THE inventor of the world wide web has told a technology conference that making the web more useful hinges on a familiar challenge: Getting the players behind the technology to agree on standards governing how computers communicate with one another. That obstacle, which confronted the initial development of the web, looms large again in the nascent stages of what Tim Berners-Lee calls the "Semantic web," an evolutionary process to make more kinds of data easier for computers to locate and process.

"It's all about standards," Berners-Lee told an audience of about 500 in a speech opening the two-day Emerging Technologies Conference at the Massachusetts Institute of Technology. "Standards are the basis for any emergent technology."

The obstacles in the way of advancing web development are as much social as they are technological, and the industry must avoid the temptation to lock up key technologies by demanding royalty payments, he said.

Berners-Lee, a 49-year-old native of England who runs the standard-setting World Wide Web Consortium from an office at MIT, envisions a new phase of the web in which the various sources of information can more readily interact with one another.

Rather than merely navigating their way via web links to information related to their interests, web surfers should be able to manipulate it to intelligently steer them to data with specific meaning to that person, he said.

Berners-Lee cited the example of a web advertisement for a seminar. While the computer user may know what the information means, the computer doesn't. Someone planning to attend would have to note the date by pasting data into an electronic calendar, or add the names of people taking part in the seminar into an address book.

Berners-Lee envisions encoding the information in a way that enables the computer to comprehend the data and seamlessly link it to applications, automatically adding information about the seminar into a calendar or address book.

That involves standardising how information is stored on the internet. Web data would carry tags to give them meaning, so computers can do a better job of searching.

Such developments could enable search engines to not only find data, but point users to what they are likely to seek next, he said. Ultimately, software could be written to process the data and make inferences that previously required human intervention.

"These different applications will link through the common concepts they share, such as location and time," Berners-Lee said.

Achieving such a transformation, he said, requires agreements on standards to make data available for sharing among applications so information can be re-used in new ways, he said.
He said he still views the web as the "collaborative medium" he had in mind when he first proposed it in 1989. He later fleshed out core communications needed to transmit web pages, and the web took off in the 1990s. Although his inventions have undergone rapid changes since then, the core technology remains the same.

*The Associated Press*

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