# ◆ Technologic Initiatives to Make Vital Scientific Literature Available Globally

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Next time you find yourself stabbing impatiently at the Ctrl+Alt+Delete keys because something is taking more than 30 seconds to download, pause a moment to think about the barriers to electronic access faced by those working in some of the world's poorest countries. According to the speakers at this session, cost is by no means their only challenge. In many countries, particularly in rural areas, electricity is intermittent or nonexistent, and telephone landlines are equally scarce. Where information technology equipment does exist, it often lacks the bandwidth necessary to download journals and books; there is so much information online that researchers and medical staff don't have the time to sift through it to find material that is relevant. Much of the information online is *not* relevant, inasmuch as 90% of research dollars are spent on medicine associated with developed nations and involve drugs and techniques that

developing countries cannot afford. Finally, doctors and researchers in rural areas often lack transport; it can take a day or more of travel to reach a library or other information resource.

Michael Jensen, director of publishing technologies and Web communication at the National Academies Press (NAP; *www.nap.edu*), described how, in addition to books and other publications sold in bookstores and online, NAP provides free online access to roughly 3,600 of its scientific and medical reports. Those reports—

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from the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, and the National Research Council—are accessed by 18 million visitors a year, 20% of whom are in developing countries. Such Web-site features as Discovery Engine, Web Search Builder, and Reference Finder all help readers to access information, as does the Active Skim, which picks out what Jensen described as the "juiciest" chunk from each page, letting online readers quickly get a sense of the content. In 2005, 150,000 of NAP's books were downloaded free in PDF format by readers in developing countries.

Andrew Sideman is director of development at Satellife, a nonprofit organization dedicated to providing timely, accurate, and reliable information to health-sector professionals in developing countries. Satellife produces four free e-publications that contain summaries of relevant articles selected by a board of editors from the cur-

rent literature, and it hosts 12 "consultative chatrooms", where health workers worldwide can ask questions and exchange information. Satellife also provides health workers with information and communication technology and training in how to use it. The technology can be used to collect public-health data, which are sent to a country's ministry of health.

Although many publishers have agreements with Satellife that allow free access to their journals, Sideman asked the audience to spread the word about Satellife's activities and to encourage other publishers to sign on.

Maurice Long, publisher coordinator at the International Association of Scientific, Medical & Technical Publishers, described three programs aimed at disseminating scientific and medical information to the world's poorest countries. Publishers participating in the Health InterNetwork Access to Research Initiative (HINARI) allow their Web content to be accessed free by nonprofit research institutions in 69 countries whose gross national product per capita is less than US$1,000 and for a nominal sum in another 44 countries whose GNP is US$1,001–3,000.

HINARI, launched in 2002 and supported by the World Health Organization, is aimed specifically at researchers in those countries and involves about 76 commercial and nonprofit publishers and some 3,300 journals. In 2003, a similar program was launched: Access to Global Online Research in Agriculture (AGORA) is sponsored by the Food and Agriculture Organization (FAO) of the United Nations and includes about 30 publishers and 800 journals. A third project, Online Access to Research in the Environment (OARE), sponsored by the UN Environment Programme, is planned for October 2006. Long asked audience members to promote those programs in their own organizations and to their readers. ⓐ