ELECTRONIC PUBLISHING AS A GRAPHIC PRODUCT

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Introduction

Digitalization, by definition, is the conversion of an analogue input into a digital form. In the case of graphic products, the goal is not to lose the quality of the input material by digitalizing the archive. Digitalization is a planned and expensive process, which should be conducted following known principles and priorities and according to established rules.

The paper analyzes multimedia, modern software tools, metadata, based on which the concept of metadata is set. Metadata is "data about data" with a description of the content of electronic publications used during the search. Effective access to the required content means that these contents are well described using the metadata. When publishing some graphic products, such as newspapers and books, the problem is not in the use of technology, but in the organization of work.

The advantage of digitalized media is that they can be easily and quickly reproduced without damaging the original, a large number of users have access to the material regardless of time and geographical limitations, the content is not damaged during the use, digital content can be searched and modified.

Disadvantages include digital protection, digitalization converts images into bits that must then be reconstructed in order for images to be displayed, and shaded transitions in images can be transformed into sharp contrasts. In order to read an electronic document, it is necessary to have additional equipment and considerable financial resources needed for digitalization.

Electronic media

Electronic media can be characterized as time-dependent in terms of their monitoring, while printed media can be characterized as static. Ideas, content and their form from information sources are the basis for output. This data belongs to the field of media preparation. Data from the preparation are further directed, depending on the need, to the printed media or the electronic media in order to process or create products intended for end-users. Processing in the production process of electronic or printed media results in media products, electronic information from electronic media and printed products from printing media. Together they make up multimedia.

There is a tendency for the sense of smell and touch to be included in multimedia applications. It may still seem unthinkable from today's point of view, but it will soon become generally accepted. In the future, these devices will be able to connect to a PC and will have one special chip for scents.

The multimedia information system should, in interactive communication with the user, simultaneously use various forms of information, such as text, graphics, animation, static or moving images, music and speech. They generate multimedia entities: video, audio, images that are only partially interpreted via programs because they are insufficiently structured. Figure 1 shows the concept of multimedia as an integration of different media.
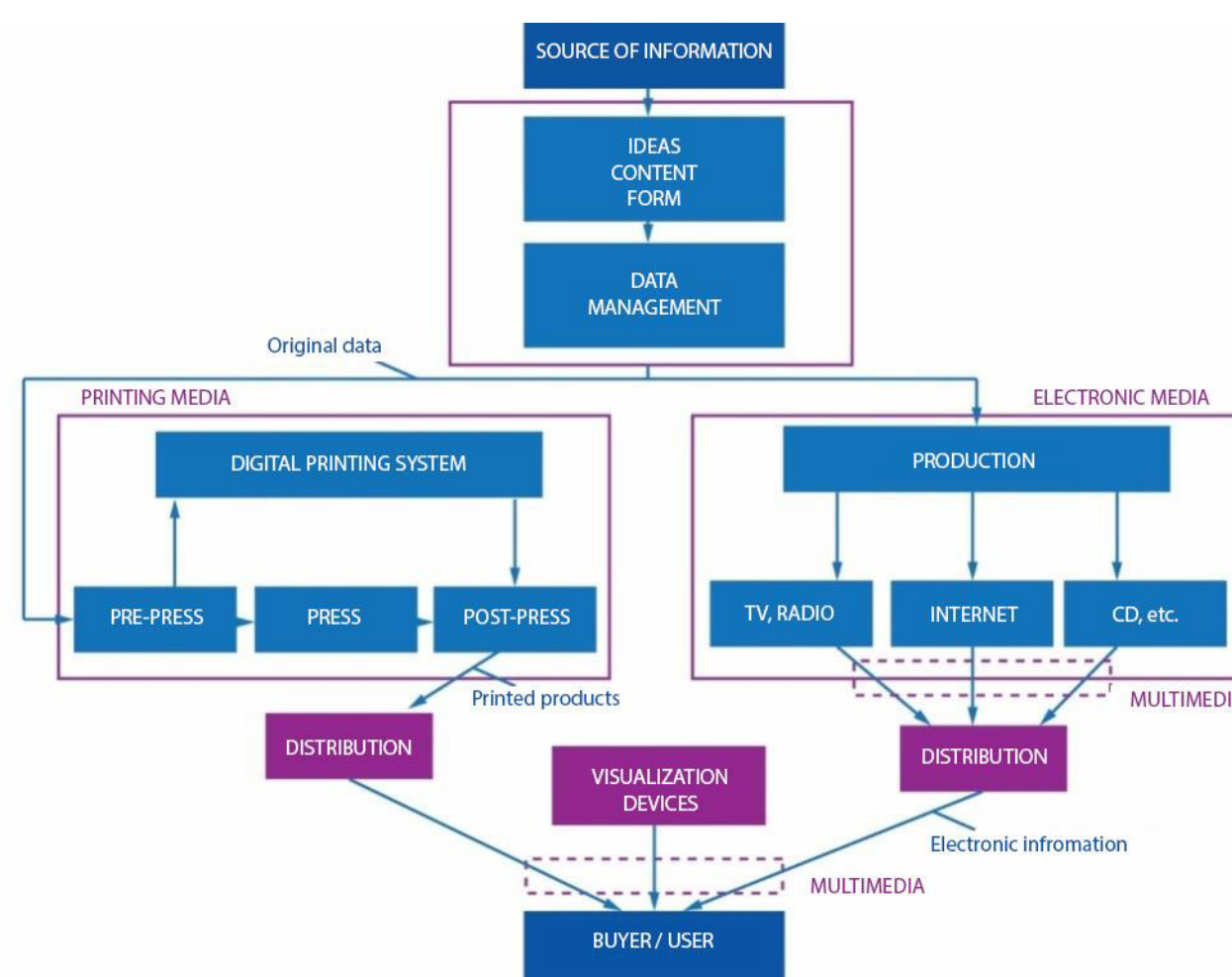

Figure 1 *Multimedia as an integration of different media*

Digitalization of printed media

Over time, news outlets have realized the need for modern digitalization of earlier print editions. This process is preceded by technical requirements and the implementation of digitalization. A digital image is an electronic photograph mapped in the form of a series of image elements, pixels and arranged following a previously defined ratio of horizontal and vertical. In the process of digitalization, the original documents are translated into bitmapped images with the help of a scanner or camera. The scanned document is stored as a digital image record without data compression (e.g. TIFF format) or with with compression (JPEG format).

When converting materials, it is very important to:

- Choose scanners that can be adjusted to the physical dimensions of the original document, the type of media, the range of details, tones and colours on the documents, as well as the physical condition of the documents
- Choose a resolution, bit depth that is sufficient to convey the finest essential details in the newspaper which are to be scanned and to apply newspaper improvement procedures very carefully.
- Use standard compression techniques "lossless" for the parent, i.e. master files
- Try to strike a balance between the visual quality acceptable to users and the file size that the computer can access with an acceptable delay.

Metadata is structured information that describes, explains, locates, or otherwise makes it easier to find, use, or manage a source of information. Metadata is often defined as data about data or information about information. Metadata can be descriptive, structural, and administrative. Metadata can be embedded in a digital object and can be stored separately. Metadata is often embedded in HTML documents and image file headers. Storing metadata together with an object ensures that it will not be lost, avoids the problems of linking data and metadata, and provides security that metadata and the object will be updated together. Flaws of metadata: creating metadata is expensive and time-consuming, metadata is complicated (especially for end-users).

Data models - Many different data models have been developed over the last fifty years. Some of them were just an attempt or a step in the development of other data models, while others came to life and left a mark both in the theory and in the practice of databases.

XML data model - XML (eXtensible Markup Language) is a standard set of rules for defining data in electronic form. It is prescribed by the W3C organization. Its main advantage is that software for working with XML documents exists on all computer platforms (PC / Mac, Windows / Linux / Unix / macOS). It gives full results only when used with related technologies, some of them being: DTD, XML schema, XPath, XQuery, XSL transformations.

Discussion / Conclusion

As a consequence of the growing automation of all phases of the printing process, strong innovation potential in the fields of machines, devices and processes will be released in the coming years. This can be best seen on the basis of technical development in the preparation of printing with short periods of change of the device on which the preparation is realized. The control electronics enable high-

Today, the field of press preparation is, as a rule, in digital form. Only in this way is it possible to shorten the delivery time of printed products and meet the high demands of customers related to quality.

The market for printed products remains, despite the growth of electronic media, as a further attractive and an extensively strong market, as a large part of the ever-growing advertising fees flows into the print media with the widespread growth of the needs for printed and electronic media.

With the spreading of the Internet, the sale of goods and services over the Internet by many companies is expanding as a new form of sales. The Internet is inevitably changing traditional media.

Interactive Internet techniques provide libraries and archives with a new opportunity to develop a global community of users, so the newspapers also need to follow this trend in order to survive. The old archive needs to be digitalized, and the new editions need to be properly preserved and organized.

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