

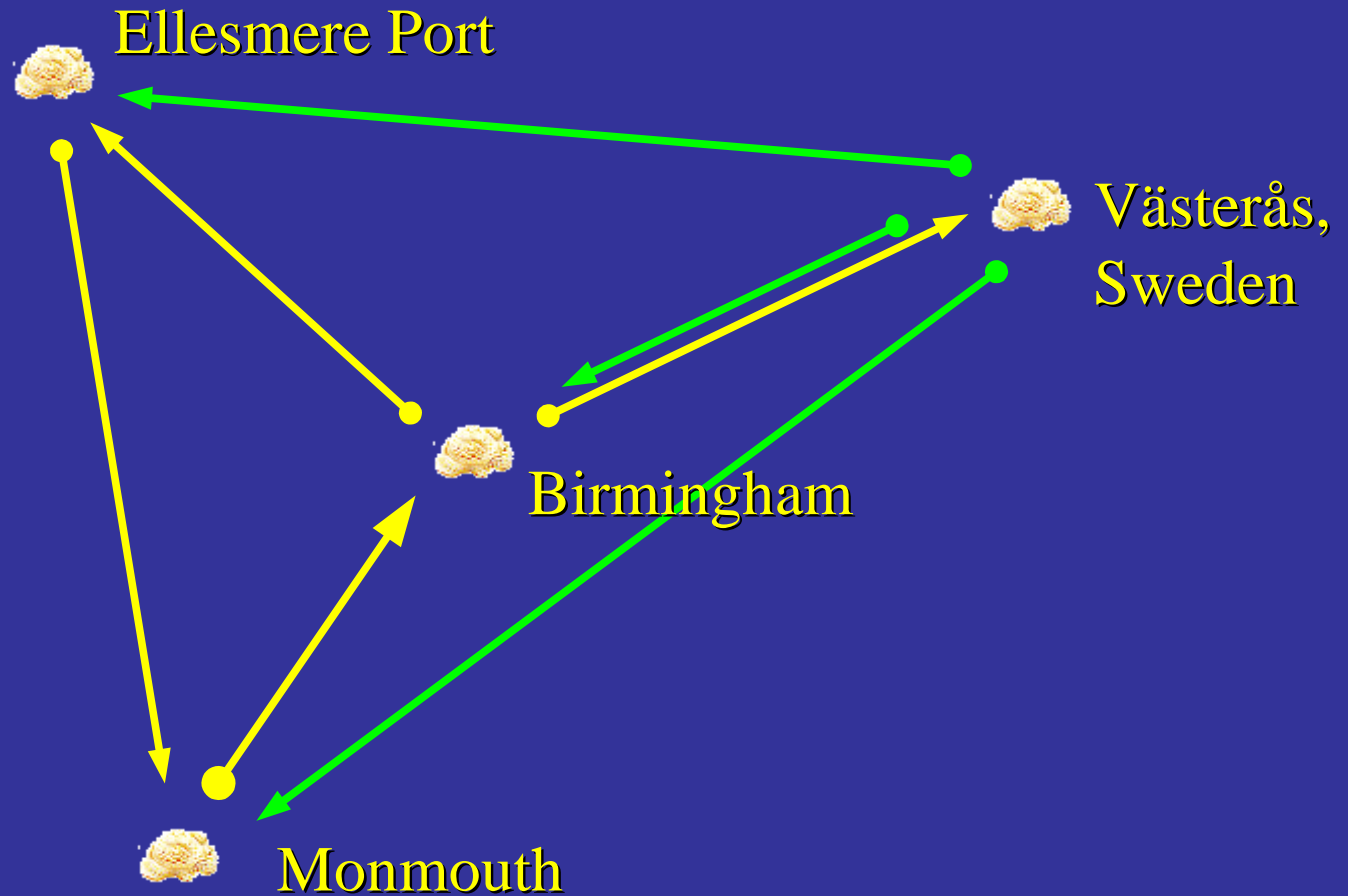
VoIP

A perspective from a user not an
expert

■ Clive de Salis

*My company chose
to install VoIP*

Used for
internal
phone calls



We chose to use FreeWorldDialUp and SJPhones

- *We also looked at VoIPTalk*
 - *Both FreeWorldDialUp and SJPhones automated their registration to send the registration back by return email – NO WAITING*
 - *FreeWorldDialUp = Phone registration (the phone no.)*
 - *SJPhones = Handset software*
 - *Both are currently free*
- www.rowanhouse.co.uk

VoIP systems

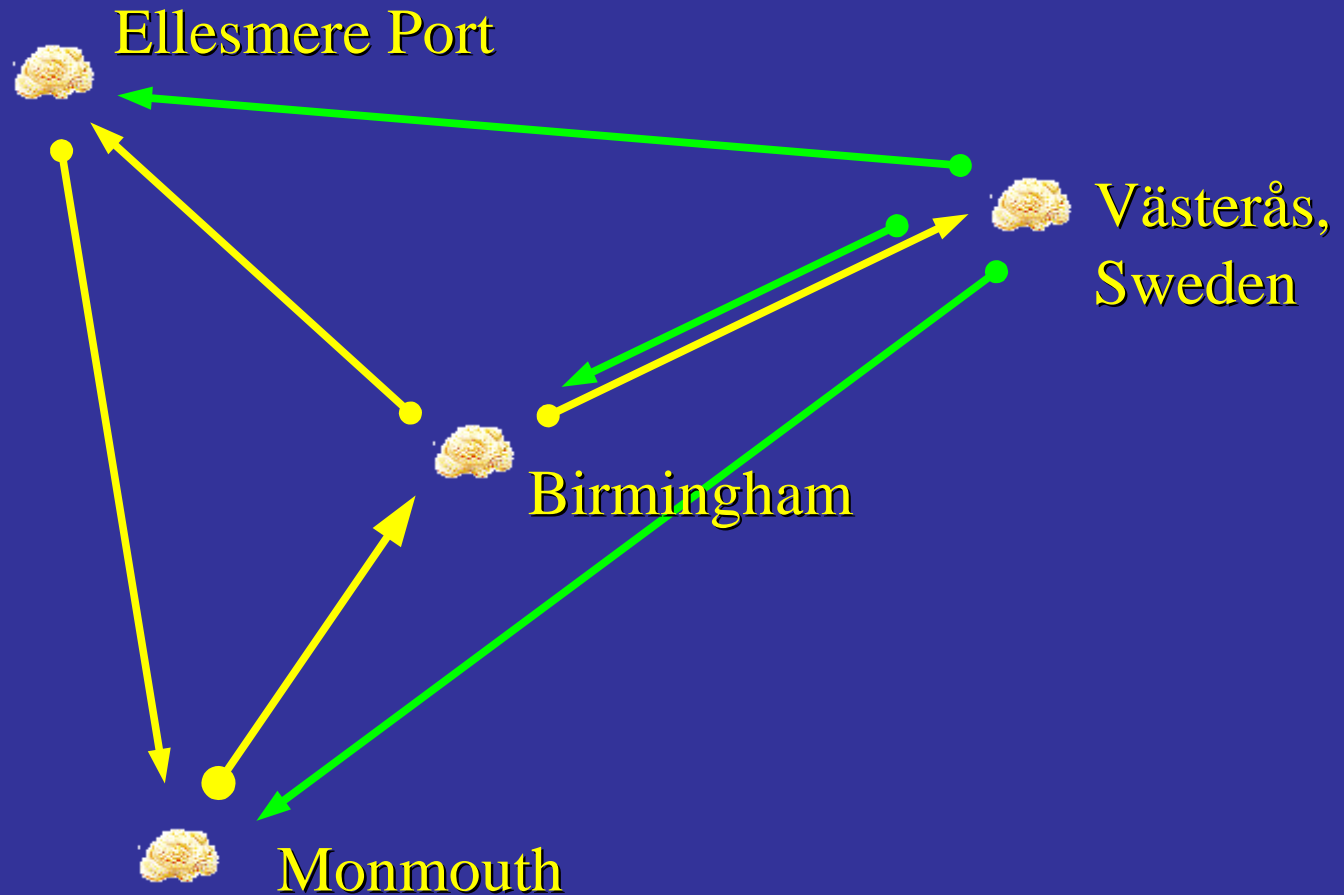
- You must have broadband
 - *IT doesn't work on 56K modems (it will ring but you can't talk)*
- Calls within the same network are free
- Calls to other networks are sometimes chargeable
- Calls to land-lines are chargeable (VoIPTalk charge 1p per min)
- Calls to mobile phones are chargeable (VoIPTalk charge 10p per min)
- You can have a landline phone number in your chosen country connected to your PC in your “home” country
 - *My brother-in-law now lives in Switzerland*
 - *He has acquired a UK phone so his customers telephone him on the UK phone number and the call is routed through to his PC in Switzerland*
 - *He has an 0845 UK phone number*

My company chose to install VoIP

Used for internal
phone calls

All on the same
VoIP network

Hence all internal
office phone calls
are free

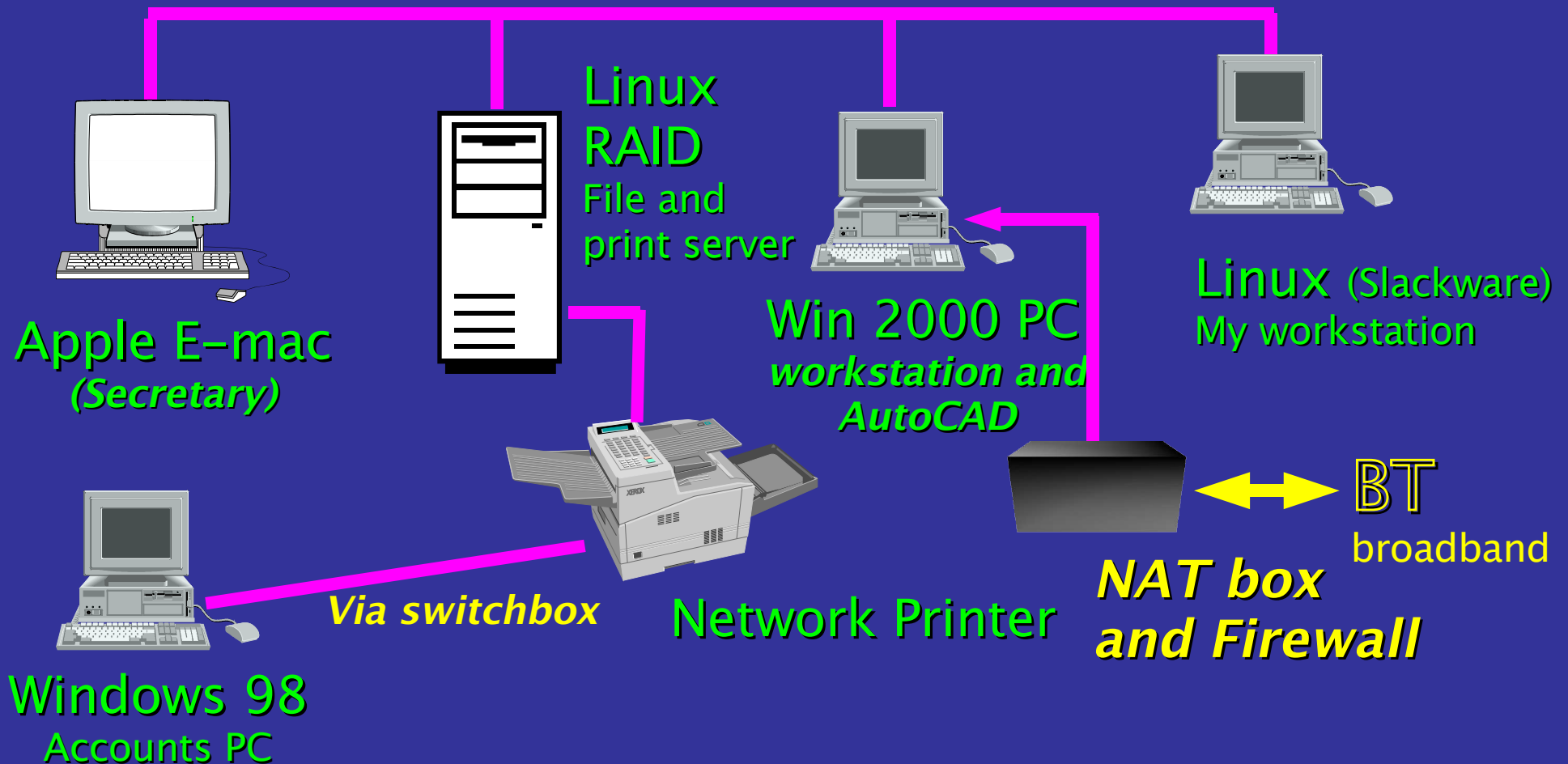


Monmouth office network

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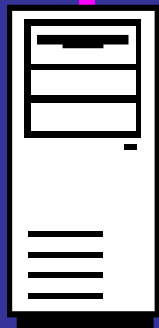
New Birmingham office network

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**NAT box
and Firewall**



blueyonder
broadband



**Linux
RAID
File and
print server**



**Linux PC
(Secretary)**



**Win 2000 PC
workstation and
AutoCAD**



**Linux (Slackware)
My workstation**



**Linux PC
(workstation)**



Network Printer

www.rowanhouse.co.uk

VoIP Problems

- *The Handset software is currently poor quality and often flaky*
- *Firewalls must allow the specific ports to be open for the VoIP*
- *Major ISPs now have internal Firewalls – and you can't change the port configurations on these*
- *I haven't found a handset software that rings the bell separately to the headphones!*

Setting it up (Getting started)

*This is not as easy and
obvious as you might
think !*

Procedure Overview

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- *Download and install headset / handset software*
- *Run headset software and it asks you to register the product*
- *Register headset software over internet*
- *Software appears to ask again for registration number ... but it is actually asking for the registered VoIP phone number*
- *Go to VoIP service network provider and register for phone number – receive phone number and account profile*
- *Enter registered phone number and account profile*
- *Run on-line test software for headset and system connection*
- *Find the headset software doesn't work properly*
- *Locate some other headset software*

The headsets

- *Generally headphone & microphone combined units are used*
- *Standard sound card will do*
- *Can't get ethernet based phones*
- *USB headsets are more expensive but sometimes easier to configure*
- *Phone sets are available*
 - *These are actually only headphone / microphone units repackaged to look like a phone*
- *Best result is to use the headphone speakers and the built-in microphone*
 - *This stops the headphone speakers cutting out each time you speak into the microphone*

Handset software



Download from
www.sjlabs.com

The Windows SPhone software only actually worked properly on MS Windows XP

For Windows 2000 we had to use another handset software that was identified as a Beta-version

The Win2000 version sometimes cuts off the call for no reason
... but it works tolerably

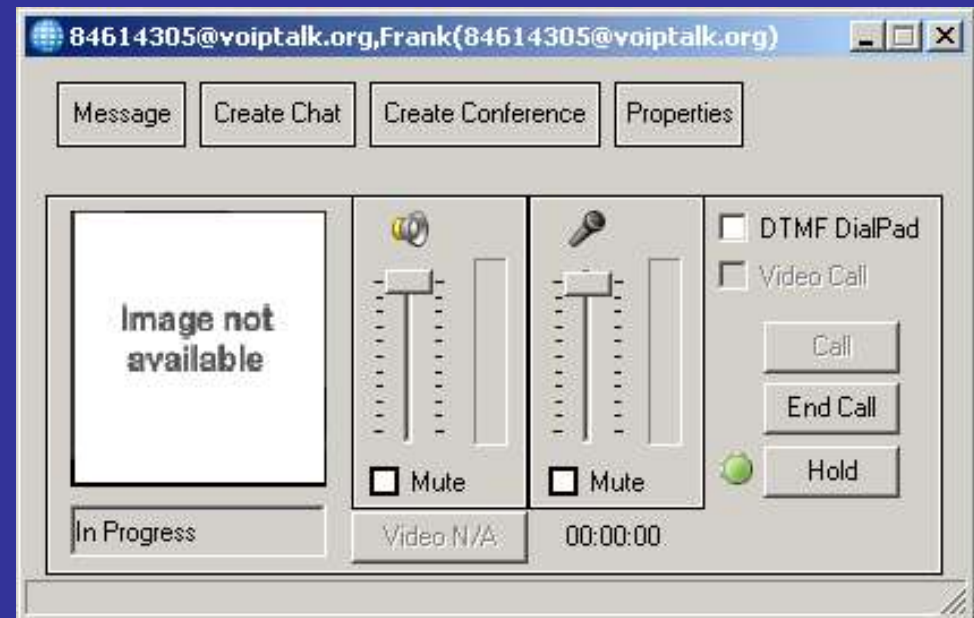
Handset software

The Windows 2000 version



This is the screen for dialling

This is the screen you get when you 'right-click' against a name



Configuration

The Windows 2000 version

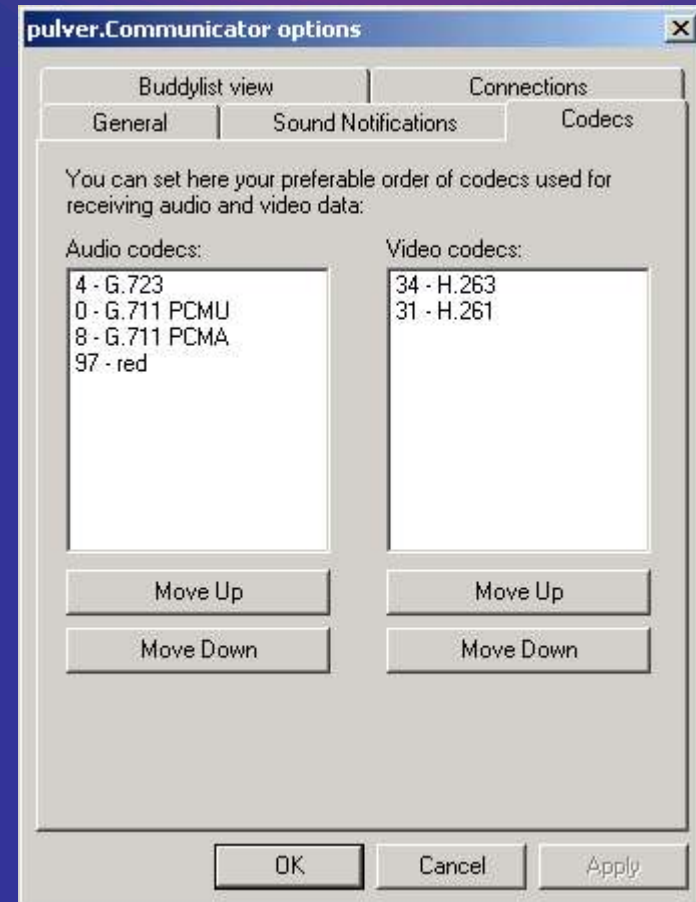
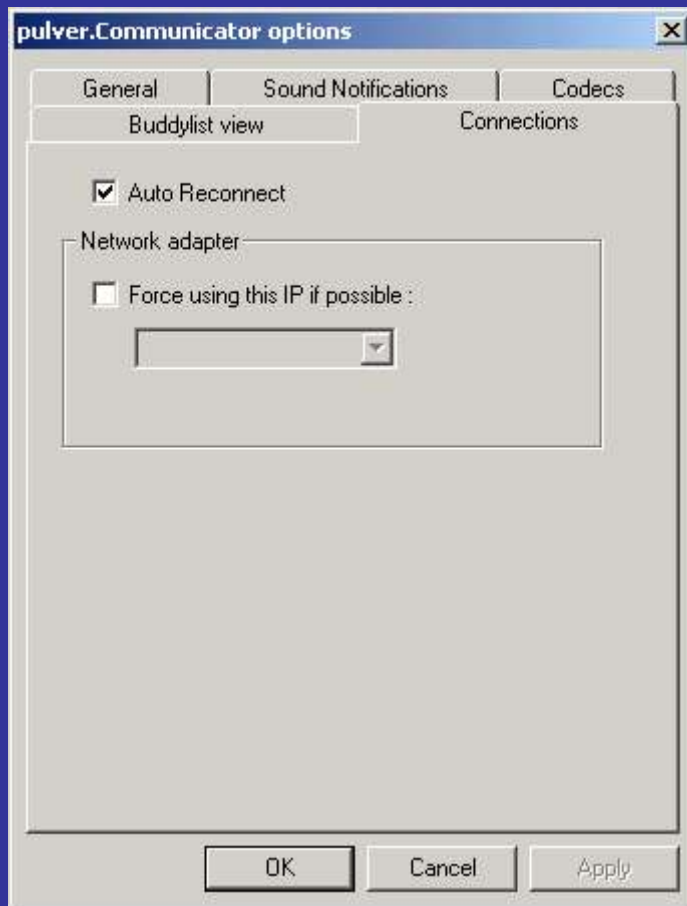


The setup refers to the logs both for diagnostics and for call logs

... as far as we can tell the call log pages don't work !

Configuration

The Windows 2000 version



Most of the setup simply uses the default values

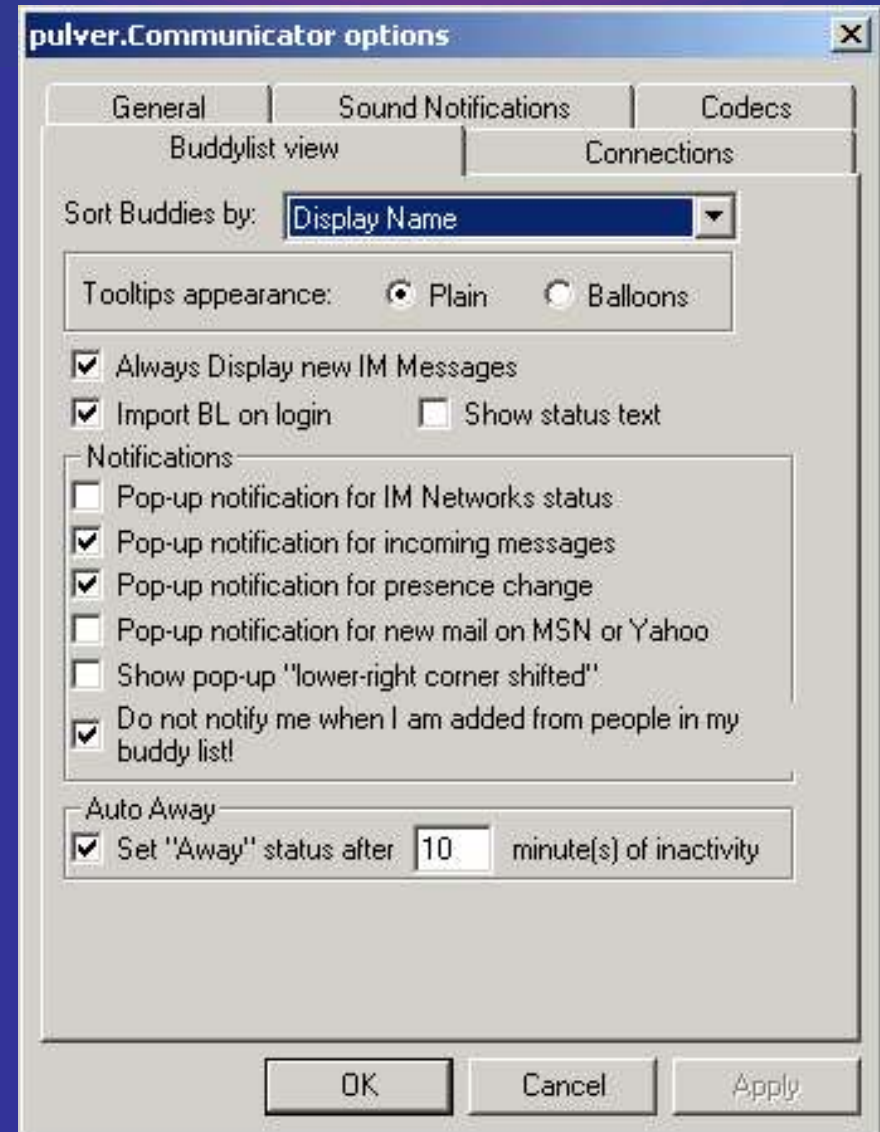
Configuration

The Windows 2000 version

As a design this handset software is looking to include instant messaging as well as images.

BL = Buddy List

IM = Instant Messaging



Linux and Apple version

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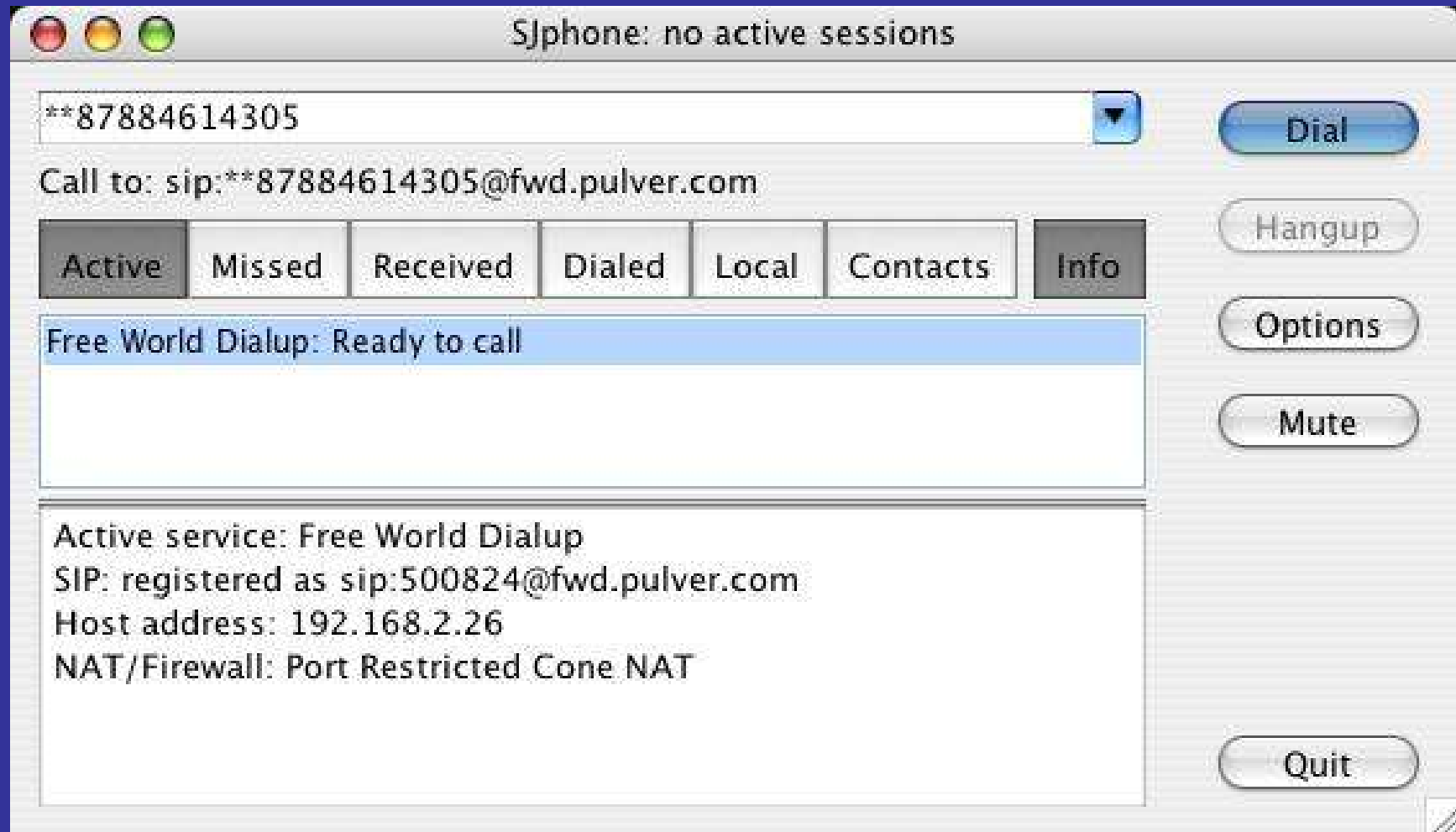


Download from www.sjlabs.com

www.rowanhouse.co.uk

Linux and Apple version

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Linux version

- Download from www.sjlabs.com
- Two files to be downloaded :
 - SjphoneLNX-256b.tar.gz
 - *This contains the Handset software*
 - FWD_SJphone_Profile.tar.gz
 - *This contains the setup for FreeWorldDialUp*
 - *2 files: FWD.ini and a file called INSTALL (very M\$)*
- Install for local user (not installed by root)
- Hence use `tar -xzvf` rather than `installpkg`

Linux version

- First install the Sjphone
 - `tar -xzvf Sjphone[tab]`
- During the install it creates a directory
 - `/home/desalis/SJphoneLNX-256b`
- and puts all the software in that directory
- Then expand out the FWD profile with
 - `tar -xzvf FWD_SJphon[tab]`
- You are now ready to complete the setup

Linux version

- To run the software:
- ... `cd` to your chosen directory
- Use `./sjphone`
 - To make an icon your application will be something like:
 - ... `cd /home/desalis/SJphoneLNX-256b; ./sjphone`
- The first time you run the software go to:
 - Options -> Profile
 - and select Import and import the FWD.ini file
 - Then select Initialize
 - The latest version now asks directly for your FWD phone number

Configuration

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The screenshot shows the 'User Information' tab of the 'Sjphone Options' window. The window has a title bar with three colored buttons (red, yellow, green) and the text 'Sjphone Options'. Below the title bar are five tabs: 'User Information' (selected), 'Call Options', 'Profiles', 'Audio', and 'Neighbor'. The main area contains four input fields: 'Name:' with the text 'Clive de Salis', 'E-mail:' with 'de.salis@swissinfo.org', 'Location:' with 'UK', and 'Comments:' with an empty text area. At the bottom right are two buttons: 'OK' and 'Cancel'.

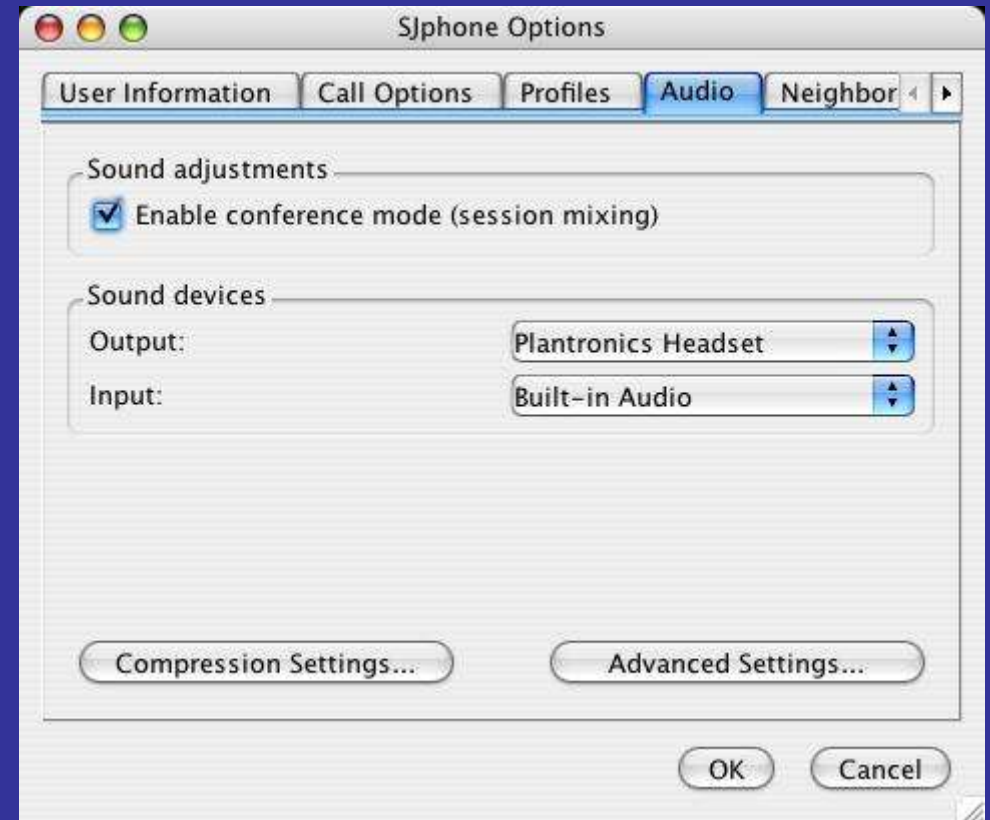
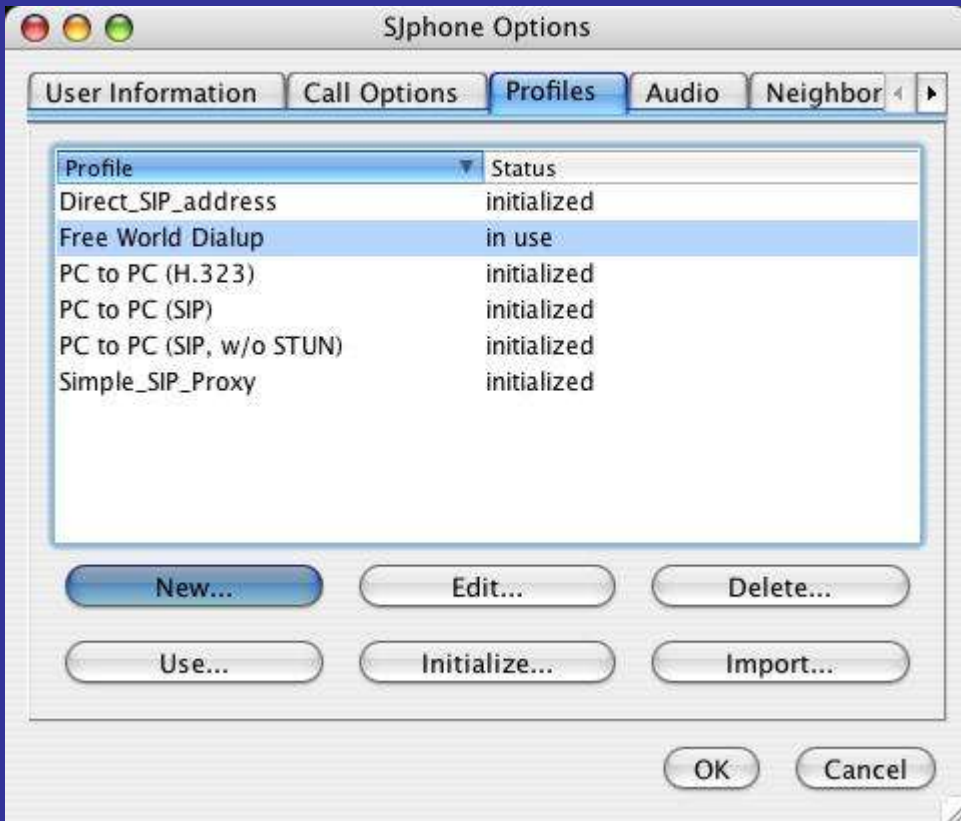
The screenshot shows the 'Call Options' tab of the 'Sjphone Options' window. The window has a title bar with three colored buttons (red, yellow, green) and the text 'Sjphone Options'. Below the title bar are five tabs: 'User Information', 'Call Options' (selected), 'Profiles', 'Audio', and 'Neighbor'. The main area is divided into two sections: 'Incoming calls' and 'Outgoing calls'. Under 'Incoming calls', there are three checkboxes: 'Automatically accept incoming calls' (unchecked), 'Automatically ignore incoming calls after 15 secs.' (unchecked), and 'Automatically ignore incoming calls (do not disturb mode)' (unchecked). Below these is a 'Redirection URL:' field. Under 'Outgoing calls', there is a checkbox 'Use following host address:' (unchecked) with a dropdown menu showing '192.168.2.26'. Below that is a 'Session initialization timeout:' field with the value '0' and the unit 'secs.'. At the bottom right are two buttons: 'OK' and 'Cancel'.

Configuration

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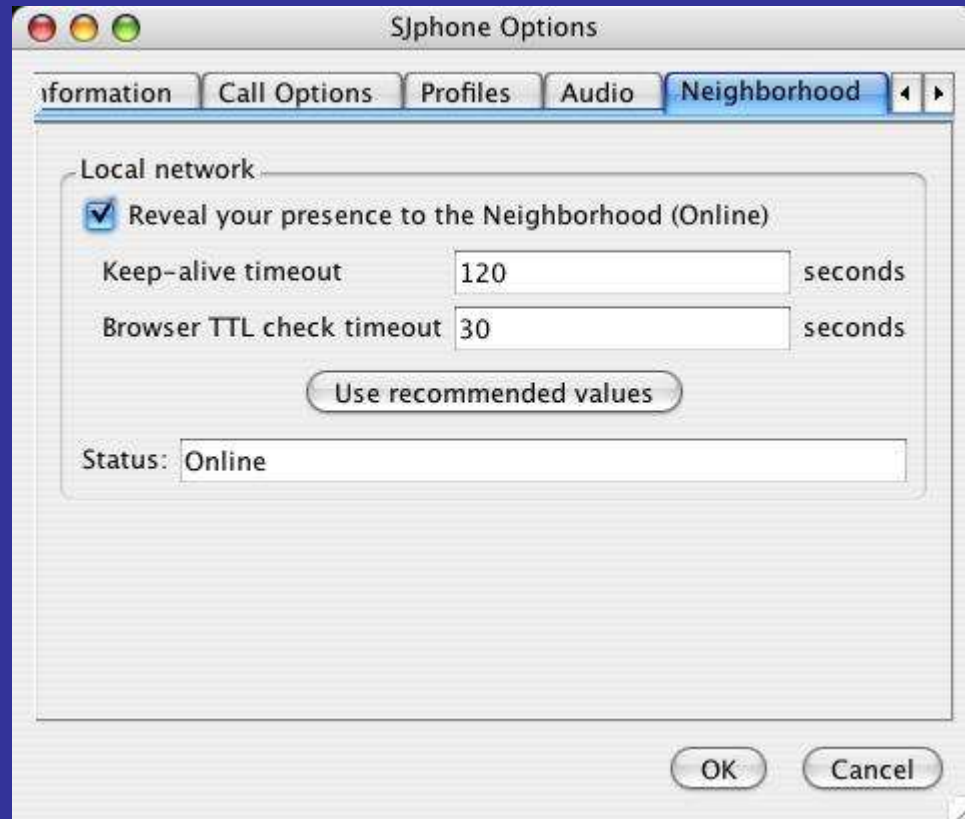


Configuration

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*Now you are set
up
and ready to go
... but you find
that*

*not quite all
the*

*software
works*

Firewalls

The firewall must have a number of ports enable

***Accessing your own firewall in your office network
is easy***

***.... accessing your broadband service provider's network
whizzo internal firewall that offers to “block all the
unwanted viruses” is nearly impossible***

(yes I know Firewalls don't remove viruses but you tell their marketing team that)

Firewalls

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The following is the list of ports to be open for VoIPTalk and FreeWorldDialUp networks ...

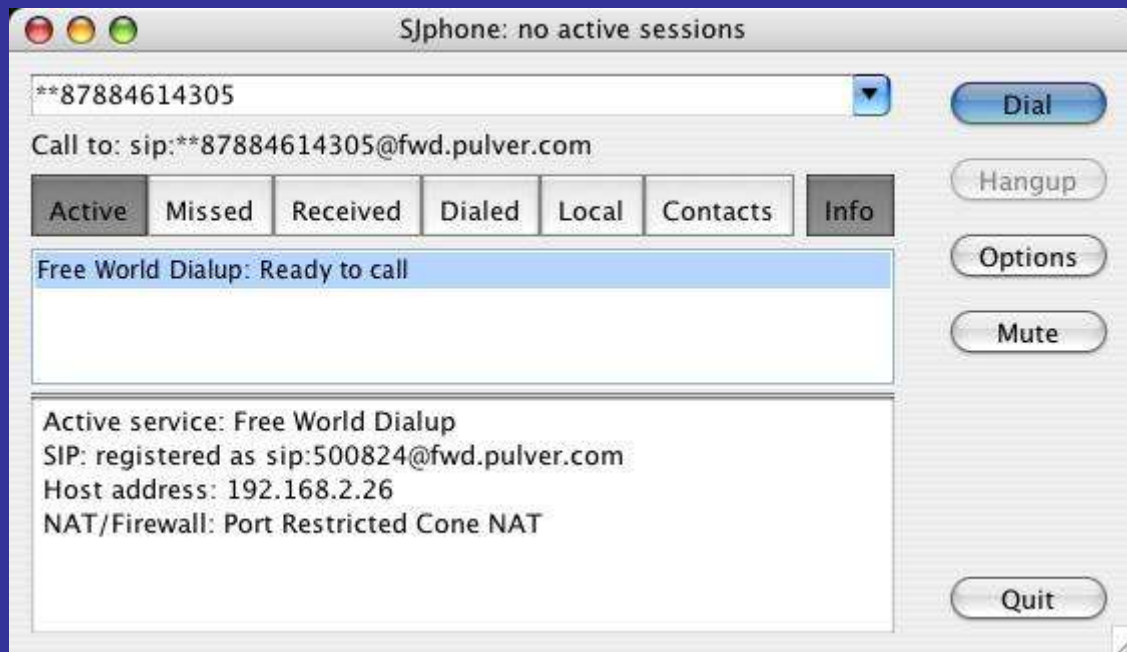
Port	Type	Description
1719	UDP	H.323 Gatekeeper RAS port
1720	TCP	H.323 Call Signalling
1812	UDP	Radius Server in SJPhone
5002	TCP	MLP protocol server
5003	UDP	Neighbourhood service
5060	TCP and UDP	SIP UAS
5065	TCP and UDP	

Using the VoIP

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Dialling to another network requires a code prefix

In this case

**878

dials the VoIPTalk network

NOT every network can talk to the other networks!

Using the VoIP

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On the Linux version
the CONTACTS list
doesn't work

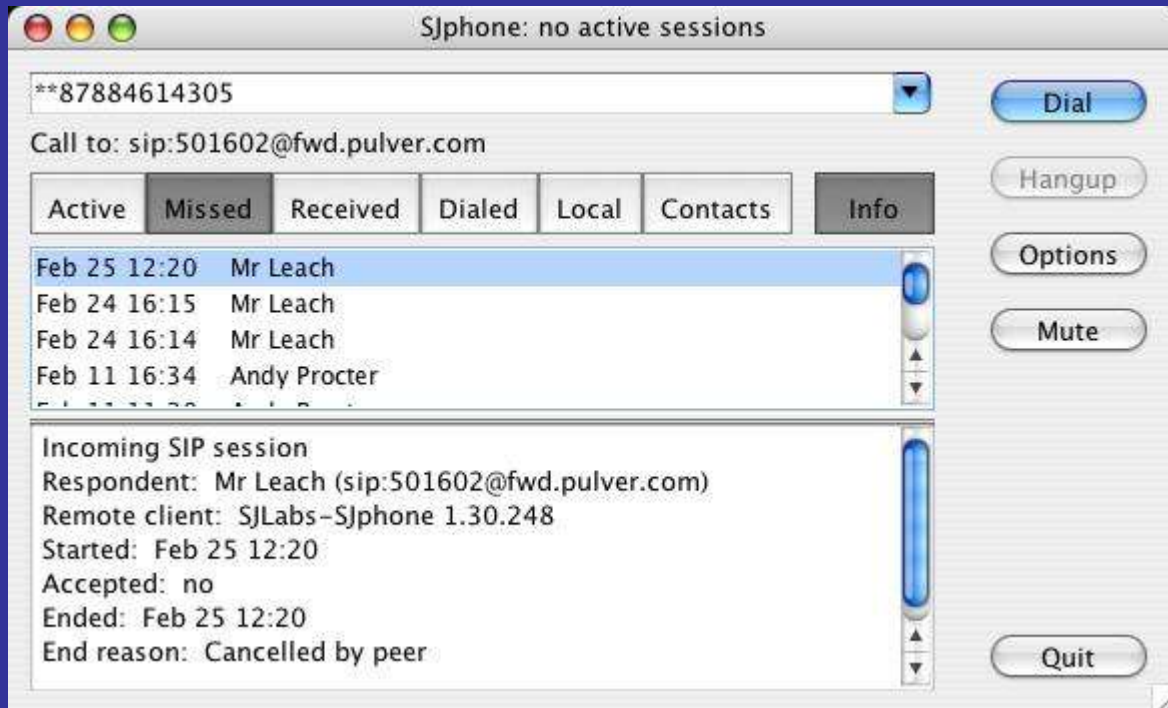
... so use one of the
address book or
contact list software
packages from KDE
or Gnome to create
your own contact list

Using the VoIP

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If you miss a call then ... FreeWorldDialUp not only shows this in the "Missed calls" list

... If you were off-line at the time then the system sends you an email with the call details

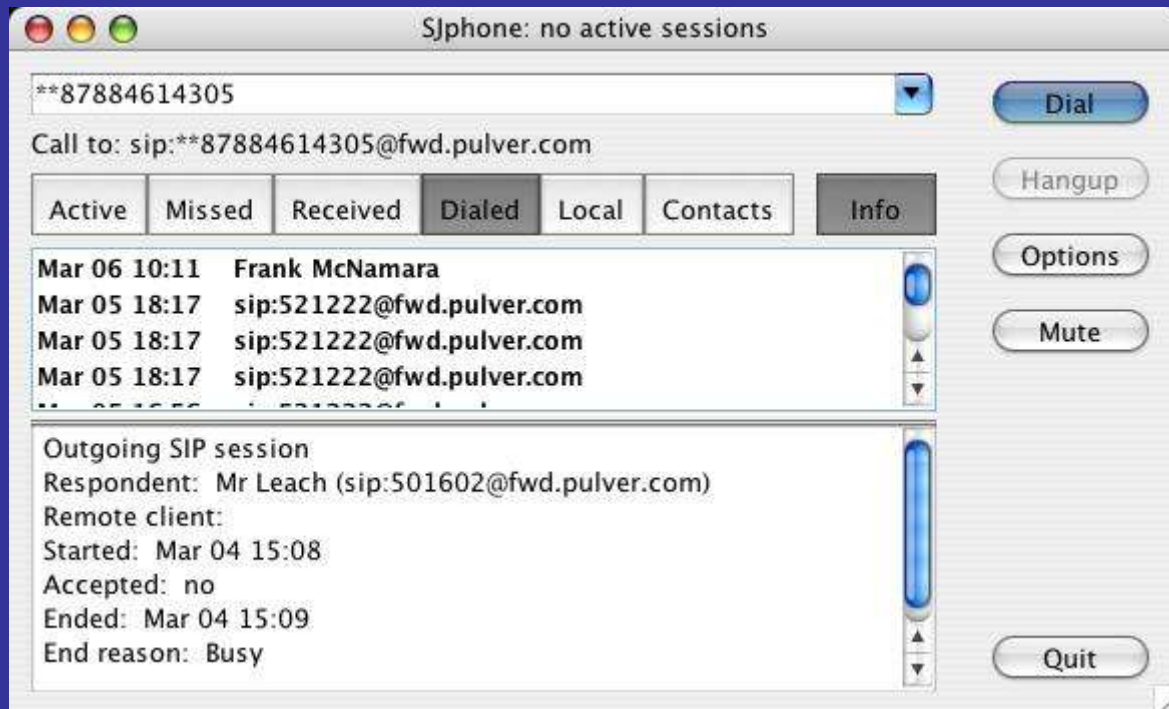
Select the call you missed and double-click to be connected
Missed calls to which you haven't responded are shown in cyan

Using the VoIP

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The call history is shown under the "Dialed" menu

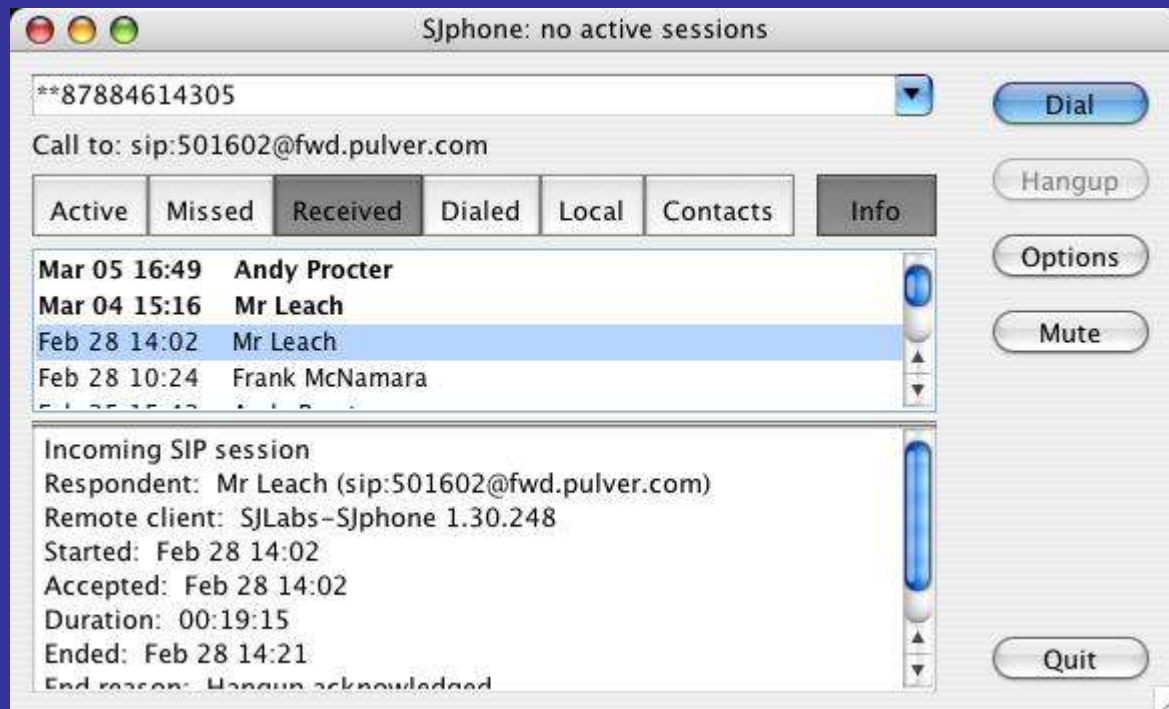
... Select a name and double-click to automatically redial the

Using the VoIP

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The history of received calls is listed in the "Received" page

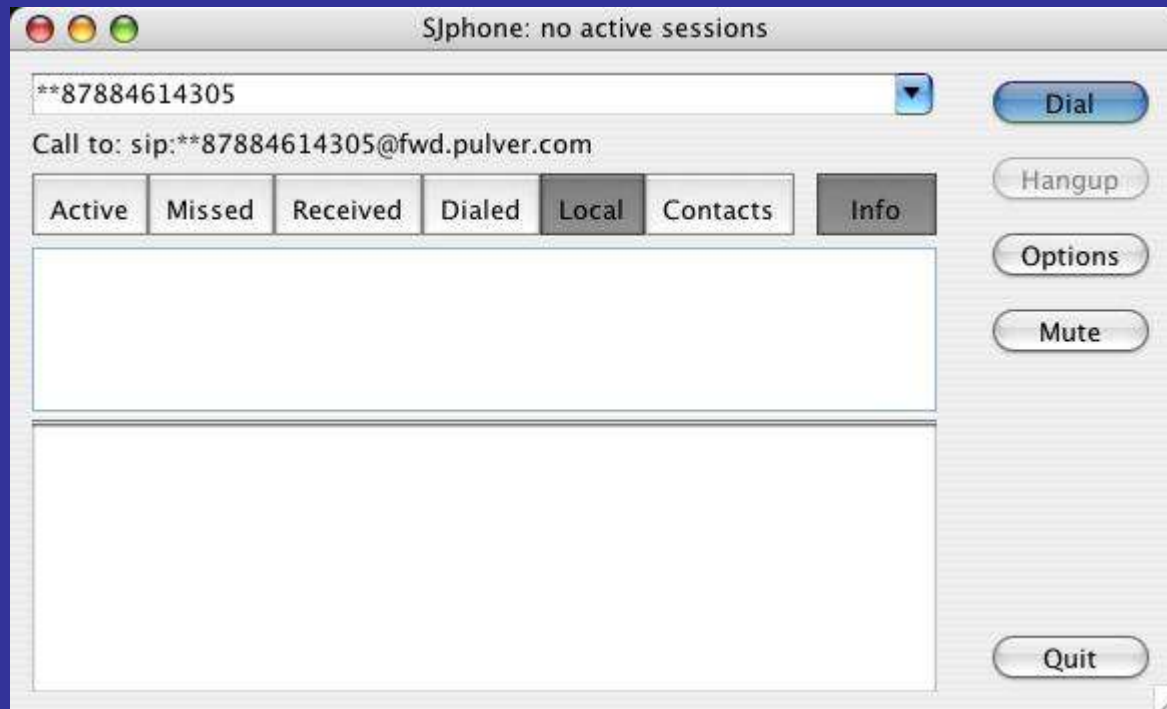
*... Select a name
double-click to
automatically return
the call*

Using the VoIP

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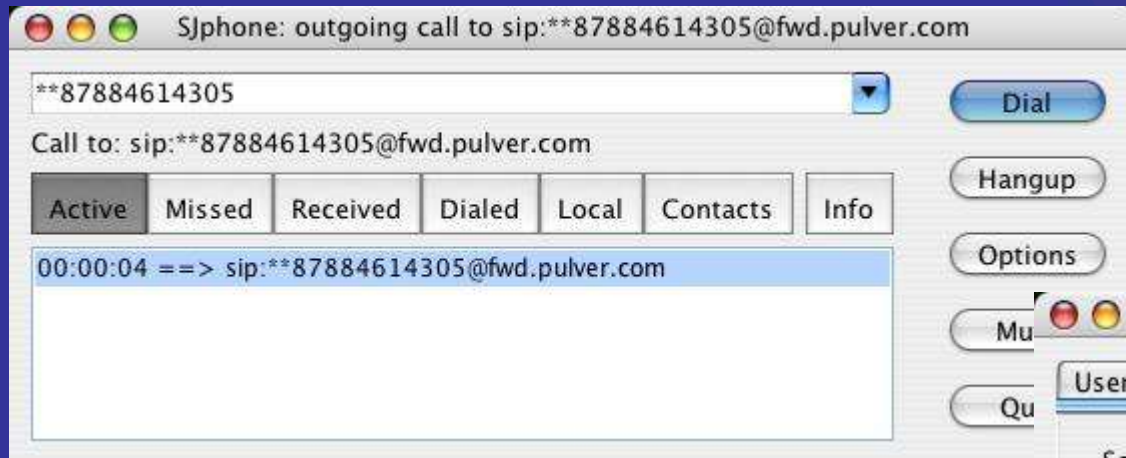
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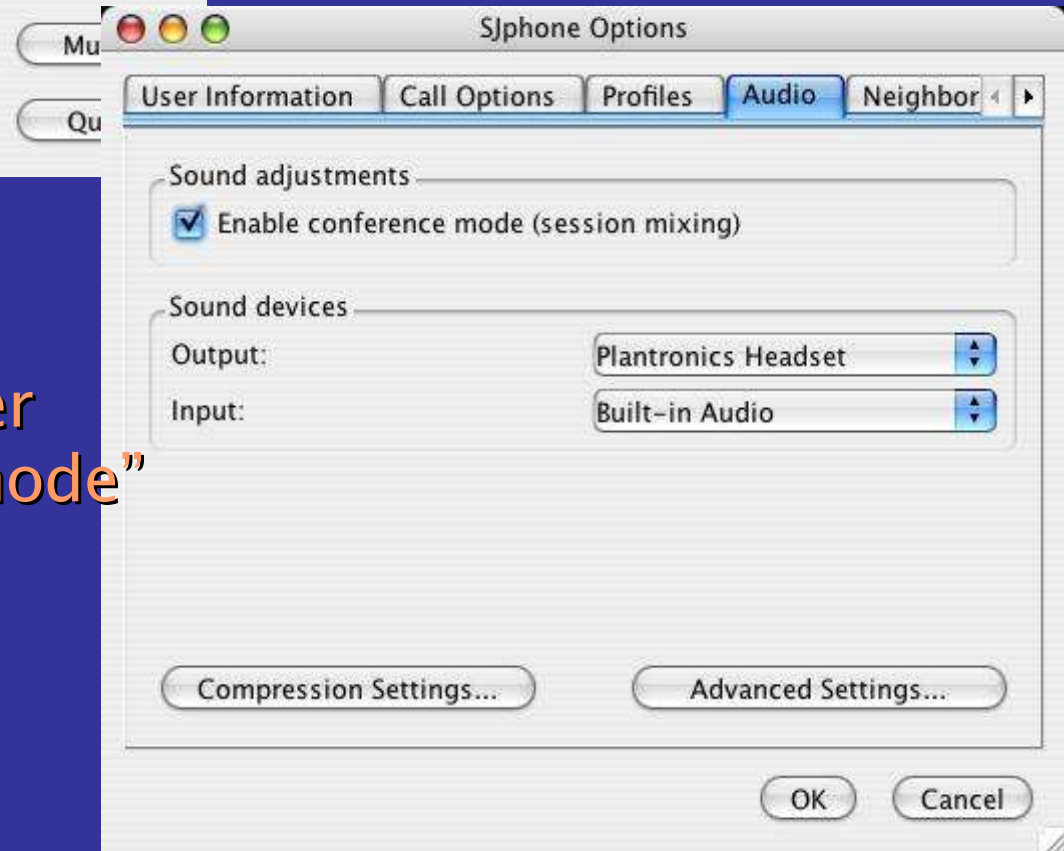
Internally within the ethernet network the "Local" page shows you who is online and allows quick connection to them

Using the VoIP



Conference calls are slightly odd

Everyone has to dial each other with the "Enable conference mode" tickbox selected



One stupid little problem

I haven't found a handset or headset with which the sound of the phone ringing can be directed to the main speakers whilst the dialogue when pick-up goes to the headphones

The future

- *Quality and reliability of headset / handset software will improve*
- *Someone will design a handset where the ring of the phone is on the speakers (and it'll probably flash a light as well)*
- *The Firewall is an opportunity for the ISPs to block the use of VoIP's other than their approved systems*
- *Calls within the same network will probably remain free ... like local calls in the USA*