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November 21

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* Feature story inside:
PHP on i5/OS
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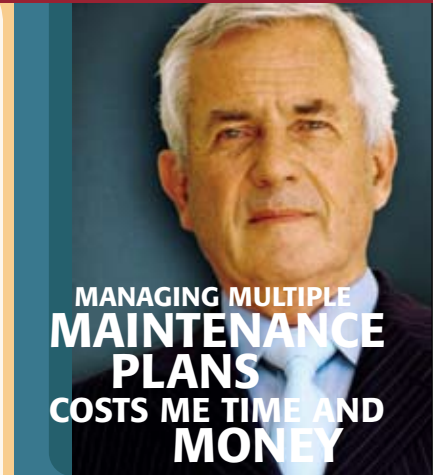
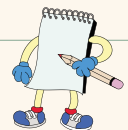
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The 2007/08 season started a bit later than usual: October 3rd. But what a start it was! We could also say that this new season picked up where the previous one left off—with record breaking attendance—25% higher than the May 2007 MoM. That was just fantastic, especially when we know that **Dr. Frank Soltis** was doing his third presentation in 24 hours...and everywhere he presented, the audience loved him. (I was there for all three presentations.) The night before, COiN had a record crowd as well. Almost twice as big as their largest previous attendance.

In the morning, Soltis presented a tailored session to a promising new group of i5 enthusiasts, or future “iVangelists”, as **Kathy Gregson** would put it. Soltis spoke to an attentive crowd of 50 plus students and teachers of Seneca College (at York University Campus). As usual, it was a great presentation. At first, it looked like many of those students did not really know why they were there, but by the end, everybody was listening with attention as he brilliantly described the events that brought us the platform we all know and love, along with the stories behind the different “Power” levels (and their three year cycle.) And guess what? The students want to meet “Dr. Frank” again.

If you want a pictorial review of those three public presentations go to <http://www.tug.ca/PhotoGallery.html>.

So, you can see that we *are* off to a good start! And, believe it or not, we are already preparing our 15th annual TEC—to be held on April 22 – 24, 2008. The prognosis is great:

- “Power 6” has just been announced;
- Version 6 Release 1 of i5/OS will be announced sometime in February or March 2008 (just in time for the speakers to update their presentations to cover that release);
- DB/2 Web Query shipped September 14, 2007;
- PHP (native to i5/OS?); etc.

What a conference it’s going to be! Great topics, great speakers, great times to refresh those RPG skills and System i knowledge... And, you know what? “**Modernizing RPG and taking it to the Web – i.e. Web-browser**” is great and fun too—you need to learn how it can be done! And TEC 2008 is the way to start.

Speaking of “taking RPG to the web” reminds me of the discussion I had last week at the COMMON Focus in Columbus, Ohio, with another Director of COMMON. We believe that the word “Web” is often wrongly interpreted when referring to system applications. For most people, the word “Web” is interpreted as the outside world, the “Internet.” And they are right. It may scare away the newbies who are afraid of sending information over the Internet and do not understand that the information processed by those applications will never get outside the company.



Vaughn Dragland

Léo Lefebvre with Dr. Frank Soltis

The point is, in most of our day-to-day lives, we should change this Web “connotation” to simply “Web browser” or “Intranet” or something similar, where the “Web browser” acts like a simple (local) User Interface replacing the panels we all developed with good old DDS and SDA.

We do NOT need to connect to the Internet to benefit from “taking RPG to the Web.” We can develop slick, neat, productive applications where the U.I. is a Web browser and where the users would all be “local.” Do you have an idea how much your life would change? You would become an RPG “Web programmer” and your work would have a brand new meaning. You could add life to your (normally) green screens and users would have a renewed faith in their applications.

But, to get all that, you really need to understand how it works, how the applications come together. You may need to read books, take courses, and attend meetings on the subject. You also need to join us at TEC. You’ve been a programmer for many years. You know how to evaluate a project, develop solutions, and fix problems. Don’t you want to know something new, something interesting, something “out-of-this-world?” Modernizing your skills (RPG?), creating programs to run on “Web BROWSERS” is the way to go! **And YOU can do it!**

Don’t get left behind! Get the info! Get the education! Get going in a new world, on the best platform in the world which is here to stay... as Kathy Gregson sums up in her review of our last MoM: “[the] attendees left feeling secure in the knowledge that their beloved system has a future (whatever the name) and the future is bright.” Go for it, Go!



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— BoB Lesiw, October 2007



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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.

Deadline for the next issue:
Friday, December 7, 2007



TUG MOM REVIEW

THE OCTOBER 2007 MEETING OF MEMBERS



By Kathy Gregson

The October Meeting of Members was held at the Sheraton Parkway Hotel on October 3, 2007, with close to 175 attentive attendees who had come to listen to a legend. The IBM Chief Scientist for System i, and creator of its architecture, **Dr. Frank Soltis**, had returned to Toronto for the first time since his appearance at TEC 2006. Always a popular speaker, Dr. Soltis did not disappoint. The audience also had the opportunity to hear more about WebFOCUS, the big brother to the hot new offering, DB2 Web Query for System i, providing a follow-on presentation to the session delivered by DB2 Web Query expert, **Jackie Jansen** at the May MOM. This event was co-sponsored by TUG, IBM and AVNET.

The meeting began with **Robert Eckersley**, the IBM Alliance Manager for Information Builders. Robert's topic was "Beyond Query/400... WebFOCUS, the Big Daddy to IBM DB2 Web Query."

IBM DB2 Web Query for System i™ offers a set of modernized tools for a more robust, extensible and productive reporting solution than the popular Query for iSeries (also known as Query/400) tool. DB2 Web Query for System i preserves investments in the reports developed with Query/400 by offering a choice of importing definitions into the new technology or continuing to run existing Query/400 reports as is.

DB2 Web Query provides the ability to query or build reports against data stored in DB2 for i5/OS databases through browser-based user interface technologies. Build new reports with ease through the Ajax-based WYSIWYG Power Painter component, or leverage the wizard-like Report and Graph Assistant components.

Simplify the management of reports by significantly reducing the number of report definitions required through the use of parameter driven reports. Deliver data to end users in many different formats, including directly into spreadsheets, or in boardroom-quality PDF format, or viewed from the browser in HTML. Leverage advanced reporting functions such as matrix reporting, ranking, color coding, drill-down, and font customization to enhance the visualization of DB2 data.

Add the OLAP (On-Line Analytical Processing) feature to interact with the data through slicing and dicing and drill-down capabilities. For the end user on the go, choose the Active Reports feature to allow reporting without having to be connected to the server. Build simple dashboards or compound reports with the optional DB2 Web Query Developer Workbench. Use the Developer Workbench to hide the complexities of the database (for example, join logic) from end users through metadata.



Kathy Gregson

DB2 for Web Query started shipping on September 14, 2007. Any company that has Query/400 today and is covered by i5/OS SW Maintenance, is entitled to a no-charge upgrade to the base DB2 for Web Query product (5733-QU2) when they go to V5R4 of i5/OS. Robert's talk re-capped IBM's DB2 Web Query for System i, which was developed by Information Builders, and he then introduced the full blown Information Builder product, WebFOCUS.

This interactive session included demonstrations with lots of questions coming from the audience. Attendees saw for themselves the reporting power that is delivered in the base DB2 Web Query product for all System i shops, and what is possible with WebFOCUS for organizations who are looking for robust self-service reporting or a rich full-function Business Intelligence solution. WebFOCUS is a comprehensive and fully integrated enterprise business intelligence platform whose architecture, integration, and simplicity can permeate every level of the organization—executive, analytical, and operational—and make any data available, accessible, and meaningful to every person or application who needs it, when and how they need it.



5:00 speaker Robert Eckersley





TUG Meeting of Members & IBM Solutions Tour, October 3, 2007 — Sheraton Parkway Toronto North

This definitely isn't your father's Query/400 as the graphic in Figure 1 illustrates. All this running natively and securely on System i, where your business data resides today.

Following Robert's talk, the group enjoyed some social networking over a great buffet dinner. Then it was time to bring on the ever popular Dr. Frank Soltis, Chief Scientist for System i and fondly referred to as the "father" of the System i.

In his typical folksy style, using no charts, Frank spoke to the group for approximately 90 minutes about today's topical areas for System i.

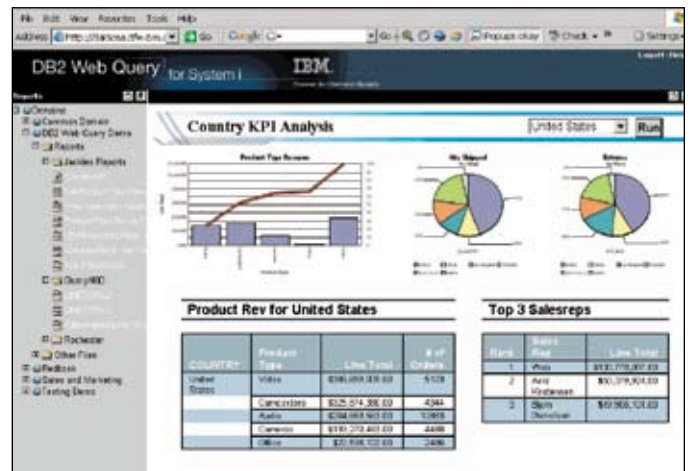


Figure 1. DB2 for Web Query sample screen

Frank covered a little on the history of the product, and the name changes we have gone through, and hinted that another one may be in the offing next year although nothing is definite at this time.

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Door prize winner Michael Marston with Kathy Gregson

Vaughn Dragland



7:00 speaker Dr. Frank Soltis

He talked about the possibility of the System i and System p merging into one HW product, running multiple, different operating environments, as is possible today on System i. The possibility of this has been discussed for some time but in the past it was determined that it made sense to keep the products separate, even though they are essentially the same HW. If that does happen, and he did state nothing has been decided for sure, then the product would need a new name. He asked the audience what a good product name would be, and many in the audience felt that a great name for the product would be AS/400! That brought a smile to Frank's face.

Frank went on to talk about the real value of System i being in i5/OS so no matter what the product is called, AS/400, iSeries, System i or ????, as long as there is an i5/OS environment, applications will continue running and a company's investment in System i continues to be protected. System i users should feel re-assured, their beloved i5/OS will go on for many years into the future, as is demonstrated by the disclosure of some of the function of the upcoming 2008 release of V6R1.

Some time was spent talking about the split of the System i Technology team into two different business units, the POWER Systems unit and the Business Systems unit. The POWER Systems unit is in place to focus on the needs of the larger customers, with responsibility for the high end models i570 and i595. The Business Systems unit will focus on the needs of the Small and Medium Business (SMB) customers with responsibility for the low end System i models i515, i520, i525 and i550. Frank joked about the names of the units being somewhat ambiguous since all System i servers are POWER servers and all System i servers are used as business systems. He did say, naming aside, what's important is to be responsive to our customer's requirements and unique needs, with solutions and offerings to match, and that is what the design point is in putting these groups in place.

Next Dr. Soltis spoke about the POWER 6 chip technology that is available today in the i570 and in the p570 and the technologies that are built into the chip to help with things like power consumption and running in a cooler environment, resulting in a much "greener" datacenter. He indicated that we would see a System i Blade model in the near future and more POWER 6 models come to market in 2008.

A lively question and answer session followed Frank's talk and attendees left feeling secure in the knowledge that their beloved system has a future, whatever the name, and the future is bright.



Kathy Gregson has worked for IBM for 32 years, supporting mid-range systems since the early 1980's. She worked on the product announcement for AS/400 in 1988 and has been loyal to this platform ever since. Kathy's current role is the Canadian "iVangelist", System i Customer Advocate and author of the iSay Customer Newsletter. She can be reached at kathyt@ca.ibm.com.

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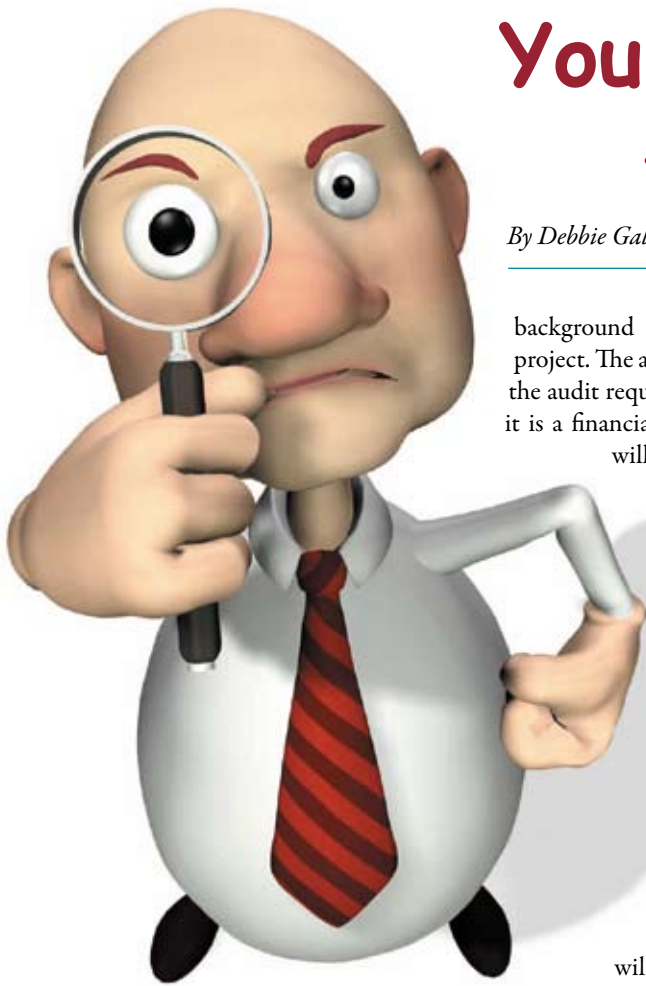
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Your IT Project Audit — What to Expect

By Debbie Gallagher

background material that describes the project. The auditor will also find out what the audit requirements are. For example, if it is a financial statement audit, he or she will meet with the audit team to understand the areas of audit risk and what audit procedures they already have planned to cover that risk.

Based on the audit requirements and the understanding of the project, the auditor will develop a scope of work and an audit plan.

Once the scope and plan are approved, the audit moves into execution phase.

Executing the Audit

This step is the one you are likely most familiar with. The auditor will meet with you and other project team members to ask more detailed questions and will ask for documentation to support the answers that you provide, and to show that certain areas of the project were well controlled.

Closing the Audit

At this stage, the work has been completed, and the auditor will issue recommendations for improvement, usually in the form of a formal report or management letter comments.

You or someone else in your organization will also be asked to provide a response to the recommendations. After the responses are gathered, the auditor presents the report to management or to the audit committee.

Areas of Audit Interest

Although every project is different and the audit scope is defined for each one, there are some areas that are reviewed frequently enough that you should expect the auditor to include them. These areas of interest fall into two categories:

- (1) the project itself; and
- (2) the new processes and systems.

For the project itself, the auditor will usually be interested in:

- Approvals for the project;
- Project governance – for example, meeting minutes, scope change control, management oversight, issues management, go-live readiness assessment;
- Testing of the new application, including unit testing, interface testing, integration testing, performance testing, business sign offs on test results;
- Customization of the application (if it's a package);
- Security related to the data, the development environment, and application configuration; and
- Completeness and accuracy of the data loaded to the new system, as well as data integrity (e.g. no orphan records).

For the new processes and new systems, the auditor is usually interested in:

- Interfaces carrying data between applications;
- Security;
- Segregation of duties;
- Changes to functionality and businesses processes – e.g. does the application now have multi-currency, or does it now have on-line purchase order approvals.

If you are subject to an annual audit where only a portion of the system is audited each year, the auditor also may need to change the rotation plan so that all elements are in scope for the go-live year of the new systems.

In the previous article, I described the various types of auditors that may audit your IT project, and why your project could be selected for audit. In this article, I'll explain the major steps in the audit for an application development or implementation project. In addition, I'll provide some information on what the audit is likely to cover, and some insight into audit evidence requirements.

Steps in the Audit

The audit of your project is also a project. So, you can expect similar steps to occur:

- Planning and Scoping;
- Execution; and
- Closing.

Planning the Audit

As you know, there are no two IT projects that are the same. So, before planning can start, the auditor needs to understand the project. To develop this understanding, the auditor will usually meet with IT and business representatives, as well as read

Audit Evidence

According to the International Auditing and Assurance Standards Board (IAASB) Handbook, "The auditor should obtain sufficient appropriate audit evidence to be able to draw reasonable conclusions on which to base the audit opinion". (International Standard on Auditing (ISA) 500, paragraph 2).

It goes on to describe in paragraph 7 that "Sufficiency is the measure of the quantity of audit evidence", and that "Appropriateness is the measure of the quality of audit evidence".

So you can see that the auditor is required to ask you for relevant documentation, and will review it and test it. By testing it, I mean that the auditor performs some procedures to verify the usefulness of the document as audit evidence. There are numerous possible audit procedures available to the auditor and they are not covered here, but here are a couple of illustrations. For example, for your document that shows the reconciliation of data conversion, the auditor may select data from both systems and check that it agrees to what shows on your reconciliation document. Or, to verify your testing, the auditor may select a sample of completed test cases to see if they have the results documented and signed by the tester.

Some of the examination of the project is done to provide insight for the auditor into areas of risk for the new processes and systems. For example, in reviewing the issues database for the project, the auditor

will assess whether issues were tracked and followed up during the project. In addition, he or she will check to see if any high priority and high impact issues were still open at go live. If they are areas of audit interest, the auditor will likely follow up to determine what mitigation strategies were implemented in the new environment to deal with errors that may have occurred due to those open issues.



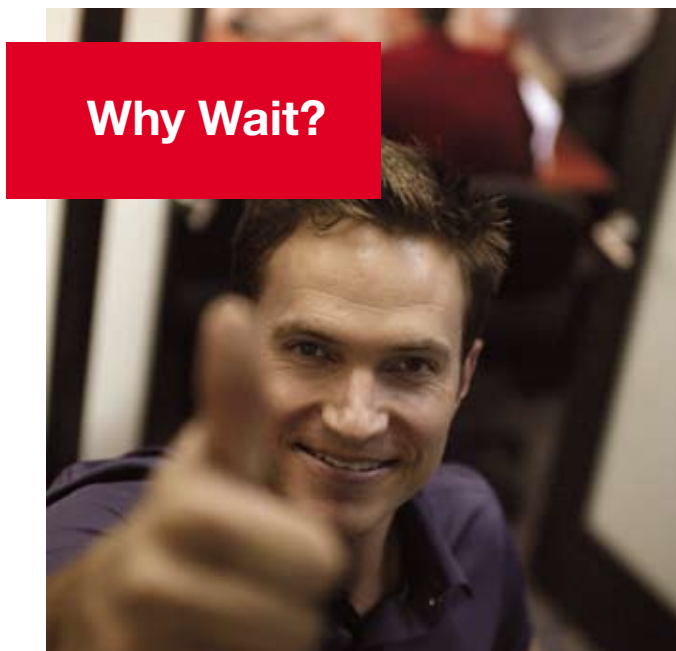
Debbie Gallagher

Conclusion

Because the auditors need to collect evidence as part of their review, you should not throw away any project documentation until after all of the relevant auditors have completed their work.

You can ask early in your project to meet with the various auditors. This should allow you to find out what areas are of particular interest, so that you can make sure your documentation is retained for their work.

Debbie Gallagher is a Senior Manager, Canada IT Project Management Office at PricewaterhouseCoopers, Toronto. Debbie previously worked as a systems implementation consultant, and as IT auditor. She can be reached by email at debbie@gallaghers.ca.



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TUG AGENDA



WEDNESDAY, NOVEMBER 21, 2007

Why PHP?

5:00 pm Session Abstract

PHP is a new and exciting language for developing/deploying Web-based applications. In 2006, IBM introduced PHP for Web application development on System i. Customers and solution providers can now choose to use this popular industry standard language on i5/OS. Is PHP the right tool for you to extend your current System i application suite, or to extend your company's reach to new customers? This session will explore typical uses of the language and review implementations where PHP makes sense.

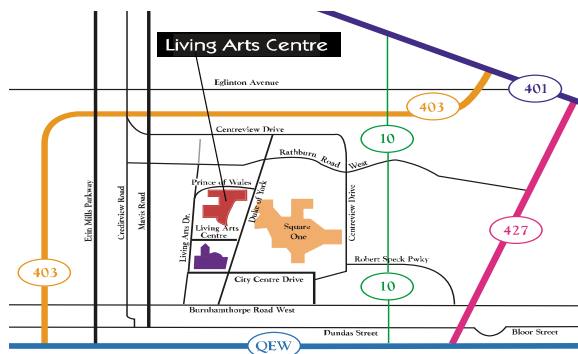


Alison Butterill

Speaker: Alison Butterill

Alison Butterill is an IBM Certified Consulting I/T Specialist for WebSphere and System i. Her current position is System i Application Development Offerings manager for the System i Brand Team. Alison has worked in the mid-range area for more than 25 years, holding a wide variety of positions at

IBM—always specializing in the areas of application development and database. In her present position, Alison is working with a wide variety of IBM teams to develop strategic direction and offerings for developers on the System i. One of the System i key initiatives, the *System i Developers Road Atlas* is a key component of her current responsibilities. Alison is a regular speaker at technical conferences and COMMON conferences around the world and holds numerous Speaker Excellence medals from COMMON North America.



AGENDA AT A GLANCE

Time	Topic
5:00	Why PHP?
6:00	Intermission / MoM & Networking (Complimentary Buffet)
7:00	How To Be an IT Survivor

MoM Location

Living Arts Centre Mississauga (BMO Room)
4141 Living Arts Drive, Mississauga ON L5B 4B8
Hwy 403 & Hwy 10,
West of Square One
(Free underground parking)

How to be an IT Survivor

7:00 pm Session Abstract



Do you know what your job will look like in 5 years? 10 years? Will you be kicked off the island? Are you the weakest link? The IT industry is fueled by change and requires both ourselves and our companies to adapt quickly. This session is a discussion of topics that can assist you in being an IT survivor. A review of past trends may give us clues to maintaining current skills and developing new skills. This will allow us to remain competitive as individuals and drive our businesses in the right direction for a future of change.

Be prepared to challenge your status quo, and leave with new ideas on how to become flexible enough to adjust quickly to new trends and directions and ensure your survival.

Speaker: Trevor Perry

Trevor Perry has been a computer nut for as long as he can remember. While he still works as an IT Strategist, he is a popular and award-winning speaker at conferences and user groups on many subjects. He has won awards for his motivational and strategy sessions all over the world.



Trevor Perry

Trevor's unique sense of humor and presentation style are two of the many reasons audiences return to his sessions. His Australian heritage, diverse consulting background, acting and improvisational experiences provide Trevor with a rare viewpoint that is entertaining and always informative.

To indulge himself and balance his life, Trevor is a part-time professional speaker, writer, actor, director, and poet, and is on a lifelong search for the ultimate coffee bean.

Send your suggestions for future topics to: leo@tug.ca

PHP on i5/OS: A Whole New Stack

The following article is reprinted with the permission of IT Jungle, New York, NY. It first appeared in Four Hundred Guru (<http://www.itjungle.com/fhg/fhg062707-story01.html>) on June 27, 2007

By Erwin Earley

Development and deployment of Web-based applications is one of the most common activities in today's IT world. For development of Web applications a development stack, consisting of an operating system platform, Web server, database engine, and scripting language is often employed. With the advent of PHP on i5/OS V5R4 and OS/400 V5R3, iSeries and System i customers have a whole new way to skin the Web cat while keeping their favored back-end system right in the thick of things.

One of the most popular of these stacks is the LAMP stack, which stands for Linux, Apache, MySQL, and PHP. Since the introduction of Linux in a logical partition, System i customers have been able to employ Web applications utilizing the LAMP set of resources. Another development stack is the WIMP stack (Windows, IIS, MySQL, and PHP). With the introduction of Zend Technologies' PHP in i5/OS in January 2006, System i customers have had a new Web development stack at their disposal, the iADP stack (i5/OS, Apache, DB2, PHP). This stack can be utilized to deploy Web applications natively in i5/OS. These Web applications can access and manipulate i5/OS resources, including DB2 resources, data areas, data queues, etc.

With the announcement of support of MySQL, yet another development stack is made available to System i customers—the iAMP stack (i5/OS, Apache, MySQL, PHP). The iAMP stack facilitates the deployment of open-source applications

(such as Wikis, blogs, CRM, e-commerce) natively in i5/OS. This article presents a general introduction to PHP in i5/OS, how the product can be obtained and installed, development environment for the language, and typical uses for the language. This will be the first in an ongoing series of articles covering aspects of both PHP and MySQL in i5/OS.

Introduction to PHP

PHP is an easy to use, open source, platform independent scripting language that has been designed primarily with Web application development in mind. PHP essentially is a data manipulation language for Web-based applications. PHP allows you to imbed business logic inside of the HTML stream that comprises a Web page. It is estimated that there are approximately 2.5 million PHP developers with upwards of 22 million Internet domains leveraging PHP to some degree in their application portfolio.

From a syntax viewpoint, PHP source code is similar in many respects to shell scripts and the C programming language. PHP code is embedded within PHP tags as follows:

```
<?php
    // PHP code
?>
```

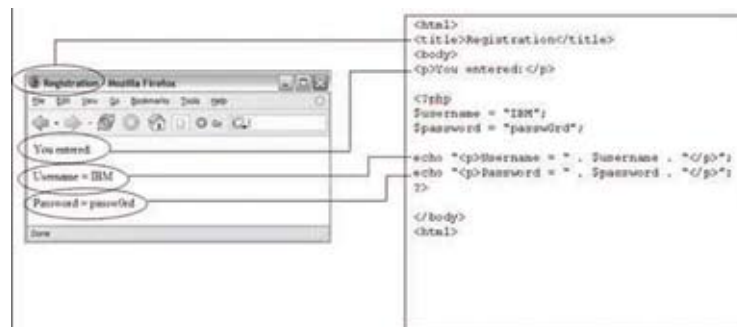


Figure 1. PHP imbedded within HTML



Figure 1 shows a simple example of PHP code embedded inside of HTML.

PHP variables are denoted with the leading '\$'. The echo statement outputs the indicated string, while the '.' within the echo statement causes the information on both sides to be concatenated together. You may also notice that HTML tags have been included in the echo statements to cause each output line to be treated as a new paragraph.

Lines of code within PHP are delimited with a semicolon. The PHP engine processes the PHP code and sends the results to the Web browser as HTML.

Perhaps a more interesting example is one in which a Web form is used to request data from the user and then passed to a PHP application. Figure 2 is a sample Web form.

The <form action> line may be the most important line to discuss from this code snippet. The line causes another file to be executed when a form action (in this case selection of the Go button) is taken. The form action line also defines the Get method, which establishes a "super-global" variable called

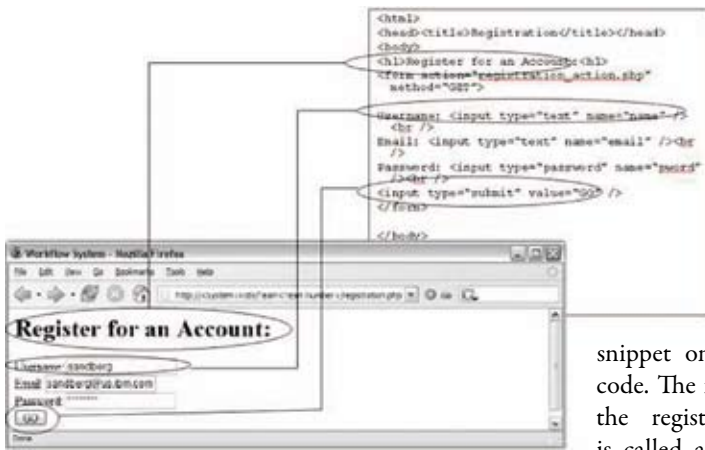


Figure 2. Sample Web form

GET. The PHP processor uses the GET variable to reference the values defined within the HTML form. The values for this example are the values *name*, *email*, and *pwd*, as shown in the form field definition lines for Username, Email, and Password.

Let's take a look at the PHP code in file `registration_action.php` in **Figure 3**.

The code snippet on the left is the HTML code, while the code snippet on the right is the PHP code. The first thing to note is that the `registration_action.php` code is called as a result of the `<form action>` from the HTML code.

Additionally, note the assignment of values to the `$username` and `$password` variables in the PHP code. They are being assigned values from the super-global variable `GET`, which was assigned within the HTML code. You can view `GET` as an array with associative keys, where *name*, and *pwd* are keys into the array.

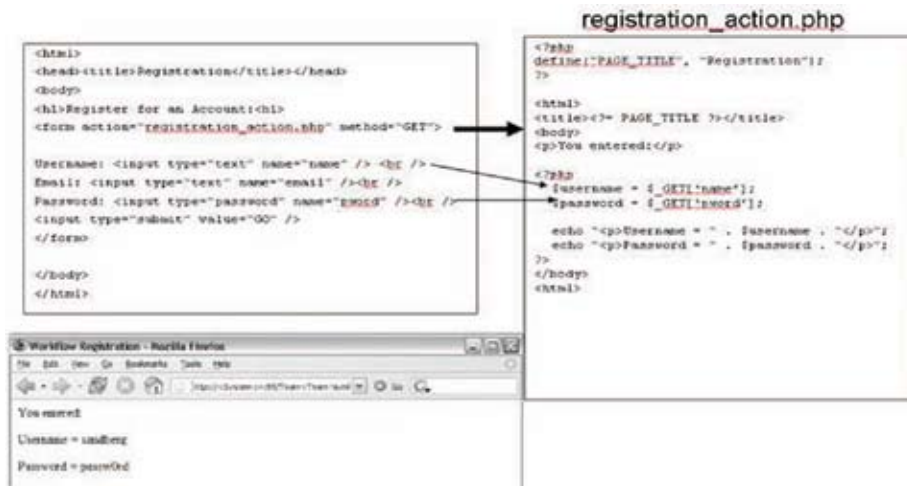


Figure 3. PHP code

Obtaining and Installing PHP in i5/OS

Obtaining and Installing PHP in i5/OS is a fairly easy process. The first step is to ensure that your system meets the pre-requisites for the Zend Core (PHP Engine) product. The latest information and pre-requisites can be found on the Zend Web site. Most models that run V5R4 or V5R3 are able to run the Zend Core product. These models include the 5XX line (515, 520, 525, 550, 570, and 595) as well as most of the 8XX and 270 line (270, 800, 810, 820, 825, 830, 840, 870, 870, and 890). **Table 1** provides a list of the licensed programs that need to be installed prior to installation of Zend Core.

Once you have ensured that your system meets the pre-requisites, you are ready to obtain and install the Zend Core product. The product itself can be downloaded from the Zend Web site. You will be requested to register for the product before you gain access to the Zend for i5/OS channel. From the channel you will download the Zend Core for i5/OS product as well as the Zend Studio for i5/OS product (discussed in more detail below).

The Zend Core product is distributed as a zip file. (As of publication the name of the zip file is `ZendCoreFori5_OS-2.0.1-pase.zip`). The zip file contains a number of files including:

- `i5Toolkit_Class_README.txt`
- `LICENSE`
- `README`
- `Zcoresavf`
- `Zend_Core_For_i5OS_2_0_1_Release_Notes-1.txt`
- `Zend_Core_i5OS_Installation_Guide.pdf`
- `Zend_Core_User_Guide_i5OS.pdf`
- `Zend_Navigator_Demo_README.txt`

Description

Product Option

Licensed Program

Portable Application Solutions Environment	33	5722SS1
QShell	30	5722SS1
System Openness Includes	13	5722SS1
Digital certificate Manager	34	5722SS1
CCA Cryptographic Service Provider	35	5722SS1
Java Development Kit	5 or 6	57SSJV1
IBM HTTP Server for i5/OS	*BASE	5722DG1
IBM Portable Utilities for i5/OS	*BASE	5733SC1
OpenSSH, OpenSST, Zlib	1	5733SC1

Table 1. Licensed programs pre-requisite to Zend Core

Once you have obtained the product, transfer the ZCoresavf save file to the i5/OS system and install the licensed program it contains. First, create a save file on the target system:

```
CRTSAVF FILE(QGPL/ZCOREPROD) TEXT('zend Core for
i5/OS Product SAVF')
```

Then transfer the save-file to i5/OS. As an example, with ftp, the command sequence would be similar to the following:

```
ftp
bin
put zcoresavf QGPL/ZCOREPROD
```

Use the Restore License Program command to install the Zend Core product:

```
RSTLICPGM LICPGM(1ZCORE5) DEV(*SAVF) SAVF(QGPL/
ZCOREPROD)
```

The installation process will prompt for the definition of a password to be used to access the Web-based administration toolkit for Zend Core (<http://:89/ZendCore>) as well as a user name and password that you will use when downloading updates. This is the user name and password that you used when you registered for the download from the Zend Web site.

Once you have answered the prompts, the Zend Core product will be installed and configured. The diagram in **Figure 4** shows the product installation and configuration to support PHP in i5/OS.

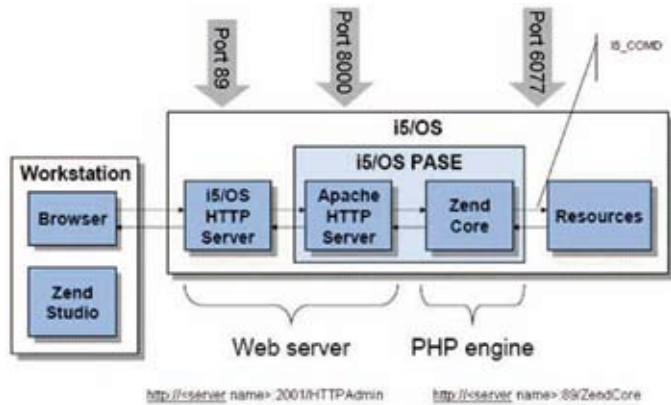


Figure 4. Product Installation and configuration

As you can see from the diagram, in addition to the Zend Core product, the Apache Web Server is also installed in the PASE environment. The i5/OS HTTP Server is configured to forward traffic on port 89 to the Apache Web Server running in the PASE environment. Apache accepts the HTTP request and forwards any PHP code to the Zend Core PHP engine. Zend Core processes the PHP code and forwards requests for i5/OS resources (such as DB2 resources, data queues, data areas, i5/OS commands, and system values) to the I5_CMD process (installed as part of the Zend Core installation) via port 6077. The resulting HTML generated by Zend Core is transferred back to the Apache Web Server which in turn transfers that traffic to the i5/OS HTTP Server, which responds to the browser request from the client.

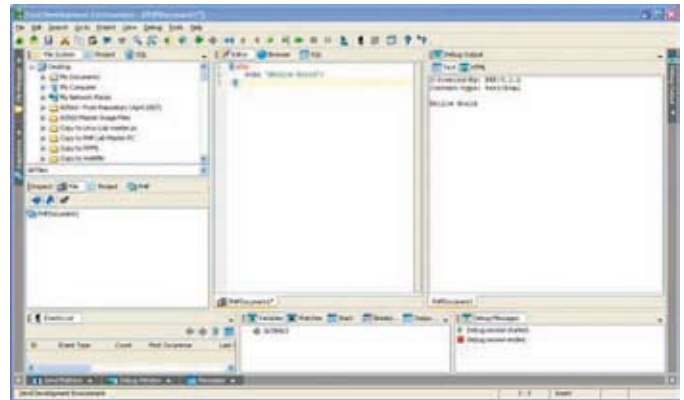


Figure 5. Zend Studio environment

PHP Development Environment

In addition to the Zend Core product, Zend also provides the Zend Studio product for the i5/OS platform. Zend Studio is an Integrated Development Environment that can be used for the development and debugging of PHP applications. Zend Studio is downloaded from the same channel on the Zend Web site as the Zend Core product was obtained from. Zend Studio is available for a number of clients, including Windows, Linux, and Mac OS X. Once the product has been downloaded, it is installed on the client through a typical Windows installer. Starting the Studio provides an environment that looks like **Figure 5**.

The advertisement features a photograph of a woman in profile, gently touching the face of a horse. Overlaid on the image is the text 'Harness Software Complexity' in a large, bold, orange font. Below this, the text reads: 'Organize and automate multi-platform application change around your System i:'. A bulleted list follows: 'Application Analysis', 'Rigorous, Cross-platform Change Management', and 'Test Automation, and More!'. At the bottom left is the Arcad Software logo, which includes a stylized figure holding a flag. To the right of the logo, it says: 'We unite your System i, UNIX, Linux, and Windows technical teams to ensure integrity of modernization projects and make deployment reliable. Call us for a quick software demo.' Below this is the contact information: 'ARCAD Software Inc. Tel: 1-800-676-4709'. At the very bottom, the website 'www.arcadsoftware.com' is displayed in a white box on an orange background.



```

/* Query file using input from form and deliver results to client */
/* Construct the SQL statement, using lastname as the search substring */
$sql = 'select * from i5schema.employee where lastname like \'J0%\'';
/* Execute the DB2 SQL statement, place results into $stmt */
$stmt = db2_exec($dbh, $sql, array('cursor' => DB2_SCROLLABLE));
/* Print Employee Search Results header and table setup */
print '<b>Employee Records On System i starting with J0</b>';
print '<br><table border=1 cellpadding=5 cellspacing=5>';
/* Iterate through result set, printing one table line per record returned. */
/* Note that the customerNumber field will be an "active field" which will */
/* $_GET the customerNumber and reinvoke the employee_update.php application*/
while ($row = db2_fetch_array($stmt)) {
    if (!$row=="") {
        $customerNumber = $row[0];
        $customerName = $row[3];
        $customerFirst = $row[1];
        $workdept = $row[4];
        $job = $row[7];
        $salary = $row[11];
        print '<tr><td
        align=center><a href=employee_update.php?customerNumber='
        . $customerNumber . '>' . $customerNumber .
        '</a><td>' . $customerName . '<td>' . $customerFirst . '<td>' . $workdept . '<td>' . $job .
        '<td>' . $salary . '</td></tr>';
    }
}
/* Close table */
print '</table><br>';
/* Print the DB2 SQL statement which was executed - Informational */
print "<p>Echo of dynamically-built sql: ".$sql."</p>";

```

Figure 9. Coding example using APIs



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The middle portion of the screen allows you to write and revise PHP source code. The right portion of the screen is where the output/results of running the code locally are displayed. The left portion of the screen provides a file directory tree, as well as project management and an event list for debugging.

One of the neat things about the Studio product is the ability to define an SQL connection within Studio. This can be very useful, as it provides a single point where table structures can be reviewed alongside code that is being written to access/manipulate the data tables.

To create an SQL connection within Zend Studio, you must first change the file/directory view (left portion of the display) to the SQL view. This is accomplished by clicking on the SQL button located on the left side below the tool bar. Once the SQL view is displayed you can add an SQL source by clicking on the Add Server button, located on the left side under the SQL button. At this point, a dialog box (**Figure 6**) will prompt for the connection information. Provide the information indicated for your i5/OS system. You can test the connection information provided with the Test button. If the connection is successful, the response shown in **Figure 7** will be displayed.



Figure 6. Dialog box



Figure 7. Response

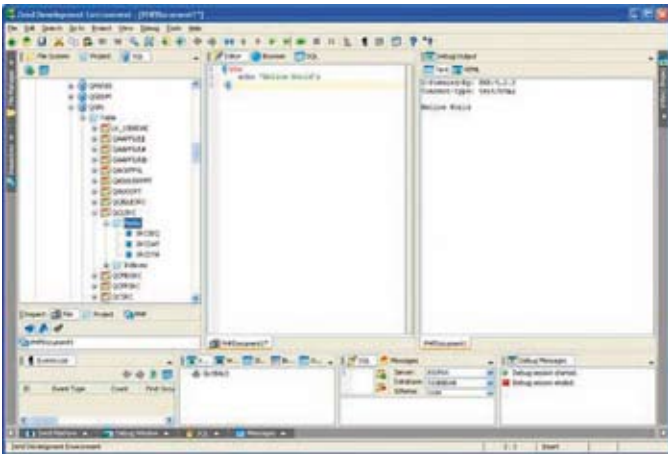


Figure 8. SQL information

Clicking on the OK button connects to the data source and displays the SQL information shown in **Figure 8**. This interface provides a mechanism to access the field, index, stored procedure, and view definitions for the system.

Typical Uses for PHP in i5/OS

For i5/OS, PHP provides two typical uses. The first will be for development and deployment of customized applications for exploiting i5/OS resident data and procedures. These would typically be developed with the iADP stack (i5/OS, Apache, DB2, PHP) to provide a Web interface into existing i5/OS resources. Zend Core ships with the i5 Toolkit, which includes APIs for accessing such i5/OS resources as server/connection, obtaining results, commit/rollback, fetch, field information, key information, statement, errors, column/procedures, and table information.

One example of using the APIs would be to retrieve records from a table. The example in **Figure 9** uses the `db2_exec` API to execute an SQL select statement and the `db2_fetch_array` statement to obtain the resulting records from the select statement:

Executing the PHP code generates HTML output like that shown in **Figure 10**. Since the output of PHP is HTML, the PHP script can output the necessary HTML tags to generate tables and cells and then use the DB2 APIs to loop through records and populate the HTML table. In addition to the DB2 APIs, the i5 Toolkit also includes APIs for command calls, program calls, native file access, system values, and data areas. The other typical use of PHP in i5/OS will be to use the IAMP stack (i5/OS, Apache,

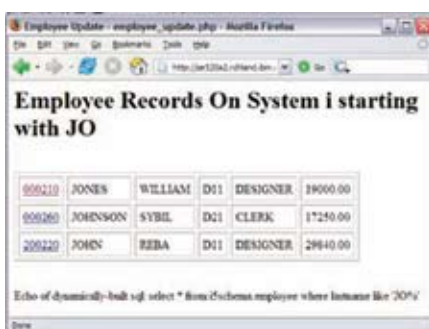


Figure 10. HTML output

MySQL, PHP) to leverage existing open source applications like SugarCRM, ZendCart, and phpBB on i5/OS. Future articles in this publication will discuss both of these uses in more detail.

Summary

This article has provided an overview of PHP on i5/OS including obtaining and installing the PHP engine and development environment, basic PHP syntax, and using PHP to access DB2 resources. I plan to cover more detailed aspects of PHP in i5/OS, including how to write PHP applications that leverage i5/OS resources and how to leverage existing PHP applications in i5/OS, in future articles.



Erwin Earley is an Advisory Software Engineer in the IBM lab located in Rochester, Minnesota and heads up the Open Source Technologies Center of Competency for System i within the System i Technology Center. At that center, he provides education and enablement services for open source related technologies on System i including Linux, MySQL, and Zend's PHP. Earley currently holds certifications from Red Hat as well as the Linux Professional Institute and is a candidate for the certification with Zend's PHP.



[Note: Erwin has also published the second in an on-going series of articles on PHP in the August 29, 2007 issue of Four Hundred Guru]

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Sheri Tingey, Entrepreneur Extraordinaire

By James O. Armstrong



Sheri Tingey – packrafting in Alaska

Today, **Sheri Tingey**, who is age 60, runs a family business called Alpacka Raft, which has created and built a series of ultra light, packable rafts for use in long distance backpacking and wilderness racing.

Sometimes, a “new” business opportunity can begin with a challenge or a question from a friend or a loved one. And, that’s exactly what happened when Sheri’s son **Thor** asked his Mom to come up with a light-weight raft that could stand up to some of the most demanding parts of Alaska’s wilderness in a sport, where he was an enthusiast.

In the first year, Sheri Tingey’s Alpacka Raft sold 200 carefully crafted units, but had

demand beginning to pick up outside of her Alaska base. In other words, if the rafts were strong enough to withstand Alaska’s wilderness, then challenges from the Lower 48 would be easily surmountable, many potential buyers must have thought. In the process, sales have inched up from 200 to 300 to 400 and, this year, Tingey estimates that her sales will top 700 units from her whole product line with approximately \$500,000 in sales.

So, how did she wind up in Alaska so far away from her Arizona roots? After graduation from the University of Oregon with a degree in Physical Education, Sheri headed to Jackson Hole, Wyoming to ski for just “one season” before getting on with the real world. But while she was there, she

fell in love with skiing and tried to figure out a way to make a living besides waitressing. That is how she happened to start her first business which involved making custom ski wear. Her one-piece snow gear for skiers at the time was sold through six retail shops around the US including Sun Valley, Idaho; Aspen and Vail, Colorado; Alta and Snowbird, Utah; Jackson Hole, Wyoming; and Lake Placid, New York. In that chapter of her life, Sheri would be skiing all day, and then sewing late every night.

After selling her “Design by Sheri” business, which she ran from 1967 to 1982 and which was based in Jackson Hole, Wyoming, she and her husband together with their two children moved to Alaska primarily because of a job offer for her husband. But, Sheri had also wanted to sell her business—in part due to a series of health-related challenges she was experiencing, including chronic fatigue syndrome.

After moving to Alaska, Tingey again tried to sew, but the effort simply drained her. She desperately wanted her old energy level back, and as a consequence felt rotten because it just wasn’t coming back. At the time, her children were small and there were no programs available for them in the Alaska Bush. So, she wound up starting both a swimming and a gymnastics program for rural Alaska kids. Further, since Sheri was able to control the hours, she could also closely monitor how much energy she put out. Doing those morning- or afternoon-only programs, she could work these job assignments into the three good hours she had each day, where she functioned somewhat normally.



The unstoppable Sheri Tingey

Today, Sheri has been married to her husband **Ralph Tingey** for 30 years. But, Sheri's inspiration for her current business—which came at the point in life where she was just beginning to feel good again after a nearly 20 year battle back to health—was and is her son Thor. For his part, Thor Tingey recently took several steps back from the business in order to attend law school. So, Tingey has recently taken a partner, **Jim Jager**, into the business to help her accomplish some of the things Thor or her husband had previously done in the business (up to the time that a suitable business partner could be found.) Finally, Sheri's daughter **Daphne**, who is 23, will be resuming school this Fall near Boulder, Colorado, where she will continue her junior year at Naropa University in Psychology.

For Sheri Tingey and her husband, they had always wanted to move to Alaska, which she described as a state that someone either really loves or they leave it. From the beginning, she said, she and her family always kept a large dog team for racing in Alaska, even when her kids were little. Plus, she said that despite her chronic fatigue, running her dogs was not as tiring as someone might think, and she very much enjoyed the experience. She really loves the wilderness in Alaska, she said, because it offers wonderful freedom to its residents. In addition, Sheri also loves to fish, hike, climb and do any kind of boating. Plus, she loves animals. And, Sheri still loves to sew and to build (which for her means carpentry work). In fact, Tingey describes the similarities between sewing and carpentry and said it was unfortunate that more people (both men and women) don't enjoy the cross-over benefits of both disciplines. Finally, Sheri loves to read too.

In terms of her health struggles, changing her MD to someone else who was willing to try some alternative approaches to medicine made all the difference in regaining her health. Not just vitamins, but Sheri was willing to experiment with a wider range of treatment options than most physicians are willing to utilize. In the end, this alternative medicine approach essentially worked for her. Interestingly, Sheri's health had substantially improved just at the point of her son's challenge.

In turn, Mom Tingey was then excited and challenged to return to the passion of her life, which has long been design. As a child, her grandmother had taught her to sew. But, she came by the design part of her DNA make up quite naturally.

In the future, Sheri concluded she and her husband may decide to take off from November through the end of January, when Alaska experiences that long night in the state. Like many other Alaskans their age, they would/will then plan to come back by February 1st each year.

Her greatest business challenge comes down to correctly estimating the demand for her product ahead of time each year, and then having it manufactured by Feathercraft Kayaks, which uses this down time to produce her rafts. For its part, Feathercraft Kayaks has long been known for making amazing folding kayaks. Plus, the Feathercraft answer now includes a 100% environmentally friendly solution to gluing the bottom of the raft to complete the finished product. In fact, coming up with an environmentally acceptable glue has long been a challenge for all of the raft manufacturers, she confided.

Today, Sheri Tingey takes pride in her workmanship at Alpaca Raft. Now that she has been given a second chance in life to be a designer, she simply wants to make each raft last. Her short-hand way of putting it is this: "I'm just too old to make junk." From being a classic, drop-through-the-cracks kid, Sheri has found her niche, where she excels. Plus, she makes a quality product that anyone would be proud to call their own. Since her rafts can easily last for 15 to 20 years—each year she has to find a whole series of new customers. But, each new raft she plans and makes is built to last. And, that's why Sheri Tingey easily qualifies as our "Entrepreneur Extraordinaire."



Excerpted from the book, *Now What? Discovering Your New Life and Career After 50*, by **James O. Armstrong**. It is available at www.nowwhatjobs.net. NowWhatJobs.net was set up to better inform individuals and employers about the current and coming labor shortage facing North America. James is editor of NowWhatJobs.net, and he is president of James Armstrong & Associates, Inc., which is a North American media representation firm.



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A Drop in the Bucket

By Wende Boddy

Yes—but ever little bit helps. Let me explain: I met TUG President **Léo Lefebvre** at Bloorview Kids Rehab last week to present them with our cheque for \$1815, which we collected from the TUG Golf Tournament back in June. It was another sunny day—this time in October.

I have visited Bloorview many time over the years and TUG has donated almost 20K to date. I personally feel so grateful that my own family has no need to use these facilities, and on the other hand grateful that it is there for the incredible hope and help that it gives to the families and children 2 years to 18 years of age that can find such positive, incredible, and dedicated people.



Léo Lefebvre


TUG presenting a cheque to Bloorview Kids Rehab: L-R: Rakesh Tripathi, Wende Boddy, Marion York, and Léo Lefebvre



This is also a teaching hospital—they have 11 doctors and 950 caring staff plus 1,000 committed volunteers. This is the only hospital-based research institute devoted to children's rehabilitation research in Canada.

This year we were able to go outside into their new outdoor camp. The leaves were crunching underfoot on the wheelchair accessible paths leading around the grounds. The pavilion in the centre had some of the children shucking corn (likely looking for caterpillars) and the teachers were telling us how the children love being outside. You could hear it in their voices.

We met **Robert Vine** the landscaper guy—appropriate name don't you think? I'm not sure what his title was but it should have been "Master Gardener." The huge reindeer (Tetra unberlope) in the picture was built by him and two artists, with help from the children. It took a whole month to build. There were wind chimes, bark planters, twig containers, and all sorts of natural usable items tucked on, in, and around trees and bushes. I was very impressed with this area and could imagine the fun the children would have being outside with all of this visual stimuli. The parents could stroll and take a deep breath, too.

So let me say a big thank you to all of the golfers and sponsors of our 19th annual golf tournament who tossed in their \$5 for a chance to win a prize. That drop in the bucket does make a difference and I hope next year we can push for the "over 20K goal." 

Wende Boddy is the Association Manager for TUG. She can be reached at admin@tug.ca or by phone at 905-607-2546.

Bloorview
KIDS REHAB

Bloorview Kids Rehab is Ontario's largest children's rehabilitation facility. It is located in Toronto, Ontario, Canada. It was founded in 1899, by a group of community-minded women who met in Toronto to discuss the creation of a "Home for Incurable Children". As of 2005, the Centre provides hospital care, outpatient clinics, an integrated kindergarten school programme, assistive technology services and community outreach activities to about 6,500 children and youth with disabilities and their families each year. It is associated with the Faculty of Medicine at the University of Toronto. Prior to 2006, the centre was called the Bloorview MacMillan Children's Centre.



i TECH TIPS

By Glenn Gundermann

Power Down System (PWRDWSYS) with Confirmation

Have you ever had a problem with someone accidentally powering down the system? Are you worrying about this possibility? There is a feature that was added several years ago (V5R2) without much publicity. The Power Down System (PWRDWSYS) command has a CONFIRM parameter. If you are like most shops, it currently has a default value of *ENVVAR. The possible values are:

***ENVVAR** – The value in environment variable QIBM_PWRDWSYS_CONFIRM is used to determine whether the request should be confirmed. If the value is set to *INTERACT, *YES, or *NO, the action described below for that value is taken. If the environment variable is not defined or not set to one of these values, then there is no confirmation. System initiated power downs do not use the environment variable.

***INTERACT** – A confirmation panel is displayed when the PWRDWSYS command is issued in an interactive job. There is no confirmation when the PWRDWSYS command is issued in a non-interactive job.

***YES** – A confirmation panel is displayed when the PWRDWSYS command is issued in an interactive job. An inquiry message is sent to QSYSOPR when the PWRDWSYS command is issued in a non-interactive job.

***NO** – There is no confirmation when the PWRDWSYS command is issued.

Again, if you are like most shops, the environment variable QIBM_PWRDWSYS_CONFIRM is not defined. Since the environment variable is not defined, there is no confirmation performed when anyone or any job executes the PWRDWSYS command. To setup a confirmation, you can go about this in three different ways:

1. Change the command default for PWRDWSYS.

If you want the confirmation for all interactive and batch jobs, change the default value of the CONFIRM parameter to *YES.

```
CHGCMDFFT CMD(PWRDWSYS) NEWDFT('CONFIRM(*YES)')
```

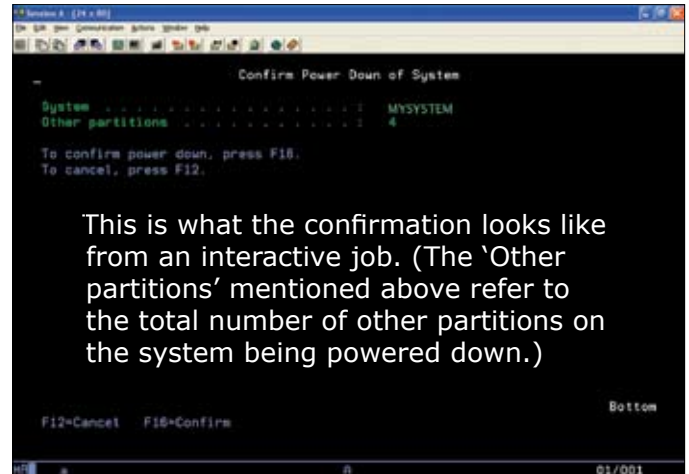
An interactive user will be prompted to confirm and a batch job will send an inquiry message to the QSYSOPR message queue. If you want the confirmation for just the interactive jobs, change the default value to *INTERACT. This means that if a batch job executes the PWRDWSYS command, there will be no confirmation.

2. Create the environment variable QIBM_PWRDWSYS_CONFIRM.

Go to the Environment Variable Commands menu: GO CMDENVVAR.

- | | |
|--------------------------------|-----------|
| 1. Add Environment Variable | ADDENVVAR |
| 2. Change Environment Variable | CHGENVVAR |
| 3. Remove Environment Variable | RMVENVVAR |
| 4. Work with Environment Var | WRKENVVAR |

Use option 1 to create the variable and set it to your desired value.




3. Create a program and use an exit point for the PWRDWSYS command.

The Power Down System exit point (QIBM_QWC_PWRDWSYS) can be used to register a program that is called when the PWRDWSYS command is used. For example:

```
ADDEXITPGM EXITPNT(QIBM_QWC_PWRDWSYS)
            FORMAT(PWRD0100)
            PGMNBR(1)
            PGM(lib-name/exit-pgm-name)
            TEXT('Power Down System confirmation +
            from QSYSOPR')
```

You could perform any function you want in this program, including a confirmation from QSYSOPR. For example:

```
PGM
DCL      VAR(&MSGRPY) TYPE(*CHAR) LEN(1)
SNDUSRMSG MSGID(CPF9897) MSGF(QCPFMSG) +
MSGDTA('PWRDWSYS has been requested. +
Enter G when ready to continue.') +
VALUES('G') TOUSR(QSYSOPR) +
MSGRPY(&REPLY)
ENDPGM
```

Stay tuned for more i Tech Tips in future issues. If you have a technical question, or if you have a technical solution that you would like to share, please let me know. 

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, WDS, 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.

Worst Practices in System Management

By Gloria Seltzer

My first IT job was with a major multi-national oil company. Their systems management and development methodology was the result of analyzing the attributes of successful projects and implementing best practices. This article is dedicated to the best system managers I have worked with who avoid the following pitfalls, death marches or death traps.

1. The Emperor Has No Clothes

Project Sponsors who put their personal ego, ambition, recognition, advancement and monetary rewards above organization goals of client service and productivity improvement jeopardize the welfare of the organization and its employees. Examples are:

- Consciously understating the cost of projects to get them approved
- Receiving kickbacks from suppliers or vendors

- Lying about project status and progress to senior management
- Trivializing monumental challenges and risks
- Accusing team members of being lazy or stupid, to “pass the buck”
- Throwing good money after bad money

2. Dog Eat Dog

Project sponsors / managers who set unrealistic project goals to meet the unrealistic time lines and costs can only



Gloria Seltzer

Vaughn Dragland

lead to shoddy work, poor morale, and lost business—as existing clients go to the competition for better service. They may think “I win / you lose,” but the end result is “Nobody wins / we all lose.”

3. My Way or the Highway

Project sponsors / managers who are dictators, micro-managers, or control freaks enslave the team into submission. Given the edict “ours is not to question why; ours is but to do or die,” team members do the minimum to survive, since they do not want their quality of work criticized or ridiculed.

4. Jump! How High?

Project sponsors / managers who constantly apply pressure and harassment tactics in the name of man-made crises such as reporting project schedules, budget and status reports to various committees, or obtaining sign-offs on project documents—create stress and tension for team members, who then adopt a “don’t sweat the petty things and don’t pet the sweaty things” attitude. After all, if everything is urgent, then nothing is urgent.

5. Chicken with its Head Cut Off

Project managers who lock the team in a room for weeks on end to come up with a master project schedule means that they do not understand the business / systems, nor are they blessed with the humility to consult with and learn from the team.

The 5th Wave

By Rich Tennant



“Don’t WYSWYG me, Doc. When I agreed to the computer image of my facial procedures, it was never supposed to include the tool bar and pop-up ad.”

This only generates anger, frustration, and resentment from team members as their day-to-day work goes undone and critical production problems go unsolved.

6. Sacrificial Lamb to the Gods

Project sponsors who make scapegoats out of project managers when heavy-handed tactics do not work only leads to staff turnover, low morale, lost knowledge / time, poor quality of work and missed deadlines. Good people will not stay and bad people will not leave.

7. Penny Wise and Pound Foolish


Project sponsors who replace experienced / knowledgeable consultants with junior staff to save money and to “cook the books” should know that “a hamburger is no substitute for a steak” and you get what you pay for.

8. Ostrich’s Head in the Sand

Project sponsors / managers who live in their ivory towers ask, “Why is there no commitment to the project?” The Team has disengaged from the project because there is nothing in it for them except miles of misery. “The light is on but nobody’s home.”

9. Lessons Never Learned

Project sponsors who swear that “this is the xth time we are doing this project and it must be done come hell or high water” do not learn from their mistakes. They keep doing the same things and expect different results. There is no future, just the past happening over and over again. “To boldly go where nobody has gone before” only applies to Star Trek, as team members are not guinea pigs with which to be experimented in a laboratory.

Conclusion: I am sure most of you have experienced these dysfunctional management styles from leaders who are no doubt bullies with impressive titles, who coerce instead of persuade, and who think they are better than we are & know more than we do. I do not pretend to understand the psychology of bullies, but surely wish they were level 5 leaders instead. Quoting from **Helen Keller:** “The only thing worse than being blind is having sight but no vision.” 

Gloria Seltzer holds Bachelor of Science and Master of Business Administration degrees from McGill University in Montreal, and a Certified Management Accountant designation. She has been in IT for over 30 years, as a Business Analyst and a Project Manager. Her current consulting assignment is with RBC Investments. She can be reached at Gloria.Seltzer@rbc.com.

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Seneca College Update

By Russell Pangborn

Some of you have lived through a few name changes of an outstanding machine over the last fifteen years. Most of you know that the AS/400, iSeries and System i are all the same platform. In contrast, a Mac fifteen years ago is still a Mac today. How does it affect us here at Seneca? I was thinking about this in my first week of classes as I was looking back at a few perplexed faces. The subject is DBT544 and takes a look at DB2 on an AS/400. We look at using embedded SQL in programs; journaling commands and commitment control; stored procedures; creating SPL user defined functions and several other interesting Database concepts.

We covered a lot of material in the first two hours, looking at how the relational database has evolved with new releases of the operating system. Listening to this in the class are students who are passionate about the iSeries architecture. There are also students present who are just passing through, getting one more subject to complete their diploma requirements. For that second category of students who are working on assimilating a lot of new information, it is not helpful that someone is intermingling three different terms to refer to the same thing. The teacher then, should just keep it simple. He could consistently use the latest name which is System i. The only problem is the pre requisite subject is IBC233 and that subject's title refers to an iSeries. We can't change the subject title without generating a whole new subject code. We also have an iSeries specialist designation that requires a new code. Changing the codes can be a problem because it needs to have some meaning and can not be the same as current codes in other departments. It also can't be the same as any

old subject code from the entire college that has been put out to pasture. At least the DBT544 outline was updated. It does not refer to a platform in the title. All iSeries references were changed to System i before the semester began.

In the class we were discussing software downloads and I brought up our tech support pages. Our tech support people, who are drowning in supporting a myriad of software and machines, have some helpful resources that unfortunately refer to all three machine names. That should be fixed to lessen student confusion. Hopefully my email request gets sent before IBM comes up with a new name. But, to be fair, it is a reality that if you are googleing some system concepts useful information can come from older pages that refer to an AS/400 as well as the other two names.

My strategy in writing this column was to intermingle the three platform names in some places where it would have been more consistent to just write System i. Since you are all pros, this shouldn't make this article slightly more confusing. It probably would to someone who had not heard any of the names. Do all of you stick to one name in all your conversations? Is it the latest one?

Anyway, my memory from the first DBT544 class was talking about something reasonably complex and being forced to mention AS/400, iSeries and System i in the same sentence. There were a few vacant looks in response. My next thought was: somebody just shoot me and put me out of my misery.

Who knows, if I am still teaching ten years from now it could be five names. AS/400, iSeries, System i, iSoltis, and Solution i.

Gee ... I hope nobody at IBM likes either of the last two names!



Russell Pangborn
is a professor at
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a Director of TUG.
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TUG MoM Location Survey

By Léo Lefebvre

Here are the numbers. At a previous Meeting of Members, on May 30th 2007, we asked attendees to tell us where they were coming from for the meeting. Feeling that we did not reach enough people, we decided to conduct a short survey on our Website. So, between mid-July and mid-August 2007, you were invited to answer a few questions to help us serve you better.

The response was great! I don't know if the chance to win a LACIE 500GB USB 2.0 external drive, designed by Porche (value approx. \$250) made any difference, but we received over 230 replies (including a few doubles—which were discarded.) Of those who answered our call, 129 left us their name and the company they work for.



Dr. Frank Soltis with prize winner Lewis Liu

The draw took place at our 23rd season opener and the Toronto stop on the "System i Direction Tour" featuring **Dr. Frank Soltis** on October 3rd at the Sheraton. If you wrote your name down, your odds were 1 in 129 to win. The lucky winner was **Lewis Liu** from Scotiabank. As a bonus, the winner was in attendance and got to carry the prize home after the meeting. Congratulations Lewis and thanks to everyone who took the time to answer our survey.

About the Survey Itself:

The three main questions in the survey were related to the two meeting locations we have been using for most of the last two years: The Living Arts Centre (in Mississauga) and the Sheraton Parkway Toronto North Hotel (in Thornhill).

We asked:

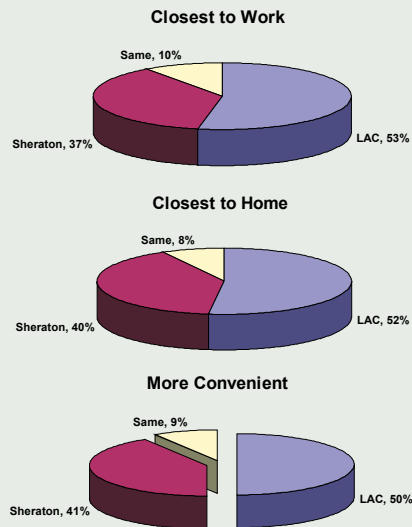
- Which location is closest to your work place,
- Which one is closest to your home, and
- Of those two locations, which one is the most convenient for you?

The **Table** below shows a quick summary of how the answers were divided (after removing the double entries).

As you can see the results are relatively similar. The Living Arts Centre (or LAC) is ahead in all categories but not by huge margins. LAC gets 117 (or 53%) of the "Closest to Work" replies against 81 (or 37%) for the Sheraton, a difference of 36. Twenty two people replied that the distance from work is about the same between LAC and the Sheraton hotel. LAC is also ahead (113 or 52%) in the "Closest to Home" category over Sheraton (89 or 40%). A difference of 24. But, then, looking at the "Most Convenient Location" answers, the difference is only 19 (again in favour or LAC). 19 is also the number of votes for "Same" in this last question.

What Will TUG Do Now?

Based on the answers submitted and from some comments we received in that same survey, it is fair to say that, for the time being, both locations should be kept in the rotation: "Is it possible to alternate and would




that make any sense? i.e., people only inconvenienced 1/2 of the time if preference is split," noted one of the participants. "Can you alternate between the two locations?" asked another one. And someone had an excellent answer: "If the program is relevant to my responsibilities I will attend meetings in either location."

Suggestions for Locations

We did receive some suggestions for the Woodbine Racetrack. (Eleven people mentioned that location.) We, indeed, got very positive feed back when we were at the track, but unfortunately, with the changes that happened about two years ago, it is now almost impossible for TUG to afford the new charges for such a place—unless the members are willing to pay for the food. Other criteria, beside costs, we look for when checking for locations are "ease of access," and "free (and ample) parking facilities."

Suggestions for Topics

Confirming what we knew for sometime already (by the number of suggestions for topics versus the number of suggestions for speakers) the topic is more important than the presenter. More than 55 people entered some topic suggestions, but only 15 suggested speakers. These excellent suggestions for topics will make scheduling for the next MoMs and TEC 2008 a bit easier.

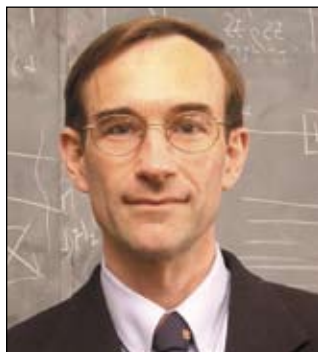
Thanks again to everyone who participated in our survey. We will put the information gleaned to good use. 

Léo Lefebvre is President of TUG. Contact him at leo@tug.ca.

Location	Closest / Work	Closest / Home	More Convenient
LAC	117 – 53%	113 – 52%	110 – 50%
Sheraton	81 – 37%	89 – 40%	91 – 41%
Same	22 – 10%	18 – 8%	19 – 9%
Totals	220	220	220

COiN Meeting Review — September 10, 2007

By Glenn Gundermann



Dr. Raymond Laflamme



Michele Mosca

The first COiN meeting of the 2007/2008 year opened with a bang at the Institute for Quantum Computing (IQC), in Waterloo Ontario. First up was COiN president **Peter Starodub** to present gifts to outgoing board members **Jim Mathie**, **Eveline Gaede**, **Ken Brown**, and **Barbara McDonald**. It is very rewarding being a board member but also a lot of work. Good work you four for everything you have contributed to COiN!

IQC

We had two fascinating speakers; **Raymond Laflamme**, a Director at IQC, and **Michele Mosca**, Deputy Director at IQC.

One interesting fact we learned was that IQC is the leader in quantum computing world-wide, and is attracting the world's best in their respective fields.

They have 16 full-time faculty members (10-11 are from outside Canada), 65 graduate students, and 20 post-doctorates. These people have a background in either: science, math, or engineering.

Other institutions are trying to catch up, including MIT, Cal Tech, etc. Right now there is some collaboration with these schools but only when beneficial to do so.

What is Quantum Computing?

We learned the concept that a classical computer follows the laws of classical physics, whereas a quantum computer follows the laws of quantum mechanics.



(Originally used by Neil Gershenfeld in a quantum computing paper published in Scientific American magazine – www.sciam.com)

We all know that our beloved computer uses bits at the lowest level. A bit can have two states; off and on, and we represent these states numerically as 0 and 1. In a quantum computer, the fundamental unit of information is a quantum bit (qubit), which can exist as a 0, 1, or simultaneously as both 0 and 1, with a numerical coefficient representing the probability for each state. This has enormous ramifications. For example, a molecule with only 50 qubits could store the same amount of information as 2^{50} classical bits (1 Petabyte).

The night was full of complex terms, which made some sense at the time but are now long forgotten for some of us. Things like quantum superposition, quantum interference, and more...

The second IQC speaker Michele Mosca is an expert in quantum cryptography and talked about computationally secure cryptography. A quantum computer has the power of cracking any existing classical cryptography, whereas nothing, including another quantum computer, can crack quantum cryptography. In 5-10 years, government and military will be using quantum cryptography. There is obviously great potential for this new science.



"As soon as I heard about quantum computing," said Dr. Laflamme, "I wanted to show that it would never work. In the course of trying to demolish the argument, I changed my own mind!"



We walked away with a brochure and an interesting CD about IQC. Thank you Raymond and Michele!

Next Meeting:

COiN's bi-monthly meetings are worth the drive for any System i professional who wants to continually keep learning.

Voice over IP (VoIP) will be the topic on November 5, 2007 at the Conestoga College meeting location.

More Information:

More information (including presentation materials and newsletters) can be found at www.coinusergroup.ca or e-mail coininfo@coinusergroup.ca for further details.



"Quantum computing is not another way of speeding up or miniaturizing the computers we're familiar with. It's something fundamentally different, based on the more exotic aspects of quantum mechanics—how nature behaves at the atomic and sub-atomic level." — Patricia Bow author of the book *Leap of Faith*

TUG and COiN have a reciprocal arrangement whereby any TUG member can attend a COiN meeting and any COiN member can attend a TUG meeting.



Glenn Gundermann is a TUG board member and chairs TUG's Technical Education Conference committee. He can be reached at ggundermann@tug.ca or (647) 272-3295.



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JACKIE'S Forum

Data Movement Tips: iSeries Navigator

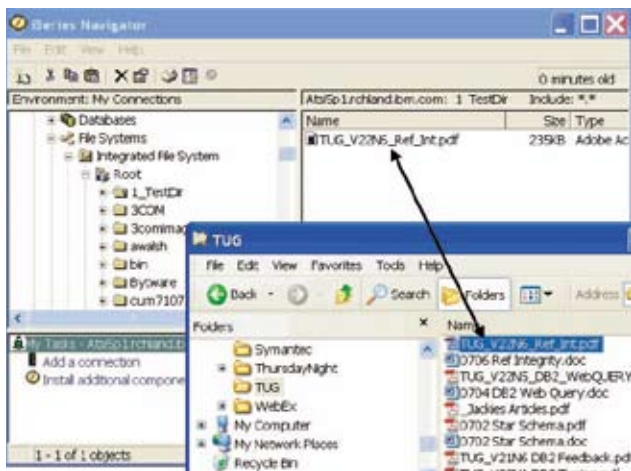


Jackie Jansen

I learned something new this week. I thought it was so interesting that I would pass it on to you and use it as the basis of this month's column.

First off, I have to admit that the something "new" I learned isn't exactly new. I just found out that I can easily copy data between PC directories and the System i using iSeries Navigator. You can simply drag and drop files between Windows Explorer and the Integrated File System (IFS). Cool.

While testing this functionality I thought that I would highlight a few other ways of moving files and tables between different systems. This could be multiple System i's or System i's and PCs.



If you want to get printer output from the System i to your PC you simply open up the Printer output folder under Basic Operations, find your spool file and drag it to your desktop. Your spool file is now a PC text file that you can do anything you want with it, including importing it into Microsoft Excel.

Cut and paste works to move tables between libraries and between System i's. Under the Database folder navigate to the library and then the table you wish to send. Right click

on the table, select copy and then navigate to the library where you want to paste the table. This could be under the database folder on a second System i.

You cannot move libraries using this technique. To move libraries (or any other object for that matter) you need to define a central system and start Management Central. You then define what is known as an endpoint system. This is the system that you wish to move your library to. From there you have two options. If you want to instantly send an object or a directory to another system you would simply navigate to that object via the IFS structure. To find a library in the IFS you need to look underneath the QSYS.LIB directory. Right click on any item or level in the IFS and one of the options will be Send. This allows you to send to any system that you have defined to Management Central as endpoint systems.

If you know that you are going to often need to send the same library or file to other systems you can go into Management Central and create a "package definition". This can be as simple as pointers to


one or many items on your system. When this "package" of items needs distributing you simply right click on the definition and say Send.

The most common way of sharing files between the PC and the System i is using iSeries Netserver. This is the server function that allows you to partake in Window's Network Neighborhood and map network drives. In iSeries Navigator locate the directory in the IFS that you want to share. Right click on it, select Sharing and

New Share. You can then view the File Shares in the IFS and map a PC drive from there. Alternatively you can use Windows Explorer, select Tools, and then map your network drive to a System i file share.

Sometimes when you look at the data in a file in the IFS you see gobbledygoop (my technical term). This is because of the age old issue of ASCII and EBCDIC. If you are moving files back and forth between the IFS and the PC, or simply using the System i as a shared network drive you can tell the system which files are basically text files that you want to be able to view or edit. To do this, right click on the Integrated File System folder and display the properties. In the properties display you can add multiple file types for your text files. For example you might add "CFG". Now you will be able to view and edit any CFG file stored in the IFS directly from iSeries Navigator.

We haven't forgotten UNIX or LINUX either. If you want to mount an iSeries directory or folder as a local NFS drive simply click on the directory in the IFS and select NFS exports and then Properties.

This column wasn't meant to be an in-depth analysis of data movement tools. It was written hoping that you might be able to pick up a few hints and tips to make life easier in this world of multiple, and often heterogeneous, systems. 

Jackie Jansen is a Senior Consulting IT Specialist. She currently works in the IBM Americas Advanced Technical Support Solutions Centre. Jackie is a frequent speaker at iSeries Technical Conferences and User Group meetings. Contact her at jjansen@ca.ibm.com.

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Upcoming Events

- ⊗ **November 5, 2007: COiN meeting**
(at Conestoga College, Kitchener)
▶ 5:00 Topic: VOIP – Voice Over IP
- ⊗ **November 21, 2007: TUG MoM**
(at Living Arts Centre Mississauga)
▶ 5:00 Speaker: **Alison Butterill**
“Why PHP?”
▶ 7:00 Speaker: **Trevor Perry**
“How to Be an IT Survivor”
- ⊗ **January 23, 2008: TUG MoM**
(at IBM Toronto Lab—to be confirmed)
▶ Speakers: **George Farr** (Product Line Manager for System i AD tools and compilers with IBM’s Rational Software Development division) plus special guests: **Tony Lewitt** (IBM 2nd line development manager) and **Wendy Toh** (IBM development executive) —both from Raleigh, NC
- ⊗ **March 19, 2008: TUG MoM**
- ⊗ **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.”
- ⊗ **May 21, 2008: TUG MoM**
- ⊗ **June 19, 2008: TUG Golf Classic**
(20th annual charity golf tournament and awards banquet)

C*RN BYTES

By Ken Davis

Oh? Cobol’s so great?
I’ll burst your bubble,
A period missed,
Means nothing but trouble.

A really great Language
Is RPG Four,
After only one program,
You’re left wanting more.

Now RUL and SOA
Live side-by-side,
Have UML and OOD,
Finally died?

Winners

The winner of the Meeting of Members Location Survey which we held on the TUG Website was won by **Lewis Liu** from Scotia Capital. (See photo, page 23.) The great prize of a 500GB external hard drive—donated by AON Re—was presented to Lewis by **Kumar Rajendra**.

Michael Marston from TD Canada Trust was the lucky winner of the September MoM door prize—binoculars from IBM Canada Ltd.

Also “winners”: retiring TUG Board members **Dan Duffy** and **Alkarim Sachedina** were presented with gifts in recognition for their years of teamwork and selfless volunteering for TUG. Thanks also to retiring TUG Board member **Richard Dolewski** who wasn’t present at the meeting. (He will get his later.)

— **Wende Boddy**

V6R1 Alert

When IBM releases i5/OS V6R1 in 2008, it’s going to be like the CISC to RISC conversion all over again. You will have to convert all of your programs and keep their observability intact. But don’t worry—IBM has created a special tool to help... (More on this next issue, in a special report from **Garth Tucker**, who will be working with IBM in Rochester, MN on the V6R1 Redbook.)

We Get Mail

Dear Wende:

Our VP of Common Ground, our Integration Competency Center Manager, plus our Infrastructure Architect, eBiz Managers, and two team leaders all attended the recent MoM with Dr. Frank Soltis. This was a great opportunity for all of us to find out, from the best source, the future of the System i (which is our core system) — an opportunity second to none! Thanks a lot, and congratulations to TUG for always bringing the best.

Julio Vallejo, Maple Leaf Foods

Dear Vaughn:

I have to tell you this because it’s funny—in our office in France, I found the latest issue of the TUG magazine in the bathroom, and it was obviously very well read! (We would like to include your magazine on our print ad schedule for next year. Please send me your latest media kit, etc.) Have a good day!

Mary Langen, ARCAD Software

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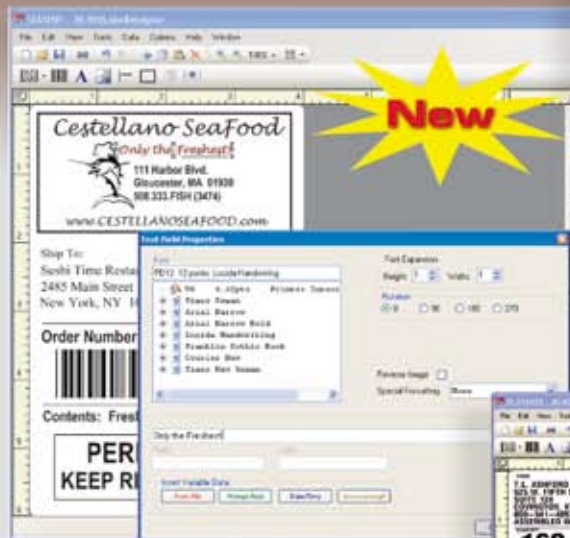
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