

## Appendix A

# Videoconference basics

### Videoconference links

Videoconferences can be:

- point to point (directly linking two sites) or
- multi-site (three or more sites).

These refer to the number of sites linked by the conference, not to the number of people participating.

Multi-point conferences can link all sites equally, or can be a main site linked to remote sites. The efficiency and therefore quality of sound and vision can be affected by the type of link used.

### Types of videoconference

There are three main types of videoconference:

- Desktop conferencing using the Internet (IP) network
- ISDN conferencing using special digital telephone lines
- ATM conferencing as in the Scottish MANs (Metropolitan Area Networks).

### Desktop IP videoconferencing

This system uses the Internet to link desktop computers running videoconferencing programmes.

The advantages are:

- It is cheap. You need any PC, an Internet link, cheap video camera and microphone, and special videoconferencing software (also fairly cheap).
- It is accessible: you can videoconference from your own desk, at any time.

The disadvantages are:

- Sound and picture are very poor quality.
- You are dependent on an Internet connection, which can be very slow.
- It is not suitable for medium or large groups of people to use, gathered round a PC.

### ISDN videoconferencing

This uses digital phone lines (Integrated Services Digital Network) and special connections. The numbers (2 to 32) indicate the equivalent number of phone lines being used.

The advantages are:

- Widely available in Higher Education Institutions.
- Ranges from ISDN2 to ISDN 32. Most HEIs which use ISDN have ISDN6.
- ISDN6 offers reasonable quality sound and vision.
- Often available as a portable “box” which can be used in any room with an ISDN connection.

The disadvantages are:

- ISDN2 is poor quality.
- Installation and equipment can be expensive.
- Availability is restricted to where the lines are connected.
- ISDN line charges for use, especially where ISDN6 or more is used, can be high.

### ATM Videoconferencing

Makes use of the cabled MAN connections in Scottish HEIs and special technology which compresses and bundles up the signal (Asynchronous Transfer Mode).

The advantages are:

- Very high quality sound and video.
- Fast and reliable conferencing in dedicated suites.
- Available throughout Scottish Higher Education institutions.
- Free at point of use.

The disadvantages are:

- Can only be used in dedicated suites.
- Some suites are not set up for flexible use.
- Must be formally booked in advance and so may cause timetabling difficulties.

### Videoconferencing equipment

All videoconference participants must have, as a minimum

- camera
- microphone
- conference management software
- display monitor.

In addition, dedicated videoconferencing suites in HEIs are likely to have some or all of the following:

- Visualiser (or document camera): used like an overhead projector, can deal with slides or paper.
- VCR connected to conference so that video tapes can be shown.
- Monitors: large monitors used to present the main picture to participants, smaller monitors to present other views or line up pre-set shots.
- Projector and screen: can provide a large image, especially useful for large rooms and lecture theatres.
- Computer and scan converter: allowing computer images to be sent across the videoconference network.
- Data conferencing software. Runs in parallel with the videoconferencing session: allowing participants to share data and applications between sites.

## **Booking a videoconference in Scottish HEIs**

The booking system for videoconferencing throughout the Scottish MANs is straightforward. All the information you may need for this is available via the UKERNA site on <http://www.jvcs.video.ja.net/>

From this site you can find

- A list of sites connected to the Scottish MANs
- A list of current bookings of these sites
- A list of who to contact at your own site.

Check the availability of all the sites you plan to use, and contact the person in charge of bookings at your local site. They will need dates, times and the other site contacts for the meeting.

The checklists in the following section provide further guidance on arranging a videoconference.