Intellectual Property On-Line – Room 214

chaired by **Andreas Wiebe, Matěj Myška**

Jan Zibner

Metaanalysis of the artificial intelligence and copyright in the mutual interactions

The artificial intelligence is inter alia understood an entity sufficiently simulating the cognitive aspects of human thinking [1]. In that case we can understand the artificial intelligence as a regular author of a work fulfilling the individual conceptual features, i.e. author of a copyrighted work. This paper presents the initial findings of the author's dissertation research on ""Artificial Intelligence as a Technological Challenge to Copyright"" and is constituted as a meta-analysis of the status quo to assess the baseline. In this initial phase, based on the evaluation of already realized research on artificial intelligence and copyright, it is necessary to determine the applicable definition of artificial intelligence itself and to systematically examine the mutual interactions of the thus determined artificial intelligence and copyright. Beside that it is needed to examine their sticking points, to determine individual research questions, to choose a suitable methodology and on basis of that the research objectives, as well as its main problematic passages, which will need some special attention.

[1] LUBER, Samantha. Cognitive Science Artificial Intelligence: Simulating the Human Mind to Achieve Goals. In: 3rd International Conference on Computer Research and Development. 2011, Shanghai, s. 207-210.

Dominika Galajdová

Software paradox – protection of software developed by AI

Software protection has developed over the past century; although initially, there were discussions about sui generis protection, the overall approach is for the protection of software as a work or database by copyright or database rights. Nonetheless, software can also be protected by patent under certain circumstances. In common, these rights can only be awarded to a natural person or legal entity. As a result, software is treated only as a subject-matter of these rights.

The rise of sophisticated software and the development of artificial intelligence (AI) raise new challenges for the protection of software. The question of the protection of software developed by AI is one of many which will become apparent. Once we consider that AI itself is fundamentally software, the paradox of legal protection for software created by software arises.

The legal status of AI and its implications for the present legal framework is the centre of an ongoing debate. Thus far, AI is not considered to have a legal personality. Therefore, the main dilemma is whether AI should be treated just as a tool or an author/inventor with the capability to carry out an independent creative process. The latter option would mean that the subject-matter of IP rights would become a subject with the capacity to possess such rights.

The aim of this contribution is to discuss the potential impact of AI on the sphere of protection of software and provide space for further debate on this topic.

Damian Klimas

Software as a Service agreements - Polish perspective

The paper shall analyze the nature of software as a service (SaaS) agreements in polish private law. SaaS consists in remotely distributing software online through the Internet. It is the most dynamically developing model of the exploitation of computer programs. Under the SaaS agreement, provider allows user to use the designated software, remotely, through the Internet. The user however have to pay the fee (although not all polish authors agree to this statement). The main research problem is to find the right legal basis for providing software as a service. In the legal relationship resulting from the SaaS contract, the beneficiary does not gain direct access to the computer program (he does not become the holder of certain files) but exploits it through another (ancillary) software such as web browsers (Chrome, Firefox) or plug-ins that are not supplied by the provider. Such model of distribution is questioned by Polish authors, who want to always apply IP law into such contracts and consider the SaaS agreements as typical license agreements. Polish lawyers beliefs in this matter have source in the old model of software protection applied to polish Copyright and Related Rights Act. Author shall analyze polish regulations (Polish Copyright and Related Rights Act and Polish Civil Code) and point out argumentation contradictory to such beliefs basing on European lawyers argumentation (mostly German and French).

Cybersecurity, Cyber-Warfare – Room 215

chaired by **Václav Stupka**

Evgeni Moyakine

International Responsibility of States for Cyber Operations: the Challenges of Attribution

Currently, various State and non-State actors carry out cyber operations that can cause significant financial loss, injuries and even deaths, constitute major threats at the individual, organisational and State levels and endanger international peace and security. It is, however, not always clear whether and when these key actors in the international arena bear responsibility for such activities in the cyber domain. The intended

article examines the role of States in cyber operations and aims to investigate from an international legal perspective the issue of State responsibility for these operations, including cyber-crime and cyber-attacks conducted during cyber warfare. This assessment will be performed on the basis of rules and principles of international law laid down in the law on the use of force, international humanitarian law, human rights and the law of international responsibility. The main research question reads: under what circumstances and to what extent can cyber operations be attributed to States and can States be held responsible for these operations under international law? The article is divided into several sections: Section 1 being an introduction into the subject matter; Section 2 describing what cyber operations are and exploring different actors involved in them; Section 3 addressing the main modes of attribution; Section 4 focusing on State responsibility and its respective legal consequences; and Section 5 containing conclusions and recommendations.

Tobiasz Gajda

Cybersecurity issues of hacker attacks on nuclear power plants

The problem of well-organized hacker attacks on the IT components of nuclear power stations around the world is becoming more and more serious. There is a real danger for millions of people. Recent attacks on teleinformatic networks of nuclear power plants in Europe and in the United States indicate this. Potentially, through interference with even a reactor cooling system, an uncontrolled nuclear explosion may occur. Soon, this can be an element of blackmail or even a hybrid war. In my speech, I would like to present current national and transnational safeguard measures. I will focus on the solutions contained in The Directive on the security of the network and information systems (NIS Directive) adopted by the European Parliament on 6 July 2016. The Annex to the Directive stipulates that the Computer Security Incidents Response Teams will be set up to cover all designated Key service providers and digital service providers. Finally, I will check the level of transposition of the standards contained among selected European Union countries.

Malwina Ewa Kolodziejczak

Actions in cyberspace as a premise for the introduction of extraordinary measures in Poland

In this paper author is trying to identify cyberspace activities that could be considered as premise for introducing one of the extraordinary measures in Poland. In the Republic of Poland, action in cyberspace is considered a premise for introducing both state of natural disaster, state of emergency and even martial law.

In the paper will be also outline the key definitions of cyberspace, and the strategic papers and analysis related to this issue.

Given the difficulty with definitions, the lack of an effective, unified cybersecurity system, the lack of estimated risk methodology, so the indication of cyberspace activities that could be considered as premise for introducing one of the extraordinary measures are probably not possible.

Distributed Ledgers and the UNCITRAL Model Law on Electronic Transferable Records – Room 109

(special stream) chaired by **Alex Ivančo, Luca Castellani**

Ondřej Svoboda

The EU e-commerce chapters in FTAs and the UNCITRAL work: Creating new dynamism

The European Union has a long history of involvement in electronic commerce. Similarly, the same statement applies on the United Nations Commission on International Trade Law (UNCITRAL) which since 1992 follows this agenda. The issue of e-commerce is thus familiar to both international organisations. Current development in international trade law however injects new dynamism into this domain. The EU under framework of the Common Commercial Policy at present negotiates ambitious free trade agreement with third countries. This approach also contains a chapter on e-commerce which strives for liberalisation in the highly regulated area. The UNCITRAL instruments, particularly the latest UNCITRAL Model Law on Electronic Transferable Records (MLETR) adopted in July 2017, on the other hand offers an approach different but complementary to the EU effort. Together, they represent strong incentives for a globally oriented approach in e-commerce state of art regulation.

Henry Gabriel

The Law and Practice of Electronic Transferable Records in the United States: A Comparison with the UNICITRAL Model Law on Electronic Transferable Records

In this paper, I discuss the development of electronic transferable records in the United States from the 1993 federal law providing for electronic warehouse receipts in cotton to the current project by the Uniform Law Commission to redraft the American laws of negotiable instruments to provide for electronic negotiable instruments and a national registry to record the rights of the holders and others with legal rights. I discuss the piecemeal development of the American law, with its selective rules for electronic documents and instruments, its often-contradictory theories on control and the transfer of rights, and the creation under the Uniform Electronic Transactions Act of a unique transferable record that is neither a true negotiable instrument or negotiable document. With this background in American Law, I compare the American experience with the newly promulgated UNICTRAL Model Law on Electronic Transferable Records.

Abhinayan Basu Bal

The Significance of the UNCITRAL Model Law on Electronic Transferable Records for Electronic Bill of Lading Platforms and Supply Chain Finance

This paper demonstrates how the UNCITRAL Model Law on Electronic Transferable Records (MLETR) can contribute to the advancement of supply chain finance (SCF) in international supply chains through the use of electronic bill of lading platforms. The paper looks at the role of bill of lading from the perspective of trade documentation and investigates how electronic bill of lading platforms support SCF through electronic exchange of information to increase visibility of international supply chains and provide better risk assessment techniques for financiers. The paper considers whether a bill of lading delivered over an electronic platform is a document of title in the traditional sense of the Hague/Hague-Visby and Hamburg Rules or whether it achieves the transfer of rights by a different legal procedure. The paper then focuses on the notion of reliability, a major requirement for functional equivalence under the MLETR and discusses whether an industry based mechanism for setting standards to achieve reliability may be favoured where existing incumbents in the industry have a strong interest in influencing the development of standards for promoting SCF.

New Media and Politics – Room 208

chaired by **Monika Metyková, Jakub Macek**

Thomas Roessing

Selectivity – the fuel that drives false news. The return of an old concept of media effects research in times of online communication

The concept of selectivity has been popular among media effects researchers since Lazarsfeld's election studies from the 1940s. The core of the concept is this: People select content that fits their predispositions. Some scholars believe that selectivity limits media effects. The concept of selectivity lost influence since the 1960s. The spiral of silence and the agenda setting theory postulated media effects independent from selectivity and Donsbach (1991) demonstrated that selectivity has a rather limited impact on exposure. Since the arrival of social media (e.g. Facebook), selectivity has returned as a concept of media effects research. Social media users actively select what and whose information they use. At the same time they are communicators who select certain messages for rebroadcast (liking, sharing). Since people are likely to rebroadcast information that fits their predispositions – regardless of validity – selectivity has become the fuel that drives false news.

Gabriela Žáková

Cyberspace from the IR Perspective

Cyberspace is a phenomenon which has been reflected by various scientific fields since the nineties of the twentieth century. Nevertheless, the field of International Relations (IR) has still rather neglected it. The aim of my paper is to ascertain the current state of reflection of cyberspace in social sciences and assess the position of IR regarding this issue. Based on gathered knowledge, a theoretical-methodological framework for further research of cyberspace in IR will be outlined and the main actors of cyberspace and their relations will be identified.

Ekaterina Pashevich & Robert W.Vaagan

Customization of news with automated journalism. A case study of Norway and Germany

Keywords: News customization, automated (robot) journalism, ethics, Norway, Germany

Introduction and research question

The customization (or personalization) of news is considered one of the main advantages of implementing automated journalism (or robot journalism) in newsrooms (Smiley et al. 2017, Pashevich & Vaagan 2017/18 forthcoming). The enthusiasm for customizing news stems from business and marketing logic: customized content is more valuable to the end-user. Additionally, increased use of social media combined with the growing potential of data mining mean that customization will increase. Yet in the news business, customization often generates ethical concerns, notably infringement of privacy. Our study is a comparative case study of early adopters of robot journalism in Norway and Germany, and our main research question is: What are the positive and negative sides of customization of news with automated journalism in Norway and Germany?

Theory and methodology

Customization of news is currently linked in media literature especially with social media, news search aggregators and trending topics on news websites (Jokela et al. 2001; Pariser 2011; Thurman 2011; Hindman 2012; Thurman & Schifferes 2012; Beam 2013). As many newsrooms around the world implement various types of automated journalism, more research is needed especially regarding the ethical challenges notably the possible violation of end-user privacy. Lee, Kim and Yoon (2017) mentioned these concerns in their discussion of a prototype of an algorithm Custombot used for writing personalized IT and science news. Smiley et al. (2017) offer as a solution to the ethical problem with automated journalism to make the readers aware of the personalization. Yet there is apparently no common agreement yet on the ethical aspects of customization with automated journalism, which is the motivation behind our article. Theoretically, the article draws on diffusion of innovation theory and theories of ethics which are combined methodologically with in-depth qualitative interviews with key stakeholders (editors, journalists, scholars and developers) in Norwegian and German news organizations and enterprises. Special attention is paid to the algorithmic structure of NLG systems used in programming robot journalists, and this material is

further enriched with interview data.

Preliminary findings

The authors argue that the main advantage of automated journalism is news customization, along with the increased speed and scale of reporting. These are seen as one of the main arguments for implementing this innovation in newsrooms. But news customization through robot journalists entails ethical dilemmas and challenges. This seems to be attributable to the NLG system that lies at the core of automated journalism, which is being developed by outsourced software companies. They tend to regards news organizations as only one of many potential clients. Developers of automated journalism are therefore often not familiar with ethical press codes or ethical standards of journalism. End-user privacy is therefore often in jeopardy.

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Brief author biographies

Ekaterina Pashevich was born in Yekaterinburg, Russia, in 1991. She is currently a graduate student of Media Science at the University of Oslo, Norway. Prior to this she obtained a bachelor degree (2013) and master degree (2015) in international journalism from the Moscow State University of International Relations, Russia. Highly interested in computer science and the ethical aspects of the implementation of artificial intelligence in everyday life, she wishes to continue studying artificial intelligence, media innovations and entrepreneurship in the future.

Robert Wallace Vaagan, Associate Professor, PhD, Department of Journalism and Media Studies, Faculty of Social Sciences, Oslo and Akershus University College of Applied Sciences. (HiOA). Has authored and edited several books and anthologies plus many articles especially on media, entrepreneurship, ethics, and intercultural communication. Leader of research group at HiOA Entrepreneurship and innovation in Media. Vice Chairman (2009-13) of Norway´s National Council for Media Studies. President (2017-19) of International Association for Intercultural Communication Studies (IAICS).

Coleen Lewis

Social media and Political mobilization: Jamaica 2016 Elections examined

On the 31st January, 2016 Mrs. Portia Simpson Miller, then Prime Minister of Jamaica, announced that general elections would be held on 25th February, 2016. Every day thereafter on social media both political parties as well as the media published a politically themed cartoon. Social Media usage is popular in Jamaica and has been used to comically depict serious public, social and political issues. In Jamaica, where democracy and freedom of expression are highly valued and disagreement respected, social media has been largely uninhibited. Social media significantly contributed to the political discourse during the election campaign by focusing on specific issues that pertains to political issues and candidates in Jamaica. The right of the citizens, and in particular the electorate to be informed so as to be able criticize governments is essential for democracy and good governance.

Using Jamaica's general election season as a case study, this article aims to examine how social media was employed to engage the public in the national debate and mobilize them during the political process as well as analyzes the manner in which social media was used to represent the main political opposing candidates, Portia Simpson Miller and Andrew Holness.

The paper also probes social media and its role in encouraging civic participation. Content analysis was used in the evaluation of the cartoons posted on social media in relation to the election, the candidates and

political issues and focus group interviews were conducted with university students to discern the impact of those social media postings on the political mobilization.

The findings revealed that social media usage aided in minimizing voter apathy as well as impacted the perception and approval of candidates and policies. The results also disclosed the use of satire perpetuated recurring stereotypes and clichés within Jamaica's cultural and political landscape: the perception of Miller as now more of a figurative head that had lost her voice, and Holness, as sweet talking the electorate.

This study engaged the scholarship relating to the gendered, raced and classed implications of these social media political postings and theories on political engagement by way of social media to create discussion around and about political issues, and encouraged civic participation and political mobilization.

Keywords: social media, civic participation and political mobilization, elections, democracy, good governance, liberty, political process, political satire, gender stereotyping, political attitudes, race, political cartoons, respectability politics.

Saleh Al-Sharieh

Personalised Communication and Cultural Participation: A Human Rights Law Analysis

The last decade of the twentieth century marked the emergence of the information economy, in which natural resources and other elements of the industrial economy are no longer nations' predominant source of wealth.1 Knowledge and information are the assets of today's economy and the revolution in information and communication technologies has significantly improved their production, processing, and dissemination.2 A downside of this abundance of information is that it "creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it."3 Personalised communication enabled by automated profiling of groups and individuals attempts to address this problem.4 On the other hand, this information and knowledge dissemination model may create challenges for the full enjoyment of the human right to participate in culture, articulated in both Article 27(1) of the Universal Declaration of Human Rights (UDHR) and Article 15(1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR). The purpose of this submission is to investigate the extent to which personalised communication enables or hinders the right to participate in culture, which is interdependent with and indivisible from the human rights to freedom of expression and education, among others. In particular, the submission investigates the relation between personalised communication and the components of the right to participate in culture including the rights to access, use, enrich and disseminate cultural goods.

1 Walter B. Wriston, The Twilight of Sovereignty: How the Information Revolution is Transforming our World (New York: Charles Scribner's Sons, 1992) at 18.

2 Yochai Benkler, The Wealth of Networks How Social Production Transforms Markets and Freedom (New Haven: Yale University Press, 2006) at 33.

3 Herbert A. Simon, "Designing Organizations for an Information-Rich World" in Martin Greenberger, ed, Computers, Communication, and the Public Interest (Baltimore, MD: The Johns Hopkins Press, 1971) 38 at 40-41.

4 See Vincent Manzerolle, "Technologies of Immediacy/Economies of Attention" in Lee McGuigan & Vincent Manzerolle, eds, The Audience Commodity in a Digital Age (New York: Peter Lang Inc., 2014) 206 at 222.

The digital literacy and multimodal practices of young children – Room 209

(special workshop) organized by **DigiLitEY**

Christine Treultzsch-Wijnen

The introduction of robotics in Austrian primary schools by using BeeBots and Lego WeDo

In Spring 2017 the Austrian Ministry of Education launched a new education strategy aiming to boost digital literacy and IT education in all primary and secondary schools. The strategy is called School 4.0 and it comprises four fields of action:

1) digital basic education – digital literacy training and coding starting with the age of 6

2) teacher training – to qualify teachers for working in coding and media education

3) infrastructure – broad band access for schools, tablets and laptops for pupils, further equipment (e.g. BeeBot and Lego WeDo)

4) digital learning tools – open education ressources

The educational programme will start in September 2017 with a pilot project with about 40 primary schools all over Austria that will introduce BeeBots and Lego WeDo in regular classes in order to combine coding and the training of analytical thinking with the teaching of other school subjects. In the federal province of Salzburg 3 schools will participate and their experiences will be evaluated and reported in this presentation. Children between 6 and 10 will work with BeeBots, little robots that are not internet connected. But the Ministry also developed an App where the "BeeBot Game" can be played online. They will also work with Lego WeDo which is internet connected and the pupils will use its online possibilities.

The aim of the Ministry's project is to teach coding but also to train digital literacies. In how far this will be

successful depends on the didactic concept behind the technological equipment as well as on the motivation of the teachers and the children. The project will be evaluated by interviews and participative observation. By the time of the conference first insights of the participative observation can be presented and they will be critically discussed with regards to the opportunities of IoToys for the training of digital literacy.

Anca Velicu

Entering STEM subjects through making in the early years. The presentation of Romanian MakEY project

The benefits of youth involvement in a makerspaces for increasing their STEM and digital skills and knowledge have been documented especially for that persons that are underrepresented in STEM fields, as girls and youth with a low socio-economic status (Barton et al., 2017, Davis and Mason, 2016). Nevertheless, any study till now has focus on pre- or primary school children (under 8s) for understanding how their engagement in a makerspace or in makerspace activities would influence their attitude towards science and digital technology (Marsh et al., 2017). That is where Romanian study within MakEY project aims to fill the gap, particularly answering at the following research questions: How do young children engage in makerspace switching from structured to unstructured activities and vice-versa? and what is the role of communication (i.e. reflecting & sharing) in making and how do young children develop digital communication in a digital fabrication environment?

In this paper I will present the international MakEY project and the design of Romanian study within it, highlighting in the same time the findings of the literature regarding STEM and digital skills developed through making activities

Martina Šmahelová & David Šmahel

Mediation of Young Children's Digital Technology Use: The Parents' Perspective

Because even young children use digital media these days, parents are encouraged to balance the risks and opportunities that their children may encounter online. Current studies have mostly been quantitative. They have mainly focused on children aged 9 and older, and have addressed the types of mediation that parents use. However, they have not consider their relation to specific risks and opportunities. In the present study, we have sought to address this discepancy and to understand the mediation strategies that parents use to shape the online experiences of their children. We focused on the factors that play a role in these mediations of specific risks and opportunities. In-depth semi-structured interviews with the parents of children aged 7–8 and their siblings in the Czech Republic (N=10 families) were conducted in 2014. A thematic analysis identified three main themes: (1) Mediation strategies of technology usage in relation to the mediation of online opportunities and online risks; (2) Time and place management of mediation strategies; and (3) The child as a co-creator of mediation strategies. Our results indicated that parental mediation is a dynamic process that is co-constructed by the parents and children in the context of the actual situation, such as where the family currently is.

eCommerce, Digital Single Market – Room 133

chaired by **Zsolt Balogh**

Teresa Rodríguez-de-las-Heras Ballell

EU Rules for Electronic Platforms: Building a Digital Single Market in Europe

Digital economy is nowadays a Platform economy. This pervading expansion of platforms has been triggered by their value-creating ability and trust-generation potential. The emergence and increasing popularity of disruptive models, such as sharing-based economy, crowdfunding or fintech variants, have been greatly accelerated by platform-based solutions. Platforms have also transformed social, political, public and educational contexts by providing participative and collaborative environments, creating new opportunities, facilitating the creation of communities, mobilizing resources and capital, and promoting innovation. Along with these visible social and economic disruptions, platforms are also legally disruptive. Their self-regulating power, the internal relational complexity, and the potential role of platform operators for infringement prevention and civil enforcement in a possible policy shift towards an increasing intermediaries' responsibility have triggered regulatory interest. The aim of this Paper is to examine the platform model in order to explore the legal anatomy of electronic platforms and identify the key issues to consider for possible legislative actions in respect of the same within the context of the EU Digital Single Market. First, the Paper analyses whether current e-commerce rules accommodate to platform-based models. Second, it traces the ongoing projects aimed to establish a legal framework for platforms, the scope, the goals, and the limitations. Third, the Paper provides a comparison between platform-based models and decentralized schemes (distributed ledger) as architectures for legal activities in the light of EU and international instruments

Katarzyna Południak-Gierz

Personalized agreement as an answer to consumer profiling

Profiling consumers in online environment has become a common standard. Big data technology enables gathering and processing vast amount of information and therefore it is possible to divide users into differentiated categories according to their characteristics, likings, needs and situation. Mass contracts in consumer trade give way to customization. This tendency should be taken into account when determining legal situation of the parties. The purpose of the study is to prove that peculiarities of a personalized contractual relationship speak for the intervention of the legislative, namely – introducing a new type of agreement.

The entrepreneur that uses Big data based mechanisms disposes of an immense amount of information

about his potential clients. He can address consumers with highly adjusted offers, in a highly persuasive manner, at the time this individual is most likely to enter into agreement. Also the relationship between the business and the consumer changes – trust, which is a highly influential factor in online environment, can be successfully inspired by various techniques.

Current legal provisions in EU law do not grant consumer adequate protective measures, but rather deepen contractual asymmetry. The need of legislative intervention becomes evident, hence, on the basis of the analysis, postulates de lege ferenda are formulated.

Christophe Dubois & Johana Kotisova

Studying lawyers' profession in an algorithmic world: a research programme

Across the world, algorithmic technologies are transforming work and production processes as well as professional practice and knowledge. In the last fifteen years, algorithms have also started reshaping the legal services marketplace. New modes of production, storage, analysis, and dissemination of legal information have emerged, such as e-discovery, Online Dispute Resolution platforms, or Automated Document Assembly. These new types of legal services are delivered by legal start-ups and law firms that algorithmically produce legal information tailored for routine and non-routine operations. This digital re-engineering of legal services entails new sociotechnical processes and workflows, impacts the legal professions as well as the nature of law and justice.

In this paper, we will review interdisciplinary literature in order to develop a conceptual framework aiming to answer the following question: how does the introduction of algorithmic technologies into legal processes affect lawyers' profession?

11:00 – 11:15 Coffee break

11:15 – 12:45 Parallel streams

Intellectual Property On-Line – Room 214

chaired by **Andreas Wiebe, Matěj Myška**

Izarne Marko Goikoetxea

WIP: 'Patterns of judicial behaviour on FRAND licensing terms of SEPs in the State of California'

Products protected by patents are part of our everyday lives. For instance, radio, television, smart phones, computers, laptops, tablets, wireless technologies such as Wi-Fi or automobile ignition and transmission systems are comprised by various patents. Usually, these patents cover technologies that have been declared essential to the implementation of a standard by a Standard Setting Organisation (SSO), so they are renamed as Standard Essential Patents (SEPs), as opposed to patents that are not essential to a standard. Besides, complex products and systems are often based on multiple standards from several SSOs. Collaboration between standards groups is therefore vital.

Because patents are increasingly viewed as strategic financial weapons and resources, not merely legal assets, companies who own a wide range of very relevant patent portfolios and manufacturers engage in numerous patent buying and selling transactions, licensing agreements, as well as in numerous costly legal disputes that could jeopardise the positive effects associated with standardisation.

Patent licensing agreements are especially important regarding SEPs, because as the technology covered by those patents has been standardised by a SSO, there are not any other alternative technologies available in the market for manufacturers. Thus, if they do not obtain a SEP license, they are unable to compete with their product in the market.

There is a large theoretical legal and economic literature asserting that SEPs allow their owners to holdup innovation by charging fees that exceed their incremental contribution to a final product. Authors also point to procedural implications of FRAND commitments, such as waiving the right to offer an exclusive license, seek injunctive relief or sell the patent to a third-party licensor. Most of the recent academic literature in the field of patents focuses almost entirely on paten holdup and holdout, as two SEP-related problems that can arise when market actors interact with each other (two-sided negotiation).

However, there is an absence of research that analyses cases in order to extract patterns of judicial behaviour about Fair, Reasonable and Non-Discriminatory (FRAND) licensing terms of SEPs. My study will focus on California judicial decisions because is where the higher number of cases have been ruled regarding FRAND terms in the ICT industry, as a part of the so-called 'patent war'. The results might be useful for ICT companies to adapt their future licensing strategy and to suggest policy recommendations to be implemented by SSOs or governments.

Pavel Koukal

Unfair Competition as the General Umbrella Stretched over the Information?

Based upon the Herbert Zech's protection of information theory (Zech H. Information als Schutzgegenstand, 2012) the author will analyse the protection of information under copyright law and under unfair competition. The author will pay his attention to the protection of ideas and he will make a critical analysis

of the case-law of the Czech Supreme Court, which ruled that "Something which is the mere idea, procedure or method [Art. 2 (6) Czech Copyright Act] may be protected by the unfair competition" (23 Cdo 971/2014). Based on the findings of the German and Polish doctrine the author will provide arguments that the approach taken by the Czech Supreme Court is incorrect and would lead to absurd consequences.

Jakub Harašta, Dominika Galajdová, Jan Zibner & Matěj Myška

Reverse engineering the exceptions and limitations to copyright: learning from the past to shape the future

Copyright law aims to achieve two penultimate goals that seem to be in direct opposition. On the one hand, it aims to provide the authors with incentives to create and on the other hand it aims to promote the progress of culture and public welfare (Hua 2014, v). The first goal is achieved by providing the creators with exclusive rights to control the creative works and consequently to recoup their investments in the creative process. The second goal is pursued by limiting these exclusive rights in order to stimulate the circulation of information and knowledge and facilitate further re-use of the creative output. In order to be functional and accepted, the copyright law needs to strike the proper balance between these two regulatory goals. This balance is however constantly challenged by development of both society (in terms of what is desirable) and technology (in terms of what is possible). In order to restore the balance and remain relevant and efficient (Siu 2013, 78), the copyright law needs to react. It could do so either by expanding the scope of rights granted to authors or by limiting the scope thereof.

Our goal is to map the exceptions and limitations to the exclusive rights as they historically emerged in order to maintain the balance. We claim that every new exception or limitation of the scope of rights granted to author could be traced to a single point of origin – i.e. a specific change in society or development of technology. By discovering and mapping impulses for establishing of specific exceptions and limitations we will be able to identify key moments leading to development of current copyright law. Our final goal is to analyse those key moments in terms of their significance – e.g. how disruptive they were for existing balance – and by extent whether the time has come, facing the current social and technological change, to establish new exception and limitations.

In the first step, this theoretical framework will be applied to three specific exceptions and limitations regulated in the Information Society Directive ("ISD"). Namely the temporary copy exception (Art. 5 para. 1 ISD), teaching exception (Art. 5 para. 3 let. a) ISD), library exception (Art. 5 para 2. let. c) ISD) and orphan works exception (Directive Directive 2012/28/EU). The research steps undertaken and presented in this contribution are as follows: 1) trace and identify the social and technological circumstances that preceded the regulation of the respective exception and limitation in the international and European copyright system; 2) evaluate the wording of the selected exceptions and limitations in the international and European regulatory acts, whether and how the technological disruption that caused their introduction is reflected 3) discuss the possible current and future developments, i.e. situations where these exceptions might be applied to the use of the work due to the social and/or technological changes.

The last step also justifies the selection of the exceptions and limitations. Namely, they were regarded as unsatisfactory in the proposed Directive on copyright in the digital single market for the areas of text and data mining, cross-border and digital teaching activities and preservation of cultural heritage. As a result, new mandatory exceptions were introduced (Art. 3, 4, 5 of the proposed Directive) that could be however regarded as "forks" or derivative exceptions from these selected ones. Consequently, the changes influencing the introduction of the selected exceptions and limitations could be also compared to the alleged changes relevant for the proposed exceptions.

Hua, Jerry Jie. 2014. Toward A More Balanced Approach: Rethinking and Readjusting Copyright Systems in the Digital Network Era. Berlin, Heidelberg: Springer Berlin Heidelberg. http://link.springer.com/10.1007/978-3-662-43517-5.

Siu, Kevin P. 2013. 'Technological Neutrality: Toward Copyright Convergence in the Digital Age'. University of Toronto Faculty of Law Review 71:76–112.

International Internet Law – Room 215

chaired by **Dan Jerker B. Svantesson**

Daniela Davidovova

Cross-border issues and SW containing open-source

Which court is competent and what law is applicable in case the SW containing open-source infringes the license terms of such open-source and is further distributed via internet (online downloading of SW)?

The question is important especially in case where the SW shall be used for commercial purposes, as the damages caused by breaching the license terms may be elevated.

The aim of this paper is to provide concrete answers on determining the competent court and applicable law in case where the EU company incorporates into its SW open-source while not respecting the open-source license terms (such as copyleft requirement) and then commercially exploits such SW in the EU or outside EU via internet (the SW is downloadable online), whereas the infringed open-source may be of EU or third country "provenience".

The PIL rules will be considered with the focus on the current Brussel and Rome I/II Regulations.

This is work-in-progress paper.

Filippo Pierozzi

The Legacy of the Law of the Sea for Cyberspace Peacetime Regulation: Moving from Imitation to Methodology

The present work address the proposal, recently advocated by a broad range of scholars and stakeholders of an ""all-encompassing Internet treaty that would harmonize relevant laws and solve the full range of cyber-cooperation issues". The drafting process of the Montego Bay Treaty on the Law of the Sea will be the testing bench for evaluating the room for manoeuver to deliver viable solution to cyberspace regulation in peacetime under an international law perspective.

The present essay is aimed at striking a balance between, on the one hand, quixotic analogies between the law of the sea and cyberspace phenomena and, on the other hand, potential ways forward through the development of a consistent international lexicon that could foster the prevention of a further balkanisation of cyberspace.

Dan Jerker B. Svantesson

'Lagom jurisdiction' – What Viking drinking etiquette can teach us about Internet jurisdiction

The law of Internet jurisdiction is facing a crisis. While there is widespread and growing recognition that we cannot anchor Internet jurisdiction in the outdated, typically overstated, and often misunderstood, territoriality principle, few realistic alternatives have been advanced.

This contribution examines the conceptual mess that is the international law on jurisdiction; including concepts such as territoriality, sovereignty, comity, duty of non-intervention, due diligence and no harm. It then argues that we may instead adopt the Swedish 'lagom' concept – which allegedly stems from Viking ear drinking etiquette – as a guiding principle for how we approach Internet jurisdiction.

Julia Hörnle & Asma Al Abbarova

Consumer Jurisdiction in the EU and the US

This paper takes a comparative approach examining the rules on when the courts have jurisdiction in and which law applies to business-to-consumer disputes. In particular it compares the concept of unconscionability in adhesion contracts and the EU rules on consumer protection in private international law. There are marked differences and similarities in that the US case law is informed by the enforceability of class action procedure whereas in the EU the issue is the cost of cross-border litigation within the EU. The EU concept of directing and the regulation of unfair contract terms will be compared to the US notion of unconscionability. We discuss a law & economics approach, risk analysis and fairness in the sense of access to justice.

Distributed Ledgers and the UNCITRAL Model Law on Electronic Transferable Records – Room 109

(special stream) chaired by **Alex Ivančo, Luca Castellani**

Teresa Rodríguez-de-las-Heras Ballell

The Architecture of Digital Economy: intermediaries, platforms and ...distributed ledgers

UNCITRAL texts on electronic commerce successfully addressed and effectively tackled the challenges posed by the use of electronic communications in the formation and the performance of contracts. These are essentially 'transaction-oriented' rules and represent the first generation of e-commerce law. The accelerated evolution of digital economy has shown that technology is not only transforming contractual process but primarily reshaping structures and organizations and even creating new social environments. The most visible manifestation of such a transformative power is the extraordinary expansion of electronic platforms and the pervasive presence of electronic intermediaries. Some regional and domestic jurisdictions – such as EU Directive on Electronic Commerce or US Digital Millennium Copyright Act – have addressed the role of intermediaries and adopted 'intermediaries-oriented' rules on obligations and liability. Such an approach is not however visible in international instruments. Distributed ledgers represent a further step in the evolution of digital architectures that essentially ushers into a scenario of decentralized schemes. Under the principle of technology neutrality, UNCITRAL texts do not reveal technology-determined solutions. The Paper traces the above-described evolution of digital law rules and discuss to which extent current UNCITRAL rules withstand the resistance test to be applied to distributed ledgers or whether specific new rules will be required

Lucca Castellani

Uniform law of electronic commerce: fundamentals, recent developments and opportunities to support innovation

Alex Ivančo

Overview of blockchain based project

Health Research Data – Room 208

(special stream) chaired by **Michal Koščík**

Michal Koščík

Use of health data in medical research – progress and perspectives in CEE region

Joanna Studzinska

Electronic medical records in Poland - selected legal issues

In current legal order, the Polish legislature allows the creation of medical records in two forms - traditional (paper) and electronic. According to the legislator, after 31.12.2017 in the public health system, the electronic form shall become the only acceptable form of medical documentation. For this reason, the

speech will address the practical aspects of creating, processing and making available electronical medical records in Poland, and of course safety of medical data in electronically form.

Kinga Flaga-Gieruszyńska

Polish model of telemedicine services legal regulation

Author shall present the legal basis for the functioning of telemedicine and similar services in the Polish legal system. The presentation will introduce the regulations, arising from the corporate provisions related to the rules of performing medical professions, in particular the profession of doctor. In addition, it will refer to provisions of the regulations on medical activity, regulating the issues of organizational and legal forms of providing health services in Poland.

The digital literacy and multimodal practices of young children – Room 209

(special workshop) organized by **DigiLitEY**

Vilmante Liubiniene, Patricia Dias & Rita Brito

Young Children and IoToys: a comparative perspective

The Internet of Toys is an emergent, fast-paced and diversified market, and the adoption and appropriation of such toys is happening in homes with young children across Europe.

The comparative research project on the Internet of Toys, under the COST Action DigiLitEY, found that media coverage and commentary debate (in the Christmas period of 2016) was different according to countries. For instance, in Lithuania, Malta, Serbia or Slovenia the media coverage was scarce, as well as the interest among children for IoT is much lower. We hypothesized this could be related with economic factors - the small size of the countries, and by extension, local markets, and the purchase power for smart toys - as well as, and connected with the first, linguistic/cultural factors.

On the contrary, there was considerable media coverage in Portugal, and mostly focused on the risks associated with this type of toys – such as privacy intrusion or commercial exploitation, instead of on opportunities.

Through additional qualitative research, which included visits to a purposive sample of 30 families, we found that, despite the discourses circulating in the media, the scenarios in Portuguese homes was not very different from the other countries. After a few attempts, we realized we had to target income and tech-savvy families in order to find smart toys in the homes. Although most children identify several toys and express interest in having them, they are not very common in homes yet. Children perceive them as engaging and reveal curiosity, while most parents prefer traditional toys, sports or outdoors activities. Price is the main barrier for parents. What bears more weight on the parents' decisions is the amount of satisfaction that the toy will afford the children, and the added-value in terms of learning or developing skills. The expectation that children will use the toy for a long time is a positive factor, while the high price is an obstacle. Thus, parents have doubts about smart toys being worth the high investment required and are hesitant to adopt them.

Another significant difference is that Portuguese children and parents are finding a positive side to the lack of IoToys offer in national language. For them, playing with these toys is an opportunity to learn English, a competence that is highly valued by parents.

Despite these differences, there are also similarities across the countries involved in the project. The most relevant one is the absence of the voice of children themselves from media discourse, and from the debate about the advantages and disadvantages of the IoToys. This absence reinforces the need for ethical guidelines, disseminated and strengthened by policy-making, in order to promote a safe and proficuous IoToys.

Donell Holloway

The Internet of Toys and Things (IoTTs) for children: Children's data in a Surveillance Capitalist society

Surveillance capitalism refers to new economic conditions in which online information (data) is converted into valuable commodities, and where the production of these commodities (data) relies on mass surveillance over the internet. This data is often extracted from the same population that will eventually be its targets (Zuboff, 2104). In the case of children, the advent of internet-connected toys and children's wearables, along with screen-based apps and games for children, has provided a significant opportunity for the appropriation of children's digital labour for commercial profit within a surveillance economy. Concerns have been raised about how the commercial appropriation of children's online information compromises the privacy and data security of children; often from children who are too young to consent to or understand the implications this practice. In addition, the consequences of accumulated data over a child's lifetime–which will quickly outstrip the data accumulated by their parents—is of concern.

This talk examines the positioning of children both as objects of economic activity (as digital labourers) and subjects of market relations (as digital consumers) under surveillance capitalism (Andrejevic, 2014; Zuboff, 2015; Chowdry 2016). It traces the history of children's engagement with the market economy from: their engagement in the labour force before and during industrial revolution times; their subsequent retreat, after a series of child labour law reforms in the late 19th and early 20th centuries, into unproductive, domestic spaces; the ensuing positioning of children as market consumers in the 20th century (with varying degrees of agency and competency); and, more recently, their emergence as both data sources and data consumers within a big data economy.

This article will highlight how the emergence of internet-connected toys and things (IoTTs) for children is significantly amplifying the value and significance of children's data for commercial entities within the

surveillance economy. Firstly, and despite having already been purchased and owned by consumers, the presence of embedded and connected software means that the customer is subject to long term contractual obligations. These terms and conditions enable data exchange between the child and the platform; the child and parent; and the child and other data sharing recipients. Furthermore, the assortment of sensors embedded in IoTTs for children provides new data sets that are already being captured and datafied. These new data sources include children's voices, movements, locations, images, breathing and heartbeat patterns. This increase in the quantity and variety of data available for commercial profit raises concerns regarding children's privacy and data security into the future.

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eCommerce, Digital Single Market – Room 133

chaired by **Zsolt Balogh**

Iga Krystyna Małobęcka

Automated pricing systems – harming or benefitting competition and consumers?

Automated pricing systems that monitor and set prices online are increasingly used in the e-commerce sector in various industries, including consumer products, hotels and airlines, as noted in the Final Report on the E-commerce Sector Inquiry of the European Commission. Their prevailing use may potentially raise three types of competition law concerns. Firstly, it may allow for more effective implementation of resale price maintenance practices. Since both manufacturers and retailers commonly monitor online prices, it is easier for them detect deviations from manufacturers' pricing recommendations and retaliate against those retailers who does not follow them. Secondly, increased online price transparency may also enable or strengthen collusion (both explicit and tacit) between competitors by making it easier to detect deviations from the collusive agreement. Thirdly, enhanced tracking technologies and easy access to personal data widely shared by consumers online contributed to advances in customer profiling and development of sophisticated personalized pricing strategies. They enable sellers to better approximate each consumer's willingness to pay and, by setting individually suited price (the highest the consumer is willing to pay), appropriate most of the consumer surplus. Although such first-degree price discrimination is currently not prohibited under competition law, its widespread use by internet platforms may lead to extensive consumer exploitation. The question arises whether current tools used in competition law are adequate to tackle these new issues.

Libor Kyncl

Corporate Structure in International Trade - Taxes Comparison for E-Shops

This paper will consist of the comparison between tax regimes in the three basic options of different corporate structure in the international trade. The tax law advantages, disadvantages, opportunities and risks will be discussed for establishing subsidiary entity / company, for establishing permanent (tax) branch and for mere goods delivery without the permanent domiciliation. These taxes will be compared for e-shops as the enterprises operating in the EU single market. Main taxes that shall be discussed will include VAT and income taxes, both in the EU legal Framework with some specific Czech examples.

Katarzyna Smyk

Healthcare information systems as an instrument of eHealth Action Plan

The European Commission's eHealth Action Plan 2012-2020, a part of Digital Single Market Strategy, provides a roadmap to link up devices and technologies, and to invest in research towards the personalised medicine of the future. One of the most pressing issues underlined in the Action Plan is eHealth Network, privacy of medical data and interoperability aspects of electronic health records (EHR). Author will present fundamental regulations affecting healthcare information systems (HIS) in European Union with a glimpse of Polish perspective, especially polish Healthcare Information System. The presentation will focus on fundamental patient rights (e.g. the right to information) as well as problems of interoperability and implementation of EHR. Author shall consider whether such systems could provide enough measures (authentication, security, information) for patient to give truly informed consent, whether it is exchange, analysis, adaptation or removal of medical data. Another important issues, that are about to be presented during the speech, are the possibilities for patients to know who accessed EHR, to be informed about any breach of HIS security and - more general - right to privacy within the meaning of GDPR. This complex

study will be summarized by evaluation of present HIS and EHR systems as well as other eHealth initiatives in EU.

12:45 – 13:45 Lunch

13:45 – 15:15 Parallel streams

Ideas for Cyberspace – Room 214

chaired by **Herbert Hrachovec, Radim Polčák**

Veronika Žolnerčíková

AI Autonomy Level and its Effect on Legal Liability

Systems and machines based on goal-oriented programming are commonly designated by the term Artificial Intelligence (AI). Among the distinctive elements of AI is the ability to perceive and analyse information and to adopt decisions while anticipating their consequences. AI that is additionally capable of gathering information and processing it without further human input (through its sensors or by exchanging information with its environment) can be classified as autonomous. However, not every AI is capable of autonomous behaviour, nor is every autonomous AI awarded with the same degree of autonomy as the other.

Autonomous Intelligent Cars are an example of such an AI. Whereas fully autonomous cars are yet to be introduced, partially autonomous cars are a common sight. A six-level autonomy scale is commonly used for the classification of autonomy in cars. The level of autonomy is determined by the necessity of human intervention during driving tasks.

This paper aims to analyse the influence of different autonomy levels on legal issues, such as liability. It focuses on Autonomous Intelligent Cars, but discusses the possibility of implementing a general classification, which would be applicable to other autonomous agents as well.

Herbert Hrachovec

Podcasting as a Philosophical Activity

There is a considerable number of podcasts presenting philosophical issues and discussions on the internet. There are, on the other hand, very few taking up the challenge of using this mediums' expressive machinery itself to deal with philosophical concerns. Audio and video clips can, however, be utilized as means for theoretical articulation following pedagogical, artistic and experimental patterns.

In an seminar held at the University of Vienna 2016/17 students developed philosophical podcasts with the aim of presenting self-selected topics in an audio-visual format for internet-distribution. The proposed talk presents some examples of their efforts and draws some conclusions from their results.

Tomáš Karger

Virtual Ownership and Value Creation in Digital Peer-Production

This contribution is based on extensive research experience with peer-production in free software projects. Its aim is to explore and contextualize the recent developments of ownership in this environment against a background of history of intellectual property and in comparison to what is known as the proprietary mode of software production. The main argument of the contribution makes use of the observation that the nature of computer software is threefold -- software exists as source code, binary files and trademarks. One of the key aspects of ownership is the matter of usage and its exclusivity. By inspecting this aspect in the three forms of software we find that the property arrangements with regard to each of them are different and that in practice, these arrangements provide stability and continuity to software development projects, which were initially seen as subversive and chaotic. This analytical move allows us to grasp the process of value creation in free software projects and in turn to explain the involvement of private businesses in an area which was initially considered wholly anti-capitalist.

Ján Mazúr & Mária Patakyová

Countering Accountability Deficit of the 21st Century Technology Giants

Facebook, arguably the most important cyberspace of our times, provides infrastructure for businesses, public and private conversations, organising civic actions etc. However, contrary to its prominence in people's everyday life Facebook remains a privately organised cyberspace where its community standards apply. In recent year, we observed an increased activity of activist groups of various backgrounds in Slovakia to flag other users' profiles and posts as inappropriate according to Facebook standards. Numerous profiles of far-right extremists were shut down, but also profiles of their online adversaries-civic activists, albeit temporarily. Such practice begs a question of Facebook's accountability for inappropriately deleting its users' content. Facebook's practices and criteria remain largely undisclosed and remedies disputable. In this contribution, we aim to discuss Facebook's position as a quasi-monopoly creating its own cyberspace with its self-imposed rules and standards. We discuss whether Facebook's position warrants regulatory action to counter the dominance and presumed accountability deficit of Facebook-like service providers.

International Internet Law – Room 215

chaired by **Dan Jerker B. Svantesson**

Piotr Rodziewicz

Ascertainment content and application of foreign law in Internet era with special regard to ODR

In the case of cross – border disputes, it is necessary to determine law applicable for legal relationship from which dispute has occurred. Conflict of laws rules may indicate as law applicable lex fori or foreign law. If foreign law is law applicable, then courts have to ascertain content of this law and apply it in proper manner. In paper I am going to present different legal models concerning treat of foreign law and I try to determine in which manner Internet may be useful for courts and other competent bodies in respect to fulfil duty concerning ascertain content and application of foreign law. Paper covers also issues concerning ascertainment and application of foreign law in Online Dispute Resolution. These dispute resolution methods were intended to solve high – volume, law – value, consumer disputes with foreign element. It should be noted that within the European Union has been adopted legal framework on ODR, namely Regulation (EU) No 524/2013 of the European Parliament and of the Council of 21 May 2013 on online dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Regulation on consumer ODR), however this act does not regulate matters concerning ascertainment content and the application of foreign law, which are continuously regulated in great respect by national law.

Jacek Gołaczyński

Law applicable to electronic contract in European law

Cross-border online contracts on a massive scale is not a matter of the future. It is present. The author shall answer the question of how European Union regulations aimed at harmonizing conflict-of-law rules in the area of the law applicable to contractual obligations impact the confidence of entities who enters into contracts via the Internet with entities from other European countries. Moreover the author shall consider whether the progressive unification of private international law is enough given the present situation (Digital Single Market strategy and Draft Model Law on Electronic Transferable Records).

Bo Zhao

The practical impacts of GDPR on China: an overview

The General Data Protection Regulation will apply directly to all EU countries from May 2018. As many have predicted, its implementation will have strong extra-territorial impacts beyond the EU, not only on data and privacy protection law, but also on cross-border data processing practices that will further reshape many business activities increasingly based on networked information infrastructures.

The big, potential influences of the GDPR, especially its new rules on international data transfer on China cannot be overlooked, considering that the EU is China's biggest trading partner, while China is the EU's second largest trading partner. Which parts of data processing operation activities of Chinese business partners will be covered, and how shall they take measures to comply with the GDPR rules? More importantly, will or can Chinese business stakeholders concerned really comply with these GDPR rules? And if they won't, what would be the response from the EU side? These are the potential, practical issues that shall be considered by both sides, either legislators, practitioners, or entrepreneurs.

This essay intends to provide an overview of the above mentioned issues by engaging in a point-by-point discussion of the related GDPR rules. This includes: when data processing by Chinese business corporations will be regulated by the GDPR, their legal status under the GDPR (as controllers or processors), appointment of DPOs or representatives, the application of Articles 44 – 47 & 49, etc. For a practical purpose, it will discuss a few popular cross-border processing activities for better illustration, including those involved in social networking services (such as WeChat), smart phone services (Huawei), cloud services (Huawei), and online shopping (Alibaba) that are targeted at EU customers and users.

Michael Bogdan

Regulation Brussels Ia and Violations of Personality Rights on the Internet

This paper presents and analyses the judgment of the Grand Chamber of the EU Court of Justice of 17 October 2017 in the case of Bolagsupplysningen v. Svensk Handel (Case C-194/16), which represents a new development regarding the application of EU jurisdictional rules to disputes arising out of alleged violations of personality rights on the internet.

Government 2.0, eJustice, ODR – Room 109

chaired by **Ludwig Gramlich, Pavel Loutocký**

Gergely László Szőke

Re-using PSI in Europe – success or failure? Lessons from some Member States with special regard to Hungary

Many experts agree that there is a huge economic and social potential in the (commercial) re-use of public sector information (PSI), and the new data-mining developments (Big Data) may boost the development significantly. The European Union adopted the legal framework quite early (in 2003), and fairly revised it in 2013 in order to ensure (at least a minimum level of) harmonisation in this field in the Member States (Directive 2003/98/EC on the re-use of public sector information). Although there are significant steps towards open data in many countries, and more and more data sets are available online, it is far not

obvious, whether the regulation of the re-use of PSI is a success story or a failure in Europe.

The national regulations and mainly their actual realization shows a diverse landscape. In my paper, I'm going to study some national implementation of the PSI Directive, namely at least the situation in the United Kingdom, Germany and Hungary, in order to show some good practice and not-so-good practice. As consequences, I will try to find out the reasons behind success or failure – and it is very likely that factors beyond legal regulation also play significant role.

Tamas Szadeczky

A comparative analysis of German and Hungarian eID solutions for eGovenment usage

The new electronic identity cards (eID) made on-line authentication of citizen easier – at least theoretically – beside of the standard username-password login to eGovenment services. The eID is available in Hungary since January 2016. An example was the German "neue Personalausweis" (nPA) for the eID systems which was introduced in November 2010. The paper analyses the available functionalities and compares the security features and issues of the above mentioned eID solutions. The focus of the research is the eID's applicability to eGovernment use. The research is conducted with the cooperation of the University of Applied Sciences - Public Administration and Finance Ludwigsburg. The work was created in commission of the National University of Public Service under the priority project KÖFOP-2.1.2-VEKOP-15-2016-00001 titled „Public Service Development Establishing Good Governance" in the Miklós Zrínyi Habilitation Program.

Tuomas Tiihonen

Disrupting the Union - how the increasing pace of technological development challenges legislating in the EU

The increasing pace of technological development has an exponential effect on the number of disruptive technologies that need to be addressed legislatively by the EU. The sharing economy, hybrid threats, AI, and A/VR are at different stages of proliferation, and need to be addressed in the context of the internal market and their security implications. The legislative and pre-legislative processes face demands for more effectiveness, but the rights-conscious citizen is not willing to relinquish the Treaty principles of openness, transparency, and good governance in the process. The salience of these requirements will only increase with further multi-speed integration.

Streamlined governance from the OMC to self- and co-regulation emerge and fade away, but none has been identified as a silver bullet to the simultaneously growing demands for more effectiveness, openness, and transparency. Are all three impossible to achieve together?

An optimal solution cannot be achieved without a critical look at the status quo. The Lamfalussy process is one example of bespoke process development for narrow policy areas, focusing on close coordination between legislative bodies. An equivalent for technology-related legislation is not as easy to develop, as the affected policy areas vary significantly. Whether the technological constant can be used to solve the conundrum is a question not solvable only by fine-tuning the impact assessment rules or revising the Better Regulation guidelines.

Pavel Loutocký

Is the EU ODR Regime Really Offering Efficient Alternative to Solve Consumer Disputes?: The Situation Two Years After Introducing the Regime

The European Consumer ODR regime was introduced almost two years ago with the main task to offer efficient, fast and easy-to-use tool to deal with low-value consumer disputes. The main problem of the regime, however, is that it is not using the advantages of the instruments which are connected with working ODR systems in general. Despite the fact, that the number of processed disputes is not low (tens of thousands of the disputes), there is only a fraction of the disputes solved.

The main focus of the contribution will be to continue with the previous research of the author, to assess the statistics and to identify and describe main problems of the regime, which causes that the whole legal regime cannot be assessed as successful and useful for the consumers.

Religion in Cyberspace – Room 208

chaired by **Vít Šisler**

Maciej Makuła

WhatsApp in Africa

In the last years WhatsApp has been conquering Africa. This continent is one of the major markets for that application. WhatsApp has driven over-the-top services in Africa and it is the most popular mobile messaging application in Africa. Why is WhatsApp so popular there? First of all, because it is a low-bandwidth messaging application. In many places there is neither access to the internet nor to the mobile service. In Africa, many missionaries and people connected with the Catholic Church use this application for activities like evangelization and communicating with people. The Catholic Church faces the challenge of using the messaging applications for its purposes. In Africa, for Small Christians Communities (SCC), many priests try to use it for creating media platforms (groups) to help interact, exchange ideas and share the experience of faith. The research question of this paper is: how can WhatsApp be used in the Catholic Church in selected countries in Africa especially for SCC? The research was conducted using the traditional survey research method (electronic survey, paper survey). A group of several hundred people actively involved in the Salesian missions in Africa was analyzed (Salesians, Salesian sisters, volunteers, leaders, etc.). It is a group of people that consciously works for the Catholic Church in Africa. Based on the answers in the questionnaire, detailed survey data on the use of WhatsApp in mission work was collected (for

example: functionalities, usage, purpose of use).

Marek Čejka

Orthodox Judaism, Politics and the Internet

This paper focuses on developments and latest progresses in the approach of Orthodox Judaism – especially Haredi (Ultra-Orthodox) Judaism – to the Internet. The paper stems from my previous research, presented at the Cyberspace conference in 2008, and revisits and updates the issue in the light of the changes, which happened over the last decade. The Internet, and social networks in particular, started to play more important role in Haredi society, often in use for activism and mobilization. Such activism typically focuses on one of the most pressing issues for Haredim nowadays, i.e. the of refusal of drafts into Israeli army. Another development of Haredi approaches to Internet will be explored, such as "protection against secular threats" and more. I will also survey the role of Internet in Israeli religious politics, particularly within fundamentalist and radical Jewish groups.

Monika Marta Przybysz & Józef Kloch

Storytelling in the Communication of Religious Institutions in Social Media

Narration is an intrinsic element of human life. Quite recently it has also found application in social communication and marketing. In these fields it is known by the name of storytelling or narrative marketing. In social media storytelling plays an important role among the huge amount of information arousing emotions, entertaining or fleeting, by building the scope of information, making the internet user enter into dialogue, encouraging to undertake further activity. The narrative content is also used in the communication of religious institutions, especially the charities. It is used to reach a few goals: to single out the message among many pieces of information, to attract the attention of the recipient, to arouse emotions and to bring the recipient into interaction and, finally, to lend credence to activities. It is particularly vital in the case of religious charities. The paper will present the analysis of the function of the storytelling in the communication of religious institutions in social media. The issues will be presented through the case study of several religious institutions in Poland.

Psychology of Cyberspace – Room 209

chaired by **David Šmahel**

Salwa Ali Kateb

Correlations between Behavioral Patterns of Smartphone Use, Nomophobia and Psychological Health Factors among University Students

In this paper, the correlations between behavioral patterns of Smartphone use, Nomophobia and psychological health factors among University Students were investigated. An anonymous and self-reported survey was distributed from Feb 2016 to June 2016. Out of around 1800 potential candidates, 335 undergraduate students comprised the study sample in Saudi Arabia. A close-ended questionnaire with a 5-point Likert scale was used for this survey. Scores were calculated to assess demographic data and Smartphones use data (Duration of Use (DoU), Frequency of Use (FoU), Purpose of Use (PoU), and Context of Use (CoU)); Depression, Anxiety and Stress Scales (DASS), and Nomophobia Dimensions Questionnaire (NMP-Q). Scores were graded and then investigated among subgroups.

Throughout this study, of the 335 respondents, 272 (81.2%) were females, where only 6.6% use their devices for less than 2 hours, more than half (63.3%) of the participants use their devices more than 4 hours a day, only 3% don't check their smart phones regularly, and 61.2% check their phones than 10 times a day. The average duration of use was 4.1 (SD = 1.07). The average sum for the daily frequency of mobile phone use was 8.15 times a day (SD=3.55, ranging from 5 to 30). The high volume (ranging between 43–94%) and frequency of smart phone use (ranging from 5 to 30 times a day) are explained by several purposes of use. More than 82% of our participants use their smart phones in many contexts; 93.7% use it when they are alone, 89.3% between classes (break time), 89.3% while waiting someone or something, 89% when they are bored, 82.7% on public transportation, 68.4% of our participants' use it while walking, 65.4% while watching TV or a movie, 52.8% while hanging out with friends, approximately 48% while driving or during a class and the least percentage of our participants use it at the dinner table (40.9%).

The findings show that duration of use and losing connectedness were significant predictors for Smartphone involvement, and may cause psychological health factors, mainly depression. The study also demonstrated a moderate prevalence of Nomophobia, and the feelings of giving up the convenience or disability to access information may correlate with psychological health factors. This study suggests that the manner in which a person interacts with their Smartphone may predict the pathological fear (i.e., Nomophobia) caused by digital influences, which consequently may cause pathological health symptoms. Therefore, students may need to attend awareness programs and campaigns on the use of Smartphones, and policy-driven advocacy may need to be developed for maintaining Smartphone use in terms of when, how, why and where to use Smartphones.

Daniel le Roux & Douglas Parry

Metaphors of Social Media

The increasing agency of social media platforms in the lives of individuals, institutions and societies across all demographic spheres has cultivated a diverse and rapidly expanding domain of research. With the aim of advancing conceptual clarity in this domain this paper proposes four metaphors of social media to cultivate critical reflection about various aspects of these phenomena. Each metaphor is utilised as a lens through which the three primary affordance categories of prominent social media platforms (following, sharing and reacting) are analysed. This is done in relation to, firstly, users' goals and, secondly, the implications of use behaviour for identity construction and social network formation. The four metaphors are social media as a Town Square; social media as a Beauty Pageant; social media as a Parliament; and,

finally, social media as a Masquerade Ball. Social media as a Town Square concerns its role as a place where important, urgent or entertaining information is shared by influential sources and the dynamics of competition for viewers' attention among content creators. Social media as a Beauty Pageant illuminates aspects of the presentation of self to others and users' joint roles as judges and participants. Social media as Parliament concerns its role as a public space where competing perspectives are communicated as part of continuous debates over salient topics. Finally, social media as a Masquerade Ball explores the partial or complete obscuration of users' true identities and the associated behavioural patterns.

Viktoriia Tsokota & Maxim Slobodyanyuk

Using of mental health app for guided imagery

Lang's Bio-informational Theory of Emotional Imagery postulated that a mental imagery representation can evoke an emotional response (Lang, 1979, Ji, 2016). Negative mental imagery is a symptom of some mood disorders (Holmes & Mathews, 2010, Ji 2016). At the same time, the success of psychotherapy is associated with the reproduction of imagery vividness (Mota, 2015). The phenomenon of aphantasia affects approximately 2% of the population (Faw, 2009, Zeman, 2015) and lower success rates of treatment patients with less vivid imagery cause necessity of creating programs for psychotherapeutic work with imagery.

The integration of Internet-based technologies is becoming an effective and acceptable form of treatment delivery (Williams, 2013). Positive imagery-based cognitive bias modification (CBM) with the help of computer technologies within the framework of Internet cognitive behavioral therapy (iCBT) proves the effectiveness of the use of images (Holmes 2011, Williams, 2015, Rohrbacher, 2014).

Also, the main way to use guided imagery is audio text with videos or images in Mental Health Apps (MHapps) like Calm, Headspace, PTSD Coach, Happify, etc.

The program ""Five days of guided imagery"" was developed. It is the first stage of in the course of 25-day stress relief in MHapp. It consists of gradual transition from sensation of vision after luminous object to mental construction of complicated visual scenarios and development of various psychotherapeutic visual techniques.

Ana Francisca Monteiro, Maribel Miranda-Pinto, Carlos Silva, Joana Vieira & António J. Osório

Using mobile apps to promote online safety: advice and support needs from a child and youth centred perspective

This paper presents first results from the Apps4eSafety project (apps4esafety.org), an ongoing study on the use of mobile applications to promote children and youth online safety. Two focus groups were conducted, involving youngsters up to 14 years old. Participants were invited to share their own perspectives on online safety and discuss the viability of using mobile apps to address their specific demands. Existing online safety applications were also submitted to an exploratory analysis. Data was collected through audio records and observational notes and submitted to content analysis. Results provide innovative and practical insights regarding support needs and motivations concerning online safety, from a child and youth centred perspective. Implications in terms of prevention and assistance are discussed. The Apps4eSafety project will: i) survey needs and motivations concerning online safety, from a children and youth centred perspective and ii) explore the potential of using apps to address these demands. This research builds on the awareness that: i) when involved in situations causing discomfort, doubt or distress, youngsters find it difficult to ask for guidance and help from adults, fearing reprimands and punishment; ii) from a child and youth centred perspective, that is, considering their own motivations, agendas and peer cultures, advice and support needs, in regard to these issues, remain fairly unknown.

Privacy and Personal Data – Room 133

chaired by **Jakub Míšek**

Xenofon Kontargyris

The need for ICT Law to take the leap from ad-hoc rules to generic principles and regulations; a critique on the occasion of the GDPR

One of the defining characteristics of information technology law is its continuous struggle to keep up with fast-evolving technological standards, which determine the regulatory issues this discipline needs to address. So far, ICT regulators have, as a rule, adopted an ad-hoc approach with regard to the kind of laws they develop: regulatory instruments are generally based on or even biased by actual or foreseeable technical standards at the time of their conception and propose solutions to outstanding issues which are heavily affected by the current technical status quo.

This may have been enough until recently but, as technological evolution happens at an ever-accelerating pace, it tends to render ICT laws obsolete faster. This article aims to debate on the need for ICT laws to move from the ad-hoc to a more generic orientation and invest in becoming technology-aware instead of technology-specific in an effort to become more long-lasting.

As a case study, the article will focus on the forthcoming General Data Protection Regulation (GDPR), EU law's newest cornerstone piece of ICT legislation. Key provisions of the GDPR will be analyzed and it will be debated whether their projected longevity could be longer if they had been concluded paying attention to technically feasible aims instead of specific technical tools to achieve those aims.

Gizem Gültekin Varkonyi

In what ways the Artificial Intelligence challenge the General Data Protection Regulation?

Current developments in the Artificial Intelligence(AI) technology brings lots of legal concerns related to data protection rights, since such technologies' source of life is the personal data. These concerns focus

mostly on the misuse and maleficence cases, and improbability of exercising some of the rights such as the Right to be Forgotten, which could happen due to the nature of the technology itself. This paper, which is in progress, presents the current legal discussions related to the AI. Then, it adds couple of new discussions in frame of the General Data Protection Regulation; whether the definitions of personal data, data controller, and data processor may change, and whether the concept of the consent mechanism may practically keep its validity in case of AI technologies. Finally, several suggestions could be made to tackle the presented concerns before the Regulation enters into force.

Márton Sulyok

Proof or Promise? The Promise of Privacy-proofed Evidence-Gathering in the Information Age

Even very simple forms of covert evidence-gathering by private parties online (cybersurveillance) can cause serious violations of privacy and law does not always have the answer to limit their use in trial. Digital surveillance capacities were previously only available to state agents but nowadays technology has empowered individuals to a point where private surveillance became widely possible. Thus, it also becomes necessary to think about how to protect individuals' privacy against the actions of others under their right to a fair trial, outside the bounds of criminal procedure, where traditional evidentiary protections evolved limiting the actions of government. Technological evolution thus creates an apparent convergence in the approaches of civil and criminal procedure laws when it comes to the protection of privacy and the admissibility of evidence gathered leading to "colliding fundamental rights positions" at trial. In civil procedure, protections provided by fundamental rights between individuals bring about debate on the horizontal effect of privacy, so we propose an alternative approach for European civil procedures based on the US experience, rooted in a comparative constitutional examination: exclusionary rules protecting individual privacy under the "law of confidentiality" shielding a wide range of human interactions online.

Oskar J. Gstrein

Who is accountable for counting the eyes of 'Big Brother'?

States around the world increase surveillance capabilities. Potential terrorist attacks and (serious) crime justify measures that result in constant monitoring of public spaces, personal internet traffic, telecommunication activities, travel records, banking transactions, energy usage, etc.

The German Federal Constitutional Court found on March 2 2010, that the government must consider to which extent the deployment of new surveillance measures affects the overall penetration of surveillance in the country. Germany guarantees its citizens a space for the development of their personality ('informational self-determination'). Hence, the government must create an environment which enables this right. Furthermore, "[…] the Federal Republic of Germany must endeavour to preserve this in European and international contexts.""

One wonders who – if anybody – is accountable for counting the manifold surveillance activities of "Big Brother"? This is not only a question for one government, but for the international community.

After an (1) introduction, (2) the international human rights framework will be discussed. The next section (3) will explore mechanics that result in the current situation. It will be analyzed how – if at all – the accountability aspect is tackled by governments and international institutions. Subsequently, it will be discussed (4) how transparency when deploying surveillance measures could be increased. Finally, (5) a conclusion and outlook will be made.

15:15 – 15:30 Coffee break

15:30 – 17:00 Parallel streams

Cybercrime, Digital Evidence – Room 214

chaired by **Aleš Završnik**

Dániel Eszteri

A property-crime committed with Bitcoins and some connecting legal questions

I would like to present a property-crime committed in Hungary during which the perpetrators fradulently convinced the victim to transfer them a bigger amount of virtual currency (Bitcoin), but they gave nothing in return. The judge responsible for the case – for the proposal of the acting prosecutor – appointed me as an expert to answer some general questions regarding with the case and the perpetration methods in order to understand the system and the value of the virtual currency better.

The technology behind the virtual currency (the so called 'blockchain') is a new phenomenom on the financial market and its legal, economical and technological interpretation is subject of a quite heavy debate among professionals. In the past years the 'Bitcoin-phenomenon' has become a great challenge for law enforcement authorities and legislators to deal with, nonetheless there is no common approach for the interpretation of Bitcoin-related crimes yet. My presentation would like to point out some general legal questions and anomalies regarding the use of cryptocurrencies through the analysis of the concrete criminal procedure and the related transfers in the blockchain.

Eva Fialová

Algorithmic surveillance and human rights

Secret services, law enforcement bodies and private organisations make use of algorithms for real-time evaluation of potentially risky situations. This algorithmic evaluation proceeds from surveillance of individuals in certain areas. These areas include airports, railway stations and other public places.

Whenever a system detects certain activity or situation evaluated by the algorithm as perilous, the system alerts a security guide and may even make a decision about its further action. The security personnel may take an action against an individual in order to prevent a potentially dangerous or otherwise undesirable event. The individual may also be affected directly by the system, for example by an automatic refusal of entry into a certain area. The reason for algorithmic evaluation is its speed and effectiveness together with the faith in the objectivity of such evaluation since it is assumed that the algorithms are free from prejudice and preconception. The algorithmic evaluation and decision making in real-time raise concerns about the interference in human rights. The paper focuses on the algorithmic decision making in real-time and its implications for human rights, particularly the right not to be discriminated, the right to a fair trial and the right to privacy.

Coleen Lewis

Digital expressions as evidence for new criminal offences: A review of the Jamaican Cybercrime Act 2015

Cybercrime has presented government and law enforcement with a number of challenges in the regulation of the digital and online conduct. The characteristics of online conduct have caused challenges in the application of traditional criminal law. Governments have had difficulties in applying general, existing criminal laws to regulate crime conduct online. As such new, computer-specific offences have been enacted across the world, including Jamaica and the English Commonwealth Caribbean.

In Jamaica, the Cybercrime Act of 2015, repealed a Cybercrime Act 2010 law which was felt by 2015 to be archaic and insufficient to deal with fast growing cyberspace. The 2015 Act by its enactment therefore sought to bring Jamaica's legislation current and in keeping with other international criminal justice systems. This Act gave effect to new offences such as computer related fraud or forgery, use of computers for malicious communications, unauthorised disclosure of investigations as well as the provision for forfeiture of computer material used in the commission of an offence.

Social media is increasingly being used by persons worldwide. The nature and ease of use of social media serve to advance the exercise of the human right to freedom of expression. However while these qualities of social media have their positives, they also conversely exacerbate the risk of social media users being exposed to criminal liability worldwide.

This article critically reviews the application of the recently enacted Jamaican Cybercrime Act 2015 which created the offence of Malicious Communication to digital comments and expressions made via social media. Section 9 of the Act declares that one may be criminally prosecuted for 'use of a computer to send to another person data and that the data sent is obscene, constitutes a threat or is menacing in nature with the intention to harass any person or cause harm or the apprehension of harm, to any person or property. This s9 Cybercrime Act 2015 carries a fine of up to $5 million and/or 5 years imprisonment on summary conviction, or a fine and/or up to 20 years imprisonment on indictment.

Recently there has been a number of arrests in Jamaica pursuant to s9. In February, 2017 a woman was arrested, charged under Cybercrimes Act after she posted photographs on social media claiming that her ex-boyfriend was wanted for rape, assault and murder. Similarly in March 2017, a women's rights advocate was arrested after posting on social media sites the names of persons alleged to have carried out various sexual assaults.

Sentiments have been expressed by various interested bodies that this aspect of the Cybercrimes Act that deal with "malicious communication" serve to penalise digital statements that injure reputation will have an unreasonable chilling effect on the fundamental right of freedom of expression and speech, and this may facilitate the repression of criticism by governments if arbitrarily enforced.

This Article seeks to examine how the Cybercrimes Act seek to punish digitally made statements online and compare its enforcement to similar cybercrime legislation and offences across the English Commonwealth Caribbean.

Paweł Janiec & Piotr Chojnacki

Blockchain as evidence - private law perspective

Blockchain is used to store and transmit information about transactions on the Internet. In an increasingly digitized world, it could be a new source of evidence in many cases in the common courts. As a digital, collective accounting book of transactions can become a completely new space of evidence exploration. All the more so because it also involves virtual currency transactions, including Bitcoin, which can potentially be used for money laundering or other suspicious transactions. The "book" is open to everyone, but fully protected from unauthorized access by complex cryptographic tools. The importance of evidence may be that blockchain transactions in the chain of blocks are irreversible, and therefore there is no possibility of tampering with the data. During my speech I will also try to answer the questions: is this technology safe? And - is it possible to become a common source of knowledge about digital transactions?

Legal Informatics – Room 215

(special stream) chaired by **Erich Schweighofer, Jakub Harašta**

Maria Dymitruk

The admissibility of using AI in the role of a decision-maker in Polish civil proceedings

Technological development made a significant impact on the administration of justice. The development of new fields in legal informatics such as the applicability of artificial intelligence (AI) in law opened up new opportunities which had hitherto been unthinkable. Nowadays the AI can be engaged in the process of legal

decision-making (automated systems can be used both to make and to recommend the decision). The paper will attempt to verify whether the use of AI in the role of a sole decision-maker is compliant with the leading ideas shaping the substance and form of Polish civil proceedings. The admissibility of using AI need to be examined against the realisation of the constitutional principles of justice (judicial independence, impartiality, transparency, the right to a trial, etc.) and the principles of civil procedure (the principle of free assessment of evidence, the principle of limited formalism in court proceedings, etc.). The above scope of the paper will also partially cover interdisciplinary considerations as there is no way to verify the possibility of providing citizens with a constitutional right of access to court without adequate research into the sociological and psychological determinants of the use of AI in court proceedings (e.g. Will there be a social consent to confer the administration of justice on AI? Will automated civil proceedings meet the psychological needs of individuals who demand the state apparatus to secure their legal interest?).

Judyta Kasperkiewicz

Artificial Intelligence & legal practice from the young lawyers' perspective

Young lawyers & AI's achievements in Europe

In recent two decades, many young lawyers received a new opportunity due to the tremendous technological progress. Simultaneously, lawyers are afraid of the changes or they diffidently think about using the technologies in their work and explore the new areas of legal practice.

The research covers the issues of the possibilities to use existing technological tools to create a successful legal start-up. Globally, millions of young lawyers graduate law schools or they are admitted to practice law every year. Normally, they think about the future with some concerns or even fears. The need to present some innovative legal offers for the clients has very positive influence on the relation between AI and law.

How may young lawyers use AI to build a successful legal start-up? Lawyers have the most limitations from all industries to run a business which depends on the jurisdiction. If the need to make easier and more widely available legal market for clients is a priority, the way through AI and new technologies is the best solution. These lawyers who are bold and open for innovations may derive from the AI's achievements through e.g. an intelligent legal assistant or some other useful solutions like the idea of smart-contracts or data analysis and many others.

The progress is unstoppable and lawyers should use the achievements rather than focus on the discussions about the potential risks, especially young lawyers.

Jakub Harašta

Handling the Data and Untangling the Net: Case Study of Making Sense of Big Legal Data

The utilization of Artificial Intelligence is more and more common in various areas of human activity, including information retrieval and information handling. However, in many European countries, applications that would use AI for legal information retrieval are scarce. Engines based on Boolean operators are still predominantly in use in legal information systems. What became known under the general term AI, only slowly finds its way into general practice in this area.

In our work, we aim to map the citation network of the Czech case law by using reference recognition. Because the references in the Czech case law are not properly handled (standardized etc.), we had to implement natural language processing (NLP) techniques and methods. We present this paper as a lesson learned from this process consisting of preparing the methodology, collecting the data, handling the data and analysing the data. The NLP techniques allow us to collect tremendous amount of data, which then requires further sorting by experts, given the specificity of legal profession and legal information retrieval. Only then are the data suitable for designers of related applications and services and further for users.

We aim to discuss the difficulties and shortcomings of collecting and preparing the collected data for use in large-scale citation networks. Additionally, we aim to discuss possible ways of handling the data to be able to mine meaningful legal information.

Zsolt Balogh

Need to know the law. Legal knowledge representation toolkit

The representation of legal knowledge is a pivotal problem of legal expert systems. The model of legal knowledge should be relevant to the substantive regulatory framework and the caselaw, flexible, scalable and should meet the logic of legal reasoning.

Although many knowledge representations systems are specified using rule formalisms, it becomes increasingly popular to grasp the legal knowledge in ontologies. An ontology contains the knowledge considered to be the undisputed core material of what is known about a certain subject.
The development of a specific legal ontology meets some major challenges:

- Uncertainty of legal notions and clauses
- Need for a legal meta-knowledge
- Need for a governing rule to systematize the knowledge

The classic toolkit for development a legal ontology based on first-order logic, several versions of Web Ontology Language (OWL) and some special developments like Semantic Web Rule Language (SWRL). Some well-known international projects, like the ESTRELLA and the DALOS gained significant results. Applicability of these modelling methods however proved to be quite limited.

During the development of a legal ontology based system vagueness, inaccuracy and uncertainty of the legal language puts up special challenges. This might be called as the fuzziness of law and legal concepts.

Fuzzy logic shall provide the due solution and tools to cope with these issues. My recent research and teaching programs I seek the development of the fuzzy methods of law. These understandings are to be presented in the Cyberspace 2017 Conference.

Smart Cities – Room 109

(special stream) chaired by **František Kasl**

Alžběta Krausová

Behavior Recognition: Can We Consider It Biometric Data under GDPR?

Smart cities presume use of electronic devices and increase in amount of data about our behavior. This data provides valuable insights into our functioning, habits as well as preferences. It can be used not only for predicting future behavior and profiling people but also for unique identification or verification of identity of a person. Smart cities and environments presume unobtrusive identification of people, which can be based on analysis of digitally monitored behavior. This article claims that under certain conditions data about digitally monitored behavior of a person may fall into the category of biometric data within the meaning defined by the General Data Protection Regulation. The hypothesis is based both on legal interpretation of the concepts of biometric data, unique identification, and profiling as well as on analysis of existing technologies. This article also explains in detail under which conditions digitally monitored behavior can be considered biometric data under the GDPR and what are the consequences for a controller and data subjects.

Deepan K. Sarma

Lessons from PARENT project: Approaches to data protection in cross-disciplinary research projects

PARENT (PARticipatory platform for sustainable ENergy managemenT) is a JPI Urban Europe-funded multi-partner research project that aims to increase engagement of individuals in the responsible management of their own electricity usage. It works with sub-meter producers to develop a platform for participatory energy management, fuelled by community building and social engagement, visualisation and gamification techniques.

Given that the use of smart grids and smart metering technology creates new risks for data subjects that were previously not present in the energy sector, taking account of both the ethical and legal challenges to privacy that such an endeavour produces is crucial. To that end, this presentation details some of the challenges the LSTS has faced in integrating into the structure of the project the relevant principles of data protection and privacy (with a particular emphasis on its digital component).

František Kasl

Towards identification of cybersecurity principles for smart city cyber-physical environment

The cyber-physical environment of a smart city represents a complex merger of the new technologies. This fusion leads to a multiplication of the potential complexities involved in the operation and security of such a system. There is a growing need for identification of basic principles that would allow creation of a methodology for smart city strategies reflecting upon risks related to this form of urban transformation. Similar initiatives are already underway in countries with more advanced smart city development, but increasing activity of Czech cities towards implementation of smart city features raises a similar need for Czech methodology. Vast majority of the current smart city projects constitute a gradual retrofitting of existing urban areas. Such stage by stage overhauls of the present municipal frameworks will be prone to conflicts between old and new infrastructure, incompatibility between networks and products from different providers, and other inefficiencies, which are consequentially likely to lead to a multitude of security vulnerabilities. The focus of the contribution shall be the identification of these instances and proposal of principles aimed at mitigation of these threats.

Religion in Cyberspace – Room 208

chaired by **Vít Šisler**

Rachel Wagner

Pixels and Pistols: Religion, Media, and New Apocalypticism

The word “apocalypse” comes from the Greek apokalypsis, which means both something “hidden” but also to “uncover” or “reveal.” The word “to screen” has similar conflicting interpretations, since it can mean both to “veil” and to “project.” Both ancient apocalypses and contemporary screened media reveal another world, another “space,” in which authors, directors, and artistic creators can place their imagination of what the world would be like if everything we know was radically transformed by violence or decay. In this paper, I present an argument for the contextualization of video game violence within a larger cultural expression of new apocalypticism in America. I propose that at the center of much violent media today is a single, viciously repeating, orienting myth of violent apocalypticism articulated through video games, popular film, television, as well as in the storytelling mechanisms of groups like the National Rifle Association and the various “prepper” groups fueling a burgeoning survivalist movement. Specifically, I argue that American apocalypticism functions as the mythic hub of a self-generating transmediated franchise of sorts, bound up in consumerist tendencies but anchored foundationally in a view of the world that posits two forces opposed against one another in imagination of a life-altering event and what may come afterward. If we focus on just one of these storytelling arenas, we may miss the larger realization that apocalypticism is not just a form of entertainment, but functions as a contemporary orienting myth that informs how people live their lives, and shapes how they engage with the challenges of globalization and cultural difference.

Tim Hutchings

Religious Education and Digital Pedagogy: Preachers, Gamers and Digital

Disciples

The digital environment offers a wealth of opportunities for religious education and training. This paper analyzes three projects designed by Christian organizations to apply principles of digital pedagogy to congregations and families, including some of my own ongoing work. I will begin by considering online preaching through video streaming and Facebook Live (a topic discussed in my recent monograph Creating Church Online, published by Routledge in 2017). For a more interactive example, I will analyze Christian games for children, paying particular attention to the mythology and gameplay of the British project Guardians of Ancora (2016). Religious games for children have often been dismissed by academic scholars, but recent iterations have been ambitious in design and have reached a sizeable audience. Finally, I will explore the current landscape of online religious training (or "discipleship") courses for Christian adults. These courses aim to be more flexible and interactive than online preaching, drawing on insights from academic online learning and educational gaming. My current research is a new interdisciplinary study of "digital discipleship" through online education, working alongside sociology, digital humanities and theology colleagues at Durham University (UK) to evaluate the range of courses available and to develop new models for more effective alternatives. This paper will introduce our preliminary questions and hypotheses, and I look forward to discussing our ongoing work with the audience.

Vít Šisler & Josef Šlerka

Who is Shaping Your Agenda? Social Network Analysis of anti-Islam and anti-Immigration Movements on Facebook

In light of current debate about the migration crisis and the proliferation of radical movements, we are in crucial need of critical investigation of the structural aspects of audience formation and agenda shaping on social media. This paper presents exploratory research on Czech anti-immigration and anti-Islamic movements' audiences on Facebook. It uses a quantitative method Normalized Social Distance (NSD) that calculates the distance between various social groups based on their members' online behavior. The primary aim of this paper is to investigate how near to, or far from, each other Facebook audiences of these movements are in terms of NSD. We also analyse their distance from major Czech news media, established political parties, and politicians active in public debate about the migration crisis. The secondary aim of this paper is to examine the structural interplays between these movements' audiences and the news media's shaping of agendas on Facebook. Through quantitative analysis of the most popular posts, we explore how diverse audiences elevate particular stories on Czech news media through the distribution of likes. The findings reveals that, although public debate on the migration crisis seems highly polarized into two adversarial clusters, it is more significantly fragmented in at least four different clusters, whose audiences rarely share the same content and which rarely overlap. This structural fragmentation negatively influences public debate, while the possibility of communicative actions and mutual reasoning is seriously limited.

Psychology of Cyberspace – Room 209

chaired by **David Šmahel**

Milosz Markocki

Identity and the player's image of the MMORPG players in cyberspace

MMORPGs belong to the online entertainment types that require a lot of time, and very often also a substantial amount of money from the people interested in it. In its essence, an MMOPRG is a social experience, and MMOPRG players interact with many other players during their time in the game. In some cases, those players devote several hours per day to play the game for, in some cases, a few years. It is therefore natural for such players to not only identify themselves in various degrees with their avatars, but also to treat seriously the way in which they are perceived by other players in the game. There are numerous ways and tools the players can use to establish their identity and create their image in an MMORPG title or on the Internet sites or message boards related to the particular game they are playing. For some players their in-game identity (i.e. their avatar or the character name) takes priority not only in the game's virtual environment, but also in real life. So the focus of the presentation will be both on how the players construct their identity and their image in the game, as well as how this virtual identity may influence their real lives.

Nika Šablatúrová

Relationship between access to facilities, leisure activities and Internet usage/video gaming

According to the Social Development Model (Catalano & Hawkins, 1986), addictive/antisocial behavior is conditioned by the perception of opportunities that one have. Reflecting this theory, our research aims to examine the relationship between opportunities for leisure activities, activities that one carry out and (excessive) use of the Internet/playing videogames among children. The analyzed data consists of 10179 respondents aged 11, 13 and 15 years and were obtained by HBSC data collection. Our findings might lead to better understanding of excessive Internet use and prevention of its formation.

Jacek Pyżalski

How should we prevent cyberbullying? After the decade of research

The presentation will be a kind of meta -analysis based on the last decade of research on cyberbullying, including the most recent findings. It will show the main factors that should be a part of prevention programs in order to tailor them to the specific context of this kind of violence (at both psychological and social level). Additionally the practical measures will be presented as examples of proposed approach.

Vojtěch Mlynář

Taming the Right to Data Portability: (Un)Intended Consequences of Increased Control Over Personal Data

The paper examines the new right to data portability ("RDP") introduced in Article 20 of the General Data Protection Regulation. The aim of the RDP is to strengthen data subject's control over his or her personal data. Two aspects of this 'increased control' and their practical implications for the protection of personal data will be discussed. First, the RDP should enable data reuse by making it easier for data subjects to move, copy or transfer their personal data. Second, the RDP aims to empower data subjects, rebalance their relationship with data controllers and enhance the fundamental right to data protection. A comparison will be made between these proclaimed objectives of the RDP and practical exercise of the right under the GDPR. Based on existing empirical research, it will be argued that the RDP will likely lead to lower standards of individual's protection with regard to the processing of personal data and increased amount of personal data that is being shared and processed. Furthermore, the RDP may ironically provide more control to data controllers, rather than to data subjects. Thus, it seems unlikely the RDP will enable data subjects to control who processes their personal data and who does not. Instead, the paper will argue that without appropriate safeguards the RDP may lead to higher complexity of personal data management, increased disclosure of personal data, less privacy and, ultimately, less control over data subject's own personal data.

Adrienn Lukács

Layoff, Facebook, Employment: the Growing Issue of the Right to Data Protection and Social Network Sites with Special Regard to the Termination of Employment

Social network sites gained an important role in the world of work, as more and more employees use these sites. Nowadays we can experience increasing court practice regarding employees who lost their jobs because of their activity conducted on these sites. Employees usually cannot make a distinction between the blurred boundaries of work and private life in cyberspace and they seem to forget that their online activities can have serious consequences for their employment.

Employees have difficulties in realising that their online activities can violate certain legitimate interests of the employer, such as the right to reputation, loyalty, etc. A distinction between two scenarios shall be made: social media use at the workplace during working hours and social media use outside the workplace. A growing number of cases illustrate the gravity of this issue. The data protection regulation aims to effectively protect the employee's privacy by defining the limits of employer monitoring and also what personal data can be used during the decision making and how. I will examine the dispositions of the GDPR and certain national cases to illustrate the phenomenon. The aim of the presentation is to highlight what rules an employer has to respect when he/she wants to dismiss an employee based on social media activity and to identify what employee conducts can result in the termination of employment.

Jan Tomíšek

Data Protection and Accountability in the Cloud

Both scholars and regulators agree that data protection in the EU needs to move from theory to practice and that the current legal framework is lacking in this respect. The challenge of bringing data protection rules to life may be observed namely in complex data processing situations such as cloud computing.

To bridge the gap between data protection law and practice, new European data protection framework represented by the General Data Protection Regulation (GDPR) introduces principle of accountability, requiring data controllers to implement appropriate and effective measures to put into effect the principles and obligations of the new framework and demonstrate this on request.

The aim of this contribution is namely to summarise the implications of the accountability principle in practice, focusing on data protection policies and compliance programs. Also, the new concepts of codes of conduct and certifications will be discussed, analysing what needs to be done to establish such mechanisms, who are the relevant actors and pointing to the questions which still remain open. The relevant issues will be demonstrated on the example of cloud computing, showing how the new accountability principle and tools could help to overcome the issues cloud computing is facing with regards to data protection.

Agata Jaroszek

Protecting intimate relationships on the internet - selected legal issues of online dating portals

In recent years online dating portals and online dating apps that are nowadays described as multibillion-dollar industry have been enjoying an unstoppable rise in popularity to look for a 'perfect match'.

A remarkable research efforts have been carried out in the fields of psychology and sociology to understand the impact of technological tools and solutions on complexed decision making processes of selection and choice of a potential partner.

Legal writing in Europe and overseas is quite scarce on the subject, notwithstanding the fact that some issues arising out in connection with marketing, sale and using of online dating services are of fundamental nature such as: sexual offences and sexual exploitation of adults as well as minors, infringements of the right to privacy and the right to intimacy that requires applying even more stringent standards of protection) that include disclosing, using, or benefitting from personal information of a sensitive nature

where confidentiality, security, or integrity of personal information, including the extent to which consumers may exercise control over the collection, use, or disclosure of personal information is of a paramount importance.

Last but not least many Internet online dating and matchmaking platforms providing customers with both free and paid cross-border services are notified for employing deceptive and unfair commercial practices (that in many instances purport to liability limitations). Such conduct may harm consumers and deprive them of the protection afforded under the laws of the country where a consumer has a place of habitual residence.

The paper aims at providing an overview of selected legal problems and discussing landmark cases. The author wants to start a discussion among legal scholars and other interested parties whether it will be possible to develop business models that will embrace solid legal and ethical standards built on trust and respect for an emotional and intimate spheres; the spheres that people share on the internet in search for love and life-long relationships.

17:00 – 17:15 Coffee break

17:15 – 18:45 Parallel streams

Cybercrime, Digital Evidence – Room 214

chaired by **Aleš Završnik**

Aleš Završnik

Challenges of tackling cybercrime with avatars

Dutch NGO Terre des Hommes created an avatar posing as a ten-year old Filipino girl called "Sweetie" to attract grooming offenders and combat webcam child sex tourism (Schermer, B. W., Georgieva, I., Van der Hof, S., & Koops, B-J., 2016; Legal Aspects of Sweetie 2.0.; Leiden/Tilburg: TILT). In its first version an operator operated the avatar, while the second version will be designed as a computer chatbot, i.e. an artificial intelligence agent. The pros of such automated policing are at hand: "doing more with less" has been the principle at the forefront of shrinking police budgets in most of the "western" countries. The "Sweetie" chatbot seems to lure sex offenders away from real children and can be used as a tool to prevent cybercrime. States agencies and not only victim support groups should then clearly support automated policing programmes. But the question is what will be the cost of shrinking police budgets and passing the policing functions to "robocops" for existing legal principles? The cons of automated policing have already been documented: there are challenges of automated law enforcement in terms of substantive criminal law, e.g. should seducing a computer programme be regarded as a proper attempt of committing a child abuse? What are the procedural hurdles of using pro-active form of policing in the light of entrapment theory? "Sweetie" is only one piece of a puzzle in the increasing automated policing the paper will try to illuminate.

Tamás Pongó

Hungarian student vs. Cyberbullying

According to the TABBY in Internet (2011-2015) project, Hungarian students are already touched by cyberbullying. This phenomenon represents a complex, technology-induced social problem, which mainly affects students. Unfortunately, Hungary has no anti-bullying law or nationwidely applied anti-bullying program. However, during the last few years, certain milestones have been achieved, but these mean just the beginning.

In my presentation, I would like to briefly introduce the Hungarian status quo regarding bullying and cyberbullying. Furthermore, I will describe the legal status of a Hungarian student, and the possibilities of such student to tackle this phenomenon. Pursuant to a study, which I have concluded, the greatest problem is the lack of awareness concerning this issue. It has already been proven that our nation's students have faced cyberbullying conduct, but they had no knowledge to recognize it, and to take appropriate measures in order to handle the situation.

Consequently, in the lack of a national program, scholars should find a proper solution to raise awareness, and give the necessary tools to our students. Since, our university has a successful Legal Clinic program, one solution could be to include cyberbullying as a topic, and train young scholars to raise awareness in schools, in the framework of regular classes, as street law. Further options may be revealed, but this initiative could help many Hungarian students to recognize and handle cyberbullying conduct.

Nimrod Mike

Cyberbullying: crime or rough game?

The contemporary online harassment, also known as cyberbullying, has had a significant social and psychological impact on today's generation of youth, therefore it is solely understandable that an inquiry on the applicability of criminal law provisions regarding such cases seems to be a necessity. But can cyberbullying among students be considered a crime? As an introductive part, a definition of cyberbullying will be delivered, but the role of participants and existent forms of perpetration should also be shortly discussed. The presentation also includes, in addition to the existing national and international statistics, the results of an empirical research and its evaluation, carried out in Romania, with 498 participants from five different schools. Given to the fact that Romania is known to be a country highly exposed to the threat of cyberbullying at a fragile age, with almost every second child between 9-16 years having experienced some kind of bullying, the empirical research partly confirms the results of the official international survey. As a closing chapter, a conclusion regarding the initial question will be drawn, including also a few de lege

ferenda recommendations.

Video Games and Society – Room 109

(special stream) chaired by **Cyril Brom, Zdeněk Záhora**

Lukáš Kolek & Vít Šisler

History and computer games: empirical study about games' effects on player's attitudes

Historical computer games increasingly influence the formation of historical awareness. Yet, the effects of these games are still largely under-researched. Our empirical study aims to evaluate the attitude change of players in relation to the historical themes depicted in the game and the role of in-group bias in this process. We use the game Czechoslovakia 38-89: Borderlands as an intervention tool. The game portrays the post-WWII arrangement in Czechoslovakia, in particular the expulsion of Sudeten Germans. We created two versions of the game depicting these events from contradicting perspectives. Our method respects between-group design. First, we collect data from both experimental groups about their initial attitudes towards the topic through pen-and-paper questionnaires and computer single-case implicit association test. The pretest is followed by an intervention with different version of Czechoslovakia 38-89: Borderlands for each experimental group. After the intervention we collect the same data again in an immediate posttest. So far we have conducted two pilot studies (n=18, n=14). The results suggest viability of our method and the fact that certain framing of historical events in the game is able to change players' attitudes. Our final study will evaluate the game effects on longitudinal attitude change by another data collection one month after the intervention. The broader aim of this research is to enhance the understanding of creation of historical awareness in the 21st century and the role historical computer games play in it.

Tereza Hannemann, Ondřej Javora, Tereza Stárková, Kristina Volná & Cyril Brom

Children in educational cyberspace

Educational videogames are posited to have a higher motivational potential than "traditional" instructional methods. It is largely unknown what game features can motivate children 9-10 years of age (3rd and 4th grade) to study the learning content embedded in the game (while also enhancing learning). Most studies focus on older audiences. This presentation has two goals. First, it introduces a new experimental Flower-growing game for teaching photosynthesis we have developed with ČT :D (i.e., the children channel of Czech Television) for the purpose of conducting value-added studies investigating motivational game elements (for 9-10 years old children). Because not all educational games are suitable instruments for research purposes, we will focus on key design decision we have made to make the game a suitable intervention. Second, based on pilots we have conducted so far with the target audience (N = 48), we will introduce our measurement instruments we have developed for assessing intrinsic motivation and flow. All in all, the presentation will show that we now have in hands suitable research materials for addressing the issue what game elements can enhance learning of third and fourth grade children through affective-motivational factors.

Cyril Brom, Tereza Stárková, Edita Bromová & Filip Děchtěrenko

Instructional game or instructional simulation – which one is more effective for learning?

Comparative studies investigating the applicability of gamification approaches in educational contexts are lacking. In this presentation, we introduce results of an experimental study (N = 98; university learners) that sought to explore whether learning from an instructional game is more (or less) advantageous compared to learning from an instructional simulation (in terms of affective-motivational factors and learning outcomes). The game was the simulation gamified by adding a game goal, increased freedom of choice, points, virtual currency and praise (all combined). The learning topic was brewing beer and the intervention lasted around two hours. Learning using the game had no significant effect on initial interest, induced positive affect, flow, learning involvement, enjoyment, perceived learning, retention test scores and transfer test scores in comparison to the two control conditions using simulations. The game was only perceived to be significantly easier than the simulation. These findings corroborate the emerging notion that caution should be taken when attempting at gamifying education.

Nicholas J. Gervassis

Attack of the Blocks: Combining Legal Education and Textual Video Gaming

This presentation expands on a design for a technologically enhanced learning (TEL) environment, which combines elements of video gaming and multi-user online communications. It proposes reimagining creatively standardised online chatting methods to deploy real-time simulation and increase participatory immersion, towards delivering a stimulating learning tool for legal education.

At the very heart of this design lies a method for structuring visually legal arguments, which we call block logic. The innovation of the block logic is that it allows legal language to be deployed onscreen in text units, which may then assist inexperienced users of legal language to assess whether their arguments are complete or not. At the same time, the block logic suggests a unique group engagement for participating learners in a dynamic virtual environment.

This presentation will discuss the prospects for such an educational virtual environment and will analyse the involved parameters of play and learning that together contribute to a distinctive integrated computer mediated educational experience.

Internet and Society – Room 208

(special stream) chaired by **Jakub Macek**

Shanu Shukla

Emotions and Media multitasking Behavior among Indian Youth

Media multitasking- a simultaneous consumption of two or more media is a ubiquitous and popular behavior among the youth. One of the reasons for its increasing growth is the structural/market level factors (known as media factors). Although being a growing technology hub, there has been limited effort to identify media multitasking index among the youth in India. Thus, this study attempts to analyze the frequency of media multitasking behavior among the Indian youth and its relationship with the users' emotions through two methods: self report and an android based application known as 'Affective Media Landscape Survey'. Previous studies have reported that continuous interaction with media diminishes face to face interaction, reduces empathy and increases the tendency to live in the virtual world. This raises the concern for emotional differences in everyday life if any, between high and low groups of media multitaskers. Thus, the second objective of the study is to understand the emotional profile of the users that varies among media multitasking index. To achieve the objectives, the same two methods, the 'self report' that involves questionnaires, and the 'Affective Media Landscape Survey' (AMLS), (an android based app to study the real life frequency of media multitasking behavior and users emotions) have been employed. The study gives an insight on the emerging patterns of behavior and hence is helpful for designing communities to cater to the growing needs of young users.

Åsa Borgström

A literature review about young people with intellectual disabilities and social media

Previous research has studied internet use in youth and adults in general, but little is known about how young people with intellectual disabilities use the Internet and social media. The available research indicates that there are risks and barriers but also opportunities to be found. While there are risks for victimization and bullying and barriers in terms of difficulties caused by literacy and communication skills, cyber-language, cyber-etiquette and accessibility, there are also opportunities such as friendships, development of social identity and self-esteem and enjoyment. The purpose of this study is to conduct a literature review of the research field, with special focus on young people with intellectual disabilities and social activities on the Internet.

A search strategy was designed in collaboration with the Gothenburg University library. The databases Scopus, Web of Science and Google Scholar was chosen due to their multi-disciplinary character. The search was limited to scientific journal articles and brief reports published in English. Search terms were chosen and combined with Boolean operators. Search was concluded in May 2017.

After articles off topic and cross references were removed, 12 of 452 publications remained. The preliminary analysis showed that most research was conducted in Europe and North America. The studies were primary from psychology, education, medicine and social science. More than half of the studies were published after 2015 indicating a rapidly growing field. Most of the studies were qualitative. The studies were grouped thematically based on content: opportunities, risks, vulnerability, barriers, sexuality, identity and support.

Douglas Anderson Parry & Daniel Bartholomeus le Roux

Irresistible Media: Why Do Students Media Multitask?

Extensive, habitual off-task media multitasking has become a defining feature of today's university students. Results from previous studies adopting quantitative methodologies indicate that media multitasking holds the potential to negatively impact academic outcomes. Against this backdrop, this study adopts a qualitative approach to investigating students' behavioural beliefs surrounding media use; the triggers underlying media use; and, students' behavioural patterns with media. To address these objectives five focus groups were conducted, involving a total of 30 undergraduate students. Discussion within the focus groups was guided by prominent theories of human behaviour, as well as the outcomes of previous studies. Following thematic analysis of the focus groups a number of notable themes were identified. The core finding emerging in this study is how students reason about the implications of media use prior to actual use. In the face of increasingly irresistible media engagement, other activities like lectures are perceived as tedious, boring and dull. This perception is central to students' justification for indulging in habitual, off-task media use. The findings suggest that, if left to their own devices, students are unlikely to moderate their own media use levels. Finally, many studies adopt a distinction between media use and media multitasking. This study contends that, for students, multitasking represents the natural mode of use, sharing many of the traits of addictive behaviour.

Katarzyna Marak

Differences within the fandom and ideas management in online fan communities: the case of Silent Hill Heaven forum

The purpose of this paper is to outline the nature of the dispersed community of Silent Hill Heaven forum users belonging to the Silent Hill forensic fandom. The characteristic features of Silent Hill Heaven user activities will be compared to the collective, organized structure that is a wiki (in this case Silent Hill Wiki), which in Mittells words, "constitute a system of participation." This paper will point out how in contrast to wiki contributors, the people who frequent Silent Hill Heaven forum gather there to discuss ideas and opinions, without governing policies, edit supervision or voting on decisions concerning canonical value of certain data. The Silent Hill Heaven users contribute to the message board for the pure enjoyment of challenging the variety of interpretations; the board operates on the same assumption as the wiki—that all fans hold varying beliefs and opinions—but in contrast to the wiki, it does not strive to be as general and neutral as possible, but is a space meant for debates and finding new perspectives.

Jiří Kolman

GDPR in Czech Academia, What Can We Expect?

The Czech Academy of Sciences and universities prepare for the implementation of the General Data Protection Regulation (GDPR). What are the challenges? Generally speaking too much sheep have to be cared about. Mainly personal data protection might be in conflict with open access policy, open data provision, free access to information legislation and general academic freedoms. How to deal successfully with GDPR in specific environment that is often international, funded by many resources (mixture of various national and international public and private funds and companies having its own financial and administrative rules), having its specific tasks and mission and culture (academic freedoms, scientific excellence, competitive environment)? In case of the Czech Academy of Sciences working group for GDPR implementation in the Czech Academy of Sciences has been established and the recommendations should be done by this group till the end of 2017. Outputs of the group will be analysed and shared the latest experience with GDPR implementation preparatory work and related legal issues.

Michal Czerniawski

Did something go wrong? About the right to data portability in the GDPR

The right to data portability was hailed as one of the biggest achievements of the General Data Protection Regulation (GDPR). Introduced for the first time in the GDPR, it imposes significant burdens on data controllers, at the same time granting data subjects relatively limited rights. One of the biggest challenges which data controllers face in the context of the GDPR is the implementation of procedures and technical means that enable individuals to exercise their right to data portability. The situation has become even more complicated when the Article 29 Working Party (WP29) in its guidelines (Guidelines on the right to data portability, Adopted on 13 December 2016 As last Revised and adopted on 5 April 2017, WP 242 rev.01.) supported a very broad understanding of the term "data provided by" the data subject, which includes not only data actively and knowingly provided by the data subject, but also observed data. I argue, that the intention, underlying the position of the WP29, which is adjusting data portability to the challenges arising out of the Internet of Things, deserves some support. However, the position of the WP29 does not find a basis in the provisions of Article 20 GDPR. I also argue that the lack of clarity with respect to Article 20 is harmful for data controllers and jeopardises the development of one of the most promising concepts in the digital economy in Europe. It seems that the doubts around Article 20 GDPR will need to be resolved by the Court of Justice of the European Union.

Jakub Míšek

Open data v. Personal data protection in Czechia

Recent years have brought in Czechia a bigger interest in publication of public sector information (PSI) in a form of open data. One of the traditional issues, which must be addressed during the process of open data publication and re-use is a conflict with personal data protection. Furthemore, personal data protection is often used by public bodies as an argument against publication of open data. In the first part the presentation shortly summerises current legal regime of PSI and open data publication in Czechia. There is a specific issue of access and re-use of public sector information, because the Czech law does not provide two different legal institutes, but there is only one regulation that covers both aspects. In the second part of the presentation, there are analysed personal data protection rules which influece open data publication, key players are identified and the most important differences between current legal framework and GDPR are presented. In the last part a case study of open data publication from the registers of persons (register of companies and trade register) is provided.

István Böröcz

The costs of cognitive enhancement - surveillance and exploitation of the individual

Recital (4) of the General Data Protection Regulation (GDPR) says "the processing of personal data should be designed to serve mankind". Although the recital articulates the need for an altruistic construction of a technology, it is rather wishful thinking. Technology has increasing influence, achieved inter alia through digital surveillance. It has become an integral part of citizens' daily lives as data is the main resource for private undertakings to create economic value, thus operationalize technology development. Due to the proliferation of automated decision-making processes in the market sphere, the individual and, more importantly, her digital copy became the essential cog in the machine of digital economy.

Private undertakings not only keep under surveillance almost everything of an individual but with the large datasets are appropriate to predict and define inter alia personal traits, attributes, or individual and social needs (e.g. by using algorithms or neural networks). The information-based exploitation of the individual impinges on various societal concerns, including rights and freedoms (predominantly the right to privacy) of the user, whereas she gladly participates in the process, ignoring potential and existing threats since surveillance is conducted through so-called Human Enhancement Technologies (HETs), augmenting inter alia cognitive skills.

With the development of and reliance on HETs large-scale integration of technological devices to the human body is only one step away, invoking questions like who will retain control over those devices, what will be their secondary or tertiary functions or whether our catalogue of human rights will provide adequate protection to the so-called enhanced humans. The integration will allow service providers to explore the individual in hitherto unseen depths and turn this information to their advantage. Existing and continuously emerging, new types of intrusions require new, stricter and, most importantly, more effective protection of the individual. This contribution aims to examine the connection between private

undertakings and users by elaborating on the motivation behind digital surveillance (i.e. collection and utilization of data) and its perception by users (i.e. enjoying the benefits of cognitive enhancement). After describing the relations and potential effects on the future the question will be raised: how can the balance of control be restored between the watcher and the watched in digital surveillance? The answer is sought in methodological and legal solutions.

[1] European Data Protection Supervisor, 'Privacy and competitiveness in the age of big data: The interplay between data protection, competition law and consumer protection in the Digital Economy', 2014 <https://secure.edps.europa.eu/EDPSWEB/webdav/shared/Documents/Consultation/Opinions/2014/14-03-26_competitition_law_big_data_EN.pdf> [27/05/2017]