

# **Managing Infoglut: how to turn an overweight Internet into a leaner, fitter resource.**

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**Please note:** throughout this paper there are recommendations and suggestions on software that can be downloaded from the Internet. You must first confirm with your line manager and/or IT support department what is and what is not permitted under your organisation's Acceptable Use Policy before you download or install any programs.

## **Introduction**

We would all like the Internet to be a quick, effective way of locating and communicating information. But there is so much coming at us through email, discussion lists and the Web that many of us are suffering from a severe case of Infoglut. It seems that we are totally incapable of saying "No" to that delicious morsel of information that we don't really need - but you never know when it might come in useful. Most of us manage to resist the temptation to print off non-essential information, so our consciences are clear as far as the rain forests are concerned, but with 10GB hard disks now becoming commonplace our PCs, as well as our brains, are beginning to crack under the strain.

My intention when starting to write this paper was to take a typical day in the RBA office and show how we filter and control the deluge of data that pours into our computers. Unfortunately there is no such thing as a "typical day" at RBA! It is possible, though, to identify key areas of activity that have undergone intense scrutiny as to their usefulness to the business, and the management of which has been reviewed and changed. These are: electronic mail, conferencing and mailing list messages, Usenet and the Web. In addition, I shall look at privacy and security issues that can have a negative impact on productivity and information management.

## **Making more effective use of email**

The only task I can guarantee that I perform every working day is the collection of my email first thing in the morning. Once the initial download has been completed it is not uncommon for my email reader (AMEOL<sup>1</sup>) to tell me that there are "1643 unread messages". Time to implement a mean regime one might think, but to be honest a large proportion of those messages are from public discussion boards such as the CIX conferences or Usenet newsgroups. Nevertheless, even discounting those messages my email count can still be in the hundreds. This is not necessarily cause for concern provided that the messages are managed effectively and not jumbled up into a single mailbox.

Email can be a far more efficient way of managing and accessing information resources than the Web and it is greatly under-utilised.

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<sup>1</sup> **A Most Excellent Off-Line** reader. AMEOL is provided by the CIX Internet Service Provider for use with its Internet and conferencing service.

## MANAGING INFOGLUT

Email can be used for :

- one to one communications
- mailing (discussion) lists
- receipt of newsletters
- alerting Services
- monitoring changes to Web pages

### *One to one communications*

This is a straightforward application of email and the most widely used. The sending and receipt of messages is in itself simple enough, but even here there is room for improvement, for example by using rules and filters to automatically sort and prioritise messages (see below).

### *Mailing/discussion lists*

These are discussion boards where "conversations" are conducted by email. Lists that are relevant to your subject area are not always easy to identify but a good general starting point is the Mailbase collection of lists at <http://www.mailbase.ac.uk/>. They can be a far more effective means of locating good quality information than the general purpose search engines. Instead of struggling for hours with AltaVista or Yahoo, a quick email to a discussion list asking for help is often quickly rewarded with sound advice from people who work in that field.

### *Newsletters*

Many Web sites provide information on updates and services via an emailed Newsletter that is sent out to "subscribers". Thus you do not have to waste time logging onto the site periodically to check if there is anything new. If you find a Web site that is of particular interest and one you that you will probably want to use on a regular basis, it is worth looking around on the pages to see if there is a Newsletter option. Examples that we subscribe to include Search Engine Watch and the OFTEL (Office of Telecommunications) new publications notification service.

### *Alerting Services*

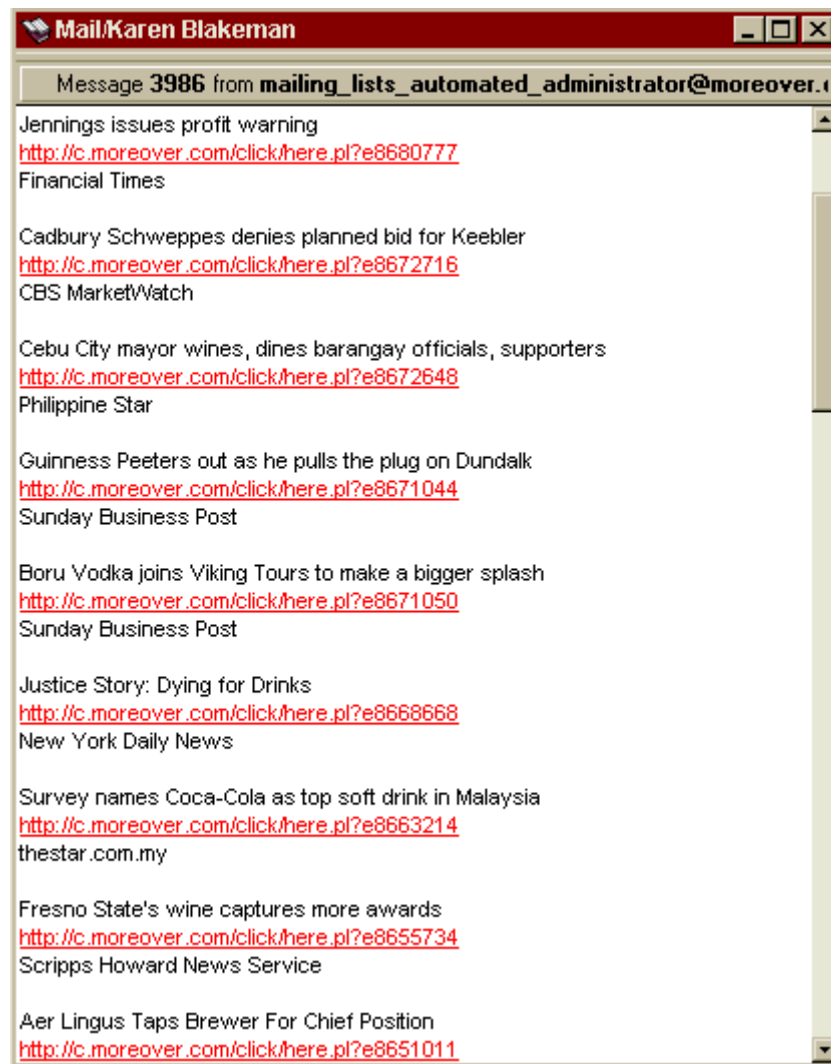
If selected with care, e-mail alerting services can save an enormous amount of time. Instead of connecting to and searching multiple Web sites individually, alerts can deliver this information directly by email. News is particularly amenable to this approach and there are several services providing daily and weekly headlines. Many give you just titles, possibly one sentence summaries and hypertext links so that you can go directly to the relevant stories. Examples that we subscribe to include: The Register (<http://www.theregister.co.uk/>) which covers the UK IT industry; eFinancial News (<http://www.efinancialnews.com/>) for European financial markets; and Moreover (<http://www.moreover.com/>).

Moreover has been described by Danny Sullivan as "a news junkie's delight"<sup>2</sup>. It crawls about 2,000 different sources and has approximately 290 predefined categories such as Oil and Gas News, Drinks and Beverages.

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<sup>2</sup> Danny Sullivan, THE SEARCH ENGINE UPDATE, July 25, 2000 - Number 81, Search Engine Watch <http://searchenginewatch.com/>

**Figure 1: Example of a Moreover Daily News Alert (Drinks and Beverages Industry)**

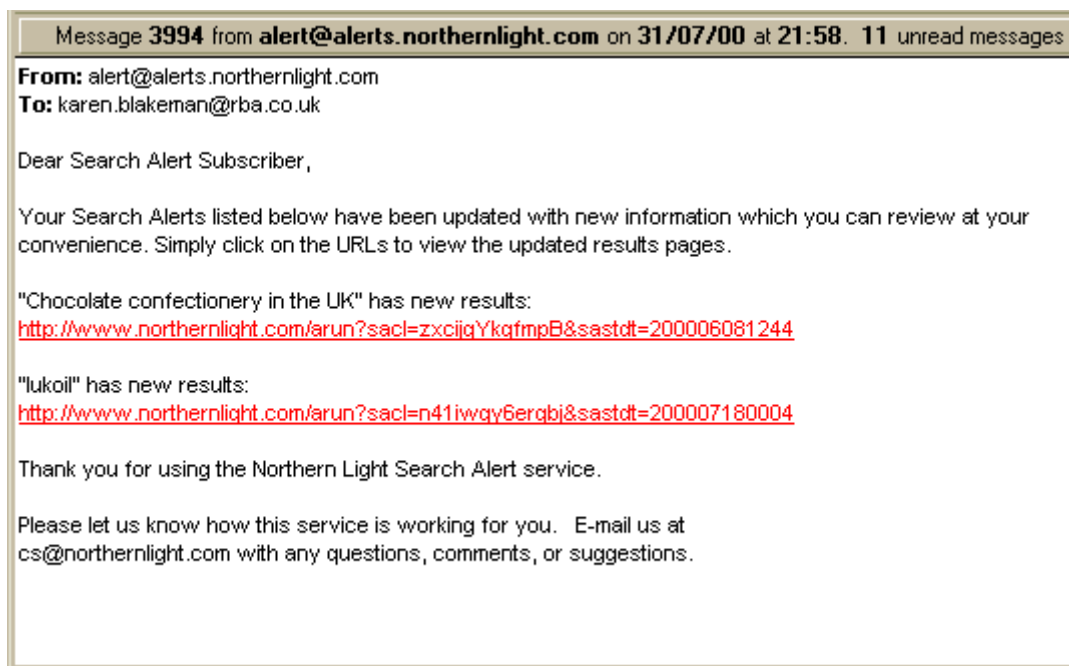


This email rather than Web based approach to scanning news saves us a significant amount of time each day. On some days we may find that there is little of immediate interest to us simply by spending a few minutes going through the alerts. The alternative would be to browse and search dozens of potentially relevant Web sources, which could take an hour or more for each subject.

If you are looking for more tailored alerts, Northern Light has an option that enables you to save one or more search strategies as Alerts. These are then automatically run on updates to the Northern Light database. Notification of new documents is sent in an email but, at present, you are not given titles, sources or type of content. You are merely presented with a hypertext link that takes you to a page on Northern Light where the documents for your Alert are listed.

A slightly irritating problem with the Northern Light Alerts service is that some of the "new" documents may have been published or posted on the Web several months or years ago, but they are included because they are new to Northern Light.

**Figure 2: Northern Light Alerts - notification of new results**



Other types of alerting service notify you when a page on a Web site has changed. These can be site specific, for example OFTEL (the Office of Telecommunications) offers a service whereby you are notified by email when new press releases and publications are added to their site, or general services such as Mind-It.

The Mind-It service monitors individual Web pages specified by you - there is no limit to the number of pages you can monitor - and whenever a page changes it sends you an email together with a copy of the page. Unfortunately, Mind-It has problems monitoring dynamically created pages and, as these make up an increasing proportion of the Web, Mind-It's usefulness is declining. In general, though, these services can save significant amounts of time because you do not have to repeatedly connect to a site to see if it has altered in any way.

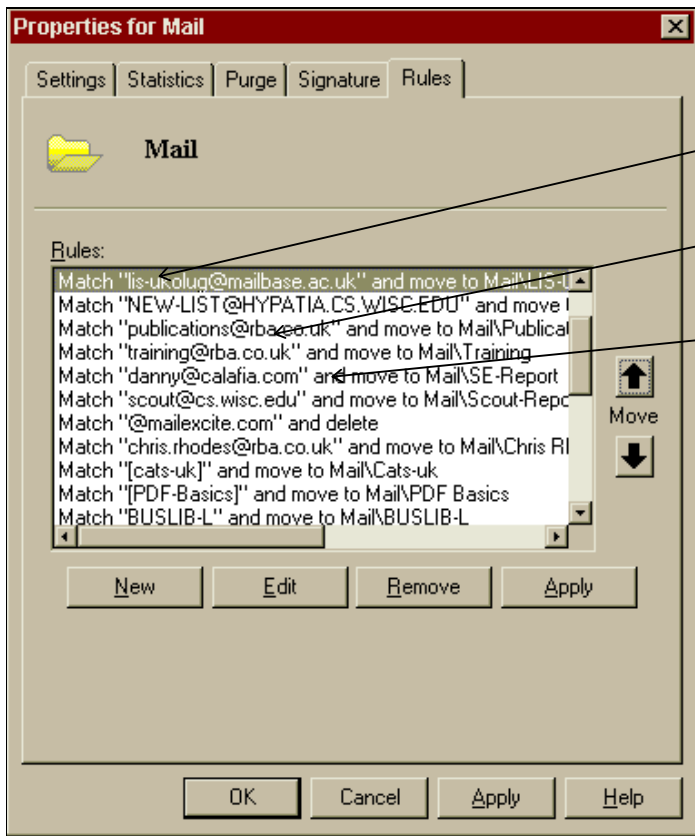
### Managing your email

There is not much point in joining discussion lists and subscribing to newsletters and alerting services if all of the email ends up in one place. Instead of wasting time on the Web you would be wasting time trying to work out what has come from where, and which are the most important items that need to be dealt with NOW! This is where filters, also known as rules, come in.

Most email programs have options that enable you to sort your messages by a number of criteria and place them in separate mailboxes or folders. You should be able to "filter" on the To: field, From: field, the subject of the message or on text found in the body of the message. In this way you can separate one to one messages from discussion lists; sort messages sent to different email addresses; set up folders or files for Newsletters; and perhaps quickly deal with junk mail (spam).

The location of the filtering option varies depending on your software. In Pegasus look under **T**ools, **M**ail **f**iltering **r**ules; in Eudora they are under **T**ools, **F**ilters; and in Netscape go to **E**dit, **M**essage **F**ilters.

Figure 3: Example of a set of rules/filters



This example here shows rules that have been set for:

moving LIS-UKOLUG discussion list messages to their own folder

moving requests for training and publications to separate folders

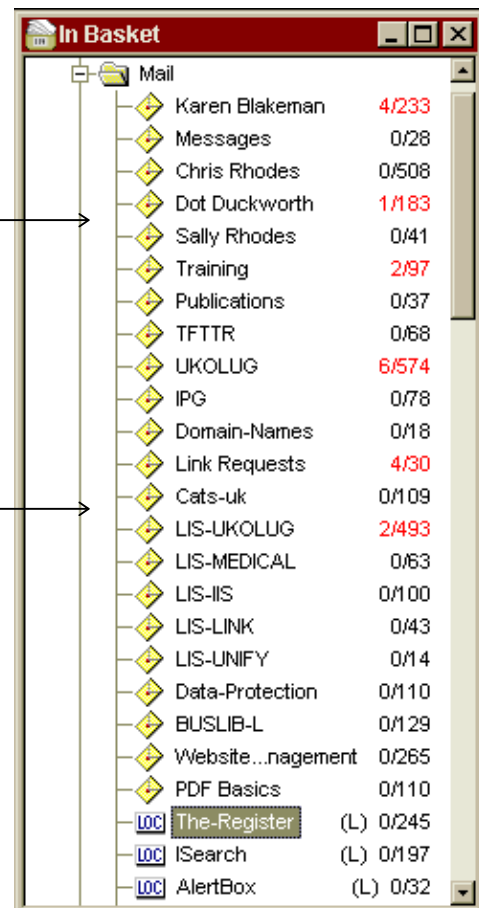
moving Search Engine Watch to its own folder

Figure 4: Email sorted into folders

The overall result is shown here on the right. At the top of the list of folders are the essential, high priority one-to-one messages; the middle section is made up of folders for discussion lists; and at the bottom are the Newsletters

one-to-one messages →

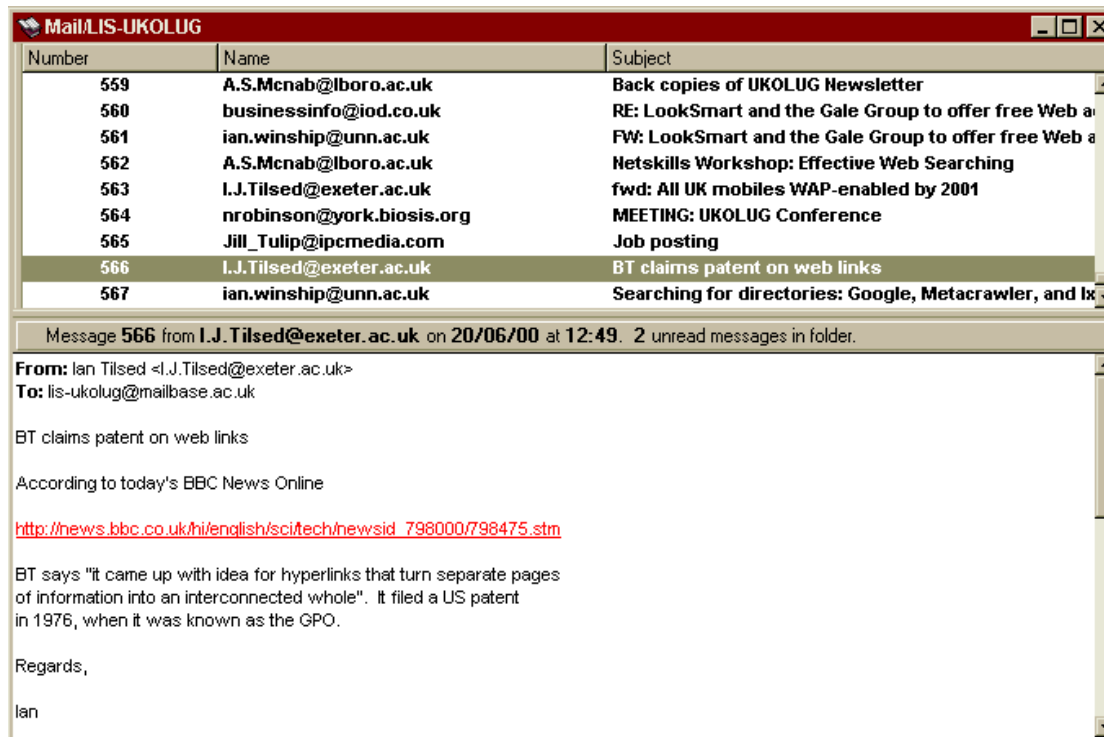
discussion lists →



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Apart from making it much easier to prioritise your email, filters can help prevent those embarrassing discussion list *faux pas* that most of us have committed at least once during our cyber-lifetime. Figure 5 shows the contents of my LIS-UKOLUG discussion list folder:

**Figure 5: Discussion list email folder**



This is an excellent example of how discussion list mail is sometimes displayed to show the original author of the message in the From: field rather than the list name. Worse still, using the reply button in your software may send your response to the whole list instead of, or as well as, to the original sender! It is an easy mistake to make if the message is buried in amongst your one-to-one messages instead of being filed in a clearly labelled, separate folder.

### *Be ruthless*

It is easy to become addicted to email news and discussions, especially once you have set up your rules to manage the extra traffic. But if you find that you really don't have time to look at all every newsletter, or you are no longer interested in monitoring a particular subject or Web page, then be ruthless and "unsubscribe" from the service.

And do you really need to keep **everything** archived in your mailboxes? If it is a note from a colleague dated two years ago and telling you that they are off on holiday in a few days, then delete it! If you do want to keep it "just in case", or as part of an essential record of discussions and correspondence, then export the messages and archive them outside of the email program. Some programs are notoriously unstable and "crashable", with the result that your message base becomes corrupted or disappears altogether.

There is no point in having mailboxes bulging with pointless or out of date information: it is as bad as spam

*Dealing with spam*

For the majority of us, spam (unsolicited email, junk email) has become a fact of Internet life. Many Internet Service Providers, and some corporate networks, have filters in place that protect their users from a large proportion of the junk. If you receive only one or two a day then hit the delete button. Never, never reply to Remove yourself from the junk mail list. You are merely confirming that yours is a valid email address and you may receive even more as a result spam.

If you wish, you can set up filters to recognise and delete junk mail but combining the right ingredients from the message header and text without losing genuine mail is difficult; if you are being bombarded with junk, then there are several very good "spam-eating" programs available. A selection can be found at any of the following:

**TUCOWS** (The Ultimate Collection of Winsock Software) <http://www.tucows.com/>

**DaveCentral** <http://www.davecentral.com/>

**Slaughterhouse** <http://www.slaughterhouse.com/>

**Usenet**

Usenet is an optional extra for most people. Unlike mailing/discussion lists, Usenet newsgroups are not usually moderated or controlled in any way. Thus a large proportion of the 35,000 or so groups consist of spam (junk mail), trolls (wind-ups), flame wars (vitriolic exchanges) and wibble (irrelevant gossip). Nevertheless, they can still be good sources of help on technical issues and provide feedback on companies and their products. Rather than browse or monitor a large number of potentially useful groups, it is better to use a search tool such as Deja (<http://www.deja.com/usenet/>) to find what you want.

At RBA, we do go as far as to monitor a handful of groups such as uk.telecom. As so many of the messages are complete and utter drivel, filters are a vital means of keeping incoming messages useful and informative. In contrast to email filters, though, we make extensive use of the "delete" option so that we never see messages from (de)selected authors, or on specific subjects. In the context of Usenet, this type of filter is referred to as a "kill file".

**Searching the Web**

The best way to use the Web is to go straight to known and trusted sites whenever possible. Unfortunately one is forced, all too often, to use one of the many search tools in an effort to locate information. Search tools are covered in detail in other presentations at this conference but to summarise:

- There is no best search tool
- The search tool that you use depends on the type of information for which you are looking and the format that you require
- Search engines are temperamental beasts and can give widely differing results from one minute to the next.

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My own favourite search tools at present are:

- **Yahoo!** (<http://www.yahoo.co.uk/>) - a good, general directory with excellent content in the form of News, company share prices, financials etc. Can also be customised as My Yahoo!
- **Google** (<http://www.google.com/>) - the most comprehensive search engine at present and the one that, for me, generally gives the most relevant results. When typing in your search strategy, remember that Google searches on **all** of your terms.
- **Northern Light** (<http://www.nlsearch.com/> or <http://www.nlresearch.com/>) - excellent for business and market information, although not all of the information is free. The only major, general purpose search engine that allows you to sort your results by date rather than by relevance.

When it comes to the search itself, "advanced" search features such as plus signs (+) to make search terms mandatory (not needed with Google) and placing phrases within double quotes can dramatically increase the relevance of your results.

For about 80% of my searching I prefer to use gateways and portals. There has been considerable argument over what differentiates "listings", "gateways" and "portals". I am not going to add to the debate here but will throw in three definitions for your consideration:

**portal** n. Door(way), gate(way), esp. elaborate one"

*Concise Oxford Dictionary, Fifth edition, 1972 reprint, Oxford University Press*

"A knowledge portal allows an organization to present each user with a view of relevant content that is available to them. It acts as a presentation layer over content that has been previously created"

*BCN Intraview FAQ, <http://www.bcnintraview.com/>, 1<sup>st</sup> July 2000*

"A gateway lets you find a resource of interest, and takes you to the resource; from then on you are on your own, working in a different environment or 'context'. Portals are currently conceived as gateways extended to include a range of integration services, such as enabling users to cross-search multiple distributed resources on the Internet..."

*ATHENS, gateways, and portals: components of the Distributed National Electronic Resource. Alicia Wise, Chris Rusbridge, and Norman Wiseman. Learned Publishing Volume 13, Number 2: Apr 2000, p.103.*

The most important feature of a listing, gateway or portal is that should **help** the user identify and locate relevant sources **quickly** and **effectively**. The following are examples of portals that we use on a regular basis:

**Yahoo** <http://www.yahoo.co.uk/>

**Corporate Information** <http://www.corporateinformation.com/>

**Exportall** <http://www.exportall.com/>

**RBA Business Sources on the Web** <http://www.rba.co.uk/sources/>

A blatant plug for my own pages covering business sources in the Web

**Sheila Webber's Business Sources** <http://www.dis.strath.ac.uk/business/index.html>

An excellent starting point for business information. This site will probably be moving soon.

**BIRD, Business Information Resources Directory** <http://www.bird-online.co.uk/>

Concentrates on UK and Ireland business information.

**BBC** <http://www.bbc.co.uk/>

**Telephone Directories on the Web** <http://www.teldir.com/>

**Governments on the WWW** <http://www.gksoft.com/govt/>

By far the best collection of links to national and local governments, government departments and political parties.

**Delia Venables Legal Links** <http://www.venables.co.uk/>

**Official Statistics on the Web**

<http://www.auckland.ac.nz/lbr/stats/offstats/OFFSTATSmain.htm>

**IRN- Research Market Research Locator** <http://www.irn-research.com/>

## Security and privacy issues

Although not directly responsible for Infoglut, there are security and privacy issues that can have a knock on effect and result in severe PC and brain overload.

### *Emailed viruses*

The recent spate of script viruses, such as I Love You!, has caused many people to be the unwitting source as well as recipient of excessive and unwanted email traffic.

Preventative measures include:

- Ensure that your virus checking software is up-to-date and that it recognises script viruses in email attachments
- Do not decode or run attachments automatically (may be difficult or impossible if you are using a Microsoft emailer)
- Do not even trust email attachments from friends - check the attachments for viruses before opening them
- If you are ultra-paranoid then use "viewers" for Word, Excel and PowerPoint - these display files but do not run macros or permit editing (available free of charge from the Microsoft site at <http://www.microsoft.com/>)
- When in doubt, delete the message and attachment

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### *Registration forms*

A significant number of Web sites, particularly in the business sector, require you to register for an ID and password before you are allowed to access information. A few simple precautions will ensure that consequential junk-mail is avoided or kept to a minimum:

- Check the terms and conditions (if available) - many sites openly state that they sell on your details to third parties and you have to actively contact them in order to opt out
- Opt out of alerts and newsletters that you do not want or need
- Do not give any more details than are required. If you really want to remain anonymous then lie! (registration databases are choc-a-bloc with names such as Fox Mulder, Dana Scully, Bill Clinton, D Duck, M Mouse etc!)
- You will probably have to give a valid email and reply to a message before your account is activated. Sign up with a free email service and use that for registration purposes. Once you have your ID and password, you can use them with your regular ISP.

### *The Web*

JavaScript, Java, Active-X and cookies have all been blamed for "harvesting" personal information and for breaches in PC and network security, but there are more serious things going on behind the scenes on your PC. If you are not already paranoid about privacy and security, then you will be after reading the pages on Steve Gibson's site (<http://grc.com/>). Privacy.net at <http://www.privacy.net/> gives a less over-the-top overview of the lack of privacy on the Net.

If you are accessing the Net through an academic or corporate network then you should be protected by firewalls on the network: if you are using a stand-alone, dial up PC either at work or at home then "Be afraid, be very afraid!". It is time to look at Personal Firewalls.

### *Personal firewalls*

Why bother with a Personal Firewall? You are not a megabucks corporation so no hacker is going to be interested in you and, in any case, you are using a free or unmetered ISP at home that gives you a different IP address each time you log on. Well, I have bad news for you: you are **exactly** the sort of victim that a hacker is looking for. More of us are getting connected at home; with free and unmetered access now available in the UK, more of us are staying online for longer; and more of us are using ecommerce and electronic banking, which means that we may be storing detailed financial information about ourselves on our PCs.

The hacker does not need to target a specific Internet address. There are tools that will roam the Net sniffing out connected IP addresses and scanning for unprotected PC ports. Once in, there are a number of techniques for extracting information from the remote PC, for example by planting a "Trojan" on the PC hard disk. The Trojan then works away selecting the juiciest pieces of personal data and takes it "home" when you next connect to the Net. At best, this could result in you being bombarded with megabytes of junk mail and faxes or in your identity being hijacked by a spammer: At worst, you could find unauthorised transactions on your credit cards and bank statements.

The good news is that there are several very good personal firewall programs for dial-up PCs. The June 2000 issue of Internet Magazine reviewed six products with Zone Alarm coming out on top<sup>3</sup>

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3 Play it Safe: Personal Firewalls, Internet Magazine, June 2000, Issue No. 67, pp 154-160, ISSN 1355-6428,

(<http://www.zonelabs.com/>). At RBA, we use Zone Alarm and find it effective, easy to install and to use. For those on a tight budget, the even better news is that is free of charge. If you want to take things a little further and find out more about who is doing what behind your back, ZoneLog Analyser at <http://www.mcs-online.co.uk/zone/zone/zone/> fits the bill (currently in beta and free of charge).

A personal firewall is a must but the log analyser is an optional extra: you could spend more time engrossed in the gory details of the access logs than actually working on the Internet. Nevertheless, spending just fifteen minutes on analysing the logs will bring home to you the potential dangers of being caught off guard whilst on the Net, and perhaps make you more sympathetic towards your IT support staff.

Figure 6 shows a Zone Alarm log analysis.

**Figure 6: Zone Log Analyser**

The screenshot displays the ZoneLog Analyser software interface. The main window shows a log listing with columns for Type, Date, Time, Source, Port, Destination, Port, and Transport. A detailed view of a log entry is shown in the foreground, highlighting an incoming probe attempt.

**ZoneLog Analyser - v0.35 Beta**

File Tools Help

Display Range:  Today Only  Specified Range: 01/07/00 to 01/08/00 Set

Colour Key: *Click keys below to change colours*

- > Attempted outgoing connections.
- > Known possible attack attempts.
- > Unknown or harmless attempts.

Raw log listing, double-click an entry for further details. Mode:  Normal  Report

Type	Date	Time	Source	Port	Destination	Port	Transport
FWIN	24/07/00	07:21:56	206.132.79.56	80	194.153.17.26	1133	TCP
FWIN	22/07/00	11:44:20	204.71.191.194	80	194.153.17.26	2920	TCP
FWIN	22/07/00	09:15:54	203.69.20.148	109	194.153.17.26	109	TCP
FWIN	22/07/00	08:55:12	205.188.1				
FWIN	22/07/00	08:55:12	205.188.1				
FWIN	21/07/00	09:11:46	202.71.24				
FWIN	21/07/00	08:55:12	24.30.63.1				
FWIN	21/07/00	07:20:52	207.200.8				
FWIN	19/07/00	14:19:14	209.185.1				
FWDU	19/07/00	14:17:40	0.0.0.0				
FWIN	19/07/00	09:08:56	212.24.23				
FWIN	19/07/00	09:07:54	10.20.10.1				
FWDU	18/07/00	12:05:16	194.153.1				
FWIN	18/07/00	09:38:52	212.41.37				
FWIN	17/07/00	11:22:00	62.136.14				
FWIN	17/07/00	11:05:42	204.71.19				
FWIN	17/07/00	11:05:40	205.240.1				
FWIN	17/07/00	09:04:38	195.24.20				
FWIN	17/07/00	09:00:34	202.139.5				

**Log Entry Details**

First Previous Next Last

Info: **This is an incoming probe:**  
Most attempted attacks will be made to a specific port on your machine, click on the 'Details' button next to the 'Port' number under 'Destination' to reveal information on any known attacks directed to that port.

Type: FWIN  
Date: 19/07/00  
Time: 09:08:56  
Transport: UDP

Source  
IP Address: 212.24.231.243 Port: 31790 Details Lookup at Sam Spade  
Domain Lookup: Lookup

Destination (Your Machine)  
IP Address: 212.41.36.175 Port: 31789 Details Lookup at Sam Spade  
Domain Lookup: Lookup

Port Details: Possible attempt to connect to a trojan server

Port 31789  
UDP traffic on this port is currently being seen due to the "Hack-a-tack" RAT (Remote Access Trojan). This trojan includes a built-in scanner that scans from port 31790, so any packets FROM 31790 TO 31789 indicate a possible intrusion. (Port 31789 is the control connection; port 31790 is the file transfer connection).

Close

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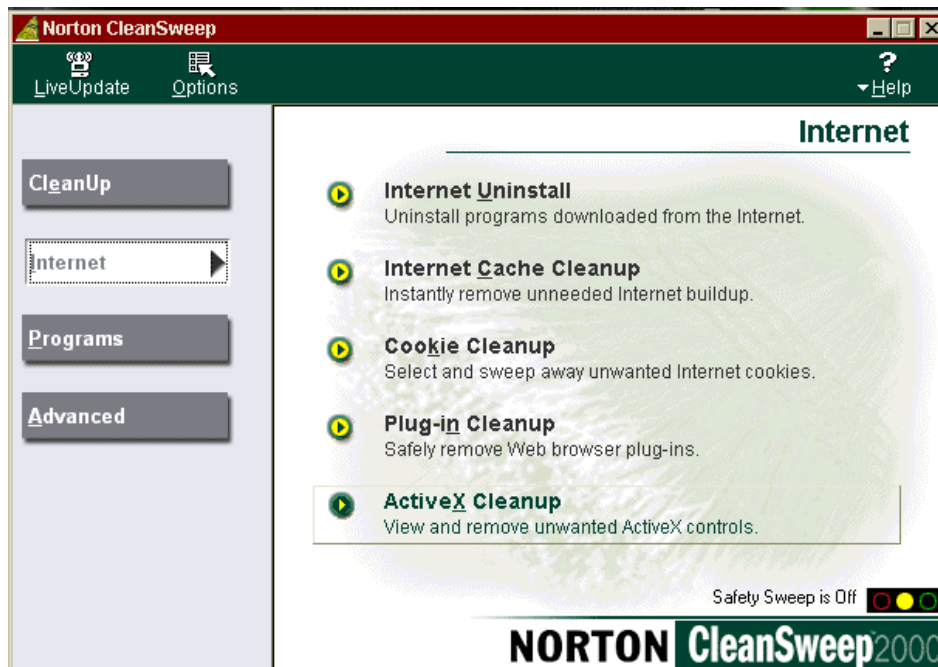
### *Other bits and pieces!*

Other applications and areas over which you might want more control include:

- Cookies - an abundance of cookie managers, crushers and crumblers are available for both Netscape and Internet Explorer. They allow you to accept cookies from sites that you trust whilst blocking all others. (For more details on why accepting cookies can be bad for you, see Laurence Bebbington's Legal Issues columns in the UKOLUG Newsletters of Jan/Feb 2000, vol 11, issue 1, pp 19-22 and Mar/Apr 2000 vol 11, issue 2, pp 17-20, as well as Steve Gibson's views on the subject at <http://grc.com/>).
- Advertisement and pop-up window filters
- Anonymisers for masking your IP address and referrer statistics
- Programs for deleting temporary files, Internet history lists, the pull down list of URLs in your browser "go to" box, and clearing your PC's cache i.e. empty your trash!

A personal firewall is a must: as for the rest of the options listed above - be selective. On my own personal PC, I run Zone Alarm all the time and when surfing the Web I use A4 Proxy Anonymizer with a "throw-away" dial-up, ISP account. Rather than control other aspects of Web access at the point of use, at the end of each day, or after a long session on the Net, I use Norton CleanSweep (Figure 7) to remove all traces of my Internet cache, history, temporary files and cookies.

**Figure 7: Norton CleanSweep**



## The Five Point Fitness Plan

1. Learn to manage your email more efficiently and learn how to use rules and filters.
2. Reduce the amount time wasted on the Web by making more use of email for newsletters and alerting services.
3. Brush up your searching skills, learn advanced search techniques and identify portals in your subject area.
4. Do take personal security and privacy seriously.
5. Clean up after yourself and empty your trash!

## Useful URLs

The following is a list of URLs that are mentioned in this article plus additional sites that may be of interest.

### Mailing Discussion Lists

**Mailbase** <http://www.mailbase.ac.uk/>

### Email Newsletters

**The Register** <http://www.theregister.co.uk/>

A daily news service on the Web covering the UK IT industry. You can have the headlines delivered to you daily by email.

**eFinancial News** <http://www.efinancialnews.com/>

Internet version of the weekly newspaper for the European securities industry plus a daily press digest of syndicated articles from Wall Street Journal Europe, Financial Times and other UK broadsheets. The site also offers a range of email newsletters that give titles and sources of the main stories.

**Moreover** <http://www.moreover.com/>

Approximately 290 predefined daily lists of headlines and sources.

**SearchEngine Watch** <http://searchenginewatch.com/>

Essential resource in search engines. Free monthly newsletter. Twice monthly newsletter with additional information available on subscription.

### Alerting Services

**Northern Light** <http://www.nlsearch.com/> or <http://www.nlresearch.com/>

Has an Alerts service that allows you to set up and save searches for Northern Light to automatically run on updates to its database.

**Mind-It** <http://www.metmind.com/>

A free service that monitors changes to the content of individual Web pages.

### Dealing with Spam

Spam "eating" programs can be found at:

**TUCOWS** <http://www.tucows.com/>

**DaveCentral** <http://www.davecentral.com/>

**Slaughterhouse** <http://www.slaughterhouse.com/>

**Spamcop** <http://spamcop.net/>

Lets you hit back at spammers by analysing your junk mail, identifying source ISPs and sending your complaint to the appropriate addresses. You have to register on the Web site for an ID and to use it you connect to a Web page and paste the full text of the spam (including full header) into a box. A bit long-winded but free.

### Usenet

**Deja.com** <http://www.deja.com/usenet/>

### Search Tools & Portals

**Google** <http://www.google.com/>

My current favourite search engine. Fast, simple to use and remarkably accurate.

**Yahoo** <http://www.yahoo.co.uk/>

**Northern Light** <http://www.nlsearch.com/> or <http://www.nlresearch.com/>

**Corporate Information** <http://www.corporateinformation.com/>

**Exportall** <http://www.exportall.com/>

**RBA Business Sources on the Web** <http://www.rba.co.uk/sources/>

A blatant plug for my own pages covering business sources in the Web

**Sheila Webber's Business Sources** <http://www.dis.strath.ac.uk/business/index.html>

An excellent starting point for business information. This site will probably be moving soon.

**BIRD (Business Information Resources Directory)** <http://www.bird-online.co.uk/>

Concentrates on UK and Ireland business information

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**BBC** <http://www.bbc.co.uk/>

**Telephone Directories on the Web** <http://www.teldir.com/>

**Governments on the WWW** <http://www.gksoft.com/govt/>

By far the best collection of links to national and local governments, government departments and political parties.

**Delia Venables Legal Links** <http://www.venables.co.uk/>

**Official Statistics on the Web** <http://www.auckland.ac.nz/lbr/stats/offstats/OFFSTATSmain.htm>

**IRN-Market Research Locator** <http://www.irn-research.com/>

### **Security & Privacy Issues**

**Gibson Research Corporation** <http://grc.com/>

**Privacy.net** <http://www.privacy.net/>

**Zone Alarm** <http://www.zonelabs.com/>

Firewall for standalone PCs giving you complete control over what comes in and what goes out. Easy to install and use. Free of charge.

**ZoneLog Analyser** <http://www.mcs-online.co.uk/zonelog/>

Zone Alarm firewall log analyser. Currently in beta and free of charge.

### **Other Bits & Pieces**

**AdFilter** <http://www.adfilter.com/>

Filters out banner advertisements, pop-up windows, blinking text and background sound files. Also blocks referrer statistics. Free trial version available. Full version GBP16.50, USD 24.95. (Company is based in the UK).

**WebWasher** <http://www.webwasher.de/>

Removes banner advertisements, pop-up windows, animations etc. Price varies depending on number of licenses requested. Single user license is USD 29. Free for personal, home use.

**A4 Proxy** <http://www.inetprivacy.com/>

Anonymizes your Internet connection. Demonstration version with limited number of proxies and features available. Full version costs USD 45 (approximately GBP 30).

**Norton CleanSweep** <http://www.symantec.com/>

As well as removing leftover programs from "uninstallations", CleanSweep can also be used to automatically delete cookies, temporary files, browser caches, "histories", unwanted plug-ins and Active-X. Price - USD 26.