1·1 THE Q.M.C. INFORMATION SERVICES NEWSLETTER 9·83

INFO Is Here

Joe Evans

IN THIS ISSUE

INFO is Information Services' newsletter – right? Well yes and no. INFO is published by Information Services but it's really your newsletter. Its purpose is to help keep all of us abreast of the world of automation and how we can use it to help us do our jobs better. More importantly, INFO will keep us up to date on what's happening in automation at Queen's and how we can use it to its fullest advantage.

The name INFO and the logo were chosen to emphasize that the field of information technology is one that is advancing rapidly. Hopefully INFO will help us keep pace with this technology. INFO is not written for the technician or the engineer rather, it is aimed at everyone who uses or is a potential user of computers at Queens.

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Often we will have to use "computerese" or a technical term to describe a function, item, or process. If it's one we've never used before, there will be a good chance that you will find it defined in the glossary which will be on the back page of each issue. Each article will introduce you to a new term or two and, over time, you will increase your computer vocabulary dramatically.

The format of INFO will be the same for every issue. The left column on page one will always tell you what's in that issue. There will even be a brief three or four line description of major articles. In each issue there will be a "Feature Article", standard columns, and occasionally a profile on a particular department's unique use of automation. The standard columns will change from time to time based upon what you feel is most useful to you. If at all possible we will try to standardize the location of all columns so that you will know where to look for them in each issue.

Three areas that are key to a successful automation effort at Queen's are the Info Center, QUIC, and the Education Center. The reason these are so important is that they are our primary vehicles for delivering "computer power" to you. Because of their importance, each will have its own column in every issue. In this issue, these columns will provide you with a little background information regarding their purpose, organization, and capabilities.

In future issues this page will be reserved for topics of broad interest to all of us at Queen's For example, you can expect to see articles based on John Nasbitt's book "Megatrends" which is a commentary on the shift from an industrial to an information society. This revolutionary change will have far ranging effects upon our personal lives and the health care industry as a whole. Certain predictable trends such as decentralization of management and decision making, networking, and "high tech/high touch" have been a result of computerization and are in various stages of development at Queen's. Yet another may be based upon the book "In Search of Excellence" which is a study of the world's most successful companies and how they have attained and maintained excellence in the products and services they provide. A rapidly changing healthcare industry, which is becoming more competitive and cost conscious, reinforces the importance of this topic. These are just a couple of examples but you can rest assured that whatever the topic, it will have an impact on all of us.

The success of INFO will depend upon our ability to provide you with

interesting and informative articles that are readable by everyone. This responsibility rests with INFO's Editorial Board and represents a major time commitment on their part. My sincere thanks goes to them for volunteering to assist in this major undertaking. Several other people have been instrumental in getting INFO off the ground. Media Services' Barbara Omura volunteered her talents to our cause. The logo and attractive, yet functional layout were all her designs. Barbara will continue to help us by doing the layouts for each issue. Also without Amy Tanaka, our staff of one, little would ever get done. Amy is responsible for coordinating the entire project and making sure we meet the deadlines.

One final note. It's up to you to make sure that INFO is on target. Please take the time to provide us with suggestions and ideas that you feel will make it better. .

INFO CENTER

Gordon Bruce

How often has the boss asked you to prepare a report based on information that you knew had to be stored in the Queens computer, but didn't know how to extract it? You could have submitted a Program Service Request (PSR) but, after all, the boss wants the report tomorrow and your friendly programmer says he can't get to it for at least six weeks. Have you ever had to compile statistical reports, graphs, cost benefit analyses, schedules, etc. by adding columns and columns of numbers on your trusty yellow pad? Well if so, relief is here and it's spelled I-N-F-O C-E-N-T-E-R. No more long waits in the PSR line and no more slaving over a hot yellow pad!

The INFO CENTER is a section within Computer Services whose sole purpose is to assist you in obtaining the computing resources necessary for you to do your job more productively. It's goal is to provide you with the education, assistance, and tools you need to solve many of your own information related problems. Why all the emphasis on self sufficiency and solving your own problems? Well, let's look at a couple of true scenarios that should help us understand.

Around the turn of the century the British Government commissioned a study of the newly emerging automobile industry. They wanted to know if the industry was going to grow rapidly and if England should become a major exporter of automobiles. The results of this study indicated that the automobile industry would remain comparatively small due to a shortage of qualified chauffeurs. The members of the commission failed to consider that human ingenuity would find a solution to the problem. The solution, of course, was that we learned to drive ourselves.

Another study, this time in the United States, occurred in the late 1940's. It reported that, although local telephone service would grow dramatically in the future, long distance service would reach it's peak in the 1950's. The reason was that there would not be enough operators to handle a large increase in long distance call volume. Fortunately human ingenuity triumphed again and we developed the technology necessary to allow us to place our own long distance calls.

We are facing a similar problem today. There is just not an adequate number of chauffeurs and operators available to satisfy your thirst for information. But this time no one is saying it can't be done. The advent of the Personal Computer and new, easy to use programs has, once again, allowed you, the individual, to become the solution to the problem. With proper training and assistance, you can now "drive" or "dial" directly to the tools you need to help you get your job done.

The INFO CENTER is prepared to provide advisory support to all QMC employees who presently use or are planning to use Personal Computers or mainframe based programs. We can answer questions regarding hardware, software, and education in addition to providing support for the INFO CENTER products. Current products include Spread Sheeting, List Processing, Database Management, Text Processing, Graphics, Scheduling, and several Report Generators. We are constantly investigating new products and will acquire those that show high potential. If you can't find a free Personal Computer or a CRT in your department, the INFO CENTER has several available on a first come first serve basis. Call the INFO CENTER Coordinator at extension 791 to schedule some time.

In October we will formally kick off the INFO CENTER with an all day Computer

Fair in the Nalani I conference room. We will install several Personal Computers, CRT's and video systems and offer continuous demonstrations of INFO CENTER products. The purpose of the fair is to acquaint you with the INFO CENTER and give you a chance to see how its products can assist you. Be on the look out for the date and plan your schedule so you can spend some time with us.

In future issues of INFO we will provide you with more detailed descriptions of the INFO CENTER's products and services, and how people are using their new found helpers.

QUIC UPDATE

Ann McHale

In your day to day activities at Queen's, have you noticed the intense expressions on the faces of Admitting Registrars, Pharmacy Technicians, Information Desk Volunteers, or Nurses and wondered why those terminals in front of them were so captivating? Have you been overwhelmed by all the "computer talk" you keep hearing from your 10 year old nephew? Or, have you thought that a TRASH 80 was an awfully expensive garbage bag? Well, welcome to the age of the computer!

At Queen's, there is a group of individuals that meets once a month to become more aware of computer usage and its impact on the Medical Center.

This group was formed in September, 1982, when Computer Services recognized a need to better communicate with all of the computer users at Queen's. Each department head who utilized the mainframe computer appointed a representative from his/her respective area to attend an introductory session. This representative attained the renowned status of becoming a member of this group based on their attendance at the first meeting.

The first agenda item was to choose a name that communicated a meaningful description of the group. The name selected was QUIC, which represents Queen's Users In Computing.

The purpose of the QUIC group was not just to require employees to attend another meeting, but to:

- communicate new computer equipment developments.
- review equipment problems and concerns.
- determine training requirements.
- provide a forum for the exchange of information among departments utilizing the computer.

The meetings have been most informative and have included educational sessions, the viewing of relevant videotapes, discussion and demonstration of existing computer applications at Queen's, and guest lecturers to update users on various aspects of computerization.

QUIC was not meant to have a static membership. New members are most welcome! If you are interested in joining this stimulating group and updating your knowledge of computers, ask your department head to contact Eloise Chun, Computer Services Education and Training Coordinator at extension 791.

For personal computer users who are feeling left out at this point, Computer Services is planning to sponsor a users group for you. Watch for further information and details in future issues of INFO. In the meantime contact Paul Lister at extension 591 if you are interested in joining the group. Our thanks goes out to Paul for volunteering to coordinate this activity.

PROJECT UPDATE

Tyler Wells

Several major computer projects are well underway at The Queen's Medical Center with each in differing stages of development. This column will help you learn a little about the various projects, when they will be implemented, and who you can contact if you should have any questions.

ADT PROJECT
What does ADT mean?
Admission, Discharge and Transfer
What will it do?
ADT will automate the registration of all patients coming into the Medical Center. By the way, you don't have to be a patient to watch automated registration in action . . . employee health will be using the system also.
What stage is the project in now?
The project is in the final state of testing. Training has already begun and should be completed by September 15, 1983.
When will it be completed?
The ADT system will be fully operational on September 24, 1983.
Who can we contact if we should have questions?
Tyler Wells, Manager, Admitting and Registration, extension 321.

GL/AP PROJECT
What does GL/AP mean?
General Ledger/Accounts Payable
What will it do?
GL/AP will automate the institutional and departmental financial statements and provide a detailed report of items charged. In addition, checks for paying hospital expenses will be calculated and printed automatically.
What stage is the project in now?
As of this writing GL/AP is up, running and a huge success.
Congratulations!
Who can we contact if we should have any questions?
Sharon Shimono, Manager, Accounting, extension 326.

PAYROLL/PERSONNEL PROJECT
What will it do?
The Payroll/Personnel system will automate The Queen's Medical Center payroll and many of the manual files of the Personnel Department. Ability to store and retrieve information will greatly enhance the reporting requirements of Personnel.
What stage is the project in now?
Computer Services is currently modifying the software package purchased by Queen's. As soon as this work is finished actual data from the Personnel files will be put into the computer.
When will it be completed?
January 1, 1984 is the target date for this important project.
Who can we contact if we should have any questions?
Bill Kennett, Assistant Director, Program Planning, extension 527.

A/R PROJECT
What does A/R mean?
Accounts Receivable
What will it do?
Our new A/R system will help us reduce the time it takes to get reimbursed for services. It will also help us monitor our costs per diagnosis related group (DRG) which is important under the new prospective reimbursement system.
What stage is the project in now?
The project is in the vendor evaluation stage. A vendor will be selected in September and a request for funding will be presented to the Board in October.
When will it be completed?
We expect the new A/R system to be operational in June of 1984.
Who can we contact if we should have questions?
Pauline Takata, Manager, Business Services, extension 201.

In future issues of INFO, Project Update will provide you with a more in-depth analysis of current projects.

HIGH TECH

Joe Evans

Speech Recognition

It's noon and the employee dining room is crowded and noisy. Outside the grounds crew is mowing the garden with a lawnmower that obviously needs a new muffler. To make things even worse the visiting physician speaking to you has a thick German accent.

Politely, you concentrate and manage to pick up a word here and a phrase there. Then, performing a remarkable feat you take for granted, you combine those words and phrases with the context of the situation and your knowledge of English and quickly decipher his message.

If computers could do this half as well as humans we could do away with keyboards, magnetic card readers, and many of the

other devices we currently use to communicate with the computer. Unfortunately voice recognition, by computers, has met with only limited success to date. Vocabularies are small, there are strict rules for word arrangement, and words must be spoken with exaggerated pauses between them.

Basically there are two types of computerized voice recognition. The first is word recognition which involves the identification of discrete words. These may be commands such as "start" or "stop" or responses such as "yes" or "no". They are characterized by simple, single syllable words that are easily understandable regardless of a person's accent or inflection. The second is speech recognition and involves the computerized identification and comprehension of a complete sentence. There is no limitation on the complexity of the words or sentence structure.

Isolated word recognition works by matching the voice pattern produced by a spoken word with a dictionary of patterns stored within the computer. These voice patterns are similar to fingerprints in that most words produce a unique pattern. Even though these patterns are often complicated by a person's accent or inflection, they can usually be correctly identified. A major problem confronting word recognition is homonyms or words that sound alike. The words "see" and "sea" have vastly different meanings but produce identical voice prints. On the other hand, a true speech recognition system would be able to analyze

these two words within the context of the sentence and make a decision as to which is correct.

Isolated word recognition systems are beginning to show up in several consumer products. For example Toyota has developed voice controls for auto air conditioners and radios, Hewlett Packard offers voice recognition for it's personal computers, and Threshold Technology has developed voice recognition chips for video games.

Although word recognition is becoming somewhat commonplace, speech recognition has a long way to go before we can replace our keyboards. Basically there are two major problems which researchers must overcome. The first is that very little is known about the process by which humans learn a language. Complicate this with a language like English which allows many grammatically permissible ways in which words can be arranged and you can begin to understand the size of the problem.

Carnegie-Mellon University and IBM are the only groups currently involved in major speech recognition projects, but their results to date are clearly astonishing! In one experiment, a computer with a 250 word vocabulary was read a group of highly structured sentences and achieved perfect recognition of each sentence. A second, more difficult experiment, used a thousand word vocabulary derived from the patent papers for a new kind of laser. Faced with a vocabulary four times as large and no limitations on how sentences could be structured, the computer correctly identified 93% of the words in the test sentences.

Even though these results are extremely encouraging, don't throw away your typewriters quite yet. It takes a computer the size of the one here at Queen's almost a day to process ten to twenty sentences. Obviously it would be hard to live with that kind of response time. Still, researchers say that we might see a draft quality "listening typewriter" by the end of this decade. In the meantime hang on to those lightpens and hone your typing skills.

In future issues of INFO we will discuss high tech products and systems that will undoubtedly find their way into Queen's in the not too distant future.

EDUCATION

Mr. ED

Eloise Chun,
Corinne Costigan

Hi! My name is Mr. Ed (Ed for education – get it?) and I will bring you the latest scoop on computer education at Queen's. In future issues, I will be writing special feature articles on education and answering any special questions you have. In this first issue, however, I would like to introduce you to a special friend of mine.

My friend is Eloise Chun. Eloise is the Education and Training Coordinator for Computer Services and she is going to assist me in writing my article. (I hope she doesn't make it too boring, you know how educators are.)

Eloise seems to be involved in everything computer-related at Queen's. She is responsible for all equipment training on CRTs and printers and application training on the ADT83 project (see Project Update). She also develops the training guides and user manuals for software applications. In addition, Eloise conducts the QUIC (see QUIC Update) monthly meetings and the WANG User's Group meetings. Moreover, she administers the Computer Services department video training system. (I'm sure you all can tell who wrote that paragraph.)

As you can see, Eloise is a very busy person, so (I know she hates to admit this) she does need some help. The Department Training Representative concept was implemented to assist Eloise in training the 1,000 plus employees that have access to the various computerized applications at Queen's. Each department designates a Department Training Representative who is responsible for training the personnel within that department on all computer-related items. Eloise keeps the Department Training Representatives informed on all new, enhanced, or modified hardware and software. They, in turn, train the users in their respective departments and communicate with Eloise any special training requirements for their department. Eloise monitors the training and provides assistance, materials (user manuals) and a classroom for the Department Training Representatives' use. Without these Department Training Representatives, there's no way that Eloise could handle all the computer training throughout Queen's.

Currently, the Department Training Representatives are working on the ADT83 project. All the Department Training Representatives have been trained by Eloise on the new ADT83 system, and they are in the process of training the users within their departments.

In our next article, we will feature the video training system used in Computer Services. We will also respond to any questions or requests from our readers. See you in the next Info Newsletter!

GLOSSARY

APPLICATION: A group of computer programs designed to perform a process or function. ie. Payroll, Patient acuity, etc.

CHIP: A very small electronic circuit etched on a silicone wafer. Chips are the building blocks for computers.

COMPUTERESE: The technical and uncomprendable language spoken by computer people.

CRT: Cathode Ray Tube. Also a Terminal. Similar to a T.V., it is used to communicate with a computer.

DRG: Diagnosis Related Group. You better already know this one!

HARDWARE: Computer equipment. ie. terminals, printers, disks, etc.

MAGNETIC CARD: Card with a magnetic surface upon which a computer can read or write information. ie. VISA, MASTER CHARGE, etc.

MAINFRAME: A large central computer. Often referred to as a CPU (central processing unit).

PC: Personal Computer. A small desk top computer. May operate as a stand alone computer or in conjunction with a mainframe.

PRINTER: Hardware used to print paper documents. May be low (20-50 lines per minute) or high (1000-10000 lines per minute) speed depending upon it's use.

SOFTWARE: A program or set of instructions that allow the computer to perform a (hopefully) useful function. Application or application program is often synonymous with software.

TERMINAL: See CRT