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VIRT-EU

Values and ethics in Innovation for Responsible Technology in Europe

Horizon 2020

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Enabling responsible ICT-related research and innovation

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Academic Dissemination

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Project Consortium

Beneficiary no.	Beneficiary name	Short name
1 (Coordinator)	IT University of Copenhagen	ITU
2	London School of Economics	LSE
3	Uppsala Universitet	UU
4	Politecnico Di Torino	POLITO
5	Copenhagen Institute of Interaction Design	CIID
6	Open Rights Group	ORG

Dissemination Level

PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	
EU-RES	Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)	
EU-CON	Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)	
EU-SEC	Classified Information: SECRET UE (Commission Decision 2005/444/EC)	

Dissemination Type

R	Document, report	x
DEM	Demonstrator, pilot, prototype	
DEC	Websites, patent filling, videos, etc.	
O	Other	
ETHICS	Ethics requirement	

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Executive summary

Deliverable 5.1 “Academic Dissemination” is part of activities in Work Package 5 “Data Synthesis and Tool Development”. This deliverable provides examples of talks and presentations from a high-level conference and workshop, and includes joint publications with methodological contributions of the project published in well-recognized peer-reviewed venues. The conference talks and presentations, and the joint publications are all placed within the ICT and SSH fields.

The “Expert Workshop on the Right to Privacy in the Digital Age” organized by the Office of the High Commissioner for Human Rights aims to identify and clarify principles, standards and best practices in the promotion and protection of the right to privacy and the responsibility of enterprises in the digital age. The objective of the workshop is to exchange international, regional and national experiences and practices concerning the protection and promotion of the right to privacy¹. Alessandro Mantelero held a talk on privacy, ethical and social impact assessment presented in the following sections.

The “Sunbelt Conference” provides an interdisciplinary venue for social network analysis. It is an acknowledged conference within the field that invites social scientists, mathematicians, computer scientists, ethnologists etc. to discuss and share knowledge on thematic areas such as social network analysis and network statistics, online social networks and social media, network visualization and so on². Matteo Magnani, Davide Vega and Luca Rossi held a presentation “Foundations of Temporal Text Networks” at the most recent conference as explained in the sections below.

¹ <https://www.ohchr.org/EN/Issues/DigitalAge/Pages/DigitalAgePrivacyWorkhop.aspx>

² <https://sunbelt.sites.uu.nl>

Conference papers

SSH Presentation: Expert workshop on the right to privacy in the digital age

OHCHR - Geneva, February 19-20, 2018

Title of the presentation: New and emerging issues: The collective dimension of data protection and the tools to safeguard it (Privacy, Ethical and Social Impact Assessment)

Presenter: Alessandro Mantelero, Politecnico di Torino

In the context of the Expert workshop on the right to privacy in the digital age organised by the Office of the High Commissioner for Human Rights, this talk addressed the following two challenging questions: Is data protection enough to safeguard individuals and society in the digital age? Is the individual dimension of data protection the adequate landscape to address the present and future forms of data processing?

To addresses these questions, this talk suggested to adopt a broad approach which goes beyond the PIA models focused on security and data quality. In this sense, the proposed PESIA model aims to contribute in creating a digital environment which is not a mere data ecosystem but primarily a system of rights and values prompting an effective digital citizenship.

Link to presentation: webtv.un.org/watch/part-2.1-un-expert-workshop-on-the-right-to-privacy-in-the-digital-age/5737592606001/?term=

Link to conference: ohchr.org/EN/Issues/DigitalAge/Pages/DigitalAgePrivacyWorkshop.aspx

ICT Presentation: XXXVIII Sunbelt Conference on social network analysis

June 26-July 1, 2018, Utrecht (NL)

Title of the presentation: Foundations of Temporal Text Networks

Presenter: Matteo Magnani (Uppsala University), Davide Vega (Uppsala University) and Luca Rossi (IT University of Copenhagen)

The Virt-EU project has collected a large dataset of online interactions about the Internet of Things (IoT), with the objective of understanding what topics and communities are present (or not) in the online discourse and how these topics and communities have evolved in time. The usage of online social media data as a way to explain human social behaviour has been very frequent in the last few years: to cope with the complexity of online information, researchers have typically focused on either the topology of the interactions, as commonly done in Network Science, or the text exchanged among individuals, using methods from Computational Linguistics, sometimes also modelling time, as in Temporal Networks or Temporal Information Retrieval. Therefore, Virt-EU researchers could base their initial analysis on existing methods. However, the need to study the evolution of topics and communities in an integrated way required to go beyond the state of the art.

In this talk we introduced a general attributed bipartite model for temporal text networks. We first presented a comparative analysis of several models for text networks, showing how all previous models can be reduced to ours. Then, we introduced one approach to analyse temporal text networks based on information discretisation. In this approach text messages can be classified into a number of (possibly overlapping) groups, based on their attributes. This classification can be exploited by projecting the original information into several derived types of networks, such as communication networks, user-annotated networks, topic-based multiplex networks and information propagation networks for which existing analysis methods exist.

Finally, we presented a first application of the model to Virt-EU data. In particular, we used the aforementioned model and methodology to investigate the existence of strong and deep communities of individuals discussing about various topics in the Twitter IoT space, in a corpus of more than 200,000 tweets collected during June 2017. Future works to address computational limitations of the proposed approach and to scale it to the full Virt-EU datasets were also discussed.

[Link to conference: sunbelt.sites.uu.nl](http://sunbelt.sites.uu.nl)

Joint publications

Design for Existential Crisis in the Anthropocene Age

Ann Light, Alison Powell, Irina Shklovski (2017). In Proceedings of the 8th International Conference on Communities and Technologies C&T '17 (Troes, France): ACM.

Summary

The authors of this article ask how to design for the common good, focusing on human needs for meaning, fulfillment, dignity and decency, qualities which technology struggles to support but can easily undermine. They juxtapose the design of computing that offers hope with that which offers only distraction, propose four modes to design for (being attentive, critical, different and in it together) and conclude with a plea to avoid tools that encourage a blinkered existence at a time of great uncertainty and change.

Collaborating partners

Alison Powell from LSE and Irina Shklovski from ITU teamed up with the VIRT-EU advisory board member Ann Light from the University of Sussex. The International Conference on Communities and Technologies is a well-recognized international venue sponsored by the Association of Computing Machinery with audience ranging from practitioners to researchers in the fields of computer science, design and the social sciences.

Planned joint publications

As the project moves forward partners are working on a variety of joint publications oriented towards different venues. Below is a small sample of publications currently in progress:

The political economy of the Internet of Things

Targeting: Science, Technology & Human Values

Authored by: Alison Powell (LSE), Funda Ustek-Spilda (LSE), Matteo Magnani (UU), Davide Vega (UU), Irina Shklovski (ITU)

Summary

In this paper we explore the concept of IoT as a justificatory regime of a particular political economy with a theoretical discussion that draws upon an empirical analysis of quantitative and qualitative data. This is a collaboration between humanities, computer science and social science partners.

The impact and implications of the GDPR for quantitative network analysis

Targeting: Nature & Human Behavior

Authored by: Andreas Kotsios (UU), Matteo Magnani (UU), Luca Rossi (ITU), Irina Shklovski (ITU)

Summary

In this paper we interrogate the opportunities and consequences of the GDPR for research that relies on large-scale social media data collection and analysis, drawing on experiences from VIRT-EU. This is a collaboration between legal research, computer science and social science partners.