



*What is the feeling of becoming the wind, an invisible power with a visible physical effect on trees? Will you cherish the leafs, or will you trigger a hurricane? B-wind!*

**B-wind** is a RTiVISS experience where users have the opportunity to dematerialize, “incarnating” an invisible character, the wind, thus observing the impressive visible consequences. The performative potential of this interactive experience and the human scale immersive environment motivate a choreographic approach that raises awareness on space and the poetry of movement, whereas empowering the users. Users are invisible, for their physical presence is subtracted from the resulting visual interface, but the results of their actions are visible.

Overtaking space limitations, this experience recalls telepresence, too. A challenging idea is the power to apply the wind effect in the forest itself – the motion visual tracking in the installation would have a real amplified effect on the real trees and in real time, by triggering physical devices producing the effect of wind. Microcontrollers such as Arduino communicating with wind generators machines can be a departure point for accomplishing this behavior. Drawing storyboards for movement indexing and mapping is part of the methods. B-wind requires programming work with open source tools with a broad set of libraries on vector field with particles, techniques or patterns of effects on the videos, such as OpenFrameworks. Anticipating and enhancing the real effects by the wind generators will be essayed with real-time video distortions for expressiveness and responsiveness, as to simulate wind effects, translating motion into abstract poetry.



*Have you ever...? Hug@ree and engage into a playful symbiotic relationship with nature, for “Everyone should hug a real tree every now and then”*

**Hug@ree** is an interactive setup where the visitor literally hugs a tree, triggering the user registration in the RTiVISS database. This physical process has a digital correspondent, combining real trees with physical computing and users database in an interactive installation, whether the user is in the outdoors installation, or accessing through the online platform from a remote location.

*In situ*, by hugging a real tree through “body-tree contact”, the visitor triggers a camera and a voice recorder, sending a photo and email contact to the database. In addition, the system generates a physical output of the registration through a small size print of the photo as a “leaf”, and mechanically transport it to its branches.

The Hug@ree virtual correspondent is accomplished when the user registers the email in an online platform – then a video displays an avatar hugging a tree, while the camera of the user’s access device – a computer or a mobile phone – is activated and shoots a photo that is uploaded to the database. A further approach to consider is the “virtual” interaction to have more “real” outputs: the photo would be sent to the tree-printer database, printed and put beside the other tree leafs.

This gallery incubates a huge potential to motivate active exponential participation, for the users would also spread the word, inviting others and expanding the network. In the whole, users reinforce the connection, symbolizing a step towards positive consequences on the environment.



*Once upon a time, little electronic beings left their old mobile devices and became inhabitants of (ssshhh... can you hear? do you see? Oohh, trees have ears and eyes...)*

**Enchanted Forest** is a world “populated” with mysterious trees inhabited by surprisingly repurposed mobile phone components. Visual input is acquired with the mobile phone cameras repurposed as webcams, then the output is displayed on the disassembled screens, while the sound input is captured with microphones, destined for an output with the mobile devices’ loudspeakers!

The exploration is multidimensional in time and space, as in fantasy magical world. Cameras and microphones hanging on trees are live weird eyes and ears in a playful and delirious approach open to experiments with devices that light the fuse for the tinkering process. The technological limitations are equally rich in aesthetical potential, derived from low resolutions and lateral thinking processes.

Whether it’s home by an online user, or in a gallery by exhibition visitors, the (re)constitution of the enchanted forest happens through the audiovisual flickering and other clues that stimulate imagination. Capabilities are augmented by the use of sensors: temperature, smoke, and wind are some of the possibilities, and the resulting data of this world of fantasy also work as clues for forest surveillance.

This environment is fertile ground for storytelling, by crossing fantasy and reality, a platform inspired in open models for free creation and open connectedness. It is also prone to subprojects, lined by the specificities of flora and local cultures, such as “The Mysterious Oak”, looking forward to Alentejo natural resources preservation.

**RTiVISS [Real-time Video Interactive Systems for Sustainability]** proposes innovative use of real-time video in artistic contexts, simultaneously contributing to help forest protection. *Assuming a surveillance metaphor, can we conceive a project that is both artistic and functional?*

RTiVISS is part of a PhD research in Digital Media in the framework of the UT Austin-Portugal Program, by Mónica Mendes. Hopefully, one to two of these three interactive installations will be developed by a multidisciplinary team with AZ labs members from altLab, LCD and xDA.  
**Areas & Skills involved:** Real-Time Video | Open Source Programming | Interaction Design | Electronics and Physical Computing | Robotics | Computer Vision | Interface Design | Video Editing | Sound | Environmental Sustainability ||| monica.mendes@fba.ul.pt