



There is a common T-Shirt worn by system administrators. It says "I read your email." It is frequently true. Unencrypted email and web communications allow curious parties who work in places like your phone company, AOL, Google and so on to spy with impunity on more or less anything their customers read, write or do online.

Electronic communication is orders of magnitude less secure than postal mail because it is **searchable** - an admin at Yahoo, for example, could easily pull out a list of everybody using the relevant Yahoo groups, and search through the email of each subscriber who's personal mailbox was on Yahoo trawling for whatever data they liked. That this is improbable does not make it impossible, and anybody who has mud-wrestled with, say, the Scientologists knows that keeping your own secrets against concerted opposition is very, very hard work.

More problematic, perhaps, are casual security issues related to Windows, such as curious children who catch their parents logged on. I believe that relatively good technical solutions exist to all of these problems and that a relatively low-time-investment project from a couple of skilled engineers could solve all of them in one stroke.

Enter Harpocrates - Hermetic Silence for the Internet Age.

Harpocrates is a two-part system: client, and server. The Harpocrates Client comes in the form of a bootable CD ROM.

"Bootable" in this context means that when the disc is inserted into a standard PC or Laptop (not a Macintosh in the initial release) and the machine is restarted, it runs the software from the Harpocrates LiveCD. Rather than booting into Windows and having your standard desktop OS, you are instead running a different operating system, in this case most likely a hardened distribution of Linux based on Knoppix.

This new machine configuration does not affect your old Windows configuration in any way. Your Windows files are not visible, the hard drive is not touched, and none of your settings will ever be affected. When you remove the CD and restart your machine, it is as if nothing had ever happened.

This property is useful because it prevents anybody discovering things they should not by poking around in your browser cache, your email, or other systems files. It also means that a virus on your Windows machine cannot infect your Harpocrates system. Hermetic files are sacrosanct.

The Harpocrates Server is run by the Order, Temple or Lodge which you are affiliated with. The server usually stores everything which is not on the CD: your working files, your email, your preferences, system configuration data and anything else of import.

All information transfer between the Harpocrates Client and the Harpocrates Server is encrypted. This means that nobody - even another person on your network, your University Systems Administrator, or other people who use your PC can listen in on your secret communications.

It is expected that Order documents - tuition materials, for example - would be stored on the Order Server. While not as secure as simply never placing materials on the Internet, a properly configured Harpocrates Server should provide roughly the same level of security as printed paper documents hand-delivered: yes, the information could be stolen, but it would require a break-in to do it.

This system is not meant to provide the same level of iron-clad security which mouth-to-ear memorization of all secret materials would. However, compared to transmission of relatively sensitive data over the public internet, it has a great deal to recommend it. More complex schemes "harden" the Harpocrates system yet further, as we will see.



Linux is a free operating system. It is much like Windows but somewhat more complicated to use. The primary difference is that Linux is not owned by a corporation, but rather governed by a meritocracy of highly advanced programmers who govern the development of the system as technical though leaders, project managers, and wizards.

Linux is "open" which means that the entire system is available for public review (which helps with security) and public modification. This means that each group using Linux can modify the operating system to suit their own needs without violating copyright laws.

This combination of security through auditability and flexibility through openness makes Linux an ideal platform for Harpocrates.

A Client/Server system you might be more familiar with is the World Wide Web. The "web server" is the machine which hosts all the pages you want to see. The "web client" is FireFox or Mozilla or even (bleargh) internet explorer. Email is also client/server. More or less all Internet Applications are.

It's nothing scary, ok?

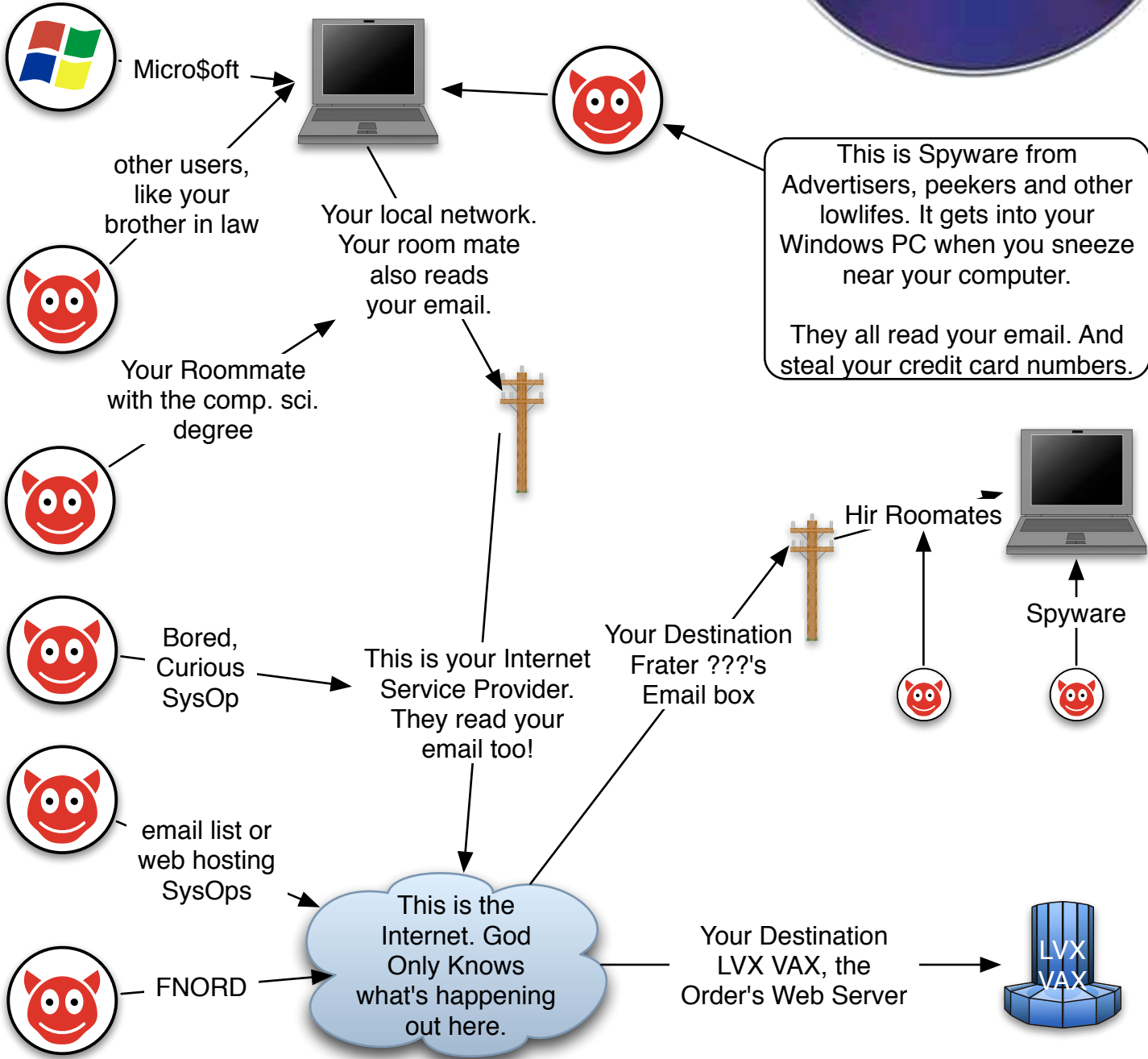
THE CURRENT STATE OF AFFAIRS

DANGER WILL ROBINSON.

THIS IS ABOUT TO GET SERIOUSLY GEEKY.



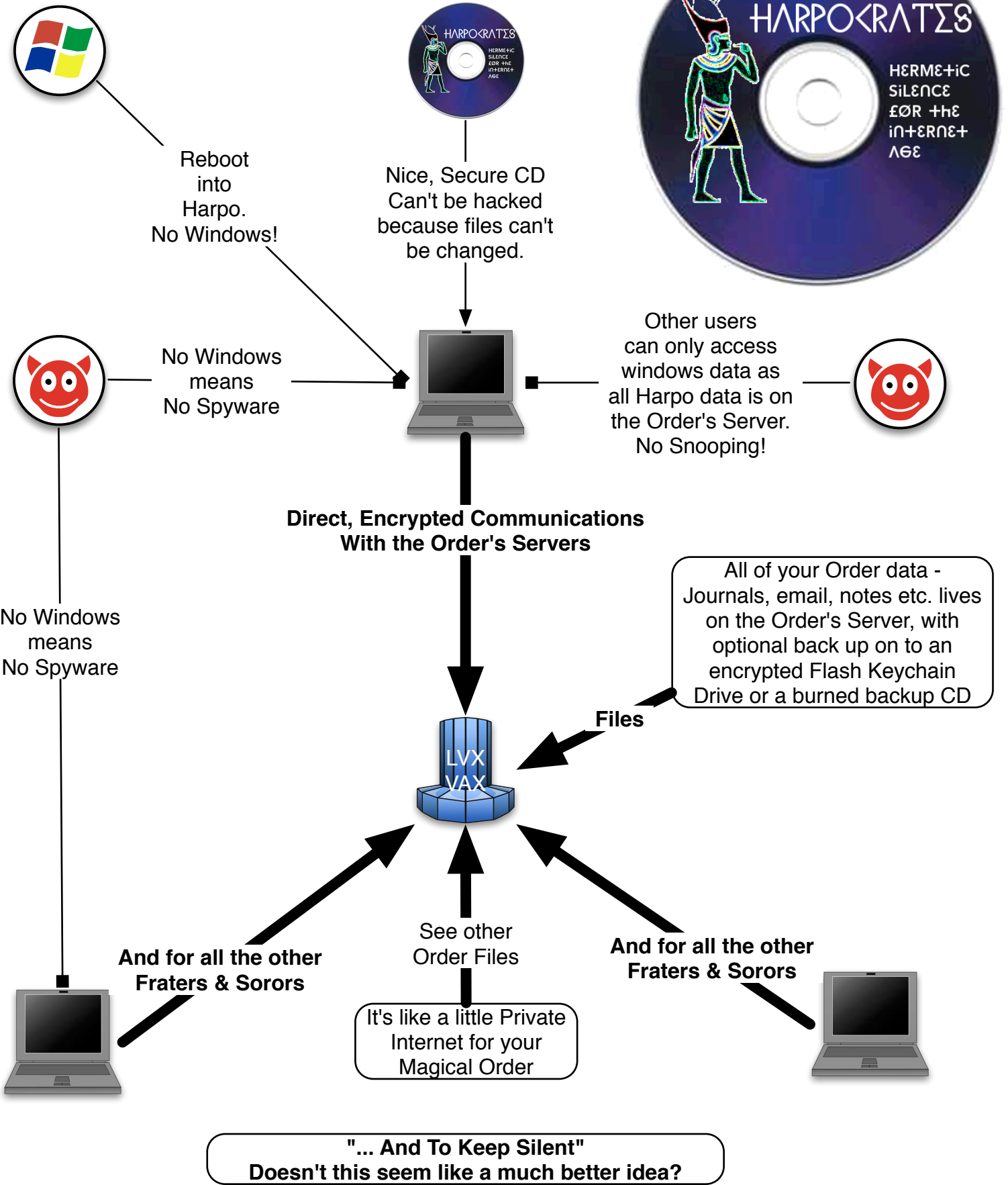
This is your Windows PC trying to talk to your Magical Order



Standard PC Internet Communications are Crap as far as Security is Concerned. How do you feel about this, Fraters et Sorors?

BASIC Harpocrates ARCHITECTURE

Now let's try that again with Harpocrates



So that's the pitch. Here's some technical detail in the form of a Q&A.

1. Doesn't all this rebooting from a CD get dreadfully tiresome?

Yes. Junkies can buy a second computer for three or four hundred dollars and only use it for Order business.

But, seriously, wouldn't the ritual of closing down Windows and rebooting into an Order-Branded Secure Environment really be good discipline? How many hours a day are you on Order business anyway, vs. socializing with your Magic Buddies?

2. Macintosh?

An OS X Macintosh is nearly as secure as a Harpo box would be, and can be configured with the same functionality. In later editions of Harpo, perhaps a YellowDog based CD would be in order.

3. File storage on the Order Server? What if my Internet goes down?

Hard question. One approach is to backup Harpo files to a local USB Keychain Drive. There are pros and cons.

4. Encryption? What, like PGP?

Possibly. This is really a policy question. Can Harpo Boxes connect to the regular internet? Can Harpo Boxes connect via, say, SMTP/TLS, or should everything be encrypted using SSH tunneling? Would a VPN be more appropriate? What about client side certificates?

The answers to each of these questions generates a slightly different configuration of Harpocrates. Each group or Temple using it may have slightly different wishes.

5. Unix? Isn't that horribly hard to use?

No. Unmanaged Unix is hard to use - you have thousands of options and it's all very complicated. Harpocrates is based on a LiveCD which doesn't let users modify much of anything, so the system is made to work once, the duplicated exactly. One configuration, one set of help files, one kind of technical support. Could be less overhead than current Order technical support requirements.

6. How much work would it take to make Harpo real?

Skilled Unix administrators could probably set up a basic Harpo system inside a week. By the time it was tested for usability and set up with a properly secured server, perhaps a month of skilled labor would be required. Half of that time is writing specifications.

Harpo is advanced, but not bleeding edge, technology.



Next Steps

If you are interested in Harpocrates, mention the idea to the leaders of any Orders you are affiliated with. My suggestion is that the Open Source Order of the Golden Dawn would be one ideal group to coordinate development of Harpocrates, but that is purely because of their name and location rather than because of any conversation I have had with them.

The technology is not really very difficult and, shown this document, any reasonably skilled Unix Administrator can probably come up with plans for a decent implementation.

If each interested group creates their own Harpocrates, we will eventually see an evolution of approaches towards an ideal of usability and security which would be unreachable from a single concerted project as a starting point. There is much strength in diversity.

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May all who love prosper,

An Anonymous Frater or Soror