

Novice to Know-How Module Text

Course 7: Providing Access to Preserved Digital Content

Module 9: Setting-Up an Access Workstation

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1. Introduction.

If you are offering access to your preserved digital content onsite at your organization's search room, library, or similar facility, it is good practice to provide this to users via one or more workstations set-up for the purpose. Dedicated access workstations allow us greater control over security whilst also offering users equality of access, which might include the use of software and hardware that might not otherwise be available to them.

In this module we will be examining what an access workstation is, what issues we should consider when setting one up, as well as suggestions for what basic hardware and software to include.

2. Access Workstations and The Levels of Born-Digital Access.

Level One of the Levels of Born-Digital Access focuses on providing access to digital content onsite at your organization via an "on-site public access computer". This is mentioned in both the Security and Tools sections. To meet the requirements of Level One the access computer (workstation) should have:

- Security measures in place, implemented in line with organizational policies.
- Open and common software that will render widely used file formats.

Level One also requires that there be a member of staff available to support users. They should be able to explain how to use the access workstation and be familiar with the basic functionality of the software installed, and how to open common forms of digital content.

3. Decisions to be Made Before Setting-Up an Access Workstation.

Although the Levels of Born-Digital Access provides us with high-level basic requirements for an access workstation, there are still a number of issues to consider and decisions to be made before we can begin setting-up one up.

We must consider:

- What will the workstation be used for?
- What security issues do we need to consider?
- What computer hardware will be needed?
- What software should be installed?

We will now consider each of these questions, and possible options for your access workstation.

4. What Will the Access Workstation Be Used For?

Results from user needs analysis, particularly user stories, can inform our understanding of why users want to access the digital content in our collections, and how they plan to use it. This can, in turn, help us to identify requirements for the access workstation.

When starting out we will be looking to identify basic needs in relation to opening and viewing digital content on the access workstation. More advanced functions for manipulating and reinterpreting digital content can be added as our organization's digital preservation capabilities mature.

We will also need to consider the key types of digital content in our collections, particularly those we expect to be most heavily used.

Bringing together the information on user needs and types of digital content, we can begin to develop a picture of what we will need the access workstation to do. This will then influence the hardware and software we need.

5. What Security Issues Do We Need to Consider?

Security is one of the most important issues to consider when setting-up an access workstation. Discussing setting-up the workstation(s) with IT colleagues can help you to understand what security issues you will need to address. In particular, they will be able to advise on organizational IT security policies and what limitations or opportunities may result from them.

This will include whether or not the workstations can be connected to the internet and/or the local network, if logins will be required, what types of software can be used, and how to procure the hardware for the workstation itself.

It is important that you are also aware of what issues to raise during discussions. Over the next four slides we will examine some key security issues.

6. Delivery of Content.

How digital content from your collections will be delivered to the workstation for users is an important issue to be discussed with IT colleagues. The following are some potential options to consider:

- Will the users be able to download digital content directly from a web page or similar?
- Will the workstation be granted limited access to the local network so you can copy content from a secure folder to a folder the workstation has access to?
- Will you transfer content onto the workstation via removeable storage media such as a USB drive?

You may find that you are limited in how you can deliver content dependent on local IT security policies. Some organizations will not allow "guest" users on their local network, some will limit downloads, and others will not allow the use of removeable storage media.

7. Allowing Copies to be Made.

Another important issue to consider with security ramifications is whether or not we will allow users to make copies of the digital content they access. This will be of particular importance if we are allowing access on a limited basis to sensitive data, or digital content with restrictions due to intellectual property rights.

Depending on how strict we need to be about managing the creation of copies, we may consider options such as watermarking digital images, ensuring access copies are read-only, requiring users to create and use a login (so we can monitor who accessed what), limiting access to the internet, and disabling ports on the computer for removeable media such as USB drives.

8. Access to Resource Discovery Information.

Finding a balance between user needs and security for your access workstation may, at times, be difficult. This is particularly true if steps such as limiting internet access have been deemed necessary. If your resource discovery systems are online, this may limit users' ability to access useful information from this source.

While working with the digital content, users may wish to read information available in the resource discovery system on the content they are examining, or they may wish to search for other relevant material.

If internet access is limited, you may need to consider alternative options such as separate workstations for access to resource discovery information, or providing an offline version that can be copied to the access workstation. This second option is only possible if your resource discovery is relatively self-contained (e.g. simple web pages or searchable documents) rather than a service provided by a repository or collection management system.

9. Accessibility.

Decisions about security may also affect accessibility options for the access workstation. Organizational policy may limit options for what software can be installed. For example, some organizations will not allow the use of open-source software, while others will try to use open-source options almost exclusively. Either might affect the ability to install software such as screen readers.

Security measures such as disabling ports to restrict copying of data may also restrict the ability to plug-in accessibility-friendly alternatives for input devices such as keyboards or mice.

Strict security may also give users limited options for changing settings such as colors or screen brightness which are important for improving screen accessibility.

It is, therefore, important to discuss accessibility with IT colleagues in relation to setting-up the workstation.

10. Identifying Hardware Requirements.

Once we have thought through what we want our access workstation to do and how we will manage security issues, we will need to decide what computer equipment (hardware) we will need, and what software we will need to install. Again, this is a process that IT colleagues will be able to advise on, both for selection and procurement.

There are two main types of hardware we will need to consider. The first is what type of computer will be needed. The second is what additional peripherals we will need for the workstation. This may include additional monitors, headphones, media readers, and devices to support accessibility, particularly input devices such as keyboards and mice.

Over the next two slides we will discuss each of these in turn.

11. Selecting a Computer.

When selecting a computer for use as an access workstation there are a few key considerations to think through:

- **Desktop or laptop?** – A desktop computer tends to be the default option for most access workstations. It allows for the creation of a defined access area and allows more flexibility in relation to monitor size and input devices such as keyboards and mice. You may, however, consider the use of a laptop if you will need to move the computer, for example, if the space where you are providing access is multipurpose.
- **Graphics card.** – If you have audio-visual content in your collections, it is important to ensure the computer has a graphics card included. This will allow smooth playback of the AV content.
- **Processor.** – The quality of the computer's processor will be most important if the digital content in your collections includes big media files, large collections of data,

or other sizable content. If this is the case, then it is worthwhile getting a computer with the best processor you can with the available budget.

- **Storage.** – How much storage you will need on the workstation will be determined by two factors: where the digital content is being stored while in use, and the types of digital content in your collections. Will the access copies of content be stored locally on the workstation? How often will these be cleared from the workstation? Are there a significant number of sizable digital content types in your collections that might be requested at once? If the digital content in use might be large or plentiful, it may be worthwhile investing in a workstation with solid-state storage which is quicker than a typical hard drive.

12. Additional Peripherals .

You should also consider what additional peripherals might be needed alongside your access workstation. These might include:

- **Monitors.** – Will the access workstation be used for close analysis of images? In which case, a large monitor will be useful. Will users be comparing multiple digital content items? For this purpose it may be helpful to have two monitors at the access workstation. You may also wish to have color screen filters available for those with visual impairments.
- **Headphones.** – Will users be accessing audio-visual material? If so, you may wish to supply headphones, so it is not disruptive to other users.
- **Input devices.** – If your access workstation is a desktop computer, you will need at a minimum a keyboard and mouse. You may, however, have additional input devices depending on how digital content will be used, for example a stylus and tablet for manipulating images, or to help improve accessibility. Accessible input devices include ergonomic or one-hand keyboards, mouse alternatives such as trackballs or joysticks, or a microphone and the accompanying software to allow speech to text.

13. Identifying Software Requirements.

We will also need to consider what software to install on the access workstation. When starting out, our priority will be software that can be used to open and view the most common types of digital content in our collections. It is also useful to focus on software that is open and commonly used to lower costs and increase the likelihood it will be familiar to users.

The information below details some possible software options for common file types.

Links to more information on all of the software tools mentioned are available in the additional resources for this course.

File Viewers.

One option to consider is finding file viewer software that can be used with lots of different file types. There are lots of options for file viewer software available, many of which are free

and will open hundreds of different file formats. Examples include, File Viewer Plus (free version offers access to 150 formats, and a paid version will open more than 300), FreeFileViewer, Free Opener, and Universal Viewer. Before choosing a file viewer, make sure to prepare a list of key file formats in your collection for comparison.

Images.

Most computers will include an image viewer with basic image editing functionality as standard (Photos on Microsoft PCs, Photo Editor on Macs). When starting out this may be sufficient for your access workstation.

If you wish to provide users with the more advanced image manipulation functionality, there are plenty of free and open image editing software that can be deployed. If you want to install the software on the workstation, you may consider options such as GIMP, ImageMagick, Paint.NET, or PhotoScape X. You can also sign-post users to online options such as Adobe Photoshop Express, Pixlr, or Fotor.

Text Documents.

For textual digital content, you will need to consider if you want to limit users to viewing the files, or if you wish to allow them to manipulate the text (and provide a more authentic experience of the document).

For PDFs, Acrobat Viewer is usually the default free option for software, although other free tools are available, such as Foxit Reader, Slim PDF, and Nitro Reader.

If your organization has licences available or the budget to buy one, you may install software such as Microsoft Office for working with textual documents. There are also comparable, free alternatives, the most commonly used of which are LibreOffice and Apache OpenOffice.

Audio-Visual Content.

When selecting software for viewing or listening to audio-visual (AV) content, the basic functionality needed includes the ability to play and pause the content, to mute the content and increase or decrease the volume, a seek bar to allow skipping back and forward, support for subtitles, and the ability to watch full screen.

Again, many operating systems will include software that supports AV content as standard. Although this software often will only playback a limited range of file formats. It is, therefore, useful to check that the most common formats in your collection are supported.

There are also plenty of free options for AV players available. Some of the most commonly used include VLC, GOM, and DivX players.

14. Maintenance and Updates.

Once your access workstation has been set-up, it is important to make sure that it is well maintained. Some of this work might be carried out by IT colleagues as part of their regular maintenance of the organization's computers, but is useful to be aware of what will need done, and to monitor that required maintenance and updates are being carried out.

One of the key issues is the need to update the operating system and software tools as patches and new versions are released. Failure to carry-out updates can cause security problems, and also result in buggy, ill-performing software.

Also, it is important to clear out the storage on the workstation as needed. If access copies are being saved for users on the workstation itself, you will need to regularly clear the storage. Depending on the number of users, the sensitivity of the information, and the size of the digital content, you may wish to do this after each user, or once a day, a week, or at whatever regular interval works best.

15. Offering Staff Support.

As mentioned at the beginning of this module, Level One of the Born-Digital Levels of Access requires the provision of staff support to users accessing preserved digital content. This means staff will need to be trained in how to use the access workstation, and be able to explain its operation to users.

This does not, however, mean that staff should be expected to be experts in the operation of all of the software packages, and the use of the digital content types and the interpretation of the information they contain.

In relation to staff skills, you should aim to be able to explain how to do the following (if relevant):

- Login to the workstation.
- Locate the relevant digital content.
- Open and view common content types using the provided software.
- Provide information on support available for those with accessibility needs.

16. Module Wrap-Up.

In this module we have worked through the issues to consider when setting-up an onsite access workstation, a key requirement of Level One of the Born-Digital Levels of Access.

You must start by considering what you need the access workstation to be able to do, before balancing those requirements with necessary security measures. Consulting with colleagues from IT can be incredibly useful during this process.

They can also help with the next steps of selecting and procuring the correct configuration of hardware and software for the access workstation to meet your requirements. Understanding your users' accessibility needs, and also the key types of digital content in your collections will help at this stage.

Once the workstation is set-up it is also important to ensure that it is well-maintained, with updates made as necessary, and that staff can explain the basics of operating it.