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Panel 3 How Should Information be Priced? Winning Strategies for the Digital Economy

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PANEL 3

HOW SHOULD INFORMATION BE PRICED? WINNING STRATEGIES FOR THE DIGITAL ECONOMY

Panel Chair: **Yannis Bakos**, University of California, Irvine

Panelists: **Erik Brynjolfsson**, Massachusetts Institute of Technology
Bob Massey, CompuServe
Bob Metcalfe, International Data Group
Hal Varian, University of California, Berkeley

It's all free software. Economically, it's one of the most unusual markets that there has ever been.

Bill Gates, *Wall Street Journal*, March 13, 1996, on the emerging Internet market

This panel will discuss and debate the best strategies for pricing information goods such as news, online entertainment, software and even academic research and teaching materials, with a special focus on the emerging information marketplace enabled by the Internet. The pricing of information goods presents special difficulties for conventional markets (e.g., Varian 1995). In particular, digital copies of information goods are equivalent in all respects to the originals, and can be created and distributed almost without cost via the emerging information infrastructure. From a societal perspective, free (or nearly free) information would be efficient in a static sense: all consumers who valued information more than its marginal cost would gain access to it. However, this price would not generate revenues to provide incentives for the creation of new information goods.

Furthermore, there is a high-stakes debate about the optimal pricing strategies from the perspective of content providers. Some have argued that the future lies with charging users “by the bit,” each time they access information, invoke a subroutine of software, or download an image (Metcalfe 1996). Other firms are betting on a strategy of bundling large groups of content together and offering them for a flat fee (Cortese 1996). Discussions with the principals at these companies reveal a remarkable uncertainty about which strategies will prevail, and many firms have made radical shifts in pricing strategies over time.

The academic literature on the topic, while still nascent, is also controversial. Pricing information in small increments has the allure of enabling a more finely-grained allocation of information goods in the economy and opens the door to profitable price discrimination strategies. However, recent research has shown that a strategy of bundling together numerous information goods and offering the bundle for a fixed price can change the nature of the demand curve in a way that increases *both* profits and economic efficiency (Bakos and Brynjolfsson 1996).

The academic members of the panel (Erik Brynjolfsson and Hal Varian) will each propose a collection of theoretical principles for the optimal pricing of information in an online environment and addressing the applicable technological, economic and strategic trade-offs.

The practitioner panelists (Bob Massey and Bob Metcalfe) will discuss how online services price their services and content and will address the practical feasibility of the pricing strategies proposed by the academic panelists.

Each panelist will be asked to speculate on how new technologies such as public key encryption, collaborative filtering and broadband communications to the home will enable new pricing strategies and to make predictions about the eventual winners in this market.

Yannis Bakos is an Associate Professor of Management at the University of California, Irvine. He employs economic theory to study the implications of information technology for organizations and markets. He teaches and lectures on telecommunications, technology trends, electronic commerce, and strategic uses of IT. Professor Bakos is an authority on the economic role of electronic marketplaces.

Erik Brynjolfsson is the Douglas Drane Career Development Associate Professor of Information Technology and Management at MIT's Sloan School of Management and a visiting professor at the Graduate School of Business, Stanford University. He has published numerous papers on the interactions among information technology, organization structure, and performance and he teaches courses on electronic commerce and IT strategy.

Robert J. Massey is President and Chief Executive Officer of CompuServe Inc. He has held various other positions since joining the company in 1976 in its Stamford, Connecticut office. He was elected to the CompuServe board of directors in 1991. Mr. Massey's earlier career includes positions with the IBM Corporation and Control Data Corporation's Service Bureau Division.

Robert M. Metcalfe is VP Technology of the International Data Group, publisher of over 270 magazines in more than seventy countries, with over 120 web sites. Among other accomplishments, Dr. Metcalfe is the inventor of the Ethernet (1973), the founder of 3Com, and InfoWorld's Internet columnist (with on average 489,000 readers per week). He serves on MIT's board of trustees and in 1996 he received the IEEE Medal of Honor.

Hal R. Varian is the Dean of the School of Information Management and Systems at the University of California, Berkeley. He also holds joint appointments in the Haas School of Business and the Department of Economics and occupies the Class of 1944 University Professorship. Professor Varian has published numerous papers in economic theory, econometrics, industrial organization, public finance, and the economics of information technology.

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