Multimedia Presentations via the Internet

Jeremy Rowntree
The Problem

How to permit a lecture to be seen in two places at once?

Why me?

Because that’s the sort of thing IT Officers get asked to solve
Aims

- To ensure that the technology does not interfere with the experience of the primary audience
- To give the second audience a worthwhile experience
- To minimise the cost of implementation
Possible Solutions

- ISDN video-conferencing
- PowerPoint Broadcast Technology
- NetMeeting software
ISDN Video-conferencing

Pros
- Allows two-way interactive video
- Dedicated line so offers good, reliable quality

Cons
- Needs both lecture rooms to have ISDN
- Needs special hardware
- Costs real money
PowerPoint Broadcast

Pros

- Best for recording in a controlled environment for repeated re-broadcast

Cons

- Needs IIS with streaming installed
- Remote display required manual editing
- Audio & video not always in sync
- I couldn’t get it to work reliably
NetMeeting software

Pros
- Free
- Allows sharing of the PC screen

Cons
- Uses IP, so affected by network traffic levels
- Video quality is poor
What did we choose?

- ISDN
- But, it turned out that the lecture was to be given in a non-ISDN equipped room, so we ended up with ..... 
- NetMeeting
What would I choose now?

**NetMeeting**

Why?

- Program sharing works brilliantly
- Audio was acceptable, despite worries
- Students weren’t fussed about video, so we didn’t bother
Obtaining NetMeeting

- If not installed, download from www.microsoft.com/windows/netmeeting/
- Windows 2000 – Software is preinstalled. See KB Q267958 if you need to reinstall it
Setting up NetMeeting

- On first launch, a wizard asks some questions
- It is not essential to be listed in the Internet Directory, or to log on to their server
- Do have your speakers and microphone plugged in, though the audio tuning wizard can be run again later
Preferred settings 1

Options

General
- My directory information:
  - First name: Fred
  - Last name: Bloggs
  - Email address: Fred@bioch.ox.ac.uk
  - Location: Biochemistry Dept, Oxford University
  - Comments: Computer Office

Directory Settings
- Directory: Microsoft Internet Directory
- Do not list my name in the directory.
- Log on to a directory server when NetMeeting starts.
- Run NetMeeting in the background when Windows starts.
- Show the NetMeeting icon on the taskbar.

Incoming Calls
- I prefer to receive secure incoming calls when I'm not in a meeting.

Certificate
- Select the type of security and certificate to use.
  - Use privacy (encryption) only.
  - Use this certificate for privacy and authentication.

NetMeeting Certificate (privacy only)

Options

General
- Incoming Calls
  - I prefer to receive secure incoming calls when I'm not in a meeting.

Outgoing Calls
- I prefer to make secure outgoing calls.

Certificate
- Select the type of security and certificate to use.
  - Use privacy (encryption) only.
  - Use this certificate for privacy and authentication.

NetMeeting Certificate (privacy only)
Preferred settings 2

Zero setting leaves hiss audible, which sounds better IMHO
Video camera?

- Necessary only if the audience needs to see something other than just the PowerPoint slides
- Ideally, you need a second screen for the video output
- Can be done using two computers at each end, or two plus one and a conference call.
Video Camera 2

- Failing that, use the “Always-on-top” option in the View menu, or “Picture-in-Picture” if your projector has it.
- You’ll need to ensure that the PowerPoint presentation is not to overlap the chosen location.
- Avoid if possible.
Choosing a camera

- Creative Webcam III
  webcam.creative.com/products/webcam3/
- Logitech Quickcam range
  www.logitech.com/cf/products/cameras.cfm
- Or use an actual video camera
  - You’ll also need a video capture card
  - Does offer greater flexibility if you want something other than a static camera
Audio

- Vital to get this right
- Make time to check every setting at both ends of the link-up
- If possible use the actual lecturer
- Otherwise, find someone with a similar voice and use the actual room
Choosing a mic

- **Lapel Mic**
  Easy to wear but poor voice pickup

- **Headset Mic** - [www.labtec.com/europe/lva7330.htm](http://www.labtec.com/europe/lva7330.htm)
  Follows head turns, but looks silly
  Hair contact can be a problem

- **Collar Mic** - [www.labtec.com/europe/lva7370.htm](http://www.labtec.com/europe/lva7370.htm)
  Comfortable with good voice pickup,
  but beware of turning your head
Radio Microphones

- Oxford Visuals installed the OUCS mic
  http://www.oxfordvisuals.co.uk/

- Other links
  http://www.stagetec.co.uk/Product_Pages/at1200.html
  http://www.rockfactory.co.uk/PAdept/microphones.html
  http://catalog.applesound.co.uk/
  http://www.trantec.co.uk/

- Guidance notes
  http://www.gbaudio.co.uk/radio.htm
Demonstration

- Launch NetMeeting software
- Activate video
- Run audio wizard
- Call receiving computer using IP address
- Share software
Program sharing

- You can share any number of individual programs, or your entire desktop
- You can even set up a three-way call
Things to remember

- Important to use the PC mouse, otherwise the remote audience don’t know what you’re pointing at.
- Colour photos transmit badly.
- NetMeeting’s Chat facility is useful during initial set-up.
- If you’re fitting speakers, fit them level with the front seats.
PowerPoint broadcast

- Didn’t work for me – got “access denied”
- If you want to try it yourself, see

- You’ll need an NT4 or Win2K server with IIS and the On-line Presentation service
- Sample at:
ISDN Videoconferencing

- Talk to Daphne Tilling (70712) at the University Offices about having the ISDN lines installed.
- Talk to the ETRC – www.etrc.ox.ac.uk about the hardware.
Other software options

- **CUSeeMe** - http://www.cuseeme.com/
  - The original web-based video program
  - Mac, PC, Linux and Solaris versions available

- **iVisit** - http://www.ivisit.com/
  - Free Mac/PC software with basic facilities

- **VideoIP** – http://wearesimply.com/
  - Linux-based videoconference software
  - Supports H.323 standard
Acknowledgements

- Andrew Foulsham – Institute of Molecular Medicine
- Peter Robinson – ETRC
- Daphne Tilling – University Telecomms
- Phillip Dove - Medical Illustration
- Prof. Jon Austyn – Nuffield Department of Surgery
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Jeremy Rowntree
jr@bioch.ox.ac.uk
75220