

The Fight to Control SPAM Continues: New Techniques by Spammers Increase Volume of Messages

By Michael Young, ITS Technical Support Services, michael.young@rit.edu

[Editor's Note: This information was published recently in the list serve ITSTech and is re-published here to give readers some information about the behind-the-scenes challenges of fighting SPAM. Email coming into RIT is filtered, yet SPAM does make its way onto campus through the creative means of spammers. The constant vigilance of decreasing the volume of SPAM email to campus users is the responsibility of Mike Young, author of this article]

As many people are aware, the face of spam has been continually changing. Since we implemented the mySpam service, we have enjoyed relatively spam free mailboxes – until recently.

This change recently has been due to increases in the use of random-content, image based spam. The entire content of the message is randomized, including the addresses, source host, and routing information. The image itself contains the spam message.

Up until recently, some software, including Brightmail (mySpam) was able to use image analysis techniques to determine that the message was spam. Sometimes they were stopped simply by obtaining one sample and using a checksum against future samples to block them. Samples didn't change frequently so this was effective for a while. Additionally, the source IP was often added to black lists after the "first run" and later spam runs weren't as effective against services like Brightmail.

Over the past several months this has changed, due to a couple of reasons.

The first reason is a continued increase in exploitation of computers worldwide. This has increased the pool of new IP addresses that could be used for spamming. This reduced the effectiveness of the black lists. With a large base of compromised hosts, each new spam run (as often as hourly) can use a different new source host. It takes anywhere from 15-30 minutes, at best, for one of these new hosts to get on black lists. In the meantime, a lot of spam gets through if it can't be identified otherwise.

The second reason is a continued increase in the sophistication of the spam messages themselves. They are no longer simple images, used over the course of several weeks. They are now images generated for each spam run, often hourly. In the past couple of months we have

seen the introduction of different colored backgrounds, to “grainy” backgrounds, and now animation in the image itself. These techniques have also increased the overall size of the messages from around 10Kb each to what we saw recently as 85Kb each.

So what does all of this mean for us? The combination of these two things is making it difficult to stop the "new spam."

Since the beginning of September, overall increases in spam targetting students combined with an increase in the stock advertisements that use the randomized images have caused intermittent delays. These have appeared in different locations, although the most significant has been in the spam appliance itself. During some of the larger spam runs, the mySpam service has started to backlog while delivering email to its quarantine. Once the backlog grows to a certain point, it starts to affect the good mail too. We've made some tuning changes to combat this and had pretty much resolved these not too long ago.

In mid-October we began to see a backlog again. This was partially due to the need for database optimization in the quarantine, but also due to the increasing size in the image based spam. With three 0-day exploits last month, and a rush on exploitation before recent patches, volume is at unprecedented levels. Once the database optimization was completed, all processes caught up again until recently.

A new spam run started for the “stock spam” using animated .GIF files. What was unusual about this was the introduction of an extended animation which has increased the size of the message from around 45kB at one point to 85Kb most recently. The increase in sophistication prevents the mySpam service from stopping it. The sudden increase in size and volume overwhelmed the internal email gateway. This started a backlog of email, not to the quarantine, but to our internal servers.

When we identified the problem, there were only about 6,000 messages backlogged – taking an extra two hours or so to deliver. Throughout the afternoon, we made some changes to way email is handled to combat this growing problem. This includes some tuning, a routing change, and the implementation of a new filter that is, at least for now, catching a great deal of this image based spam.

This new filter is based on some information that I came across on one mailing list. In a sample of 2.5 million messages that it stopped at this site, there were no false positives. For RIT, the new information resulted in stopping more than 1,000 spam per hour.

The combination of all of these changes is allowing mail to flow freely again.

Many in F & A Family Nominated in Individual and Group Categories for 2006 Staff Recognition Awards

By Michelle Cometa, ITS Administrative Services, michelle.cometa@rit.edu

Staff members at RIT were compared to the 2006 Detroit Tigers on their drive to the World Series title at the recent Staff Council Recognition Awards. The major league baseball team and the RIT staff were recognized for their tenacity, cohesiveness and spirit. In recognition of these qualities – and more - the 10th annual awards ceremony highlighted more than 40 individuals or teams on campus nominated for their service excellence.



For the first year, ITS took home one of the crystal trophies. The **ID Replacement Project Core Team** (*pictured above*) won an award for Staff Excellence. Recognized for the successful implementation of transitioning student and financial record systems from using social security numbers as unique identifiers, the core team, *and* full task force of 65-plus members, began a change in the way important data is kept at RIT. The yearlong ID Replacement Project touched all campus departments and colleges. The project team led the transition of more than 900 databases from using SSN to using new University ID numbers.

Lyn Kelly (*right*), Associate Controller for Finance & Administration (F & A) was also recognized in a Staff Excellence individual category for her professionalism and financial stewardship. A long time member of F & A, Lyn Kelly was praised most of all for her integrity and respect for her customers as well as her staff.



Paula Guadalupe (*left*), a member of the Facilities Management Services team and a recognizable face within campus buildings was also recognized for exemplary customer service. She received a standing ovation when her name was announced as winner of another of the four Staff Excellence awards.

In the 10 years since the Staff Recognition Awards first began, 931 individuals have been nominated and 184 have been distinguished for their service to RIT. In testimonials from the nomination forms submitted to Staff Council, many customers saw their nominees as ‘noteworthy for their high quality services’ and ‘true friends and colleagues.’ When nominees interacted with customers across campus, many were taken into customer groups and considered part of the team.

Congratulations to all nominees, especially those in the F & A family:

Individual nominees:

Sean Cartwright	Judy DeCoursey
Candice Fischbach	Debra Fitts
Janice McGraw	Fran Versace

F & A members of the following *teams* nominated: 2006 United Way Steering Committee, The Brick City Catering Staff and the ITS HelpDesk team.

Photos courtesy of Elizabeth Lamark, [ETC Photo](#).

Major Software Upgrades from Microsoft: Office 2007 and Vista to be Released Soon

By Dan Rosica, ITS Distributed Support Services, dan.rosica@rit.edu

ITS has been waiting, like so many others, for the release of the newest operating system (OS) Microsoft Vista from the software giant. The news of late has been more about the time between new OS releases from Microsoft than about the newest features to be found in what they are calling “a breakthrough computing experience.”

Two major upgrades will be available to Microsoft PC users in the next couple of months: Microsoft Vista and Microsoft Office 2007. Vista is an upgrade to the Windows operating system, currently Windows XP Pro. Office 2007 is the latest Microsoft Office product, and is an upgrade to Office 2003.



The earliest releases of Vista have showcased new organizational features, graphical improvements and improved search functions. Underlying all of the new ‘bells and whistles,’ Microsoft has worked to address security concerns as well.

The release date for Vista is estimated to be late November, early December – in time for holiday purchases. Microsoft has yet to give a specific date, but after five-years of development and testing, consumers have had the chance to look into the product through beta testing and pre-release opportunities.

For RIT, planning is underway to determine how the new software will be rolled out to campus. There are several factors that will determine how RIT customers transition to Vista – particularly for older model PCs and those who expect to make purchases of computers in 2007. Newer

model PCs will be Vista-capable, meaning the software will be easily installed and the full user experience will come across. For older models, there are some minimum hardware requirements:

- 800 MHz 32-bit (x86) or 64-bit (x64) processors
- System memory: 512 MB
- HDD at least 20 GB
- HDD Free Space at least 15 GB

For more information about the minimum requirements for installation of Vista, the Microsoft web page has an extensive list:

<http://www.microsoft.com/windowsvista/getready/default.aspx>

For Office 2007 system requirements, visit

<http://office.microsoft.com/en-us/suites/HA101668651033.aspx>

A project team has been formed, made up of campus representatives, to assess who can easily transition to Vista because they have met the minimum requirements and have computers that will be capable of operating effectively with the new software. They also will be able to assess those that cannot transition immediately because it would be more cost effective to purchase newer model computers already Vista-capable. Additionally, the project team is evaluating the extent of training and guidance needed for the newest features of Vista.

The **Microsoft Campus Agreement** is also being reviewed as part of the transition process. The negotiated agreement includes upgrades to the different versions of software from Microsoft. This upgrade to Vista will also be included as part of the campus agreement.

Customers will ask if they should upgrade as soon as the software is released. It's usually wise to suggest prudence when it involves such an integrated part of most users daily mode of communication and documentation - their computer! We have been experiencing the Beta version the last few months with positive results. Shortly after Vista has been on the market for a couple months, many faculty and staff with newer computers will consider the free upgrade that our MS Campus Agreement allows.

“Many will get the most out of the new operating system by having it preinstalled in their next new computer purchase,” said Rosica. “Please keep in mind, this operating system has many similarities to MS Windows XP Pro, though it also has some significant changes. Be prepared to spend some time learning the new system. If you don’t have the interest in dedicating that time, you may want to hold off for a few more months.”

More information about the planned roll out of Vista and Microsoft Office 2007 will be detailed in the December issue of ITS eNews. Contributions for this article came from Mark Chast, ITS Distributed Support Services based in the College of Engineering and Michelle Cometa, ITS Administrative Services.

John Whitely Retires from RIT Celebrating 35 Years of Service

By Michelle Cometa, ITS Administrative Services, michelle.cometa@rit.edu

At his recent retirement celebration, John Whitely, director of Institution Research and Policy Studies (*pictured, with wife Jette*), shared some of the many changes he has seen over his 35-year career at RIT. Joining the college as an employee in 1971, Whitely recalled a campus with no personal computers, a student records system consisting of individual data cards in file cabinets, a downtown campus and a continuing education department on a semester system, rather than a quarter system.



“I remember 54 international students [at RIT] in 1964 when I was a student,” Whitely said. “Now there are more than 2000. RIT has gone from competing for local students, to competing globally.

“Progress doesn’t happen by chance. It happens with great leaders,” he added as he named the last four presidents – Dr. ’s Mark Ellingson (’36 – ’69), Paul Miller (’69-’79), Richard Rose (’79 – ’92)) and current president, Dr. Albert Simone (’92- present) as people who took RIT from local technology school to global presence during the years he was at RIT. In that time Whitely worked closely with those leaders, providing his own leadership as Registrar and then Director of Records, which eventually evolved into the current Institutional Research and Policy Studies (IRPS) group. This group is now a part of the Finance & Administration (F & A) Division, after being a part of the ITS Division for several years.

Speaking on behalf of the F & A division, Sr. Vice President James Watters praised Whitely for his years of service highlighting several college and career items on his original application from 1971. He recalled that Whitely began his connection to RIT as a student in 1964, received a degree in printing management, served several years in the Army and returned to his alma mater to become a part of the administrative team.

“I have been pleased to work with John. He is a true gentleman who has a dedication to his job and sincere appreciation of the people he works with,” said Watters. “He’ll be remembered for a long time at RIT.”

Prior to his retirement Whitely began a list of things he ‘must do’. As a parting gift Whitely was given a digital camera, acknowledging that photography was high on the ‘must do’ list. He thanked his wife Jette, who attended the celebration, and recognized long time IRPS staff, Robert Bowen, Alice White and Dan Cosper for the work they have done together for RIT. “Thanks to all of them,” he said, “I’ve truly received more than I have given.”

RIT Hosts Second Annual Explore Rochester IT Symposium

Local CIO Group Promotes IT in Upstate New York

By Michelle Cometa, ITS Administrative Services, michelle.cometa@rit.edu

For the second year in a row, RIT hosted more than 100 students in information technology related fields, at a symposium to promote Rochester as **the** place to be for future IT careers. Explore Rochester IT was developed to showcase some of the top companies in the area and the numerous IT opportunities at each.



"Rochester, NY...A Great Place for I.T."

In the last several years, many jobs and people have migrated out of Upstate New York. There has been an equal push by the Explore Rochester IT group to do what they can to retain IT talent as students graduate from local colleges. Ten CIOs from local companies presented their organization's use of technology and the opportunities in the IT field that can be found within each.

The panel, consisting of "high-powered, blue ribbon personnel," according to Dr. Al Simone who opened the session, included

- Steven Graham CAI
- Evon Jones, Bausch & Lomb
- Kim VanGelder, Eastman Kodak
- Patrick Neville, Energy East
- David McDowell, Excellus Blue Cross/Blue Shield
- Steven Ward, Frontier/Citizens
- Dan Conzano, Paychex
- Donald Reeve, Wegman's
- Diane Barbour, RIT
- David Lewis, University of Rochester



Students in the audience asked the CIO panel about typical paths to a successful IT career. "There's no one path," said Energy East's Neville in response. He added that the time spent for specialization in any one technology area actually limits an individual. The need to enhance IT skills with project management, communication and customer service experience is important. Students also had an opportunity to meet with IT employees from each company.

More information about the Explore Rochester IT program, including its internship program available to junior and senior level students, can be found at their website:

<http://www.explorerochesterit.com/home.html>

ITS Newsletter Becomes Part of RIT Digital Media Library

Online library resource promotes RIT scholarship, research and news

By Michelle Cometa, ITS Administrative Services, michelle.cometa@rit.edu

While ITS has moved away from a printed monthly newsletter to an online publication, the back issues of *ITS News* will be preserved for posterity. Print issues from 2002 through 2005 have been posted in the Digital Media Library (DML) in an effort to make these items more accessible to RIT readers. The most recent issues, including the new online format, will also be included in the DML. *ITS News* is now part of a growing list of college and academic division communities in RIT's institutional repository.

Readers connect to the Digital Media Library through Wallace Library's website or directly: <http://ritdml.rit.edu>. The DML uses a hierarchical system for organizing submitted items. For ITS News issues - Link to *Communities* and scroll down to the area called *Additional Communities*. Click on the *Finance & Administration* Community link. ITS is its own sub-community with the *ITS Newsletter* having its own collection. You can browse the material by date, title, author, or by a keyword search. Alternatively, using the search box on the DML homepage is a quick method to access *ITS News*.

About the DML

The Digital Media Library has been growing since its inception in 2002, said Marianne Buehler, Head of Publishing and Scholarship Support Services. The Library staff envisioned a single search point where RIT-created digital documents, images, and media could be accessed. Using DSpace open source software and the Web, the DML is administered by the Library with content controlled by the colleges and individual *Communities* within. The DML is a growing and dynamic electronic resource for showcasing the scholarly work of the RIT's eight colleges, while also providing a central 'home' to archive RIT created publications, such as *news&events*, *ASC Quarterly*, *Signatures*, *Test Targets*, *The Scholarship Report*, the *NTID Research Bibliography*, and more. In the near future, there will be additional submissions that will incorporate issues of the *Reporter Magazine* from 1955 to the present.

In a brief interview with Marianne Buehler, she related some of the highlights of the DML and its direction for the future:

ITS eNews: What is the Digital Media Library?

Marianne Buehler: The Library defines RIT's open access institutional repository in a broad sense as an archive that houses peer-reviewed intellectual work, related to scholarship and teaching within the college *Communities* while also including materials representing RIT's cultural, historical, and administrative documentation. The level of peer-review is based on a continuum starting at a basic level of faculty-to-faculty or faculty-to-student to the classic journal editor review.

ITS: Who can contribute to the DML?

MB: RIT faculty, staff, or graduate students that have scholarly, cultural, historical, or administrative material may post in the DML. To self-post, first login to the DML: <https://ritdml.rit.edu/dspace/RITpassword-login>, then contact Marianne Buehler, who will make arrangements to add you to the workflow. The Publishing and Scholarship Support Center posts the majority of institutional repository materials and is glad to assist. We also encourage faculty recommendations of exemplary undergraduate work to submit to the DML.

ITS: What types of materials can be submitted?

MB: Digital university repositories typically preserve and showcase a university's research (articles, lab reports, newsletters) theses/dissertations/Capstone Projects, presentations, images, historical documents, teaching materials, and administrative documents, such as Academic Senate minutes and committee reports. All items are PDFed with optical character recognition software (OCR) so that they are keyword-searchable and retrievable, deriving maximum benefit from the repository.

ITS: What are some of the most viewed items?

MB: In the next upgrade of the DSpace software, there will be counters for each item to enable a tracking system of how many times an item is viewed or downloaded. There have been researcher requests from England, New Zealand and other distant locales to be in contact with RIT authors for various reasons relating to viewed scholarship.

ITS: The newest entries?

MB: Some of the recent submissions are back issues of *ITS news*, College of Science faculty articles, NTID faculty dissertations and student Masters Projects, a CIAS faculty award-winning website, and Academic Senate documents.

ITS Website Takes On New Look

If you've gone to the ITS website recently, you may have noticed a few changes to the site, from a more subtle look to some notable content revisions. In the last several months, staff has worked to emphasize services offered and products supported.

<http://www.rit.edu/its>

Some distinct changes are in the re-work of main areas such as Services. This page has been divided into sub-categories of Products, Services and complementary items.



Within some of the areas, for example, Communications Services, the link takes you to a page with general information about the Telecommunications Services and Networking groups which recently merged. A side, navigation bar with itemized content for the site is to the right side of the main page to be sure that the most important information is "above the fold" – (in the main viewing pane so a reader would not have to scroll too far down to find pertinent information.)

The ITS website will continue to undergo further renovations to ensure that the information provided serves customers well. To provide input about the website, email macits@rit.edu.

University Web Services Team Grows

Three new staff members were recently welcomed to the ITS family and begin duties on the University Web Services team.

Chris Leckinger joins the team from SUNY Geneseo where he performed several roles including being in charge of the Geneseo web presence, the myGeneseo portal and the college's content management system. Chris will oversee the Web Server Upgrade project.

Leah Perkins (formerly Perlman) has been a member of the RIT community for 10 years where she has served many roles on campus. Most notably Leah has been the Associate Director of Online Learning, Assistant Dean of GCCIS, and has also worked for Part-time and Graduate Enrollment as well as the Co-op Office. Leah brings a wealth of business and technical solution knowledge to ITS.

Billy Vazquez joins ITS after 6+ years of consulting with many organizations including Kodak, Genencor and the Navy. Prior to that, Billy spent four years with Frontier Corporation. Billy brings a significant amount of design, development and architecture experience in the areas of software development and web services to ITS and will be responsible for supporting and extending our current web services architecture.