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MODERN ASPECTS OF THE INTERPRETATION OF THE TERM 'REPROGRAPHY'

There is interpretation of the term 'reprografy' on the basis of modern technologies receive fax copies of the images, texts, various documents. Analyses the most famous work of the ways and methods of copying by means of hardware-software complexes that have pulled together these and systematize scientific and practical experience in the world of inventors, scientists, engineers, which gave impetus and developed modern technologies of reprography, which are used for industrial needs and to address scientific and technological experimental tasks. There was analised understanding reprography as fax (not printing) copy the information direct or indirect reproduction on the photo- or sensitive material.

Keywords: terminology; reprography; reproduction; digital encoded originals; analogue originals; copy; model; nano-printing; 3D-printing.

Statement of the problem

Modern publishing and printing production as a sector of economic activity marked the latest technology that efficiently and harmoniously combined in the technical implementation of a variety of business tasks. Most important of which is to disseminate information, to which recently provide the value of the main resource of development of the society, and information systems and technologies are considered today as a means of improving the performance of typography in general.

Exactly what information technology is a set of methods, processes and software and hardware tools, integrated with the aim of collecting, recording, processing, storage, distribution and use of information, rooted in all areas of technology and technique of printing, in particular all kinds and means the creation, registration, recording, storage and playback of data in visual, audio-visual and material forms. And it is publishing today is a powerful, relevant economic activity that covers the entire publishing and printing work. The term 'typography' it is interpreted in a modern Ukraine publishing and printing terminology is much wider than its Russian ('book printing') and English ('Graphic Art') counterparts.

There are two global destinations of world publishing — increasing varieties of publications, packings, other printed products, their

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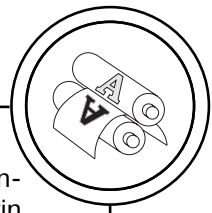

names, structures, language options, combination, etc., and reduce their runs. Now the popular league 1–1000. Somewhat lost circulations of newspapers, magazines, which traditionally had significant circulation. However, the intensification of electronic publications and the creation of sites of popular newspapers and magazines, contributed to the increase in demand for these types of products at the beginning of 10 years of the XXI century. So the predictions of industry development, announced during the last 20 years of the last century, partially projects implemented, however the need for humanity in the information is in the public domain, reading, transmission, i.e. its registration, storage and dissemination, the remaining unchanged in providing intellectual, industrial, and social needs of society.

Therefore, the actual analysis and expressiveness of the individual terms that get new broader significance due to the spread of new technologies implementation of requests of the society regarding the content of the information. It is reprography as a branch of science and technology now requires a thorough explanation and modernizing the definition of its entity.

The aim of the work

Analysis of the term 'reprography' in the context of the modern aspects of terminology of publishing-printing industry.

An analysis of previous research

It is advisable to give the formation period, as well as any form of language terminology in science and practice by drafting a Latin and Greek names. Reprography: from Latin *re* — re-re-, backward; Latin *producere* — produce, create; Greek $\gamma\rho\alpha\varphi o$ — write, mint, draw.

The most complete interpretation of the term is the foundational works of Ukrainian specialists in publishing and printing production [1, 2].

In particular, in [1, p. 601] 'reprography — 1. Branch of science and engineering, covering a set of methods, processes and means of reproduction of the images of the originals with obtaining copies without the use of printed forms and is based on the application of the carriers that alter the physical and chemical properties under the action of radiation. Reprography is one of the basic means of copying the technical and business documents with both the fax and the playback with a significant change in scale. Functional reprography is located between the equipment and the operational printing: means equipment receive information by means of reprography her copy (i.e. multiple copies pressrun to 50–100 approx.) or get it printed the form, which is then use a small offset machines, devices for screen printing or gektography. The ways of reprography are: elektrofotography on the leading (direct method) and nonleading materials (indirect method); diazography; thermography and mikrography. 2. Processes and technical means of copying the documents'.

A comprehensive analysis of technologies, techniques, tools, technical solutions, composition and structure of materials for the

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registration and preservation of information, the justification for the appointment of reprography in publications [3–6].

Although these editions have been published over the past 25 years, the past and the beginning of the XXI century and claimed essence of reprography as fax (not printing) copy the information direct or indirect reproduction of the photo- or another sensitive material, they should provide great value and give due respect — they have pulled together these and systematize scientific and practical experience in the world of inventors, scientists, engineers, which gave impetus and developed modern technologies of reprography, which apply for industrial needs and to address scientific and technological experimental tasks. Namely:

— faxsimile copy (reproduction) information the direct or indirect method from the originals (analogue or coded digital) on photo- or another sensitive materials;

— processes and the technological means of copying products (documents, layouts) that allow you to get a reprint of an (copy) of almost any original image (digital) encoded according to the original in form, content and views;

— technology production, reproduction documents (products) by means of simulation, nanoprinting, 3D-printing [7].

So, reprography is a branch of science, technology and industry, covering a set of methods, processes and means of reproduction copies of the originals, based on the application of media, changing physical and physico-chemical properties under the action of the corresponding radiation or other type of energy. Thus, reprography occupies a prominent place among the technology of printing and can be seen as a component of digital technologies as a modern system of registration and dissemination of information by means of. The idea is based on the notion of a set of intellectual property as a source of production of printed and electronic publications, which is distinctive in the work [8]. Already now there is software for the Internet, not dependent on the hardware, the operating system, fonts. The importance of them is implementing the standard platform for the reception and processing of information, what is the incentive to overcome key obstacles to the development of the information market. Thus, hardware-software complexes will be an essential element in the improvement of technological process on the way to improve the reliability of the technology 'from the computer to print', which is the embodiment of a certain kind of reprography and is now a leading place.

The results of the research conducted

So the modern means definitely belong to the computer publishing systems are highly automated and computerised printing machines and the printing device is a hardware-software complexes that provide high accuracy and frequency of playback text or illustration information in a visual, audio-visual and material forms.

In technology and technique of printing as a means of information throughout the centuries there were eye-popping changes

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that gave mighty development across society. These include: methods of application on clay products images — cameo's and intaglio (VII century BC); use ksilography (VI century BC); print 'movable type' (XI century BC, China); print a standard font on a printing press (1440, Germany, Johann Gutenberg); printing of lithographic stone (1757); the development of the classic intaglio (rotogravuren) printing (1879); the technology of offset printing (1880); technology flexography (1905); the first computer publishing system (1985); the encoding of the text and illustrations in digital printing (1993) etc.

However, together with the development of power-intensive dieback occurs, time-consuming and harmful for humanity methods, tools, materials. Similarly, in reprography is charged not one stage knockdown changes that led to the dying diasography, gektography, etc. Even the terms 'office equipment' and 'operative printing' now not display as the field of engineering and technology, because their tools and methods of the country reprography, which allows you to get a reprint of an (copy) of almost any original encoded (digital) image of the original in form, content and views and in the amount required for the query. And since the main trend of development of publishing and printing production is decreasing runs, so digital technology applicable to a certain degree is reprography as a modern system of registration and dissemination of information by means of production.

With the appropriate note on technology reproduction or copy, or documents (products) by means of simulation, nanoprinting, 3D-printing. And among them is perhaps the greatest achievement in the development of information systems will be the development of nanotechnology, where the technology of reproduction has deep roots.

Nanotechnology and molecular technology is so far little researched. The main opening in this field will certainly come. Development of modern electronics, as we know, goes by reducing formats (sizes). And we now can be connected to another continent with ultra-thin, as they say 3×5 cm device. Nanotechnology is the next step in the development of materials with defined properties, electronics, technology, reprography and printing techniques.

Nanotechnology is a multidisciplinary branch of fundamental and applied science and technology, a set of theoretical study of practical methods of research, analysis and synthesis, as well as production methods and the use of products with a given nuclear structure established controlled manipulation of individual atoms and molecules. The practical aspect of nanotechnology encompasses the production of devices and their components (components) necessary for the processing and transformation of atoms, molecules, nanoparticles.

Modification of the materials, materials on the nanoscale materials, these new properties is catalytic, adsorption, optical and other, which is extremely important in the production of standard tools for transformation of energy, information, etc.

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Formation of products from nanomaterials can be carried out in various ways, including printing. For example, thin film solar cells, electrodes of lithium-ion batteries, etc.

It is technology of the fax copy (reproduction) information the direct or indirect method from the originals (analogue or coded digital) on the photo- or another materials and documents (products) by means of modeling, nanoprinting, 3D-printing is paid to attention by scientists and practitioners reprography, which publish not only the composition and structure of the process, devices and materials, but also the debate with a study of standardization of the industry [9–12].

The conclusions

1. Analyzed the known sources that characterized the reprography at the turn of the XX–XXI centuries, as techniques and materials fax up copy, reproduction and duplication of texts, images, documents.

2. The paper considers the practical aspects of the technology production and reprodaction documents (products) by means of simulation, nanoprinting, 3D-printing.

3. There are essence of modern technology reprography as part of digital technologies — is a modern system of registration and dissemination of information by means of reproduction.

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Наводиться трактування терміну «репрографія» на основі сучасних технологій отримання факсимільних копій зображень, текстів, різноманітних документів. Аналізуються найбільш відомі роботи зі способів і методів копіювання за допомогою апаратно-програмних комплексів, які узагальнили та систематизували науково-практичний досвід світових винахідників, науковців, інженерів, який дав поштовх й розвинув сучасні технології репрографії, котрі застосовуються як для промислових потреб, так і для вирішення науково-технічних експериментальних завдань. Аналізується відоме трактування репрографії як факсимільного (не поліграфічного) копіювання інформації прямою чи непрямою репродукцією на світлочутливому чи іншому сприймаючому матеріалі.

Ключові слова: термінологія; репрографія; репродукування; цифрові кодовані оригінали; аналогові оригінали; копіювання; моделювання; нанодрукування; 3D-друк.

Приводится трактовка термина «репрография» на основе современных технологий получения факсимильных копий изображений, текстов, различных документов. Анализируются наиболее известные работы по способам и методам копирования с помощью аппаратно-программных комплексов, которые обобщили и систематизировали научно-практический опыт мировых изобретателей, ученых, инженеров, который дал толчок и развил современные технологии репрографии, которые применяются как для промышленных нужд, так и для решения научно-технических экспериментальных задач. Анализируется известная трактовка репрографии как факсимильного (не полиграфического) копирования информации прямой или косвенной репродукцией на светочувствительном или ином воспринимающем материале.

Ключевые слова: терминология; репрография; репродуцирование; цифровые кодированные оригиналы; аналоговые оригиналы; копирование; моделирование; нанопечать; 3D-печать.

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