



28 October 2003

By Facsimile & Overnight Mail

Hon. James E. Rogan  
Under Secretary of Commerce for Intellectual Property  
Director, United States Patent and Trademark Office  
Suite 906  
Crystal Park 2  
2121 Crystal Drive  
Alexandria, VA 22202

Dear Under Secretary Rogan,

As the Director of the World Wide Web Consortium, the global standard-setting body for the Web, I write to urge you to consider the impact of U.S. Patent No. 5,838,906 ("the '906 patent") on World Wide Web users, software developers, and the many commercial and non-commercial organizations that depend on the Web every day around the world.

On October 24 2003, we filed a statement under 35 U.S.C. Section 301 presenting prior art not considered by the Patent and Trademark Office in issuing the '906 patent and explaining why the claims of the patent are invalid based upon that prior art. For the reasons given in our statement, we urge you to initiate a reexamination of the '906 patent in order to prevent substantial economic and technical damage to the operation of World Wide Web. As a result of a recent infringement judgment against Microsoft Corporation based on the '906 patent, they have stated publicly that they intend to redesign the Internet Explorer browser to avoid infringing the '906 patent. Although Microsoft's proposed redesign covers only a small portion of its entire browser program, it would render millions of Web pages and many products of independent software developers incompatible with Microsoft's product.

The impact of the '906 patent reaches far beyond a single vendor and even beyond those who could be alleged to infringe the patent. The existence of the patent and associated licensing demands compels many developers of Web browsers, Web pages, and many other important components of the Web to deviate from the fundamental technical standards that enable the Web to function as a coherent system. In many cases, those who will be forced to incur the cost of modifying Web pages or software applications **do not even themselves infringe the patent** (assuming it is even valid). Given the interdependence of Web technology, those who wrote Web pages or developed software in reliance on Web standards will now have to retrofit

their systems in order to accommodate deviations from standards forced by the '906 patent. These deviations will either reflect individual decisions by developers about how to avoid infringement liability, or will be an effort to be compatible with decisions individual vendors make in the course of their own re-design. What's more, the inevitable fragmentation and re-tooling costs caused by the ability to enforce this patent, which we believe to be invalid, cannot even be remedied by individual parties choosing simply to pay licensing fees to the patent holder. If some parties are granted a license, while others either don't or can't obtain one, we will still be left with impaired functionality of the Web. Global standards have been the basis of assuring interoperability on the Web. A patent whose validity is demonstrably in doubt ought not be allowed to undo the years of work that have gone into building the Web.

Removing the improperly disruptive effect of this invalid patent is important not only for the future of the Web, but also for the past. Even if the Web has to endure several years of disruption, we are confident that currently active Web pages will eventually be fixed and brought into compliance with whatever the prevailing standard is. However, pages that are inactive but have historical value may well remain in a state of impaired accessibility indefinitely if Web technology is forced to deviate from standards in this manner.

The Web functions **only** on the strength of its common standards. The costs of widely divergent implementation of standards is borne by all who rely on the Web. The enormous expense and the more general threat the '906 patent poses to the Web community is completely unwarranted because the '906 patent is, we firmly believe, invalid in view of the prior art described in our filing to the Patent Office under the authority of 35 U.S.C. Section 301.

## **The World Wide Web Consortium and Global Web Standards**

W3C -- an international organization made up of over 350 members from industry, academe, users' organizations and public policy experts -- is responsible for setting the core technical standards for the World Wide Web. Since the infancy of the Web in 1994, W3C has led the development of Web standards and, with these standards, established the basic architecture for the World Wide Web. We have produced over 50 technical Recommendations ranging from the HyperText Markup Language (HTML) and the Extensible Markup Language (XML) to digital signatures, guidelines for Web accessibility, and the Platform for Privacy Preferences (P3P). These specifications are developed through a collaborative process that brings technical and social requirements to working groups of engineers and scientists from around the world. I founded W3C in 1994 and serve as the Director of the Consortium.

## **Practical Impact on Web Users**

The practical impact of withholding unrestricted access to the patented technology from use by the Web community will be to substantially impair the usability of the Web for hundreds of millions of individuals in the United States and around the world. The object embedding

technology supposedly covered by the '906 patent provides critical flexibility to Web browsers giving users seamless access to important features that extend the capabilities of Web browsers. Nearly every Web user relies on plug-in applications that add services such as streaming audio and video, advanced graphics and a variety of special purpose tools. Some examples of popular plug-in software that rely on object embedding include:

- multimedia applications that extend the Web from text and simple graphics to high quality interactive video and audio: RealAudio and RealVideo streaming, Apple QuickTime video, and Macromedia Flash and Shockwave players.
- rich document formats: plug-ins such as Adobe's PDF document Reader enable the incorporation of sophisticated document formats in standard Web pages;
- advanced scripting languages: languages such as Sun Microsystems's Java are implemented through plug-in tools that enable a huge variety of Web site customizations

The power of plug-in components on the Web not only gives users the benefits of new state-of-the-art services, but also enables continued innovation in new technologies that are not yet part of the accepted base of Web standards. The ability to embed content to be processed by external applications has enabled early testing and adoption of emerging standards such as Scalable Vector Graphics (SVG). New standards such as SVG develop faster than the rate at which many users actually upgrade their browser software. With the ability to plug in new software components, such as SVG readers, users can take advantage of new technologies simply by installing software plug-ins, as opposed to having to upgrade their entire browser. Knowing that this capability is available to users encourages Web page designers and those who write software that creates Web pages to use the latest new standards with the knowledge that users can simply plug in the tools needed to render those new data formats. Without the ability to call external code from within a browser window, which is the feature apparently claimed in the '906 patent but which was squarely in the prior art, the cycle of innovation on the Web would be substantially retarded.

Changes forced by the '906 patent will also have a **permanent impact on millions of Web pages that may have historical importance** but are no longer actively maintained by their creators. In many cases these pages contain non-commercial content or older material that is not generating revenue, hence there is no way to cover the cost of modifying those pages to bring them into compliance with whatever changes are made in response to the '906 patent. The Web community has traditionally recognized the problem of historically-important but dormant pages and has therefore sought to ensure 'backward compatibility' when developing new technical standards and new software. However, in this case, the behavior of those historically important pages will be significantly impaired because the changes were forced by the '906 patent, without consideration of backward compatibility.

## Invalidity

For as much as the disruptive impact of the '906 patent is clear, there are significant questions regarding its validity. The '906 patent is generally directed to a Web browser's ability to invoke external programs to display portions of a Web page that the browser cannot directly display itself. A Web browser may not be capable of displaying certain types of image data, in which case the browser would invoke a program that is capable of doing so. The sole difference between the Web browser described in the '906 patent and typical browsers that the patent itself acknowledges as prior art, is that, with prior art browsers, the image is displayed in a new window, whereas, with the '906 browser, the image is displayed in the same window as the rest of the Web page. But that feature (i.e., displaying, or embedding, an image generated by an external program in the same window as the rest of a Web page) was already described in the prior art publications submitted in our section 301 filing.

The claims of the '906 patent are plainly not patentable given this prior art. Moreover, even prior to the development of this feature in Web browsers, software developers had recognized the usefulness of adding a similar feature to prior art word processing programs, which display documents instead of Web pages. For example, more than a year before the claims of the '906 patent was filed, a word processing program called Write, provided with Microsoft Windows 3.1, enabled users to embed into Write documents graphic images created with the Paint program. The Write program would then invoke the Paint program to display the illustration within the same window as the rest of the document. Thus even without considering the several prior art publications annexed to our Section 3.01 filing, it is apparent that the '906 patent added nothing to the art -- it only applied a well known concept in the display of documents to the display of a particular kind of document -- Web pages. Our 301 filing provides a more detailed analysis of some of this art.

## Disruption of Global Web Standards

The barriers imposed on the information technology industry by the '906 patent are of such concern because they cause fragmentation in the basic standards that weave the Web together. Denial of access to any particular technology is a problem that engineers can successfully address, provided they have knowledge of the barrier **before** it becomes part of a standard. However, as the '906 patent threatens widely deployed, standard technology, the damage is magnified. If the '906 patent remains in force, Web page designers and software developers will face a dangerous dilemma. They may comply with globally-recognized Web standards resulting in an inadequate user experience of their content. Or, they may attempt to design to the various work-arounds chosen by different browser developers and face the uncertainty of not knowing who will be able to use their content or applications properly. W3C's development and the industry's acceptance of a single common base of standards for Web infrastructure arose out of a need to avoid just this sort of dilemma. The '906 patent is a substantial setback for global interoperability and the success of the open Web.

Recognizing the sensitivity of Web standards to patent licensing demands, the W3C has

recently enacted a formal patent policy that requires specifications suggested for standardization to be implementable on a royalty-free basis. The disruption of the Web caused by the '906 patent certainly underscores the reasons for W3C's patent policy. In the history of the Web, low legal and financial barriers to use of Web standards have been as important as ease of deployment from a technical perspective. W3C Recommendations are often implemented in a large number of interoperable individual software environments. Indeed, the Web standards design process depends on the implementation experience of a large number of developers to assure that each component of the Web is well designed and satisfies the needs of the increasingly diverse communities of Web users. What's more, the diversity of content represented by the over three billion Web pages is only possible because the creators of each of those pages is able to use key Web standards such as HTML and Cascading Style Sheets (CSS) without paying a royalty. While it is not beyond imagination that an existing standard might be found to require payment of patent royalties, there is no reason to burden the entire Web community based on a patent that is invalid.

None of these concerns were examined at trial in Chicago. Just as the trial court failed to consider the merits of the art we present in our Section 301 filing, it also failed to consider the large impact of its ruling on the Web. While that case was nominally a bilateral dispute between a patent holder and an alleged infringer, it should be clear now that the ruling and particularly its failure to consider relevant prior art will likely have a highly detrimental impact on the entire Web community unless you initiate reexamination of the patent..

## Conclusion

The '906 patent will cause cascades of incompatibility to ripple through the Web. I hope that you will take into account the fact that the material we have presented in our Section 301 filing bears directly on the validity of the '906 patent, that the merits of this prior art were not considered at trial, and that allowing the patent holder to control the use of technology required for compliance with World Wide Web standards is having a substantially disruptive effect on the Web industry and users both in the United States and around the world. I would be grateful for the chance to meet with you on this matter at your earliest convenience. Please feel free to have you or your staff contact Daniel Weitzner, Technology and Society Domain Lead at the W3C at <djw@w3.org> or +1 202 364 4750.

Thank you for your consideration of this important matter.

Sincerely,

Tim Berners-Lee  
Director, World Wide Web Consortium