The government is about to start opening up the process of reviewing patents to the modern font of wisdom: the Internet.

The Patent and Trademark Office is starting a pilot project that will not only post patent applications on the Web and invite comments but also use a community rating system designed to push the most respected comments to the top of the file, for serious consideration by the agency's examiners. A first for the federal government, the system resembles the one used by Wikipedia, the popular user-created online encyclopedia.

"For the first time in history, it allows the patent-office examiners to open up their cubicles and get access to a whole world of technical experts," said David J. Kappos, vice president and assistant general counsel at IBM.

It's quite a switch. For generations, the agency responsible for awarding patents, one of the cornerstones of innovation, has kept its distance from the very technological advances it has made possible. The project, scheduled to begin in the spring, evolved out of a meeting between IBM, the top recipient of U.S. patents for 14 years in a row, and New York Law School Professor Beth Simone Noveck. Noveck called the initiative "revolutionary" and said it will bring about "the first major change to our patent examination system since the 19th century."

Most federal agencies invite interested parties to weigh in on proceedings, and even the patent office allows some public comment, but never to the degree now suggested.

Until now, patent examiners rarely sought outside opinions, instead relying on scientific writings and archived records of previous patents. For security reasons -- in particular, out of concern that examiners could inadvertently reveal proprietary information if their online searches were tracked -- patent officials have at times even been barred from using the Internet for research.

But their mission has grown increasingly unwieldy. Last year, the agency's 4,000 examiners, headquartered in Alexandria, completed a record 332,000 applications. The tremendous workload has often left examiners with little time to conduct thorough reviews, according to sympathetic critics.

Under the pilot project, some companies submitting patent applications will agree to have them reviewed via the Internet. The list of volunteers already contains some of the most prominent names in computing, including Microsoft, Intel, Hewlett-Packard and Oracle, as well as IBM, though other applicants are welcome.
Brigid Quinn, a spokeswoman for the patent office, said the program will begin with about 250 applications from the realm of software design, where it is especially difficult for examiners to find related documentation. Unlike specialists in many other fields, software designers often forgo publishing their innovations in technical journals and elsewhere.

Anyone who believes he knows of information relating to these proposed patents will be able to post this online and solicit comments from others. But this will suddenly make available reams of information, which could be from suspect sources, and so the program includes a "reputation system" for ranking the material and evaluating the expertise of those submitting it.

With so much money riding on patent decisions -- for instance, a federal jury ordered Microsoft last month to pay $1.52 billion for infringing two digital-music patents -- the program's designers acknowledge that the incentive to manipulate the system is immense.

"I'm sure there will be a degree of gaming. There always is," Kappos said.

Maintaining a reliable Web-based reputation has become an increasingly pressing concern for Web companies as they seek to reassure users that they can trust the strangers they do business with online. So the designers of the new patent-review system consulted some of the Internet's leading experts on reputation, Noveck recounted. These included specialists from eBay and Rob Malda, aka CmdrTaco, the founder of the popular technology Web site Slashdot.org.

EBay, for example, established its position as the Web's premier auctioneer after pioneering a public feedback system that has buyers and sellers rate one another based on customer service, the quality of the goods, and timeliness of delivery and payments. Amazon.com, the Web's leading bookseller, provides reviews of its offerings, then allows readers to rank its reviewers based on the usefulness of their evaluation.

The new patent system will try to help separate experts from posers by offering extensive details about the people sending information to the site. To help others evaluate the quality of this information, called prior art, each posting will include several measures gauging the quality of his other contributions to the site. Patent examiners, for instance, will award "gold stars" to people who previously submitted the most useful information for judging earlier applications, Noveck said.

Ultimately, those registered to participate in this online forum will vote on all the nominated information, and the top 10 items will be passed on to the examiner, who will serve as the final arbiter on whether to award a patent.

Noveck said the online program would not only produce better information for examiners to consider but also make the patent process more democratic. "The idea is to make something as important as decision-making about innovation more transparent to the public and more accountable to the public," she said.

During discussions about the patent review project, its developers initially considered limiting or weighting the votes to reflect the expertise of the participants. For the time being, they have instead decided to go with one person, one vote.

But Noveck and others involved in creating the online review system said it was likely to evolve. To assure that the outcome can be trusted, some of those involved in designing the program say some kind of
weighted voting system may eventually be required.

"If voting is necessary, you'll have to have some rules about who gets to vote," said Paul Resnick, a professor of information at the University of Michigan.