

### Standards

Using file format standards (see [Media and Formats](#) ) and encouraging best practice in data creation and preparation of digital resources for deposit has been a key part of many digital preservation programmes. Combined with collaboration and outreach (see [Collaboration](#) and [Outreach](#) ) it can be an effective method of addressing some other challenges in digital preservation.

The use and development of reliable standards has long been a cornerstone of the information industry. Their existence facilitates the discovery and sharing of resources. Standards are also relevant to the digital environment and provide the same prospects for resource discovery and interoperability between diverse systems.

There are also specific advantages in terms of digital preservation:

- Standard formats are likely to present fewer problems in migrating from one format to another.
- A relatively small number of standard formats will be much easier to manage in both the short and long term.
- A broad consensus on standards will facilitate and simplify collaboration on digital archiving between institutions and sectors.

While undeniably important, there are also factors which inhibit the use of standards as a digital preservation strategy:

- The pace of change is so rapid that standards which have reached the stage of being formally endorsed - a process which usually takes years - will inevitably lag behind developments and may even be superseded. For example, the DLM Guidelines ( [DLM Forum 1997](#) ) divides standards into three levels, de facto, publicly available specifications, and de jure, acknowledging the rapidly changing environment.
- Competitive pressures between suppliers encourage the development of proprietary extensions to, or implementations of, standards, which can dilute the advantages of consistency

and interoperability for preservation.

- The standards themselves adapt and change to new technological environments, leading to a number of variations of the original standard which may or may not be interoperable long-term even if they are backwards compatible in the short-term.
- Standards can be resource intensive to implement.
- In such a changeable and highly distributed environment, it is impossible to be completely prescriptive.

The above factors mean that standards will need to be seen as part of a suite of preservation strategies rather than the key strategy itself. The digital environment is far less inclined to be constrained by rigid rules of any kind and recent years have witnessed a change of emphasis, from reliance on standards towards establishing common approaches which are sufficiently flexible to adapt to both changing circumstances and individual requirements.

### **Best practice**

The necessity for a more fluid approach has led to increased efforts to establish best practice. Increasingly this is being refined into concepts of "ideal practice", "acceptable practice", and "unacceptable practice" to aid implementation. There is still some distance to go before best practice in all aspects of digital preservation can be definitively articulated and in such a rapidly changing environment it may never be categorically established. There are beginning to emerge common approaches based on increasing practical involvement with the many and varied issues. For example, NEDLIB, Cedars, the British Library, and the National Library of Australia have all either adopted the OAIS Reference Model or have taken account of it in their system specifications. There are also increased efforts to define a whole range of acceptable practices, particularly in the creation of digital resources (see also [Creating Digital Materials](#)), many of which will significantly assist later digital preservation efforts. This guidance invariably includes, but is not limited to, the use of appropriate standards.

Common elements of good practice in creation include:

- The use of open, non-proprietary data formats.
- Providing metadata in conformance with emerging standards and documentation aimed at facilitating future use and future management of the resource.
- Assigning permanent names to online digital resources.

### **References**

To open PDFs you will need [Adobe Reader](#)

1. DLM Forum. (1997). Guidelines on Best Practice for Using Electronic Information.  
<http://europa.eu.int/ISPO/dlm/documents/gdlines.pdf> [PDF]

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No longer available - information at

<http://ec.europa.eu/archives/ISPO/dlm/>

[See Exemplars and Further Reading](#)