

IMD Senior Project Proposal
DRAFT 1.0

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Eric Chan 100646231
Hannah Johnston 100613068
Alicia Landry 100660819
Jordan Shaw 100646411

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1. Project Description

Our team is interested in using this interactive art format as it will allow us to observe, from a global perspective, the social collectiveness of different moods and emotions of individuals.

We will build an environment with screens and projectors that participants can walk through. On the walls, 'mood words' will be projected at varying sizes, moving and dynamically growing and decaying based on user input through several methods. --

1. Direct user input of words (using text messaging/mobile devices and computer consoles within the installation and via the website)
2. Through facial expression (using image processing/analysis)
3. Through body movement (using accelerometers or Wii-style interface)

All of the words will combine in the environment, however the dominant mood (the mood most inputted by users) will also alter the colours and music/sounds of the environment. In this way, all users will be able to influence their own environment, but only to a certain extent. The mood will be most heavily influenced by the majority (or global) mood.

2. Main Project Elements

We hope to incorporate a variety of media and interaction methods. The following features will be investigated further as to their suitability for inclusion in the installation:

Types of user input:

- **Text:** Users will be able to directly enter mood words in order to influence the installation. They may be entered:
 - **Within the Installation:** Users can enter mood words through computer consoles setup within the installation itself.
 - **From the Web:** Globally, visitors will be able to influence the installation by submitting mood words through the project website.
 - **Through SMS:** Globally, users will be able text mood words to the system via blackberries, cell phones, and other mobile devices.
- We hope to make our installation global and thus capable of accepting multi-lingual input from all over the world.
- **Image:** Within the installation itself, users will be able to input a facial expression (via web cam most likely). The image of the face will be converted into text as a mood word.
- **Sound:** Within the installation itself, users will be able to input sound expression (via microphone). The captured sound will be converted into text as a mood word.

- **Motion Sensor:** Within the installation itself, users will be able to input expressive movement (via accelerometer device or controller). The captured movement will be converted into text as a mood word.

The project will output (project) these mood words in an interesting way on the walls of the installation. Mood light and sound will also be added, based on dominant moods. Further to our research of appropriate sounds and colours for moods, we plan to approach professional musicians in order to help us establish what sounds might be most appropriate for given moods.

3. Project Genre

Our project fits under the interactive art installation genre. We are designing an exhibition-style environment, in which users can passively walk through, or influence it.

Wikipedia defines **installation art** as:

...Art that uses sculptural materials and other media to modify the way we experience a particular space. Installation art is not necessarily confined to gallery spaces and can refer to any material intervention in everyday public or private spaces. Installation art incorporates almost any media to create a visceral and/or conceptual experience in a particular environment. Materials used in contemporary installation art range from everyday and natural materials to new media such as video, sound, performance, computers and the internet. Some installations are site-specific in that they are designed to only exist in the space for which they were created.

And **interactive art** is defined as:

...A form of art that involves the spectator in some way. Some sculptures achieve this by letting the observer walk in, on, and around the piece. Other works include computers and sensors to respond to motion, heat or other types of input. Many pieces of Internet art and electronic art are highly interactive. Sometimes visitors are able to navigate through a hypertext environment; some works accept textual or visual input from outside; sometimes an audience can influence the course of a performance or can even participate in it.

4. Tools and Technologies

Our project will require the following technologies and tools:

Hardware Components:

- Web cam
- Microphone
- Accelerometers/Wii remote
- Projectors (multiple)

- Projection screens (multiple)
- Main computer
- Computer console 'stations' within the installation

Programming Environment:

- Image processing software
- Interaction of hardware components

5. Market Analysis

Locally, we have the **Sound and Light Show** on Parliament Hill (no interaction).
http://www.canadascapital.gc.ca/bins/ncc_web_content_page.asp?cid=16297-16298-22878&lang=1

Our project has been inspired by a wide variety of interactive art from the web:

Eyebeam is an art and technology center that provides a fertile context and state-of-the-art tools for digital research and experimentation - <http://eyebeam.org/>

Graffiti Research Lab outfits graffiti artists with open source technologies for 'urban communication' - <http://graffitiresearchlab.com/>

Dan Shiffman, Professor from the NYU Interactive Telecommunications Program, using processing to display a continuous image across multiple screens - <http://www.shiffman.net/2007/03/05/tech-trek-tv/>

Chronotext - Software experiments exploring the relation between text, space and Time
<http://www.chronotext.org/>

Interactive Projection

Vinyl Workout @ remf - http://muonics.net/site_docs/work.php?id=39

Interactive Projection with SMS

TXtual Healing - <http://www.txtualhealing.com/>

Large-Scale, Outdoor Projection Display

Projection Bombing - <http://www.instructables.com/id/EIDH3WPPZSEPD7QVIA/>

Digital Projection Interaction Videos

Interactive water projection - http://www.youtube.com/watch?v=t2Q_mHxuCOI&NR

Interactive soccer projection - <http://youtube.com/watch?v=vRi0m329iL4>

Sending SMS with PHP

<http://www.sephiroth.it/tutorials/flashPHP/sms/>

6. Group Structure

Our project is heavily programming based and as such, all team members will be required to take on a significant programming role.

Collectively our team will:

- Design the overall appearance and construction of the installation
- Establish appropriate conversions for mood words, sounds, and colours.

Specific Team Member Responsibilities:

- Eric will be primarily responsible for the use of image input for the installation.
- Hannah will be responsible for the use of motion input for the installation.
- Hannah and Eric will be responsible for the output display of mood words.
- Alicia will be responsible for the use of sound input for the installation.
- Jordan will be responsible for the backend and website components of the installation.
- Alicia and Jordan will be responsible for the use of text input (SMS, website, etc).
- Hannah and Alicia will lead project organization documentation.