

Understanding and supporting Personal Information Management across multiple platforms

Paris Stelios Buttfield-Addison
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Declarations

Originality

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Abstract

THE research described in this thesis updates and extends Personal Information Management (PIM) scholarship to account for its cross-platform nature. In doing so, it explores the role of the tablet and similar emerging mobile technologies, and makes design recommendations, validated through prototype development and evaluation, for future PIM-tools to support cross-platform and tablet-based PIM.

In the past decade, PIM has evolved from an activity that largely takes place in the confines of an office, using paper and a personal computer, to a mobile activity involving multiple platforms, such as smartphones and tablets. PIM relates to the acquisition, organisation, maintenance, and retrieval of information —paper documents, files on computers, tablets, and smartphones —and is a constant source of every day challenges and roadblocks for many office-based knowledge workers. Significant research has been devoted to improving specific PIM-tools, such as email or web bookmark management, exploring the ways in which workers organise physical offices, or explorations of the ways that people browse or search their personal information collections. Many of these studies, however, do not contribute to PIM knowledge beyond the specific PIM-tool that they target, or lack a deep empirical grounding in their conception of PIM behaviours. Similarly, the role of emerging, yet rapidly adopted consumer technologies remains largely unexplored, much less in the context of myriad other PIM-platforms workers use to create, manage, and work with their information.

Inspired by techniques commonly employed for user-centred design (UCD), PIM is explored here through three phases. The phases presented employ a variety of data collection tools and grounded-theory based analysis methods. Addressing the shortcomings of past research, this thesis builds a detailed picture of the nature of PIM, with a focus on cross-platform PIM involving tablets. This picture is used as an empirical basis upon which to build an understanding of the tablets and cross-platform PIM, the development of prototypes, and the extension of existing conceptual representations of PIM to account for the new understanding.

Data collection was performed through multiple tools, including online questionnaires, semi-structured interviews, and a case study involving diary studies, prototype deployment with mediated data collection (automatic software logging), and further interviews. Data was analysed using a systematic social research method, combining a grounded theory-based analysis with initial thematic analyses. This work reports on the unique ways in which transfer is performed between the tablet and other PIM-platforms, the role of the tablet in PIM, user experience problems with existing software PIM-tools and the tablet, and recommendations for PIM-tool design

and evaluation.

Findings of the research allow for a deeper understanding of PIM in general, provide a rich understanding of the role of the emerging mobile technologies, and provide new guidance on the design of PIM-tools to serve an increasingly fragmented, cross-platform world.

The major contributions, at the three levels, offered by this work include: observations on the role of the tablet in PIM, the cross-platform nature of PIM, the design and successful evaluation of several PIM-tool prototypes, and a pragmatic application of varied social research methods as means of analysis. The work also provides guidance on appropriate methods for the evaluation of future PIM-tools. A popular conceptual model of PIM is also extended and evolved to allow for its use with cross-platform PIM; this extension is explored and evaluated through the PIM-tool prototypes.

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