# USEMP

# D9.4

# Report on standardisation and dissemination – v2

v 1.0 / 2015-10-11
postreview.v0.4 / 2016-2-15

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This report discusses the standardization and dissemination activities that have taken place in the second year of the USEMP project.
This deliverable is an update of D9.2 (submitted in month 12) and will be updated by D9.6 (to be submitted in month 36).

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|---|---|
| Project acronym | USEMP |
| Full title | User Empowerment for Enhanced Online Presence Management |
| Grant agreement number | 611596 |
| Funding scheme | Specific Targeted Research Project (STREP) |
| Work program topic | Objective ICT-2013.1.7 Future Internet Research Experimentation |
| Project start date | 2013-10-01 |
| Project Duration | 36 months |

| | |
|---|---|
| Workpackage | 9 |
| Deliverable lead org. | HWC |
| Deliverable type | Report |
| Authors | George Mourikas (HWC), Symeon Papadopoulos (CERTH), Georgios Petkos (CERTH), Yiannis Kompatsiaris (CERTH), Tom Seymoens (IMINDS), Adrian Popescu (CEA), Katja de Vries (iCIS), Ali Padyab (LTU), Theodoros Michalareas (VELTI), Andreas Drakos (VELTI) , Alexandru GINSCA (CEA) |
| Reviewers | Jo Pierson (IMINDS), Adrian Popescu (CEA) |
| Version | Postreview.v0.4 |
| Status | Final |
| Dissemination level | PU: Public |
| Due date | 2016-02-15 |
| Delivery date | 2016-02-15 |

| Version | Changes |
|---|---|
| v0.1 | Utilized the D9.2 document and organize the contributions (HWC) |
| v0.2 | Added section 3 with acknowledgement summary of year 1 activities and moved the achievements of year one in this section 1 there (HWC). Cleaned up section 4 and 5 to make them more applicable to year 2. Section "6 Standardization Activities", Introduction and Conclusion is work in progress. |
| v0.3 and v0.4 | CERTH + iMinds contributions |
| v0.5 | Modifications based on comments from CERTH and CEA. |
| v0.6 | LTU contributions integrated |
| v0.7 | CEA, ICIS, CERTH integrated |
| v0.8 | VELTI contributions integrated (including v0.8b) |
| v0.9 | Last contributions from ICIS and VELTI (Copy to internal reviewers) |
| v1.0 | Integrating internal reviewers comments |
| Postreview.v0.1 | Contribution by HWC initial version of section 3.8 |
| Postreview.v0.2 | Contribution by VELTI to section 3.8 |
| Postreview.v0.3 | Contribution by CEA to section 3.8 |
| Postreview.v0.4 | Integration and submit |

# Table of Contents

# 1. Introduction

This deliverable includes the second year dissemination target achievements and the planned dissemination targets for the third project year. The dissemination targets regarding the promotion of the USEMP project are described in terms of:

- Publications of conference and journal papers where USEMP was cited

- Events and/or sessions where USEMP was promoted

- Standardization related activities

- Collaboration with other projects

- Sharing of the concepts of USEMP through the media outreach that includes the USEMP website, social media accounts and public participating to the experiments that are part of the USEMP DoW

In addition to the outreach dissemination activities this deliverable includes the internal dissemination and standardisation activities performed during the second year period. These activities include the project consortium collaboration in the effort to produce the necessary research and implementation material.

# 2. USEMP Dissemination Strategy

Dissemination activities are very important for USEMP consortium partners since they allow to reach out to the research and industry community, to make the USEMP project results known to the general public and to collect feedback. Dissemination is also important due to the fact that the multidisciplinary work is relevant for the different scientific and professional communities that focus on data and privacy. As discussed in previous deliverables (D9.1, D9.2), a number of dissemination activities have been considered planned and carried out within the USEMP project. The dissemination strategy for the second year of the project was to maintain and update the first year's dissemination strategy, expand on the dissemination avenues and to initiate contributions/dissemination to standardization bodies. More specifically regarding the maintenance and keeping up-to-date dissemination activities these include:

- The USEMP public website content being up-to-date with the current activities of the consortium and deliverables

- As part of the USEMP website dissemination a number of blog posts describing important aspects of USEMP research for the academic community and the general public are scheduled

- Newsletter update: A second year annual newsletter is in progress to be published by the consortium after the completion of the 2nd year that will provide a summary of the main results and activities of the project to potentially interested parties, both to researchers and the general public.

- Leaflets and posters are updated with new graphics depending on the attendance to which they are presented

- Maintain and increase the effort regarding the paper publication and conference attendance

- Additionally work on contributions to standardization has started initially with W3C – these are reported in more detail in Chapter 5

In addition to the established maintenance and keeping up-to-date dissemination avenues above, in the second year the strategy is expanded into:

- Producing as a USEMP consortium the first version of the educational/promotional video of the DataBait tools

- Producing a number of infographics that explain USEMP and the DataBait tools produced in an easily comprehensible manner

- A working prototype of DataBait that has been demonstrated across events from various consortium partners to help them understand USEMP concepts.

In order to measure the USEMP's Key Performance Indicators (KPI's) targets against the estimated targets proposed in D9.1 "Dissemination plan" deliverable, updated in D9.2 and comments by the EC reviewers during the year 1 review the consolidated KPI's up-to-date results are included in Table 1.

| Dissemination action | Indicators | Values and targets | | | | |
|---|---|---|---|---|---|---|
| | | End Yr1 Target | End Yr1 Values | End Yr2 Target | End Yr2 Values | End Yr3 Target |
| **Prepare a simple information leaflet about the USEMP project** | **Distribution of at least 100 leaflets per year by all partners in relevant gatherings, monitored and reported on by the dissemination team** | 100 per partner | Achieved | 100 per partner | Achieved | 100 per partner |
| **Set up public website with relevant news and information featuring USEMP news and events** | **Use the number of visitors recorded on a monthly basis and starting at month 6 try to achieve a % increase of monthly visitors per year** | Increase of 10% | Achieved | Increase of 15% | Achieved (Increase of > 250%) | Increase of 20% |
| **Participate and promote USEMP in relevant regional or national events.** | **USEMP partnership to be represented in relevant international events** | 2 | Achieved | 4 | Achieved (15) | 6 |
| **Collaborate effectively with other projects consortia, agencies and networks** | **Establish regular contact and communication channels with other relevant projects and networks** | 1 | Achieved | 3 | Achieved (3) | 5 |
| **Use social media to provide relevant information to target groups** | **Identification of relevant existing social media channels for dissemination actions and provide relevant updates and information about USEMP activities to these channels.** | 8 posts | Achieved (FB=2, LinkedIn=2, Twitter=26) | 12 posts | Achieved (more details in section 3.5) | 20 posts |

*Table 1. Dissemination KPIs "End of year 2" update*

# 3. Dissemination Activities

This dissemination activities section is separated in a consolidated planning of activities for the third year of the project (section 3.1), followed by detailed sections per-category of dissemination activities achievements. The categories of dissemination activities which consortium members participated during the second year of the project include:

- Publication in journals, conferences and workshops

- Events and sessions

- Collaboration with other projects

- Update on the public access USEMP Website

- Updated 'traction' of USEMP on the social media

- The latest additions and modifications on the communication kit

The above listed activities are elaborated in their respective sections bellow.

## 3.1. Publications Achievements

This section lists the publications in journals, conferences and workshops achieved by the USEMP consortium during the second year of the project (from 1st of October 2014 until 30th of September 2015)

CERTH and CEA:

- Participated in the MediaEval Placing Task 2015 evaluation task

    Category: Conference / competition

    Status: Published

    Authors: G. Kordopatis-Zilos, A. Popescu, S. Papadopoulos, Y. Kompatsiaris

    Title: *"CERTH/CEA LIST at MediaEval Placing Task 2015"*

    Abstract: We describe the participation of the CERTH/CEA LIST team in the Placing Task of MediaEval 2015. We submitted five runs in total to the Locale-based placing sub-task, providing the estimated locations for the test set released by the organisers. Out of five runs, two are based solely on textual information, using feature selection and weighting methods over an existing language model-based approach. One is based on visual content, using geo-spatial clustering over the most visually similar images, and two runs are based on hybrid approaches, using both visual and textual cues from the images. The best results (median error 22km, 27.5% at 1km) were obtained when both visual and textual features are combined, using external data for training.

- Participated in the MediaEval Diverse Social Images 2015 task

    Category: Conference / competition

    Status: Published

Authors: E. Spyromitros-Xioufis, A. Popescu, S. Papadopoulos, Y. Kompatsiaris

Title: *"USEMP: Finding Diverse Images at MediaEval 2015"*

Abstract: We describe the participation of the USEMP team in the Retrieving Diverse Social Images Task of MediaEval 2015. Our runs are produced based on a supervised diversification method that jointly optimizes relevance and diversity. All runs are automated and use only resources given by the task organizers. Our best results in terms of the official ranking metric on the one-topic part of the test set came by the runs that combine visual and textual information while the textual-only run performed better on the multi-topic part.

- A journal editorial was published in Computing Now, vol. 8, no. 1, January 2015, IEEE Computer Society (editorial)

Category: Journal / editorial

Status: Published

Authors: S. Papadopoulos and A. Popescu

Title: *"Privacy Awareness and User Empowerment in Online Social Networking Settings"*

Abstract: Sharing data on online social networks (OSNs) has become an important part of everyday life for a wide majority of citizens worldwide. OSN users share myriads of volunteered data (such as photos, videos, text messages, Web queries, and likes) and are observed by a variety of Web services (through various means such as browser cookies and ad trackers) that record a massive amount of observed behavioral data. From volunteered and observed data, many online services automatically infer new information and build user profiles that they sell to third parties, thus constituting the core of their current business models.

- Published paper in the proceedings of the conference ICMR 2015

Category: Conference

Status: Attended

Authors: E. Spyromitros-Xioufis, S. Papadopoulos, A.L. Ginsca, A. Popescu, Y. Kompatsiaris, I. Vlahavas

Title: *"Improving Diversity in Image Search via Supervised Relevance Scoring"*

Abstract: Results returned by commercial image search engines should include relevant and diversified depictions of queries in order to ensure good coverage of users' information needs. While relevance has drastically improved in recent years, diversity is still an open problem. In this paper we propose a re-ranking method that could be implemented on top of such engines in order to provide a better balance between relevance and diversity. Our method formulates the re-ranking problem as an optimization of a utility function that jointly considers relevance and diversity. Our main contribution is the replacement of the unsupervised definition of relevance that is commonly used in this formulation with a supervised classification model that strives to capture a query and application-specific notion of relevance. This model provides more accurate relevance scores that lead to significantly improved diversification performance. Furthermore, we propose a stacking-type ensemble

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learning approach that allows combining multiple features in a principled way when computing the relevance of an image. An empirical evaluation carried out on the datasets of the MediaEval 2013 and 2014 "Retrieving Diverse Social Images" (RDSI) benchmarks confirms the superior performance of the proposed method compared to other participating systems as well as a state-of-the-art, unsupervised re-ranking method.

CERTH:

- The conference paper was published in the proceedings of the International Conference on Computational Social Science 2015

Category: Conference

Status: Attended

Authors: G. Rizos, S. Papadopoulos, Y. Kompatsiaris

Title: *"Learning to Classify Users in Online Interaction Networks"*

Abstract: We study the problem of user multi-label classification in settings where two types of information are available: a) a set of seed users with known labels, b) the online interactions among the users of interest. User labels may refer to topics of different granularities (e.g. broad themes, news stories, etc.), user types (e.g. person, news agency, etc.), political stance (e.g. liberal, conservative) and others. To tackle the problem, we propose a semi-supervised learning framework that represents users by means of network-based features. We propose the use of Absorbing Regularized Commute-Time Embedding (ARCTE) as a means to extract local graph features and devise a computationally more ancient scheme (compared to existing ones) for their extraction. We then compare the results of this representation with a number of previously proposed alternatives on a Twitter dataset of 534K users. We also discuss a few key practical issues as well as the repercussions of the proposed approach with respect to privacy in online networked environments

- The conference paper was published in the proceedings of the 24th International Conference on World Wide Web Companion (pp. 129-130). International World Wide Web Conferences Steering Committee (2015, May).

Category: Conference

Status: Attended

Authors: T. Theodoridis, S. Papadopoulos, & Y. Kompatsiaris

Title: *"Assessing the Reliability of Facebook User Profiling"*

Abstract: User profiling is an essential component of most modern online services offered upon user registration. Profiling typically involves the tracking and processing of users' online traces (e.g., page views/clicks) with the goal of inferring attributes of interest for them. The primary motivation behind profiling is to improve the effectiveness of advertising by targeting users with appropriately selected ads based on their profile attributes, e.g., interests, demographics, etc. Yet, there has been an increasing number of cases, where the advertising content users are exposed to is either irrelevant or not possible to explain based on their online activities. More disturbingly, automatically inferred user attributes are often used to make real-world

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decisions (e.g., job candidate selection) without the knowledge of users. We argue that many of these errors are inherent in the underlying user profiling process. To this end, we attempt to quantify the extent of such errors, focusing on a dataset of Facebook users and their likes, and conclude that profiling-based targeting is highly unreliable for a sizeable subset of users.

- The conference Poster presentation published in the proceedings of ICCSS 2015 (2015, June).

Category: Conference

Status: Attended

Authors: T. Theodoridis, S. Papadopoulos, & Y. Kompatsiaris

Title: *"Assessing the Reliability of Facebook User Profiling"*

Abstract: User profiling is an essential component of most modern online services offered upon user registration. Profiling typically involves the tracking and processing of users' online traces (e.g., page views/clicks) with the goal of inferring attributes of interest for them. The primary motivation behind profiling is to improve the effectiveness of advertising by targeting users with appropriately selected ads based on their profile attributes, e.g., interests, demographics, etc. Yet, there has been an increasing number of cases, where the advertising content users are exposed to is either irrelevant or not possible to explain based on their online activities. More disturbingly, automatically inferred user attributes are often used to make real-world decisions (e.g., job candidate selection) without the knowledge of users. We argue that many of these errors are inherent in the underlying user profiling process. To this end, we attempt to quantify the extent of such errors, focusing on a dataset of Facebook users and their likes, and conclude that profiling-based targeting is highly unreliable for a sizeable subset of users.

- The conference paper accepted in the International Workshop on Multimedia Forensics and Security (MFSec) held as part of the International Conference on Availability, Reliability and Security (ARES), 2015.

Category: Conference

Status: Attended

Authors: G. Petkos, S. Papadopoulos, Y. Kompatsiaris

Title: *"PScore: Enhancing Privacy Awareness in Online Social Networks"*

Abstract: The phenomenal increase in the use of social media in recent years has raised a number of issues related to privacy. In this paper, we propose a framework for raising the awareness of Online Social Network (OSN) users with respect to the information about them that is disclosed and that can be inferred by OSN service operators as well as by third parties that can access their data. This framework takes the form of a semantic, hierarchical scoring structure, which enables users to easily browse over different privacy-related aspects of their presence in a social network. Contrary to previous privacy scoring approaches, the proposed framework provides a finer and more intuitive organization of privacy information. Importantly, it also takes into account both information that is explicitly mentioned in users' shared content, as

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well as implicit information that may be inferred from it. We make available an open source implementation of the framework.

- Conference paper was published in the proceeding of the International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2015.

Category: Conference

Status: Attended

Authors: G. Petkos, S. Papadopoulos, Y. Kompatsiaris

Title: *"Social Circle Discovery in Ego-Networks by Mining the Latent Structure of User Connections and Profile Attributes"*

Abstract: Online Social Networks (OSN) allow their users to organize their friends into groups, also known as social circles. These social circles can be used to better manage who has access to users' posted content and also to control the content posted from other users that they view. Unfortunately, these social circles are generated manually and this can be a laborious process for users with more than a few friends. In this paper, we propose an approach for automatically generating social circles that takes into account both the profile information of the friends to be grouped, as well as the social network connectivity between them, while it allows multiple memberships of friends in social circles. The approach is based on an adaptation of the widely used Latent Dirichlet Allocation model and, despite the fact that it does not explicitly model social network connectivity, as other state of the art methods do, it manages to achieve results that are competitive and even better than those obtained from such methods, at a considerable lower computational cost.

IMINDS:

- Presentation at LSE Visiting Fellows Network Meeting, London School of Economics and Political Science, London (4 June, 2015).

Category: Presentation at Network Meeting

Status: Attended/presented

Authors: Jo Pierson

Title: *"Privacy and Dis/empowerment in Connective Media"*

Abstract: In order to explore the roadmap and future directions of social, mobile and ubiquitous media technologies regarding privacy and data protection, we take an interdisciplinary perspective, building on research in Media and Communication Studies and Science and Technology Studies. In order to assess to what extent and how people are effectively 'empowered' in relation to their privacy, we investigate how they socially engage with these media and how their communication is being (re)configured. For this we first take a macro perspective by discussing recent interdisciplinary views on the changing internet landscape. Next we take a micro perspective on the position of users of 'connective media'. We then explain and situate user empowerment in relation to online privacy and how this is related to

vulnerability. This perspective is used for discussing (young) people and their privacy management, based on the findings of online privacy research projects, among which the USEMP project.

- Presentation was performed at LSE Research Dialogues, London School of Economics and Political Science, London (2 July, 2015).

Category: Presentation at Network Meeting

Status: Attended/presented

Authors: Jo Pierson

Title: *"Privacy and Dis/empowerment in Connective Media"*

Abstract: The presentation discusses the sabbatical research project *'Linking and substantiating domestication, privacy and (dis)empowerment through digital media use'*, which studies transitions in social media platforms, and how they configure and are configured by (disruptive) user practices related to privacy, surveillance, and datafication. First the overall research framework is presented, illustrated with findings from an analysis of Facebook's new Data Use Policy (see also http://www.theguardian.com/technology/2015/mar/31/facebook-tracks-all-visitors-breaching-eu-law-report), in combination with past and ongoing empirical user research. The latter is based on a series of focus group interviews with Facebook users (part of EMSOC project; http://emsoc.be), and on semi-structured qualitative interviews using different probes (part of USEMP project; http://www.usemp-project.eu).

- Conference paper was presented at the Data Power Conference, Sheffield (22-23 June, 2015).

Category: Conference

Status: Attended/presented

Authors: Tom Seymoens, Laurence Claeys, Sanne Ruelens, Jo Pierson

Title: *"Social Media and Datafication: Identifying User Awareness and Attitudes Towards Data Inferences"*

Abstract: Outings of social expressions are increasingly commensurated, mediated and manipulated by social media and online platforms (Van Dijck, 2013). As a consequence, they leave a structured footprint, both searchable and traceable by advertisers and other third parties (Feng & Xie, 2014). Data mining algorithms, machine learning and other data extraction techniques make it possible to also infer detailed predictions of user preferences out of this footprint (World Economic Forum, 2012). This leads to a risk of data power imbalance through the loss of user agency. To oppose this threat, user empowerment can be raised by enhancing user's capability to interpret and act upon this mediated social world (Pierson, 2012; Mansell, 2012). In our research, we are guided by the following question: Are people aware of the way their data is collected, processed and inferred and in what way is their attitude affected when we confront them with the operational and economic logic underlying their online sociality? From a theoretical perspective we build on the integration of Science and Technology Studies with Media and Communication

Studies (Gillespie et al. 2014), more in particular taking a critical stance on the co-construction of technological systems (Feenberg, 1999).

In the paper we present the results of an in-depth user study within the interdisciplinary EU project USEMP. The study took place in Flanders (Belgium) in November and December 2014. Through means of 14 semi-structured qualitative interviews, we captured insights on people's awareness and attitudes towards the way five different institutional actors can reason on their social media data. Using a diverse set of probes, we took into account the different ways of data gathering (volunteered, observed and inferred) and a potential change in perception towards anonymous and identifiable information. Later on, we confront our results with the data-reachability matrix (Creese et al., 2012) wherein the authors define which personal information can be inferred through the use of existing data extraction techniques on (a combination of) data.

- Conference paper was presented at IAMCR (International Association for Media and Communication Research), Montreal (13-17 July, 2015).

Category: Conference

Status: Attended/presented

Authors: Tom Seymoens, Laurence Claeys, Jo Pierson

Title: *"Case Study of Privacy Engineering: The USEMP Project"*

Abstract: While privacy engineering is still too often equated to the mere modelling and assessing of privacy risks and vulnerabilities. We argue in this paper that it is important to include user agency from the onset of the development process of new technologies. We support our claims by demonstrating how the user is actively involved in the design process of a new Privacy-Enhancing Technology, DataBait. We present how the tool might help to raise user empowerment in a culture of connectivity.

- Presentation at TILT seminar (Tilburg Institute for Law, Technology, and Society) – Tilburg University, 17 February 2015, Tilburg, The Netherlands.

Category: Presentation at Network Meeting

Status: Attended/presented

Authors: Jo Pierson

Title: *"Privacy, (dis)empowerment and connective media"*

Abstract: In order to explore future challenges for privacy and data protection in social, mobile and ubiquitous media technologies, we need to take an interdisciplinary perspective. This means that findings from privacy and security engineering and legal sciences, need to be complemented with insights from research in humanities and social sciences, more in particular on how people socially engage with these media and how their communication is being (re)configured. In this way we are able to assess to what extent and how people are effectively empowered or rather disempowered in relation to their privacy and publicness. This forms the outset of the presentation, where we incorporate different socio-technological aspects, foremost building on the integration of Science and Technology Studies (STS) with Media and

Communication Studies (MCS) (Pierson, 2014; Gillespie et al., 2014), more in particularly taking a critical stance on the co-construction of connective media and technological systems (van Dijck, 2013; Mansell, 2012; Feenberg, 1999).

For this we first take a macro perspective by discussing recent views in humanities and social sciences on the changing landscape of internet and media technologies. We sketch the broader societal context, introducing the critical notions of 'culture of connectivity' and 'digital seepage'. Next we take a micro perspective on the position of users in this culture of connectivity. We explain and situate user empowerment in relation to online privacy and how this is related to issues of vulnerability. The latter is typically subdivided in an external and internal component, referring to exposure and coping. This division is then used for framing our research regarding (young) people and their privacy awareness, attitude, capabilities and practices. We illustrate and corroborate how empowerment and vulnerability take form in the everyday life and experiences of people. In this way our user-oriented research aims to safeguard a balance between strengthening the empowerment of users while at the same time unburdening the users with respect to the responsibility of protecting their privacy (responsibilisation).

- Presentation at APPR meeting (Amsterdam Platform for Privacy Research) – University of Amsterdam, 1 December, Amsterdam, The Netherlands.

Category: Presentation at Network Meeting

Status: Attended/presented

Authors: Jo Pierson

Title: *"Privacy, (dis)empowerment and digital media"*

Abstract: N/A

- Conference paper was presented at 2nd International Conference on Internet Science (Network of Excellence EINS), Brussels (27-29 May, 2015).

Category: Conference

Status: Attended/presented

Authors: Jo Pierson

Title: *"Privacy and Empowerment in Connective Media"*

Abstract: In order to explore the roadmap and future directions of social, mobile and ubiquitous media technologies for privacy from an Internet Science perspective we take an interdisciplinary perspective, building on research in Media and Communication Studies and Science and Technology Studies. In order to assess to what extent and how people are effectively 'empowered' in relation to their privacy, we investigate how they socially engage with these media and how their communication is being (re)configured. For this we first take a macro perspective by discussing recent interdisciplinary views on the changing internet landscape. Next we take a micro perspective on the position of users of 'connective media'. We then explain and situate user empowerment in relation to online privacy and how this is related to vulnerability. This perspective is used for discussing (young) people and their privacy management, based on the findings of online privacy research projects.

- Book chapter in T. Tiropanis, A. Vakali, L. Sartori, P. Burnap (Eds.) INSCIE 2015 – Lecture Notes in Computer Sciences (LNCS) 9089, Cham: Springer International Publishing Switzerland, 3-14.

  Category: Book chapter publication

  Status: Published

  Authors: Jo Pierson

  Title: "Digital Enlightenment Yearbook 2013, The Value of Personal Data"

  ISBN 978-3-319-18608-5 / DOI: 10.1007/978-3-319-18609-2_1

- Book chapter in O'Hara, Kieron David, Scott L., De Roure, David and Nguyen, M.-H. Carolyn (Eds.) Digital Enlightenment Forum Yearbook 2014 - Social networks and social machines, surveillance and empowerment, Amsterdam: IOS Press, 265-274.

  Category: Book chapter publication

  Status: Published

  Authors: Jo Pierson

  Title: "Interdisciplinary perspective on social media, privacy and empowerment: the role of Media and Communication Studies in technological privacy research"

  ISBN 978-1-61499-449-7

VELTI:

- Paper on privacy by design architectures accepted in Annual Privacy Forum 2015, 7-8 October 2015, Luxembourg

  Category: Conference

  Status: Accepted and published as part of the program at: http://privacyforum.eu/programme

  Authors: Adrian Popescu, Mireille Hildebrandt, Jonas Breuer, Rob Heyman, Shenja van der Graaf, Laurence Claeys, Symeon Papadopoulos, George Petkos, David Lund, Theodoros Michalareas, Timotheos Kastrinogiannis, Apostolos Kousaridas, Etienne Gadeski, Hervé Le Borgne, Katja de Vries

  Title: *"Increasing transparency & privacy for Online Social Network users – USEMP value model, scoring framework & legal"*

  Abstract: In this paper we present research results from the multi-disciplinary EU research project USEMP. In particular, we look at the development of a personal data value model in Online Social Networks (OSNs), the development of privacy & personal data value indicators frameworks and the legal aspects personal data licensing & profile transparency. In the first part of the paper we present overview of the existing personal data monetization ecosystem in OSNs and its possible evolutions for increasing privacy and transparency for consumers about their OSN presence. In the second part of the paper, we describe USEMP scoring framework for privacy & personal data value indicators that can assist users to better perceive how their privacy is affected by their OSN presence and what the value of their OSN activities is. In the last part of the paper we show how personal data usage licensing

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and profile transparency for OSN activities provides for Data Protection by Design (DPbD).

- Paper for the USEMP use cases & DataBait architecture in Amsterdam Privacy Conference 2015, pages 23-26, 8 October 2015, Amsterdam

Category: Conference

Status: Accepted and published as part of the program at

http://www.apc2015.net/sites/default/files/pdffiles/APC2015%20Preliminary%20Program2_0.pdf

Authors: A. Popescu, M. Hildebrandt, S. Papadopoulos, G. Petkos, Y. Kompatsiaris, L. Claeys, T. Seymoens, D. Lund, T. Michalareas, T. Kastrinogiannis, E. de Vries, N. van Dijk, J. Pierson, A.M. Padyab, E. Gadeski, H. Le Borgne

Title: *"User Empowerment for Enhanced Online Presence Management – Use Cases and Tools"*

Abstract: In this paper we present the DataBait platform, a set of privacy awareness tools and methods that offer online social network (OSN) users the ability to better manage their online presence and to better understand the economic value of their shared data in the context of EU FP7 USEMP project. DataBait offers transparency on how users of OSNs may be profiled by their providers and third parties, while making visible what information they unknowingly disclose about themselves. Simultaneously DataBait offers tools to automatically change one's privacy settings, based on the profile transparency that is provided. The paper starts by recounting the privacy paradox that refers to people sharing their private information even though they explicitly indicate that they would rather not share so much. It then explains how the DataBait tools will contribute to a new form of user empowerment, capable of reducing the privacy paradox. We follow up with an explanation of the legal ground that covers the processing of personal data, discussing the Data Licensing Agreement. Finally, we explain the architecture of the DataBait platform, hoping to clarify that and how data mining operations on the side of the users can enhance their awareness of the knowledge and information they leak while interacting with their preferred OSN.

- Position paper for the USEMP manifesto for privacy aware advertising and a novice proposal to W3C for user agent driven advertising in W3C workshop in Digital and Web marketing convergence, 17-18 September 2015, Tampa, FL, USA

Category: Conference

Status: Presented (presentation listed at: http://www.w3.org/2015/digital-marketing-workshop/agenda.html )

Authors: T.Michalareas (VELTI) & USEMP consortium partners

Title: *"USEMP vision for privacy-aware digital marketing & advertising, a proposal for a useragent-centric model"*

Abstract: In this position paper we present USEMP consortium vision with respect to how the digital advertising/marketing community should be supporting privacy for the end-users, what new business innovation can come out of it and a novice model for

advertising/marketing for the open web that enables end-users to retain control over the use of their personal data, allows marketers to deliver performance-based targeted campaigns and requires some additional support (useragent, ontology framework, data model, APIs/bindings) from W3C-steered  open web technologies.

CEA:

- Conference paper published in the proceedings of the Multimedia Modelling 2015 Conference (January 2015).

  Category: Conference

  Status: Complete

  Authors: A.L. Ginsca, A. Popescu, H. Le Borgne, N. Ballas and D.P. Vo

  Title: *"Large-scale Image Mining with Flickr Groups"*

  Abstract: The availability of large annotated visual resources, such as ImageNet, recently led to important advances in image mining tasks. However, the manual annotation of such resources is cumbersome. Exploiting Web datasets as a substitute or complement is an interesting but challenging alternative. The main problems to solve are the choice of the initial dataset and the noisy character of Web text-image associations. This article presents an approach which first leverages Flickr groups to automatically build a comprehensive visual resource and then exploits it for image retrieval. Flickr groups are an interesting candidate dataset because they cover a wide range of user interests. To reduce initial noise, we introduce innovative and scalable image reranking methods. Then, we learn individual visual models for 38,500 groups using a low-level image representation. We exploit of-the-shelf linear models to ensure scalability of the learning and prediction steps. Finally, Semfeat image descriptions are obtained by concatenating prediction scores of individual models and by retaining only the most salient responses. To provide a comparison with a manually created resource, a similar pipeline is applied to ImageNet. Experimental validation is conducted on the ImageCLEF Wikipedia Retrieval 2010 benchmark, showing competitive results that demonstrate the validity of our approach

- Conference paper was published in Proceedings of IEEE CBMI 2015 Prague, The Czech Republic

  Category: Conference

  Status: Complete

  Authors: P.D. Vo, A. Ginsca, H. Le Borgne, A. Popescu

  Title: *"Effective Training of Convolutional Networks using Noisy Web Images"*

  Abstract: Deep convolutional networks have recently shown very interesting performance in a variety of computer vision tasks. Besides network architecture optimization, a key contribution to their success is the availability of training data. Network training is usually done with manually validated data but this approach has a significant cost and poses a scalability problem. Here we introduce an innovative pipeline that combines weakly-supervised image reranking methods and network fine-tuning to effectively train convolutional networks from noisy Web collections. We evaluate the proposed training method versus the conventional supervised training on

cross-domain classification tasks. Results show that our method outperforms the conventional method in all of the three datasets. Our findings open opportunities for researchers and practitioners to use convolutional networks with inexpensive training cost.

- Conference paper published in Proceedings of IEEE CBMI 2015 Prague, The Czech Republic

Category: Conference

Status: Complete

Authors: E. Gadeski, H. Le Borgne, A. Popescu

Title: *"Duplicate image detection in a stream of web visual data"*

Abstract: We consider the problem of indexing and searching image duplicates in streaming visual data. This task requires a fast image descriptor, a small memory footprint for each signature and a quick search algorithm. To this end, we propose a new descriptor satisfying the aforementioned requirements. We evaluate our method on two different datasets with the use of different sets of distractor images, leading to large-scale image collections (up to 85 million images). We compare our method to the state of the art and show it exhibits among the best detection performances but is much faster (one to two orders of magnitude).

LTU:

- Conference paper was presented on 30 May 2014 in the Information Systems Research Seminar in Scandinavia (IRIS)

Category: Conference

Status: Complete

Authors: Devinder Thapa; Dan Harnesk; Anna Ståhlbröst; Ali Padyab

Title: *"Make way for the new wave: Living Labs as a DSR Approach"*

Abstract: Living Lab (LL) has been used as a milieu as well as methodology for open innovation. However, the impression of living lab as a research methodology among academia is still blurring. The living lab carries many elements of design science research paradigm such as innovation, artifact, evaluation, design principles, etc. however it still needs conceptual underpinning to proclaim it as a valid DSR methodology. The peculiarity of the living lab approach compare to existing DSR methodologies is its openness, co-creation, and evaluation of IT artifacts beyond organizational context. With the continual growth of open innovation platforms, the living lab as a DSR methodologies can play a supplementary role along with its other companion such as DS, AR, and ADR. In this regard, this paper will provide a conceptual clarity in establishing the living lab as a DSR methodology in the context of open innovation and co-creation of IT artifact that goes beyond organizational setup.

- Conference paper was presented on 15 July 2014 in Norsk konferanse for organisasjoners bruk av informasjonsteknologi (NOKOBIT)

Category: Conference

Status: Complete

Authors: Ali Padyab

Title: *"Getting More Explicit on Genres of Disclosure: Towards Better Understanding of Privacy in Digital Age (Research in Progress)"*

Abstract: Disclosure is all about communication and Genres are about analyzing communicative action. "Genres of Disclosure" as repetitive patterns of disclosing has given less attention. Drawing on Palen and Dourish's work, this paper expand its defined scope from a social approach into a more socio-technical approach. Evolutionized by the affordances of a new digital medium, new genres have emerged. We called these new subgenres, secondary genres of disclosure. We provide a taxonomy for these type of genres and some real examples to illuminate the concept. Implications of use for designing privacy and venues for further research are discussed. It is concluded that "Genres of Disclosure" can serve as a common language between users, system providers and legislators to preserve privacy within any system that has consequences for personal privacy.

iCIS

- Event workshop chairing and presenting was performed in the Privacy & Identity lab (PI.lab) Annual Event (12 December 2014), for more details see: http://pilab.nl/index.php/events/2014/10/19/12-12-2014-pi-lab-annual-event-preliminary-announcement/

  Category: Conference

  Status: Attended/presented

  Authors: Adrian Popescu and Mireille Hildebrandt

  Title: *"TETs for PETs, transparency tools for profiling in social networks"*

  Abstract: This workshop will present some of the findings of the USEMP project on the nexus of data science and profile transparency. The coordinator, Adrian Popescu (CEA, Paris), will present the architecture of the USEMP platform and the functionality of the so-called DataBait tools. Mireille Hildebrandt (RU, Nijmegen) will present the Data Licensing Agreement (DLA) as a first step towards fair and lawful contracts for Personal Data Management systems on the side of end users of Online Social Networking sites (OSNs). After presenting the research, we will open the floor for a discussion about (1) what problems can be solved this way, (2) which problems are not solved, (3) what new problems are created.

- Guest lecturer presentation in the course on Digital Government in the Advanced Master of Law Programme in Law and Digital Technologies, at Leiden University 17th October 2014.

  Category: Guest lecture

  Status: Attended/presented

  Authors: Mireille Hildebrandt

  Title: *"Profiling and the Rule of Law"*

  Abstract: N/A

- Keynote presenter in Infosecurity Conference Utrecht, 29th October 2014: http://www.infosecurity.nl/seminar/S102

  Category: Conference/Keynote

  Status: Attended/presented

  Authors: Mireille Hildebrandt

  Title: *"Big Fat Data and the proposed General Data Protection Regulation"*

  Abstract: N/A

- Conference presentation as a keynote speaker at the 2014 Birkbeck Law Review Conference on Privacy and Surveillance, London, 1 November 2014: http://www.bbklr.org/blog/conference-2014-privacy-and-surveillance

  Category: Conference/Keynote

  Status: Attended/presented

  Authors: Mireille Hildebrandt

  Title: *"Preempting our intent, to predict the present. Counter-profiling and inversiveillance in data-driven society"*

  Abstract: N/A

- Participated and presented the USEMP findings so far in a conference held at the European Parliament, Brussels (4 November 2014)

  Category: Conference/ Moderation of a discussion

  Status: Attended/presented

  Authors: Mireille Hildebrandt

  Title: *"The findings of the EU research project on Profiling"*

  Abstract: N/A

- Conference presentation at a workshop titled 'Being Human in a Hyperconnected Connected-Era: The Onlife Initiative', held at the European Parliament (2 December 2014) http://www.europarl.europa.eu/stoa/cms/cache/offonce/home/events/workshops/connected;jsessionid=70A2FD0E71AAB66A13C61F1476ADEB8F

  Category: Conference/presentation

  Status: Attended/presented

  Authors: Mireille Hildebrandt

  Title: *"Privacy? More than data control and why it's contextual"*

  Abstract: N/A

- Conference presentation about the in USEMP findings so far in Groningen (10th December 2014) organized by Nederlands Genootschap Internationale Zaken (NGIZ)-Noord at the BIG DATA lecture series.

  Category: Conference/presentation

Status: Attended/presented

Authors: Mireille Hildebrandt

Title: *"Data Obesity: Ethics, Law or Regulation"*

Abstract: N/A

- Participated in CPDP2015 (Brussels 22 January 2015) conference as a panel organiser, panel moderator and presenter

http://www.cpdpconferences.org/Thursday22January2015/thursday22january2015.html

Category: Conference/ Panel organization and panel moderation:

Status: Attended/presented

Authors: Mireille Hildebrandt

Title: *"Location Privacy. Which problems, what solutions?"* (Part of the FWO project on Contextual Integrity and the Proliferation of Location Data)

Abstract: N/A

- Presentation submitted and presented at the 'Oxford Lawyers Without Borders' Annual Conference 2015 (Saturday 7th February 2015), in the section '21st Century Rights – modernisation and the Human Rights Agenda',

Category: Conference/ presentation

Status: Attended/presented

Authors: Mireille Hildebrandt

Title: *"Human Rights and Technology Neutral Law"*

Abstract: http://oxlwobconference.wix.com/conference-2015#!about1/c105p

- A publication got submitted and accepted in the Computer Law & Security Review

Category: Publication

Status: Accepted after modifications

Authors: Van Dijk, N., Gellert, R., Rommetveit, K.

Title: *"A Risk to a Right? Beyond Data Protection Risk Assessments"*

Abstract: The proposal for a new European Data Protection Regulation introduces the novel obligation of performing data protection assessments. Since these assessments will become a mandatory exercise for those in control of data processing systems, they will become an important apparatus for the governance of new and emerging information technologies. This tool, and in particular the notion of "risks to the rights and freedoms of data subjects" which is at its core, epitomises the shift from classical legal practice to more risk-based approaches. Merging risks and rights in the proposed fashion could change their meanings into something hardly predictable. This contribution proposes to explore the nature of the relation between both concepts within the assessment of a "risk to a right". It will start by mapping out the various relations that exist between risks and rights in different practices. This should serve to identify gaps in the way DPIAs are currently operationalized and

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might well determine whether the introduction of this methodology in its current form might itself pose a risk to the rights of privacy and data protection. In turn however, it can provide opportunities for improvement and for lessons to be drawn from other practices and expertises that strike different relations between risks and rights, like the ones found in environmental governance and courts.

- A book publication by "IOS Press 2013"

Category: Book publication

Status: Published

Authors: M. Hildebrandt, K. O'Hara, M. Waidner

Title: *"Digital Enlightenment Yearbook 2013, The Value of Personal Data"* ISBN 978-1-61499-294-3 (print) | 978-1-61499-295-0 (online)

Description: The value of personal data has traditionally been understood in ethical terms as a safeguard for personality rights such as human dignity and privacy. However, we have entered an era where personal data are mined, traded and monetized in the process of creating added value - often in terms of free services including efficient search, support for social networking and personalized communications. This volume investigates whether the economic value of personal data can be realized without compromising privacy, fairness and contextual integrity. It brings scholars and scientists from the disciplines of computer science, law and social science together with policymakers, engineers and entrepreneurs with practical experience of implementing personal data management.

The resulting collection will be of interest to anyone concerned about privacy in our digital age, especially those working in the field of personal information management, whether academics, policymakers, or those working in the private sector.

- An ebook publication by "IOS Press 2013"

Category: Ebook publication

Status: Published

Authors: M. Hildebrandt, K. O'Hara, M. Waidner

Title: *"Introduction, in: M. Hildebrandt, K. O'Hara, M.Waidner, The Value of Personal Data, Digital Enlightenment Yearbook 2013",* pages 1-25, DOI 10.3233/978-1-61499-295-0-1

Abstract: N/A

- A publication in the journal "Computer Law & Security Review 29, no. 5 (October 2013)" pages 509–521

Category: Journal publication

Status: Published

Authors: Mireille Hildebrandt and Laura Tielemans

Title: *"Data Protection by Design and Technology Neutral Law"*

Abstract: This article argues that to achieve a technology neutral law, technology specific law is sometimes required. To explain this we discriminate between three

objectives, often implied in the literature on technological neutrality of law. The first we call the compensation objective, which refers to the need to have technology specific law in place whenever specific technological designs threated the substance of human rights. The second we call the innovation objective, referring to the need to prevent legal rules from privileging or discriminating specific technological designs in ways that would stifle innovation. The third we call the sustainability objective, which refers to the need to enact legislation at the right level of abstraction, to prevent the law from becoming out of date all too soon. The argument that technology neutral law requires compensation in the form of technology specific law is built on a relational conception of technology, and we explain that though technology in itself is neither good nor bad, it is never neutral. We illustrate the relevance of the three objectives with a discussion of the EU cookie Directive of 2009. Finally we explain the salience of the legal obligation of Data Protection by Design in the proposed General Data Protection Regulation and test this against the compensation, innovation and sustainability objectives.

- A book section contribution in pages 145-160 in the publication of 2014

Category: Book publication

Status: Published

Authors: M. Hildebrandt

Title: *"The Public(s) Onlife, in: Luciano Floridi (ed.), The Onlife Manifesto. Being Human in a Hyperconnected Era, Dordrecht: Springer"* ISBN 978-3-319-04092-9

Abstract: What is the impact of information and communication technologies (ICTs) on the human condition? In order to address this question, in 2012 the European Commission organized a research project entitled The Onlife Initiative: concept reengineering for rethinking societal concerns in the digital transition. This volume collects the work of the Onlife Initiative. It explores how the development and widespread use of ICTs have a radical impact on the human condition.

ICTs are not mere tools but rather social forces that are increasingly affecting our self-conception (who we are), our mutual interactions (how we socialise); our conception of reality (our metaphysics); and our interactions with reality (our agency). In each case, ICTs have a huge ethical, legal, and political significance, yet one with which we have begun to come to terms only recently.

The impact exercised by ICTs is due to at least four major transformations: the blurring of the distinction between reality and virtuality; the blurring of the distinction between human, machine and nature; the reversal from information scarcity to information abundance; and the shift from the primacy of stand-alone things, properties, and binary relations, to the primacy of interactions, processes and networks.

Such transformations are testing the foundations of our conceptual frameworks. Our current conceptual toolbox is no longer fitted to address new ICT-related challenges. This is not only a problem in itself. It is also a risk, because the lack of a clear understanding of our present time may easily lead to negative projections about the future. The goal of The Manifesto, and of the whole book that contextualises, is therefore that of contributing to the update of our philosophy. It is a constructive goal.

The book is meant to be a positive contribution to rethinking the philosophy on which policies are built in a hyperconnected world, so that we may have a better chance of understanding our ICT-related problems and solving them satisfactorily.

The Manifesto launches an open debate on the impacts of ICTs on public spaces, politics and societal expectations toward policymaking in the Digital Agenda for Europe's remit. More broadly, it helps start a reflection on the way in which a hyperconnected world calls for rethinking the referential frameworks on which policies are built.

- A book section contribution in pages 31-63 in the publication of 2014

Category: Book publication

Status: Published

Authors: M. Hildebrandt

Title: *"Location Data, Purpose Binding and Contextual Integrity: What's the Message? In L Floridi (Ed.), Protection of Information and the Right to Privacy - A New Equilibrium?"* ISBN 978-3-319-05720-0

Abstract of publication: This book presents the latest research on the challenges and solutions affecting the equilibrium between freedom of speech, freedom of information, information security and the right to informational privacy. Given the complexity of the topics addressed, the book shows how old legal and ethical frameworks may need to be not only updated, but also supplemented and complemented by new conceptual solutions. Neither a conservative attitude ("more of the same") nor a revolutionary zeal ("never seen before") is likely to lead to satisfactory solutions. Instead, more reflection and better conceptual design are needed, not least to harmonise different perspectives and legal frameworks internationally. The focus of the book is on how we may reconcile high levels of information security with robust degrees of informational privacy, also in connection with recent challenges presented by phenomena such as "big data" and security scandals, as well as new legislation initiatives, such as those concerning "the right to be forgotten" and the use of personal data in biomedical research. The book seeks to offer analyses and solutions of the new tensions, in order to build a fair, shareable and sustainable balance in this vital area of human interactions.

- A book publication in 2015 by Edward Elgar 2015

Category: Book publication

Status: Published

Authors: M. Hildebrandt

Title: *"Smart Technologies and the End(s) of Law. Novel Entanglements of Law and Technology"* ISBN 978-1-84980-876-7

Abstract of publication: This timely book tells the story of the smart technologies that reconstruct our world, by provoking their most salient functionality: the prediction and preemption of our day-to-day activities, preferences, health and credit risks, criminal intent and spending capacity. Mireille Hildebrandt claims that we are in transit between an information society and a data-driven society, which has far reaching

consequences for the world we depend on. She highlights how the pervasive employment of machine-learning technologies that inform so-called 'data-driven agency' threaten privacy, identity, autonomy, non-discrimination, due process and the presumption of innocence. The author argues how smart technologies undermine, reconfigure and overrule the ends of the law in a constitutional democracy, jeopardizing law as an instrument of justice, legal certainty and the public good. Finally, the book calls on lawyers, computer scientists and civil society not to reject smart technologies, explaining how further engaging these technologies may help to reinvent the effective protection of the rule of law.

## 3.2. Events and Sessions Participation

This section includes the list of events and sessions which the USEMP consortium partners have represented and/or communicated the vision of USEMP during the second year of the project (October 2014 until end of September 2015).

CEA-CERTH:

- Participation to MediaEval 2015 (http://www.multimediaeval.org/mediaeval2015) CERTH and CEA submitted common runs for the Placing and Diversity tasks of this year's evaluation campaigns and the team ranked 1st of 6 participants and 2nd out of 14 participants respectively. These tasks allow the consortium to evaluate a part of the multimedia mining tools developed in USEMP.

CEA:

- Participation to the Digital Enlightment Forum 2015 held on 25 – 26 March 2015 in Kilkenny, Ireland (https://digitalenlightenment.org/)

- CEA represented USEMP during the CAPS 2015 held on 7 – 8 July 2015 in Brussels (http://caps-conference.eu/).

Velti:

- Keynote presentation to ADHOCNOW 2015 conference - Athens, (http://www.netmode.ntua.gr/adhocnow2015/) 29 June – 01 July, Title: "Developing privacy-aware mobile applications in the Era of Ubiquitous Communication, Big Data, Smartphones & Social networks, USEMP paradigm"

- USEMP position paper Presentation in W3C Workshop for Digital & Web convergence in 17-18 September, Tampa, FL (http://www.w3.org/2015/digital-marketing-workshop/agenda.html), Title: "USEMP vision for privacy-aware digital marketing & advertising, a proposal for a useragent-centric model"

iMinds:

- Participation at Net Futures 2015 (http://www.netfutures2015.eu). USEMP Presentation at the CAPS Workshop, Brussels, 25 March 2015.

LTU:

- Ali Padyab, researcher at LTU presented the USEMP project to the students of ERASMUS Mundus Master Program in Pervasive Computing at Luleå, Sweden, 8/10/2014.

- LTU has presented the USEMP project during the SWITS (SWedish IT Security) annual meeting during 10-12 June 2015 in Västerås, Sweden. http://www.cs.kau.se/~simone/SWITS/

- LTU has prepared and submitted an article entitled "Privacy Enhancing Tools: A Literature Review on End-User Role and Evaluation" to "IFIP Summer School 2015 privacy and identity management – Time for a revolution?", Edinburgh, 16.-21. August 2015. Ali Padyab has participated on behalf of LTU in this summer school. www.ifip-summerschool.org/programme/

- Marita Holst and Anna Ståhlbröst gave a presentation at Steinkjer workshop February 2015.

- Project presentation in March 2015, to invited audience during Docent lecture of Anna Ståhlbröst in Vetenskapens Hus, Luleå, Sweden.

- Anna Ståhlbröst from LTU has presented in the Arctic Crowd sourcing week March 12-13 2015, Vuollerim, Sweden.

- Marita Holst, has participated and promoted the USEMP project in Smart city Seminar, May 4-6 2015, Oulu, Finland. http://www.smartseminar.fi/

- Marita Holst gave a workshop talk at IoT Week, June 15-19, 2015, Porto, Portugal, using USEMP as example case.

- Anna Ståhlbröst and Marita Holst gave a workshop talk at Open Living Lab Days, August, 2015, Istanbul, Turkey, using USEMP as example case.

## 3.3. Collaboration with other Projects

### 3.3.1. Clustering activities

In addition to the projects which were already mentioned, USEMP partners will actively survey other existing or upcoming relevant initiatives. For instance, CEA is part of the MUCKE FP7 project, which focuses on large scale text and image mining and will run until December 2015. After adaptation, a part of MUCKE resources (i.e. structured textual and visual resources) proved useful for multimedia mining tools developed in USEMP and their exploitation will be explored.

HWC, LTU and VELTI participate in the H2020 Privacy Flag project started May 2015, were concerns in privacy and personal data protection are addressed in the scope of smartphones, IoT and websites utilizing a crowd sourcing platform. The collaboration between the two projects will be defined based on the Privacy Flag maturity. As a first phase the public deliverables of USEMP are cited in order to depict further collaboration opportunities.

### 3.3.2. Achievements

This year, CERTH coordinated a joint submission with the REVEAL project for the MediaEval 2015 Placing Task. In addition, to leveraging technical resources from both projects, this collaboration was very fruitful since it provided feedback to the task organizers from two different use case viewpoints, i.e. location detection from personal content (and the privacy concerns arising from it) and location detection for public content verification (coming from the REVEAL project).

CERTH has communicated with CAPS cluster project CHEST (http://www.chest-project.eu/) and has provided CHEST team with access to USEMP public deliverables and ideas for collaboration, the communication is in progress.

VELTI has communicated with MyPersonality.org project and Dr. David Stillwell, the tool has been presented and ideas have been discussed for further collaboration based on open questions around OSNs and inferring personality traits.

## 3.4.    USEMP Website

The USEMP website (http://www.usemp-project.eu – Figure 1) has been kept up-to-date utilising features such as: the tweets from the project's twitter account, RESULTS-link which includes a comprehensive list of USEMP-deliverables accessible to download (pdf's only), NEWS-link offering an inside view to the project internal dissemination activities.



*Figure 1. User Empowerment for Enhanced Online Management (home page)*

The statistics of the USEMP web page site, based on the Google Analytics are summarised in Table 2 (depicted information from Figure 2, Figure 3 and Figure 4) and illustrate an encouraging increase of unique visitors to the USEMP website from different countries around the world. Figure 3 shows the year 2 visitors geo-location and Figure 3 presents the number of page views from the beginning of the operation of the Google Analytics service. We observe that the number of visitors is continuously increasing, achieving the goal that has been set for the first and second year, as it is described in Section 2.3. The new visitor's acquisition presented in Figure 5 depicts the top channels of the second year new visitors have viewed the website.

| Period of activity / Website[1] compare factors | Year 1 (Feb 2013- Sep 2014) | Year 2 (Oct 2014- Sep 2015) |
|---|---|---|
| Website[1] unique visitors | 482 | 4934 |
| Website[1] page views | 1805 | 8477 |
| Website[1] visitors countries | 35 | 114 |

*Table 2. Three factors comparison of USEMP website between year one and two*

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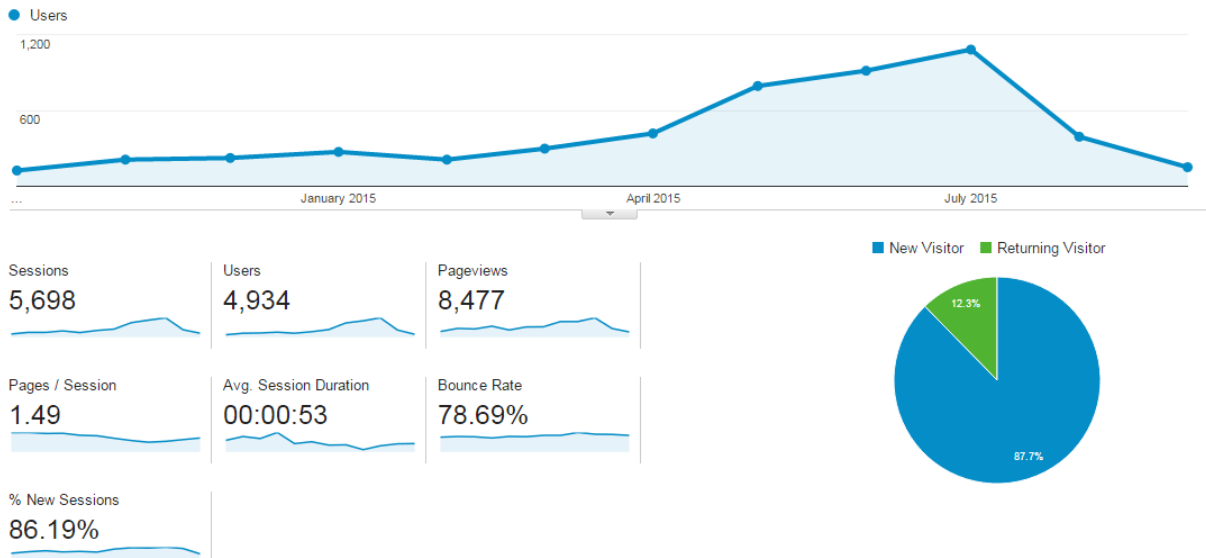[1] The public website URL is: http://www.usemp-project.eu

*Figure 2. Number of unique visitors for the period of October 2014 – September 2015 (Source: Google Analytics)*
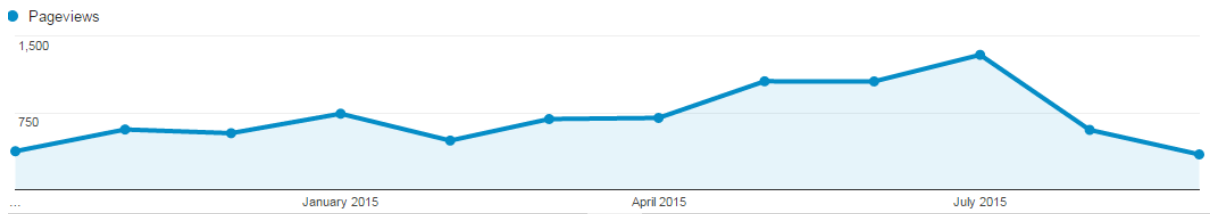


*Figure 3. Number of page views for the period of October 2014 – September 2015 (Source: Google Analytics)*
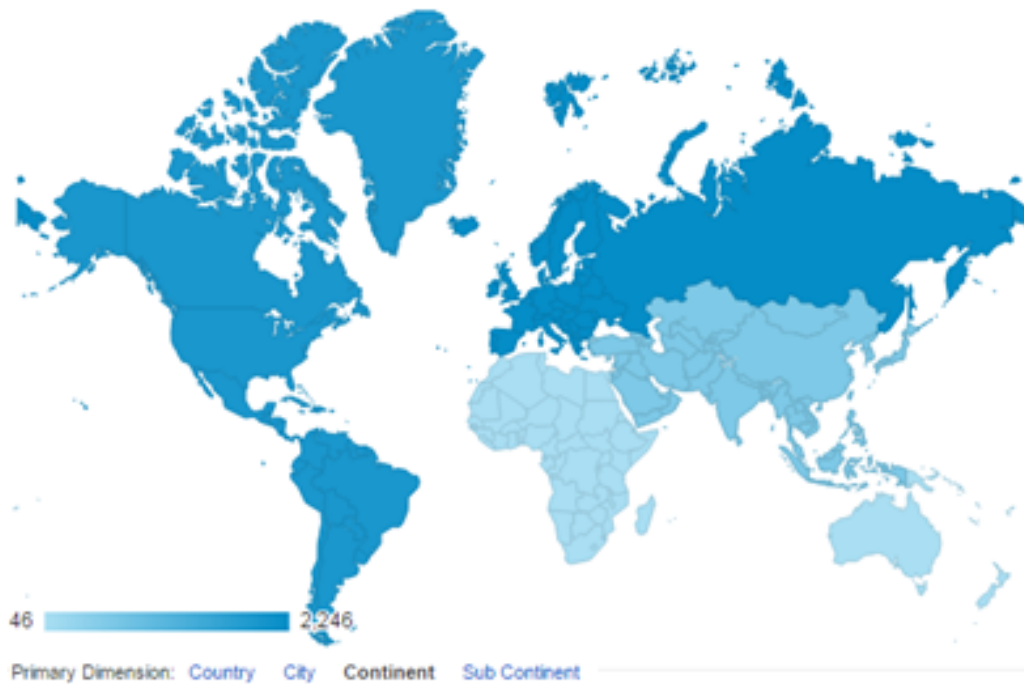


*Figure 4. Geographical distribution of sessions on USEMP web site between October 2014-September 2015 (Source: Google Analytics)*
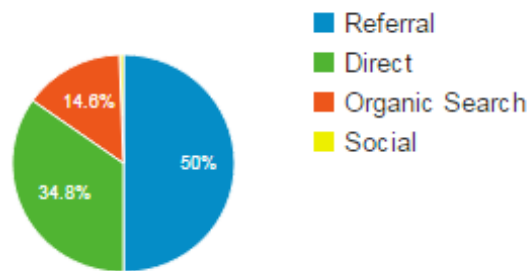
*Figure 5 Top channels for new user' acquisition between October 2014-September 2015 (Source: Google Analytics)*

## 3.5.    Social Media

Social network accounts have been maintained by the USEMP consortium team members to promote the USEMP research results. A summary of the social media activity is shown in Table 3 including the values from Table 2. Overall, as shown below, during the second year of the project we focused on enhancing our social media presence creating a network of people engaged in the social media, following the USEMP news items. The following table and figures present in summary the insights from the different networks.

| Year of activity Media outreach | Year 1 activity Feb 2013 - Sep 2014 | Year 2 activity Oct2014- Sep 2015 |
|---|---|---|
| Twitter[2] overall tweets | 26 (tweets), 12 (followers) | 106 (tweets), 36 (followers) |
| LinkedIn[3] activity | 2 members | 20 members |
| USEMP[4] Facebook activity | 30 (likes), 10 (posts) | 50 (likes), 92 (posts) |

*Table 3. Summary of the Social Media activity comparison table*

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[2] Twitter account name; "usempproject" Twitter account link:
    https://twitter.com/usempproject/status/441139826759196672
[3] LinkedIn account https://www.linkedin.com/grp/home?gid=7469046
[4] The project Facebook account (open page) is https://www.facebook.com/usempfireproject
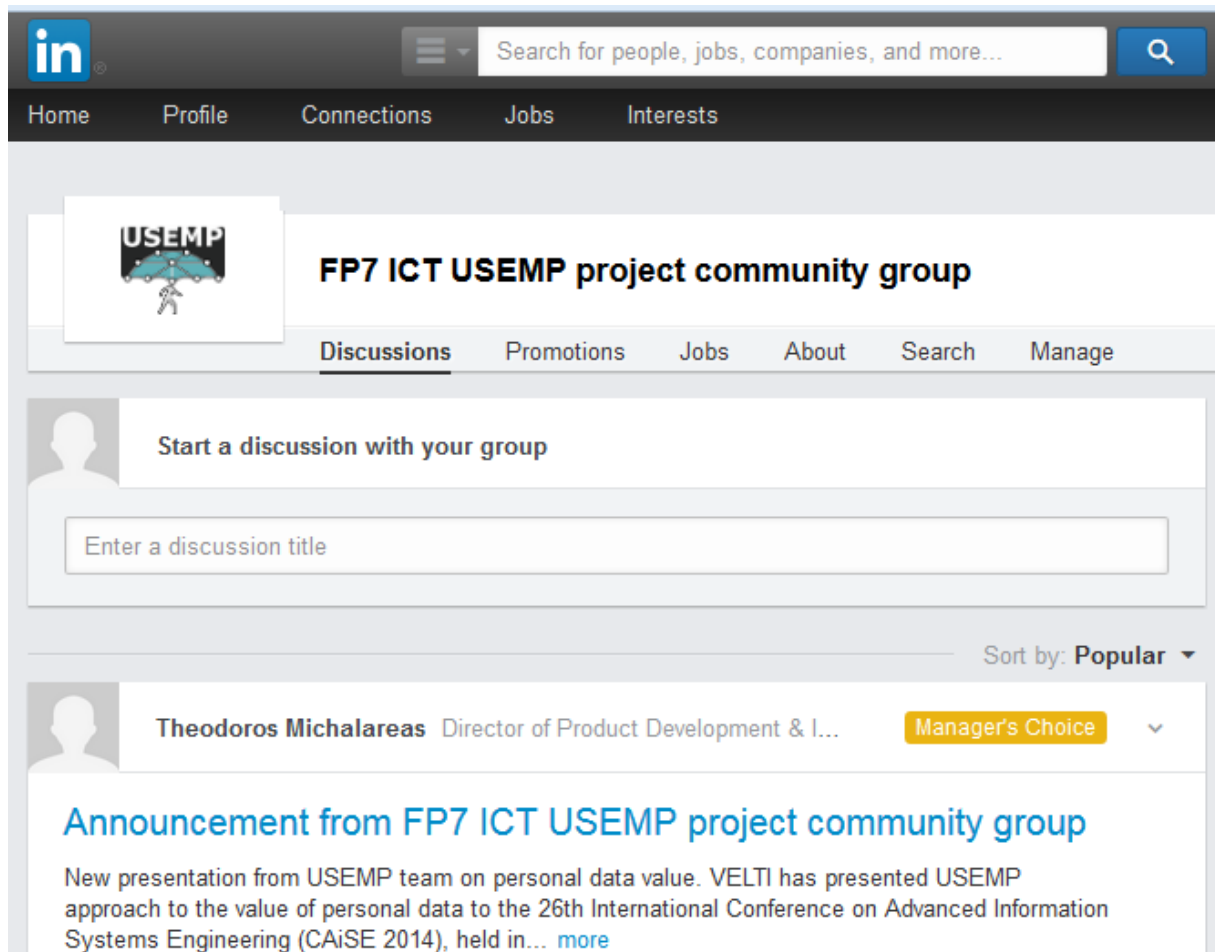
*Figure 6. Front page of the USEMP LinkedIn account[3]*



*Figure 7. Front page of the USEMP Facebook account[4]*

*Figure 8. Total Page likes from USEMP Facebook pages audience*

## 3.6.　Communication Kit

In addition to the existing communication kit, which evolves with the inclusion of new project results, the following items were added to promote the DataBait tool:

- The USEMP Platform tools had a name and logo change agreed among the partners in the consortium meeting in the beginning of the second year of the project. The agreement of logo and name was necessary in order to implement a uniform visualisations theme in the various tools. The new name is 'DataBait' and the logo can be seen in Figure 9 (within the screen of the animated computer)

- Samples of the informative visualisation produced (mainly by VELTI UI team) are shown in Figure 10. Infographic produced for promotional purposes and Figure 11. Infographic produced for explaining DataBait process for processing& extracting privacy indicators from users' personal data

- A new addition to the communication kit is the promotional video describing the DataBait tool capability and a screenshot can found in "Figure 9. Screenshot from promotional Video explaining DataBait at-a-glance"

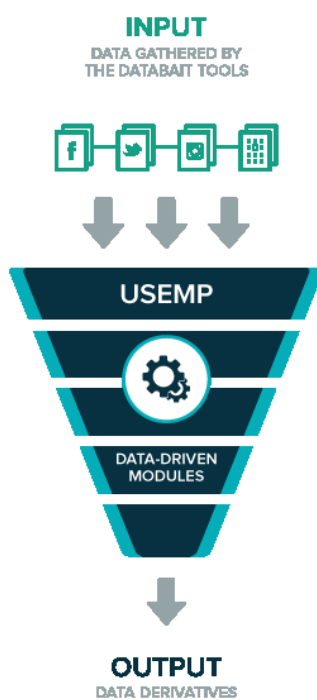*Figure 9. Screenshot from promotional Video explaining DataBait at-a-glance*



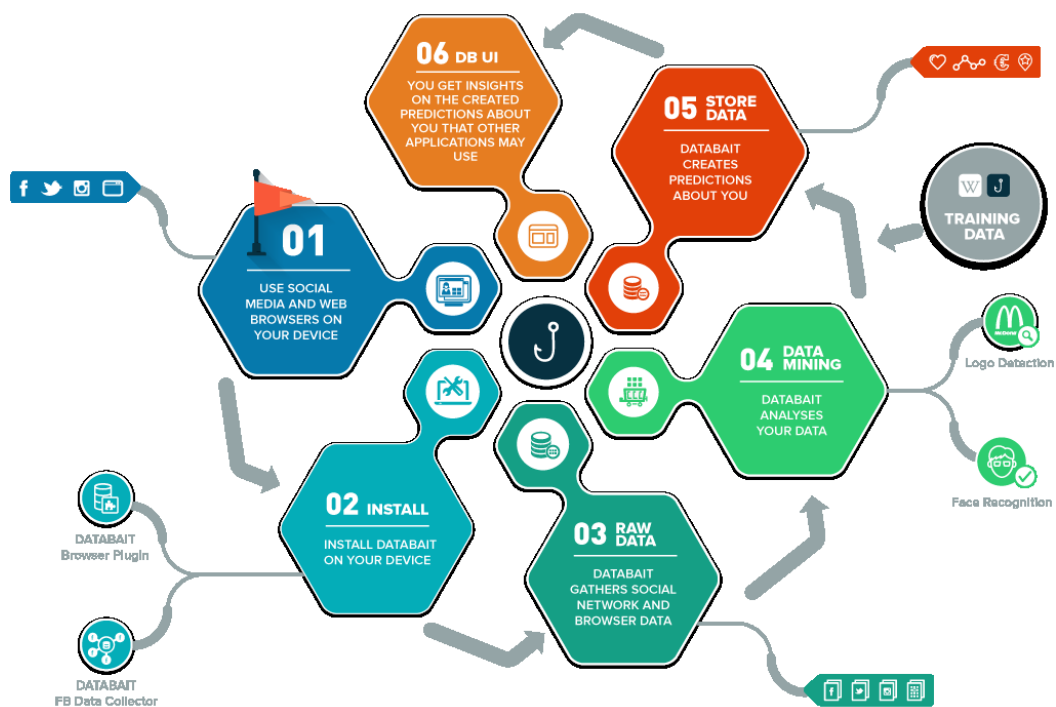*Figure 10. Infographic produced for promotional purposes*

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*Figure 11. Infographic produced for explaining DataBait process for processing& extracting privacy indicators from users' personal data*

## 3.7.    Dissemination Planning

A preliminary list of relevant target publication venues for the third year of the project has been compiled in Table 4. With the availability of working prototypes, event participation will be one of the main activities of the third year of the project. In addition to recurring events, such as CAPS conference, MediaEval evaluation campaign, there are participations that are already planned to the following events that involve contributions from all USEMP partners:

- Annual Privacy Forum 2015 – presentation of USEMP data value, scoring and legal framework

- Amsterdam Privacy Conference 2015 – presentation the USEMP's global vision on digital privacy

- ICT 2015 Exhibition – demonstration of the current state of the DataBait tool

Individual participations are foreseen as follows:

- CEA plans to submit papers to the following scientific conferences: WWW 2016, ICWSM 2016, CIKM 2016, CBMI 2016, ACM Multimedia 2016

- CERTH plans to submit papers to the following scientific conferences: ICMR 2016, ACM Multimedia 2016, CBMI 2016, COSN 2016, SocInfo 2016

- PhD Student Ali Padyab at LTU is attending "Tekniikan päivät Tampereella" event. Research and applied business representatives from all over Finland shed light on the public to what's going on now and what is coming on this 3 day event. LTU is going to present a demo of DataBait tool to the audience. The event held in Tampere, Finland, 22.–24.10.2015.

- LTU is preparing a literature review journal article on Privacy Enhancing Tools for submission to one of high ranked journals in the privacy. The journal candidates for this paper are: International Journal of Information Security and Privacy (IJISP), Information and Computer Security (ICS) and Journal of Information Privacy and Security (JIPS). The planned submission date is mid-October 2015.

- Based on the results of deliverables 8.2 and 8.3, LTU is planning to extend the idea of "Genres of Disclosure", as described in the first year activities, and submit a paper to one the related conferences. The candidate for disseminating the research is: "Symposium On Usable Privacy and Security" June 22-24, 2016 at the Denver.

- W3C 2015 or 2016 TPAC (Technical Plenary / Advisory Committee) Meetings Week – Location to be defined, related to standardization work around privacy and privacy-aware advertising

- IMINDS plans dissemination (a.o. based on research of Deliverable 4.1), by contributing to one or more of the following academic conferences: IAMCR – International Association for Media and Communication Research 2016, July 27-31, Leicester (submission February 2016); CPDP – Computers, Privacy & Data Protection 2016, January 27-29, Brussels (submission October 2015); SOUPS – Symposium On Usable Privacy and Security (in cooperation with USENIX), June 22-24, Denver (submission deadline not yet announced). These conference papers should result in publications in one or more of the following journals: Telematics &

    Informatics (Elsevier); European Journal of Communication (Sage); Communications & Strategies (Digiworld IDATE); Science, Technology & Human Values (Sage).

In terms of collaboration with other projects, follow-up with existing projects will be continued. ICT2015 participation will also be used as an opportunity to find more potential projects in relevant fields to collaborate. CAPS meetings will also be utilized for the same purpose.

| Topic | Relevant Journals, Conferences, and Workshops |
|---|---|
| **Social Sciences research** | *Conferences*: UMAP, INTERACT, IUI, DIS, Creativity & Cognition, VL/HCC, CHI, EASST, IAMCR, AOIR, ICA, EuroCPR, CPDP, SOUPS - Symposium On Usable Privacy and Security, Conference on the Economics of Information and Communication Technologies, Behavioral Decision Research in Management Conference, Conference on Web Privacy Measurement, BlackHat USA, Workshop on the Economics of Information Security (WEIS) , APC - Amsterdam Privacy Conference<br>*Journals*: Telematics & Informatics, Info, New Media & Society, Journal of Computer-Mediated Communication, Communications & Strategies, Journal of Economic Literature, Communications & Strategy, Journal of Marketing Research, Big Data & Society, Social Media + Society; Journal of Interactive Marketing, Information Systems Research, Journal of Comparative Economics<br>*Community*: Network of Excellence in Internet Science (EINS) |
| **Legal studies** | *Journals*: The Modern Law Review; Identity in Information Society; Techne; Science, Technology & Human Values, Computer Law & Security Review, International Review of Law, Computers & Technology<br>*Conferences*: CPDP, APC, APF, Privacy & Identity Lab Conference at CCC |
| **Social media analysis** | *Conferences*: ASONAM, COSN, SocInfo, ICWSM<br>*Journals:* Data Mining and Knowledge Discovery (Springer), Social Networks Analysis and Mining (Springer)<br>*Community*: IEEE CS STCSN |
| **Multimedia information Extraction** | *Conferences*: CIKM, ACM MM, ICMR, ECML/PKDD, ECIR, MMM<br>*Journals*: IEEE Transactions on Multimedia, Multimedia Tools and Applications (Springer), International Journal of Multimedia Information Retrieval (Springer) |
| **Advanced user interface and interaction** | *Conferences*: CHI, HCI, UIST, VRST, Mobile HCI, VisWeek |
| **"Genres of Disclosure" research** | *Conferences*: Paper regarding "Genres of Disclosure" research which is going on in LTU for the following conference: SOUPS 2016 which will be held June 22-24, 2016 at Denver.<br>*Articles in journals*: Planning for the future articles are targeted at one or more of the following journals: The Journal of Information System Security (JISSec), Information Management & Computer Security (MCB UP Ltd), Computers & Security (Elsevier). |
| **Privacy Enhancing Tools with user interaction** | *Journals*: IJISP, ICS and JIPS |

*Table 4. Related year 3 venues for dissemination of USEMP results*

## 3.8.　IP and third parties interactions

Taking into account the USEMP project objectives and vision, the project handles with caution all issues related to the Intellectual and Industrial property and especially in relation to any collaboration with third party service providers. Before any collaboration with third-party services is established, e.g. internet browser services, apart from the technical perspectives i.e. Apps and API's used by the USEMP project, the terms and conditions of the service are　analysed in order to be in compliance with the DataBait Terms of Service. Integration of the USEMP tool in third party platforms is first reviewed by the legal partners within the project consortium before any type of formal establishment of collaboration.

More information related to the IP produced during and after the duration of the project, as well as the collaboration with third party platforms are included in the D9.5 Initial Exploitation Plan and will be updated in D9.7 Final Exploitation Plan.

# 4. Internal Dissemination

## 4.1.    Published Deliverables

Following the project description of work, a number of deliverables were completed in the first year and after the modifications according to the year 1 review where published. A number of deliverables were completed in the second year but without the EC review are marked as pending modifications from review. The list of deliverables distributed to partners during the second period of the project are:

**Publicly available – approved deliverables [these deliverables have been reviewed & approved from project reviewers]**

1. **Deliverable D2.1**, Multidisciplinary Use Case Analysis, **2014-05-06**, this document describes the results of the use case analysis done during the first six months of the USEMP project
2. **Deliverable D4.1**, Social Requirement Analysis, **2014-08-18**, this document presents the methodology used and the results of the first user research
3. **Deliverable D4.2,** User Categorisation of Digital Footprint, 2014-10-27, this deliverable discloses the methodology behind the upcoming quantitative and qualitative research track that will result in a user categorisation of their digital footprint
4. **Deliverable D7.2**, Web & Mobile Interface Templates, **2014-11-28**, the scope of this deliverable is the design of the first version of the Web & Mobile Interface for the overall platform regarding mobile and web clients, based on the requirements that are collected by WP2, WP4 and WP6
5. **Deliverable D8.1**, Pilot Case Requirements and Specification, **2014-10-29**, the objective of this deliverable is to define the plans and activities to perform the pilot studies in USEMP
6. **Deliverable D9.2**, Report on Standardisation and Dissemination, **2014-10-15**, This report describes the status of standardization activities related to USEMP topics and reports on the undertaken standardisation and dissemination
7. **Deliverable D9.3**, Market analysis, **2014-11-14**, This document contains a thorough market analysis on personal data management, presenting the main technology players and providing an overview of the market landscape

**Publicly available – under review deliverables [these deliverables are not yet approved by the European Commission]**

1. **Deliverable D2.2,** Requirements Analysis, **2015-04-13**, this document describes the results of the use case analysis done during the first six months of the USEMP project
2. **Deliverable D2.3,** Content and dataset specifications, **2015-04-21**, This deliverable looks at the variety of data that is used during the development of USEMP tools and that is foreseen to be handled by the USEMP system once it is operational
3. **Deliverable D2.4,** Integration with FIRE Infrastructure, **2015-03-31**, this document provides a specification of the integration of the USEMP tools for FIRE facilities

http://www.usemp-project.eu/wp-content/uploads/2015/05/usemp_deliverable_d2.4_revised.pdf

4. **Deliverable D3.1,** Fundamental Rights Protection by Design for OSN, **2015-03-31**, this document presents an overview of the possibilities for fundamental rights protection by design (FRPbD),

5. **Deliverable D3.2,** Profile transparency, Trade Secrets and Intellectual Property Rights in OSNs, **2015-03-31**, this document relates the analysis of the end users' right to profile transparency (conducted in D3.1) with the database rights and copyright software rights of OSNs and third parties that process user generated data and behavioural data of OSN end users,

6. **Deliverable D3.3,** Copyrights and portrait rights in content posted on OSNs, **2015-03-31**, this document presents a first analysis of the copyrights and portrait rights involved in content posted on OSNs,

7. **Deliverable D3.4**, Coordination of Legal Aspects in USEMP, **2015-05-19**, This document presents the results of the legal coordination and the integration during the first half of the USEMP project,

8. **Deliverable D3.5,** Socio-economic value of personal information, **2015-04-01**, this report presents a socio-economic perspective on the tool for user-centred personal data management as envisioned by the USEMP project,

9. **Deliverable D4.3,** UI Low Fidelity Prototypes, **2014-12-30**, this document presents the methodology used and the results of the initial investigations into the types of visualisation that could be used for the USEMP application (named DataBait),

10. **Deliverable D5.1,**Text mining and linking modules, **2015-04-01**, this report presents a socio-economic perspective on the tool for user-centred personal data management as envisioned by the USEMP project,

11. **Deliverable D5.2,**Visual mining and linking modules, **2015-01-09**, the current deliverable is a technical report accompanying the first version of the USEMP visual mining and linking modules,

12. **Deliverable D5.3,** Multimodal content mining and linking framework, **2015-02-12**, This deliverable is a report which describes the first version of the USEMP multimodal content mining and linking modules,

13. **Deliverable D6.1,** USEMP privacy scoring framework, **2015-01-15**, the current deliverable is a technical report accompanying the first version of the USEMP privacy scoring framework, a tool that aims at raising the awareness of users about the disclosure and value of their personal information,

14. **Deliverable D6.2,** USEMP privacy setting framework, **2015-03-10**, This is a report accompanying the first version of the USEMP privacy setting framework that aims at assisting the USEMP users to better perceive and control the exposure of their data,

15. **Deliverable D6.3,** USEMP Visualisation and Interaction Recommendations, **2015-02-13**, this deliverable describes some of the background and motivation for this work and presents the planning for the remainder of WP6, task 6.3. The goal of the work carried out in task 6.3 in particular, is to develop front-end visualisations of a user's privacy profile, generated based on output from the developed tools for various functionalities of the USEMP web application.

16. **Deliverable D7.1,** Architecture Design, **2015-04-10**, this document defines the architecture design of the USEMP software

17. **Deliverable D9.1,** Project Presentation, Communication Kit, Website, Communication and Dissemination Plan, **2015-03-31**, This document provides the initial version of the project dissemination plan

Public deliverables will be uploaded on the project website ([http://www.usemp-project.eu/documents/deliverables/](http://www.usemp-project.eu/documents/deliverables/)) after their review and approval by the EC.

## 4.2. Project collaborative website

The chosen project collaboration area is PBworks and is utilised by the consortium without any issues or deviations. This serves as the main workspace to share project deliverables and to organize and support management activities, such as regular project meetings.

# 5. Standardisation Activities

## 5.1. Monitoring & participation to standardization bodies

In addition to the standardisation bodies that are included in the D9.2 the following are identified (Table 5).

| Stand. Body | Description |
|---|---|
| W3C DNT working group | VELTI monitors closely the developments of W3C Tracking Protection working group http://www.w3.org/2011/tracking-protection/ in order to understand better what new features are available to build privacy aware tools for the web |
| W3C Social interest group | VELTI monitors closely the developments of W3C Social interest http://www.w3.org/Social/IG in order to understand better what new use cases related to OSNs are promoted by W3C |
| W3C property graphs community group | VELTI participates to W3C property graphs community groups that provides recommendation to W3C for work and business cases on how property graphs can be modelled in web application https://www.w3.org/community/propertygraphs/. This work relates to the development of privacy aware advertising. |

*Table 5. Standardisation activities related to the objectives of USEMP.*

**Additional activities**

VELTI has participated to W3C workshop for the convergence of Digital & Web marketing/advertising presenting USEMP vision for privacy aware advertising and a novice proposal for user-agent based (browser) advertising models. As part of the follow-up activities VELTI will participate to W3C Community group on Digital & Web marketing to be created from W3C to discuss the outcomes of the workshop and will continue efforts along with Adobe, Mozilla & Apple to form a W3C community group to investigate user-agent based advertising.

## 5.2. Standardisation Plan

VELTI as part of its activities consortium partners will contribute project results to W3C community groups and consider input to W3C working groups on privacy and related web technologies. This is an offshoot of work related to USEMP consortium participation to W3C Digital & Web marketing convergence workshop.

In addition to the monitoring of standardisation activities described in D9.2 as a consortium with partner contributions there is no direct path that we can foresee in contributing to the above mentioned standards for the duration of the project. If contributions are made, these will be mentioned in the updated version of this document (D9.6 with deadline M36).

# 6. Conclusions

In this report the USEMP consortium documented the dissemination work progress of the second year and how it fits within the overall plan for the USEMP Project. While the project is at the end of the second year, all partners remained active in sharing information about the project amongst their networks and significant interest in the activities and outcomes of the project has been aroused. Next steps include the continuing effort in promoting the already established use-base of the USEMP platform through the DataBait tool and communicate though continuous dissemination activities via USEMP social network expansion, sharing the media kit, collaborate with more projects, implement and improve the final round of implementation of the DataBait (with the help of living-labs) and of course elaborate further on the achieved goals in standardization and dissemination on month 36.