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Dave Loveless Staff Award

Merran Neville <mneville@uwo.ca>



Aron Downes, a member of the ITS Onsite team, is the 2011 recipient of the **Dave Loveless Staff Award**. His enthusiastic nomination included the following remarks.

“If you are ...

Looking for a guy who loves to hunt down malware and destroy it with his bare hands? Call Aron Downes.

Looking for an unusual piece of hardware not seen since the days of the dinosaurs? Call Aron Downes.

Looking for an extra man to help with a laptop clinic or a departmental move? Call Aron Downes.

Watch email anytime an SOS goes out from anyone in ITS, Aron will respond. It doesn't matter

what department he supports, he'll help you support yours too. He shares his knowledge and expertise freely. Customers describe him as friendly, competent, very helpful, and keen.

Aron's impact on the team gives the reassurance that there is always someone to go to when all else fails. He welcomes my inquiry and not only helps to solve it but educates in the process.

Aron's genuine interest and enthusiasm for all things IT are Dave Loveless qualities. And just like Dave, Aron cares about his work, his team, his department and his clients.”

See <http://www.uwo.ca/its/doc/newsletters/InTouch/vol13-0607/sum2007.pdf> for details about the **Dave Loveless Award**.

About In Touch

Published quarterly by
Information Technology Services
The University of Western Ontario

Editor: Merran Neville

The purpose of In Touch is to inform our users about activities and events of Information Technology Services.

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We welcome your comments, suggestions, and articles.

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Notices/Information

- Scheduled System Maintenance takes place during Sundays, 3am - 12noon; Thursdays, 12am - 7am
- ITS Services Document available at:
<http://www.uwo.ca/its/services.pdf>

Need help, have a question?

- Call ITS Customer Support Centre:
519 - 661-3800 ext. 83800
- ASK ITS: <http://askits.uwo.ca/>
- Email using the web form:
<http://www.uwo.ca/its/helpdesk/question.html>

Communications Express Decommissioned

Communications Express (CE) was decommissioned on July 25, 2011. The new Convergence webmail service, which has been available for some time, is found at <http://mail.uwo.ca/>.

You can also access your Western email through a desktop client or mobile device.



Wireless @ Western

Debbie Jones <debbie@uwo.ca>

Wireless service is critically important to the student experience at Western. ITS is continuing to focus on a major wireless infrastructure upgrade to the latest wireless technology standard 802.11n which began last December with changes to our core wireless login and authentication services. Since then, ITS has completed two successful conversions to the new wireless technology in both the D.B. Weldon and the Allyn and Betty Taylor Libraries earlier this spring. Our mandate is now to complete the rollout of this improved wireless service to all buildings on main campus over the next 18 months.

The rollout project began in June 2011 and has now ramped up to full speed with 3 conversion crews working on multiple buildings at the same time. Our approach is to begin in the main campus core and to fan outwards always trying to convert higher student traffic areas as early as possible in the schedule. At the time of publishing this article, the following buildings will have been converted: Weldon Library, Natural Sciences Centre (including Taylor Library), the Law Building, the University Community Center, the Western Student Services building, and the North Campus Building. Details on the next wave of priority buildings and their conversion status can be found at <http://wireless.uwo.ca/>.

In parallel with this technology upgrade, ITS is also working on a communications plan to encourage students to access the "uwosecure-v2" wireless network rather than the traditional public "uwo" network which is being scaled back for both security and capacity reasons. All of these changes, along with other capacity upgrades to internet service access, are designed to collectively improve the student experience with wireless service. There will be further campus wide communication about these changes coming in the fall when our students return to school.

Twenty Five Year Service Recognition

Four ITS staff were recognized at the summer Staff meeting and lunch for their twenty-five years of service to the department.

Those recognized were Chuck Reid - Data Centre, Network and Storage Operations; Debbie Jones - ITS Director; Stan McFadden - Facilities and Cable Infrastructure; Judy Steward - Team Leader, Helpdesk and Switchboard, Customer Support Centre.



(L-R): Chuck Reid, Debbie Jones, Stan McFadden, Judy Steward

Security Team News

Jeffrey Gardiner <gardiner@uwo.ca>

Recently, ITS realigned the duties of a number of staff members to create an Information System Security Group within ITS tasked with the responsibility of assisting in the protection of Western's network and Information System infrastructure. This group consists of Rich Whitcroft, Chris Poblocki, Ed Zuidema, Ed Paczkowski, and Jeff Gardiner, who leads the group.

The responsibility to secure Western is something akin to protecting the IT infrastructure of a small city (including a Wide Area Network or WAN). In these efforts, we have many partners outside of ITS who also assist us; such as Systems or Network Administrators employed in faculties, departments, affiliated colleges, as well as other Information Technology professionals from our ITS Helpdesk and Network Operations group.

Western experiences millions upon millions of attacks per day, on a variety of services. For example, over the summer, with many students

gone, we've sustained on average more than 1.5 million brute force attacks against the Remote Desktop Protocol (RDP) Service many members of Western rely on to obtain outside access to internal resources. We've been working to mitigate these attacks and safeguard the service by moving access to the service into Western's Virtual Private Network (VPN) ROAMS.

Safeguarding our campus infrastructure requires us to respond to sensitive IT related incidents by forensically investigating attack paths, account or server compromises, and network abuses, etc. This type of work also extends beyond mere incident response by requiring us to analyse and investigate anomalous network patterns across the campus network or at our gateways.

More pro-actively, we assist with the development of security related policies or best practices, as well as with the design and deployment of security related solutions which

safeguard sensitive data, or other IT resources within Western. An example would be our on-going campus wide deployment of PGP (Pretty Good Privacy) to provide cryptographic support to researchers engaged in research which uses sensitive, or highly sensitive data. Related to this is our effort to assist others with new software and hardware deployments where the interest of security is at the heart of the deployment.

To validate our work, we perform internal and external penetration testing of our own web applications, servers and infrastructure. If we don't try breaking into our own systems to see how they stand up, we won't know how much success or lack of success our curious crackers (sometimes mislabelled 'hackers') are experiencing when they probe us.

In all, our work is very interesting, very technical, and very rewarding. We look forward to engaging the community and making a difference in security at Western.



(L-R): Jeffrey Gardiner, Chris Poblocki, Rich Whitcroft, Ed Paczkowski, Ed Zuidema

The Open Experience

Chromium: The Other Open Source Browser

Paul Lukasewych <plukasew@uwo.ca>



For many years, I have found it helpful to run more than one web browser at a time; stability and security are two of the main reasons for this.

- Some browser plugins are notorious for crashing, so I like to run sites that require them in a separate browser. That way, if the plugin crashes, I don't lose my main browser session.
- I also like to open a second browser whenever I'm doing something sensitive, like online banking, and then close that browser right away after I'm done. This helps protect against cross-site scripting attacks.
- A third reason to run multiple browsers is to log in to a single site with multiple user accounts. I do this daily with OWL.

Although most web browsers can be downloaded for free, this doesn't mean they are open source. Of the major, well-known browsers (Internet Explorer, Firefox, Chrome, Safari, Opera), only one, Firefox, is open source. Fortunately, in reality things aren't so black and white. Chrome and Safari are both built on an open source technology called WebKit (which was started by Apple as a fork of an existing open source project, KDE's KHTML). While you can manage to run WebKit as a standalone browser on a Mac, it's not so easy on other platforms. On the other hand, Google provides a complete open source browser based on WebKit, called Chromium, on all major platforms.

Chromium versus Chrome

You may wonder why one would choose Chromium over Chrome, and what the difference is. Chromium is the cutting-edge, development build. Google takes a stable version of

Chromium and makes some changes to it to turn it into Chrome. We don't really know exactly what all the changes are, since Google doesn't release the code for Chrome. From my point-of-view, Chrome has two big downsides: you can't improve it yourself, and you can't remove things that you may not want. For me, this is enough to prefer Chromium. It has performed quite well as my alternate browser for quite some time.

If you wish to try Chromium for yourself on Mac or Windows, visit the following URL, where you can download the latest build for Windows or Mac (look for the folder with the largest build number):

<http://build.chromium.org/f/chromium/snapshots/>

If you're on a GNU/Linux system, Chromium should be in your distribution's software repository.



VoIP Deployment Update

Mona Brennan-Coles <mona@uwo.ca>

VoIP deployment is a multiyear project (2008-2011) with two components:

1. The Power Strategy Closet Upgrades which includes providing UPS and generator power, upgrading closet electrical and heating, ventilation and air conditioning (HVAC) as needed and replacing existing network switches with ones able to provide power to the IP telephones. Physical plant is managing the power, electrical and HVAC upgrades. ITS is managing the UPS and network switch deployments.

Year Two (2009-2010)

Completed:

Boiler House
Cronyn Observatory
Elborn College
Faculty of Education
(except for portable)
Law Building
Social Sciences Building
Spencer Engineering
Thompson Engineering
University Community
Centre
Weldon Library
Western Sciences Centre

Year Three (2010-2011)

Completed:

3M Center
B&G (South)
McIntosh Gallery
Middlesex College
Music Building
North Campus Building
Somerville House
Staging Building
Talbot College
Thames Hall
University College
Visual Arts Centre

Year Three (2010-2011)

In Progress/Planning:

Boundary Layer Wind
Tunnel
Mogenson Building

In Renovation Project:

Lawson Hall
Physics & Astronomy
Stevenson Hall

Year Four (2011-2012)

Completed:

357 Windermere Road
363 Windermere Road
367 Windermere Road
Alumni Hall
Alumni House
Alumni Western Centre
Bayfield Hall
BooksPlus (1153 Richmond)
Collip Building
Elgin Hall
Esses Hall
IVEY Business School
London Hall
Medway Hall
N.C.M.R.D. (L.N.C.P.M.)
South Valley Building
Sydenham Hall
Stiller Centre
TD Waterhouse

In Progress/Planning:

Brescia University College
Continuing Studies (Citi Plaza)
Delaware Hall
Lambton Hall
Saugeen-Maitland Hall
Westminster Hall
Westminster Property

2. When a building is ready for VoIP, **ITS installs grey IP telephones** and removes the black digital phones.
IP Telephone Installations Completed

3M Centre
 Advanced Facility for Avian Research
 Biological & Geological Sciences
 Biotron Research Building
 Chemistry Building
 Claudette MacKay-Lassonde Pavilion
 Clinical Skills Learning Building
 Cronyn Observatory
 Dental Sciences
 Elborn College
 Faculty of Education Building
 Graphics Building
 Health Sciences Addition
 ICFAR
 Kresge Building
 Law Building

Material Sciences Addition
 Medical Sciences Building
 Middlesex College
 Molecular Biology Building
 Molecular Biology Laboratory
 Music Building
 North Campus Building
 Robarts Research Institute
 Siebens Drake Research Institute
 Social Science Centre
 Somerville House
 Spencer Engineering Building
 Staging Building
 Support Services Building
 Talbot College

Taylor Library
 Thames Hall
 Thompson Engineering Building
 TRAC
 UCC
 Visual Arts Centre
 Weldon Library
 West Valley Building
 Western Sciences Centre
 Western Student Support Building

Voice Quality

Mona Brennan-Coles <mona@uwo.ca>

While the fundamentals of a telephone remain unchanged (a micro-phone to speak into and an earphone to hear the other person) since the first phone call (Alexander Graham Bell to his assistant, Thomas A. Watson on March 10, 1876), the technology has changed a great deal. As technology has changed, so has voice quality – improving as a particular technology matures and initially decreasing when a new technology is introduced. When cell phones were first introduced, call quality varied and dropped calls were not infrequent. As cellular networks and devices improved, so did call quality and stability until today “crowd noises” are often the only indicator someone is talking on a cell phone.

When VoIP was introduced in the mid nineties, call quality was similar to that of cell phones. Today, major voice quality issues have long since been resolved and VoIP traffic can be prioritized over data traffic. Some people compare the call quality to being face to face with the person they are speaking to.

Then why do some people experience call quality issues with VoIP and others don't?

- Where are you calling?
 - o Call quality is affected by Western's network, the internet and the destination. Western controls its own network quality, bandwidth, etc. but cannot control the internet or the destination.

- Audio quality is subjective and some people are more sensitive to changes in audio quality than others.
 - o The “new” Cisco phones have more than twice the audio bandwidth than the “old” Nortel phones.

If you would like to talk about this further, please contact me at mona@uwo.ca or ext.82510.

Instructional Support Team News

Sakai New LMS

Deanna Grogan
<owlflightplan@uwo.ca>

WebCT, the online learning environment used by Western faculty, staff, and students since 1998, will not be supported after January 2013. The vendor, Blackboard Inc, will not provide any further updates, enhancements, or technical support beyond this date. Furthermore, any infrastructure updates or maintenance to local WebCT servers and databases could render an unsupported WebCT environment non-functional.

This presented an ideal opportunity to review Western's learning and teaching needs and plan for the future. The OWL Flight Plan project was initiated in the spring of 2010 to evaluate the campus requirements for the new version of OWL. Sakai has been selected to replace WebCT as the University of Western Ontario's learning management system (LMS).

Selection Process

To make the best choice for the Western community, the OWL Flight Plan project team gathered input and feedback from faculty, staff, and students and evaluated two LMS options. That information guided the selection of Sakai. Both the community and the project team were impressed by the system's reliability and ease of use. This open source LMS is developed and supported by more than 350 educational institutions worldwide.



The Sakai Foundation

The Sakai Foundation, a non-profit corporation that encourages community-building and provides its members with an institutional framework for their projects, ensures stability to the product moving forward. Sakai's transparency and collaborative philosophy allows Western to participate in the development of the core product and the future direction of the LMS. Initial development of Sakai was funded by the Mellon Foundation in 2004 through the Sakai Foundation. Its original institutions included the University of Michigan, Indiana University, Stanford University, and the Massachusetts Institute of Technology.

Commercial Affiliate

Going forward, Western will contract a commercial affiliate to help with implementation. A small pilot of the new OWL is planned for January 2012 with a full-sized pilot during the following summer. WebCT will continue to be used for the coming 2011 academic year. For updated information on the project, visit the OWL Flight Plan website at <http://webct.uwo.ca/owlflightplan/>

Final Grade Export Tool Improvements

Shawn Foster <sfoster9@uwo.ca>

OWL's Final Grade Export tool has been updated to improve the experience of exporting final grades from OWL to the Registrar's Office.

To help instructors and department administrators find courses more easily, the course lists are now divided into academic terms. A filter bar at the top of each page allows users to filter on any keyword or number in the course section's title to narrow the results further. Revision export PDFs now list all of the students in the class with the revised grades highlighted in bold, and also include statistics.

Users who prefer the original design of the Final Grade Export tool can toggle the interface to "Classic View" (or change back to the new design, "Default View") at any time.

The improved design was released at the end of June. Already, the tool's new design has received positive feedback from users submitting spring and summer term grades. Instructors and department administrators can access the Final Grade Export tool from the My OWL page after logging into OWL.

For more information, see the documentation for instructors and department administrators at <http://www.uwo.ca/its/itrc/gradeexport/>

ITRC Project: Visualization of 3D Models in RealXtend

Matt Devlin <itrc@uwo.ca>

Since 2006, graduate students in the Department of Anatomy & Cell Biology have worked closely with Dr. Tim Wilson to produce a collection of 3D anatomical models. Using data collected from MRI & CT scans, 2D images are traced with a program called Amira to form a 3-dimensional re-creation of various structures in the human body. Former ITRC student consultant, Yang Ding, partnered with Dr. Wilson to assist in the labour-intensive process of creating and effectively managing these data sets. See In Touch Vol. 14 No. 4 <http://www.uwo.ca/its/doc/newsletters/InTouch/vol14-0708/sum2008.pdf> page 9 "The Anatatorium Project."

Using stereoscopic projectors (two identical projectors stacked together displaying left and right eye polarized images, thus creating an illusion of depth), these data sets have been implemented into both undergraduate- and graduate-level courses. In 2008, it became clear that, although the educational benefits afforded by this technology were great, there was a significant logistical impediment: this educational tool could only be used within the physical confines of the Anatatorium, a room in the Arthur & Sonia Labatt Health Sciences Building, that holds the stereoscopic equipment. To combat the restraints of the technology, Dr. Wilson and Yang Ding began work on a supplemental project to bring the 3D data sets into an online environment accessible anywhere, at any time. Not only was the project intended to be accessible, it needed to be social; research shows that social educational environments are more effective for individual and group learning.

In summer 2009, as Yang Ding was preparing to leave his position in the ITRC to pursue graduate studies at McGill University, I was brought on to take over the project. After extensive research and preliminary testing, an open source program called RealXtend was chosen as the best tool for our intended goal. Not only did RealXtend offer many of the same educational benefits as popular virtual worlds like Second Life, it was also free and much more robust; while Second Life demonstrated all of the requirements for the project, it did not allow for 3D models to be imported.

Before constructing the virtual anatomy lab, I worked with Dr. Carole Farber, Faculty of Information & Media Studies, as well as Dr. Wilson, to develop an undergraduate course about virtual worlds in an educational setting. I researched and constructed my own syllabus, including all of the weekly readings and assignments, and used this opportunity to further both my academic career and the project itself.

From what I learned about effective design in virtual environments, the role sociability plays in education, and the larger implications of e-learning, I constructed an interactive virtual anatomy lab. The programming language Python was used to place several 3D models in the virtual lab and to script in RealXtend to allow users to pull complex 3D models into their smaller parts to aid in spatial comprehension.

Dr. Wilson's encouragement to submit the project to the Experimental Biology Conference in Washington D.C. (April 9 - 13, 2011, <http://www.the-aps.org/meetings/eb11/>) led to

my participation in the multiple poster presentation sessions and gave me the opportunity to bring work done by the ITRC to an international audience.

Dr. Wilson believes "the future is now and environments like RealXtend are making increasing inroads into undergraduate curriculum. With preliminary steps like those taken here, technology specialists, educators, and students will be in the position to not only make use of the technology but also to judge whether it is of pedagogical effectiveness."

Turn to page 10 to see an image of 3D models in RealXtend. This image displays an avatar interacting with extremely small deeper human brain structures, magnified many times in this view. The avatar is able to move the structures to view them from multiple aspects.

Matt Devlin joined the ITRC in May 2009 and has been a principal videographer for many ITRC Video assignments, including Spring and Fall Perspectives for the Teaching Support Centre, and other video projects.

Matt graduated in the spring from MIT and his future plans will take in some interesting travels.

Information about the ITRC student consultants is online at <http://itrc.uwo.ca/studentConsultants.html>

Image in RealXtend displaying a user-controlled avatar and deeper human brain structures.



ITS Information

Network Backup Service

For network backup and recovery service, please contact the ITS Legato Group:

Email: legato@uwo.ca

Web: <http://www.uwo.ca/its/network/backup.html>

ITS Open Hours

Building hours and hours of opening for the various areas of ITS are listed on the web at the following location.

Web: <http://www.uwo.ca/its/about-its/hours.html>

ITS Mission

We are committed to delivering the best information technology services and solutions in support of the teaching and research missions of the University.

ITS Vision

To be recognized as the preferred source of information technology services and solutions within the campus community and recognized as one of the leaders in the North American university community.

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Administration Office	519 - 661 - 2151	ext. 82151	FAX 519 - 661-3486 ext.83486
Computer Accounts Office	519 - 661 - 3800	ext. 83800	accting@uwo.ca
Computer & Network Operators	519 - 661 - 3525	ext. 83525	operator@uwo.ca
ITRC	519 - 661 - 2111	ext. 85513	itrc@uwo.ca
ITS Non-Credit Courses	519 - 661 - 2151	ext. 82151	its-courses@uwo.ca
Dial-in Line (all modem speeds)	519 - 640 - 5305		
E-mail Postmaster	519 - 661 - 3800	ext. 83800	postmaster@uwo.ca

Facilities

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ITS Training Lab	SSB 4230	NSC - 110	NCB - 105,
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			SSC - 1000, 1012, 1032

