

# Seneca Update

## The Passion of Pioneers

By Russell Pangborn

**H**ave any of you had the chance to be a pioneer in your company? Well, here in the Computer Studies Department at Seneca, a few of us get that opportunity once in a while. Fortunately the innovators doing this have struck out in different directions. In my opinion this is one of the strengths of our department. It is the breadth of technologies that are supported by a passionate faculty. My zeal with regards to System i technology has probably made me a little predictable to my colleagues. In this column I am going to do something that will surprise them all—talk enthusiastically about other areas in our department.

I would like to give a brief history of how our department evolved into a multidimensional entity and how some people on our staff were pacesetters. Next, I will tell you about some of the exciting things accomplished by the Seneca Centre for Development of Open Technology.

Many years ago we shared an approach common to a lot of colleges with regards to curriculum. There were only a few choices a student could make. The faculty decided which subjects were most important in getting a diploma. In order to give our

curriculum more flexibility to adapt to a quickly changing knowledge base, we introduced an approach that allowed a student to make up to seven professional option selections and a couple of programming language selections in a three year program. This is where the pioneers come into play. Faculty needed to step up to the plate and provide subjects that reflected the changing computer landscape. Learning new things is a fact of life for all computer professionals—but imagine having to study something and become the resident guru a few months later!

While all of us at the college have a computer background, the pace of new methodologies means sometimes we have to start almost at the beginning with a newly developing body of knowledge. That is what Professor **John Selmys** did in the fall of 1996 with Java. Java was launched as an Internet extension for browsers in early 1995. It went into production in December 1995. John studied up on it in the summer and became an expert for the students a few months later in the Fall of 1996.

Students can be a tough crowd. This is rightfully so because they are spending their hard earned money, usually working a part time job, and investing their time in your subject. You had better know your stuff. Fortunately John had been interested in



Smalltalk before so he had a bit of an OO background. Here is what John had to say to me about his experience, “I believe we beat out all Ontario colleges and possibly most universities. I think University of Toronto came on board the following year but I can’t be sure. I do recall getting phone calls from U of T Computer Studies students looking for tutors. I wasn’t interested so I recommended one of my students”. So we were probably the first. Java later became so widespread that it was elevated to a language choice in our fourth semester.

A number of us struck out in different directions. I made a professional option available based on the AS/400. I remember there was a healthy turnout. Employers from that area were hiring some students based on AS/400 experience before they even graduated from our program.

Since there were only a limited number of students, there was a little competition to get students to select your professional option. I remember one semester there was a drop off in the number of students selecting the AS/400 professional option. One student told me there were more students se-



lecting Database option subjects. It turned out that one of our innovative faculty members, (I think it was **Carol Terentiak**), had come up with the idea of students graduating with a specialization. Students had bought into the idea of graduating with a specialization designation which required taking a specific set of subjects. Carol was a database person and now students were selecting more database professional options. That still is probably our most popular student choice. Unfortunately for me, our database experts on staff were more enamoured with Oracle than DB2 on the AS/400. Actually this was close to the time that IBM did not have a name for the AS/400 built in database. IBM had got a little complacent with their lead in relational database technology and had fallen a bit behind the innovations included in an Oracle database. IBM woke up to this with a competitive relational database in 1994 called DB2 on the AS/400.

I think of the person(s) who started the idea of a CPA program specialist as pioneer(s) with the CPA Program because they put together a structure that allowed students to get excited about a certain area in computer studies and identify themselves with it and focus on it. One diploma now had some important nuances for students without our college going to the ministry of education and getting approval for different types of diplomas. Industry has used a similar approach with the marketing of certifications. I believe our college was the first to adopt this type of approach with the CPA curriculum. In later years I would see other educational institutions come up with synonyms for “specializations” in their course load.

If my area was to survive I needed more AS/400 subjects, so an AS/400 specialist designation was born. This allowed me to offer CL Language, Advanced RPG, DB2, and Lotus/Domino subjects that counted towards the iSeries specialization.

One specialization area that I would never have predicted back in the 1990's was “Game Developer”. This was pioneered by our current chair, **Evan Weaver**. I remember one student had not done so well in my second semester iSeries subject. He had gotten a “C” when I knew he could have easily scored an “A” with his prior industry experience. He confided in me the reason why, “I am really here for the Game Developer specialization.” He had some advanced standings which did not include the iSeries and was throwing all his effort into subjects like Game Programming Techniques. I do not think there is any other College in Ontario that has included these types of subjects into their Computer Programming and Analysis diploma.

Evan, reflecting on the bigger picture, recently told me the following: “Game programming combines real-time control with advanced hardware utilization and massive data manipulation, it is one of the most difficult areas in which to program. Students come to the program because we offer them the opportunity to learn game programming, and while they are here, they get a balanced, full-featured software development education, which includes System i. No matter what happens in the IT industry, they are prepared to cope.”

There have been a lot of defining moments through the years where a faculty member has fought for inclusion of a new technology and stepped up and learned and then delivered a different subject to our students. (I am only scratching the surface with this little bit of history.) **Dr. Frank Soltis** in a recent talk at our college, fondly remembered working on the VAX DEC VMS. Our professors who championed the move from this college favourite to a UNIX platform faced stiff opposition. It turned out to be a good move as Digital Equipment seems to have fallen off the radar. Our post diploma programs and degree program have also turned out to be really good ideas.

But, it is time to move up to the present day. Although it pains me to say this, some of our younger professors have also been really delivering the goods. No, I'm not jealous of their accomplishments. It's only that at one time I used to be referred to as “younger”. Now I am referred to as “older”.

As older people tend to do, I am going to go off topic a bit with a little bit of advice for my older readers. Going to a **Tim Conway** show should help with those feelings of being too ancient. My wife and I went to a show that included Tim, **Don Knotts** and **Harvey Korman**. On leaving we were a little impatient because everyone was moving really slowly in front of us. There were a lot of people actually using walkers. Then it dawned on us. Everybody looked older. We felt like adolescents again. Maybe walking with this crowd wasn't so bad after all...



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Let's get back on topic to our younger Seneca innovators. Two years ago **Professor David Humphrey** developed a very impressive professional option that introduced our students to Open Source Development. This involved a close cooperation with the Mozilla community who suggest projects that the students can bring up to a "0.3" release level (stable but not necessarily feature complete or fully polished). This has been so successful that more professional option subjects have grown from this effort.



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\$100,000 grant to support the joint efforts by Seneca's Center for the Development of Open Technology and Mozilla.

Here is part of our news release:

*Seneca College is pioneering new and innovative ways to train the next generation of software developers. We've been very happy with*

*the quality of the students Seneca has produced and the contributions they've made to the Mozilla project," said Frank Hecker, Executive Director of the Mozilla Foundation. "Through our ongoing relationship with Seneca we hope to see this success story continue, and have Seneca's Mozilla and open source curriculum serve as a model for other academic institutions around the world."*

One of those options now has students taking their projects to a fully-polished "1.0" release state. Computer World and CBC television have reported favourably on this. If you want to see David talking about this on a CBC news report, click on <http://zenit.senecac.on.ca/wiki> and start the available video.


There are now four Seneca students interning at Mozilla in California this summer. I contacted Dave recently and this is what he had to say, "Yesterday Mozilla released Firefox version 3 around the world, and with it the work of hundreds of Seneca students. Seneca students have been involved in writing new features, fixing many bugs, improving tools, documentation, QA and testing, and everything in between. Our collaboration with Mozilla is a model of how to make industry-academic partnerships work, and more, how to have them produce world-class software."

In March of 2008 the Mozilla foundation provided a

We have Professor John Selmys to thank for an annual event that occurs in the Fall. The Free Software and Open Source Symposium or FSOSS. John started this with an iBox fund from Seneca seven years ago. FSOSS now ranks as an important event in the Canadian Open Source Calendar. FSOSS is scheduled to run on Thursday, October 23 and Friday October 24. It is an excellent way for students to meet premier developers and

visionaries from the open source world. The URL to get more information about this is <http://fso.senecac.on.ca/>. I would encourage all of you to drop by when this event occurs.

Another professor, **Chris Tyler** is leading the way in the development of a Build Automation professional option for our CTY program in Winter of 2009. Red Hat Inc. has generously provided a \$50,000 grant towards this and Seneca's work with the Fedora Linux distribution.

There are many more unique individuals driving our programs. I have only mentioned a few that have crossed my path. If you've read this far, my pride in our School of Computer Studies should be quite evident. It has allowed passionate people the opportunity to pursue what excites them in our industry and hopefully that has rubbed off on our students. 

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