

## Welcome



Society is asking more of the Internet than ever before, but what are we as a service providing community doing to educate businesses and general public about overcoming performance limitations? Probably very little actually...

This strikes me as strange since we all got into connectivity businesses

because we believe in what the Internet can offer and now spend most of our waking hours helping to ensure that it works better. Ask an average, informed IT user about the scope of VoIP, IPTV, tripleplay and its application for the future and the response is unquestionably full of anticipation and excitement. Do the risks posed by DDOS attacks, credit card fraud, unregulated content and wider performance limitations feature so majorly on their radar screens? Probably not, and this is where there is a knowledge shortfall.

I'm not advocating doom and gloom – far from it. It's just that a better educated society, whether general public or business user, makes for a better customer base which looks

to you and your own connectivity providers to push the boundaries and exceed expectation. We all have a duty here, and this is why we as a company are actively engaging with government and the industry at large to raise awareness and understanding of what can be achieved with the Internet, and where better solutions can help everyone reach the next level. I know that many of you are doing the same.

We've enlisted some external opinion and news in this edition of exchanges – we hope you enjoy it.

**Kieron O'Brien**  
CEO,  
PacketExchange

## This month in EXCHANGES...

- If it's not broke, why fix the Internet?
- Government Super Computer Cash Boost
- Spam Filters are a MUST for Australian ISPs
- Easyspace optimises connectivity costs with PacketExchange
- Criminal Hackers Replace Lone Operators
- Meet PacketExchange at the 2006 Ethernet Expo

## IF IT'S NOT BROKE, WHY FIX THE INTERNET?

**Exchanges asked leading Internet and technology journalist, Wendy Grossman, for her own personal viewpoint on the demands placed on today's Internet, the need for security, and what can be done to meet the shortfalls.**

### Background

The Internet was created to do two things: enable the sharing of information and withstand a bomb outage. The second of those goals, resiliency, dominated early funding and research. But the first of those goals has dominated everything else, from early Internet utilities like FTP to today's peer-to-peer file-sharing networks and search engines. The interaction between the two goals,

The Net designers chose simple and stupid



Wendy Grossman

coupled with the early limitation of the Internet's audience to academic, government, and corporate research divisions, led to many decisions that have made the Internet inherently insecure.

One key decision was whether to build intelligence into the network itself or into the end points and the applications. The telephone network, which had stagnated technically for decades, is an example of an intelligent network. The Net designers chose simple and stupid.

Continued overleaf..

### PacketExchange – service bulletin

- The integration of the Packetexchange and XchangePoint London metro networks is nearing completion, moving PacketExchange's customer base in London onto the latest generation of CWDM equipment. Expected completion of all sites and customer connections is early May 2006
- Architectural changes and new product offerings created through a joint programme with Level 3, are set to offer further benefits to PacketExchange customers – details to be released soon

## IF IT'S NOT BROKE, WHY FIX THE INTERNET?

Continued from page 1

Many benefits have accrued from this design. The fact that all Internet users have low-level access to the Internet's infrastructure allowed rampant experimentation. Services like VOIP, instant messaging, real-time chat, media streaming, and even the Web all happened because no one had to get central approval to try out new ideas.

A couple of Stanford students thought they had a better way of searching the Web. Now it's Google. By contrast, preceding online systems were closed and centralised - and they are mostly dead now.

### The need for Security

For a company doing business, however, that openness is a problem, particularly since legislation like Sarbanes-Oxley in the US and data protection in the UK implicitly require good data security. The Internet's infrastructure is insecure by design. Routers do not authenticate themselves to each other. Security must be added in every application, whether that's transferring files or email, making a phone call, or watching a movie.

VOIP, Instant Messaging and Media Streaming all happened due to no one needing central approval to try new ideas

More than that, simply by connecting a network to the Internet opens it to the possibility of all kinds of attacks from the outside. Where in the physical world you can choose to site your headquarters in a low-crime neighbourhood, on the Internet you are everywhere at once.

Some of the biggest and most Net-savvy businesses have seen their sites taken down by Distributed Denial of Service (DDOS) attacks, in which their networks are flooded with useless, spoofed traffic that blocks them from using their connections as they intended. Spam and phishing attacks (in which criminals try to get users to divulge personal information, passwords, and banking/credit card

details) hit everyone indiscriminately. Other common problems include spoofed Web sites, hijacked connections that allow attackers to sniff email and sensitive data in transit (enabling credit card theft), and so on. Similarly, there is no Quality of Service guarantee available on the public Internet, something that is an increasing problem as applications like VOIP and media streaming, which are extremely sensitive to disruption, become commonplace.

In traditional telephony, consumers and businesses turn to their telephone companies for help. But in the Internet world, ISPs in general have little control, in part because attackers are getting smarter all the time. Spam no longer comes from a few known networks and/or domains; instead, it is sent out by millions of consumers' PCs that have been infected with viruses that turn them into 'botnets' - networks of zombies controlled by a remote master. Security on the Internet is dependent on user behaviour - and users are no longer drawn from a relatively small, relatively homogeneous group of researchers. Broadband has enabled worse problems, partly because machines are available for attack 24/7, and partly because a single machine can send out so much more data in a shorter period.

There is, therefore, a considerable gap between what we expect of the Internet as we become ever more dependent on it for commerce, entertainment, and government and what it was designed to support. One aspect of this gap is the subject of legislative battles currently brewing in the US under the name 'network neutrality' - bills have been introduced into Congress to ensure that the telephone and cable companies are not allowed to give priority service to their own data at the expense of their competitors. That sort of two-tier system is also opposed by most long-time Net users on the grounds that it will stifle innovation.

ISPs have very little control as attackers are getting smarter all of the time.

Packet Exchange takes the view that today's filtering and other efforts are too limited to succeed in securing the Internet long-term. Instead, the company favours 'walled garden' private networks, connections whose content and practice can be controlled. The company is not alone in taking this approach; it's the idea that lies behind Internet II, a next-generation network that, like the Internet before it, is currently limited to research and educational institutions.

**Wendy M. Grossman writes on a Freelance basis for Technology Guardian, The Daily Telegraph and others. Her weekly column is called net.wars. She has covered the Internet and related technology since 1991.**

## NEWS IN BRIEF

### Government Super Computer Cash Boost

The UK project to build Europe's fastest computer has received a huge cash boost from the government in the form of a 52 million pound donation. The High-End Computing Terascale Resource to be known as HECTOR, will be completed next year as existing super computing facilities at the Universities of Manchester and Edinburgh are set to be decommissioned over the next two years.

### Spam Filters are a MUST for Australian ISPs

Australia has launched a crackdown on junk mail with a new industry code for tackling spam.

Under the new code, due to come into force in July, internet service providers (ISPs) will be forced to shoulder some of the responsibility for helping to combat spam. ISPs will be required to impose more reasonable limits on subscribers' sending email, offer spam-filtering options and further advise them on how to handle and report unwanted mail.

More than 680 ISPs will be affected in Australia and global email operators like MSN Hotmail and Yahoo! will also be affected by the legislation.

## EASYSYSPACE OPTIMISES CONNECTIVITY COSTS WITH PACKETEXCHANGE

**Easyspace is one of the UK's largest domain name registrars and is continuing to grow thanks to an exciting new partnership with PacketExchange. We take a look...**

### The Company

Easyspace Ltd was founded in 1997 to make Internet web space and domain names available to customers at competitive rates, backed by reliable and robust technology. The company has now become the UK's largest domain name registrar and offers a wide choice of web products including personalised email and managed servers.

### The Challenge

Easyspace needed to operate an efficient network at all times to meet the needs of over 500,000 users, ranging from large corporate customers to personal websites. This is essential in order to maintain a strong value for money proposition for its customers with price savings of up to 40% of the industry average. The company asked PacketExchange to assist by providing 'mix and match' connectivity services to maximise the efficiency of its infrastructure.

### The Solution

PacketExchange initially provided 20Mb of IP Transit from Level 3, which was later upgraded to 45Mb due to the company continuing to expand. In addition to this, Easyspace connected to the PacketExchange UK Peering Exchange. This provided a private connection to a large and diverse number of peers and achieved ultimate connectivity optimisation. Installation was completed to budget in less than a week.

### The Result

Easyspace is now able to balance the provision of a reliable and robust service with optimal connectivity costs. End customers benefit from the speed and efficiency of low cost private peering traffic as well as a good quality link to Level 3.

### NEWS IN BRIEF

#### Criminal Hackers Replace Lone Operators

57% of the 600 US businesses surveyed by IBM have said they are losing more money through cyber crime than from conventional crime.

84% of IT managers believe that criminal hacker groups are increasingly replacing lone hackers as the perpetrators of cyber crime and three-quarters of those surveyed said that a significant threat to their corporate security came from inside their own organisations.

Companies surveyed have most commonly opted to upgrade their anti-virus software and firewalls. The implementation of intrusion detection and prevention technologies such as patch management systems have also been cited as necessary precautions.



## Meet PacketExchange at the 2006 Ethernet Expo

PacketExchange Director, Andy Johnson will be one of a number of high profile industry opinion formers present at this year's Ethernet Expo 'Light Reading Live' event.

Come and see Andy on Wednesday 26 April and participate in 'Tomorrow's Transport Infrastructure: SDH Migration to Carrier Ethernet' workshop. He will also be a panelist on the Enterprise Roundtable.

Book your place at the Ethernet Expo online – click on:  
[http://www.lightreading.com/live/default.asp?survey\\_id=170&surveyquestion\\_2814\\_prepop=live170\\_packetexchange](http://www.lightreading.com/live/default.asp?survey_id=170&surveyquestion_2814_prepop=live170_packetexchange)

**The Ethernet Expo takes place at the Excel Exhibition Centre, London, on 25-26 April.**

## talk back!

EXCHANGES is your magazine, so tell us what you think. We would love to hear your personal viewpoints on the articles featured, and any suggestions you may have about the newsletter.

Contact PacketExchange: [exchanges@packetexchange.net](mailto:exchanges@packetexchange.net)

**PacketExchange™**  
 ALL THE RIGHT CONNECTIONS

Tel: +44 20 7377 4130  
[enquiries@packetexchange.net](mailto:enquiries@packetexchange.net)  
[www.packetexchange.net](http://www.packetexchange.net)