ABSTRACT
This application invites the user to create short Haiku poems by selecting and arranging words that are displayed onscreen. The web-based application is presented on a touchscreen, and displays a constantly refreshing pool of words taken from the large collection of Haiku poems written by Jack Kerouac in the 1950s. Once the user has created a new Haiku, it is added to the pool of user-created poems, and information is then displayed about Kerouac’s approach to the Haiku form of poetry. The research aim of this project is to explore design approaches that attract interest and then sustain engagement with publicly sited systems, using the themes of “emotional intelligence” and “independent agency”. To this end, two versions of the application have been created, each demonstrating a variation on the design approach, enabling comparative user studies to be carried out.

Author Keywords
Public spaces; interactive installations; optional interaction; engagement; experience design; evaluation.

ACM Classification Keywords
H.5.m. Information interfaces and presentation

General Terms
Human Factors; Design.

INTRODUCTION
Public spaces are becoming populated with entertainment oriented digital media, often in read-only formats such as large screens, but increasingly in interactive formats. Such displays are already commonplace in museums, educational institutions and visitor attractions where they have been the focus of observations conducted by Human Computer Interaction (HCI) researchers such as Hornecker [3]. More recently, interactive displays are being situated in city streets and other urban spaces where interaction design problems become increasingly complex. These include designing to encourage passers-by to notice displays, to understand that they are interactive, and to be motivated to interact [5]. This is a relatively new area for HCI research and it is suggested that much can be learned by exploring interactions with the creative works produced by new-media artists.

BEAT HAIKU DEMO
The work to be demonstrated is titled "Beat Haiku", and is informed by the three-stage engagement process comprising attractors, sustainers and relators, as described by Edmonds et al [1]. This description classifies engagement phases in an interactive art gallery context as belonging to these categories: firstly there are the attractors, aspects of the system that encourage the audience to approach the artwork, secondly there are sustainers, aspects that keep an audience engaged for a period of time, and finally there are the relaters, aspects that encourage an ongoing relationship with the work. In order to promote these stages of user engagement, Beat Haiku utilizes a design framework that suggests animate and intelligent aspects to the user. This work is inspired by a theme of apparent independent agency that interactive artworks often present, where artworks give the impression of intelligent awareness of, and responsiveness to, the presence of the visitor. An example is Golan Levin’s 2007 work Opto Isolator II [4] that consists of a mechatronic blinking eye which responds to the gaze of visitors with a variety of psychosocial eye-contact behaviors.

Figure 1. First screen of the Beat Haiku application.
INTERACTION DESCRIPTION

In designing the Beat Haiku application the aim was to keep the interaction as simple and focused as possible. As can be seen in figure 1, the initial screen comprises of two sections: the words on the left, which are constantly animated, with new words emerging and replacing existing words; and the notepad to the right on which to drag chosen words to form short poems. The visual and animated elements are designed to entice users to interact, and it is intended that the application provides sufficient interest and visual affordance to attract users and encourage them to interact with the game-like interface.

Versions One and Two

There will be two versions of the main screen, with differences in the behaviours and animations. Version One (the control) will incorporate a fairly simple, ambient animated effect to signify that the application is running, and that the words are mobile and can be moved by the user. The background graphic remains unchanged throughout the interaction phase. Version Two implements an experimental design framework as discussed in [2]. This version incorporates more complex animation effects, designed to suggest a “lifelike” aspect to users. Also included is responsive visual imagery; the background graphic changes in appearance according to the emotional tone of the poem that the user creates. The words presented by the application each have a value attributed to them, according to their emotional quality (light, dark or neutral words). As the emotional value of the user-created poem becomes lighter or darker, the background graphic will adjust gradually to suit the mood of the poem. This effect is intended to suggest a form of intelligent responsiveness to the user. Evaluations are underway to discover whether the versions presenting these additional features promote more engaging and sustained interactions.

The second screen is the same in each version, containing the user’s newly created Haiku, alongside a rolling display of other user-created Haiku. There is also information about the Haiku form of poetry as viewed by Kerouac, and links to further information if users wish to know more.

After a short period of inactivitiy, the application reverts to display the first screen in each version. It is integral to the design vision that the user passing by the application is drawn to the potential interaction as an engaging activity in itself, with the further information presented only once this interaction phase is complete.

EVALUATION

As mentioned, this application has been designed to explore a theoretical framework developed by the author. This “lifelikeness framework” includes designing features implying animate aspects of the systems, such as animalistic movements, or those that suggest sentence and independent agency. It is proposed that these aspects may prove to be useful in the design of public installations; as attractors to initiate interaction, and as sustainers, to promote positive engagement with the system.

The application will enable evaluations to be carried out over extended periods “in the wild” in natural settings such as exhibitions and foyer areas of public buildings. As well as observational and qualitative data collection, the two versions include data tracking functionality that enable quantitative measures to be recorded. Together this data will enable a direct comparison between the levels of engagement promoted by the two versions of the application.

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REFERENCES

5. Müller J., Walter R., Bailly G., Nischt M., Altz F., Looking Glass: A Field Study on Noticing Interactivity of a Shop Window. CHI’12, Austin, Texas, USA. ACM 978-1-4503-1015-4/12/05