

A PATENT SYSTEM FOR THE 21ST CENTURY

Statement of

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Good afternoon, Mr. Chairman, Senator Leahy, and members of the committee. We are Richard Levin, President of Yale University, and Mark Myers, Wharton School of the University of Pennsylvania (formerly, Xerox Corporation), co-chairs of the Committee on Intellectual Property Rights in the Knowledge-Based Economy of the National Research Council. The Research Council is the operating arm of the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine of the National Academies, chartered by Congress in 1863 to advise the government on matters of science and technology.

Although most Academy studies are conducted in response to an agency's or a congressional request, the study we will describe was initiated by the Council's Board on Science, Technology, and Economic Policy (STEP), because it recognized that the breakneck pace of technological change across many industries was creating stresses in the patent system that needed to be examined to ensure that it continues to be a stimulus to innovation and does not become an impediment to it.

Since 1980 a series of judicial, legislative, and administrative actions have extended patenting to new technologies (biotechnology) and to technologies previously without or subject to other forms of intellectual property protection (software and business methods), encouraged the emergence of new players (universities), strengthened the position of patent holders vis-à-vis infringers domestically and internationally, relaxed other restraints on the use of patents (antitrust enforcement), and extended their reach upstream from commercial products to scientific research tools and materials.

As a result, patents are being more zealously sought, vigorously asserted, and aggressively enforced than ever before. There are many indications that firms in a variety of industries, as well as universities and public institutions, are attaching greater importance to patents and are willing to pay higher costs to acquire, exercise, and defend them. The workload of the U.S. Patent and Trademark Office has increased several-fold in the last few decades, to the point that it is issuing approximately 100 patents every working hour. Meanwhile, the costs of acquiring patents, promoting or securing licenses to patented technology, and prosecuting and

defending against infringement allegations in the increasing number of patent suits are rising rapidly.

In spite of these changes and the obvious importance of patents to the economy, there had not been a broad-based study of the patent system's performance since the Depression. Accordingly, the National Research Council (NRC) assembled a committee that includes three corporate R&D managers, a university administrator, three patent holders, and experts in biotechnology, bioengineering, chemicals, telecommunications, microelectronics, and software, as well as economists, legal scholars, and practicing attorneys. This diversity of experience and expertise distinguishes our panel from nearly all previous commissions on the subject, as does our study process. We held conferences and public hearings and we commissioned our own empirical research. The committee's report, *A Patent System for the 21st Century*, released a year ago, provides a thoroughly researched, timely perspective on how well the system is working.

High rates of technological innovation, especially in the 1990s but continuing to this day, suggest that the patent system is working well and does not require fundamental changes. Nevertheless, the committee was able to identify five issues that should and can be addressed now.

First, maintaining consistent patent quality is important but difficult in fast-moving fields. Over the past decade, the quality of issued patents has come under frequent sharp attack, as it sometimes has in the past. One can always find patents that appear dubious and some that are even laughable – the patent for cutting and styling hair using scissors or combs in both hands. Some errors are unavoidable in a system that issues more than 160,000 patents annually, and many of those errors will have no economic consequence because the patents will not be enforced. Still, some critics have suggested that the standards of patentability have been lowered by court decisions. Other observers fault the USPTO's performance in examining patent applications, variously attributing the alleged deterioration to inadequate time for examiners to do their work, lack of access to prior art information, perverse incentives to grant rather than reject patents, and inadequate examiners' qualifications.