

Meet Eater: Affectionate Computing, Social Networks and Human–Plant Interaction

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ABSTRACT

The Meet Eater is a physical computing project which explores how social networks can be used to convey anthropomorphic qualities of an inanimate object. The installation consists of a real garden of plants with a synthetic ecosystem that automatically triggers a water pump when its ‘social needs’ are being sustained on its own Facebook page.

Author Keywords

Physical Computing, Tangible Media, Affectionate Computing, Human-Computer Pet Interaction, Ambient Displays, Anthropomorphism, Social Networking Services, Art, Design

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

The purpose of the Meet Eater is to further understand the relationships people form and maintain through online social networking services. The installation plays on the adage that plants respond to “talk, attention, and affection” (Fechner, 1848) popularised in more recent times by one of the world’s most prominent horticulturalists, Charles [Prince of Wales] who believes that talking to his plants encourages growth (BBC News, 2009).

CONCEPT

The Meet Eater further explores Tangible Bits (Ishii & Ullmer, 1997) by providing an installation which exists in two contexts: “here” as a real garden of plants and “there” on cyberspace as a page on the online social networking service Facebook (webpage available at <http://www.facebook.com/meeteater>). The gardens’ watering patterns are dependent on the amount of social interaction the page receives in a given day. A (thriving) pot plant can be re-visualised as an ambient display of its owners’ dedication to its growth. A well-kept plant is more significant than a mere ornament for a household; it becomes mapped to its carer’s sense of place and understood reality (Dourish, 2006).

BACKGROUND

The Meet Eater further explores Human-Computer Pet Interaction [HCPI] (Lee & Cheok, 2006) to create a connection between a community of people using social media and individuals visiting the physical installation.

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Figure 1: The Meet Eater Installation at The Edge, State Library of Queensland, Brisbane, Australia

Plants as a Visualisation Medium

Spore (Easterly, 2004) explores the economic responsibilities of large corporations by visualising the fluctuating value of stock prices via a rubber tree. The synthetic ecosystem delivers nutrients when the company reports a profit to its shareholders. Babbage Cabbage (Fernando et al, 2009) visualises the state of social, personal and ecological issues by altering the appearance of a cabbage plant. The system converts qualitative data to quantitative values and transitions the cabbage to a new colour by altering its pH levels.

Plants as an Input Mechanism

Interactive Plant Growing was developed by Christa Sommerer & Laurent Mignonneau at the Institut für Neue Medien in Frankfurt, Germany. Participants are sensed through electronics in the plants. Data gathered “controls different parameters of an artificial growth-program, which is visualized on a screen in real-time” (Institut für Neue Medien, 1998). By interacting with the plants directly, a virtual garden develops.

Communicating Plant Requirements

A myriad of physical computing projects exist which attempt to personify plants. Most projects are based on extrinsic data and evaluate the state of the plants’ environment (e.g.: soil quality, moisture) rather than evaluating the life of the plant as a human would by identifying if a plant has wilted or lost its colour. The original concept for Botanicalls (Faludi, Hartman, London, & Bray, 2009) utilises Voice over IP to communicate between plants and their owners. The plants called their owners when their watering needs are not being met. This project has now been commercialised into an electronic device which broadcasts a plants’ water needs via Twitter (<http://twitter.com/botanicalls>).

Anthropomorphising Entities

ZiZi [the Affectionate Couch] (Barrass, 2008) is an ottoman which engages with its audience by purring and crooning when stroked and yelping when ignored. The installation builds on the field of Affectionate computing (Schiphorst, 2006).

TANGIBLE DESIGN

The internal architecture of the cabinet is analogous to a household sink with two connecting PVC pipes. A reservoir sits inside the installation with a submerged water pump that (when actuated) trickles water through an irrigation system into the pots above. Each pot detects when a plant or its soil is touched by a person. When physically interacted with, the Meet Eater begins to whirr with excitement.

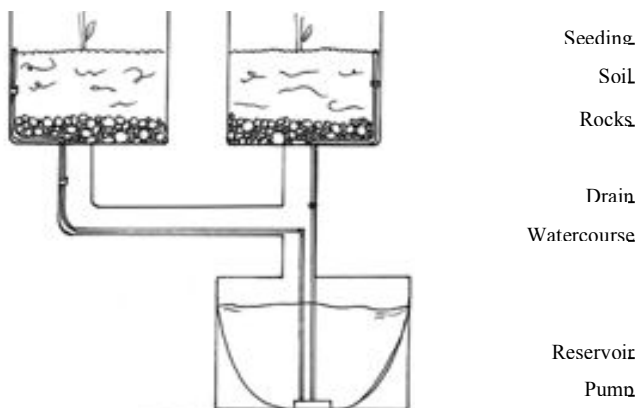


Figure 2: Internal design of the installation.

IMPLEMENTATION

The plants are fed at two-hour intervals depending on the level of social interaction the plant accumulates on Facebook (see Figure 3). An increase in the number of fans or posts on its wall actuates a pre-determined amount of water to be pumped into the pots per post. The installation is controlled by an Adobe AIR application which queries Facebook at two-hour intervals to check the amount of interaction received. When thresholds have been met, the application actuates the water pump in the reservoir through an Arduino microcontroller.



Figure 3: A sample of the Meet Eater's Facebook page.

RESULTS

Meet Eater's progress so far is in line with the results produced by Spore (Easterly, 2004). The plant is currently in its third iteration after drowning in a sea of love and water from an overwhelming amount of social interaction received online. While the former of the two deaths can be credited to over-stimulation and low watering thresholds, the latter death can be attributed to a substantial increase in the number of Facebook fans after the design intervention was published on several social media news blogs and over 45 international news publications.

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REFERENCES

- Barrass, S. (2008). Creative Practice-Based Research in Interaction Design. *ACM Computers in Entertainment*, 6 (3), Article 33.
- BBC News. (2009). *Can talking to plants bear fruit?* Retrieved from http://news.bbc.co.uk/2/hi/uk_news/7973727.stm
- Dourish, P. (2006). Re-Space-ing Place: "Place" and "Space" Ten Years On. *Proceedings of the 2006 20th anniversary conference on Computer supported cooperative work*, 299 - 308.
- Easterly, D. (2004). Bio-Fi: Inverse Biotelemetry Projects. *Association for Computing Machinery*, 182-183.
- Faludi, R., Hartman, K., London, K., & Bray, R. (2009). From Botanicalls: <http://www.botanicalls.com/>
- Fechner, G. T. (1848). *Nanna oder über das Seelenleben der Pflanzen*. Leipzig: Leopold Voss.
- Fernando, O. N. N., Cheok, A. D., Merritt, T., Peiris, R. L., Fernando, C. L., Ranashinge, N., Wickrama, I., & Karunanayaka, K. (2009). Babbage cabbage: Biological empathetic media. *Proceedings of VRIC Laval Virtual* (pp. 363-366). Laval, France.
- Institut für Neue Medien. (1998). *Documentation (booklet 1995-1998) of the INM-Institute for New Media*. From <http://www.inm.de/index.cfm?siteid=118>
- Ishii, H., & Ullmer, B. (1997). Tangible bits: towards seamless interfaces between people, bits and atoms. *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 234-241). Atlanta: Association for Computing Machinery.
- Lee, S. P., & Cheok, A. D. (2006). A mobile pet wearable computer and mixed reality system for human-poultry interaction through the internet. *Personal and Ubiquitous Computing*, 10 (5), pp. 301-317.
- Schiphorst, T. (2006). Affectionate Computing: Can We Fall in Love with a Machine? *IEEE MultiMedia*, 13 (1), 20-23.