



InformationWeek
BUSINESS INNOVATION POWERED BY TECHNOLOGY

Sir Tim Berners-Lee Gives Congress Vision Of The Future

World Wide Web inventor says entire taxicabs, desks and even subways could become computer screens in the future of a more sophisticated Web.

By K.C. Jones, [InformationWeek](#)

March 1, 2007

URL: <http://www.informationweek.com/story/showArticle.jhtml?articleID=197700586>

One of the most important figures in the Web's history provided members of Congress with a glimpse into the future of technology.

[Sir Timothy Berners-Lee](#), inventor of the World Wide Web, spoke about his experience, his views, and his vision of the future during a congressional subcommittee hearing Thursday. The hearing, entitled "[The Future of the World Wide Web](#)," is the first in a series on the "Digital Future of the United States."

Berners-Lee -- whom TIME Magazine listed, with Albert Einstein, as one of the most important people of the 20th Century -- normally shies away from media interviews and keeps the public at bay to limit personal inquiries and reduce personal intrusions. The visionary computer scientist spent hours Thursday publicly explaining how the Internet and the World Wide Web came about, how they work, what their potential is and what must be done to make sure they reach it.

He did so while federal lawmakers consider dozens of bills that would control, restrict or promote access to information on the World Wide Web.

"I think it's smart to talk to him before we dig any deeper," Vice Chair of the House Subcommittee on Telecommunications and the Internet, Mike Doyle (D-Penn.) said, adding that Berners-Lee could provide a broad view "from 30,000 feet up."

While industry and media use the phrases Web 2.0 and Web 3.0 to describe their predictions for the Web's evolution, Berners-Lee uttered words and ideas even less familiar to most people who benefit from his invention. He talked about a Semantic Web; a policy-aware Web; and one that could be delivered through structures that make up a subway system, the desks in the halls of Congress and on -- not just rooftop displays -- but entire bodies of taxicabs.

For example, Berners-Lee talked about a world in which a cell phone would use radio technology to communicate with everyday objects wrapped in surfaces equipped with digital billboard technology. The phones could determine whether surfaces are known or safe venues for projecting personal information like calendars.

"If you're going through the tedious process of booking a flight, your phone with radio technology, like Bluetooth, determines that it can trust your desk and projects a map of the flight they're proposing, pictures of restaurants where they're suggesting you should eat on the desk and information about your travel [projects] on the wall," Berners-Lee said during the hearing.

"The phone has to be able to have an independent existence," he continued. "There are lots of problems that need to be solved in between. You don't want your calendar up on the subway. The machine has to be aware of policies for information." Berners-Lee explained that the Internet is like the bottom of an hourglass, while the World Wide Web -- the imaginary space holding the documents and information we send and receive through computers, and wires -- are like the top of the hourglass. And, Berners-Lee believes there will be another neck with a whole new abstract universe of applications

and processes above that.

The Semantic Web, or a Web of "machine-processable data," is under development around the globe, including the U.K.'s Southampton University, where Berners-Lee holds a position. The World Wide Web Consortium (W3C), which Berners-Lee founded, is working on the components that will form the basis of the Semantic Web.

Berners-Lee and the [W3C](#) describe the Semantic Web as a common framework that allows data to be shared and reused across applications, enterprises and communities. It will be to maps, calendars, spreadsheets and other data storage tools what the World Wide Web has been to written information, he said.

"It's about being able to connect from one application, through another," he said.

He provided an example of someone who is trying to fill out a tax form and cannot remember why he or she spent a certain amount. They could pull up a bank statement, take the date, and pull that up on their personal calendar. If they still don't see why they spent the money that day, they could drop their photographs into the calendar and "see the pictures of the kids at Disneyland."

"Now, imagine a scientist trying to figure out where a certain virus is coming from," he said, adding that the scientist could combine genomics, proteomics and maps, or any part of the sum of human knowledge about the illness, into one location to seek clues.

The Web's next most important application is likely being dreamed up somewhere by someone, "quite likely a woman," Berners-Lee said, who is frustrated by something and will not have to ask if he or she can use existing architecture before building that application.

Berners-Lee urged lawmakers to keep in mind the principle of universality and the separation of layers. He said the most important thing legislators should remember, as they deliberate over issues affecting the World Wide Web is the importance of protecting communication, which allows science, politics, education, romance and even personal diaries, to flourish.

"Communication between people is what makes us a society," Berners-Lee said, adding that. "The World Wide Web is, together, technology and society. It is computers and people."

Edward Markey, a Massachusetts Democrat who chairs the subcommittee, told Berners-Lee that lawmakers would like to continue consulting with him for years to come as they craft technology policy.



Copyright © 2006 [CMP Media LLC](#)