1. Introduction

I've been reading about VoIP for over 2 years now and been meaning to "implement" something. But I keep getting side-tracked. What I find is that I build up my knowledge to the level I need, get distracted and have forgotten a lot of things.

These are my *crib notes*.

2. FXS versus FXO

An FXS (Foreign Exchange Subscriber/Station) and FXO (Foreign Exchange Office) are two different styles ports. The telephone exchange generates FXS ports that you can plug into.

Only FXO devices (typically telephones) can plug into FXS ports.

Annoyingly FXO devices have FXO ports as well. They can only connect with FXS ports. The connection between an FXS and FXO port is the cable the from the wall socket to the phone socket.

In that case the wall socket is the FXS port and the phone socket is the FXO port. There is a good diagram at http://www.digium.com/index.php?menu=fxsvfxo

3. Hardware

Most hardware that I can find on the Internet, and for sale in Australia, seems to offer only FXS and Ethernet ports. That is they are adaptors for existing analogue phones, that do not connect to the phone network.

Whereas I am after hardware that offers at least one FXO and an FXS port.
3.1. Candidate Hardware

1. Grandstream Handytone 486
   - Contains one FXO and one FXS port
   - Not A-ticked
   - AUD165 (ozvoip.com)

2. Sipura 3000
   - Contains one FXO and one FXS port
   - (somewhat) Usable with Asterisk (see http://www.voip-info.org/wiki-Sipura+3000)
   - A-ticked
   - USD99 (telephonyware.com)
   - AUD195 (myvoipstore.com.au) (no credit card)
   - AUD195 (atp.org.au) (nope; too much info.)
   - AUD205 (techtopia.com.au) (nope; too much info)
   - AUD209 (ozvoip.com)

3. Wildcard TDM400P (11 B)
   - Contains one FXO and one FXS port
   - Not A-ticked
   - USD193 (telephonyware.com)
   - USD195 (asterisk.org)
   - AUD325 (ozvoip.com)

4. Wildcard TDM400P (22 B)
   - Contains two FXO and two FXS ports
   - Not A-ticked
   - USD321 (telephonyware.com)
   - USD321 (asterisk.org)
   - AUD530 (ozvoip.com)

5. Octtel SP4220SO
   - Contains two FXO and two FXS ports
   - Not A-ticked
   - AUD499 (ozvoip.com)
6. Octtel SP4220DX0
   • Contains single FXO and FXS port
   • Not A-ticked
   • AUD339 (ozvoip.com)

7. VoiceTronix OpenLine4
   • Contains four FXO ports
   • A-ticked
   • USD595 (telephonyware.com)

3.2. Purchased Hardware

I ended up buying a Sipura3000 from ozvoip.com (http://www.ozvoip.com). Not because they are the cheapest but because they don’t want useless information (marital status!) and accept orders with a credit card.

Hardware delivered 3 days later — so I was pleased.

4. Asterisk

Since I’m on Debian, apt-get install asterisk got me something installed but without much useful information (also grab asterisk-docs). I ended up downloading the Asterisk handbook from asterisk.org (http://www.asterisk.org) and also looking over the one from the Asterisk Documentation Project asteriskdocs.org (http://www.asteriskdocs.org/).

4.1. Notes

Installed the ztdummy module for timing information?
5. Resources

There are a large of number of VoIP websites out there. A lot of people get confused between the different types of VoIP (those that are toll-bypass; i.e. using FXO ports) and those that just use a handset over IP (i.e. hardware only provides FXS and Ethernet ports).

- voip-info.org (http://www.voip-info.org)
  A good wiki with lots of useful links

- testyourvoip.com (http://testyourvoip.com)
  A resource to test your bandwidth and give you an idea of how a call to various locations will sound

- voipuser.org (http://voipuser.org)
  Gives you access to a UK number (inward and outward)