KARIGI

PROJECT PROPOSAL

OPEN OPROEP ADE SOUNDLAB 2015

SUE

ZESBAANS

KARIGI

Central to ceremonial and recreational life of the Inuit [Eskimo] was the Karigi, a dance house built temporarily for the winter season. Shamanistic performances and ritual and recreational dancing occurred there. (..) Although there are considerable differences in culture and race between the Inuit and Native Americans, the music of the two groups is stylistically related.

Oxford University Press. (2007). Inuit - Music and Dance.
Retrieved from http://www.oxfordmusiconline.com/public/page/Inui

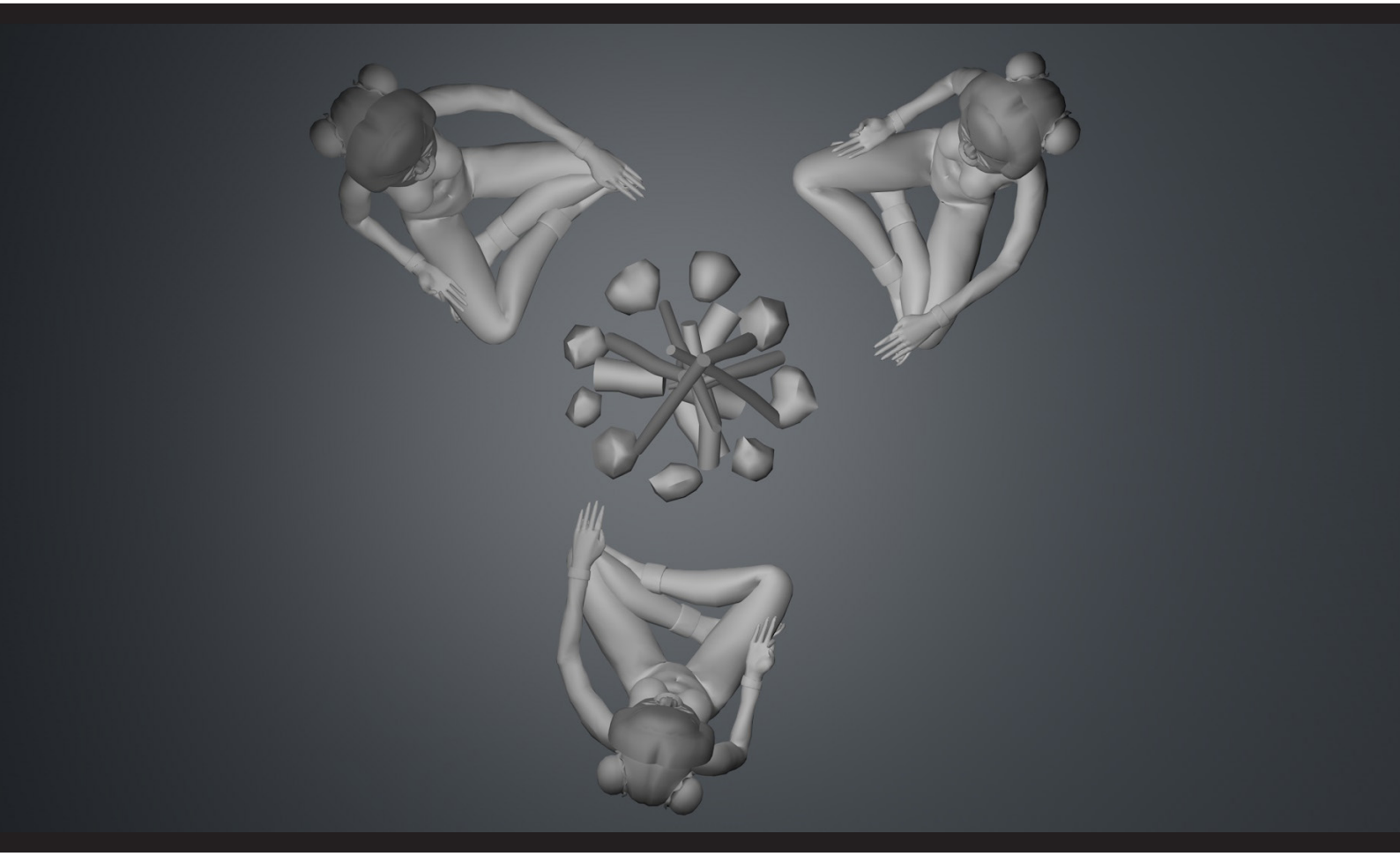
SYNOPSIS

KARIGI is an interactive multiplayer musical installation. Offering users a unique way of experiencing and interacting with electronic music, displayed through a virtual reality headset.
The experience starts by designing an exposition space with a real life ornamented Tipi tent, creating intrigue and a sense of curiosity with its look and feel of a spiritual ancestral place combined with a modern electronic twist. A place where visitors can come inside and sit down in peace to experience electronic music in a different way.

Inside *KARIGI* there is room for 3 people to take place around a (fake) campfire. Once seated down around the fire the participants are presented a decorated “shaman-mask” with a virtual reality headset (Oculus Rift DK2) and a pair of stereo headphones installed inside. The participants are then asked to put on the masks and stare into the fire.

From this moment on the 3 participants are inside the virtual reality version of the tipi. In this virtual space the participants are still able to “see” each-other sitting around the campfire. The participants are able to see their own hands as well as the movement of the other 2 participants' hands and heads. The virtual experience consists out of multiple “levels” where the participants can float through. The participants are able to control the experience by lifting up and down their arms and by looking around in virtual space.

The goal of the experience is to let users play and discover the different levels of musical complexity. The higher the participants “float” the more complex the musical experience will become and the more melodies they can unlock to enrich the music.
The graphics and exposition space will be designed in a fresh, modern view on spiritual native American & Eskimo culture, using a limited color palette and combining physical objects such as the tipi, masks and other objects.



INTERACTIVE SCRIPT

The participants are able to interact with the experience in two ways;

1. By moving their hands up and down in real-life the participants are able to float up and down in the scene. It is important however that the participants are synchronized with each- others hand movement. Therefore the participants will have to work closely together and observe each-other in order to float up or down properly in the scene.

2. Floating objects circle around the participants in 3D space. These ellipses of floating objects are the key-ingredient to make the music more interesting. The user is able to activate these objects simply by looking at them for a second or 2. These activated sound objects will enrich the music by playing new melodies - synchronized and in harmony with the base-sound of the current level.

From a visual point-of-view the different levels are visualized as “layers of space”.
Level 1 starts at ground level, level 2 high up in the mountains, level 3 in the clouds, level 4 in space and the final level is in intergalactic deep space where everything comes together as a whole. This is where the partcipitants eventually experience the final musical exctasy while travelling through a worm hole that will bring them back inside the tipi.

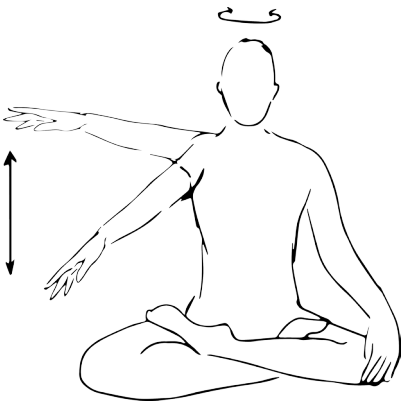


figure 1. Interaction with hand and head movement

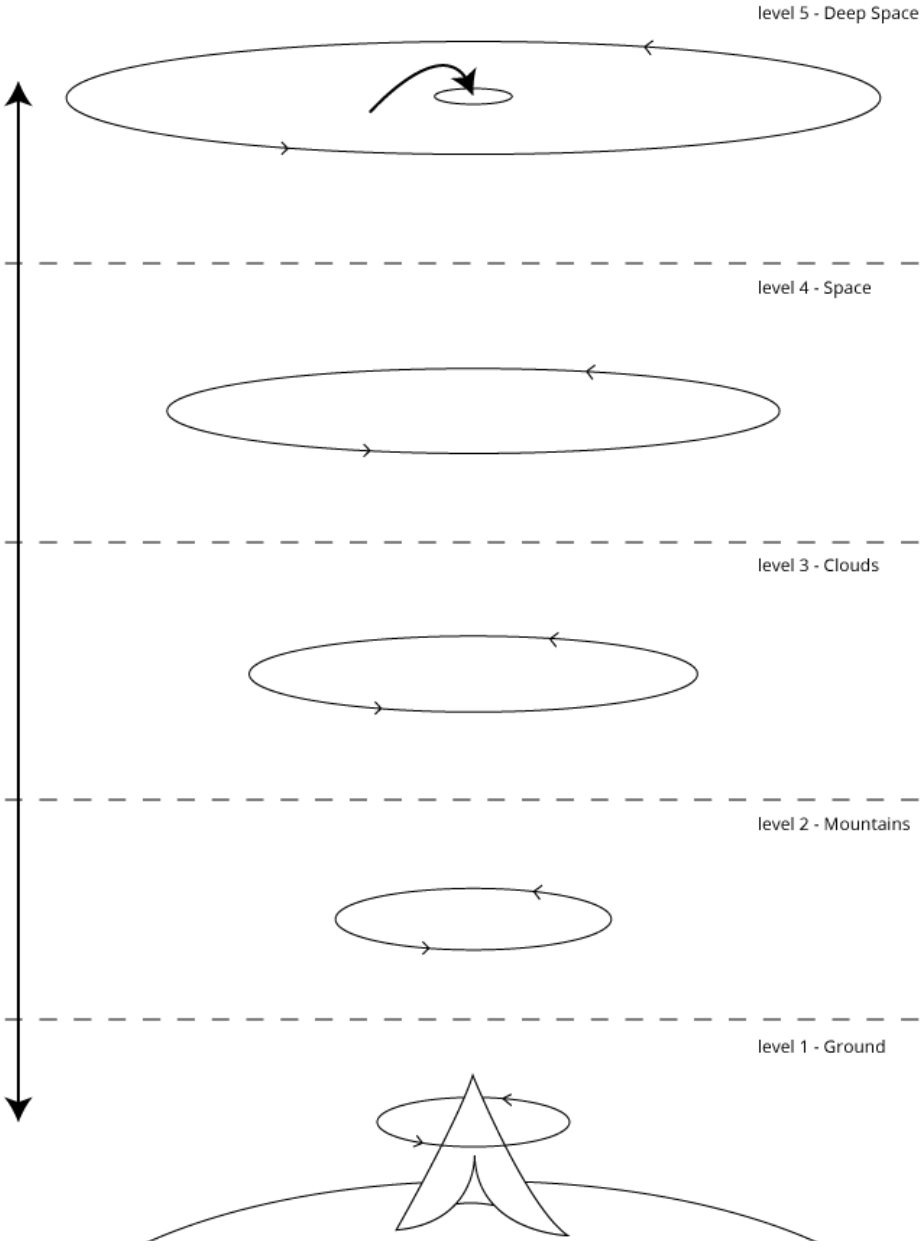


figure 2. Schematic drawing of level composition. Rotating ellipses with sound objects in each level.

INTERACTIVE SCRIPT - continued

The first level of the experience takes place inside the tipi. This is a virtual replica of the actual tipi tent of the installation. We want to give the participants a smooth transition from reality to virtual reality in order to reach optimal immersiveness.

The first level consists of basic instructions on how to interact with the experience. These will be spoken from the fire by some sort of ancestral creature.

During the first level the tipi tent unfolds itself and disappears. The participants will find themselves in an open landscape with a bright sky full of stars and various of interesting visual elements around them to look at.

This is also the moment the music fades in. But at first, the music will consist out of very basic monotone sounds. It is up to the participants to evolve this music into something more interesting.

To interact and enrich the music of *KARIGI*, the participants will have to locate and activate the floating sound objects in the scene. These objects, which are broadcasting a binaural sound and thus easily located, hold a musical loop that will enrich the music. Think of adding a new synth-loop on top of a basic drum&bass track.
Each orbit of the sound-object is perfectly synchronized with the measure of the music. Depending on the level, the sound objects will orbit around the participants with a relative speed equal to the length of 4, 8, 16 or 32 measures of the musical composition. And to keep things in harmony, the activated sound objects will only start playing their loops at the start of a new measure.

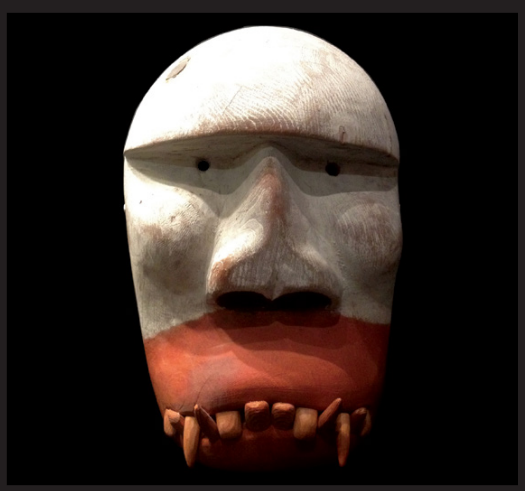
Traveling through the different levels is done by synchronized hand movement by all 3 participants. Each level has a new "theme" and different, but complementary and synchronized, base layer of music with new sound objects to interact with. To keep the music mixed between the levels properly and smooth, floating through levels is only possible during the start of a new measure.

Participants can float through the different levels freely up and down. But in order to reach the final level they are required to activate all the orbiting sound objects first

The final level, intergalactic deep space, will act as a top-down overview of the previous musical compositions. Since the floating music-objects from the previous levels were circulating in an ellipse around the participants, the participants can now see the whole picture from above as a kind of planetary lineup of objects floating around in ellipses around each-other.

The moment everything lines up perfectly, like an ancient Maya calendar or perfect lineup of planets, is when the participants are sucked into the void to experience the final audio/visual ecstasy. One can think of traveling through a wormhole in science-fiction. In this final audio/visual experience the participants are no longer in control.

Finally the participants are back into *KARIGI* sitting around the campfire ready to take their masks off.



MUSIC MECHANICS AND APPROACH

In the diagram below you can find a schematic overview of the mechanics of the game and its musical interaction. The different levels, as described in the interactive script and shown in figure 2, consist out of multiple rings with floating sound objects which orbit around the players.

The rings themselves differ in “length” and size. The length of the rings are based on the length of the melodies inside the sound-objects. For instance, the sound-objects in the most outer ring hold melodies which equal the length of 32 bars, and the ones in the most inner ring contain much shorter loops with a total length of 4 bars (based on a 4/4 time signature).

The sound-objects are activated by looking at them for a short period of time. Once the sound-objects are activated, they start playing their melodies after they passed the begin-repeat measure sign. In this way we are able to keep the overal music in sync and harmony, similar to the way Ableton Live works.

During the creation of *KARIGI* we will work closely together with other musicians and sound-engineers of the electronic music genre. A musical composition for each level, broken down in multiple sets of loops for each different ring, is needed.

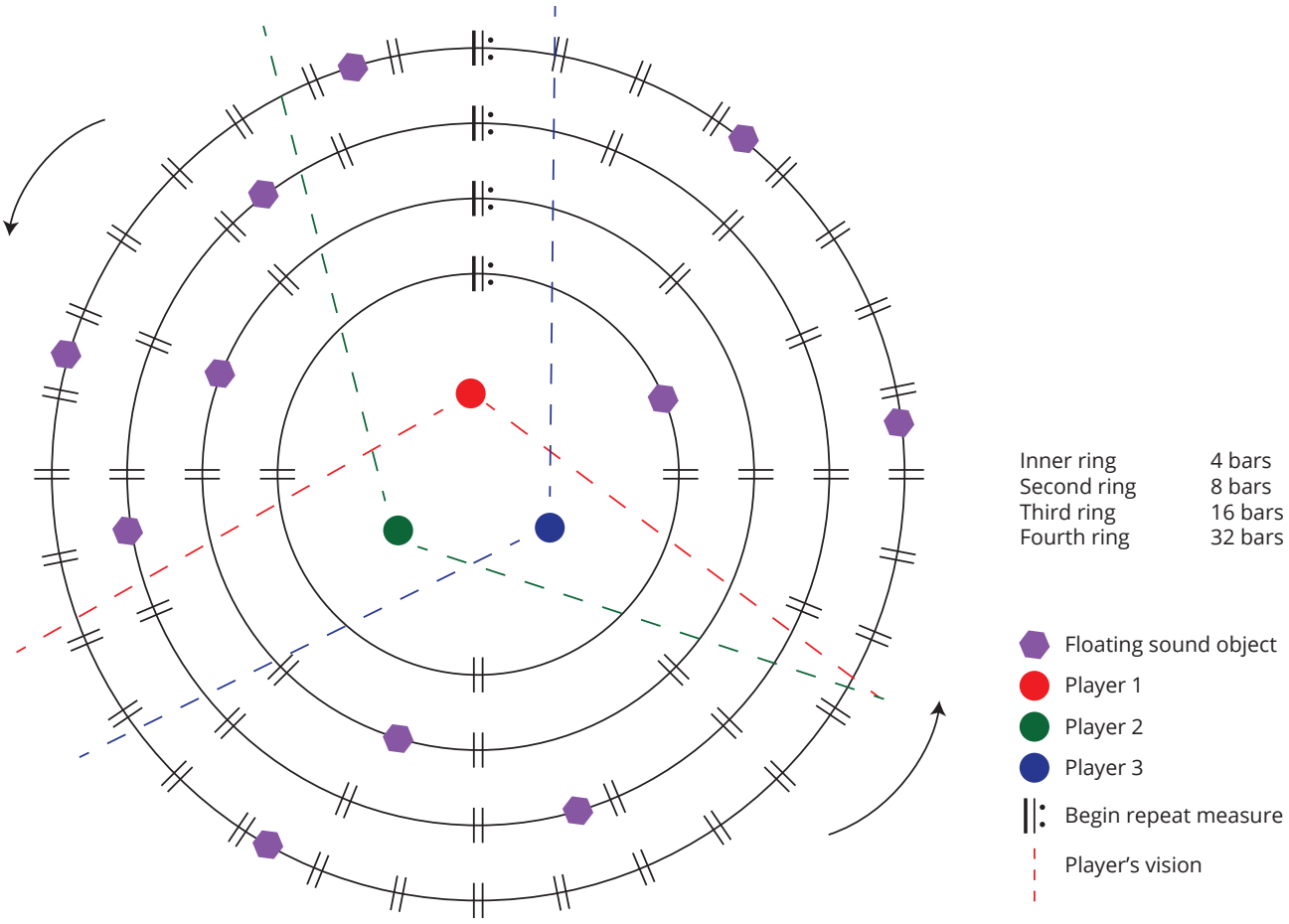


figure 3. Schematic diagram of the music mechanics

TECHNOLOGY

Karigi will be supported by the following hardware and software.

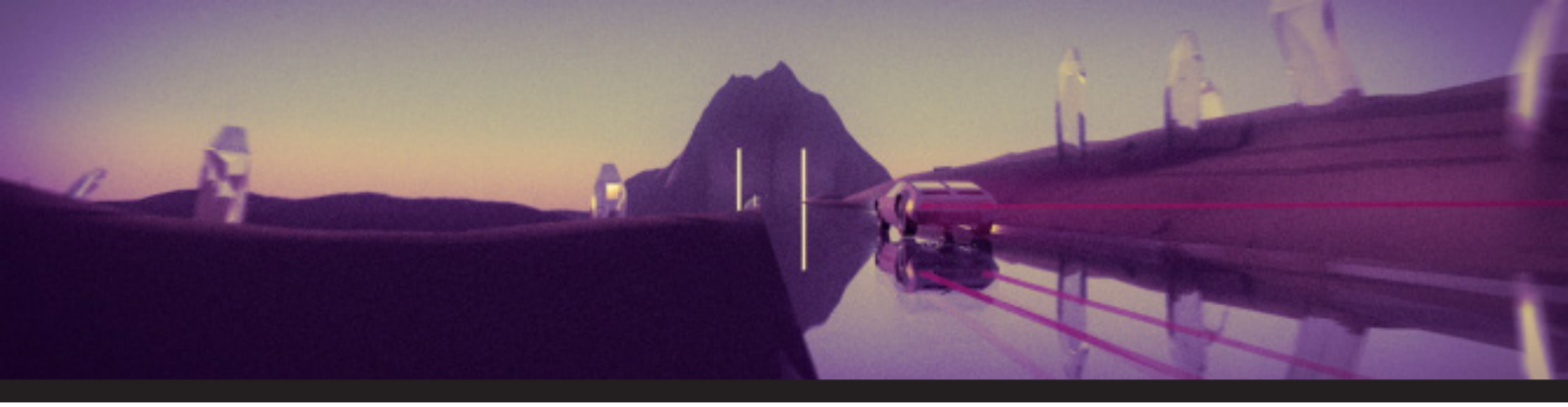
Hardware:
3 * Oculus rift DK2 Virtual Reality headsets
3 * Quality stereo headphones with decent bass frequency (AKG K518LE or similar)
3 * Computers with a decent graphic card (at least 2gb GDDR5 ram graphical memory)
3 * IMU-sensors - to track the players hand movement
3 * Arduino uno – to communicate between the sensor and the application

Software used during the exposition:
Unity3D – A C# based 3-dimensional game-engine (Free for non-commercial use)
Two-big-ears – Unity3D plug-in for Binaural sound-effects (Free for non-commercial use)

Software used in the creation process:
Cinema4D – 3D Composition software to create the environment and animations
Adobe CC – Graphical software package used in all stages of the production process
Ableton live – Live-looping music production software
Unity3D- A C# based 3-dimensional game-engine

EST. COSTS OVERVIEW

	Price per unit	Amount	Total costs
Oculus Rift DK2	€ 308,37	3	€ 925,11
Arduino Uno	€ 23.95	3	€ 71.85
Razor IMU Sensor	€ 65.56	3	€ 196.68
Headphones	€ +/- 50	3	€ 150
Computers	€ +/- 750 - 1000	3	€ 2225 - 3000
TIPI Tent Ø 3 m	€ 655	1	€ 655
Material Expo & Masks	€ +/- 1000		€ 1000
		SUB	€ 5998.64
Manpower	€ 800		€ 800
Uncontemplated		10%	€ 679.86
		TOTAL	€ 7478.5



BIO MAXMANA | MAX ITALIAANDER
DIRECTOR & ANIMATOR
http://www.maxmana.com/

Max Italiaander is a new media artist based in Amsterdam. He graduated Master of Arts (2006) from the Utrecht School of the Arts (HKU) studying Digital Media Design at the faculty of Art and Technology.

Under the name maxmana he has been creating motion graphics, and live visuals since 2008. Making visuals for a broad range of digital applications. Ranging from pure animations/motion graphics for television and web to installations and projection mapping installations.

He is also part of Amsterdam based interactive new media art collective Zesbaans from the beginning in 2007 and took part in many of their projects. See Zesbaans bio for more info.

Directed & animated music video “Let it Go” by Nobody Beats The Drum 2014 - Winner Grand Prix Dutch Animation 2015 - http://maxmana.com/work/nobody-beats-the-drum-let-it-go/

Director and Produced video clip “Cityscape” by Mike Luck 2013 - Vimeo Staff Pick. Nominated best use of Stereography Klik Animation Festival 2013 - http://maxmana.com/work/mike-luck-cityscape/

BIO SUE | SUE DOEKSEN
VISUAL ADVENTURER
http://www.suedoeksen.nl/

Amsterdam based illustrator Sue Doeksen (1982) creates worlds that are overpopulated with bright colors, friendly shapes and hidden jokes. Mediums ranging from physical, digital, pencildrawn, papercut, and animated. Often overwhelmed by chaos because there are so many visual adventures to be made at the same time and therefore wishes there were more hours in a day

BIO ZESBAANS | HARMEN SMIT
http://zesbaans.nl/

Zesbaans is a new media collective based in Amsterdam. Projects range from gallery expositions to nightlife installations, with an emphasis on technology and interactivity.

Zesbaans, founded in 2007, consists of young designers with backgrounds in digital media design, interaction design, motion graphics, VJ-ing and technology.

Zesbaans has made and shown work at the Dutch Film Festival 2010, the Venice Biennale 2009 & 2011, Lowlands 2009 & 2011, Freemote 2011, CBKU, STRP Festival 2011

Recent work of Zesbaans is Waterwerk (Water works), a permanent interactive installation - inside a swimming pool. It is located in the recreational pool of Sportcomplex Koning Willem-Alexander, Hoofddorp, The Netherlands.

Harmen Smit, student Art&Technology - Saxion University and graduate-intern at Zesbaans, will be responsible for the realization and technique behind *KARIGI.* Harmens graduation has everything to do with binaural audio and virtual reality. As a hobbyist musician himself, Harmen forms the perfect bridge between the music and the technology to make *KARIGI* work. During the development of *KARIGI,* Harmen can count on full support of Zesbaans its expertise in realizing interactive installations.