

**SCIENTIFIC-THEORETICAL APPROACHES OF FOREIGN SCIENTISTS
REGARDING ELECTRONIC DOCUMENT CIRCULATION IN THE TAX
SYSTEM**

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The tax system of the Republic of Uzbekistan, like all other systems, was established within the framework of scientifically based experiments developed in accordance with foreign experience and the opinions of scientists. We can quote the opinions of several scientists in this regard.

Some economists, in particular, V.S. Ukolov, in his scientific work, analyzed the issues of creating a unified information space and the methods of organizational, administrative, technical and software protection of information in data processing systems, showed that from the mid-fifties is important in our country and abroad. Theoretical experience has been accumulated that allows for the practical implementation of information authentication in automated systems for general and special purposes.

A number of works were carried out by the scientist. In particular, the existing systems of organization of electronic document circulation were analyzed. An analysis of the possibilities of economically reasonable application of special functions, in particular, orthogonal functions and polynomials, as signal models in electronic document circulation systems is carried out.

Within the identified possibilities, a methodology for creating parameters necessary for authentication of messages in electronic document circulation systems was developed, in particular, a methodology for creating a convolution function for creating an electronic digital signature in electronic documents was developed.

As a new element of increasing the economic efficiency of the organization, the scheme of interaction of information flows is analyzed, and the scheme of information exchange using the electronic secretariat is proposed. The methodology for calculating the economic efficiency of the electronic document circulation



system of the higher education institution was developed. The economic and mathematical compatibility of the developed models was assessed and recommendations were made for their practical application. The economic efficiency of the electronic document circulation system of the higher education institution was evaluated. The work of the scientist in this regard has been serving the development of the economy on a large scale.

Economist Yu.V. Lelina emphasized that the electronic document circulation system is an important factor in the process of globalization of modern information technologies. The scientist did the following through his scientific work:

studied the characteristics of the management system and document circulation in organizations with a geographically distributed structure;
analyzed the modern methods of the inter-departmental work process, including the current normative-methodical basis of document management;
analyzed modern electronic document circulation systems;
developed the principles of organization of geographically distributed work with documents. This scientist, like other scientists, conducted a large amount of research and made suggestions for the development of the electronic document circulation system.

F.S. Kortikov said that the development of methods of integration of information resources is one of the most urgent problems in the field of information systems. In recent years, it has attracted a lot of attention due to the high diversity of data sources. The availability of various types of electronic documents has turned the electronic document circulation system into a very relevant information system.

At the same time, electronic documents are not provided with semantic description, which makes it difficult to target knowledge for identification in scientific work.

The scientist analyzed the existing electronic document circulation systems and created a classification of electronic document circulation systems. Defined the basic principles and requirements for the operation of the electronic document circulation system. Within the framework of scientific work, he created a structural model of his field. He developed numerical methods and corresponding algorithms that provide a quantitative assessment of the joint operation of the structural model.

Based on the general weighted level of the electronic document circulation system, he developed the basic rules for determining the level of its interoperability. Created



a software package for managing business processes described using a proposed formal language. Developed a model for automatic identification of metadata of electronic documents.

Economist A.I. In his scientific work, Shukayev recognized the introduction of an electronic document circulation system as the most optimal solution for managing economic entities and the complexity of management processes.

In his scientific work, the scientist analyzed the goals and tasks of corporate management, trends in the development of information and communication technologies in the field of corporate management, and based on this, he developed a scheme for the interaction of electronic document circulation with auxiliary operations of the financial business process.

Created a scheme for the management of production association enterprises, as well as the interaction of the flow of electronic documents with the processes of auxiliary business operations - corporate business operations; developed and researched economic-mathematical models for the optimization of short-term financial planning in enterprises according to the criteria of net profit and net cash flow; introduced economic and mathematical models of short-term financial planning into the tools of the corporate electronic document circulation system in order to increase the validity of management decisions in the corporate financial resource management system; created economic and mathematical models for optimizing the management of corporate economic operations according to the criterion of total costs, using the system for evaluating the costs of document circulation of auxiliary business processes in order to increase the efficiency of the management of material and financial flows between enterprises; in order to increase the speed of management decision-making, he developed models for monitoring corporate business operations in the operational management system of the supply chain in vertically integrated enterprises based on the electronic document circulation system.

In his scientific work, Nguyen Dinh Hing recognized the introduction of centers that confirm the authenticity of these documents as a necessary process along with the introduction of the electronic document circulation system.



It has been proved that if paper circulation of documents regulates the relations of two interacting parties, it creates the need for the emergence of a third party in electronic circulation of documents.

It has been proven that the need to prove the authenticity of an electronic digital signature is always present in electronic document circulation.

In addition, in his scientific work, the scientist studied in detail the specific features and problematic aspects of the electronic document circulation system, proved the necessity of a third party in the introduction of the electronic document circulation system, and proposed rational schemes of the third party electronic document circulation system. .

The scientist developed a model of the organization of an electronic document circulation system using third-party technologies and studied its features with the help of simulation modeling, in addition to the above, he also proved the importance of having a large number of third-party systems in the process of designing an electronic document circulation system.

V.D. Chervatyuk analyzed the requirements of electronic document circulation in modern processes and implemented the following:

- 1) comparative analysis of modern electronic archives and electronic document circulation systems, capabilities of existing product information management systems, principles of differentiation of rights to use electronic documents;
- 2) developed a data warehouse model for electronic archive of technical documents of non-governmental non-profit organizations and electronic document circulation;
- 3) developed a model and algorithms for the exchange of electronic technical documents between NGOs with the necessary level of information protection;
- 4) developed algorithms for data processing from the electronic archive of technical documents of non-governmental non-profit organizations, which made it possible to automate the process of creating original copies of new copies of technical documents;
- 5) developed a structural and functional solution for the electronic archive of technical documents and the information system (AT) of the electronic document circulation database of non-governmental non-commercial organizations;



6) checked the operation and efficiency of IT algorithms in the laboratory and emphasized that archiving is a necessary process in the electronic document circulation system.

Yu.M. In her research, Kukarina noted, first of all, that a new subject of research is an electronic document that is being actively introduced into the field of management and requires the unification of legislation. The first laws in this field appeared only in the mid-90s of the 20th century. Therefore, in scientific works, he noted that the understanding of the electronic document phenomenon begins with the gradual accumulation of experience in its use. In them, a comparative analysis of existing definitions was conducted, and the process of formation of new concepts of "electronic document" and "electronic signature" was considered from the point of view of document circulation.

A.E. In his scientific abstract, Samotuga paid attention to the protection of electronic document circulation and a number of other aspects. It is distinguished by the proposed novelty of the mathematical model of the handwritten images of subjects, based on the analysis of the laws of changing the parameters of signature reproduction depending on the psychophysiological state of the signer.

Using statistical correlation, applying coefficients to calculate altered-state signature parameters based on normal-state values of signature parameters, replacing long experiments with simple computational procedures allows us to obtain an altered-state signature template. The novelty of the developed method for determining the psychophysiological state of the signer based on the analysis of reproduction features of handwritten images is distinguished by the fact that it is proposed to use artificial neural networks of multivariate Bayesian maximum likelihood functions for PFC classification, at the stage of signature verification, the signer's PFC allows assessment.

The novelty of the scientist's proposed signature verification method is based on the analysis of reproduction characteristics of handwritten images, taking into account its psychophysiological state, and it is distinguished by the fact that it is proposed to use multivariate Bayesian maximum likelihood functions. Signer allows for increased accuracy in identity verification through handwriting features.

The novelty of the algorithm for creating hybrid documents in information systems is distinguished by the possibility of verifying the identity of the owner of the data



at the time of signing the document, based on the analysis of the reproduction characteristics of handwritten images. Introducing the block to assess his psychophysiological state, which will later confirm its integrity and authenticity, as well as make sure that the creator is in an adequate state. The opinions of this scientist are mainly focused on security and reliability of information in electronic document circulation.

Yu.Yu. Petrov studied the concept of electronic document circulation on the example of manufacturing enterprises and introduced a number of approaches and innovations. He determined the characteristics of enterprise management in the use of modern electronic and information technologies in production organizations and gave recommendations for improvement.

