President's Page



Trudi Bellardo Hahn

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The Council of Scientific Society Presidents recently asked me to respond to a survey question: "What were the most important seminal five to seven discoveries in the field represented by your professional society in the 20th century?" Such a question raises several complex issues, such as what are the most remarkable achievements unique to the field of information science in the past 100 years? Who are the individuals who were responsible for each one? Just what constitutes our field as of bibliometrics – the study of published literature and its usage. Bibliometrics has many aspects, including studies of impact, diffusion of innovation, bibliographic coupling, citation and co-citation patterns and other statistical regularities in scientific and scholarly productivity and communication.

2. Information science developers contained the information explosion. Information scientists

pioneered innovations in indexing systems that were very different from traditional subject cataloging in libraries – automatic indexing and abstracting, KWIC and KWOC indexing,

What Has Information Science Contributed to the World?

separate from other fields such as computer science, librarianship, chemistry, engineering, medicine, management, law or education? How do our research methods differ from those of the social sciences, operations research, linguistics and others from which we have obviously borrowed?

Since I could not answer the survey question off the top of my head, I consulted ASIST members who research and write the history of information science. Michael Buckland, Eugene Garfield, Julian Warner and Robert Williams replied. It appeared that "developments" is more apt to describe information science activities than "discoveries."

However, their responses appeared to have discouragingly little consensus or overlap.

By merging their responses into larger categories and consulting some information science textbooks and historical papers, I drafted a list of five major categories of accomplishment that I believe can be attributed directly and solely (well, nearly) to IS researchers and developers.

1. Information science researchers measured the information explosion. They created the field

citation indexing, keyword indexing and postcoordination, text analysis and natural language searching systems. They also developed thesauri or controlled vocabularies for thousands of disciplines and specialties.

- 3. Information science developers applied computers to manipulating documents and document records in information storage and retrieval systems. This began almost as soon as computers became available in the 1950s, but really took off with third-generation computers in the 1960s. The development of online database systems was accompanied by related telecommunications and networking technologies and specialized search functionalities, as well as large machine-readable databases. The application of formal logic (Boolean operators) to database searching was a major component of these developments.
- 4. Information science researchers studied users' information seeking, needs and preferences, as well as related areas such as relevance and utility assessment. The sociologists got us started, *(Continued on page 3)*

From the Editor's Desktop



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eeling insecure about the Semantic Web? This issue will solve your problem. My special thanks go to Jane Greenberg of the University of North Carolina for serving as guest editor and to the six other authors for four excellent and helpful articles on this exciting and expanding area of exploration and development. This issue concludes our two-part treatment of metadata, which we began in the October/November 2002 *Bulletin*.

We have one other major article, a condensation of a piece by Dave Snowden from the *Journal* of Knowledge Management. Dave was a most stimulating and entertaining keynote speaker at 2002 Annual Meeting, and I thank him for letting me chop this very dense publication down to a size we could accommodate. Despite my valiant efforts, I encourage those of you who find it intriguing to read the original and more nuanced version, which is referenced with the article and available on the Web.

Finally Trudi Bellardo Hahn has a true challenge for us. One of her recent tasks as ASIST President was to respond to this query from the Council of Scientific Society Presidents: "What were the most important seminal five to seven discoveries in the field represented by your professional society in the 20th century?" She tackles this daunting question with her usual insight and enthusiasm, shares her thoughts with us and solicits ours.

Andrew Dillon's IA Column will be back next issue with expanded comment on the IA Summit in Portland.

President's Page

(Continued from page 2)

but we quickly developed our own body of research in the second half of the last century.

5. Information science leaders in government and industry contributed to formulating national information policies related to issues of privacy, security, regulating dissemination and access, intellectual property, acceptable use and others. They contributed to developing standards for the processing and communication of information, as well as the monitoring of the national information infrastructure (human, technological, materials and financial) to ensure that information systems and services related to the public interest were maintained.

ASIST members are invited to debate the content of this list, to suggest additions or items that should have high priority, to identify the pioneers and to date seminal discoveries, developments or inventions. We know we are multidisciplinary and cross-disciplinary, but I believe there is a core of knowledge and developments that is uniquely ours – if we can but define it.

I have asked Robert Williams, University of South Carolina, to work with members of the Special Interest Group on History and Foundations of Information Science to refine and expand this list. He has already started the process by compiling a draft of a detailed chronology of information science and technology available at www.libsci.sc.edu/ bob/istchron/ISCNET/Ischron.htm. Please help by sending your thoughts and suggestions to Bob (bobwill@sc.edu).

Our goal is to publish an authoritative list of accomplishments on the ASIST website. In addition to the existing "About ASIST" page and the mission and vision statements, it will show ASIST members and potential members what this field is about, what it values and where the greatest potential for future discoveries and contributions lies.