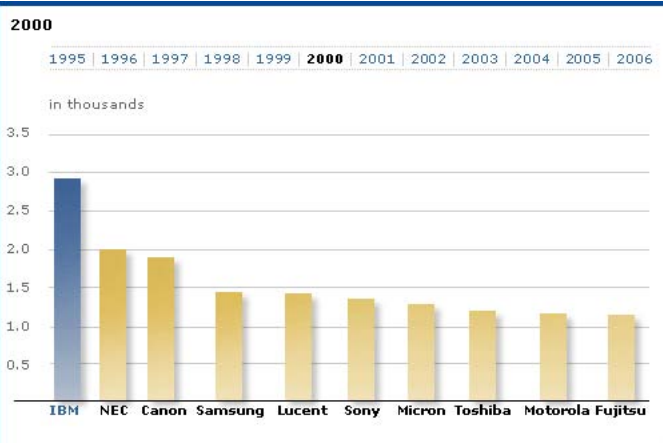
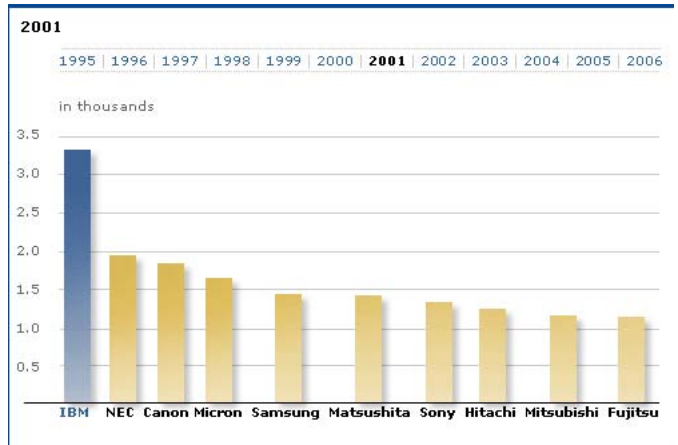
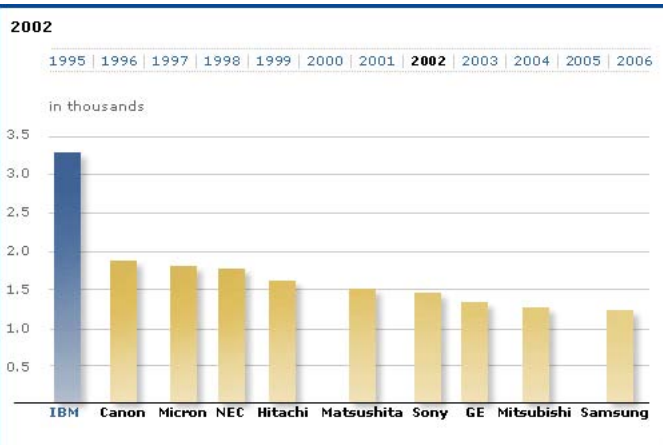


More than a decade of patent leadership

In 2006—and for 14th consecutive year—IBM earned more U.S. patents than any other company, setting a new record with 3,621 patents (and an additional 30 patents assigned jointly to IBM and other entities). To see how the competition for patents shaped up over the last decade, click on any of the bars below for more details about that particular year.

IBM Patent Leadership 1995-2006







Innovating the patent process itself

IBM spends roughly \$6 billion a year on research and development and earns approximately \$1 billion each year directly from its intellectual property. But our own intellectual property (IP) is only as valuable as the system in which it is developed, earned, recognized and defended—and as a company full of inventive individuals, we're not alone.

Big ideas come from small companies, too

Although IBM is one of the world's largest companies, many of our partners, suppliers, and clients are small and medium entities (SMEs)—including many talented, free-agent individuals. Recognizing that the patent system must work for all its constituents to be considered healthy, IBM announced in January 2007 that it will develop and host the "Inventors' Forum," an online initiative to share and debate ideas on how smaller enterprises view patent systems and can contribute to reform efforts such as improved patent quality.

According to the U.S. Small Business Administration, small businesses earn nearly 15 times the number of patents per employee than larger enterprises. But, unlike larger institutions, they have not had the means or resources to collaborate or participate meaningfully in the world's invention system. Smaller companies often lack the resources to help them navigate the process and rules for obtaining a patent, maintaining ownership, and then converting patents into marketable products and services.

According to John E. Kelly III, IBM's senior vice president of Technology and Intellectual Property, the goal of the Inventors' Forum initiative is "to enable representatives of a broad segment of the invention community to voice new ideas for improving how they participate in the system and become part of the solution to the challenges our patent systems face."

New principles for a new IP marketplace

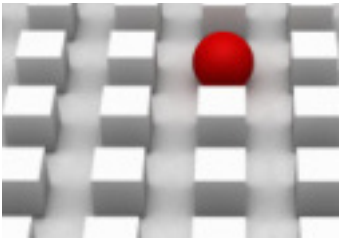
In 2006, IBM assembled a worldwide community of experts in the fields of law, academia, economics, government, technology and others to discuss issues, determine key characteristics of a properly functioning IP marketplace, and establish a blueprint for meaningful reform.

The group collaborated via a dedicated wiki for two months to debate some of the most significant challenges surrounding intellectual property—sometimes reaching consensus and sometimes agreeing to disagree.

The results of the project are available in the *Building a New IP Marketplace* report, which goes into detail about the tenets the group established for the creation, ownership and equitable exchange of intellectual goods in a global knowledge-based economy:

1. Inventors should file quality patent applications for novel and non-obvious inventions of certain scope.
2. Patent ownership should be transparent.
3. Market participants should act with integrity.
4. IP value should be fairly established based on the dynamics of an open market.
5. The market infrastructure should provide flexibility to support differing forms of innovation.
6. Realistic introductory levels of global consistency should exist for all of the above.

To download a copy of the full *Building a New IP Marketplace* report that resulted from this collaborative process, go to www.ibm.com/gio/ip.



Patent quality

When inventors, judges and patent examiners say a patent is of “high” or “low” quality, they’re making an assessment of how new, useful and non-obvious an invention is. Sometimes patent quality refers to the quality of the supporting materials that must accompany a patent application. Or it may even refer to whether the idea itself is actually original and specific enough to warrant an exclusive right to its use.

For example, [U.S. Patent 5,443,036](#) (“Method of exercising a cat”) is often cited as an example of why reform of the patent system is sorely needed.

In history, a “patent letter” was an open letter (rather than one under seal) from the crown, granting exclusive rights to favored people or those willing to pay for a monopoly—with a primary purpose of raising money for the crown.

The first real effort to improve the quality and integrity of patents was reluctantly undertaken by James I of England (under Parliament’s duress) in the 17th century. From thenceforth, patent letters could be issued only to the creators or introducers of original inventions.

Modern efforts to reform the patent system seek to update a process and policies designed in a pre-digital age. For example, since 1977, the leading classification of patents has been under “Drug, Bio-Affecting and Body Treating Compositions.” In that same time, only one patent has been classified under “Typesetting” and only two for “Railway Mail Delivery.”

IBM is participating in several collaborative efforts to improve the quality of patents granted by the U.S. Patent and Trademark Office (USPTO), as well as those issued by other patenting bodies.

Community Patent Review

Until now, only the U.S. patent office has been allowed to review patent applications and determine whether or not the invention claimed is worthy of a patent license. While this system worked reasonably well for a couple of centuries, the current volume and degree of complexity in most patent applications threatens to swamp today’s USPTO.

“Patent examiners are currently trying to make decisions that will shape an industry about a twenty-year grant of monopoly rights on the basis of information contained only in the USPTO’s internal databases,” Beth Simone Noveck, director of the Institute for Information Law and Policy at New York Law School, wrote in a paper describing the challenges facing the current system and the potential of a Community Patent Review process. “Examiners may not consult the public nor may they talk to experts or, in most cases, even use Google. The information upon which examiners may rely in making a determination is further limited by poor or ambiguous drafting by applicants and the fact that there is no onus upon those applying for a patent to supply adequate information to the examiner. The costs of searching fall to the Patent Office alone.”

The Community Patent Review process—a project of the Institute and sponsored by IBM, General Electric, Hewlett-Packard, Microsoft, and Red Hat—is designed to enable the public to collaboratively assist in the evaluation of patent applications by providing pertinent information to patent examiners on prior art that might narrow or even invalidate a pending published patent application.

By using social software, such as social reputation, collaborative filtering and information visualization tools, the project seeks to apply the “wisdom of the crowd”—or, more accurately, the wisdom of the experts—to complex social and scientific problems. This could make it easier to protect an inventor’s investment while safeguarding the marketplace of ideas.

In August 2006, the USPTO selected the Community Patent Review Project as one of its strategic initiatives that will be implemented as part of its comprehensive overhaul of the patent examination process.

Open Source as Prior Art

In early December 2005, the USPTO met with members of the open source community and industry to discuss ways in which they could collaborate to improve the quality of patents, including software patents.

One of the initiatives explored involved improving accessibility by patent examiners and others to electronically published source code and its related documentation as a source of prior art. ("Prior art" is all [information](#) related to a patent application that has been disclosed to the public—or, in the U.S., privately in some circumstances—in any form before a given date.) That initiative, dubbed the "Open Source as Prior Art Initiative," involves work and development in several different areas, including the following:

- Establishing electronic publication practices that any software author can use to ensure their source code can be used as prior art.
- Creating search mechanisms and interfaces that allow patent examiners and others to more easily locate relevant electronically published source code and its related documentation.
- Developing a "taxonomy" or "tagging" system that can be used by software developers, patent examiners and others to describe and help locate relevant source code and documentation.

In addition to the USPTO, companies such as IBM, Novell, Red Hat, and organizations such as the Eclipse Foundation and Open Source Development Labs are participating or have expressed interest in participating in the Open Source as Prior Art initiative.

Patent Quality Index

The real test of a patent application occurs when the examiners are assessing the validity of an invention and whether it deserves a patent. But patent applications are increasingly accompanied by volumes and volumes of data on DVD, which taxes the resources of the patent office. In addition, the system's inherent complexity and costs—as well as the threat of lawsuits to defend the patent once it's earned—can dissuade inventors from pursuing and patenting their ideas.

The idea behind a Patent Quality Index (PQI) is to assign a patent application a single numeric "score" representing the quality of a patent document—to serve a purpose for examiners and inventors similar to what bond ratings serve for issuers and investors.

Based on objective, measurable and accessible information to construct an index score, the PQI number of a patent application could have many uses:

- Provides a "quick and dirty" assessment of a patent application's quality prior to submission, which lets inventors improve the quality of their application before filing.
- Helps examiners allocate resources and even triage patent applications, so that applications of lower quality don't slow the approval of higher-quality patent applications.
- Would offer targets and benchmarks for "best patenting practices."
- Could enable meaningful trend analysis of quality issues, which could be valuable for the USPTO's own innovation efforts in the future.
- Would likely include the development of additional "sub-indexes," such as a "Patent Complexity Index."

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