2nd Workshop on LifeLong User Modelling

Frank Hopfgartner[1], Judy Kay[2], Bob Kummerfeld[2], and Till Plumbaum[1]

[1] Technische Universität Berlin, Germany
[2] University of Sydney, Australia
`http://lifelogging-workshop.org/`

Abstract. Recent technological developments enabled users to create detailed log files containing their everyday activities. These log files, also referred to as lifelogs, open gates for interesting new research challenges, such as the identification of long-term and short-term user interests and behaviour. In the context of this workshop, we focus on an emerging challenge, namely the creation of lifelong user models from a potentially large and diverse data corpus that has been created over a very long period of time. Such lifelong user models pose interesting questions, e.g. regarding the scalability of existing user modeling techniques with respect to the diverse input sources and the pure size of the lifelogs. The importance of this role for the lifelong user model is reflected in the identification of personalised lifelong learning as a Grand Challenge Problem by the Computing Research Association (CRA), United Kingdom Computing Research Committee (UKCRC) and National Academy of Engineering. Following the successful first Workshop on Lifelong User Modelling which was held in conjunction with UMAP 2009 (`http://rp-www.cs.usyd.edu.au/~llum/2009_UMAP09_llum/`), this workshop provided a platform for researchers from both user modelling and lifelogging communities to discuss emerging research trends in this field.

1 Introduction

Nowadays, we are surrounded by technology that assists us in our everyday life. We use GPS devices to navigate from A to B, we use all kind of sensors to track our sport activities, we query the WWW for information while on the go and we use all kinds of devices and software to communicate with our friends and family and share opinions, pictures, etc. With today's technology, we have the capability to automatically record at large-scale the places that we have been to, things we have seen, people we communicate with and how active we are we're already creating a lifelog. This creation of lifelogs offers new possibilities for personalisation but the resulting data volume raises new challenges. Analyzing this large data corpus will enable us to better understand ourselves: What are my habits and interests? Or, even more specific: Do I live a healthy life? Answering these questions can lead to a more conscious lifestyle. One big challenge is the creation and management of long term, even life long, user models These must capture salient aspects about the user over very long periods of time, possibly spanning periods from early childhood into old age. These models have to handle

changing interests over time. Also, such lifelogging models have to be usable by different applications. Other challenges pertain processing big data and identifying user interests, skills etc. and their usage in real world systems like health or recommendation systems.

The workshop improved the exchange of ideas between the different research communities and practitioners involved in the research on user modeling and lifelogging. The workshop will focus on the following key questions:

- What lifelogging techniques exist that can benefit from long-term user modelling?
- How can user interfaces assist to explore lifelogs and/or the underlying user models?
- What personalisation techniques can be used in the context of lifelogging?
- How should privacy issues be addressed when it is possible to create detailed user models covering every aspect of ones life?
- What are the particular representational requirements for life-long user modelling?
- What are the requirements for enabling a life-long user model to be useful for a range of applications?
- Which aspects need to be part of the foundation design of technical solutions that will ensure the user's privacy over their life-long user model?
- How will we ensure users can control and share their life-long user model effectively?
- What are the relevant existing standards that should be part of life-long user modelling and where is there a need for additional standards?

2   Acknowledgements

The workshop keynote was presented by Dr. Cathal Gurrin from Dublin City University, who talked about "Experience of a Lifelogger: Tasks and Challenges". In the references the papers accepted for presentation at LLUM 2013 are presented [1–3].

References

1. Iyilade, J., Vassileva, J.: A decentralized architecture for sharing and reusing lifelogs. In: Second Workshop on LifeLong User Modelling, in conjunction with UMAP 2013. (2013)
2. Tang, L.M., Kay, J.: Lifelong user modeling and meta-cognitive scaffolding: Support self monitoring of long term goals. In: Second Workshop on LifeLong User Modelling, in conjunction with UMAP 2013. (2013)
3. Šajgalík, M., Barla, M., Bielikova, M.: Efficient representation of the lifelong web browsing user characteristics. In: Second Workshop on LifeLong User Modelling, in conjunction with UMAP 2013. (2013)