DreamScope Catcher: a Touch Sensitive Interface to Catch Dreams

Mara Dionisio
Madeira - ITI,
University of Madeira,
Campus da Penteada, 9000-160
Funchal, Portugal
msgdionisio@gmail.com

Valentina Nisi
Madeira - ITI,
University of Madeira,
Campus da Penteada, 9000-160
Funchal, Portugal
Valentina.Nisi@gmail.com

Paulo Bala
Madeira - ITI,
University of Madeira,
Campus da Penteada, 9000-160
Funchal, Portugal
paulo.bala@gmail.com

Nuno Nunes
Madeira - ITI,
University of Madeira,
Campus da Penteada, 9000-160
Funchal, Portugal
Njn@uma.pt

Rui Trindade
Madeira - ITI,
University of Madeira,
Campus da Penteada, 9000-160
Funchal, Portugal
rui.antero.trindade@gmail.com

Time's Up
Industriezeile, 33b
4020 Linz, Austria
info@timesup.org

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Abstract
Dream Scope is the interactive, stand alone, self-contained portion of a bigger Art installation named Lucid Peninsula. The goal of the installation is to offer a way for people to experience the future through a physical interactive installation. To achieve this aim we designed and developed the interactive DreamScope device, while the Time's Up collective designed and built the physical installation. On one side with the DreamViewer binoculars enable participants to see the Lucid Peninsula fictional world and absorb data relating to factors such as air quality, presence of plant and other life forms, etc. On the other side of the installation, the audience will be able to borrow mobile devices (DreamCatchers) and 'catch' the dreams of the inhabitants of the peninsula, which are mixed with memories of the world before it was transformed.

Author Keywords
Mobile Touch surface, interactive art installation, interaction design, experience design

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

Figure 1: In this image, a participants is looking through the DreamScope viewer in the top slice of the image. In the middle slice and bottom slice, a view of what can be seen from the binoculars interface of the DreamViewer is shown.

Figure 2: In this image, a participant is using the DreamViewer device outdoors capturing a dream. In the bottom part of the image a participant is exploring the dream by means of touch interaction.

Introduction

Lucid Peninsula is an interactive installation designed to immerse participants in a dreamlike, post-apocalyptic storyworld where changes to the Earth's atmosphere have led to the emergence of new species, conditions, and ways of life. Fragments of memories and dreams belonging to the inhabitants of the previous era still linger in this new world, hovering over certain locations. The Lucid Peninsula storyworld where the lucid dreaming takes place emerged from a future scenario planning activity undertaken by artists and designers from the FoAM and Time's Up collectives in June 2014. We worked closely with these artists to create the Lucid Peninsula interactive physical installation. Lucid Peninsula is a part of Future Fabulators, an EU-funded project that aims to explore and prototype possible futures within a cultural framework. [1]

The goal of the installation is to offer a means for people to experience the future by bringing to life a storyworld the audience can interact with, reflect on, and interrogate with questions such as: Could I live in this world? Could this really happen? How would I adapt?

Lucid Peninsula storyworld

The Lucid Peninsula is a futuristic world that feels familiar, yet strange: an eternal twilight of dreamlike metaphors and shape-shifting beings. Environmental living conditions have radically changed and the search for green plants has become crucial for survival. The outside air is toxic: not immediately lethal, but requiring special gear and treatment after exposure.

Dreamscope Mobile Application

To give the public a chance to experience the Lucid Peninsula firsthand, we designed a physical installation and an interactive environment. A special device called a DreamScope, comprised of Dreamviewer binoculars and a mobile Dreamcatcher, will guide people in the discovery of this world. Ideally, the equipment will be located in a special room, dedicated to the detoxification and recovery of air force pilots who sweep the peninsula in search of rare green plants and need to undergo a special purification treatment before they can fly the next mission. For the scope of the ITS demonstration we will not recreate the pilot room, but set up the dream scope viewer and catcher in a corner of the room where the audience can easily interact with both devices and switch from sweeping the Peninsula landscape and catching the dreams and memories of its inhabitants.

Lucid DreamScope Viewer

The DreamViewer enables the audience to glimpse life in the Lucid Peninsula. The device is used by pilots in the recovery room to check outside conditions (temperature, humidity, visibility), make sure it is safe to exit the room, and find locations with heightened dream activity.

With the DreamViewer, visitors can enjoy a 180-degree panoramic view of the outside world, as if they are looking through a window of the room. The 3D world depicts a desert-like landscape with orange sky and large red sun. The 3D landscape simulates the landscape outside the recovery room, highlighting buildings that the user can explore in the city. Users can zoom in on buildings in the landscape to apprehend more details of the structure. This is possible through

the use of a Google cardboard virtual reality kit. [2] The software was built using the Unity game engine and receives input from the compass and the accelerometer in order to show the virtual environment of the Lucid Peninsula.

Figure 3: the DreamViewer device, allowing participants to see the Lucid Peninsula Landscapes

Lucid DreamScope Catcher

With the Dream Catcher visitors will discover the dreams and memories of the Lucid Peninsula inhabitants. The Dream Catcher runs on a mobile device through an Android application built using the Unity game engine. It uses image recognition software to trigger the virtual environments where the characters' dreams are narrated as voice overs. By tapping the mobile device screen, users create circular viewing portals, that show what the Lucid Peninsula world looked like at a different time. An audio narration recounts the dream mixed with memories from the dreamers. The dreams themselves focus on the past and how the world once was (which is a reference to our current world) and the nostalgia the present inhabitants feel about such distant times. Such memories are mixed with dreamlike narrations of their present lives.

In the ITS demo space we envisage setting up a large panoramic image of the Lucid Peninsula (printed from the Dream Viewer 3D landscape). Ideally the large poster will be positioned on a wall near the Dream Viewer device. On this big poster, the audience will find a special icons placed near the depicted buildings where dream activity has been detected (through the previous scanning of the landcape with the Dream Viewer). Upon capturing such icons (or markers) the mobile device will load the 3D environment of such location and where the dream is kept. Upon touch of the screen of he Dream Catcher device the dream will play. Each touch of the screen will reveal a fragment of the dream, and a fragment of the past of the Lucid Peninsula, how this world used to be when the memories were made. Such a juxtaposition of past and present and dream and memories creates an atmosphere of nostalgia but at the same of awareness that our world might not always keep as it is, and that we ought to care for it, cherish and respect its richness and natural beauty.

Figure 4: the DreamCatcher device, closed. See Fig.2 for how it looks once opened.

Conclusions

The Lucid Peninsula full installation was successfully exhibited in Austria and Romania, in the context of the exhibition Intime Raume 2014 by IMA [3] and Future Fabulators exhibition by AltArt [4]. The diverse audience found the Dreamscope entertaining and thought-provoking.

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