The Lift as Curator: A Serendipitous Design Process

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ABSTRACT
The OzCHI24 student design challenge defined isolated experiences as a problem space that can offer potential for serendipitous encounters by redesigning, rethinking or augmenting the experience. Within the allocated twenty four hours for the challenge we investigated how to successfully design for serendipity and arrived at a crucial equation required for all serendipitous encounters: *curiosity* + *sagacity* = *serendipity*. Gathered research from our own serendipitous journey combined with user research culminated into our concept: a lift that offers an opportunistic space which promotes serendipitous experiences on a case by case basis.

Author Keywords
Serendipity, Sagacity, OzCHI24, Dérive, Dead zones, ambient displays, social interaction

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI):Multimedia Information Systems—artificial, augmented, and virtual realities.

INTRODUCTION
The Lift as Curator is a concept derived from a serendipitous design process undertaken during the OzCHI24 student design challenge, which asked for the exploration of the serendipitous as a theme both in terms of design and design forms. By referencing serendipity not just for our goal but utilising it as our process, a deeper understanding of how to design for serendipitous encounters was achieved.

BACKGROUND
Mark Weiser's visionary article (Weiser, 1991) proposes that computing will inevitably become an "integral, invisible part of the way people live their lives", aided by ubiquitous computing. In recent years, our society's move towards ubiquitous computing can be found in the growing number of commercially visible Natural User Interfaces (NUIs). However, with the introduction of technology that holds so much potential, we must also ground ourselves to our human values in its use (Harper et. al., 2008). The continued increase in availability holds much potential in the display of ambient information (Brave et. al., 1998).

OZCHI 2011 Student Challenge Programme, Nov 28 & 29, Canberra, Australia.

Many online content providers, such as advertisers, are constantly researching better methods to compile data from a range of sites (Bilchev et. al., 2003) to effectively present the most personally relevant information to users based on their data, their friends, and others like them (Kobsa et. al., 2001). This computational ability to infer personalities and interests will only become more accurate and detailed with the rise of linked data (Bizer et. al., 2009). Beyond advertisements, these inferences can greatly benefit users in discovering new and personally engaging artifacts.

The personalities people exhibit in their analogue and digital identities can be quite different (Suler, 2004) however, decreased anonymity required of more recent social networks have reduced these differences (Back MD et. al. 2010), though a gap still remains. Though there has been research done into the representation of online identities, there has been little in regards to bridging the gap between analogue and digital identities. Fortunately, with the rise of NUI technologies, there have been projects which can address this, for example a "personal visualisation (ceiling) projection" that is "a novel means of electronic self-expression" (Leung, M., 2011), and a wearable gestural interface 'SixthSense' that can project a user's and others' digital identities onto related surfaces (Mistry et. al., 2009).

DESIGN PROCESS
Throughout much of our earlier process, we researched and generated ideas. Idea generation consisted of brainstorming, quantitative then qualitative methods, across increasingly narrower categories. The efficient division of research areas across different members allowed for the concise presentation of information spanning broad fields. We were adamant on defining our terminology: the non-literal definition of an isolated experience, and a search for the definition and implications of serendipity — a process that significantly directed our concept.

The dérive, an unplanned tour through an urban landscape directed entirely by the feelings evoked in the individual by their surroundings ("Dérive", 2011) is a notion closely tied to serendipity. The word serendipity usually suggests "a happy accident" (Zuckerman, 2011), yet a dérive is influenced not by chance but rather by the urban landscape's psychogeography, and this is crucial to the experience (Debord, 1956). As part of our design process we embarked on our own dérive, which offered more than inspiration — like the dérive, a serendipitous encounter requires more design input than just chance. Our dérive around Sydney was a serendipitous journey and our sagacity combined with curiosity as designers

lead us to numerous potential problem spaces. We learnt that a successful serendipitous experience requires sagacity — chance plays a minor role. Without acuteness, there is no serendipity. From this insight a rule was formulated: *curiosity + sagacity = serendipity*. We believe this formula is crucial to all systems designing for serendipity.

The user research and concept testing process allowed for the discovery of new features and problems and the refinement of processes. It enabled participants to voice their own opinions and interactions with the concept. Throughout the design and refinement of our project, there were three user-feedback loops in our iterative methodology starting with participatory design research, concept testing then concept evaluation.

Discussions with and between participants on serendipitous experiences were augmented with the creation of self-immersion collages, induced focus group discussion, and idea drawing for future concepts. This lead to the idea of "spaces within spaces" or "dead zones", areas which are inhibited for the sole purpose of another, including train platforms, and the awkwardness of a lift ride which became our problem space. Concept testing sessions queried users' current behaviours in the problem space, reactions to the concept, and open-suggestions. Sessions (inscribed, photographed, and audio-recorded) were evaluated and filtered through mind maps, discussions, chalk drawings and networked clustering of scenarios and features. The concept was further tested and evaluated with online Skype interviews with three different age-group users whom were walked through and queried on scenarios aided with sketches.

Overall, participants were willing to interact with other users based on mutual interests. For outliers whom stated a reluctance to interact, the concept could be further adapted for relaxed experiences.

Detailing our concept was achieved through user profiles and role play of user scenarios. Experiencing our space through method acting allowed the contextualisation of ideas and appropriate interactions.

CONCEPT

Our concept redefines the mundane lift experience as an experimental space that promotes a potential serendipitous encounter by unveiling common interests or 'experts' of a domain as curated by the Lift itself.

The Lift as Curator combines both curiosity and sagacity for a successful serendipitous experience. Curiosity is left up to the user; sagacity is a shared responsibility with the curator and users. The Lift, through building up a 'virtual rapport' with frequent users can determine who, when, where, and how is an opportunistic time for a potential serendipitous experience. Through 'serendipity instigators' such as iconography or audio cues, an interaction potential between users is presented, but not forced — in this way, our concept takes care to expand the users' encounter with the world, rather than unintentionally limiting it. The intelligence of the curator deliberately constrains and actively selects the appropriate instigators so as to not burden or dissolve the potential experience.. The ambient serendipity instigators are contextual, recognisable, and intuitive, but require no direct interaction from the user — the interactions that the lift encourages are between the users, not the lift itself.

The implementation of this concept relies on the use of ambient displays on the surfaces of the lift. The personal identification of individuals would also be required (via mobile indicators, e.g. NFC, or lift-centred computer vision). The logical inference of similar individual interests also requires the aggregation and analysis of publicly personal linked data.

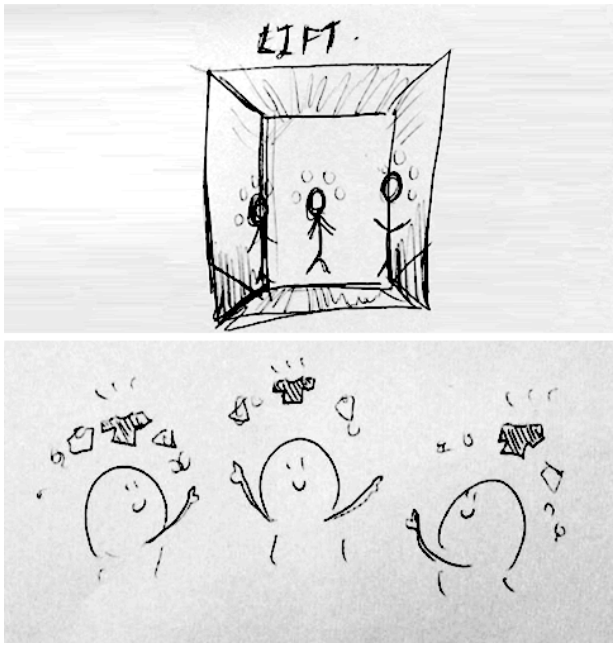

Figure 1. Mock-up of serendipity instigators.

DISCUSSION

User interviews revealed that some people may not be open to the concept of social interaction within a lift. This suggests an examination of user testing to understand how to accommodate for different personality types. Further evaluation could be conducted with 'technology probes' (Hutchinson et. al, 2003), where the effects of serendipity flags and features can be properly evaluated across different users and scenarios over time. The results from these studies and discussions can also trigger changes in the design.

Further discussion is also warranted for an extension of scope beyond the lift into a lobby, or the waiting time before said lift is available. The ethics involved with our concept is another consideration unreachable during our limited challenge time, and would require due research and careful analysis regarding moral implementations.

We believe that *curiosity + sagacity = serendipity* is a crucial formula necessary for the successful design and implementation of systems building for serendipitous experiences. The necessity of curiosity along with sagacity factors was validated by the very design process in which this formula was derived.

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