

Advice on Digital Technology for Societies – May 2009

Background

The NADFAS Education Department (ED) issued papers in 2005 advising how Societies and Lecturers might approach the issue of digital technology. Inevitably technology and the external world have changed over this time, and so NADFAS must take account of these changes and will amend its guidance accordingly as and when required.

Societies, at the Annual General Meeting 2007 and Area meetings, asked for more structured guidance on migration to digital technology. The ED completed a consultation with NADFAS Lecturers to ascertain how many of them **would** be moving to digital technology and within what timescale.

The guidance is based on the ED's consultation with Societies, Areas and Lecturers. It comprises these introductory notes on facts, assumptions, opinions and a view of the likely future scenario, along with specific recommendations for Societies and Lecturers.

It was first issued in November 2007, and has since been updated with current figures and new research.

Facts

1. Most NADFAS Societies use Kodak carousel slide projectors. Kodak stopped the manufacture of slide carousel projectors in December 2004, although other companies do still produce slide projectors (Simda and Kindermann, for example.)
2. Kodak does not produce projector parts anymore, however the ED can put Societies in touch with suppliers of spare parts and repairers. Over time, the number of available parts will inevitably decrease.
3. Many universities, colleges, museums, galleries and other like-minded organisations now use digital technology to illustrate art lectures, although some (such as the Courtauld Institute) continue to use slide carousels as well. The corporate world uses digital technology as the norm, for presentations etc.
4. Currently, **eighty-seven Lecturers offer some or all of their lecture titles in digital format. This is 31% of the Lecturers.** These lecturers can be identified by the symbol (D) which appears after the lecture title in the Directory of Lecturers. However, forty-seven Lecturers have indicated that they will move to digital technology only when there is no alternative. A further thirty-seven Lecturers have said they will not move to digital technology at all.
5. **Most** new-to-NADFAS Lecturers use digital technology. The panel which selects Lecturers is asked to judge on the quality of their presentation and the quality of the images they use, but not the type of technology. **However, those candidates who do not use digital technology are asked if and when they plan to convert.**

Opinions

NADFAS does not feel it is necessary to make a judgement on the relative qualities of digital images and that of 35mm slides as the technologies have their own benefits and issues. Rather, NADFAS advocates the use of good quality images in either format.

Some NADFAS Lecturers have strong opinions about the relative qualities of digital and 35mm technology. Concerns over the quality of digital images was given as one of the main reasons for Lecturers not switching to digital technology in the recent survey of Lecturers. Other barriers included the cost of digital equipment and the cost and time which would be required to digitise 35mm slides or to re-take photographs.

Survey results indicate that 37 NADFAS Lecturers will not convert to digital technology. Issuing a deadline would force these lecturers to leave the Directory and as we wish to offer Societies as wide a choice of subjects as possible this would be undesirable and, as the selection of lecturers is based on quality of presentation, this would be self-defeating.

Assumptions

The assumptions set out below will be reviewed regularly. So, for example, if it appears that slide projectors will become obsolete sooner than 2012, assumptions, and guidance based on the assumptions, will be amended.

NADFAS assumes that:

1. Top quality digital images compare well with 35mm slides;
2. The external world is moving over to digital technology, and will continue to do so, possibly at an accelerated rate;
3. Slide projectors will be serviceable for at least the next three to five years;
4. Lecturers will continue to migrate to digital technology at a steady rate. 39% of the NADFAS lecturers who responded to the ED's consultation exercise in 2007 said that they would probably move to digital technology within 5 years, with 34% saying it was likely that they would move within 3 years.
5. The main risks for NADFAS might be summarised as:
 - i) The financial and administrative burden for Societies coping with two types of technology;
 - ii) Being overtaken by a move to digital technology and a rapid redundancy of 35mm slide technology;
 - iii) The acquisition by Societies or Lecturers of incompatible digital equipment;
 - iv) The loss of Lecturers from the NADFAS Directory of Lecturers if NADFAS is not supportive in the transition to digital technology.

Future Scenario

For the above reasons Societies and Lecturers are encouraged to begin considering the transition to digital technology. However, there is no panic to rush into the

purchase of equipment. It appears that most Societies have their programmes settled for the next 18 months to 2 years and so will be aware if they are due to have a visit from a lecturer who uses digital technology. Programme secretaries will have discussed with such Lecturers whether the Society or the Lecturer will be providing the equipment. If it is to be the Society, digital projectors can be hired by the day. To address the above lists, the NADFAS guidance is based on a flexible future scenario.

Lecturers

All costs associated with the production of digital images will be borne by the lecturers. This will include the conversion of existing 35mm slides to digital and the provision of a memory device to transport the images to the Society venue. Lecturers may be able to offer lectures in either digital or slide format.

Advice and training initiatives to support lecturers with the transition are part of current budget proposals/discussions.

Societies

It is anticipated that costs associated with the visual presentation during lectures will be covered by the Societies, as they are currently. This will include the purchase or hire of digital projection equipment and its maintenance and upkeep. This will ensure that Societies have the digital equipment most suited to their particular venue. By maintaining 35mm slide equipment for as long as possible, Societies will be maximising the options they have regarding lecture choice. The costs associated with acquiring and maintaining traditional carousel equipment are not considered to be prohibitive.

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A. Detailed recommendations

1. As every Society's meeting place is unique, the requirements of the particular venue should be considered when purchasing digital equipment. This is why it is recommended that Societies should provide a digital projector. The larger the hall, the greater light output likely to be required from the projector – please see *Technical Specifications*. You may wish to share these technical specifications with a supplier as there are a number of points to consider.
2. A list of suppliers of digital equipment suggested by NADFAS Societies is available from the NADFAS website or by contacting the Education Department.
3. Societies should also consider buying a laptop computer for use with the digital projector. This would avoid compatibility issues and could also be used for other Society/committee activities.
4. NADFAS offers individual advice to any society wishing to buy digital equipment.
5. NADFAS will not be suggesting a deadline by which lecturers must use digital technology. It is the quality of lecturers' presentations and images, rather than the type of technology they use, which is vital to the accreditation process. A transition to digital technology (driven by obsolescence of carousel projectors) is expected over the next three to five years.
6. NADFAS offers advice to any lecturer ready to convert to digital technology and issued some detailed guidelines in October 2008.
7. NADFAS will facilitate the use of existing slide equipment for as long as it is economically viable. This is currently estimated to be for at least three to five years.
8. External and market forces will determine the rate of change but it is suggested that both Societies and Lecturers begin planning for change.

B. Compatibility

- Modern multimedia projectors are usually compatible with PCs and Apple Macintosh computers, although some models of Apple might need an inexpensive device, a 'Mac converter', to plug into the back of the computer to connect to the projector. One such converter is an interface cable called a mini-DVI to VGA. These are widely available and cost approximately £15-20. This is something to double-check with the supplier.
- For the avoidance of doubt, NADFAS adopts 'PC compatible' as the standard.
- There are many different presentation packages which can be used with a laptop but PowerPoint is the most common and is PC compatible. Lecturers are asked to ensure their presentations are compatible with PowerPoint. As Microsoft upgrades,

changes are made to programmes such as PowerPoint, and presentations created on later versions might not run on computers which have earlier versions installed. However, presentations created on earlier versions of PowerPoint should run on later versions.

- Where appropriate and agreed, lecturers might send a CD or memory stick of their presentation in advance of the lecture to give the society time to check that everything is working. Ideally such checking should take place on the laptop to be used for the lecture some days before the event.

C. Cost to Societies

- NADFAS has advised since 2005 that Societies set aside a contingency fund for the purchase of new equipment or the upkeep of existing equipment.
- Costs change constantly, however, for a 3000 lumen projector, Societies will expect to pay in the region of £1,000 to £1,500. Brighter projectors inevitably cost more than this. Recognised brands of laptops (also called notebooks) will probably start at about £300. Cabling should not be expensive. A total budget of some £1,800 should therefore be sufficient for most societies.
- It is advisable for Societies to purchase a spare digital projector lamp. This will cost in the region of £200.
- The Education Department has issued information on grants that might be available for the purchase of digital equipment.

D. Supporting the use of existing equipment

- Societies should maintain their Kodak projectors for as long as economically viable. This will enable Societies to make full use of all the lectures and lecturers available in the Directory. Currently, about a third of Lecturers listed in the Directory of Lecturers use digital technology and although this will increase, the move to digital will take time.
- If appropriately maintained, slide projectors should last for at least the next 3-5 years.
- The NADFAS Education Department will continue to put Societies in touch with Kodak slide equipment suppliers and repairers.

Appendix 1:

Technical Specifications

NB. We have tried not to use technical jargon, or at least explain it where we have!

- There are currently three types of multimedia projector available; LCD (Liquid Crystal Display), DLP (Digital Light Processing) and LCoS (Liquid Crystal on Silicon). We suggest that Societies choose an LCD projector as these give good quality, sharp computer images with good colour balance. AADFAS, NADFAS's Australian sister organisation, has chosen to advocate the use of DLP projectors, which can handle moving pictures to a higher standard.
- Projector brightness is measured in lumens. We suggest that most NADFAS society venues will require a minimum brightness of 2500 lumens. Larger venues are likely to require a projector which gives out more lumens than this. The larger the image the projector needs to give out, the brighter the projector will need to be. If the Society venue does not have complete blackout, again the number of lumens required will be higher.
- Resolution refers to the number of pixels (dots) on a screen. It is shown as:

number of horizontal pixels x number of vertical pixels

The different resolutions have different names such as SVGA, XGA, WXGA and so on. We suggest that Societies buy an XGA projector. XGA means that the projector displays 1024x768 pixels and this is used by most computers with 15" monitors. Larger screen computers will use a greater number of pixels. Best results are achieved when the resolution of the projector matches that of the computer screen.

- Multimedia projectors can be used for rear projection (if a rear projection screen is provided). As with slide projectors, different lenses are available for use with digital projectors. A long-throw lens can be used for when the projector is positioned a long way from the screen. Short throw lenses can be used when a projector is mounted near to a screen to display a large image, such as with rear projection.
- Multimedia projector lamps (the 'bulb') have an average life of 2,000 hours - the light output of the lamps will deteriorate over time and the lifespan denotes when the bulb is likely to be giving out less than 50% of its original brightness.

The lamp's life will be reduced further if it is not allowed to cool before the projector is switched off. Projectors have a built-in cooling system which keep running when the projector is on standby, however switching the lamp off at the mains does not allow for this facility and can shorten the lamp's life.

- Societies' existing screens should be adequate for digital presentations. Although if a Society opts to *change* to rear projection, a new screen will be needed.
- Many suppliers sell laptop PCs equipped with PowerPoint software, ensuring compatibility.
- The laptop PC requires a CD/DVD drive and an output which can be connected to a digital projector. Please check with the individual supplier.
- The laptop can be positioned at the front of the hall in front of the lecturer so that s/he can see what the audience is seeing behind her/him. This will require cabling from the laptop to the projector. Long cabling might affect the quality of the image,

although this can sometimes be rectified by the addition of a booster, and of course there will be health and safety issues as cables will need to be taped down.

The laptop could be connected to the projector by a short cable and the presentation operated by a remote control, which is usually supplied with the projector at the time of purchase.

A third possibility is the use of wireless or 'wi-fi' technology. Wi-fi is an unobtrusive computer networking system that uses short range radio communications to replace cables. A wi-fi enabled laptop (most new ones are) and projector would be able to communicate without the need for cabling. However, this is likely to be a more expensive option.

- Societies may wish to ask the supplier to visit their venue to establish the "best fit".
- Societies should consider asking about after-sales service, for example in case training is needed to enable members to use the equipment.
- To future-proof the projector, it might be worthwhile purchasing one with a USB slot so that a digital presentation can run from a memory stick loaded into the USB slot. If an infra-red or radio link to a remote control held by the Lecturer is enabled, the Lecturer should be able to move the digital images back and forth from the stage. Societies which have already bought a projector which does not have a USB slot should not worry as a presentation can be run from a memory stick via a laptop.