

Attachment B

Stake-Holder Financing for International Scientific Channels

Purpose

To organize financial support for long-term growth of global Internet capacity and resources to accelerate scientific innovation in health, education, and science and economic growth. And, specifically, to organize new mechanisms so that people with good ideas for Internet-based projects in these areas will not need to struggle, forever, to obtain funding to bring their ideas to life.

Proposal

After a startup package is completed, the World Bank and other members of the purchasing cooperative will organize stakeholder conferences to survey options for financing the expansion of Internet-linked infrastructure, resources, and services in different sectors.

- The conferences will consider a range of institutional options [(a.) complete reliance upon governments and foundations; b.) Corporate philanthropy or annual corporate subscriptions on the model of the Industrial Liaison Program at the Massachusetts Institute of Technology and the Technology Transfer Institute of Japan; c.) limited partnerships of scientific societies and R&D-oriented corporations to create scientific channels to accelerate creativity and bring the best and latest ideas, from all sources, to the desktops of scientists (in academic and corporate settings) worldwide. Etc.]<sup>1</sup>

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<sup>1</sup> Corporations could subscribe to, or underwrite, international scientific channels: 1.) To monitor, at low cost, a wide range of new ideas and results, in many countries, 1-2 years before print publication; 2.) To identify potential consultants; 3.) To reduce current travel costs; 4.) To carry their own advertising, at low cost, to well-targeted technical audiences, domestically and globally. (See below.); 5.) As a far-sighted investment to stimulate, worldwide, innovations the company can use. These would include products (e.g., synthetic fuels); processes that cut across industries (e.g., efficient or intelligent manufacturing systems); or useful tools (e.g., better computer simulation of physical processes.); 6.) To build international capacity in fields of interest to the future of the industry. [A company might sponsor a set of broadcasts (e.g., pharmaceutical companies might underwrite biochemistry; insurance companies might underwrite statistics); or an entire industry could underwrite both current research communications and educational resources for long-term capacity-building (e.g., the computer/telecommunications industry channel would be used to

[For example, in the case of Environmental Technology, a working group including representatives of the international automobile industry might identify key technologies for the future of the industry and to the solution of urgent problems of sustainable development (e.g., synthetic fuels, photovoltaics, plastics). The next step would be to bring together state-of-the-art scientific presentations, from all sources, 1-2 years before print publication, into a common Internet channel.]

These channels also could sell advertising for products and job recruitment, an option that the Sloan Foundation's recent study thought might be very attractive:

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Appendix A

Advertising Revenue for International Scientific Channels

Given changes in technology and economics, it will be feasible to have channels that provide basic services without advertising, supported entirely through a portion of annual dues, philanthropy, subscription fees from R&D-oriented companies, or other sources.

However it may be possible, with thoughtful design, to include advertising without adversely affecting the character of the networks, and to provide additional services at lower cost as a result of advertising revenue. The following information may be useful:

Basic advertising rates are determined by the size of an audience and its demographic characteristics.

For scientific networks, a relevant comparison is the advertising rates of leading scientific journals and (perhaps) several specialized medical channels. The following chart compares the ad rates per 2-page, 4-color spread (or 1 minute commercials) and the rates /1,000 potential readers or viewers.<sup>2</sup>

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provide state-of-the-art scientific conferences, and also to improve educational curricula, worldwide, concerning computers and information technology); 6.) As an attractive advertising vehicle to convey a progressive international civic image.]

<sup>2</sup> These numbers are drawn from research conducted by Gary Welz, supported by the Sloan Foundation, and reported in "Information for Advertisers" from the Science and Engineering Television Network's, Information for Advertisers (NY: Association for Computing Machinery, 1993). (A copy of the report may be obtained from Mr. Welz at the ACM, 1515 Broadway, 17th Floor, New York, NY 10036-9998.) The comparison

	<u>Cost per ad/pot. viewers</u>	<u>Rate/1,000</u>
<u>Science Magazine</u>	\$13,600/477,000	29
<u>Nature</u>	\$11,890/357,000	22
<u>Scientific American</u>	\$73,200/1,661,000	44
<u>Lifetime Medical</u> <u>Television: Physicians</u> <u>Journal Update</u>	\$6,000/41,652	144
<u>American Medical</u> <u>Television</u>	\$5,145/178,000	29

Specialized scientific broadcasting channels allow a new and unique degree of well-targeted advertising. They may prove highly desirable to manufacturers of products designed for scientific and engineering tasks.

Several concerns about the nature of advertising, and the wisdom and appropriateness of including it, deserve comment:

Perhaps the greatest concern, is that a "ratings game" might develop, with areas of science, lines of investigation, or programming being included or dropped because of the size of an audience. If the goal of the network is to increase the rate of scientific innovation, the size of an audience may be a misleading measure. (It may be small groups or invisible colleges, working at a cutting edge, who drive scientific innovation and who should have the highest priority for air time.) Any scientific society accepting advertising would need to weigh the extent of its anticipated reliance on this source of revenue and its vulnerability to short term revenue-maximizing pressures that might reduce the long term benefits of the networks.

- Experience suggests several examples where intellectual integrity and scientific quality have been maintained in the presence of advertising and even by for-profit companies. For-profit publishers like Scientific American, Annual Reviews, Inc., and the Institute for Scientific Information provide services of outstanding merit and intellectual integrity; leading scientific publications (e.g., Science) include advertising without any

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with print media likely understates the marketing advantage of television: the SETN report suggests that audience recall of 60 second commercials is greater, by a factor of 3:1, than recall of 2-page, 4-color advertisements in journals.

apparent effect on editorial decisions.

Television advertising is intrusive, in a more direct way than print advertising. It interrupts, often for several minutes, in the middle of programs that viewers prefer to be watching. It could break the concentration that is needed for worthwhile engagement with a line of argument.

- It may be possible to organize a new generation of televised scientific advertising in creative ways, so that it genuinely provides valuable information without intruding (as commercial advertising does) in the middle of programs that viewers prefer to be watching. For example, advertising could be organized, scheduled, and announced an advance - so that, for example, anyone interested in new products related to electron microscopy will know to watch from 8:30 to 9:00 next Monday night. Or that all engineering companies seeking to hire new graduates in a certain field will have 15-minute videotapes about their firms and employment opportunities from 7:30-8:30 each evening during the second week of October.

Advertising opportunities will tend to favor certain economic interests or countries - those who already can afford large advertising budgets.

- It would be desirable to have special rules to limit the risk of dependency (the possibility that the network's budget and survival becomes dependent upon any small set of large advertisers).

- Advertising on scientific Internet channels may stimulate innovation by providing information about new products more directly and efficiently. The goal of supporting innovation might justify special rates to allow small start-up companies to reach a worldwide audience quickly, and at a far lower price than currently is available. Given this goal, special attention might be given to provide an ease of basic access to advertisers from Russia, Eastern Europe, and the Newly Independent States with severe restrictions on access to foreign currency, or from the Third World.