UDC 343

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THE USE OF THE OPEN SOURCE INTELLIGENCE IN THE CRIMINAL INVESTIGATIONS

1. Introduction

The explositation of information revolution in society and the change in the habits of the Y, Z generations have radically changed the way the access and processing of information. Nowadays, we are only superficially reading large volumes of content, and it is much more common to quickly review and change short content by topic. It is estimated that 28% of the world's rapidly growing population (over 2 billion people) have direct access to the World Wide Web and nearly 5 billion people have mobile phones. On average, 247 billion emails are sent every day. This percentage increases by 24% each year.[1] Today, by 2020, more than 4 billion people worldwide are using the Internet. In 2017, the number of mobile Internet users exceeded the number of PC users. 45% of the world's population actively uses social media, exactly 3484 million people, 42% of whom use social platforms through mobile devices.

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[1] Alfred Rolington: Stratégiai hírszerzés a XXI. században: A mozaikmódszer (Srategic Intelligence for the 21st Century: The Mosaic Method), Antal József Tudásközpont, 2015. p. 9.

The most popular social media are Facebook, followed by YouTube and then Instagram.

The increasing amount of information from day to day presents enormous challenges for law enforcement agencies and national security services as well. Governments have a legitimate need to continuously prevent national security challenges, risks and threats, and identify serious and organized crime, terrorism, criminal groups, individuals. It is equally important to prove their criminal activities and dismantle criminal organizations.

Criminal intelligence has two very important purposes. On the one hand, it should be very timely and, on the other hand, fill in the decision-maker's lack of information to match the decision-maker's information need. If any of these conditions is not met, the gathering of information becomes self-serving, out-of-date. The use of OSINT for criminal purposes can efficiently and purposefully assist the decisions of investigators and leaders in criminal intelligence and criminal investigation at law enforcement agencies.[2]

2. Legal background

The European Union's Internal Security Strategy[3], adopted in 2010, set out challenges, principles and guidelines. Based on the strategy, the EU's intelligence, counter intelligence, and law enforcement agencies have to face the below most pressing challenges in the coming years:

- human trafficking, smuggling of drugs and firearms, money laundering, illegal transport and disposal of waste inside and outside Europe, trafficking in counterfeit or dangerous goods, terrorism, cybercrime, border security

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[2] PÉTER Nyeste: Bűnügyi OSINT (Criminal OSINT), In FERENC Szendrei (szerk): Handbook of Criminal Intelligence p.209.

[3] 5842/2/2010 Council of The European Union, Draft Internal Security Strategy for the European Union: "Towards a European Security Model"

Europol's current SOCTA report[4], published in 2017, identifies the following eight priority crime threats:

- cybercrime
- drug production, trafficking and distribution
- migrant smuggling
- organised property crime
- trafficking in human beings
- criminal finances and money laundering
- document fraud
- online trade in illicit goods and services.

These criminal acts presuppose the operation of international organized criminal groups, and effective action against the criminal organizations must be coordinated at European level. According to the Strategy and Europol report, effective prevention and threat assesment require a proactive intelligence based approach.

The Hungarian Police Act defines crime prevention as a criminal intelligence activity that does not deal with a concrete crime, but so criminal acts that threatens the social order of Hungary. Crime prevention has been defined as one of the possible purposes of criminal intelligence, and the steps to be taken to achieve it have been progressively regulated.

- First, the general concept of crime prevention and its tasks were defined in law, which is functioning as the so-called intelligence-led policing based on the all analyzed law enforcement information.

- According to the law, the police carry out crime prevention by monitoring the criminal situation in Hungary, revealing the risks of committing crimes, and obtaining, analyzing, evaluating, monitoring and transmitting

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[4] https://www.europol.europa.eu/socta-report

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crime-related information which are necessary for the purpose of preventing or combating crime.

This general purpose crime prevention system is the basis for the strategic and tactical intelligence of the police, which collects information not only for criminal purposes but also for other law enforcement branches so meets their information needs.

- In addition to general crime prevention measures, under certain conditions available use so covered information gathering methods,[5] which no need judicial authorization.

- The law enforcement agencies can use only by judicial approval coercive, covered criminal intelligence methods for the purpose of prevention organised crime.[6]

The new framework of the Hungarian Criminal Procedural Law ensure that it is possible to establish or exclude the suspision of crime before the investigation begins.[7]

- During data collection the data can be collected from the records specified in the particular law, data may be collected from a file or source made or lawfully made available to the public.

An important task of data collection is the gathering from open source information (before and below the investigation).

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[5] RECOMMENDATION REC (2005) 10 of the commitee of Ministers to member states on «special investigation techniques» in relation to serious crimes including acts of terrorism.
EXPLANATORY REPORT of the Recommendation Rec (2005) 10 of the commitee of Ministers to member states on «special investigation techniques» in relation to serious crimes including acts of terrorism.
[6] DI NICOLA Andrea - GOUNEV Philip - LEVI Michael - RUBIN Jennifer: Study on paving the way for future policy initiatives in the field of fight against organised crime: The effectiveness of specific criminal law measures targeting organised crime, Final report, February 2014, Brussel

[7] PÉTER Nyeste: A leplezett eszközök hatékonysága (Effectiveness of special investigative means), Pécsi Határőr Tudományos Közlemények Vol. XIX. 2017. p.157.

The new law on criminal procedure regulates in detail the use of covered investigative measures based on the special european investigative tools.[8] These investigative methods are enrich procedural and data collection possibilities.

3. Criminal OSINT

OSINT is a method developed by US secret services, which has become commonplace with the spread of the Internet, not only within the secret services but also from business to government, across a broad spectrum.[9] Open source information cannot replace secret sources, but it can complement and verified information from classified and other sources, and that can be used after proper evaluation and analysis.

According to Robert D. Steele, Chief Executive Officer of Open Source Solutions (OSS.Net), 20% of usable information can be obtained from classified sources at 95% of the cost, 80% of the available information comes from open sources, which requires 5% of the cost. This estimate is also correct in criminal investigations too.

The domestic definition of OSINT was defined by Gábor Lévay as follows:

„OSINT means the professional search, collection, selection, analysis, evaluation and utilization of non-military intelligence and counterintelligence data which are publicly available, legally collected and distributed or limited use, but not classified." *[10]*

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[8] PÉTER Nyeste: Speciális nyomozási eszközök az Európai Unió tagállamaiban (Special Investigative means in the Member States of the European Union), Belügyi Szemle Vol. 64. 2016. p.16.
[9] LÁSZLÓ Bálint: Terrorelhárítási Információs és Bűnügyi Elemző Központ (Counter-Terrorism Information and Criminal Analysis Centre, -In. (szerk): Resperger István: A nemzetbiztonság elmélete a közszolgálatban (Theory of national cecurity in the civil service, 2018. p.139.
[10] GÁBOR Lévay: OSINT (Open Source Intelligence) – Nyílt információs hírszerzés. ZMNE, Egyetemi jegyzet, Budapest, 2006. p.6.

The concept shows that this method is used to obtain data that are not classified, unprotected from unauthorized access, and can be purposefully obtained, either through human resources or through technical search engines.

Sources of OSINT information according to the OSINT NATO[11] Manual:

- internet, Deep Web
- Commercial Online (Fee for Access)
- Gray Literature
- Subject-Matter Experts
- Commercial Geospatial Information
- Direct Ground and/or Aerial Reconnaissance
- Complex Human and/or Technical Service

Within the European Union, serious and organized crime at the local, regional and international levels is becoming ever closer, with the collapse of borders and the free movement of persons.Over 5,000 organized crime groups operating in the European Union, identified according to uniform European criteria and operating at international level.[12]

One of the most common crime scenes in the world today is cyber space, where crime is committed or services are provided or information is transmitted to criminal groups, terrorists, and radicalization can also be promoted. Filtering, analyzing, and utilizing evaluated information from an open source can be a great help in preventing and detecting serious and organized crime, as well as in detecting crimes below this level. Previously, gathering open source information was a secondary task of the secret services, but with the spread of the information revolution web newsletters, radios, blogs, and social media posts were all transformed into information sources that could be useful data sources with appropriate and systematic filtering.

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[11] NATO OSINT Handbook, Saclant, Norfolk,2001.
[12] Europol: Serious and Organized Crime Threat Assesment 2017.

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OSINT tools:

- innovative data mining and data analysis methods,

- intelligent linguistic search method,

- smart search engines,

- thematic sorting system (e.g. automating RSS feed monitoring),

- monitoring community sites (e.g. instant risk assessment of flash mobs),

- evaluating the source code of websites, displaying hidden content,

- domain search, whois tools (retrieve data associated with the domain subscriber of the site),

- Hungarian and international press monitoring.

Key OSINT Areas:

• Internet news,

• gray literature,

• social network,

• traditional media,

• open data repositories,

• records (e.g. Firminfo, Takarnet). [13]

In Hungary, the Counter-terrorism Information and Criminal Analysis Center continuously examines Hungary's security and criminal situation and analyse Hungary's national security, criminal and terrorism threat situation. The Counter-terrorism Information and Criminal Analysis Center operates an open source information and processing service (OSINT Center) and provide analysed information for Law Enforcement Agencies, National Security Services and other contributors. With this task, the organizational element of the

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[13] LÁSZLÓ Bálint: Terrorelhárítási Információs és Bűnügyi Elemző Központ (Counter-Terrorism Information and Criminal Analysis Centre, -In. (szerk): Resperger István: A nemzetbiztonság elmélete a közszolgálatban (Theory of national cecurity in the civil service, 2018. p.139.

central criminal OSINT was created, and now the Department performs its tasks in an organizational form and provides its services.

„By monitoring, evaluating and analyzing blogs, news sources at domestic level and abroad, the central OSINT can filter out, for example:

– Expected directions for the development of the latest designer drugs (risky compounds), online distribution networks, target, potential online or real-world distribution sites (chat, blog).

– Changes in risk levels, group formation initiatives in the process of radicalization.

– Changes in the financial position of organized crime groups that have already been identified in the course of asset recovery activities, which seek to remove criminal profits from the scope of the authorities

– Relations between domestic and foreign criminal organizations, movement of money derived from crime.„[14]

The most commonly used OSINT methodological tools for crime detection are lexical, textual content analysis, social network analysis, geo-informatics analyse based on the data of user's social media tools and combinations thereof.

The Cybercrime Unit of the National Bureau of Investigation of Rapid Response and Special Service provides assistance to other police units and gives OSINT methodological training in the detection of specific crimes.

Based on the above OSINT as a criminal investigation tool has become an indispensable investigative tool nowdays.

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[14] LÁSZLÓ Bálint: Terrorelhárítási Információs és Bűnügyi Elemző Központ (Counter-Terrorism Information and Criminal Analysis Centre, -In. (szerk): Resperger István: A nemzetbiztonság elmélete a közszolgálatban (Theory of national cecurity in the civil service, 2018. p. 253.

▪ Peter Nyeste. The Use of the Open Source Intelligence in the Criminal Investigations. *Часопис Національного університету «Острозька академія». Серія «Право».* 2020. № 1(21) : [Електронний ресурс]. – Режим доступу : http://lj.oa.edu.ua/articles/2020/n1/20npptci.pdf.

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In this study it was examined the legal bases of criminal OSINT on the basis of international and domestic regulators. Subsequently, I dealt with the criminal OSINT tools, key areas of application, methodological tools and OSINT units within the police organization. In addition to traditional investigative tools, the use of criminal OSINT has become an integral part of the detection of crimes committed in cyberspace or by means of computer and information technology.

Key words: open source intelligence, criminal investigation, criminal OSINT, criminal intelligence.

Bibliography

ALFRED Rolington: Stratégiai hírszerzés a XXI. században: A mozaikmódszer (Strategic Intelligence for the 21'st Century: The Mosaic Method), Antal József Tudásközpont, 2015.

DI NICOLA Andrea - GOUNEV Philip - LEVI Michael - RUBIN Jennifer: Study on paving the way for future policy initiatives in the field of fight against organised crime: The effectiveness of specific criminal law measures targeting organised crime, Final report, February 2014, Brussel

LÁSZLÓ Bálint: Terrorelhárítási Információs és Bűnügyi Elemző Központ (Counter-Terrorism Information and Criminal Analysis Centre, -In. (szerk): Resperger István: A nemzetbiztonság elmélete a közszolgálatban (Theory of national security in the civil service, 2018.

Europol: Serious and Organized Crime Threat Assesment 2017.

EXPLANATORY REPORT of the Recommendation Rec (2005) 10 of the commitee of Ministers to member states on «special investigation techniques» in relation to serious crimes including acts of terrorism.

GÁBOR Lévay**:** OSINT (Open Source Intelligence) – Nyílt információs hírszerzés. ZMNE, Egyetemi jegyzet, Budapest, 2006.

NATO OSINT Handbook, Saclant, Norfolk,2001.

PÉTER Nyeste: A leplezett eszközök hatékonysága (Effectiveness of special investigative means), Pécsi Határőr Tudományos Közlemények Vol. XIX. 2017.

PÉTER Nyeste: Speciális nyomozási eszközök az Európai Unió tagállamaiban (Special Investigative means in the Member States of the European Union), Belügyi Szemle Vol. 64. 2016.

PÉTER Nyeste: Bűnügyi OSINT (Criminal OSINT), In: FERENC Szendrei (szerk): Handbook of Criminal Intelligence, Dialog Campus Kiadó, 2019.

RECOMMENDATION REC (2005) 10 of the commitee of Ministers to member states on «special investigation techniques» in relation to serious crimes including acts of terrorism.

5842/2/2010 Council of The European Union, Draft Internal Security Strategy for the European Union: "Towards a European Security Model"

https://www.europol.europa.eu/socta-report

1994.évi XXXIV. törvény a rendőrségről (Police Act)

2007.évi. XC. törvény a büntetőeljárásról (Criminal Procedure Law)