
SOME REMARKS ON AN ELECTRONIC CASE MANAGEMENT SYSTEM IN THE CRIMINAL JUSTICE AREA

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Progress is impossible without change, and those who cannot change their minds cannot change anything

George Bernard Shaw¹

Abstract. *Storage capacity, transmission of huge amounts of data from one part of the World to another within seconds has created solid technological ground for usage it in the conservative area our social life such as the criminal proceedings.*

The author of this research aim is to present his vision and vectors based on his practical experience on usage the achievements of the Fourth Industrial Revolution for an electronic criminal case management system in the criminal justice area, namely at the criminal proceedings. The above mentioned issue trend points out the main objective of this paper:

To describe main elements of e-case management system's architecture.

Research type: fixed research.

Keywords: *digital technologies, criminal proceedings, an electronic case management system in the criminal justice area.*

Introduction

*There is nothing permanent except change.
Heraclitus²*

Emerging technologies, particularly in the area of communication, may significantly expand the availability and quality of data upon which we can make informed decisions for the benefit of society. 5G will have an average download speed of about 1 Gbps (1 gigabyte per second), meaning

¹ 35 Inspirational Quotes On Progress. <https://www.awakenthegreatnesswithin.com/35-inspirational-quotes-on-progress/>

² Brainyquotes. <https://www.brainyquote.com/topics/change-quotes>

that users can download an entire movie in a matter of seconds. In short, 5G technology can quickly transfer huge amounts of information/metadata from one point to another, despite locations and the distances between them. This makes this technology extremely attractive to law enforcement agencies.

The author of this paper is going to present his vision and vectors on usage the achievements of the Fourth Industrial Revolution at the criminal proceedings. It is the most conservative part of procedure laws, regulated in detailed each procedural actions. It is understandable such strict regulations due to huge responsibility which bear on the shoulders of the applicants of criminal law provisions as *ultima ratio* tool to protect the highest values in the society. The judges, prosecutors and other officials who are dealing with criminal offences have accepted novelties in the area of criminal justice with some elements of precaution or even with a fear. Reasons for it could be different by its essence, origin varying from a lack of confidence dealing with new technologies till lack of legal acts. Despite above mentioned factors more and more countries are exploring ways on employment the achievements of the newest technologies on storage and transmission data in the criminal proceedings.

The author of this paper would like to draw attention to the usage of a specific phrase by national lawmakers in article 1 of Criminal Procedure Code of the Republic of Lithuania: “*in defense of human and citizen rights and freedoms at a speedy and detailed detection of criminal acts.*”³ How to speed up detection and pre trial investigation and the same time to keep protection of a human right at the highest level? The answer and the same time the solution is next to us. Employment of achievements of the Fourth Industrial Revolution at the criminal proceedings. Namely, creation of electronic case management system at the criminal proceedings.

The author of this paper personally witnessed and was the part at the implementation electronic case management system, experienced obstacles with whom the architecture of the e-case management system faced in the Republic of Lithuania and in Ukraine. It was valuable experience and the author would like to share this vision, ideas on the construction of an electronic case management system in the criminal justice area, main obstacles on the way of implementation it into real life. It allows to have a clear picture on an electronic case (hereinafter referred to as “**e-case**”) management system at the criminal justice area.

Architecture of an electronic case management system

Four freedoms of the European Union: free movement of goods, free movement of capital, freedom to establish and provide services, free movement of persons are the main drivers who has make impact on the conservative criminal justice area. It also pushes for deeper digitalization different spheres of social life, for example, e-government, e-commerce. Many public services became accessible through the Internet. If someone were to tell about it 20-30 years ago, we would have just labelled him/her as a human being affected by science-fiction ideas.

At the same time, a drastic and rapid change in the social life within last 20 years require to have clear vision on the directions of the technology development. Pandemic as a catalyst adds addition speed for development electronic case management system in many countries around the world. 2020 starts with introduction strict limitations for natural persons’ movements. It also makes

³ Criminal Procedure Code of the Republic of Lithuania. Official Gazette. 2002, No. 37-1341.

immense effect on traditional, conservative criminal justice sphere as a criminal proceeding. A strict ban on movements also effects court trails, many criminal cases which were handover to a court for further actions stalk like a car jams during rush hours in the Megapolis. For example, like Beijing, Paris, or even capital city of the Republic of Lithuania - Vilnius. Only achievements of the new digital technology allow to go ahead for criminal proceedings. For example, electronic criminal case, online court trials etc. Despite many awful things which pandemic brought into our daily life we can find one positive thing. Pandemic has fostered introduction to the new products of digital revolution in the criminal proceedings. The author's point of view it may take 7-10 years or more to achieve it what we already have now.

The technological solutions, tools are not almighty from themselves and cannot provide any guarantees for its successful performance at the criminal justice area. The most important figure in the e-criminal justice area is a human being. Introduction the products of the new digital technology requested from developers of it to shape clear vision on e-case management system at the criminal proceedings, e-file, also requested from law makers side, practitioners, researchers to build solid legal ground for usage the products of newest technologies in criminal proceedings and to present clear structure of the future e-justice philosophy.

The author of this paper would like to draw attention to the elements of e-criminal justice:

- 1) environment;
- 2) architecture of e-case management system,
- 3) legal grounds for functioning such system including comparative study on it.

Many of practitioners (judges, prosecutors, defense lawyers, officials from pre-trial investigation bodies) who works in a criminal justice area, namely, at different stages of criminal procedure even in the dreams couldn't imagine the fact that it can happened at X day when a criminal case with volumes of hard copies will be replaced by almost invisible, easy transformable from one place to another part of the world within seconds small e- criminal case.

Before introduction, a state of art in the criminal procedure we should get answer on several questions. Who will be a user? Is a user ready to accept the new technology at the service? At first, if we want to get an answer to the first question, we should have clear picture on the main actors in criminal justice area and their characteristics such as age, literacy on information technology etc. Before start to introduce the e-case management system, the developers must have full picture on future users of their products. The introduction of e-case management system for future users should follow classic rules of marketing of new products. Adaptive education programs should be developed for each segment of actors/parties involved into criminal proceedings based on each person's literacy level on information technology.

There are also other many factors related with environment related to the e-criminal case management system which can be object of separate study. The author's opinion – the main axis of e-case management system at the criminal proceedings is **a human being**. If a human being doesn't accept or simply ignore the products of new technologies, it will create huge obstacles on implementation new progressive ideas into real life.

E-case management system (for criminal, civil, administrative proceedings) main pillars are:

- 1) software and hardware,
- 2) data transmission,
- 3) users,
- 4) interoperability,

5) protection from different types of incidents (cyber-attacks, interruption of energy supply, protection the personal data of criminal procedure parties etc.).

The important part in the architecture of e-criminal case system is software. The creator of e-case software must obey main principles (the author as practitioner presented just some of them) during development an electronic case management system:

- 1) friendly to a user,
- 2) easy for navigation,
- 3) clear presentation of e-case,
- 4) “need to know”,
- 5) involvement of all parties of criminal proceedings.

Users. All main players in a criminal justice area must be involved into building e-case management. Firstly, we need identify main players in given area. It helps to avoid mistakes on development above mentioned system in some countries, namely each player started to develop own e-case management system and later due to different software, applications in use prevents to operate e-case management system as one indivisible part free from interoperability issues. There are we can compare it with phenomena which in music world we called out of tune orchestra. A state allocated amount of budget money for creation above mentioned system and each ministry, state agency announces public tender for creation own part of e-case management system. Lack of strategy, vision on development e-case management system at the criminal proceedings, lack of cooperation and coordination amongst selected service providers or/and suppliers of goods for separate parts of the same system leads to miscommunication between separate parts of the system. These learned lessons from other countries must be taken into account before planning to create e-case management system. Also, access right to e-case management system should be granted for defense lawyers. For example, access to all materials of a criminal case after pre-trial investigation was finished by the pre-trial investigation body.

To sum up, Ministry of Internal Affairs, General Prosecutor’s office, Ministry of Justice (namely National Court administration), other pre-trial investigation bodies, Bar Association are the main players in the criminal justice area and one strategy, one vision should be in place amongst above mentioned players on creation e-case management system.

The author of this paper think that e-case management system has consist of united, interconnected and at the same time independent parts/blocks running by different players of the criminal proceedings. For example, pre-trial investigation bodies and prosecution office, court.

E-case management system has to cover all the stages of criminal procedure and in addition:

- 1) preliminary phase of information inquiry regarding presence or absence elements of criminal act in the presented event;
- 2) criminal execution part where penitentiary institutions, other state institutions, probation service involved into execution process could provide some data, namely through downloading procedural documents related with execution of different types of criminal punishments, confiscation of crime proceeds, etc.

It allows to save a lot of financial, human resources on monitoring: how confiscation of seized crime proceeds is going, how mechanism of compensation to the crime victims works in real life or choosing the most suitable behavior correction programs for convicted person based on accessible and already collected data. The same time it allows to prepare different by its aim

assessments on different topics. For example, on execution of confiscation property of convicted abroad.

Protection from different types of incidents. What digital hub that brings conversations, content, assignments, and apps together in one place is going to use for communication? For example, for conduction witness interview online, court hearings online? It is strategic question and answer should be given after comprehensive analysis pros and cons for each proposed and functioning now system. For example, Google Meet, Skype, Zoom, Microsoft Teams. There are many factors which decision maker should pay attention. For example, price for a product, possibility of a product provider remotely to stop functioning of apps, global situation in the world, threat of cyber-attacks from internal and external hackers.

The most vulnerable and weakest part in the protection system of e-case management system is a human being and first step should be introduced staff with basics of cyber hygiene.

Databases of e case management system must be duplicated, in other words, a backup must be in place to prevent in case of emergency situation to restore the lost data. Also permanent, non-interrupted electricity supply must be in place in case of incidents at power grids. Finally, e-case management system (for the criminal, administrative, civil proceedings) must be granted critical national infrastructure status.

Conclusions

Architecture of an electronic case management system must keep proper balance between comprehensive and solid protection of the personal data of parts involved in the criminal proceedings and the public's right to know.

The main pillars of an electronic case management system are: 1) a human being, 2) an environment, 3) the technological and legal procedures.

Ministry of Internal Affairs, General Prosecutor's office, Ministry of Justice (namely National Court administration), other pre-trial investigation bodies, Bar Association are the main players in the criminal justice area and one strategy, one vision should be in place amongst above mentioned players on creation e-case management system.

A cyber hygiene is an important tool to protect the the weakest pillar of an electronic case management system – a human being.

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