President's Message

Lynn Ecklund, Seek Information Service, lecklund@seekinfo.com

I'm told that "may you live in interesting times" is a Chinese curse. Whether you think of it as a curse or a blessing, it's certainly true of the world, our industry, and our Association right now. But entrepreneurs are the most resilient of people. We don't have the baggage of huge organizations, entrenched bureaucracies, or outdated traditions. When times get tough, we get moving. We change the way we market, we change the people we market to, and we may even change our product. However, we keep the confidence that there's a way to live the way we want and make a living too.

In times like these, the contacts we have through AIIP become critical. We share ideas, we express our feelings to people who understand us, and our community is strengthened. I know I echo every president of AIIP in saying that I am amazed by the selfless dedication of Board members and the many volunteers who assist them. They have devoted hours and hours to analyzing and re-structuring the organization to insure stability and a solid path for our future. While many professional organizations are faltering, I am glad to report that we have managed to accomplish many of our goals this year. I truly believe that our ability to step up to the plate, tackle the issues, and accomplish so many things comes from the deep sense of caring that our volunteers have for this great organization.

Here are just some highlights of what the Board, committees, and a whole slew of volunteers have accomplished this year:

Vendor Alliances & Partnerships: This year's Vendor Relations Committee, headed by Susan Weiler, negotiated new discounts for AIIP members from askSam, Profound, ProQuest, Questel Orbit, and the Wall Street Transcript. Dialog invited AIIP to have formal representation on their Customer Advisory Board and Susan Weiler was appointed to this two-year slot. We signed an association partnership (AP) agreement with IRMA (Information Resources Management Association), adding it to our list of existing AP's – Information Today; Learned UK; NFAIS; Online, Inc.; and SLA. These partnerships offer AIIP various benefits, such as exhibit space at conferences sponsored by the partner organization and discounts on conference attendance.

Referral Programs: We now have two referral programs in place which allow businesses, professionals and other information seekers to connect with the targeted expertise of AIIP members. Larry Mrazek continued his diligent efforts on the *AIIP Referral Program* and Factiva continued to sponsor the toll-free line for this program. A new *Dialog & AIIP Search Services Referral Program* was established to provide Dialog customers in need of search services with access to AIIP member contacts.

Electronic Communication: Debbie Hunt and her Electronic Communications Committee has been working very hard behind the scenes to upgrade the hosting of AIIP-L to improve its functionality. There have been various improvements to the AIIP website throughout the year. The current and back issues of *AIIP Update* can now be found on the "Members Only" portion of the website. Larry Mrazek has incorporated directory search capabilities into the public portion of the AIIP website. In addition, members can now directly update their record in the membership database, electronically, via the "Members Only" portion of the website. This year, for the first time, we conducted an electronic survey and ballot, thanks to Peggy Carr's vision to get us all working electronically. The experience shows this to be a very effective way to poll our geographically diverse members in a fast and cost-effective manner.

Membership Directory: This year, the *AIIP Membership Directory* is available on the "Members Only" section of our website in PDF format. This electronic version allows for easy access to all sections of the *Directory*. We are also delighted to report that Factiva has generously provided the funding to produce the *Directory* in print. The *Directory* is mailed to every AIIP member and is included with every new member packet.

The *Connections* newsletter has received numerous kudos, and member contributions of quality articles are on the increase. *Connections* is a key element in our efforts to recruit new members. Selected issues are offered as handouts in conjunction with AIIP conference exhibits, and are included in prospect kits and new member packets. We were extremely fortunate to receive funding from Dialog for printing and mailing *Connections* this year, with continued funding in the coming year.

The Public Relations Committee, headed by Cindy Shamel, has generated numerous press releases about the Association's activities throughout the year. Copies of all press releases are available on the Breaking News section of the AIIP website and cover a host of activities including AIIP conference exhibits, vendor partnerships and alliances, and awards. AIIP's exhibiting activities included the AIIP Annual Conference in New Orleans; Southern California Online Users Group (SCOUG) Spring Workshop in Burbank, California; National Online in New York City; Internet Librarian in Pasadena, California; and Online UK in London, England. An official AIIP "position statement," conceived to respond to media situations that require a fast and direct response, was created by the Media Relations Committee, headed by Suzanne Sabroski.

Awards and the Mentor Program continue to be offered thanks to the devoted efforts of Chairperson Federico Turnbull. Although we had difficulty finding an appropriate Technology Award recipient for 2001, we are actively looking for worthy candidates for 2002. The Sue Rugge, Myra T. Grenier, Gale, and President's Awards will be bestowed on deserving winners at this year's conference in Long Beach, California.

Inside this Issue

Reflections on the Beginnings of Dialog: The Invention of Online Information Access

Roger Summit, rsummit@earthlink.net

As one of the earliest explorers in the online world (in fact, some have over-graciously credited me with creating it), I would like to tell you a bit about the birth of DIALOG – a service which has survived two wars, six presidencies, and four business cycles, and which is perhaps even more relevant today than when it began.

Background

My interest in computers began in 1951 when a friend told me of a new machine – the digital computer – which had the capability to store magnetically, in digital form, not only data, but also the programs that could be used to manipulate that data. The exciting key to this invention was that since both the program and the data were stored in digital form, the computer program could adapt to dynamically-changing needs as it processed. As a psychology major, interested in cognitive intelligence and how the human mind stored and integrated information, this fascinated me. Even as an undergraduate I knew this was a field I had to understand.

Following graduation and three years in the U.S. Navy, I returned to Stanford University to pursue an MBA degree. In 1957, the final year of the degree, Stanford obtained an IBM 650 computer and I enrolled in the first computer science course in the University. The instructor, Bob Oakford, and the class, worked step-by-step to program it from a rather sketchy operations manual. Coding was done as basic machine language and was very tedious (e.g., it took four program steps to simply add one number to another and store the result). In addition to learning to program simple tasks, we also discussed potential applications such as inventory control, point-of-sale recording, and information retrieval.

My first job after obtaining the MBA was in the information systems division of Arthur Andersen, doing some of the early work on what was to become the VISA system.

Later that year I was offered an IBM scholarship at Stanford to pursue a Ph.D. degree working under Professor Daniel Teichroew.[1] My purpose in returning to Stanford was not so much for the degree as for the technical education I felt I needed to pursue my computer applications interest. Most of my Ph.D. course-work, therefore, was done outside the School of Business – in math, statistics, industrial engineering, and operations research. Harvey Wagner[2], who taught operations research, significantly influenced my future business philosophy when he impressed on me that the Ph.D. degree is not so much a matter of personal attainment as it is an obligation to provide society a return on its investment.

While a doctoral candidate at Stanford in 1960, I took a summer job at Lockheed Missiles and Space Co. working for the director of information processing, E. K. Fisher. One of his first assignments was for me to investigate the use of the computer in information retrieval. A common statement at Lockheed at the time was that it is usually easier, cheaper and faster to redo scientific research than to determine whether it has been done previously. It appeared possible that computer-based information retrieval had a chance to change the way scientific research would be managed in the future.

Lockheed's computers at that time were second-generation, IBM 7090s, also known as "batch processing" machines. With batch processing, there is virtually no interaction between the customer and the machine. Data are fed in on punched cards or magnetic tape and results are output to magnetic tape, punched cards or an impact printer. Moreover, computers in those days were specialized and used mainly for accounting and scientific computation, not the processing of text.

A programmer named Peggy Don and I began some test programs to experiment with the application of computers to information retrieval. It occurred to me that we should be able to simply parse the plain text statement of a query and match those words against a database of textual citations, identify the relevant items, and then sort them according to word-hit frequency (an idea that seems to have caught on with Internet search engine designers as well). The results of this process were disappointing. One of the main issues, I recall, had to do with the mystery of how to modify the query to obtain better results. Because the search and relevance algorithms within the search engine are unknown to the user, how to modify the query to improve the results was not apparent. We referred to this as "black box" searching and abandoned further work along these lines.

The Formative Years - Information Retrieval and New Exciting Technology

"Man-machine interaction" and information retrieval were hot topics in computer science through the 1960s, as was evidenced by numerous conferences hosted by IBM and other technical organizations. These were very stimulating times and we were very excited about developing applications with this technology. A number of us who were interested in library applications formed a multi-company working group that met regularly to share ideas. It was during these meetings that I first got the idea of using computers to access technical literature on a global scale.

At one of the meetings we met a particularly visionary and influential person, H. Peter Luhn.[3] At IBM in the early 1960s he invented and introduced Keyword In Context (KWIC) indexing and Selective Dissemination of Information (SDI) – also known as "alerts" and "current awareness." SDI has been recently reinvented by dot-comers as "push" technology."

At the time, there were several information retrieval and SDI systems in place within IBM, government agencies, and various universities. They were, however, running on second-generation, batch technology with all the disadvantages of these systems, as described above!

In the mid-1960s, the IBM 360 series computer[4] was introduced, which opened up a number of possibilities. I saw an opportunity to

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utilize this third-generation computer technology to leapfrog over existing information retrieval services. Clearly, it contained functionality that could revolutionize information access, retrieval, and distribution.

Lockheed Information Systems Laboratory - Development of DIALOG

Thus it was that in 1964 a colleague and I proposed that Lockheed establish a laboratory to explore application of this exciting new technology to information retrieval and other areas.

The environment at Lockheed at this time was ripe for such a proposal. Lockheed was being encouraged by Wall Street to diversify beyond its aircraft and government contracting lines of business. The Department of Defense had established several independent research priorities, one of which was information retrieval. Finally, Lockheed's Executive Vice President, Herschell Brown, had seen what was called the Red Book, a feasibility study for automation of the Library of Congress. He felt such a task to be consistent with Lockheed's innovative approach to utilizing new technology; he approved establishment of the Information Sciences Laboratory.

In early 1965 Lockheed received one of the first-produced IBM 360/30 computers. In addition to the computer, itself, the system consisted of the following:

- One 2321 mass storage device (400 million bytes)
- 2311 disks (7.25 million bytes, each)
- Two IBM 2314 disk drives (29 million bytes, each)
- One IBM 2260 CRT display unit

The system also contained a communications controller, two tape drives, an IBM 1403 high-speed printer (600 lines per minute), and some other associated equipment. The computer had an internal memory (RAM) of 32 thousand bytes and ran at a very slow 1.5 microsecond cycle time. Stop to think for a moment if you will – the laptop on which this article is being written has more than 10 times the storage and perhaps 100 times the processing speed of the computer on which we developed DIALOG!

The first problem we faced was that none of us knew anything about programming this new technology. IBM came to the rescue! They provided training classes, consultative help, and seemingly limitless assistance on call. This early experience with IBM support inspired later DIALOG customer services policies.

Several projects developed in the Information Systems Laboratory (as it was called) including work on speech recognition, automated flight planning, pattern recognition, language translation, information retrieval, and an automatic bridge-playing program. I was asked to head the information retrieval project.

The appeal of the information retrieval project and the excitement within the group as we began to work in this area were intense. The impetus from the beginning was towards solving a problem – that of facilitating and improving human-machine interactions – and not towards establishing a business. We knew we were dealing with a process akin to books and literacy (i.e., what good is it to be able to read if you can't find the information you

What's in a Name?

The name for the system, "Dialog," occurred to me in 1966 when my wife Ginger and I with our two babies, Jennifer and Scott, were on our way to Portland to visit her parents. She was driving and I was dictating a project plan for what was to become Dialog into a small, voice-activated tape recorder. But what should we call the project? A nameless project receives about as much attention as a book without a title.

OK, the system was to be interactive between man and machine. The searcher in a sense said, "this is what I want," and the machine said in effect, "this is what I have." Described that way, why not call it, "Dialog?" But should it have the "gue" or just the "g" ending? the "g" spelling was the less preferred and seemed to make a better trade-mark so that's what we decided to call it.

Actually it turned out to be a good selection. Carlos Cuadra, the developer of Orbit (an early competing system) used to say every time he heard the word used in a normal context at a conference he grimaced. We also always expressed the mark in all caps so it stood out on wherever printed.

want to read?).

In the back of our minds was the thought that with this technology we might be able to substantially enhance the utilization of knowledge. Gradually, we began to realize that we could command a worldwide market for our services and could store, with real-time access, massive amounts of the world's knowledge. We literally believed we could change the face of research and computing, and we had the skills and vision to do so.

Project development

Our 1966 project team, the group that set about programming the system that was to become DIALOG:

- Roger Summit - project leader
- Dexter Shultz - file-loading software and operation
- Jim Brick - telecommunications *(with consultation from Len Fick)*
- Ken Lew - master applications programmer
- Bob Mitchell - systems programmer
- Ed Estes - system architect.

Systems design

Computer resource limitations dictated that all coding had to be at machine language or assembler level. The system design priorities we developed were as follows:

- It should be command driven so that searchers could use it directly without needing computer programmers to act as intermediaries.
- It needed to be interactive to allow searchers to display hits and modify queries based on intermediate results.
- It had to be recursive, meaning that there needed to be a means to limit or extend the scope of a search without having to re-enter the search itself.
- It should provide an alphabetical display of all retrievable terms

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from which one could choose.

Two unique features of the design were *search recursion* and *index word display*.

Recursion: With an interactive system, information retrieval can be a process and not just a probe.   Recursion, embodying feedback and modification, constitutes a powerful process. In the search process, recursion with feedback allows the user to modify the query during the process of the search, based on feedback from the database. Furthermore, recursion allows one to mentally break up a complex task into a series of connected simple tasks to obtain a desired result.

Perhaps probe versus process searching can be further illustrated by considering the difference between a ballistic and a guided missile. A ballistic missile will only hit its target if all the variables affecting its flight course are known at the outset, whereas a guided missile can adapt its flight pattern to unknown environmental factors during the course of flight.

Other than for simple explicit searches within a database, the searcher is neither completely aware of what is contained in the database, nor confident of just which words to use in the query to elicit a desired response. Thus it is useful for the searcher if the search process allows the saving of intermediate results of queries, which can then be used later as elements of subsequent queries. A particular query thus defines a concept within the search space and that concept, saved as a search "set" can itself be used for subsequent query formulations along with other words or phrases.

I recall great debate among the design group with regard to saving intermediate sets.   Computer memory was very expensive and saving intermediate results could mean a lower user capacity. Thus there was a very real tradeoff between the number of simultaneous users that could be accommodated online and the amount of memory that could be devoted to a single user.

We invented the generalized recursion function, which though copied by a handful of commercial search services, is not offered by any of the major Web search engines.

Index display: The idea of providing for the display of searchable terms came to me from a visit to one of the Stanford libraries. In utilizing the card catalog, I was totally frustrated trying to guess what classification category my topic of interest might fall under. After opening drawer after drawer and pawing through entry after entry, I approached one of the librarians to ask if there was a listing of the subject entries. I was told, "no," and besides that this would be difficult because they were frequently changed or added to.

When it came to designing DIALOG, one of the early requirements thus became that of allowing the searcher to display an alphabetic list of searchable terms near a desired term. We also included with each displayed term the number of items in the database containing that term, and if there were a thesaurus associated with the database, the number of thesaurus entries associated with the term. All of these features were included to help the user better formulate a search.

Index display is particularly useful in examining corporate names and personal names, which are often entered in a database in a great variety of forms and spellings. We called this command, "Expand" with an argument of a word or phrase.

By 1965, the team had developed a small, working prototype of DIALOG incorporating the design priorities into the following simple commands:

BEGIN (file number/s)	- specifies the file/s to be searched..
EXPAND (term)	- provides a display of alphabetically near terms to the germ entered.
SELECT (term; set)	- creates a Boolean-defined subset of the search file(s) corresponding to the terms and/or sets specified
TYPE (Set number)	- outputs an item or range of items from the set indicated.

Searching DIALOG is as simple in concept as remembering: B E S T.

This conceptual design was a model for several later systems such as the IBM Stairs system and the American Chemical Society STN system.

In my view, one of the huge limitations of current Internet searching is the lack of recursion functionality. Furthermore, the index display function (Expand, in DIALOG) is offered by few, if any, of the current Web or commercial service search engines. I recall a conversation in the mid-1970s, with Ron Quake (one of the founders of Bibliographic Retrieval Services (BRS)) when he commented that the one thing he coveted in DIALOG was the Expand command. The BRS system had been adapted from the IBM Stairs system, which has no index display capability.

The NASA Experience - Achieving Wider Recognition

As we were being supported with Lockheed independent research funds – a highly sought-after, scarce, and fickle resource – I knew that if we were to survive, we had to move through proof-of-concept and into externally-supported work rapidly.

The ideal database to test our proof-of-concept was the NASA Scientific and Technical Aerospace Reports (STAR) database. Not only was it the largest database around at 250,000 citations, but access to it was in great demand. NASA was running searches against STAR on a batch IBM 1401 computer, but I knew we could surpass this effort with DIALOG, given the chance. Mel Day[5] of NASA was the key figure in this regard. He, along with Mortimer Taub[6] of Documentation Inc., developed software to store the NASA STAR citations as a database. The announcement bulletin and catalog were printed directly from the database which, in turn, was used for searching. This was an accomplishment in its own right, as it was one of the first instances of the source of a printed publication being stored as a computer database.

I arranged a meeting with Mel Day in Washington D.C. in 1965. During the meeting, Mel responded to my description of the utility of DIALOG by explaining that he had a dozen or so people a week describing systems that could do most anything short of reading your mind. He said he had to see it in operation to believe its effectiveness. After further discussion I offered to submit an unsolicited proposal to install DIALOG on the NASA database and

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conduct an evaluation of the approach at the Ames Research Center in Mountain View, California. He responded by issuing a request for proposal (RFP) in April of 1965 incorporating the features we had discussed. We submitted a bid.

Much to our chagrin and enormous disappointment, we learned that Bunker Ramo Corporation had also submitted a proposal and had been awarded the prototype contract. As this contract was to be our avenue to proof-of-concept as well a vehicle for becoming independent of Lockheed independent research funding, I felt we had lost a major opportunity and had to come up with another alternative. The one that I decided on was to submit a very low-cost proposal, one within Mel Day's discretionary funding limit, for a parallel experiment. I argued that in this way NASA would have a backup in case the Bunker Ramo system didn't work out to their satisfaction.

An interesting summary of the bidding process is reported by Marjorie Hlava[7] as follows:

> *In 1964 after some discussion with Mel Day of NASA, Roger Summit prepared a proposal to NASA to use DlALOG for the automation of the NASA information system. Daniel Sullivan of Bunker Ramo also bid on the proposal and received the award to develop the prototype for the later Bunker Ramo System The initial request for proposals asked for 20 ideas in the system specifications. At that time DlALOG included 19 of these ideas. Undaunted, Summit prepared an unsolicited proposal for a parallel experiment to be run between the NASA-Ames Research Center and the Lockheed Palo Alto Research Laboratory. NASA specified a dial-up teletype protocol and purchased the Bunker Ramo equipment to support the project. After two years, the Bunker Ramo experiment proved unfruitful and NASA dropped it. In the meantime, the NASA-Ames experiment had proved to be very successful.*

Ames Research Center Prototype

Our proposal was minimal, covering only the cost of the remote terminal equipment (an IBM 2260 display terminal with printer) and a 1200-baud leased line between the Lockheed facility in Palo Alto and Ames Research Center. We had proposed installing the leased line in order to support a CRT display system rather than the dial-up teletype system proposed by Bunker Ramo. We were awarded a contract from NASA in 1966 and were operational in January of 1967.

At NASA/Ames, DIALOG was used both by NASA end-users and librarians. There was a single database, that contained the 250,000 NASA citations mentioned above, and the system allowed only a single person to search at a time. An analysis of the results later showed that end-users spent significantly more time online in search formulation and viewing intermediate results with smaller printouts, whereas librarians behaved just the opposite – with less search time and much larger printouts.[8] This of course, makes sense in that end-users could better determine the online results they wanted whereas the librarian, as an intermediary, tended to be more exhaustive in searching. The only complaint we got from the service

was from a librarian who said demand for her services had increased to the point that she had to cut short her coffee break!

Turnaround time for searching the NASA STAR database was thus reduced from 14 hours plus mail and handling when done on the NASA headquarters IBM 1410 computer, to a few minutes at the remote site. Furthermore, the search could be modified during the process without having to be reformulated entirely.

This project marked the first remote, interactive, information retrieval application utilizing real people doing real searches on a very large database. Based on the success of the Ames implementation, we were asked to install remote terminals at three other NASA facilities.

We were excited beyond words!

NASA/RECON (Remote Console) System

In 1967 NASA issued a competitive RFP for development of the NASA RECON system. We submitted a bid of $180,000 against a dozen or so prominent software companies such as Informatics, Computer Sciences Corporation, IBM, and others. We received the award, which was our first major development. The contract specified several enhanced features but otherwise was very close to the original DIALOG. The result was called NASA/RECON (Remote Console Information Retrieval System). In preparation for the work, we upgraded the laboratory computer to an IBM 360/40 which was faster and contained more internal memory.

In the bid, we included a "rights in data" clause which gave Lockheed the right to use any software developed for our own purposes. This right proved invaluable to the future success of the business.

Following successful installation of the NASA/RECON software on the NASA facility computer, our group was awarded contracts from the Atomic Energy Commission (AEC) and the European Space Research Organization (ESRO) to install DIALOG on their computers.

About this time I wandered into one of the offices adjoining mine to discover a blackboard drawing of WWI biplanes engaged in a massive dogfight. Each plane had a project name label such as, "DIALOG," "Bridge Project," "Speech Recognition," "Language Translation," etc., and most were shooting at each other. Some of the planes had crashed and burned, others were in tailspins on their way down, and still others were trailing smoke plumes. Only a couple were flying high at the top of the blackboard and one was labeled "DIALOG."

Business Redirection

In 1969 we negotiated a contract with the U.S. Office of Education, to provide them a retrieval service on the ERIC database. I met with Harvey Marron and Lee Burchinal[9] of the U.S. Office of Education to discuss installing DIALOG on one of their computers. They indicated they had no interest in operating computers and asked if we could not simply mount their database on our computer and provide them access for searching. Of course we could! And so this became our first services contract and changed the group from a systems development/installation organization into a services organization.

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What I learned from this transition proved profound. In the development/installation mode, one is effectively out of business at the conclusion of the contract and thus needs to scurry around for additional contracts or lay off people. In a services mode your customers become dependent on the continued supply of your service (if its useful to them) and thus you tend to operate under renewable contracts. In this way you can build and cumulate business by adding new customers and adding useful services for existing customers.

Many businesses can operate either in a contract mode or a services mode. The latter is far more desirable from a business continuity point of view. It was at this point in 1970 that I decided DIALOG was to become a commercial services business.

My father-in-law, a successful patent attorney, was impressed by the applicability of our technology to patent searching and suggested that we buy DIALOG from Lockheed. He offered to finance the $100,000 or so that we felt Lockheed would require. My intuition dissuaded me from pursuing his offer. In retrospect the decision was probably a good one, other than from a personal financial perspective.

DIALOG, the Business

With the demonstrated utility of DIALOG during the NASA contract and as a result of requests from other organizations, in 1971 I proposed to Lockheed management that we launch a commercial business based on DIALOG and the database services we were already supplying to government agencies. With a foundation of government services covering most of our expenses, we could easily take on the risk associated with a commercial startup. I felt we had a real head start and could develop momentum as we progressed.

Lockheed management was reluctant for many reasons and deferred approval of the commercial program. Then came the trigger that spurred them into action. Carlos Cuadra of Systems Development Corporation (a Lockheed competitor) mailed a survey exploring the feasibility of establishing an information retrieval service similar to the one I had in mind. This survey, arriving from an external source and a competitor, gave Lockheed management reassurance that there really may be an opportunity here. They approved the commercial launch.

And so, in May of 1972, the commercial service of DIALOG was launched, with a grand total of three databases: ERIC from the Educational Resources Information Center, NTIS from the National Technical Information Service , and PANDEX (a Science Citation Index look-alike created by Dick Kollin) from Crowell, Collier and Macmillan; and half a dozen customers.

With this launch, DIALOG had demonstrated that an entrepreneurial business could be successfully developed within a large corporation, given proper nurture and support. We had achieved our goal of becoming free of independent research support funding and, although we did not know it at the time, were on our way to becoming a successful business. The first step in Harvey Wagner's admonition to provide society a return on its investment had taken place.

* * * *

What I have described here is in a sense the first chapter in a continuing story of the evolution and development of DIALOG. Today, in 2002, DIALOG offers 531 databases, is used internationally in over 100 countries, and has found a place in the professional lives of untold numbers of librarians and other professionals.

Over the past 30 year period, DIALOG has changed names and parentage and now finds itself in a very solid position with its new owner, The Thomson Corporation. Under the management of Roy Martin, DIALOG CEO, my dream of providing access to the world's important technical literature continues along its path toward fulfillment. Under the stewardship of Thomson, I feel that DIALOG has a strong parent whose primary mission is consistent with my original vision.

It is particularly gratifying for me to see this position stated so clearly by Richard Harrington, President and CEO of Thomson Corporation: "Our goal is to get the right information to the right people at the right time with the right applications and software, to enable our customers to make better decisions, faster." ɑiip

References

1 Daniel Teichroew - http://ioe.engin.umich.edu/saab.html
2 Harvey Wagner - http://www.bschool.unc.edu/faculty/directory/62.html
3 H. Peter Luhn - http://www.asis.org/Features/Pioneers/luhn.htm
4 IBM 360 - http://www.geocities.com/SoHo/Bistro/8502/360a.html
5 Mel Day - http://www.asis.org/Features/Pioneers/nasa.htm
6 Mortimer Taube - http://www.asis.org/Features/Pioneers/docinc.htm
7 Hlava, M. M. "The NASA information system" [History of RECON]. In *Proceedings of the Second International Online Information Meeting*, London, 1978. New York: Learned Information, 1978, pp. 251-256.
8 Summit, R. K. "Remote Information Retrieval Facility," Report No.: NASA-CR-1318; N-07-68-1
9 Lee Burchinal - http://www.libsci.sc.edu/BOB/ISP/burchinal2.htm

Roger Summit, Ph.D., is the founder and past president of DIALOG Information Services, a successful, pre-Internet database access service company. His pioneering work in the development of the DIALOG system began in 1962 at the Lockheed Corporation where he continued on as Manager, Director, and finally as President and CEO of the Company when it was spun-off from Lockheed.

Under Roger's leadership, DIALOG grew to be the world's most extensive online information retrieval service, offering over 325 million documents in over 500 databases to over 150,000 subscribing customers worldwide.

Following his retirement in 1992, he was named Chairman Emeritus of DIALOG. He has also served on several start-up advisory boards and boards of directors. Through these activities, Roger has earned recognition as an authority on the development and use of Internet applications and services.

As this story may be continued, Roger would appreciate hearing your comments and early memories relating to DIALOG. He can be reached at rsummit@earthlink.net.

This is the service that provides the information that is found by the librarian who consults with the VP who formulates the plan to launch the product that beats the competition to market by a mile.

This is Dialog.

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