Information, Communication, and Money: For What Can We Charge and How Can We Meter It?

Stephen Blott   Henry F. Korth   Abraham Silberschatz

Bell Laboratories, Lucent Technologies
700 Mountain Avenue
Murray Hill, NJ 07974
USA
{blott,hfk,avi}@lucent.com

Panel Objectives

Internet telephony, electronic commerce, on-line information services, and video conferencing are projected to grow rapidly in coming years. How can we charge for these and similar services? What information must be gathered to enable proper billing for services rendered? Where is this information generated and where is it collected? These questions are being addressed in today's marketplace in an ad-hoc manner. Since this is in essence a distributed information system problem, the database research community should be able to have a positive influence on the evolution of billing systems for electronic communication and information services. Billing systems represent a significant and growing database problem. They offer an application domain for real-time databases, materialized views, event aggregation, data mining, OLAP, etc. The goal of this panel is to create awareness of this application domain and to inform conference attendees of the key issues and opportunities via a (vigorous, we hope) debate. Among the issues we shall address are:

- Usage metrics: connect time, distance, network hops, number of packets, number of bytes etc.

- Quality of service: delivery time, transmission quality, real-time issues, data resolution, etc.

- Real-time pricing

- Credit- and debit-based billing, authentication

- Security

- Timing constraints

- Cost of metering versus cost of the service: Are flat access charges preferable?

- Billing among service providers (called "settlements" in the industry)

For each of these issues, the emphasis will be on the database and distributed systems aspects of solving the problems presented.

Panelists

- Stephen Blott, Member of Technical Staff, Bell Labs, Lucent Technologies

- Henry F. Korth, Head, Database Principles Research Department, Bell Labs, Lucent Technologies

- Abraham Silberschatz, Director, Information Sciences Research Center, Bell Labs, Lucent Technologies

- Adam Grove, Senior Member of Technical Staff, Savera Systems

- Andrew Hume, Member, AT&T Labs - Research

- H. V. Jagadish, Department Head, AT&T Labs - Research

- Shoshi Loeb, Executive Director, Internet and Information Technology Research Department, Bellcore