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## **Preserving our Digital Heritage A New Paradigm**

Abdelaziz Abid

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# World Heritage

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- Ever growing digital heritage and the need for a world campaign to safeguard endangered digital memory
- UNESCO exists in part to enable the preservation and enjoyment of the cultural, scientific and information heritage of the world's peoples. The growth of digital heritage and its vulnerability could hardly go unnoticed.
- The interest of UNESCO in this situation comes as no surprise



## The domain of digital heritage

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- Heritage: monuments, museum collections, archives, collections ...or practices that a society inherits from its past, and which it intends to preserve and transmit to future generations, with the aim of constituting a common foundation of values
- Lasting value and significance
- Significant part of digital heritage consists of the product of the digital reproduction of pre-existing works
- The second component of digital heritage comes from data which only exist in digital form



## The domain of digital heritage

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- Traditional preservation methods cannot be applied as such
- Web pages lifespan extremely short
- Software and hardware constantly replaced by more powerful new generations- incompatible with their predecessors.
- Volume of data to be sifted is staggering
- Copyright- a dazzling array of rights may be associated with websites combining mixed materials from various sources
- The complexity of these problems means that preservation must involve producers of digital information, including software, as they design their products



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## UNESCO's Campaign

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UNESCO has developed a strategy centred on:

- wide consultation with governments, policy makers, producers of information, heritage institutions and experts, the software industry and standard-setting organisations;
- dissemination of technical guidelines;
- implementation of pilot projects and;
- adoption of an international charter on the preservation of digital heritage in October 2003
- pilot projects and capacity building with CODATA and InterPARES. Workshops held in Brazil, Canada, China, Ecuador, Ethiopia, Malaysia and Tunisia.



## A Paradigm Shift

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- Before the Internet, it was still possible to bide our time. Preserving these new disconcerting carriers in a more traditional form remained an option
- With the Internet, the question is clear: the time is close when we will no longer go out from the virtual spaces in order to be able to use them
- The Internet sharpens the issues of the digital world and heritage
- Need to reconsider our certainties about ‘preservation’



## A Paradigm Shift

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- All matter tends to disappear gradually, to dissolve, to disintegrate, to yellow, to age – but not digital information. Information either is, or is not
- Keeping digital information will be like preserving the flame of a fire
- Letting documents lie on shelves in appropriate physical conditions was the best guarantee of preservation
- On the contrary, allowing digital information to circulate on new carriers, to migrate from one carrier to another, will be the ultimate guarantee of its permanent existence.



# A Paradigm Shift

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- The digital domain has one congenital defect: if you do not save something, you erase it
- The digital domain reverses those very propositions which seemed the most certain: the survival of a document is not dependent on how long the medium carrying it will last, but on the capacity of that document to be transferred from one medium to another as often as possible
- A new preservation paradigm is born



## In the grip of digital technology

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- Digitization is invading all spheres of activity, in the production and marketing of goods and services, in artistic, intellectual and scientific creation, and in public administration
- Currently, scientific institutions face the challenge of managing incredible quantities of diverse data
- The safe keeping of this knowledge capital is just as important for the world of science as creating and interpreting that knowledge



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## Text, sound and music

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- Birth of office automation end of the 1970s and beginning of the 1980s
- The world of publishing and the press were the next to be affected by this revolution in page design and printing
- Libraries are digitizing their collections for on line access
- Sound recording, a pioneer in the digital field
- Music, largest cultural industry by number of files exchanged on the Internet



## Virtual images

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- As in the case of music, digitization begins with synthesis in non-real time, and later spreads to the recording, processing and reproduction of images and natural sounds
- Photo agencies circulate digital images across networks
- Extension of these applications in the 1980s to television and cinema production and introduction of special effects
- Digitization affects gradually all components, from production to editing, from editing to transmission control, from transmission control to broadcasting networks, and finally to the private individual's TV set.



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# E-culture and e-learning

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- Virtual museums and laboratories
- Digital libraries
- E-campuses and e-learning without frontiers
- All this contributes to building an ever-increasing digital heritage



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## Infinite heritage?

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- Volume is not the main problem,
- For all that, is all this production suitable material to become heritage?
- If we consider the production resulting from the digitization programmes of cultural institutions, we are clearly on familiar ground
- the approach is quite different when it comes to the Internet



# The elusive Web

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- The unity of the document lost in hyperlinks, flow replaces the finished object
- Various harvesting procedures can be employed:
  - Random samples providing a snapshot of the Web at any given moment
  - Selection strategies based on well-defined criteria, either by subject, form, language, or nationality (domain name)



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# The elusive Web

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- The Internet is in a state of permanent technological evolution
- Directories, search engines indexing the Web
- A content published today on the Internet has no chance of being readable in ten years, unless regular format migrations are organized in the meantime



## A final word

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- We are witnessing the end of the paradigm of the written archive
- Throughout the twentieth century new media have wisely joined this prestigious tradition
- This paradigm has already been transformed, and the systems in place are unable to deal with the brutal advance of digital technologies
- A whole new regime of preservation will have to be constructed
- If this shift does not take place, our societies will suffer irremediable damage in their collective social memory



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Thank you

[az.abid@gmail.com](mailto:az.abid@gmail.com)