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TORONTO USERS GROUP for System i™

TUG™ magazine

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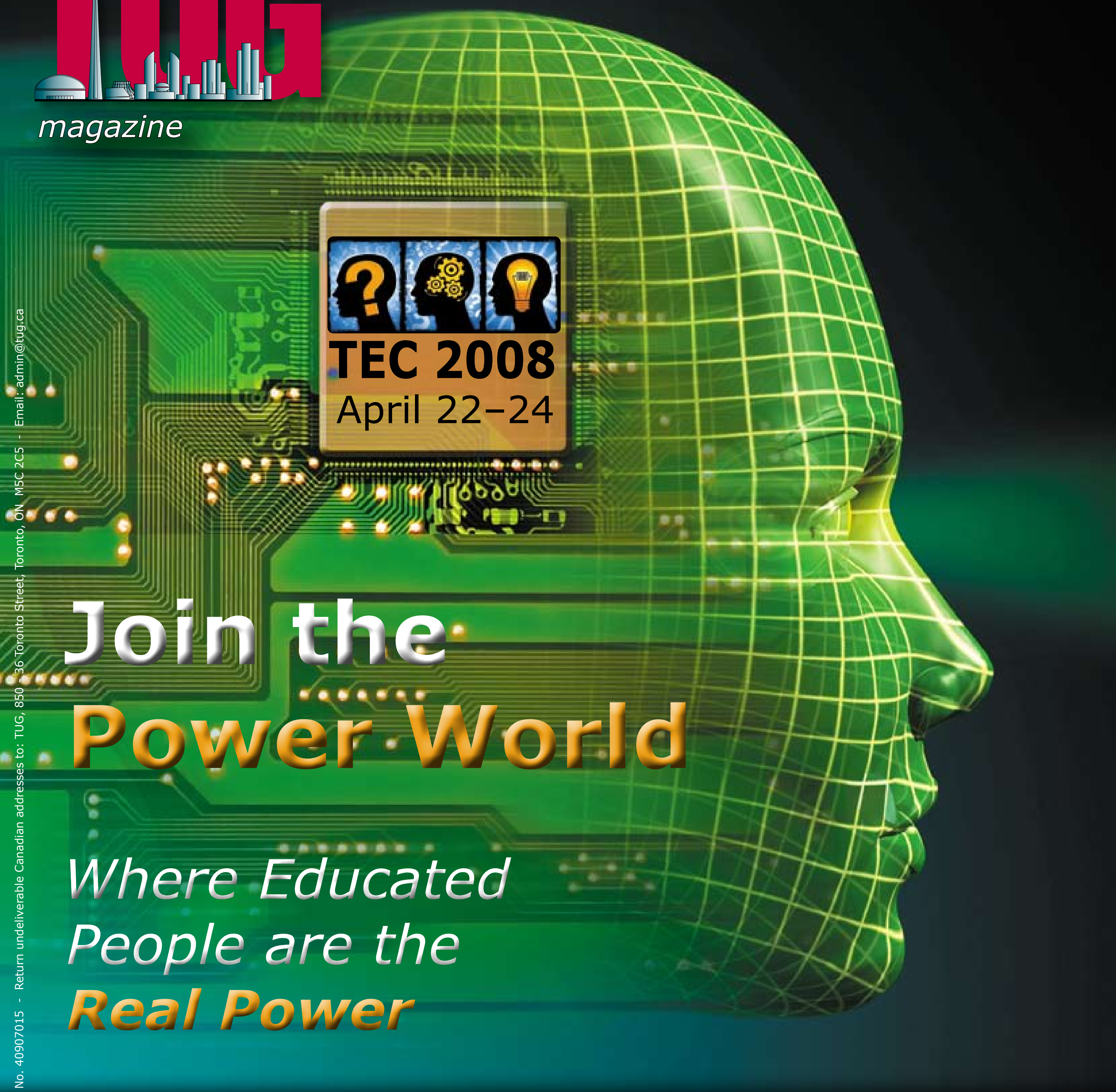

Join the Power World

Where Educated People are the ***Real Power***

March 19 MoM:
Barry Pow and Barbara Morris on i5/OS V6R1

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The Canadian CA Plex / CA 2E Developers User Group (CAPDUG) presents a day of information on model based development.

Tuesday, March 18, 2008
CA, Inc. Offices
5935 Airport Blvd, 11th Fl
Mississauga, Ontario L4V 1W5

8:30 – 9:00am Optional – Meet and Setup
Arrive early to meet and configure your laptop for the Test Drive: Websydian WebClient for Plex

9:00 – 10: 30am Optional Test Drive: RIA Development using WebClient
ADC Austin, Austin TX

10:30 – 11:00: Meet and Greet

11:00 – 11:45am Websydian v.6.0
Websydian A/S, Copenhagen, Denmark

11:45 – 12:30pm 2E Modernization Methodology - Analysis
ADC Austin and Databorough

12:30 – 1:30pm Lunch Presentation: Plex/2E Status & Plans
Bill Hunt, CA Product Manager

1:30 – 2:00pm Using 2E at TD Bank Financial Group
Mike Marston, TD Developer

2:00 – 2:30pm What's New with CM
MKS Software, Chicago IL

2:45 – 3:15pm RIA Application Development using Plex
ADC Austin, Austin TX

All are invited!

Visit www.capdug.org for more information and to RSVP.

TUG

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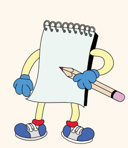

By Léo Lefebvre,
President, Toronto Users Group
for System i

Vaughn Dragland

Fifteen in a Row

Another year, another conference! As in the previous fourteen years, we are again preparing for another TEC. And our fifteenth production promises to be great again. With all the changes that happened recently at IBM, and with all the announcements that were made, there is so much to be aware of... and a two or three day break in your work schedule to update yourself on those events could be your passport for a great future.

As soon as last year's TEC was over, IBM started its round of announcements and re-organizations, that at this date are still going on. These exciting hardware/software announcements included: DB2 for Web Query, the Power 6 processor (providing IBM the opportunity to converge the System i & p families into a single Power server family), i5/OS V6R1 (allowing the system to run on the existing JS22 blade), WDSc repackaged into smaller components, RDi, RDi SOA, and RBD. There were also some company reorganizations to move to a "client-centered structure – top to bottom".

All of those changes and announcements should really whet your appetite and push you to get more information and more training—just to stay abreast of all recent developments. So, guess what? TEC 2008 has been designed to give you a big push in that direction. Two full tracks have been reserved for the IBM Toronto Lab developers to show you the new toys you will want to get and play with. They will demonstrate what you can do with them. And, if you have the chance to stay for a third day, you will also be able to test drive some of them.

Dr Franken @ TEC 2008

Also this year, we put a bigger emphasis on system setup, operations and maintenance. Among our selection of superstar speakers is **Larry Bolhuis** (a.k.a. Dr Franken). Larry currently holds more than 30 IBM System i certifications, including Certified Advanced Technical Expert, LPAR, Linux, Windows Integration, and System Design & Implementation. In addition to System i, Larry has extensive experience with Ethernet, Wireless, and TCP/IP networking. If you have any questions to ask about running your System i, Larry is the guy to ask. To see what Larry can do with an old System i and parts, I encourage you to check his website at www.frankeni.com. Larry is also a prolific contributor to the iSociety (www.isociety.org) and has his own "opinion-space" (read: BLOG) at www.angustheitchap.com/Angus/Bloghuis/Bloghuis.html.

Elections 2008

It appears that 2008 will be an election year in many countries. Who does not know about the Primaries in the USA? Who knows about possible elections in Canada? (Even the Canadian government itself doesn't seem to know.) But here at TUG there is no guessing. Every year is an election year. At least we try—and it is always during the same period of the year. Yes, the TUG 2008 election process runs between the months of March and May. I encourage you to think about what you could do for TUG—your users group. If you have some time to devote to TUG and your System i fellows, and have some ideas where TUG should be in the future, put your name down to become a TUG director. This year, five current directors will again have to ask the TUG members for their support. If you are "willing and able", or know someone who is—please call Wende at the TUG office for a nomination form. If you want to talk about it a bit more in detail, you can always reach me by email or by phone. I would be glad to talk to you about what life is like as a TUG director. And guess what? You don't need to spend $millions & $millions to run for a seat on the TUG board.

Association Manager

As you may know the TUG Association Manager, **Wende Boddy** is retiring at the end of April 2008. Wende has been (and continues to be) a great asset for the organization. But, as they say, every good thing must come to an end. We will certainly miss her for all the energy, enthusiasm, and time she put into the organization for at least 23 years. Yes, Wende was a co-founder of the Toronto Users Group in 1985. She served as a director for six years before taking the Association Manager's position. Actually, Wende is the only Association Manager that TUG ever had. She "carved" that position.

Anyway, time is passing and we have to look at the future. A committee has been formed to find a replacement for Wende and it is nearing a decision. During that process, we made some changes in our operations and we are also changing some of our systems. As of January 1st, 2008 we hired an accounting firm to look after our day to day financials. We are now looking at re-designing our Web site and, at the same time, our database. More on that soon...

See you at MoM on March 19, and at TEC 2008 on April 22, 23, and 24. (Both events will be held at the Sheraton Parkway, Toronto North.)

And don't forget, consider becoming a director. TUG needs your help!

TEC 2008

TUG's 15th Annual Technical Education Conference and Vendor Showcase

April 22 – 24, 2008 • Sheraton Parkway Toronto North

Attention: developers, managers, operations staff, support / helpdesk staff, systems specialists, and consultants!

Learn how you can leverage technology to provide your users a better, easier, more intuitive, faster, and more cost effective experience...

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TEC 2008:

- Two full days of seven tracks of great sessions & speakers
- Hands-on at IBM Lab (Day 3)
- Award winning IBM and industry speakers
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- CD of session materials
- Conference Certificate
- Keynote Speaker
- Vendor Showcase

TORONTO
USERS GROUP
for System i

"The real POWER is what educated staff can bring to Application Development and ultimately the End User experience. It is truly NOT about the Power Chip, or the powerful tools—it is about what these empower an educated developer to bring to the application and hence the End User.
— BoB Lesiw, October 2007

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www.tug.ca/tec

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* All articles are the views of the authors and do not necessarily reflect those of the TUG magazine or of the Toronto Users Group for System i.

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TUG is a not-for-profit organization that promotes knowledge of IBM® System i™, iSeries™, AS/400™, and other midrange technologies. Questions about the users group, and subscription enquiries, should be directed to our Association Manager, Wende E. Boddy, at the TUG office: **36 Toronto Street, Suite 850, Toronto, Ontario, Canada M5C 2C5.**
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Friday, April 18, 2008

MoM REVIEW

THE JANUARY 2008 MEETING OF MEMBERS

By Pradeep S. Virk.

The meeting was hosted at the IBM Toronto Lab facility in Markham. It was well balanced for both the business and the very technically minded. This TUG meeting was my second meeting on January 30th 2008—the coldest day of winter! But for those in attendance, the cold weather outside was mitigated by the hot topics inside, as the change in IBM's strategy became evident from the get go—with emphasis largely on modernization tools for System i.

George Farr

George Farr, IBM Toronto World Wide Product Line Manager for System i AD tools and compilers with IBM's Rational Software Development Division talked about Rational solutions for i5/OS for application development.

Wendy Toh

Wendy Toh, IBM Raleigh, NC Software Development Director of Enterprise Development Tools & Compilers touched on the general challenges of modernization of legacy applications, and the steps that organizations must address on the complex dimensions of architectural challenges.

In addition, guest speakers **Barbara Morris**, **George Voutsinas**, **Don Yantzi**, **Abe Battish**, **Claus Weiss** and **Linda Cole** expanded on the enhancements to the compliers and demonstrated the various Rational products.

Pradeep Virk

IBM's three key messages at the joint IBM/TUG presentation were:

- Repackaging of software into smaller more focused areas of development tools and enhancements to compliers in version V6R1
- Investment in Application Development (AD) products and tools
- Modernization in areas of Web enablement and Service Oriented Architecture (SOA)

Wende Boddy

The TUG booth at The IBM Toronto Laboratory, Markham

To net out the advancements, IBM is unbundling WebSphere Development Studio (WDS), introducing two versions of Rational Developer, bundling HATS & WebFacing, and introducing Rational Business Developer. Highlights include:

- Rational Developer on System i (RDi)
- Rational Developer on System i for Service Oriented Architecture (RDi SOA)
- HATS and WebFacing bundled into a single offering as the "HATS for 5250" application

IBM's impressive line-up of speakers:

Barbara Morris

George Voutsinas

Don Yantzi

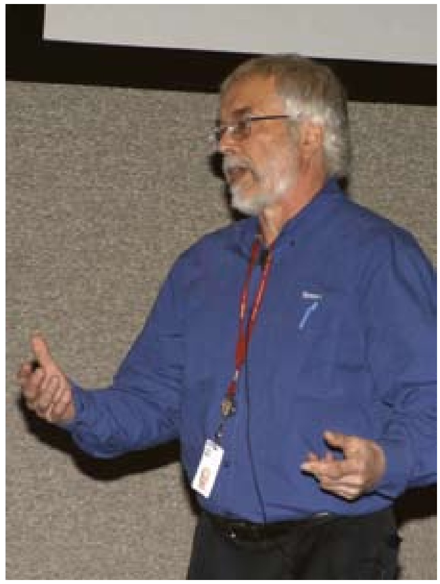
- And the announcement of Rational Business Developer (RBD)

Major changes and benefits to be expected are on two fronts: the server and the workstation.

On the server front, WDS which originally had all of the compliers and development tools, is now unbundled into three categories, Heritage & ILE compliers and ADTs. Compliers are now individually priced with major investments in the area of RPG or ILE RPG compliers. Enhancement highlights include multithreading, local file support, additional keywords, and Web enablement with SOA, to mention a few.

On the workstation front are two new separate products: RDi and RDi SOA. RDi is created to do simple edit/compile/debug for RPG and COBOL programmers. Most of the WDSC Advanced Edition functions are now incorporated into RDi, that being application diagrams in designer, screen designer, and the additional enablement for RDi which then makes it RDi SOA. RBD is an add-on to RDi and includes EGL—the newer platform-independent business language for V6R1.

Abe Battish



Claus Weiss

Linda Cole

Photos by Léo Lefebvre

Key information from IBM is that WDSC and WDSC AE are now pretty much at the end of their life with no additional enhancements expected. This has ended the speculation on the future of WDS. It will, however be supported, maintained, and still be available for purchase for the next little while—a clear indication that RDi is now the key strategic tool to invest in. Keep in mind that your software agreements will entitle you to various options, so do query your representative for details.

So the hint here is that you are encouraged to adopt lightweight RDi or the full RDi SOA. To all of those IT managers out there, ADTs tools are now at the same level playing field as RDi, so the logical decision should be simple—move to newer technology, to RDi or RDi SOA.

In closing, for the modernization of your System i applications, Rational core products will play a major role in the area of architecture, quality, and change management. By repackaging and unbundling, IBM has re-aligned their tools with open source Eclipse.

One other existing news item worth noting here is that IBM's new i5/OS, V6R1 is available on blades—which gives the ability to consolidate i5, Power, and Intel servers.

In closing, the success of this meeting was largely aligned with IBM's forthcoming announcements, which served as a great preview to TUGer's.

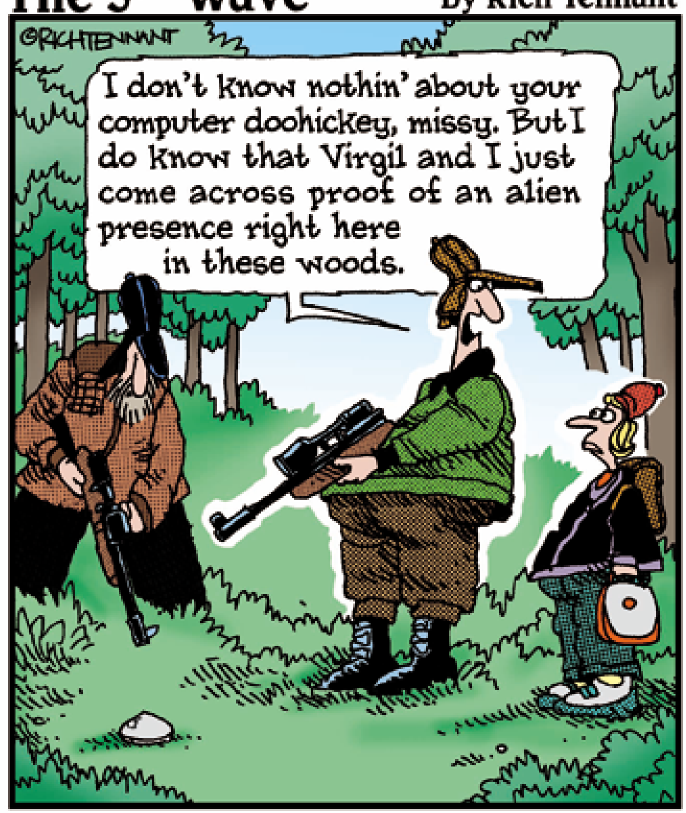
Related Web links

http://www-306.ibm.com/software/awdtools/rdi/
http://www-306.ibm.com/software/awdtools/developer/business/index.html
http://www.redbooks.ibm.com/abstracts/sg247284.html?Open
http://www-306.ibm.com/software/webservers/hats/
http://www.eclipse.org/

And as a final note, on behalf of all TUG members I would like to extent a special thank you to the IBM Toronto Lab and the TUG volunteers for their efforts to make this conference a great success. TUG

***Pradeep S. Virk** holds a Bachelor of Information Technology degree, and works as Senior Systems Administrator at Ainsworth Inc. (http://www.ainsworth.com). Pradeep can be reached at virk@ainsworth.com.*

The 5th Wave By Rich Tennant

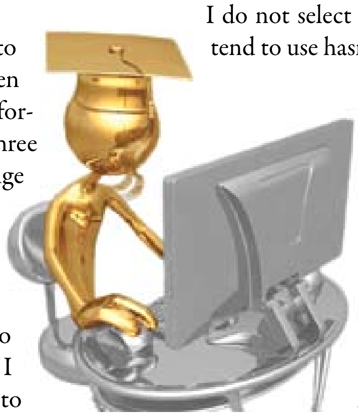


"Oh, I'll get by with a little help from my grads ..."

By Russell Pangborn

We had just upgraded our operating system to V5R4 and there were a few problems. I did not realize at the time that a connection was going to be made between several Seneca students of our Computer Studies program in resolving this dilemma. This line would connect a couple of our graduates and a current student. They were all going to get involved in troubleshooting this change from V5R3.

First, I am embarrassed to admit we should have been at V5R4 a while ago. Unfortunately there are only three times a year when a change can be done. It is not popular with teachers and students to make a change in the middle of the semester. The time to do this is between semesters. I missed one opportunity to initiate a request for the summer semester and our busy staff missed another opportunity at the start of the fall semester. There is a small window where our technical support staff needs to deal with upgrades. In addition to upgrading the larger machines, they must try to fit all the software that professors decide to teach on an image that needs to be put on all the PCs at the campus.



I am willing to bet most of you do not start up your desktops and make a decision on one of four operating system choices. There are several options when starting a computer in a Seneca lab. To give our students the best experience, we provide Vista, XP, Linux, and bring your own hard drive boot up selections.

So, throw everything but the kitchen sink into a machine and ensure that it all works as promised. And—this must be working as the latest version. With my area, the request for the PCs would be to have WDSC 7.0 installed and working with Windows XP. I do not select Vista because the software I tend to use hasn't all been made compatible.

After the System i upgrade, I noticed my SQLRPGLE programs were not compiling. The system, which is always very good with error messages, was striking out this time. There was no listing generated. Instead I got five spooled files with no clear message as to the problem. Here is a sample of the feedback I was getting:

```
QDSPJOB indicated: No MLB attributes list available.
QSRVDMP indicated: Receiver value too small to hold
result.
```

An RPGLE program would compile, but there was a problem when I tried to embed SQL statements into a program and compile it. This needed to be fixed so our advanced Database course could be delivered properly in a few days. Also, there were a few students working on late labs that suddenly could not get their work out of the way before the next semester started. Our tech support person, **Ravi Arruliah**, a Seneca grad from the 1990's who had taken one of my AS/400 subjects was stumped. He had solved problems in the past for me (for example he helped me get Domino up and running on our System i). We both knew it was time to call in some help from IBM. The call was placed and what a surprise! Our savior from IBM turned out to be another of my ex students. **Venugopan Shanmuganathan** who had recently graduated and was now a Software Specialist/ Remote support Specialist on the IBM Global Technology Services, Canada team. He advised us to reinstall some software. Ravi had to re-install the compilers including the following:

```
5722SS1 *ERROR Extended Base Support
5722SS1 *ERROR Extended Base Directory Support
```

Also, a Group PTF that was around 10GB in size kept him up until 3:00 am using catalog image. He finds this a great function that IBM has for the System i. He was able to do this from home using remote desktop to the console. Ravi emailed me, "If I had the CDs of the PTF which was around 12 CDs, I would have to be in the server room putting them in one by one. With catalog image that I had downloaded directly from PTF central IBM, I was able put fixes directly to the AS400 system." He finds this the fastest and most effective way to install a PTF.

It was very gratifying to have two Seneca grads helping out the teacher. I have occasionally gotten a call and was able to help a working grad with a System i problem. Now the help was coming from the other direction. The reinstall enabled the SQLRPGLE programs to compile. We thought everything was solved, but there was more advice to come. This came from one of my current students.

One of my exercises in an early DBT544 lab involves listing the installed DB2 products on our machine. I look to see if a student has included the SQL Development Kit. To do this they usually type "Go Software" and take a menu selection to "Display software resources". The Display Software Resources display shows the name and maintenance level information for installed software resources My students were doing this and writing out a list that included the Kit 5722ST1 *BASE 5050 DB2 Query Manager, and SQL Development Kit for iSeries.

I don't have a problem if some of them write up a list after running the command and check with each other to see if they have covered everything. They are interacting with the system. I don't like it when the occasional student just blindly copies down another persons answer without employing any system commands or bothering to know how the information was researched. On the other

A few days ago my old college, Sheridan, was in lockdown mode with the report of a suspected gunman. Police were seen leading a student out of the college in handcuffs. It turned out to be a false alarm. Someone saw a person carrying a cylindrical container and had their imagination get the better of them. They called the police. My last TUG column was about Sheridan College, a gun, and a swat team. That is certainly an odd coincidence and gave me a surreal feeling when listening to the news and teachers' accounts. (Maybe my next column should be on the sudden epipheny at IBM on how to effectively market the System i...)

hand, I really enjoy it when someone comes up with a contrary answer with good reasons.

There were lots of things to do in this lab and I tend to be very detail orientated. A student will show me a lab and there may be four or five things that need to be redone: "That SQL statement isn't working", or "You need to check on the system for something else", etc. Sometimes word spreads across a row in the lab. In this case, it could have been "He's looking for the SQL Devlopment Kit on your list" for question 27. I usually approach a student at a terminal and ask them to run a few commands from the lab and go over their written answers. **Ioan** (one of my students) had neglected to include the SQL Development Kit on his list of installed DB2 products. He told me with a confident tone that it wasn't installed properly so it should not be on the list. On being asked how he knew this, Ioan selected the Display Installed Licensed Programs from the Software Menu and pointed to the following:

```
5722ST1 *Error DB2 Query Mgr and SQL DevKit.
```

The Display Installed Licensed Programs display shows a list of licensed programs, optional parts of the licensed programs, and IBM-supplied user libraries installed on our system. It included status information. This student had a point! I got in touch with Ravi and Venu and we determined another partial re install was required. So, with the help of three of my students who I had taught over a ten year span, we finally got the upgrade finished properly.

There was a recent TUG meeting highlighting the next release of the OS. With all of this practice on what can go wrong, it is time to put in a request to my tech support area for this latest upgrade. I am not going to wait so long this time to be current. TUG

***Russell Pangborn** is a professor at Seneca College, and a Director of TUG. He can be reached at russell.pangborn@senecac.on.ca.*

[Pangborn: "The last meeting was about the next release of the operating system — so here is a column on our upgrade. In the next issue of TUG I will discuss how well our students did in an IBM contest and the recent CBC news feature on our department."]

TUG AGENDA

WEDNESDAY, MARCH 19, 2008

System i 1Q 2008 Announcement Overview

5:00 pm Session Abstract:

On January 29, IBM announced the next release of the i5/OS operating system and related System i software products — V6R1. This new release contains functional, performance, and security enhancements, and support for an IBM Power BladeCenter JS22. It will be generally available on March 21. IBM also announced a new System i HA Solutions Manager to facilitate a complete end-to-end "hardware" based clustering solution for HA and disaster recovery operations. Also, there was an announcement of the first release of the IBM DataMirror iCluster products. Plus WebSphere Development Studio for System i V6R1 was announced with major repackaging of its components, as well as significant enhancements to the ILE compilers. In addition there were some System i platform enhancements for the POWER6 570 and other System i models, there were announced selected System i hardware feature withdrawals, select System i software program withdrawal and support discontinuances, and some pricing updates affecting DB2 Web Query for System i developer and run-time users and System i internal storage devices. This presentation will provide a summary of the highlights and an overview of each of these announcements.


Barry Pow

5:00 Speaker:
Barry Pow

Barry Pow is the System i Power Systems Platform Lead and System i Product Manager in the Systems and Technology Group (STG) of IBM Canada, based in Ontario, Canada. He has been with IBM for over 38 years and was associated with IBM's first small and medium commercial business machines, starting with the IBM System 3, followed by the IBM System 32 and System 34. He was involved in the announcement and marketing support for the follow-on IBM System 36 and IBM System 38, prior to the AS/400, including a 2 year international marketing manager assignment. Barry also held systems engineering and technical management positions in Toronto at the branch office and the Ontario Region level.

In 2006, Barry took on additional responsibilities as the Business Resiliency Manager for System i including High Availability (HA) and Disaster Recovery (DR) programs and announcements for Canada, interfacing to HA and DR Independent Software Vendors (ISVs), and announcing and presenting IBM's System i Capacity BackUp offerings and strategy to the Canadian and CND marketplace. In 2008, Barry became the Platform Lead for Power Systems (p & i).

AGENDA AT A GLANCE

Time	Topic
5:00	IBM i5/OS V6R1 Announcements
6:00	Intermission / MoM & Networking (Complimentary Buffet)
7:00	What's New for RPG in V6R1?

Please register in advance on the TUG Website!

What's New for RPG in V6R1?

7:00 pm Session Abstract:

- Declare files in subprocedures
- Pass files as parameters
- Never need a compile-time override again
- Define huge variables - no more 64K limit
- Define huge arrays - no more 32767 limit
- Run in multiple threads
- And more

Also, a reminder of some of the other enhancements from recent releases, with special attention to using data structures for I/O to externally described files.

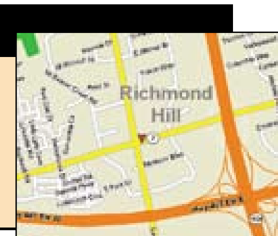

Barbara Morris

7:00 pm Speaker:
Barbara Morris

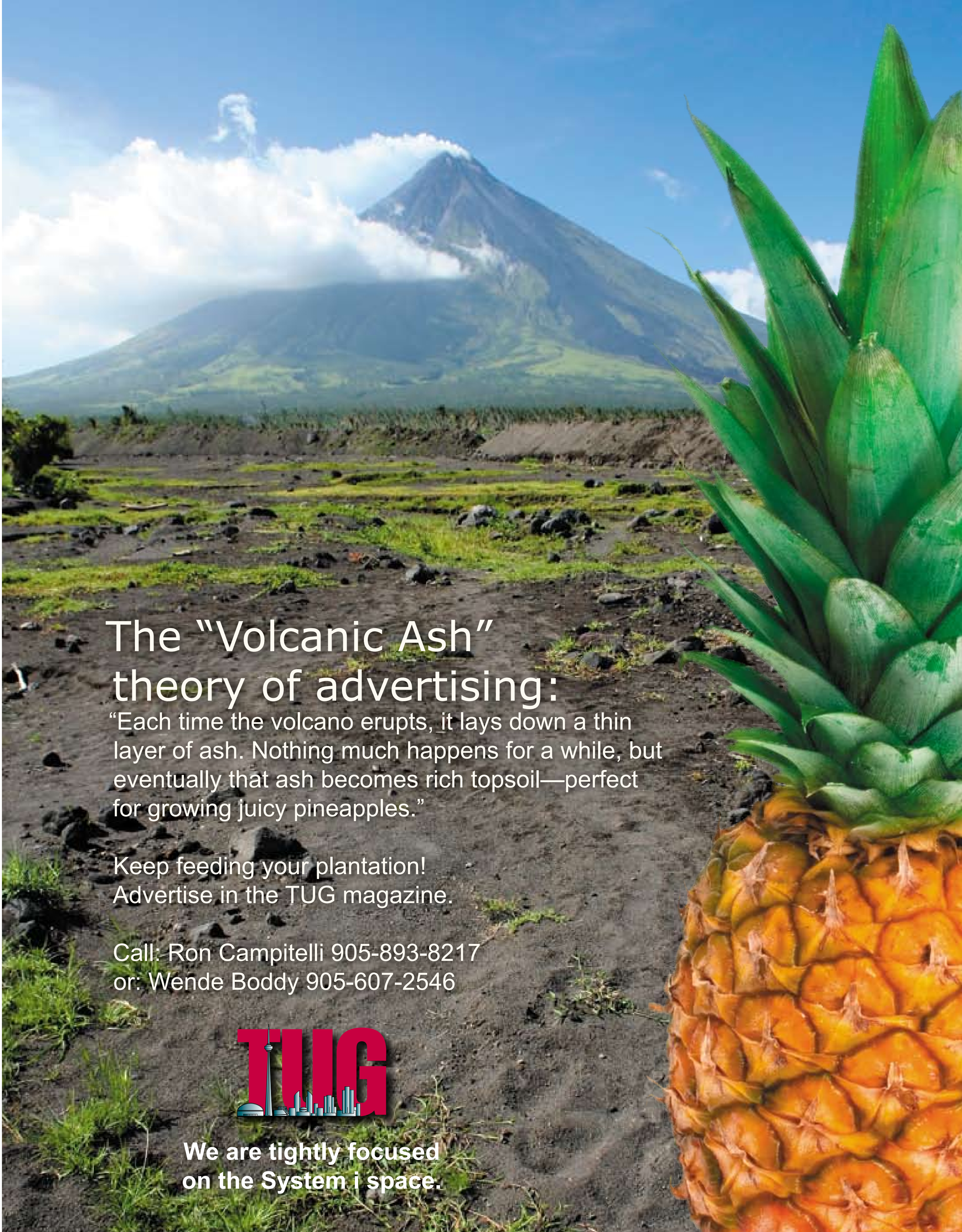
Barbara Morris is the lead developer for the WDS compilers in the IBM Toronto Lab. She has been working on the RPG compilers since she started at IBM in 1989 after receiving a Computing Science degree from the University of Alberta. Her first enhancements for RPG were back in V2R1: ENDIF/ENDDO, and *ON/*OFF. Her more recent RPG enhancements have included qualified names, Java support, and XML support. Her first career was as a performing musician in Edmonton, Alberta; she still tries to find time to play cello in a string quartet.

MoM Location

Sheraton Parkway Toronto North
600 Highway 7 East (at Leslie)
North York ON L4B 1B2 Canada
(Free underground parking)



Send your suggestions for future topics to: leo@tug.ca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*Where Educated People are the **Real** Power*

By Glenn Gundermann

The Toronto Users Group for System i proudly presents its 15th annual Technical Education Conference on April 22 – 24, 2008 at the Sheraton Parkway Hotel in Richmond Hill, Ontario.

Every year is a good year to attend TEC, and this year is no exception. With the planning of V6R1 being announced just prior to TEC, there is a vast amount of information to be learned.

What Speakers!

In typical fashion, TUG has planned another stellar cast of speakers, including favourites **Jon Paris**, **Susan Gantner**, **Barbara Morris**, **Jackie Jansen**, **Trevor Perry**, plus many more. We're lucky to have a great relationship with the IBM Toronto Lab and have all of the experts imparting their invaluable knowledge for your benefit.

What a Schedule!

As usual, there is so much to choose from, you won't know which session to attend. Hopefully you'll have others in your company that will cover the sessions you can't attend yourself. And of course you'll receive a CD with all of the session handouts of the conference so you will have all of the information at your fingertips.

We've put a schedule together with all of the topics you asked for. With the programmer in mind, we have sessions on RPG, ILE, RSE, EGL, DB2 Web Query, CL, security, plus much more.

Many companies have operations staff to educate, so we have greatly increased our offerings in this area by covering backup & recovery, backup encryption, high availability, BRMS, HMC, PTFs, iSeries Navigator, TCP/IP, Work Management, and more.

With team leaders and project managers in mind, we also have two full days of Professional Development sessions.

And More!

We have an Executive Breakfast for the executives of your company talking about IBM Rational strategy for System i by **George Farr** and **Todd Britton**, a Vendor Showcase of great products and services, an expert panel discussion on the topic of "Your future and the System i future, are they the same?", a lunch and Keynote Address by **David Burnett** from End to End Networks, and of course the great hands-on labs at the IBM Toronto Lab.

We also have some excellent Vendor Sponsored sessions:

- **Day 1**, 9:45 **Information Builders** – WEB Focus Part 1
- 11:10 **Information Builders** – WEB Focus Part 2
- 1:30 **Seagull Software** – Good Green vs. Bad Green: Considerations for System i Application Modernization
- 2:55 **Tango/04** – 1-2-3: Infrastructure, Security & Applications. The New Trend in Monitoring Strategies
- **Day 2**, 9:45 **EXTOL** – Essential Integration for Resource Constrained Companies

See you at TEC!

Here we are again, the month before another wonderfully planned TEC. You have just enough time to plan for what will be three invaluable days towards your future. There is only so much time you can spend reading magazines and scanning Web sites for information, but we've put together three days of jam-packed information that is useful to you and your job today that you won't want to miss.

Be sure to put TEC 2008 at the top of your list and register today. Check our website www.tug.ca/tec for more details, and I'll see you at TEC! TUG

Day 2: KEYNOTE SPEAKER:

David Burnett, CD, B.Sc is an entertaining, multi-talented man of integrity, dedication, and determination. He has contributed enormously to the local community and has made every effort to achieve both professional and personal goals over the years.

David Burnett is one of the co-founders of End to End Networks Inc., a network management company based out of Markham, Ontario established in 1993. They design, build, and manage wide area networks for mid to enterprise sized companies headquartered in North America. With David's 35 years of experience, specializing in operations and communications, he establishes long standing relationships that benefit the growth of End to End Networks.

In addition to his responsibilities as the CEO of End to End Networks, he continues to show leadership in the organizations that he participates in. He is currently the President of the Toronto Ski Hawks Ski Club (a downhill ski club for the blind and visually impaired) and the President of the Toronto Gunners.

During the period of 1966 to 1980, he served in Toronto's reserve Artillery regiment, attaining the rank of Captain before losing his eyesight. He was awarded the Canadian Decoration (CD) for his military service.

Presently, he spends countless hours enhancing his business expertise and committing to various organizations. He finds the time to contribute as a member of the Royal Canadian Military Institute (RCMI), the Royal Canadian Legion, the Ontario Visually Impaired Golfers (OVIG), the Ice Owls (a visually impaired hockey team) and the Church of St. Luke – Lutheran.

David Burnett is ultimately a family man and a business man, dealing with life with wisdom and humor.

TEC 2008
April 22–24

__Glenn Gundermann__ is an independent consultant, specializing in RPG IV programming. Glenn also instructs at IBM and customer sites in North America, with a repertoire that includes RPG IV, SQL, WDSc, WebSphere Application Server, Operations, BRMS, WebFacing, HATS, CL Programming, DB2, iSeries Navigator, Query, Performance Analysis & Capacity Planning, Security Concepts & Planning, plus more. Glenn can be contacted at ggundermann@tug.ca or (647) 272-3295.

SOA Governance: Better Now Than Never

By Alex Nubla

The year was 2004. **John** was the CTO for an IBM ISV where they piloted a supply chain application. They used the SOAP engine inside the IBM Websphere Application Server, with Enterprise Java Bean for the front end and connections to i5 RPG applications using WSDL.

The idea behind this was point-to-point integration, the kind where Web Services (WS) and consuming applications are designed at the same time. These were easy to create. But as their business changed and more clients requested Statements of Work (SOW), those point-to-point WS became obsolete. Worse, since these WS were easy to build, developers had a blast creating a plethora of services. The Quality of Service was in various states and some not well thought of.

By 2007 the company had created way too many WS with little or no long-term thinking. No one was sure which applications were using which WS, and with so many SOW created, no one knew the history and ownership.

SOA is great, but unless it is managed, it is just another IT process that can be chaotic. John contacted Gartner and they recommended putting into place a SOA Center of Excellence: to act as a focal point; to establish reference architecture; to review newly created WS; to communicate & enforce the standards; and to encourage a higher degree of service reuse. Implementations are typically coordinated with clients, and unless strict governance exists, different groups or individual developers will make different decisions, increasing diversity and inhibiting reuse.

Things had been out of control for some time. John realized that the current mode of operation, with frequent ad hoc WS creation could not be continuously sustained, and could not support the numerous SOW requests. John finally understood the difference between WS and SOA. It is easy to create WS; but it takes discipline to deliver meaningful and serious value from them. John had been using a spreadsheet to track WS and all their dependencies. This was no longer sufficient. Many clients were asking for more details about the various services. John had a hard time keeping the spreadsheet up to date and it was error prone. The idea of having a registry and repository for SOA is exactly what was needed. How could John encourage reuse if no one could find information about what services might be available for reuse?

Tim Everett, the CFO of National Parts Distributor (NPD), approached John about modifying their Web Services enabled Warehouse Management System (WMS). NPD required various inventory inquiry services which needed to be consumed by .NET clients. According to Tim, for time-to-market reasons, the WS need to integrate with third party services to locate parts or preferred distribution centers.

John realized his strategy of point-to-point WS was over. A whole new chapter of flexible relationships between service consumer and provider is apparent. This, together with understanding the purpose of each WS and dependencies were vital. NPD is not the only customer requesting such changes.

John pondered on how to prioritize and execute a solution:

- How can we deliver more services to our customers quickly?
- How can we prioritize the services that needed to be built?
- How can we encourage services reuse so that cost and time required to get applications running can be reduced?
- How can we control the Quality of Service being implemented?
- How can we identify and improve those hard-to-integrate services?
- How can we identify best practices and pattern for better services?
- How can best practices be enforced?
- How can we get a handle on the entire

Lifecycle Stage:	Design Time	Run Time	Change Time
Stakeholder:	Architect, Developer, COE, QA / Testers	IT Operations	Business Users, IT Administrator
Policy Store:	Registry / Repository		
Policies:	Change Management, Publication, Policy Lifecycle	Core Security, Service Usage, Quality of Service	Auditing
Policy Enforcement:	Registry Repository	Message Transport	Management System

Figure 1. Policy Enforcement Points (PEP) for each Lifecycle Stage

service inventory, the infrastructure required to run on, and the other services or composite applications that depend on them?

Without answers to these questions, John knew he couldn't deliver SOA with the promise of agility. Then he recalled reading about SOA Governance.

SOA Governance is a misunderstood term. Some people use the term to mean service lifecycle governance—governing from creation to implementation. Others coined it as applying runtime policies to services. But is there more to SOA Governance than this?

SOA Governance is a concept used for activities related to exercising control over services in SOA. It is an emerging concept used to address management issues that are caused by the *loose coupling* of services in SOA. SOA Governance can be seen as an overlay on IT Governance, but often has a more organizational focus than IT Governance, when services represent business activities.

To achieve SOA Governance, John addressed the following:

1. He collected three years worth of artifacts related to services, and investigated the end-to-end lifecycle of these assets. Artifacts include XML, WSDL, XLS and multitude of documents from Excel and Word.
2. He established initial policies, standards, and key measurements related to the lifecycle of services and composite applications.
3. He reviewed SOA Governing mechanism software in the market that enforces policies, decisions, and processes around the end-to-end lifecycle of these artifacts.

Figure 2.

Exploring SOA Governance Solutions

Software system mechanisms play a major role in the foundation of SOA governance to enforce and automate policies across the services lifecycle. Two of the main components of this system are:

- A Registry, which acts a central index of business services
- A Repository, for storing policies and other metadata related to the governance of these services

By themselves, these components are insufficient. The registry and repository must be fully interoperable with each other and with other SOA artifacts. They must form a comprehensive system that manages the entire SOA lifecycle.

Define Policies and Procedures

John's initial step is to define the policies for the company. This is done in conjunction with the SOA Center of Excellence to help communicate policies and other SOA related decisions. Policies include both business and technical requirements, and help create a common source of information and processes. You should be able to answer the following questions:

- Which policy should you implement first? What policies are needed now?
- Who in your organization is responsible for creating policies?
- How will you create these policies? How will you communicate them?
- Which policies can be automated?
- How will people within your organization discover policies?
- What tools will people use to follow policies?
- How will management get visibility into the policy compliances?
- What actions should be taken for policy violations?

The first step of SOA Governance is to define your framework. The framework tells the organization what to consider during policy creation, communication and enforcement relevant to the project. This governance framework then becomes your outline. Take an iterative, step-by-step or phased approach to your governance. Your initial attempt may include simple policy documentation, but your next iteration includes detail definitions and how you plan to enforce such policies. As your organization moves up the maturity model, you can create more enterprise-based policies and processes around shareable services. Governance becomes more important and the scope widens as SOA becomes more mainstream and reuse increases. Establish SOA goals, standards, policies and procedures proportionate to your SOA maturity.

Establish SOA Baseline

John can evaluate the business impact of introducing new or changing policies against current artifacts and services already published in the registry and repository. SOA Governance involves the enactment of these components—checking to make sure the artifacts follow policies, publishing reports on results & business impacts, and dynamically associating each artifact with its location. Having an SOA baseline allows John to see the quality of existing artifacts and highlights areas that need review. For the first time, John has a dashboard view that he can share with senior management to provide visibility on the current state of their SOA.

Arm yourself with information about where to start; which policies have the highest impact on business and which are out of compliance. Focus in improving services that do not comply with policies and have the highest impact on business. Gradually bring existing services to comply with your policies.

Establish SOA Roles and Responsibilities

John formed an SOA Center of Excellence (COE) based on the recommendation from Gartner. The SOA COE became the governing body and single point of coordination for SOA. Clients now have a focal point to call when they require more details on various Web services. John assigned subject matter experts, business analysts and IT architects to the COE, and assigned each with a clear set of responsibilities. John also appointed a Manager to chair the COE.

SOA Center of Excellence provides the perfect opportunity to see how business objectives can be articulated in SOA. The roles and responsibilities include:

- Acting as the SOA focal point
- Communicating and enforcing standards
- Helping to establish a reference architecture
- Reviewing newly created services
- Encouraging a high degree of services reuse
- Helping to setup policies and procedures
- Suggesting corrective actions when a specific process is broken
- Defining the IT infrastructure to support SOA
- Developing clear guidelines for SOA projects
- Discovering how to implement SOA and Web services to help increase competitive advantage
- Adopting proven best practices to optimize SOA

Activity	Deliverable	Stage
Business Service Analysis	An understanding of data entities and process steps that drive the need for the creation of a service	Planning
Service Partitioning	An understanding of the different levels of services (data level, orchestration, composition, management) needed to meet the needs of the business, what each service will do. This drives the definition of business events and documents.	Planning, Design
Event and Schema Design	The plan for the behavior of the services that meets the operational, informational, and business process needs of your organization. Behavior is often described as a protocol, but it can include service level expectations, exception management and compensation definition.	Planning, Design
Security Policy Creation & Management	These are the set of standards for how services will be secured, what level of authorization is needed for services of different types, how network boundaries will affect the access to different forms, levels, and types of data.	Planning
Operational Policy Creation & Management	These are the set of standards for how services will be constructed so that they can be seen, tracked, managed, audited, and monitored.	Planning
Policy Enforcement	Automated application of policies to services running in the network	Implementation, Support
Service Monitoring	Automated monitoring, logging, and tracking of service calls to insure that service levels are maintained and to aid in debugging and exception handling.	Implementation, Support
Rogue service discovery	Automated discovery of services running in the network to capture services that may offer uncontrolled functionality, backdoor access, and audit gaps.	Support
Service Registry and Repository	Tools for sharing information about services, both with consuming applications and with the people who create or use them.	Planning, Design, Build, Implementation, Support
SOA Project Compliance	A process for insuring that projects funded in corporate IT departments actually consume or deliver the services needed by the enterprise.	Planning, Design, Build

Figure 3. The highlighted rows are areas often covered by SOA Governance System Mechanisms. While these are important "Strategic" governances, they are about 20% of the whole SOA Governance.

Continuous Governance

Now that the SOA baseline and COE exist, John can enforce the policies accordingly to any artifacts published in the registry and repository, ensuring continuous governance over newly created services and enabling changes to existing ones.

As part of policy enforcement, John can configure criteria of publication acceptance and rejection. In certain occasions, he can allow publication even though the artifact is not compliant, and can mark through the metadata that this artifact should not be exposed as Production Quality. John is aware there are exceptions to every rule—as artifacts are checked for compliance users may want to request exceptions from complying with these policies. Exceptions must be managed as well.

SOA Governance Foundation

The foundation of SOA Governance is the ability to enforce and automate policies across the SOA lifecycle. A set of mechanisms can enable the automation and enforcement. To do this, we need a place to store policies (Policy Repository) and a place to enforce them (Policy Enforcement Point). These two locations represent where a policy "lives" and where it "goes to work."

The SOA lifecycle consists of three stages:

1. Design Time
2. Run Time
3. Change Time

Regardless of lifecycle stage, the Registry & Repository is the Policy Store for all stages. Having a single context for policies enables SOA lifecycle management of policies and a means to establish enterprise-wide policies.

However the Policy Enforcement Point (PEP) changes with the lifecycle stages. As illustrated in **Figure 1**, during Design Time – the Registry / Repository itself is the PEP. During Run Time – the Message Transport system (your ESB) is the PEP. And finally during Change Time – the Management and Security system is the PEP.

Design Time

- Architect designs a service contract or plans a service implementation
- Developer searches for an existing service before building a new one
- Developer requests that the SOA COE approves the creation of the service
- Tester simulates a new service to execute a test plan

During Design Time, policies such as namespace validation, schema validation, interoperability validation, approvals, document access control, audits, and resource utilization need to be enforced. If the Policy Repository is combined with the Service Registry, then typical best practice is for the SOA Registry / Repository system to also serve as the enforcement point.

Run Time

- IT Operations monitor a business process
- IT Operations confirm compliance of a service with policies (or SLA)
- Operations Manager monitors level of service reuse
- Operations Manager handles service exceptions

The Run Time system is responsible for Message Transport. Enterprise Service Bus (ESB) is typically used. The ESB brokers transactions between service providers and consumers and frequently handles functions such as data transformation, reliable messaging & message queuing, security, and other operations. In a Web service, the emphasis is on supporting SOAP and extensions like WS-Security. These systems can act as Runtime PEP.

Change Time

- Business Analyst plans a change within certain business process
- IT Administrator adjusts Quality of Service requirements for a service

Change Time governance is the act of managing services through the cycle of change. Since most services will be modified through time, this is an essential component of long-term governance. During Change Time, users connected to services, taxonomies, or policies receive notification to approve, review, or recognize when any of those assets are modified. Furthermore, Change Time governance enables policies to dictate whether a service or even another policy can change—and if so, who approves it. If a change is planned (e.g. version upgrade, service decommission, etc.) then the event is recorded and described to allow dependent parties to adjust their processing.

SOA Lifecycle within SDLC

The whole point of SOA is to create an agile environment, making it easier to build a fully integrated environment from the get-go. (See **Figure 3**.) This is our goal. If our services do not allow us to build service oriented applications, then we just wasted money and time. SOA governance is about making sure we don't waste time and money by building services we don't need, or failing to build services we need.

Bottom Line

An ungoverned SOA can often lead to unintended consequences, reversing the cycle and causing SOA to add cost and disrupt processes. There is no "one size fits all" SOA Strategy. Thus, there is no such thing as a single set of policies and procedures that constitute governance with SOA. We should not forego SOA because of the risk, but rather define strategy for SOA that builds governance. The cost of ungoverned SOA can cause:

- Lack of reuse by compromising trust, unpredictable quality, and performance issues
- Process disruption by publishing services that do not conform to standards or SLA, or by failure to assess the impact of change
- Escalations in support costs through an onslaught of help-desk and service calls due to service issues and outages
- Lack of interoperability resulting in silos of business services, and perpetuating the same issues of traditional "tightly coupled" architecture
- Non-compliance, by failing to associate key policies with the services that have implications for industry or governmental regulations
- Security breaches by allowing arbitrary data access
- Overall SOA failure by allowing chaos, perpetuating a "Garbage in, Garbage out" environment

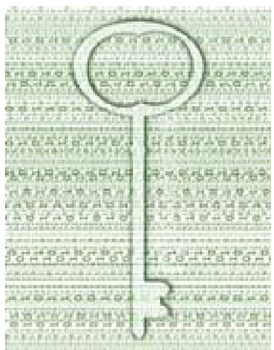
Governance is not an option for SOA—it is necessary. SOA Governance requires more than a registry and repository. It requires an integrated solution that provides support for all SOA stakeholders throughout the SOA lifecycle.

__Alex Nubla__ is a subject matter expert specializing in Service Oriented Architecture. He has served in a variety of technical and business roles across a broad range of industries including Banking, Finance, Supply Chain, and Health Care, to name a few. Alex's current post is as an SOA Strategic Lead and a Director for Health Net Inc.

BRMS Encryption

By Garth Tucker

In the last number of years, many businesses have been legislated or taken upon themselves to secure their data. However, one piece of this that was often overlooked is offsite data. Onsite data is hidden behind firewalls and may have numerous levels of authority securing it, but when it goes offsite on tapes or through other electronic means, it has been essentially available to anyone who nicked a tape. This has been a bit of a black-eye for some enterprises, which shall remain nameless, when tapes or in one case, disk units went missing, with not just critical business data, but individuals personal data as well. This contravenes privacy laws that have been enacted over the last several years, such as SOX, Visa PCI, HIPAA and PIPEDA here in Canada.



In response to this issue, IBM began identifying ways and means to alleviate the issue with offsite data on tape storage or "Data at Rest". Data being sent over a network or other such method is identified as "Data in Motion" and is secured through other means such as SSL, which we will not get into in the scope of this discussion.

Through use of encryption (also known as cryptography), we can secure the data being stored on tapes. On the i5, we can utilize the encryption standard AES 256, which Wikipedia defines as Advanced Encryption Standard (AES), also known as Rijndael, a block cipher adopted as an encryption standard by the U.S. government. It has been analyzed extensively and is now used worldwide, as was the case with its predecessor, the Data Encryption Standard (DES). AES was announced by National Institute of Standards and Technology (NIST) as U.S. FIPS PUB 197 (FIPS 197) on November 26, 2001 after a 5-year standardization process. It became effective as a standard May 26, 2002. As of 2006, AES is one of the most popular algorithms used in symmetric key cryptography. It is available by choice in many different encryption packages. The cipher was developed by two Belgian cryptographers, **Joan Daemen** and **Vincent Rijmen**, and submitted to the AES selection process under the name "Rijndael", a portmanteau of the names of the inventors.

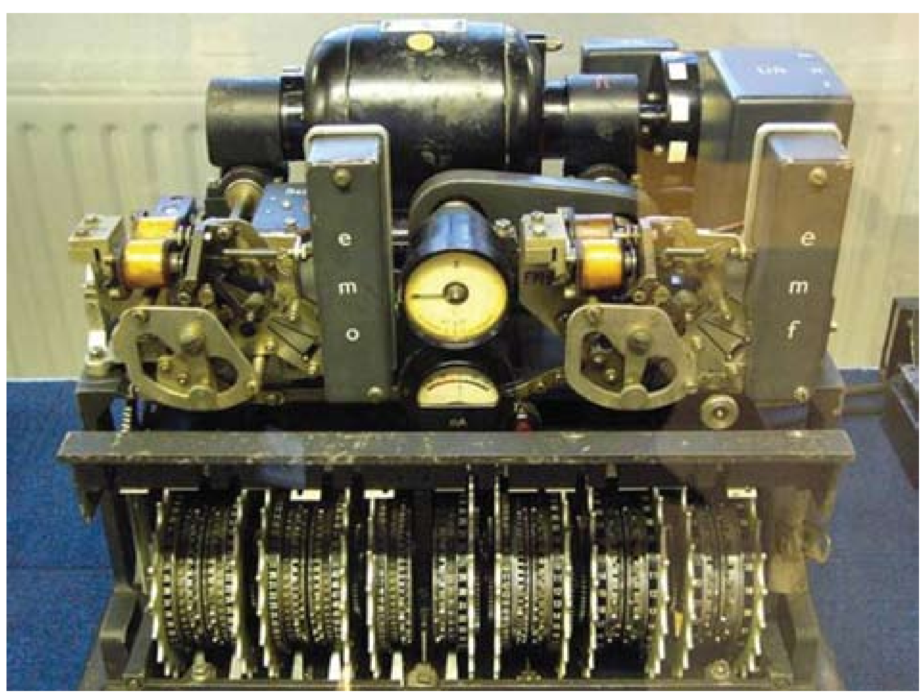
So what does all this mean to us? If we want to secure our tapes going offsite, we have a couple of methods from IBM:

1. Hardware capable tape devices with an EKM (Encryption Key Manager), or with V6R1:
2. Software Encryption using BRMS Advanced (5761BR1 – Option 2) and Cryptographic Services Key Management.

Both of these methods have pros and cons and you will need to assess your requirements to determine which method works best for you. For our purposes here, we will focus on Software Encryption using the BRMS Advanced function.

This encryption solution is hardware independent, meaning no need for any encryption device. To use the function, you need to have the BRMS Advanced feature (5761-BR1 Option 2) and Cryptographic Service Provider (5761-SS1 Option 35) installed on the operating system. Previously, the Advanced function (Option 2) of BRMS allowed you to perform Hierarchical Storage Management (HSM) functions and now contains the functions to allow us to perform encryption.

This is a chargeable feature and you should check with your IBM or IBM Business Partner rep for pricing. Cryptographic Service Provider – Option 35 is an optional part of the OS and again, you will have to check with your IBM or IBM Business Partner rep for pricing.



Enabled encryption will be supported for any tape library, standalone tape drive, virtual tape and media duplication. This means that we can avoid changing tape platforms if it's not convenient at this time.

All user data may be encrypted, but Operating System objects and tape labels will not be encrypted. This may be the biggest drawback to this method over using a hardware solution. This may or may not meet with your auditing/security requirements and you should investigate this with your auditors prior to committing to implementation. In my opinion, if you configure your backups to only send user data offsite, you will be meeting the spirit of the legislation.

Performance Considerations

Software encryption will require additional processor capacity. From my experience with the product during the V6R1 Technical Overview, it adds significant overhead to your saves. However, my thinking is that this can be dealt with through the use of the Save-While-Active function and being creative with your backup control groups.

Encrypting

According to the InfoCenter, cryptographic services key management for the i5/OS operating system allows you to store and manage master keys and keystores. On the i5, Cryptographic Services supports a hierarchical key system. At the top of the hierarchy is a set of master keys. These keys are the only key values stored in the clear (unencrypted). Cryptographic services securely stores the master keys within the i5/OS Licensed Internal Code. Eight general-purpose master keys are used to encrypt other keys which can be stored in keystore files. Keystore files are database files. Any type of key supported by cryptographic services can be stored in a keystore file, for example AES, RC2, RSA, SHA1-HMAC.

In addition to the eight general-purpose master keys, cryptographic services supports two special-purpose master keys. The ASP master key is used for protecting data in the Independent Auxiliary Storage Pool (in the Disk Management GUI is known as an Independent Disk Pool). The save/restore master key is used to encrypt the other master keys when they are saved to media using a Save System (SAVSYS) operation. BRMS will not manage the keys used for encryption, meaning you must provision to allow for key management. It provides the interface for the user to ask for encryption, specify the keys to use for the encryption and what items to be encrypted. The key information is also saved by BRMS and BRMS knows what key information is needed to decrypt on the restore.

Conclusion

We know now that we can use BRMS and software encryption to secure user data that is going offsite and generally how it works, but it must be determined by your requirements and the businesses auditing requirements as to whether or not this will meet your needs. As far as I can see, this will suffice for most SMB clients and give them the level of security for their "Data at Rest" without having to migrate to a newer tape technology or invest in an EKM server. It's easy to implement and provides a level of security that is currently not in place for clients who do not have budget for hardware changes.

***Garth Tucker**, the managing director of i3 Tech Group and Dynamic Disaster Recovery of Aurora, is an IBM System i Specialist and Business Continuity Planner. IBM Certified for V4R3 through V5R4 as well as being CompTIA Linux+ Certified. He has many years of experience with AS400, iSeries and now i5 and helped write the Technical Overviews of OS400; V4R4, V4R5, V5R1 and V6R1 with the IBM ITSO. In addition, he has written numerous articles for the Toronto Users Group, Midrange Magazine and COMMON.CONNECT magazine and has presented sessions at COMMON, the Toronto Users Group's TEC conference and Meetings of Members.*

OUTSOURCING MYTH BUSTED

By Gloria Seltzer

Outsourcing has become a popular solution for North American CEOs and CIOs who dream of saving big bucks by outsourcing their operations to third world countries, where labour resources are cheap and living standards are low. The following outlines the common outsourcing models.

Model 1: Workload/ Resource Management

Organizations contract local resources to address peaks in workload which are seasonal or temporary, e.g. data entry during RSP season. In addition, external resources can help set strategic goals for the organization to compete and succeed in a global turbulent economy, and undertake complex projects utilizing new technology and expertise not yet mastered by in-house staff (e.g. Web development.)

These represent best management practices, since the external resources speak the same language as the customer, adapt easily to the customer's culture/dynamics/politics, and can easily adopt the customers' guidelines, discipline, methodology, policies, and procedures.

Model 2: Outsourcing Defined Functions Locally/ Nationally

Organizations contract other organizations to deliver specialized services because they have the expertise and the economy of scale to do it better and cheaper. For example, many airlines and hospitals outsource their food services to a caterer; and HR departments often outsource their payroll function to a vendor.

These represent best management practices, since the operations are relatively simple with defined processes and procedures, output and results are visible and easily measurable, and corrective action if/when required is timely by switching to another vendor.

Model 3: Outsourcing Semi-Defined Functions Globally

Organizations contract other organizations to manufacture their products in economically depressed or developing countries. There are many instances of companies in the apparel, food, shoe, toy, and other product manufacturing industries who outsource their operations to China, India, Thailand, Mexico, and other countries.

There are pitfalls however. The manufacturing processes and safety standards may not be fully understood or adhered to by these countries. The end product can be toxic and subject to recall, with disastrous impact on sales revenue and corporate image/reputation which cannot be salvaged in the short-term. Note the recent recall of toys coated with lead paint and children's jewellery made with metals containing lead, as well as pet food which killed thousands of cats and dogs.

> ***"As the number of third parties increases, the coordination/integration effort increases and the time to deliver services also increases."***

Model 4: Outsourcing IT Functions Locally/Nationally

Organizations contract other organizations to deliver specialized services because they have the expertise and the economy of scale. Examples include IT departments in Toronto outsourcing their call centres/help desks to service bureaus in New Brunswick, and systems development, enhancement, and support functions to service bureaus in other parts of North America.

There can be problems with this model as well. One recent high profile case involved a service bureau that did not understand the complexity of the customer's support

Léo Lefebvre

Gloria Seltzer

infrastructure. This resulted in production data loss for a mission critical system which was not recoverable.

As the number of third parties increases, the coordination/integration effort increases and the time to deliver services also increases. Eventually, the service quality deteriorates, since it is difficult to isolate problems to one service provider in a complex environment, service providers blame each other and do not take responsibility/ ownership of problems, and service providers' priority is to address the general needs of major customers rather than tailor to one customer.

Another challenge is when the contract with a service provider quoting fixed prices over a number of years only covers "high level generic" support functions. The service provider often charges per diem/delivery, claiming that the specific service requested is outside the scope of the contract. A fixed price model evolves into a variable time & material billing model.

Model 5: Outsourcing IT Functions Globally

Organizations also contract with foreign IT providers to deliver specialized services where labour resources are cheap even for highly skilled information workers. Most common is the outsourcing of their call centres/help desks, systems development, and support functions to teams in developing countries.

At first glance there seems to be a significant economic advantage to this model, but the following factors contribute to the challenges of making a positive impact to the bottom line:

Language Barrier

Often, staff based and educated in foreign countries are not proficient in English. Their heavy accent is not easily understood by customers of the call centre/help desk. (This is an inconvenient truth which is politically incorrect but needs to be stated.) In some cases, they do not speak English at all and rely on their team lead to interface with the customer to translate to their native language. In a typical scenario, a team lead talks to his team on the phone in their native language all day. Team members are on coffee breaks most of the time at the customer site, waiting for the lead to understand/translate business/system requirements. (Savings are drastically reduced with the team living and working in North America, as the cost is ultimately charged back to the customer.)

Culture Barrier

Some Eastern cultures promote male chauvinism and discrimination against women, resulting in teams that do not take direction from women project sponsors/managers. Other cultural problems involve the habit saying "yes" to everything requested for the sake of being polite, and covering up problems for fear of "losing face" and being blamed. This can result in teams falsely reporting that the project status is on schedule, on budget, and "everything is under control." They report problems only when they have no choice and it is too late (e.g. failure to deliver on the due date).

Knowledge Barrier

Outsourcing overseas is common in the financial industry, however the learning curve for the financial industry is steep, and the learning curve for foreign teams is even steeper. Since their North American knowledge/experience is limited, they sometimes take a simplistic/superficial approach to complex environments and make strategic errors. The frequency, pace, and magnitude of system requirement changes (especially regulatory compliance changes) cannot be easily assimilated by these teams.

Methodology Barrier

Foreign teams frequently have their own methodology/templates for the Systems Development Life Cycle which is not compatible with North American customers' methodology/templates. This creates problems for system integration/implementation. The customer team is forced into identifying/correcting the problem themselves, with major rework after the fact.

Customer Team Morale

The customer team can be discouraged, demoralized, pressurized, frustrated, distraught, and burnt out when they witness their work being outsourced. This is further exacerbated when they have to clean up the mess and pick up the pieces afterwards. This usually happens after the outsourced team has left the project, citing that the contract is fulfilled. This makes it even more difficult for the customer team to analyze problems and take corrective action.

CONCLUSION

The following are good mottos to heed before embarking on an outsourcing adventure with its potentially huge inherent risks:

- Buyer beware (Ralph Nader).
- Look before you leap.
- There is no free lunch.
- How do you eat an elephant? Bite by bite. (Test the water by awarding smaller contracts first to benchmark performance.)
- If you cannot solve your existing problems, outsourcing them may even compound your problems.
- The devil is in the details. (No contract in the world can cover all of your requirements, but at least have a clause to withhold payment six months to a year after a major system implementation.)
- Make sure the outsourcing opportunity does not turn into an insurmountable problem.
- Make sure you are not penny wise and pound foolish when "cheap" becomes "expensive", and your dream of saving money turns into a nightmare of runaway project schedule and escalating cost overruns, poor product/service quality, and staff disengagement (which can be irreversible).

***Gloria Seltzer** holds Bachelor of Science and Master of Business Administration degrees from McGill University, Montreal and has a Certified Management Accountant designation. She has been in IT for over 30 years, as a Business Analyst and Project Manager. Gloria can be reached at gloria.seltzer@bmo.com.*

JACKIE's Forum

IBM Listens! DB2 Web Query Licensing

Jackie Jansen

As many of you know I have spent a significant amount of time recently talking to customers about DB2 Web Query. Overall the reaction has been extremely positive. The two main requests that I have heard are for a change to our named user licensing policy and for better batch support. I can assure you that IBM is listening closely to these concerns. On January 29th IBM announced a solution for the named user licensing concern. Keep tuned for more announcements coming for DB2 Web Query.

Many of you were concerned that you had to specifically name, and pay for, every user that might be viewing reports in DB2 Web Query. One option we looked at was changing to a concurrent user strategy but even with this strategy there are drawbacks. For instance, you would still need to know how many users you have and how many would be on at the same time. In a reporting environment it is common to have one concurrent sales user servicing many sales reps but at month end everyone in finance is often on concurrently. You don't want someone in finance to not be able to do their month end analysis if you don't have enough concurrent user licenses.

We came up with a solution we are calling "Run Time User Enablement" or RTE. You will still need to name your power users/developers who create or edit query definitions, but you will no longer need to name each and every person that simply runs reports. Rather, you will name groups of users with similar interests and security clearances. In theory, if everyone in your company could see every report, you could license one developer and one group user. That one user license could cover all your employees whether there were one or one thousand, even if they were all signing on simultaneously.

RTE is a feature that will be licensed to a server, based on processor tier. User license pricing won't change except that you will now have far fewer users to license. As previously announced, OLAP and Active Reports are server based, and their charges won't change even though you could be adding tens or even thousands of users. RTE becomes even MORE of a bargain because of the power of OLAP and Active Reports!

With the highly parameterized reporting capabilities of DB2 Web Query, the analytical slice and dice capabilities of OLAP, and the ability to modify and manipulate data with Active Reports there is much less need for users to actually edit reports themselves than with traditional reporting tools. If a user needs to use tools such as Report Assistant then they will still need to be a named user. Basically, developers or "report authors" need to be named users, while end-users running or viewing reports, analyzing, slicing and dicing, sorting etc., may belong to a single group.

Let's look at how this works in a little more detail. In DB2 Web Query we create domains, and within those domains we have folders, and within those folders we have reports. Report security is controlled at a domain level. Within a domain an individual is either a report author or a member of a group authorized to the view and execute the reports, or he/she cannot see the domain at all. All members of a group have the same rights to all folders and reports within their authorized domains. With the "Run Time User Enablement" feature you will only need to purchase a single user license to cover all users who are authorized to all the same domains.

Normally this would imply that the users would all need to be able to see the same data. This isn't necessarily the case. There are a few ways to authorize different users to see different data while running the same report. For example you might want individual sales reps to see only their own customers. This can be achieved using the GETUSER functionality within DB2 Web Query. It can also be achieved using SQL Views. For more information on the SQL Views technique, see **Gene Cobb's** white paper *"Using SQL views and stored procedures with DB2 Web Query"*. This can be downloaded from www.ibm.com/partnerworld/wps/whitepaper/i5os/db2_sql/security.

A standard way to use this new licensing might be to have all users in Sales with similar report authorities using one user license. Marketing may require access to different reports and therefore they will need a separate user license. Finance might use yet another user license. You will still receive the default number of user licenses that match your processor tier with your initial order of DB2 Web Query. If you purchase option 4, the "Run Time User Enablement" feature, you will be able to use those user licenses as either report authors or as group users. This support is planned to be available March 21 for both V5R4 and V6R1.

***Jackie Jansen** is a frequent speaker at System i Technical Conferences and User Group meetings. Contact her at jansen.jackie@gmail.com.*

TUG NOTES

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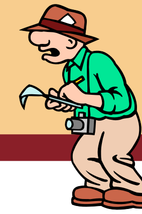

Upcoming Events

March 19, 2008: TUG MoM
(at the Sheraton Parkway)
▸ 5:00 Speaker: **Barry Pow**
Review & summary of the January 30th i5/OS V6R1 announcements
▸ 7:00 Speaker: **Barbara Morris**
RPG enhancements in V6R1

March 30 – April 3, 2008:
COMMON Annual Conference & Expo, Nashville, Tennessee

April 22 – 24, 2008: TEC 2008
(TUG's 15th annual tech conference)
"Join the POWER WORLD – *Where Educated People are the **Real** Power.*"
▸ **Day 1**
Exec bkfst: **George Farr & Todd Britton**
TEC Vendor Showcase
▸ **Day 2**
Lunch keynote speaker: **David Burnett**
▸ **Day 3**
Hands-on sessions at IBM Toronto Lab

May 21, 2008: TUG MoM
(at Living Arts Centre Mississauga)

June 19, 2008: TUG Golf Classic
(20th annual charity golf tournament and awards banquet)

MoM Winners!

Here are the Early Bird TEC winners whose names were drawn at the January 30th MOM, from the list of attendees who registered for TEC before December 31st:

- **Andre King** – Kuehne & Nagel
- **Ed Tilley** – Sameday Right Away
- **Luice Yu** – Global Upholstery

And here are the winners from the on-line Meeting of Members registrations:

- **Lorne Sturgeoff** – Allied International Credit
- **Doreen Hannon** – Homewood Health Centre

Please remember to register on-line for each meeting. It helps us to plan for seating and food, and you could win a prize!

NetServer Green Screen Tool

FYI– Here is a useful (and much quicker than firing up iSeries Navigator) way to do some common NetServer functions. It creates menu NETS: http://www-03.ibm.com/systems/i/software/netserver/qusrtool.html
From: **Neil Palmer** (neilpalmer400@yahoo.ca) Cambridge, Ontario, Canada

C*RN BYTES

By Ken Davis

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Ed's Aphorisms ‡

- The nicest thing about the future is that it always starts tomorrow.
- Money will buy a fine dog but only kindness will make him wag his tail.
- If you don't have a sense of humor, you probably don't have any sense at all.
- Seat belts are not nearly as confining as wheelchairs.
- A good time to keep your mouth shut is when you're in deep water.
- No one ever says "It's only a game" when their team is winning.
- There are worse things than getting a call for a wrong number at 4 AM, e.g., it could be a right number.

"If you think education is expensive, try ignorance …"
— Derek Curtis Bok / Andy McIntyre

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‡ Aphorism: A short, pointed sentence expressing a wise, clever observation, a general truth, or adage.

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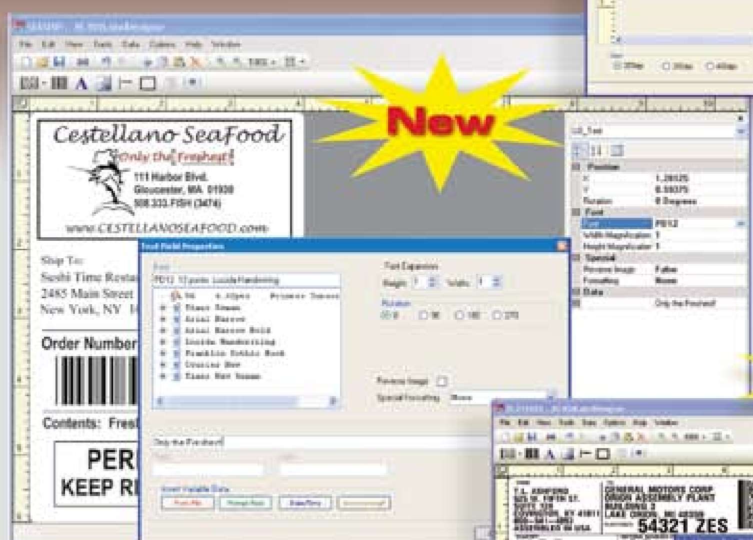

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