NUL COMPUTING NEWS

Velma, This One's for You

When Vince McCoy and I started *NUL Computing News* in August 1988, we spent much time discussing in which directions the newsletter should go and what topics it should cover. For our second issue, we came upon the idea of interviewing key people in the creation and marketing of the NOTIS software since nearly every staff member uses this software daily. This idea grew into a three part series of interviews with Velma Veneziano, James Aagaard and Jane Burke (President of Notis Systems, Inc.)

It was decided that I would interview Velma Veneziano because I could bring a novice computer user's viewpoint to the interview. My interview with Velma was my first extended conversation with her. I prepared some questions but I quickly discovered that Velma was a natural conversationalist, with a storehouse of information about NOTIS history and the future of computers in libraries. My role as interviewer became very simple since I only had to introduce a topic and Velma expounded upon it and other related topics. The interview lasted an hour (we filled both sides of a cassette tape) and there were still issues we did not get a chance to discuss.

It was fascinating to hear how NOTIS came into existence and to hear how Velma's and Jim's vision of the system became a reality. Even in that short time, it became obvious that Velma was able both to envision possibilities and to put them into action. In any field, it is necessary to be able to dream big and to be able to implement this vision. But it is rare that one person is able to do both.

The September 1988 issue of *NUL Computing News* containing Velma's interview was one of our most popular issues. This interview reached a national audience when it (along with our interviews with Jim Aagaard and Jane Burke) was reprinted in Notis System Inc.'s newsletter, *NOTISes*. This special edition of *NUL Computing News*, issued in honor of Velma's retirement, reprints her interview. We also invited ISDO and library computing staff (past and present) to contribute some comments and remembrances of working with Velma over the past twenty-four years.

I also learned in that interview that, with Velma, one should never take the word "retirement" too literally. I am sure that NUL will continue to benefit from Velma's experience. Best wishes!

-- **Wayne MacPherson**

Contributors to this issue

Kenton Andersen served as Library Programmer from 1977 to 1980, when he was named Senior Library Programmer. He transferred to the NOTIS office in 1982 as a Systems Engineer and to UMS as Senior Systems Programmer in 1984. He was responsible for the original version of LUIS and for the programs that generate MARC tag tables. Over the years, he was responsible for many other contributions - both major and minor - to the NOTIS system. He left NU in 1988 to become a consultant with Technical Support Group, Inc. and his current client is the University of Chicago Hospital system.

David Anderson has been a Programmer in ISDO for the past six years.

Karen Horny is the Assistant University Librarian for Technical Services and Library Computing.

Bruce Miller returned to NUL in 1981 as Library Systems Analyst, where he played a major role in the formation of the current circulation system. He transferred to the NOTIS office as a Systems Analyst in 1984 and left NSI in 1989. He currently works for Towers Perrin Company in Chicago.

Susan Rosko is Assistant Director and Senior Programmer/Analyst for ISDO.

"Keep It Simple and Elegant": An Interview with Velma Veneziano

by Wayne MacPherson / SEL

(While NOTIS is a system used daily by many libraries, NUL is unique in employing the two creators of the system Velma Veneziano and James Aagaard. This issue of NUL Computing News features an interview with Velma Veneziano.)

WM: You started at Northwestern as a systems analyst in 1967. Could you tell us about your previous experience and how you heard about the opportunities here?

VV: I have no formal training in computer science or in mathematics or in library science. I was a history major in college, back in World War II days before computers were common. I got involved in computers accidentally in 1958 at Science Research Associates, which later became a division of IBM. They published materials for schools and did educational testing. They needed a "girl Friday" to work with a fellow who was developing a means of automatically collecting and processing standardized test scores. At that stage they were practically combing the streets for anyone with the slightest interest in computers. So I got in accidentally and got absorbed in it.

From there I went to the Chicago Board of Education for seven years. At that time there was a great deal of graft and corruption going on in the school system which I finally decided I couldn't stomach. So I talked to Ben Mittman who was then head of Vogelback. He said there was a new associate librarian, John McGowan, charged with developing a means of utilizing computers in library operations. He sent me over to John and I started in January 1967.

My first chore was simply to interview library staff members and flow chart all of their jobs. This gave me an understanding of how the work flow went, what forms were used, what kinds of output were needed. This resulted in a long range plan for automation. At that time batch processing was still the most accepted mode; people were just beginning to think about on-line systems. But after studying library processes, it seemed to me that, if we were going to make anything other than marginal improvements in operations, an on-line system was needed; not a batch system which poured out piles of paper which immediately became obsolete.

Once we had developed a plan which called for developing an integrated, online system, which would be implemented modularly, John McGowan decided we needed a site where we had more latitude for experimentation than we would have in the main library. So he and I moved to Tech [Tech Library now SEL] until the new library opened in January of 1970. During that time, Jim Aagaard (who was then at Vogelback), got interested in the library application and developed our first application, circulation control, which became operational in January 1970.

After we moved back to the main library, we had a very dynamic team of eager, forward thinking young people that Tom Buckman [the University Librarian who replaced Jens Nyholm] brought in. It was an ideal environment in which to make changes in procedures. Originally, we planned to develop a cataloging and acquisitions system only for monographs; however Mike Costin, who was then head of Technical Services, convinced me that we should include serials. In retrospect, knowing how much I didn't know about serials at that point, I would not have tackled it. Fortunately, after a few false starts, it worked.

One of the things we have discovered over the years is that the only way users can effectively be involved in the design process is to use the prototyping technique. It is very hard for end users to look at paper specifications and actually visualize how the system will work. So we have over the years decided that even though work sometimes has to be redone, it is better to make prototypes than to try to come up with the perfect version from just paper specifications. The first version of the author-title index was really a prototype. We went through an extensive review process, with almost daily changes being made. This was very time consuming but users accept a system more readily if they feel they are involved. It does not mean that end users always get exactly what they say they want. But in the process of interacting with the user you find out what it is that they actually need. Usually it is possible to come up with a compromise. One of the reasons I think that we have been successful (if any system can be said to be a complete success), is that we have had very, very close interaction with the librarians. NOTIS was not developed in an ivory tower.

As the Law, Medical, Dental schools started to use NOTIS this interaction became more difficult. It is unfortunate that, with our small staff, we are not able to meet with them as often as we would like. I can't walk into their operations and see what the problems are. But this is a drawback which comes with growth. We don't have the nice, neat little laboratory environment that we had in the early days. It is also unfortunate that even in the main library as more and more departments have become dependent on NOTIS, we have had to balance the needs of one department against the needs of another. These perceived needs don't always coincide. So hard decisions have to be made.

I don't feel that an awful lot of people around the library, however, are aware of what we do and how many problems we face, and our long hours

of unpaid overtime. They think you go out and buy these systems and plug them into the wall. There is also a lack of understanding about how much a group of 4 or 5 people can possibly do. It is the case that when a design group comes up with a piece of paper that says "this is what we want and this is what the screen should look like", they have no idea what is involved in doing the detailed design and programming to translate those screens [to a working module]. People have come to expect so much of systems. They are not very tolerant of delays at all. People used to be more willing to wait. They didn't have such high expectations.

We have taken the approach that the system would be an integrated system; that every function performed had to serve multiple users. Instead of automating one job at a time we looked at the library operations as a whole. The advantage is that when you get through you have a system that hangs together. The disadvantage is that the nature of many jobs must change, and staff have to learn to cooperate. It still bothers me we have areas where people are not really giving their best to try to reconcile their needs with [those of] other departments. You still have these interdepartmental rivalries. However, it's not as bad as it used to be. People have been forced just by using a common system to understand the needs of staff in other departments.

Another problem which has arisen as the result of the availability of PCs is that people are saying "we'll just do it ourselves." This is dangerous. People writing such PC programs tend not to document those programs. When they leave nobody touches those programs again. I do worry about what is going to happen as more and more people get PCs. I can see centralization and integration giving way to more of this "do-your-own-thing". Which is what we, when we came to the conclusion that we needed an integrated

centralized system, were trying to prevent. We tried for consistency in the way things were done so if someone left there was still an established way of doing things; it wasn't so dependent on a particular person.

WM: Did you ever think the NOTIS software would grow as large as it has and be marketed?

VV: No I didn't. In the early 70's, Jay Paulukonis, who was the librarian up at Tech, and I talked about the possibility of having public access terminals. Just the cost of the terminals made it seem inconceivable that the public would ever get access to an online catalog. The success of the online catalog was frankly a big surprise to me. It is a tribute to the risk-taking of people in Tech Services and in Public Services. People made up their minds that there would be an online catalog and tackled it with optimism. When you make up your mind that something is going to be, it usually happens.

We resisted for a long time marketing the system. Over a four year period, we had visitors from over 200 places around the world. So there was a lot of interest. But we just hadn't time to think about marketing. But then we kind of buckled under after a while when the University of Florida, Harvard and some other places wanted to buy NOTIS. We finally agreed we should let them have it, but we made no commitment to maintain it.

Jim and I and everybody in ISDO at that time really wanted to sell the system outright to someone to market. We tried to sell it to TBG, but it didn't work, so we set up NOTIS, Inc. NOTIS, Inc. has done a phenomenal job with marketing. I hope they can do a reasonably good job with keeping the system viable. If you aren't constantly improving a system, it loses its competitive edge.

WM: Do you feel possessive at times toward what you've done?

VV: I want NOTIS, Inc. to improve NOTIS but I don't want them to make a mess of it. Naturally I have my own ideas on what improvements are needed and what things should not be done. However, I recognize that the improvements I want may not necessarily coincide with the ideas of marketing personnel.

WM: What improvements do you want?

VV: I want NOTIS, Inc. to keep the system simple and elegant. I don't want patchwork and tack-ons. The system that we turned over to them was simple. And if it is going to continue to be a good product, it must stay simple. It's like the space shuttle; if you get beyond a certain level of complexity, one little thing going wrong can cause the whole thing to crash. When it gets to the point when one person cannot keep it all under control, when one person isn't able to comprehend the whole, then you are in for trouble.

WM: Is there anything you would do differently?

VV: There is something the University and the Library ought to have tackled a long time ago and that is retrospective conversion. It is a real shame that we have not faced up to the need for it. Almost every other major library in the country, even the ones that are buying NOTIS, have realized the need for retrospective conversion. We haven't.

WM: Rumor has it that you retired.

VV: That is like the rumor about Mark Twain; it's been grossly exaggerated. Last year I temporarily went on 2/3 time because I wanted more time to travel. But if I am not traveling I enjoy working more than sitting around home. After years and years of working, there is no way I can ever settle down to the business of garden clubs, bridge clubs, coffee klatches. I intend to work as long as there is work to be done and my health stays good.

(continued on next page)

WM: What things would you like to do to enhance the system?

VV: The area that intrigues me is organization of knowledge so as to enhance access. I am interested in how you take language, which is so imprecise, and organize it optimally so that people can access it. That is why the index redesign project has just been fascinating to me.

There is so much left that we can do to improve access using the basic structure of the new indexes but applying them in new ways. For example, we need to experiment with providing access by classification numbers. We need to be doing more work with evaluating the logs [of LUIS transactions] and building in means by which we can take a users terminology and translate it into the term used in cataloging. The whole problem is one of the organization of language and knowledge.

An "Expert System" is what we are aiming for. But we're not talking about the trivial things you can do on a PC. We are talking about tackling the whole universe of human knowledge. I spend a lot of time thinking about this.

WM: I know people have spent a lot of time talking about keyword-boolean as one way to take what people think they need and transform it.

VV: That is a brute force approach. That technique was developed a long time ago when there was no understanding of the way people think. It's archaic and obsolete to rely on k-b in this day. People think in concepts, not in words. With k-b you get so much noise, so much garbage that you have to sift through. K-b relies on a user knowing all the forms of a word. For example, the user has to know that when he wants information about computers, he must also use the terms dataprocessing and microcomputers. There are better ways that we can lead the user to the desired information. This requires control of the vocabulary.

We should be going toward the idea of controlled vocabularies, accessing by concept rather than by isolated words.

WM: What is a controlled vocabulary?

VV: One example is the Library of Congress subject headings. Even more systematic are MESH subject headings which are very controlled, very hierarchically arranged. Some thesauri, such as the one for art and architecture, are very highly developed using a faceted approach. There are also ways of describing material by a string of concepts strung together as in PRECIS. These are ways that the cataloger, indexer and abstracter can provide controlled access to data. We need to unify all these different lists and thesauri to provide one master vocabulary. Such a vocabulary needs to be constantly evaluated by experts and updated using information gathered from logs. Once this is done the system becomes an "expert" system.

One of the worst problems we have with k-b access is that the casual user doesn't know how dumb and stupid the system is. He really relies on the computer to do more than it can do. I am worried about the fact that the user is not well served. He just thinks he is well served. He gets a few things that seem appropriate and he says "Oh, beautiful." He doesn't know what he has missed.

WM: Doing the same job for 21 years, you obviously have found it intriguing.

VV: I sometimes think that if I had to pay to do the job I would. Fortunately, I get some money for doing it; not as much as you get in business and industry, however the freedom of the academic world more than compensates for the lack of monetary reward. Not many people have that luxury.

Kenton Andersen

I had the pleasure of working with Velma from 1977 through 1984. I have always been impressed by her dedication, intelligence, and vision. She has an uncanny knack for filtering through various points of view, finding the true requirements, and coming up with solutions which not only satisfy those requirements, but are simple and efficient ("elegant") as well.

Velma's vision of what libraries could accomplish with computers is often well ahead of the technology. But rather than wait for the "ideal" solution, Velma has always been willing to implement those things which are affordable, while refining her vision of the future. This long-term approach to systems development, coupled with incremental refinements, has resulted in very functional system which meets the cost constraints of academic libraries.

In recent years, she has focused a lot of her energies on information retrieval. The human-machine interface has always been a compromise, mostly on the part of the human, due to the costs of storage and processing. New techologies like CD-ROM, RAID disks, and Hypermedia are going to reduce these costs considerably, and I expect that many of Velma's ideas will be implemented in the next few years.

I learned a lot working with Velma. I appreciated her good working relationships with all areas of the library, and it really paid off in our end product. She was active in ALA, and her contacts provided valuable insights into our work. Many of those contacts also became customers of NOTIS when we made it available for license.

I am very grateful that I had the chance to start my career at NUL, under the leadership of Velma Veneziano and Jim Aagaard. The profession will surely miss her presence.

Bruce Miller

In Honor of Velma Veneziano

Northwestern's faculty, students and staff have benefitted tremendously from Velma's 24 years of service. In addition to being a primary contributor to NOTIS' rich functionality, she successfully encouraged an environment at NUL where staff at all levels actively suggested system changes.

Velma accomplished this by:

❑ Actively encouraging, contributing and adhering to national standards. She served on MARBI during its formative years in the 1970's, and has continuously fed excellent suggestions to standards makers.

❑ Expecting a very high quality of work from herself and all other NOTIS contributors.

❑ Conceiving and adhering closely to a conceptual model of a library system. This has resulted in a remarkably consistent system that accommodated functional changes well over the years.

❑ Deciding with Jim Aagaard to build a highly integrated online real time system, at a time when most computer systems were batch or online front-ends to batch systems.

Velma was a true pioneer of library automation, as befits her Wyoming heritage. She had no formal library training. Yet in partnership with Jim Aagaard and the consistent administrative support of John McGowan, she designed the best library system extant.

Working with Velma wasn't easy--you always had to be ready to consider alternatives, or defend your ideas vigorously. But it was exciting and a superb education. Millions of library users in various countries have benefitted personally from her ideas and inspiration to others.

I wish Velma the very best in her retirement--a great, great job!!!