Section 2 of America Invents Act will deny inventors U.S. patent protection that would not be denied under foreign patent laws

By Ron D. Katznelson, Ph.D.

The “First-to-file” element of S. 23 and H.R. 1249 is included in identically worded Section 2 of both bills and is a ‘red herring.’ Interferences are so rare and are irrelevant as compared to the major pernicious components in Section 2 – the perverse weakening of the grace period. Evidently, the results are not merely a shift to a system used in other countries. It is a shift to a patent system that is worse than any other. In what follows, I use the term S. 23 to mean the identical language of both patent reform bills.

In important circumstances, S. 23 would bar a patent in the U.S. that would not be barred in the rest of the world. In a novel and perverse way found in no other country, S. 23 would weaken patent protection only in America. Let’s keep it simple and limit the discussion to the loss of grace period due to the "public use" and "on sale" bar language of S.23. It provides in pertinent part as follows:

"102 (a) NOVELTY; PRIOR ART.—A person shall be entitled to a patent unless—
"(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention;"

In comparison, the "public use" and "on sale" bar under current law in 35 USC 102(b) is as follows:

"A person shall be entitled to a patent unless —
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

Current U.S. law provides an unconditional one-year grace period. Although under S. 23 there are exceptions in proposed subsection 102(b) that excuse public disclosures by the inventor if made less than a year before filing, they are irrelevant here, as no disclosure is involved in mere public use or sale. A “disclosure” must enable those skilled in the art to practice the invention. Construing the term “disclosure” in the exceptions of S. 23 differently - as including acts of public use and offers for sale from which no proof can be adduced that the inventor in fact had “possession” of the claimed invention - would contradict the fundamental constitutional directive for a patent grant. This is because under such construction, the exceptions would enable parties to obtain patents for prophesied subject matter yet to be invented. Hence, public use or sale, per se, cannot mean “disclosures” and therefore do not trigger S. 23’s exceptions which provide grace. For a comprehensive statutory analysis explanation of this conclusion including the Senate colloquy purported to suggest a different result, see a companion article by this author.1

For these events, there is no grace period in S. 23. As such, this provision will kill startups’ ability to launch their commercial existence. It upsets two centuries of expertise in founding, marketing, financing and building new technology companies. Often, it is impossible to file an application that describes a workable invention early before its public use or offer for sale. In many cases, the public-use is necessarily the very first event that tests and validates an inventive solution worth protecting in a patent application. In these cases, public-use is an integral part of the development process and the business practice that facilitates development. In these cases, a patent would be barred under S. 23. But not so in the rest of the world!

It is not required to file an application before such events in other countries. The rest of the world does not bar a patent based on “public use” or “on sale” where no public disclosure of the invention is involved. **But S. 23 does.** To add insult to injury, because S. 23 extends the bar by removing the existing clause “in this country,” it will bar a patent in the U.S. on account of “public use” or “on sale” events purported to occur **anywhere in the world.** It will be very difficult, if not impossible, for U.S.-based small business to accomplish effective legal discovery of such events. Challenging factual assertions in evidence and testimony taken abroad for a case before a U.S. court without our strong federal rules of evidence and discovery will be problematic as foreign witnesses can testify with absolute immunity from the pains and penalties of perjury. So, for example, if a foreign company wants to infringe and invalidate a U.S. patent, it would merely need to present testimony and “evidence” of “public use” or “offer for sale” in its own country of a product purported to embody the claimed invention. In no other nation are patents vulnerable to such an attack.

Without knowledge of the consequences, do S. 23’s proponents seek to impose restraints on American technology innovation practices which have not been imposed or experienced anywhere else in the world? Currently, American patent law encourages invention and development to remain in America because our “public use” or “on sale” bar are subject to the one-year grace. The rest of the world, in a perverse way, has an **indefinite** grace period for filing an application after such public use or sale events, so long as there is no public disclosure involved. Do S. 23’s proponents want patent protection under such circumstances to exist only abroad but not in America? This would create a tilted playing field, where inventors find that they are more likely to lose patent protection in the U.S. than elsewhere. It appears that S.23’s drafters have concocted an orphan which resembles none of the existing patent systems - a system that would singularly disadvantage inventors attempting to obtain patents in this country.

**Examples of well-known entities’ use of the American grace period**

The attached table includes historical examples showing events during the grace period that could risk patent rights under S. 23. The hypothetical effects of “public use” and “on sale” events that did not bar a patent under existing U.S. patent law and would actually bar a patent under S. 23 are shown in two cases discussed below. The other cases involved detailed private disclosures that are well protected under existing grace-period law but which would have not triggered the “disclosure” exception for grace under S. 23 - therefore placing much higher risk of loss of patent rights.

*The Wright Brothers*

The Wright Brothers’ case is not uncommon. Their unpowered test flights in October 1902 in Kitty Hawk constituted “public use” of their invention. It was “non-disclosing” public-use to most observers and only “privately disclosing” use to Octave Chanute and Augustus Herring who were permitted to see the details up close. These details included the mechanisms the Wrights devised to couple the strings that warp the wings in opposite directions and the novel way for connecting those strings to **simultaneously control the vertical rudder** to counteract the aerodynamic effect of the wing-warping (ailerons) for stability. These were essential features of their patent claims and none were publically disclosed at the time of the flights. Because the “public use” was by the patentee, the Wrights were subject to a grace period bar in the U.S., which was two years at that time. They filed for their patent application on March 1903 in the U.S., and on March 1904 in Europe, claiming the U.S. priority. S. 23’s provisions would have barred the patent for the Wrights. In contrast, under prevailing U.S. patent law, public use prior to filing did not deny them the U.S. patent. Similarly, there **should have been** no problems for them in Europe because there had been no disclosing-use or public disclosure in Kitty Hawk, October 1902. A problem arose in France, however, when the Wrights asserted their patent against French infringers and the Third Tribunal of The Seine ruled that while the non-disclosing flights in Kitty Hawk may not have been a bar for a patent in France, the early public disclosures made by Octave Chanute in Europe prior to the U.S. March 1903
filing barred their patent in France\textsuperscript{2}. There were appeals, settlement attempts and lengthy proceedings which lasted beyond 1920 – effectively denying the Wrights patent protection in France during the most critical period.\textsuperscript{3}

Chanute did not see the Wrights’ contributions in October 1902 in the same way they did. His account during his public disclosure in Europe led various defendants in infringement actions brought by the Wrights to argue that the Wrights derived their invention from Chanute’s description of works made in 1892 in Egypt by Louis Pierre Mouillard. Wilbur Wright, was disgusted with these derivation allegations and wrote an essay in the Aero Club of America Bulletin in 1912 to explain their absurdity.\textsuperscript{4} The facts in this derivation allegation were mostly predicated on activities of two men who were dead by that time.

Under S. 23’s “exceptions due to derivation,” by reading Wilbur Wright’s account, one can appreciate the nature of the challenge that the Wrights would have had in attempting to prove that Chanute’s public disclosure in Europe was derived from them. The Wrights only had circumstantial evidence: They could have shown that Chanute and Herring were with them in Kitty Hawk in October 1902 and that they were also trying to fly their own glider, which did not work. There was no dispute that the Wrights had implemented their invention while Chanute & Herring did not “reduce to practice” an idea that was alleged to originate with Chanute. Chanute did not claim that he was entitled to any patent but merely asserted that it was based on known principles that he had previously described to the Wrights from the works of Mouillard. Making matters worse for such hypothetical derivation proceeding, defendants in France and in the U.S., have alleged the opposite - that the Wrights derived the invention from Mouillard as conveyed by Chanute. None of these challenges can take place under existing U.S. law.

\textbf{Hewlett-Packard}

In the HP example, the variable frequency oscillator was demonstrated and offered for sale in the IRE trade meeting. The claimed subject matter provided unprecedented frequency tuning range with resonators that do not include bulky coils. Prior art systems did not permit a broad tuning range because they resulted in large impedance variations of the resonator in the oscillator circuit, stopping oscillations on frequencies that differed appreciably from the nominal center frequency. These details could not have been learnt by those observing the sales demo. Under current law (and that effective in 1938), the patentee would not be barred, and indeed was not barred, from obtaining a patent upon the application filing before the end of the one-year grace period. Under S. 23, HP founders would not have been able to obtain the patent because the offer for sale and public use were made before “the effective filing date of the claimed invention.”

\textbf{Conclusion}

The unconditional American grace period has been the hallmark of a flexible and powerful legal system that over the last two centuries enabled American innovators to obtain patent protection during the course of their efforts to build their new business. America’s lead in innovation is a testament to the success of the American grace period. It is as essential today as it was a century ago. Any effort to weaken the grace period would harm America’s new Wright Brothers, new De Forest, new Carlson, or the new Hewlett-Packard.

\textsuperscript{4} Wilbur Wright, What Mouillard did, \textit{Aero Club of America Bulletin}, Vol 1, April, 1912, pp. 3-4. Reproduced at \url{http://invention.psychology.msstate.edu/i/Wrights/library/Aero_Club.html}.
<table>
<thead>
<tr>
<th>Entity Name</th>
<th>City, State</th>
<th>Key Grace Period Activities Prior to Patent Application Filing</th>
<th>Related Patent Information</th>
<th>Notes and comments on actual events as having been facilitated under existing U.S. law</th>
<th>Public-use &amp; on-sale effects</th>
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<tr>
<td>Wright Brothers</td>
<td>Dayton, Ohio</td>
<td>Publically accessible field-trials and demonstrations <em>[PUBLIC USE]</em></td>
<td></td>
<td>Unpowered flight over 600 feet at Kitty Hawk, N.C. Incorporated all inventive elements of the Wright Brothers’ patent.</td>
<td>Patent barred</td>
</tr>
<tr>
<td>De Forest Radio Telephone Co.</td>
<td>New York, N.Y.</td>
<td>Specific vacuum tube design with a third grid electrode disclosed to a subcontracting shop for making it.</td>
<td>McCandless &amp; Co.</td>
<td>With confidence that his McCandless order would not lead to a filing race he may lose, De Forest disclosed his first triode invention, launching the new field called Electronics.</td>
<td>Patent allowed narrower</td>
</tr>
<tr>
<td>Xerox Corp.</td>
<td>Rochester, N.Y.</td>
<td>Private demonstration. Inventor Carlson demonstrated workability of invention.</td>
<td>Otto Kornei</td>
<td>Provided the first photocopy image ever made, ensuring Carlson can prove he was the first inventor of the photocopier. Invention was eventually licensed to the Haloid Co., which became Xerox Corp.</td>
<td>Patent allowed narrower</td>
</tr>
<tr>
<td>Hewlett-Packard</td>
<td>Portland, Oregon</td>
<td>Public/Trade Show <em>[ON SALE]</em> Trade meeting sales demonstration in Portland.</td>
<td>IRE</td>
<td>Seen by Walt Disney Studios’ sound engineer Bud Hawkins, who purchased eight of the oscillators. HP’s first product was used in the soundtrack of Fantasia</td>
<td>Patent barred</td>
</tr>
</tbody>
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6 Provided that no public disclosure of the claimed subject matter was made as a result of information leak or derivation from the inventor.
<table>
<thead>
<tr>
<th>Event</th>
<th>Third-Party Involved</th>
<th>Date</th>
<th>Filing Date</th>
<th>Title(s)</th>
<th>US Pat(s)</th>
<th>Claiming Priority of Filing Date</th>
<th>Notes and comments on actual events as having been facilitated under existing U.S. law</th>
<th>Public-use &amp; on-sale effects</th>
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<tr>
<td>Private disclosure</td>
<td>Hughes Aircraft Co. Agreement to fund mobile CDMA study.</td>
<td>1986</td>
<td>17-Oct-1986</td>
<td>Spread spectrum multiple access communication system using satellite or terrestrial repeaters</td>
<td>4,901,307</td>
<td>Report to Hughes prior to application filing showed feasibility of a mobile communication system based on features later patented in Qualcomm’s first CDMA patent.</td>
<td>Patent allowed</td>
<td>Patent allowed</td>
</tr>
<tr>
<td>Private disclosure of the CDMA cellular system</td>
<td>PacTel Cellular Agreement to fund development of prototype system</td>
<td>May-1989</td>
<td>7-Nov-1989</td>
<td>Method and apparatus for controlling transmission power in a CDMA cellular mobile telephone system</td>
<td>5,056,109</td>
<td>The early technical disclosure to strategic partner/customer PacTel secured its funding for developing the prototype system. Qualcomm worked on perfecting the prototype system until the very day of the San Diego CDMA demonstration, which employed PacTel’s base stations. The systems’ extensive inventive features were subsequently claimed in three basic patent applications.</td>
<td>Patent allowed</td>
<td>Patent allowed</td>
</tr>
</tbody>
</table>


11 Provided that no public disclosure of the claimed subject matter was made as a result of a leak or derivation from the inventor.


13 *Id.* pp. 77-78.