
The curse of the werE-mail

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Je suis Charlie

The pen is mightier than the sword

Edward Bulwer-Lytton, "Richelieu; or The Conspiracy", 1839

A blow with a word strikes deeper than a blow with a sword

Robert Burton, "The Anatomy of Melancholy", 1621

E-mail – things to consider

- In recent times e-mail has become:
 - Mass-market
 - Pervasive
 - Business-critical
 - A means of attack
- Understand how it works
- Understand how to secure it
- Improve communication
- Avoid common problems
- It's a people problem, not a technology problem!

E-mail – context and distribution

- The “tone” is set by the recipient, the mood they’re in and the context in which they read it
- Tailor your e-mail to the recipient’s culture, not yours
- If you’re the recipient, consider it in the sender’s context, not yours
- Anything you send by e-mail can be forwarded without your control or knowledge

E-mail – blurring work and personal time

- Dealing with e-mail has become a major issue
- Look at what's happening in Germany and France
 - Volkswagen stop sending mail 30 minutes after shift end
 - Daimler delete all mail arriving during a person's holiday
 - France considering new laws to restrict work e-mail use
- Breaking the “Working Time Regulations”
- Continued access to e-mail and messaging at any time is causing a lot of stress, largely due to poor behaviour and the “24x7” expectation placed on staff

A rant about uncivilised behaviour

- E-mail is far too easy to use wherever you are at any time
- It is frequently latched onto by people in a rush to throw ideas and orders around as and when it occurs to them
- An embodiment of the “dopeler effect” (the tendency of ideas to seem smarter the faster they come at you)
- An expectation by the sender that you’ve received it, read it and will respond immediately
- E-mail is “half-duplex” and a terrible way to try and have a discussion
- It is an easy way to tell someone something and leave them hanging without any means to contact you for a while
- ...

A rant about uncivilised behaviour (cont.)

- ...
- The modern way to hold “memo wars”
- Often intrusive, inconvenient, disruptive, unnecessary, ...
- Can wreck the quality of decision making, especially under pressure to solve a really complicated and urgent problem
- Can wreck the quality of communication, especially when things start to go wrong
- People will often hide behind a keyboard and write things they’d never say in person or in a formal communication
- You will frequently find people slugging it out by e-mail when they’re but a few desks apart
- ...

A rant about uncivilised behaviour (cont.)

- ...
- Beware volunteer organisations and people with too much time on their hands who've recently discovered e-mail
- No-one will ever get back to you on your schedule, only on theirs. What's urgent to you may seem irrelevant to them.
- If you need someone to take action, be clear, concise, polite and ask for help, having first made a decent effort to do what you can yourself and then summarise what's left to do and why you need help.
- ...

A rant about uncivilised behaviour (cont.)

- ...
- An easy way to manage people and projects by merely being an e-mail forwarding node, then going home having done very little towards the success of a project, but feeling self-satisfied that you've been busy
- The assumption by some outfit you've dealt with that it's OK to start spamming you just because they got your address for an entirely different reason – ditto SMS messages
- An easy way for any spammer to send you stuff you're not interested in – and at your expense and inconvenience

Technical stuff - mail flow

- Mail originates at a “mail client”
- Mail is sent to a “mail server” during “send / receive”
- Mail is passed between “mail servers” from source to destination using “store and forward”, being deleted from the sender when the receiver acknowledges receipt
- Mail is read by a “mail client”
- The “mail client” can look at mail on the mail server, or fetch mail from the mail server to the mail client
- Mail communication uses TCP/IP (V4 or V6)
- Needs a reliable connection to the mail server
- Takes a while if they’re large mails with attachments

Technical stuff – sending mail

- Send uses a mechanism called SMTP (Simple Mail Transfer Protocol)
- Most service providers use Authenticated SMTP, where your mail client has to log into the mail server in order to be able to send mail – a protection against spammers
- Most service providers use encrypted SMTP, where your mail client first agrees (negotiates) an encryption scheme (SSL or TLS) – a protection against the link being listened to by a 3rd party

Technical stuff – looking at mail

- Looking at mail on a mail server uses a mechanism called IMAP (Internet Mail Access Protocol)
- With IMAP, the mail stays on the mail server
- All service providers use authentication, where your mail client has to log into the mail server in order to be able to look at mail – a protection against anyone reading your mail
- Most service providers use encrypted IMAP, where your mail client first agrees (negotiates) an encryption scheme (SSL or TLS) – a protection against the link being listened to by a 3rd party

Technical stuff – fetching mail

- Fetching mail from a mail server uses a mechanism called POP3 (Post Office Protocol version 3)
- With POP, the mail is copied to your mail client and is usually deleted from the mail server
- All service providers use authentication, where your mail client has to log into the mail server in order to be able to fetch mail – a protection against anyone reading your mail
- Most service providers use encrypted POP, where your mail client first agrees (negotiates) an encryption scheme (SSL or TLS) – a protection against the link being listened to by a 3rd party

Technical stuff – Webmail

- Access to your mail server through a web page
- Authentication by logging in
- Encryption by use of HTTPS, not HTTP (as with banking)
- Think of it as running a mail client directly on your mail server without using your normal mail client
- Beware – “send” and “forward” are usually immediate
- You may wish to synchronise your mail client address book (contacts) with your webmail service
- Attachments need “uploading” before they can be sent
- Needs a stable network connection
- The “user interface” will change whenever the service provider changes their code – it’s not in your control

Securing your mail

- The link from client to server uses encryption (SSL / TLS)
- Access to the mail server uses authentication (logging in)
- Digital signatures tie the source to a specific address and the specific machines on which that certificate is loaded
- Digital certificates use Private Key / Public Key Encryption, where your “private key” stays with your machine(s) and your “public key” is in your digital signature
- If both parties use digital certificates, then the message itself can be encrypted and thus cannot be easily read by anyone without the relevant keys
- Do not publish your digital certificate, only your signature!

Organising your mail

- Find a scheme of categorising and storing your mail that works for you - quickly and easily find what you need
- Archive stuff for subsequent access, but get it out of the way if it's not needed within a reasonable period of time
- Discard what you can – don't try to keep everything
- Be systematic
- Keep your inbox small
- Never “send immediately”, always allow time for reflection and subsequent editing
- ...

Organising your mail (cont.)

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- With a long mail, or long mail thread - edit out the irrelevant stuff and make a précis at the top
- If mail threads start to diverge (eg: multiple replies to a single mail from different people at the same time), then edit it back into a single consistent thread
- Change the title if it helps to find it later, or to store it in a given order
- Understand and follow the rules and policies of your company or clients – if it's your company, have rules!

Dealing with spam

- Only accept mail to specific addresses, not any address within your domain
- Use “blacklists” and “whitelists” to exclude non-business sources (gmail, yahoo, hotmail, etc.), but allow through known good senders
- Avoid publishing your e-mail address. If you need to publish an address on a web page, obfuscate using “hivelogic enkoder” or a similar technique.
- Always use BCC for groups of people. Someone in the group may have an infected machine.
- Call them and ask where they got your details from

Some guidelines

- Anyone worth dealing with is worth speaking to in person
- Lawyers and employment tribunals love e-mail trails
- Avoid “reply all” unless absolutely necessary
- If you must send something to many people, use “BCC”, never make other people’s e-mail address visible
- Be immensely careful about how you use language, especially for non-native speakers
- Avoid late-night or “not entirely sober” e-mail
- Don’t use humour or try to be clever / sarcastic – it will go horribly wrong
- ...

Some guidelines (cont.)

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- Don't send large attachments – put the content onto a file server and just send a URL instead
- Clearly separate personal stuff from business stuff
- For business, use a professional looking address with a domain that is relevant to your business
- For business, set up a proper e-mail signature block
- Be aware of your legal obligations (confidentiality of mailing list details, mail signature content, opt-in requirements, etc.)
- Be organised!
- ...

Some guidelines (cont.)

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- Use digital signatures to clearly identify the source and to encrypt anything sensitive
- Use “throw-away” addresses for non-essential stuff
- Use addresses that are specific to whoever you’re dealing with to track down leaks (eg: registering to attend the Business Show 2014)
- Don’t rush to respond – contribute something useful and well thought through. “Send in haste, repent at leisure!”
- If in doubt, pick up the phone, or make the effort to meet up

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There's no "golden carrot" to slay the monster, but with a bit of thought and effort you can keep it at bay. Good luck!

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