What is Web 2.0? Ask these Web experts, and you get some interesting answers.

"Overused." Okay, granted. Since the first Web 2.0 conference in 2004, the term has been a catchall for a host of tools and services that have given rise to a new model of Web use, persisting even as the model has become less novel and more mainstream. But what is Web 2.0? "A conversation." "Many-to-many information flow." "The democracy of the Web." And not least, Web 2.0 is "a good party" in which more than one person gets to do the talking.

Three veterans of Web 2.0 implementation shared those views interspersed with rich, rapid-fire insights during an informative session designed to explore what the Web has become and what online publishers should know about its opportunities and challenges.

Here’s a sample: If you want to reach a student, don’t use e-mail. That message came through clearly to Julie Noblitt, of HighWire Press, at a recent meeting with librarians and students. For today’s youth, Noblitt said, microblogging by cell phone with such Web sites as Facebook and Twitter has replaced e-mail as the cornerstone of communication. Other presenters agreed. Mark M Cassar, of the American Institute of Physics, explained that Web 2.0 facilitates social behavior, and this is changing how younger people communicate. He added that “digital natives”, those younger than 30 who have grown up online, reflect it in their heavy use of Facebook, Twitter, and syndicated blogging.

But what of budding science geeks? One might expect more reserved habits from that group, but it appears that they also respond to the social attractions of Web 2.0. Hilary Spencer, of the Nature Publishing Group, cited research showing that a majority of life scientists use some type of online social medium, and they appear to be enthusiastic about participating in discussion groups and listening to podcasts.

The reach of Web 2.0 in the scientific community goes even further. Cassar noted that a number of Web sites are beginning to demonstrate collaborative, interactive science. For example, at Many Eyes (services.alphaworks.ibm.com/manyeyes/app), scientists are able to create their own topical hubs of data in which others can join and participate. Cassar also described a "YouTube for scientists" at SciVee (www.scivee.tv), where researchers can post informal videos in which they present their findings. And such scientific journals as the Journal of Applied Physics (jap.aip.org) are providing tools to encourage blogging about peer-reviewed research articles.

All three presenters underscored fundamental changes due to Web 2.0 that online publishers need to keep in mind. Noblitt believes that a dramatic shift has taken place in how publishers do their work. Content is increasingly designed to be transported and packaged for customized delivery via desktop “widgets” and other tools that facilitate sharing. Cassar echoed that view, noting that Web 2.0 publishers are shifting their site strategies to syndication of content rather than visitor retention.

Cassar believes that a Web 2.0 publisher’s strategy needs to be about engagement: engaging students and scientists with scientific literature and engaging them with other scientists by using the literature as a basis. Web 2.0 tools provide the means for engagement by making it easy for users to participate and contribute. However, people don’t contribute as much as they could, according to Spencer, so publishers may want to keep their expectations in check. User-generated content should be balanced with editorial features, and publishers should automate where possible to offset the high level of maintenance that Web 2.0 requires.

Web 2.0 publishers need to be sure they are not creating barriers to access, Noblitt warned. That could be the result if publishers fail to provide tools that enable users to collect and share information.

But what about the publisher’s need for exclusivity? Noblitt emphasized that publishers can succeed with Web 2.0 by creating value for their visitors that goes beyond the article content to developing a community to which researchers will want to return.