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Notion and content of informational-supportive records and their place in the system of criminalistic registration

Streszczenie

Pojęcie i treść informacyjno-wspierającej dokumentacji oraz jej miejsce w systemie rejestracji kryminalistycznej

We współczesnym postępowaniu sądowym bardzo ważną rolę odgrywa system rejestracji kryminalistycznej. Dla zrozumienia istoty tego pojęcia bardzo ważne jest przedstawienie jego ewolucji. Jednym z rodzajów dokumentacji w systemie rejestracji kryminalistycznej jest informacyjno-wspierająca dokumentacja. Celem autora tego artykułu jest przedstawienie koncepcji i zawartości informacyjno-wspierającej dokumentacji oraz wskazanie ich miejsca w systemie rejestracji kryminalistycznej. Przedstawione są sposoby tworzenia i funkcjonowania informacyjno-wspierającej dokumentacji, oraz ich źródła i klasyfikacja.

Słowa kluczowe: rejestracja kryminalistyczna, informacyjno-wspierająca dokumentacja, zabezpieczenie informacyjne

Анотація

Поняття і зміст довідково-допоміжних обліків, їх місце в системі криміналістичної реєстрації

У сучасному судовому провадженні надзвичайно важливу роль відіграє система криміналістичної реєстрації. Для зрозуміння суті цього поняття важливо представити

її еволюцію. Одним з видів обліків у системі криміналістичної реєстрації є довідково-допоміжні обліки. Головним завданням автора статті є розкриття поняття та змісту довідково-допоміжних обліків та представлення їх місця у системі криміналістичної реєстрації. У статті також представлено формування і функціонування довідково-допоміжних обліків, а також їх джерела та класифікацію.

Ключові слова: криміналістична реєстрація, довідково-допоміжні обліки, інформаційне забезпечення

The level of information support, i.e. actions to detect and transfer relevant and, primarily, criminalistically essential information to the direct user, is one of the most important factors determining success and effectiveness of any criminal proceeding. In the literature great attention is constantly paid to investigational information support. Works by V. A. Zhuravel,[1] V.H. Lukashevych,[2] Y.D. Lukyanovych,[3] R.A. Usmanov,[4] M.M. Khlyntsov[5] etc. are dedicated to the theoretical issues of information usage in the course of crime investigation. Information support tasks of investigation process are still far from being solved.

Systems of criminalistic registration are currently acknowledged to be the most effective form of working with large information volumes. This system is known to be created by various criminalistic records — legal data retrieval systems, containing an array of criminalistic information, converted by specialists using scientifically based methods and tools for usage of such information in criminalistic activity.

Depending on a particular type of criminalistic activity, its subjects may be people (and organizations) conducting activities such as operational search, recording, forensic expert activity, procuratorial supervision, and other kinds of activities, related to crime detection, investigation, and prevention. Naturally, a certain type of criminalistic activity mostly predetermines the character of information used.

Information is "certain data, cumulative evidence, knowledge";[6] "data being the object of storage, processing, and transfer; in mathematics, cybernetics — it is a quantitative

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[1] Zhuravel V.A., Information support of investigation process: Ways and methods, *Academy of Law Sciences Herald* 2004, 2, pp. 175–179.

[2] Lukashevych V.H., Towards the definition of the notion of information, used in modern legal language, *Herald of Zaporizzhya Institute of Law* 1998, 2, pp. 3–12; idem, *Criminalistic theory of communication: Raising an issue, investigation methodology, usage perspectives: Monograph*, Kyiv 1993.

[3] Lukyanchykov Y.D., *Information support of crime investigation (legal, tactic, and forensic aspects)*, Dissertation abstract of the doctor of legal sciences: 12.00.09, Kyiv 2005.

[4] Usmanov R.A., *Information grounds for preliminary investigation*, Moscow 2006.

[5] Khlyntsov M.N., *Criminalistic information and modeling during crime investigation*, Saratov 1982.

[6] *Philosophical Dictionary*, 5th edition, Moscow 1986, p. 172.

value for uncertainty elimination (entropy)."[7] "Information is a value of uncertain quantity that is destroyed after a message is received."[8]

Information important for criminalistics can be recorded, processed, or transferred distantly and stored for safekeeping. In such way s t o r a g e s or data bases of significant criminalistic information are created. They determine the principles for establishment of data retrieval systems (DRS), designed to implement the function of information support of criminalistic activity. DRS are commonly referred to as records, whereas scientifically developed system of receiving, recording and storing of data regarding people, subjects, and other objects of criminalistic significance, are called criminalistic registration.

Criminalistic registration has its history that dates back to the old times. Criminalistic registration system was created in 1879 by Alphonse Bertillon,[9] and was preceded by extensive development of its means and methods. At first, it was formed as a criminal registration, i.e. registration of people under criminal prosecution.

At first, criminals were r e g i s t e r e d through branding, tattooing, permanent injuries, bodily punishments, etc. (so-called barbaric registrations). Such practices were used in Ancient Greece, Middle Age England, France, Germany, and other countries.

Various methods were used for registration: fingers were severed; ears and noses were cut off, nostrils torn out. In Peter I Russia another method was used: instead of using hot brand, plate with needles was applied to the body. The wounds were later covered with gunpowder, so that these people w e r e   d i f f e r e n t   f r o m   o t h e r p e o p l e ,   s o   t h a t   t h e y   c o u l d   b e   r e c o g n i z e d. Needles were arranged in a form of an eagle, or in a form of letters: "В" — thief (*вор* — in the original), "У" — murderer, "Л" — liar, "СК" — convict in exile, "СП" — exiled settler. For commitment of a sexual crime, especially shameful brand was put on the forehead.

Besides branding, description of criminals according to their appearance was also used. The oldest such document is a description of an escaped slave, made in 14AD: "Young slave, belonging to Aristogen, son of Hrizip, born from Alabanda, escaped to Alexandria. His name is Herman, also known as Neilos, native of Syria, Bambico, 18, of average height, with straight legs, without a beard, with a dimple on a chin and a scar across the left corner of the mouth."[10]

In the mid-18th century systematic written records of people held criminally liable was established owing to aforementioned A. Bertillon. Naturally, it initially happened

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[7] *Dictionary of foreign words, 8th edition*, Moscow 1981, 624 p., p. 205.

[8] Shennon K., *Works on the theory of computer science and cybernetics*, Moscow 1963, p. 6.

[9] Alphonse Bertillon is a founder of forensic identification, clerk of the police card-catalog, son of a famous medical statistician and a vice President of the Paris Anthropologic Association. So what was his identification based on? He used scientific data of anthropology and statistics. According to them, a body size of one person is never the same as a body size of another person. He measured criminal convicts (nine measurements: height, span, chest breadth, head breadth, left foot length, left hand middle finger, left ear), recorded their body dimensions on the cards and in such a way gained possibility to recognize already registered people.

[10] Габітоскопія поняття і сутність 2, p. 3.

in France, and only then in other countries. In Russia, and in some Ukrainian territories respectively, written records of people convicted for crimes was introduced in 1870.

At that time *Newgate Calendar — a* reference book about inmates of Newgate prison in London — was published in England. This reference book contained biographic data of inmates and description of their crimes.

When photography was discovered and the sphere of its use expanded, criminals started to be photographed. The first registration photographs were made in Belgian prison *Forest.*

Special albums were formed out of collected photographs, where each picture was arranged alphabetically according to last names. First such album was compiled in January 1874 in Paris prefecture; then in 1876 in Berlin. Berlin *Album of criminals* till 1910 consisted of 53 volumes and contained 370 thousand photos in it. Photographs were arranged according to categories of criminal professions, though it was difficult to use them to identify unknown criminals.

Among others, the drawbacks of anthropometric system were: physical difficulty of the very registration procedure and impossibility of future identification of women and minors. This was foreseen by A. Bertillon. Therefore, he developed a table of possible fluctuations of measured body areas for people of these categories. He started to further improve the methods of criminal appearance description and photographing.

He suggested, in 1895, a system of human appearance description, called v e r b a l d e s c r i p t i o n. Later A. Bertillon designed a photographing system, called sygnaletic photography. He constructed a new camera mounting for this purpose.

A. Bertillon's v e r b a l   d e s c r i p t i o n was improved in 1905 by a professor of criminalistics R.A. Reiss. He introduced a digital code which allowed transferring relevant information about person's appearance through telegraph. It significantly accelerated the process of criminal tracking.

F. Galton is considered to be the author of the scientific system of law offenders' registration using fingerprint patterns. He published, in 1982, a book titled *Finger Prints.* In this book, he presented results of his research of ridge patterns and provided their classification. Combined system of criminal records, consisting of fingerprinting, anthropometry, photographing, and description of distinguishing features was introduced in England in 1895.

By the end of 1914, fingerprinting had become the principal system of criminal registration in the majority of countries. The same situation is observed even nowadays in all of the countries of the world.

Besides the main (fingerprinting) system of criminal registration, other supportive systems were also developed. These include the following:

1) *modus operandi* system that presupposes registration of events and people according to the method of crime, in other words — according to their criminal style;

2) monodactyloscopic registration, when each fingerprint is recorded on a different card, and a dactyloscopic formula is derived for each fingerprint. This system was developed in 1914 by H. Jorgensen;

3) registration of the unknown corpses with signs of violent death;

4) registration according to nicknames and aliases;

5) registration according to tattoos and physical peculiarities, etc.

Thus, at first criminalistic registration was formed solely as a criminal one. This means that only convicted people were registered.

However, it is generally known, that other objects need registering as well (objects of criminal offense, means and ways of committing crimes, trace of crime, etc). Means and methods of information obtaining have changed significantly with time. This was the main reason to form a bigger network. It was then called criminalistic records.

Modern criminalistic records consist of nearly 30 various records, which, depending on their intended use, object peculiarities and characteristic features are divided into groups, kinds, etc., according to various criteria.

1. Thus, according to the centralization level, records can be divided into the following: a) local — in the city, district, linear (hereinafter — CDLB) bodies of home affairs; b) regional — in scientific and research, expert and forensic centers (hereinafter — SREFC) under regional administrations of the MIA of Ukraine and equal status administrations; in the AIAS — administrations of information and analytic support under regional and equal status administrations of the MIA of Ukraine; c) central — in State Scientific and Research, expert and criminalistic center of the MIA of Ukraine (hereinafter — SSREFC); and DIAS — department of information and analytic support under the MIA.

2. According to the kind of equipment: a) manual; b) power-operated; c) automated.

3. According to the type of registration object: a) human records; b) animal records; c) records of objects, things, ammunition; d) traces records, etc.

4. According to the method of information recording: a) descriptive records; b) graphic; c) visually figured; d) collector's; e) mixed records.

5. According to the form or method of information accumulation: a) catalog records method; b) collector's album; c) set of audiotapes, discs, videos; d) lists; e) data banks, automated data banks.

6. Criminalistic records are also classified according to peculiarities of the registration objects, in other words — depending on the feasible tasks.

It should be noted that the latter classification (division of criminalistic records depending on the feasibility of tasks) is not regulated in the legislation, nor in criminalistic literature.

Conclusion concerning the most common approaches can be reached, if existing opinions in the literature are grouped together. The first approach being that criminalistic records are divided into three kinds: operational-informative, criminalistic, informational-supportive.[11] The second approach entails dividing them into two kinds:

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[11] Averyanova T.V. et al., *Criminalistics: Textbook for Universities*, ed. R.S. Bielkin, Moscow 1999, pp. 96–99, 368–397, etc.

operational-searching and informational-reference.[12] The third approach is not even distinguished.[13]

We consider the division into two kinds acceptable, namely, division into operational-searching and informational-supportive. This division follows the logics of presentation of record types; it is recognized in one of the departmental documents of the MIA of Ukraine. Clause 1.6 of the Instruction on organization of functioning of criminalistic records of the MIA expert service states that records consist of operational-searching collections and/or informational-reference collections (in fact, informational-supportive).

Operational-searching records are characterized by large volumes of relatively short (reference) description of recorded objects. Their main task is to verify the availability of information about the object, its location at the moment of inquiry; to solve diagnostic and identification tasks according to individual features and other object peculiarities, when constituent information is unknown or concealed.

The following informational-supportive records are known (most of them are collections): 1) collections: a) firearms and cold weapon; b) ammunition; c) breaking tools and instruments; d) details, article parts; e) voice and language; f) substances and materials, etc.; 2) atlases; 3) albums (issued for production needs or promotion purposes, e.g., paper or fabric samples etc.); 4) catalogs with descriptions of object's characteristics contained in: a) norms and specifications (standards, specifications, product passports, etc.), b) in reference books, published by enterprises manufacturing certain products, c) in systematic guides to some objects, prepared by the SEU employees; 5) collections of reference information on the change of object's characteristics under the influence of external conditions (time and place of storage), obtained as a result of forensic examinations; 6) spectrums, chromatograms, X-ray patterns; 7) catalogs of qualitative and quantitative composition of substances and materials, depending on various parameters, obtained during relevant research, e.g. catalogs of X-ray interplanar distances and integrated intensities — to establish the phase state of the substance.

Like any other system, criminalistic records are characterized by the functioning unity of purpose and existence of ties between the elements. The following task of criminalistic records may be named: accumulation of information, which can be used to solve, investigate, and prevent crimes; ensuring objects' identification conditions, using registration data; facilitation of the search of objects, the data of which are contained in criminalistic records; placing of reference and orienting information at the disposal of operational search, investigatory and court bodies.

Information support occupies an important place in the system of scientific and technical support of criminalistic examinations. It is, in fact, an information activity that helps an investigator and court to increase the initial evidence-based informa-

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[12] Averyanova T.V. et al. op. cit., pp. 96–99, 368–397, etc.

[13] Hlibko V.M. et al., *Criminalistics: Textbook for law students at higher education institutions*, ed. V.Y. Shepitko, Kyiv 2001, pp. 150–153, 168–169, etc.

tion. Undoubtedly, insufficient attention to information support organization leads to a significant decrease in the efficiency of a whole investigation process. Development of scientific potential of forensic expert research, complicating of expert tasks, reveals the need for development of the theory and methodology of information support of forensic examination.

The notion of forensic examination information support is viewed in two aspects: a) as an activity aimed at providing people who conduct examinations with additional scientific and technical information that is necessary for expert task solving; b) as information necessary to conduct research.

All expert and reference information can be divided depending on the class (kind), forensic examination (forensic-ballistic examination, trace examination, graphological examination, etc.). Its further differentiation depends on the designated tasks. For example, forensic-ballistic reference information may be classified according to the following expert tasks: determining weapon model, determining bullet type, finding the shot distance, shot direction, etc. Hence, there is an opinion that in order to create additional data bases, a classification of objects and their peculiarities is needed, as well as identification of information necessary for successful research of traces and objects that created them.

Two groups of information, necessary for the conduction of qualified examination, usually form the context of information in the forensic examination domain: a) information regarding the properties of expert examination object; b) information regarding the methods and methodologies that can be used to tackle relevant issues. Kinds of special information are provided analogically. First of all, it is information on the basic science or sciences (i.e. scientific disciplines determining the profile of the special training of an expert). Secondly, information of operational character, which is needed directly during forensic and expert examination and which is dependent on the particular issue to solve. For example, in order to determine which kind of weapon provided knife belongs to, a forensic expert needs information on distinguishing cold weapon from other kinds of weapon. From information perspective, operational component of expert examination is relatively more changeable and dynamic than the basic one. Its data often change and need to be updated on a regular basis.

The content and structure of operational information support has to be viewed on the basis of general epistemological scheme of forensic and expert research. That is to say, when solving the issue raised by an investigator (court), an expert performs a cognitive process related to distinguishing of two kinds of data concerning the object of study — its substantial and functional characteristics.

Substantial characteristics of the object of study means data regarding its materialized nature, structure, etc. Functional characteristics of an object are created by data concerning its properties, i.e. its abilities to show some sides in correlation and interaction. In such context, operational information support of each type of forensic examination should take place with obligatory consideration of three components:

a) information fund on researched objects' substantial characteristics (e.g., information on quantitative and qualitative characteristics of writing materials);

b) information fund on forensic examination objects' functional characteristics (e.g., samples of handwriting written in an unusual state (intoxication, anxiety, illness, etc.));

c) information fund on scientific and methodological instructions for forensic expert research (data on methodologies, algorithms of expert research, etc.).

The following components can be distinguished in the system of forensic examination support:

1. general reference support — experts' notification of new information updates regarding certain tasks of objects of forensic examination.

2. individual reference support — kind of information support that is characterized by constant accumulation of information about all tasks of forensic examination.

3. continual information support — kind of information support which lies in data obtaining by means of expert inquiries that had not been satisfied earlier due to the lack of necessary data, which later became available.

The most common forms of expert information support are the following: usage of the most used collections in the sphere of forensic examination with detailed scientific or technical classification of their properties, features; usage of automated informational search systems for specific objects or methods; usage of information funds, borrowed from literary sources.

Modern reference system's capabilities expand rapidly. This tendency is, primarily, determined by the integration of highly sensitive analytical methods and means for substances and materials (vapor-liquid chromatography, emission, spectral, X-ray diffraction and other kinds of analysis) examination. They create the actual starting conditions for the establishment of target banks for essential criminalistic information on relevant substances, materials, goods.

Continuous increase in the number of expert tasks, complexity of examination methods significantly expanded the sphere of information that an expert should possess. However, such information is not always within the framework of so-called traditional methodological aid; therefore it cannot be remembered in all necessary details. An expert, however, should know, where such information could be found, which information source should be used in each separate case. This is what led to distinguishing of an independent kind of informational search funds in the system of criminalistic records — informational-supportive records. Reference and information funds of expert and forensic subdivisions, scientific research laboratories, forensic examinations, etc. created basis for these records.

The Constitution of Ukraine, the Code of Criminal Procedure of Ukraine, Law of Ukraine "On Police" and the relevant departmental regulations formed legal grounds for informational-supportive records usage.

The content of activity towards the organization and functioning of informational-supportive records includes the following components: finding objects for

recording; establishing features of registered objects' group meaning; concentration of registration objects (information about them) in designated locations and in the established order; determining certain forms for keeping the records; keeping registration documents (registration objects) according to an established system, which ensures fast information obtaining; establishing an order for object registration and deregistration, as well as obtaining of information about registered objects.

The following differentiated classification of informational-supportive records could be suggested:

1. Depending on the reason for functioning: a) obligatory records, i.e. those that are foreseen by the relevant departmental regulations and are obligatory for all subdivisions; b) recommended (initiative), nonbinding records, formed locally on the initiative of the bodies of prejudicial inquiry. The order of their keeping is not foreseen by regulations.

2. According to the degree or level of centralization (concentration), service area: a) central; b) regional (covering the zone of region servicing); c) local, i.e. run by primary subdivisions of prejudicial inquiry. If a certain group or department of scientific research and forensic examination center serve more than two city district linear bodies, so-called bush registrations are created there, and information on the objects covered by a certain area (usually several neighboring districts) is concentrated there. Such records are mostly characteristic for rural districts with small population and relatively low level of crime.

3. Depending on registration objects and forms of their implementation (collections of firearms and cold weapon, ammunition; collections of traces of break in tools; collections of details, parts of goods, etc.; collections of substances and materials; spectral atlases; chromatograms, X-ray patterns; catalogs; record library of voices and language, etc. The following bodies have a right to obtain criminalistic registration information, contained in the informational-supportive records: operational search and investigatory subdivisions of the relevant law enforcement bodies; forensic expert subdivisions of internal affairs bodies, Security Service of Ukraine, Ministry of Health Care of Ukraine, judges.

Partially mentioned sources may contain useful information on the objects of informational-supportive records formation: a) full-scale collections formed by forensic expert institutions from subjects, substances, and materials that are mostly the objects of relevant forensic expert research in forensic proceedings; b) collections of copies (images) of certain objects (photographs), seals, casts, e.g., copies of handwriting samples of different (according to age, profession) groups of people, samples of print and typewriter fonts; c) atlases, albums, issued for production purposes or enterprise commercial purposes (e.g., samples of paper, fabric, etc.); d) catalogs of object properties descriptions (text, schematic, graphical, spectrogram, etc.), subjects, substances and materials, which are the objects of forensic examination (type of their parameters that are usually studied by forensic experts — prescription formula, type of raw material, production technology, etc.). These

data are contained in norms and specifications (standards, specifications, products' passports), reference editions, published by enterprises and characterizing their manufactured production (reference books, brochures, price lists), systematic reference books concerning various objects, prepared by employees of forensic expert institutions; e) reference data on the changes in objects' properties under external circumstances (e.g., storage terms and location), received as a result of research by forensic expert institutions.

Information on objects and methods of research within the framework of criminal proceedings is also contained in modern scientific developments: special expert literature (monographs, methodological guides and letters, express information, methodological letters); general scientific literature containing description of certain research methods that could be used in expert activity; scientific reports; and finally, in the archives of forensic expert conclusions according to the results of completed research, in the process of which new methodology was developed or the old one modified. It is advisable to create such support fund per each kind of forensic examination, in the form of a list of methods and methodologies, indicating the sphere of tasks and sources application.

Expert conclusions should be included in the archive if: unusual or rare objects in expert activity are researched; unusual conditions of object execution are present (e.g., text of a handwritten document); complicated expert tasks were solved; untraditional research methods were applied; materials were of historic significance; opposite conclusions of the second examination were provided.

Collection of examinations can be used in the following ways: during scientific and methodological work with judges and investigators, when capabilities of forensic examination or significance of certain methods need to be exemplified, etc.; during young specialists' internships (experts can become acquainted with complicated research objects), etc.

Expert conclusion for an archive must be recorded orderly and include the following: short summary containing a criminal case description (short description of circumstances), name of the person who assigned the examination, list of the issues raised for an expert, motives for assignment of repeated examination and data on the primary examination; presentation of the research part of conclusions (with detailed description of the object, research methods and detected features) and expert conclusion; photo images indicating features taken from expert conclusion.

Prepared material should be kept in a folder with a number and a name of examination on it. Research object and tasks are included in the name of examination. These data (number and name of examination) are further used to create a catalog of examinations.

Systematized expert research, materials and illustrations can be also stored in computed storage.

It is advisable to create a collection of educational examinations with an aim to conduct educational and methodological activity. It can be used when teaching

young specialists to conduct examinations; it can also be used for expert advanced training.

Educational examination would consist of two parts: material usually given to an expert at the moment of a certain examination, resolution (judgment) on examination assignment including case presentation, other data on the researched object, questions raised to the expert; research object; samples. Their quantity should be enough for solving the raised question (questions); examination proceedings (solving of an expert task): expert conclusion, photo spreadsheet. This part would be assigned to control solving of an educational examination task.

Each educational examination should have a name and a number (research object and a feasible task are indicated). These data are necessary when creating an educational examination catalog.

The following are the tasks of establishing and functioning of informational-supportive records:

— obtaining complete and in-depth information on objects' properties (features), their origin, sources, etc.; information regarding methods and methodologies necessary to perform the tasks in the process of expert research; obtaining materials for scientific and research activities in the sphere of forensic examinations aimed at the development of object methodology research;

— obtaining materials for educational and methodological work. For example, full-scale collections could form the basis for testing new research methods and methodologies. Information fund of the kind, analyzed herein, will simplify the educational and methodological work with investigators and judges regarding their insight into the forensic examination capabilities, preliminary research of the objects during respective investigative (forensic and investigative) actions, etc.

— achievements of effective legal support of expert activity.

Thus, informational-supportive records are one of the several kinds in the system of criminalistic registration which ensure the establishment (accumulation, processing, storage, search) and rational use of informational-supportive data (support fund), that can be required for crime investigation, as well as for scientific and research or educational and methodological work.

Information that ensures forensic expertise and any other kind of criminalistic activity (primarily, activity towards crime investigation and its operational search support, etc.) should be accumulated within the framework of informational-supportive records.

Theoretical, methodological, organizational and legal aspects of informational-supportive records' usage in law enforcement bodies need to be further developed. Full-scale collections, which currently are the least arranged form of their functioning, call for special attention. They can successfully be used during research in forensic expert subdivisions to perform certain tasks; they could also be applied in investigative activity or in educational and methodological sphere. However, reality shows that efficiency of collection usage in crime investigation is still rather low.