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Encouraging Serendipity in Interactive Systems

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Abstract. We regularly make serendipitous discoveries in both online and offline contexts – from stumbling upon a useful website when searching for something completely different to meeting someone with mutual research or business interests in an unlikely place. However, most existing interactive systems do not provide a fertile environment for serendipity to occur. This workshop will identify key requirements and research challenges for designing and evaluating user-centred systems that aim to encourage serendipity.

1 Introduction and workshop objectives

While not usually life-changing like Fleming’s discovery of Penicillin, we often make serendipitous discoveries that involve a mix of chance and insight and lead to a valuable outcome – , particularly when interacting with information and people. For example, consider finding a useful article for a paper you are currently writing while researching a different topic entirely, meeting someone with mutual business or research interests in an unlikely place such as at a conference on a different subject, or applying for a job position after being approached by a company that notices your enthusiastic tweets on Twitter.

Interactive systems cannot directly ‘induce’ serendipity. Indeed, it can be argued that even ‘designing to *encourage*’ it is an oxymoron; as soon as serendipity is ‘engineered’ into a system, discoveries might cease to be regarded as serendipitous even if they lead to a valuable outcome. This is because the system is likely to reduce the amount of chance and insight involved in the serendipitous discovery simply by helping to encourage it. So how can we harness the potential of this fleeting concept? How can we best design interactive systems that surprise and delight users without devaluing users’ perceptions of the role of chance or insight? And how can we best evaluate the success of the systems we design if by designing to encourage serendipity, we might actually make the resultant discoveries appear to be *less* serendipitous than if they had been made without our assistance? With these tensions in mind, this workshop will identify key requirements and research challenges for designing and evaluating user-centred systems that aim to encourage serendipity.

The workshop will be structured according to 3 themes: 1) *understanding* serendipity to inform design (i.e., what do we know and need to know about the conditions that stimulate serendipity?), 2) *designing* to encourage serendipity (i.e.,

what are the key requirements for designing interactive systems so that conditions are optimum for serendipity to occur?), and 3) **evaluating** the success of interactive systems aimed at encouraging serendipity (i.e., what approaches and criteria should we use to judge the success of the systems we design?).

2 Workshop structure and organisation

The workshop will begin with 1 minute introductions by each participant, focusing on serendipity-related interests. Next, multi-disciplinary groups of 3-4 chosen by the organisers based on attendees' research interests will sub-divide by the 3 workshop themes to discuss the *current state-of-the-art* for understanding serendipity, designing to encourage it and evaluating the success of interactive systems that aim to encourage it. Findings will be reported back to the workshop and the links across themes will be discussed as a whole group. After lunch, a group design activity will allow participants to consider how serendipity might be enabled by *future* technologies. Individuals will be asked to think of a novel interactive tool or system aimed at encouraging serendipity, then pair up with someone from a different institution with a similar/complementary idea. The process will be repeated to form groups of 4 and these groups asked to devise a scenario of how their tool/system might be used and reflect on the key requirements and research challenges highlighted by their scenario for understanding serendipity and designing and evaluating systems aimed at encouraging it. Each group will present their scenario and a summary of the requirements and research challenges identified. This will be followed by a plenary discussion on how the identified requirements and challenges might be addressed through future research efforts. Finally, there will be an optional group dinner.

3 Target audience and expected workshop outcomes

To encourage a range of perspectives during discussion, and fitting with this year's conference theme, this workshop aims to 'build bridges' by bringing together up to 20 participants from a mix of HCI and related disciplines (e.g. Design, Psychology, Information Retrieval, Information Science and Computer Science) who share an interest in the *user-focused* design and evaluation of interactive systems that aim to encourage serendipity. We expect most participants to be researchers or PhD students as well as practitioners who are currently involved in developing interactive systems.

We have created a workshop website to facilitate discussion, knowledge-sharing and post-workshop collaboration (<http://sites.google.com/site/serendipityworkshop>). The current approaches and research challenges identified for each workshop theme and future research directions will be summarised on the site and will form the basis of an article to be submitted to *ACM Communications* and one aimed at communicating our findings to practitioners in a magazine such as *Interactions*.

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