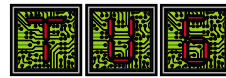


– TUG MoM Review –

The March 2003 Meeting of Members

By Jay Burford



Jay Burford

We came into the hotel from out of the cold winds and a quickly dropping temperature. Happily, **Wende Boddy**, along with **Loretta Dryer** and **Inass Moussa** from the Meeting Team, gave us the usual warm welcome and started the evening off on an upbeat note.

There was a strong turnout indicating the positive interest in the two topics being presented this evening – “In-building Wireless Networks”, and “Application Program Interfaces (APIs)”. After people had the opportunity to pick up a coffee, some TUG literature, and a copy of the handout, **Léo Lefebvre** started the meeting. He welcomed everyone and advised the attendees that there would be COMMON Back Pack bags available for the draw after the dinner break.

As the video projector provided by ASTECH Solutions Inc. had already been set up, Leo then introduced our first speaker, **Mitchell Shnier**, the President of Lance Communications, speaking on “In-building Wireless Networks”.

In-building Wireless Networks

Mitchell Shnier started with an introduction to the vocabulary of wireless networks. He explained the differences and similarities of items such as Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA), Global System for Mobile Communications (GSM), and General Packet Radio Service (GPRS). While many of us had heard some of these terms or at least the acronyms, other items were new, as were the definitions and differences.

Mitchell then went on to explain the frequency bands currently in use for wireless: 900MHz for cordless phones and proprietary wireless; 2.4 GHz for cordless phones, microwave ovens, Bluetooth, and 802.11b wireless; 5.8 GHz for cordless phones; and 5.2 GHz for 802.11a wireless.

This led into the current and emerging 802.11xx standards from the Institute of Electrical and Electronics Engineers (IEEE). Mitchell used a graph to show that while the 802.11b standard has 11 channels, you must be careful at your installation to use only channels 1, 6, and 11; otherwise there is a possibility of interference. There are also the newer 802.11a standard, and the 802.11g standard, which is not yet finalized. The 802.3af standard is almost finalized and will become very important in Radio Frequency (RF) coverage, as it will allow units to be powered over the Ethernet as well as providing for shutdown and remote reset. Some of the problems discussed were interference from such items as microwave ovens, cordless telephones, Bluetooth devices, and other 802.11b users, (both within and outside your organization).

Security problems are always a major worry. Some of the main problem areas mentioned were weak encryption (especially when there are errors in implementation), rogue access points (i.e. when someone installs **their** own Access Point on **your** LAN), and Key Management (where the “key” is never changed and/or it is not kept secret). Solutions to the security risks are Virtual Private Networks (VPNs) currently, and Wi-Fi Protected Access (WPA), which will hopefully be available soon. WPA will provide a software upgrade that will change encryption keys frequently and

Photos by Léo Lefebvre



Mitchell Shnier

automatically, and will add user authentication that will stop both rogue access points and unknown users from being added to the network. Other security measures with various standards were discussed.

The next topic mentioned was wireless public access points called “Hot Spots” which are of interest to many “road warriors”, as well as other travelers. (My daughter Meaghan, on a university exchange year in Tartu, Estonia, uses a **free** hot spot at a café in that city to talk to us on ICQ and Instant Messenger.) Carriers like Bell Canada and Telus are currently setting up these hot spots as test sights in airports, hotels and coffee shops.



Jim Sloan with Bev Russell



Mitchell Shnier

Again security is an issue. Mitchell’s advice was that a Virtual Private Network (VPN) is currently the only form of security. Another security concern is ensuring that your profile is set up to stop “shared files”. Otherwise everyone on the wireless network with you will be able to see your files. (This actually happened to a number of the wireless users at a recent COMMON Conference).

Speaking of profiles, there are many different subscription based services supplying these hot spots, and your computer profile needs to be set up to conform to the current supplier (i.e. When traveling you may require many different profiles, or considerable configuration knowledge, in order to access the technology at different “hot spots”.)

In the case of the iSeries-AS/400, the “wireless plug in” is through that “brilliant technology called Ethernet”. Mitchell discussed an application using wireless bar code scanning, where the scanners appear to the AS/400 as 5250 terminals connected through Ethernet. He provided details on the coverage, the number of access points, costs, 5250 emulation, etc.

See the details of this application in the full presentation provided on the TUG website in PDF format at: <http://www.tug.on.ca/MoMHandouts/WLANs3.pdf> or Power Point format at: <http://www.tug.on.ca/MoMHandouts/WLANs3.ppt>. Mitchell Shnier can be reached at 416-222-1430, and at MShnier@LanceCom.com. In case you missed it, Mitchell also wrote about this subject, as the feature article, in the March 2003 TUG Magazine (Vol. 18 No. 4 Page 10).

A question was asked regarding the health concerns when using “wireless” and we were advised to go to the FCC



(Federal Communications Commission in the United States) web site and review the warnings (i.e. the distance to stay away from aerials on routers etc.).

Léo Lefebvre thanked **Mitchell Shnier**, and **Wende Boddy** presented him with a gift in appreciation for his exciting presentation.

Meeting of Members

During the dinner break we all enjoyed sandwiches, veggies and dip, and delightful (all calories removed?) desserts provided by TUG. Everyone took the time to say hello to friends and acquaintances, both old and new. Prior to the second presentation, TUG President **Richard Dolewski** commented that he had attended the recent COMMON two weeks prior, and that it had been an excellent conference. He also told us that the Salary Survey would be going out on Friday, March 21st, and he reminded us

that we should sign up early for the TUG Golf Tournament on June 20th at Nobleton Lakes, as there are a limited number of spaces and they have had to turn late applicants away in other years.

Director **Glenn Gundermann** invited us to the TUG TEC on April 22nd and 23rd. He advised us that we would be able to choose from six different tracks and attend six sessions on Day 1 and five sessions on Day 2, an Expo on Day 1 with a free lunch, and a sit down lunch on Day 2 with **Randall Munson** as the Keynote Speaker. A CD with all the presentations would be provided to all attendees.

Richard and Wende then proceeded to distribute the door prizes: backpacks for laptops donated by COMMON, a book provided by **Jim Sloan** and duffel bags supplied by TUG. See the “Lucky Winners” article under “*TUG NOTES*” on Page 42 for the names of the winners.

Our IBM Liaison, **Dale Perkins**, advised us of the upcoming election of Directors. There are twelve (12) Directors of TUG, each serving two (2) years. Six (6) are elected each year. Nomination forms were due to be returned by Friday, April 4th. Ballots were then sent out and the newly elected Directors will be announced at the May 21st MoM. It was noted by **Richard Dolewski** that TUG is a volunteer organization and that it is important to get involved, so get in the running.

Léo Lefebvre introduced our second speaker of the evening, **Jim Sloan**, President of Jim Sloan Inc., to speak on Application Program Interfaces (APIs) He noted that Jim has attended every COMMON since 1979 and that he has won multiple speaker medals for his presentations at COMMON. The last time that Jim spoke at a TUG MoM was on September 19, 1993. Leo recounted the story of the how Jim, over a drink in



Jim Sloan with Hans Viirlaid , Ed Jowett and Terrance Enger (March 19, 2003).

the bar later that evening, had suggested that since IBM was dropping its Toronto Technical Conference at that time, TUG should run one to replace it. And TUG TEC was born, with our tenth coming up on April 22nd – 23rd, 2003.

Application Program Interfaces (APIs)

As **Jim Sloan** took the podium, he pointed out that **Richard Dolewski** was also a winner of a Speaker's medal at COMMON for his presentation "Testing Disaster Recovery Plans". He then reflected on changes in our world as his grandfather drove a horse and wagon, his father drove a truck. Jim himself, worked with computers, while his son was in the space exploration program. In each case, the business of the descendant *did not even exist* for the prior generation when they started their careers. Jim then provided a synopsis of his career to date. Thirty-five years ago, he joined IBM in Rochester, Minnesota and started working on RPG. Thirty years ago he started on the System 38 and spent the next twenty-five years working on the follow-on architectures. Twenty years ago he came to TUG for the first time and in 1988 he attended the COMMON Conference in Toronto. Twelve years ago he retired from IBM and started his own business. Jim then launched into his API presentation, as he pointed out, using "old fashion" overhead foils instead of a laptop and a video projector.

He used a light humorous approach and provided a full set of code for each of his examples (including a ninety-page hand-out with code in a font actually large enough to read). He pointed out that if you could follow these programs, then you would be able to do many APIs, as they all "smell" the same. The examples were clear and concise.

Instead of writing your own APIs and "re-inventing the wheel", Jim advised us that the TAA Tools package that was available would do the work for you. The TAA Productivity Tools Product currently contains over one thousand (1,000) tools. ▶

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APIs have changed over time. They have gotten smarter, and provided more of the users' requirements. The presentation makes the point that while APIs are "not as consistent as the Command interface, the general flavor is still the same". There are different types of APIs – i.e. Callable, Exit, and Unix. Normally APIs are faster than commands, and in the case of long running commands with much iteration, the APIs can be much faster.

Just some of Jim's examples listed the code for APIs to retrieve class info, access run priority in a class, error handling and aborts, exit programs, simple retrieves, creating a user space and retrieving that user space or a pointer from that space. There were also samples of a number of various list APIs. Additional information was provided on accessing objects and members, working with binary and integer fields, using "keys", and many more.

Jim stressed that the examples were for "vanilla" situations, and that it was extremely important to ensure error handling with good debugging aids. In the case of large volumes it was imperative that you test for the right answer on both the first and last entry.

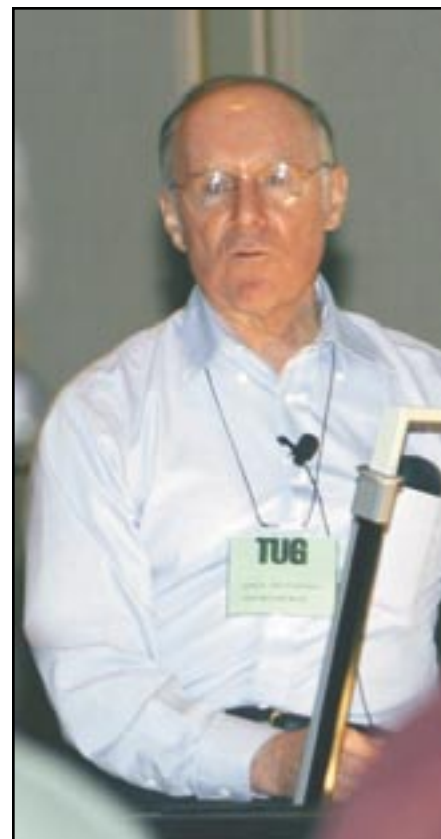
In conclusion, while APIs are not for everyone, it is clear that the system is doing less with commands and DDS, and more with APIs.

In addition, APIs are adding to the integrity and security of the System, while allowing a number of users and vendors to do some clever stuff.

Jim then thanked **Vaughn Dragland** and **Léo Lefebvre** for the "neat" picture on the TUG Magazine cover. He also presented **Wende Boddy** with a TAA cap. (When asked later what TAA stood for, Jim responded that initially TAA was the IBM assigned designation for this particular group of tools, but that it now stood for Terrifically Artistic Applications.) Wende in return presented Jim with a mounted copy of the magazine cover, and a Roots Canadian sweatshirt in appreciation for his wonderful presentation.

Complete particulars of the TAA Productivity Tools can be found at the web site <http://www.taatool.com> including details of their **contest** where you could **win one thousand dollars (\$1,000) U.S.** by suggesting the best new tool idea by December 31, 2003. Hopefully, one of our members will win!

(Note: When you attend COMMON, in addition to his technical presentations, watch for Jim Sloan's "Portrait of an Artist" presentations. They are usually given on Wednesday afternoon and they are a great break from "technical overload". Jim provides an exiting description with wonderful slides of the life and works of one of the famous artists – a different artist each conference.)




Jim Sloan

Also for additional insight on APIs, see the article by TUG eServer Editor, **Vaughn Dragland**, in the March 2003 issue (Vol. 18 No. 4 Page 6).

And Finally...

The meeting ended at 9 PM We all had a great evening and learned a lot about both a new and emerging technology (Wireless) as well as an important and developing area (APIs). With any luck we will be seeing you all on May 21st, when we will look forward to the prospect of hearing from two more experts, **Mike Warkentin** from DataMirror on "High Availability", and **Brian Bennett** from Extol on "EDI and the Internet".

I HOPE THAT YOU WILL BE ABLE TO COME TO THE MEETING? 

Jay Burford, currently a Senior Consultant at ASTECH Solutions Inc., retired from the IBM Canada Laboratory in 1997. He is a member of the COMMON Finance Committee and Manager of the COMMON Training Program, and was the Showcase Manager for the 2001 TUG TEC Showcase.



Debbie Gallagher with Jay Burford and Léo Lefebvre