

Technical Rider - (ex)tending towards

Description:

(ex)tending towards gives form to human/forest alliances, and is driven by the following questions: What does it mean to be alive and have agency?, How can we re-train ourselves to slow down and listen to voices that have been marginalized for millennia?, and What sort of perceptual and mental shifts must occur in order to recognize and value the liveliness and precious vibrancy of individuals that do not share the same language nor temporal reality?

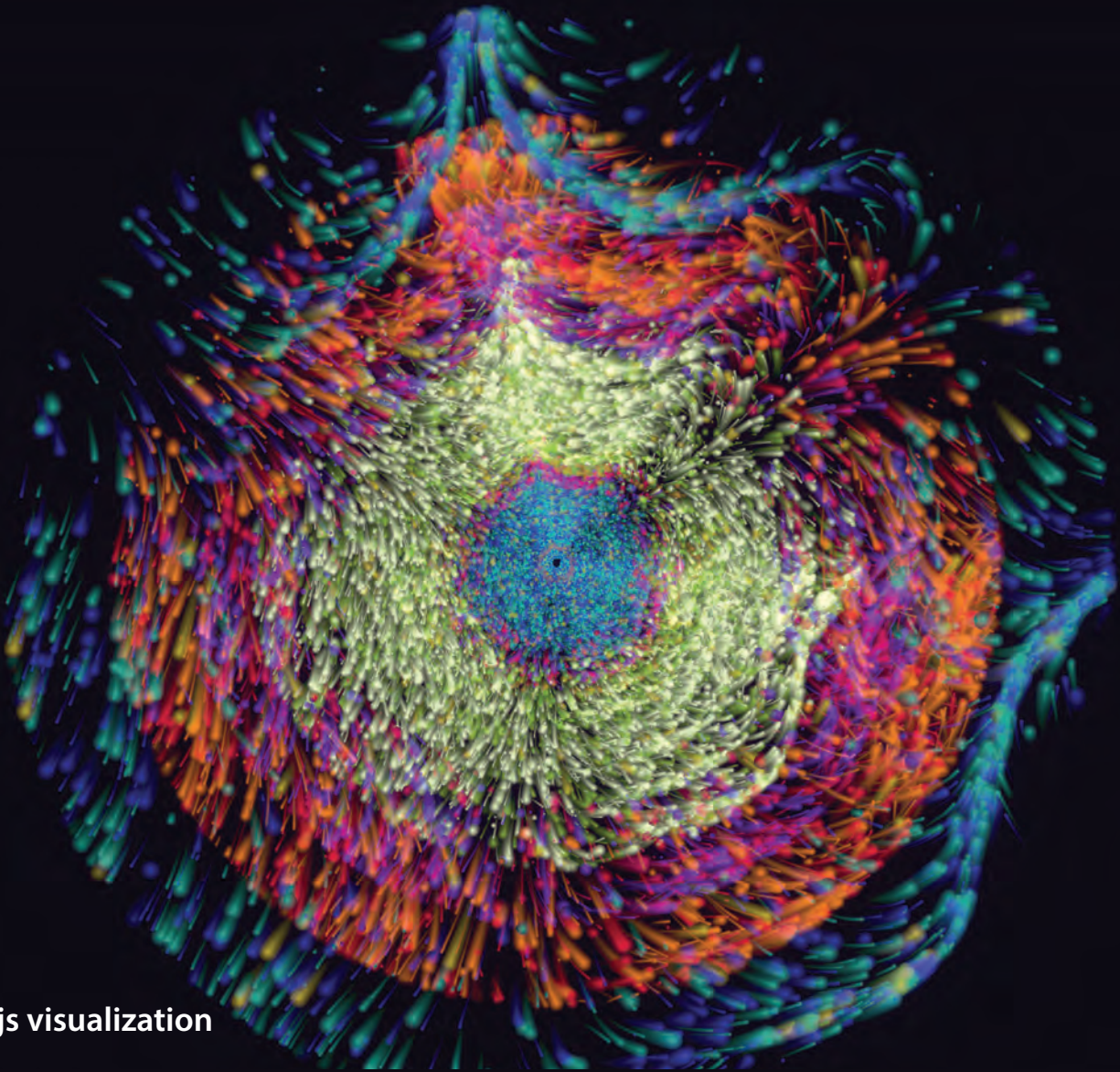
(ex)tending towards uses the data collected from the Foresta-Inclusive infrastructure installed at the rare Charitable Reserve in Cambridge ON. In response to the temporal difference between tree and human individuals, this work explores ways to slow down human engagement, and also to make visible the daily experience of a tree. Inspired by tree rings as evidence of yearly experience, the visualization uses the same logic to visualize the last 24hrs of the tree's life, where the outer ring shows contemporary values and each subsequent smaller ring the values from the previous hour. The interface for the visualization is a one meter tall cork cylinder that is also a scent sculpture, which releases the scent of geosmin (the scent of a forest after it rains) every time it rains in real-time. The interface is embedded into dirt, which also contain a set of sculptural sensor pods identical to the installed pods. Next to the visualization is a point cloud of the tree being sensed, including the 3D models of the installed sensor pods on the trunk. This point cloud is also affected in real time by the live data. This work uses a simple gestural interaction that allows the participant to move into the 3D spaces of the visualization. The slower one moves enables the participant to inspect each ring of the visualization. In its entirety this installation creates an embodied and exploratory space where the deep time of a tree's life is remembered, and the human body is slowed in an attempt to find a space for both tree and human to engage. This work is the first in a series exploring ways of using technology as a tool to place human and non-human into a dialogical relationship, where both voices are equal despite perceived differences (temporal reality, im/mobility, non/verbal).

This work is created in collaboration with Faadhi Fauzi (three.js programming), and Ilze (Kavi) Briede (point cloud wrangling and Touch Designer)

Installation Needs:

- 2 day installation time.
- Dedicated wifi Internet connection (10 mbps).
- 120/220 power - 1 circuit.
- 200 sq ft or 18.5 sq m exhibition space.
- Projection wall painted projection grey.
- Light controlled.
- Ideally - location for installing soil and scent sculpture.

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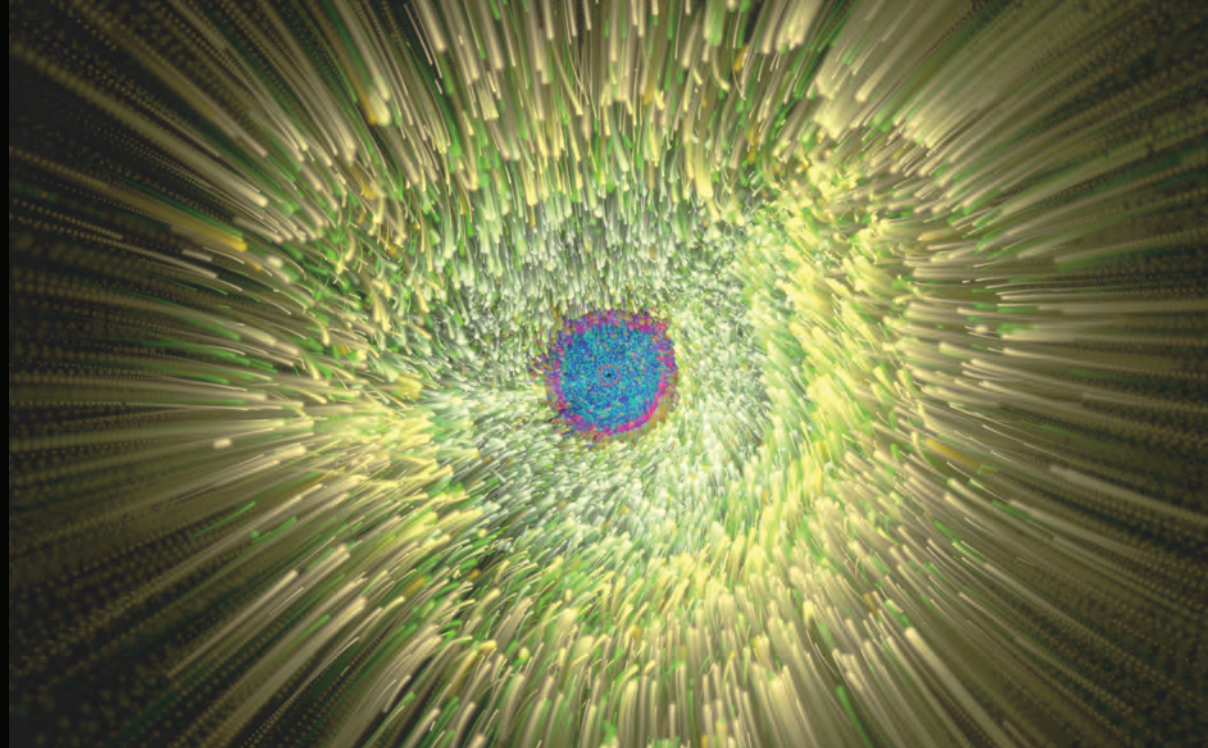


three.js visualization

This live projection visualizes 24 hrs of a trees life. This images light, wind, particulate matter, CO2, VOCs, soil temp/humidity, rain, humidity and temperature in real time.

Packing List:

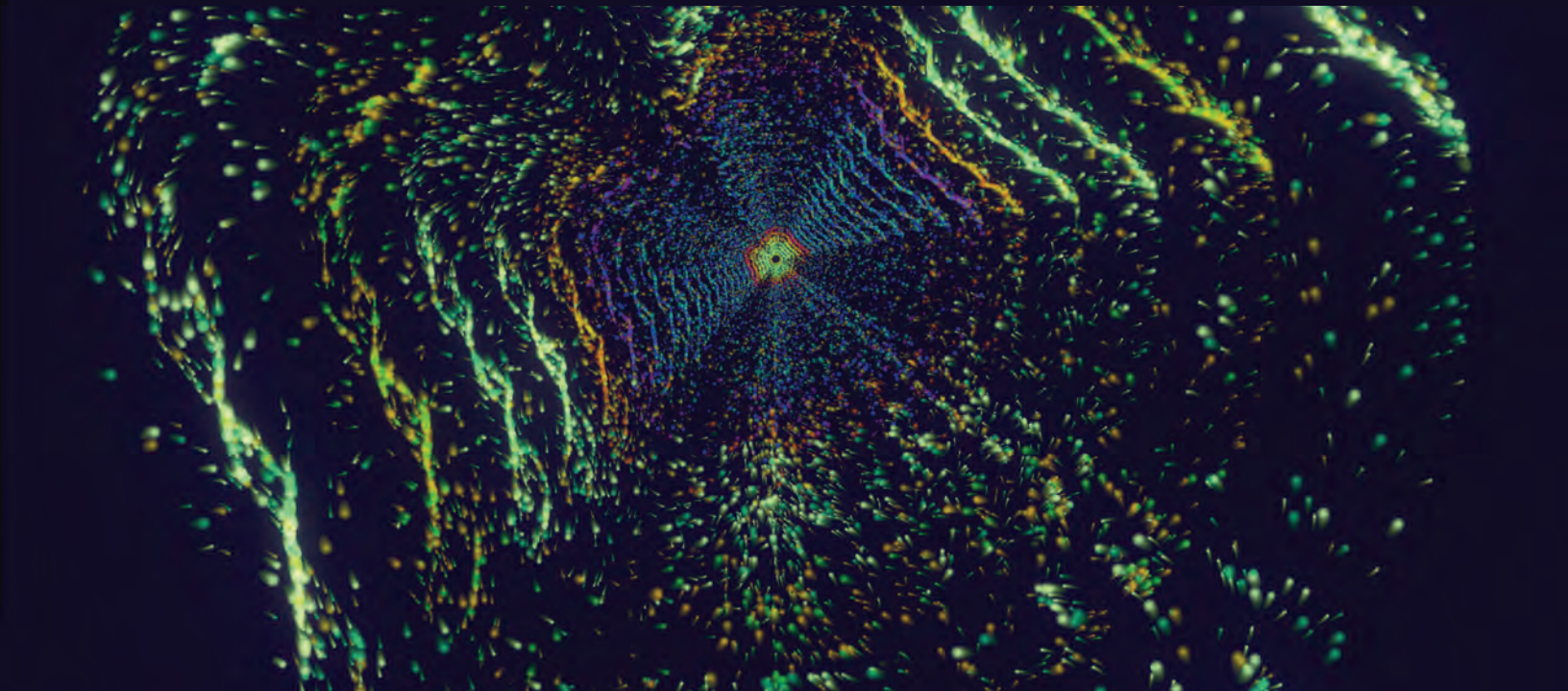
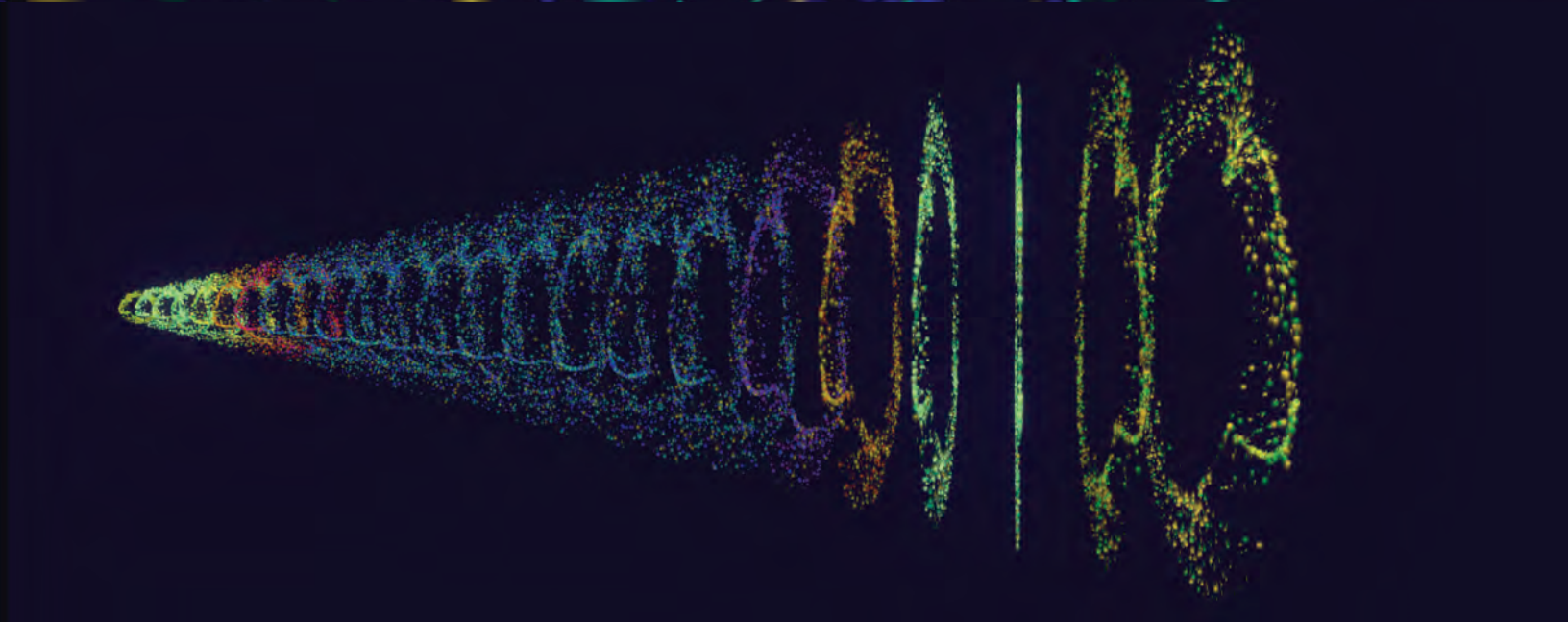
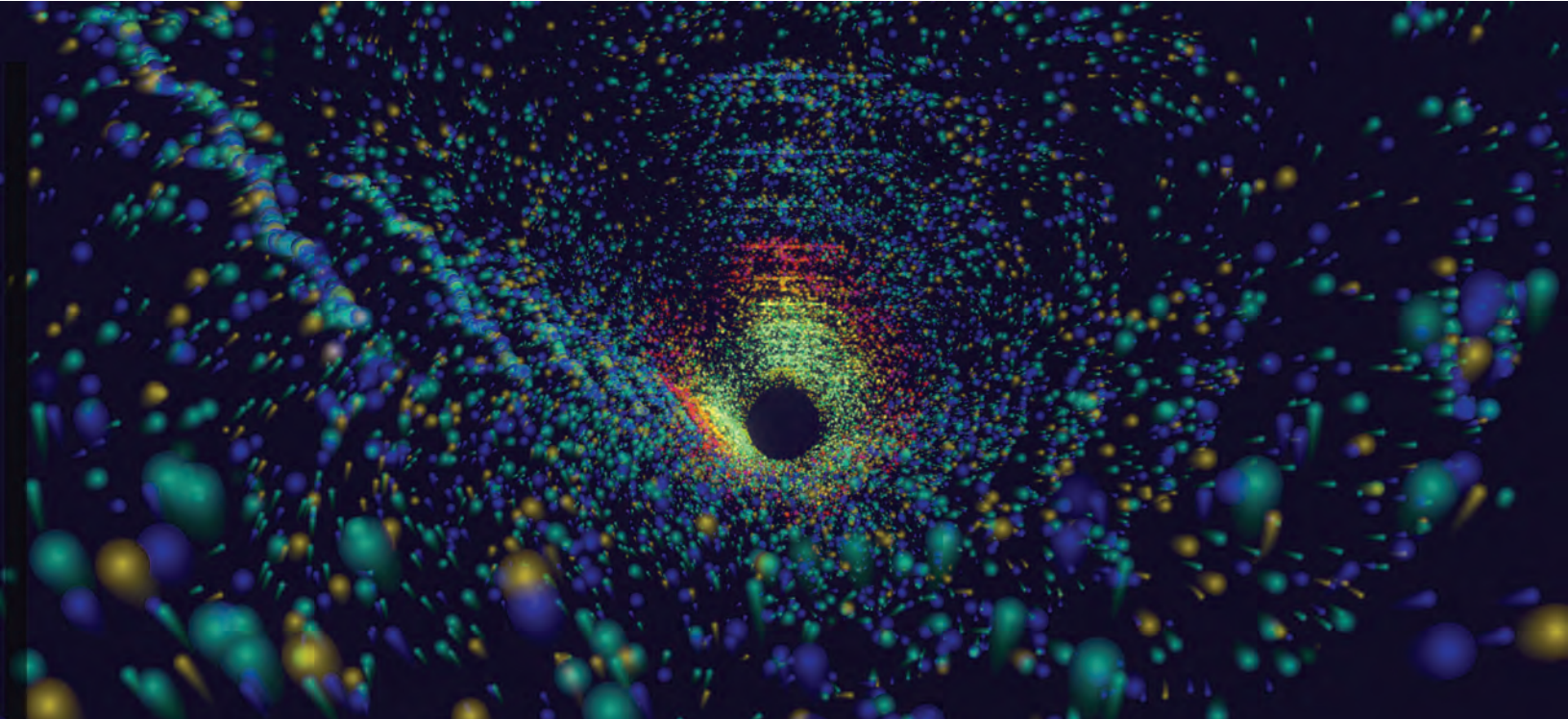
Item	Quantity	Description	Artist	Exhibition Centre
1	1	Mac Mini, keyboard, mouse	X	
2	1	Mac Studio, keyboard, mouse	X	
3	2	Projector: 4000 plus lumens 1:1 - throw ratio		X
4	1	Scent sculpture/interface (12vdc)	X	
5	tbd	Soil (protective plastic underlay)		X
6	3	Custom sculpture sensor pods	X	
7	3	Custom plinths (12vdc)	X	
8	1	Sound system - for ambient sound		X

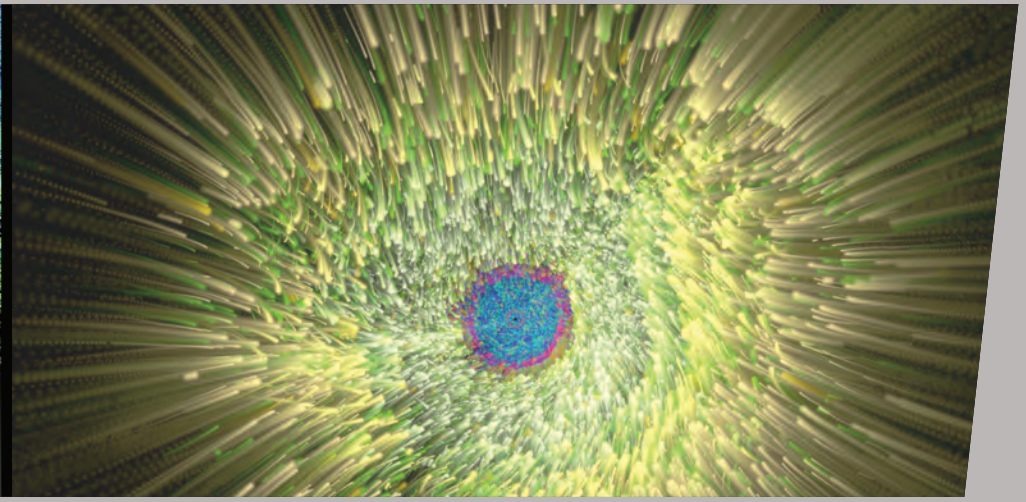
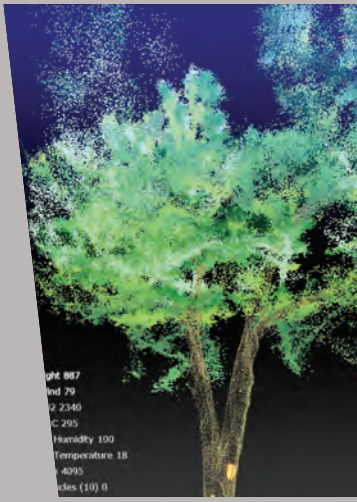


Point Cloud visualization and three.js visualization as projected



The above scent sculpture/touchless interface and 3 sensor pod sculptures will be embedded in soil. The scent sculpture releases the scent of geosmin everytime it rains in the forest.

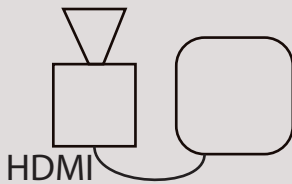




Projection wall should be painted projection grey

Ceiling mounted Projector:

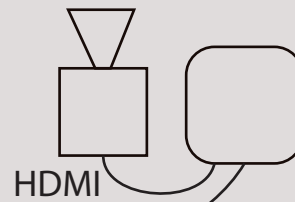
4-6000 lumens
1:1 throw ratio
1080P



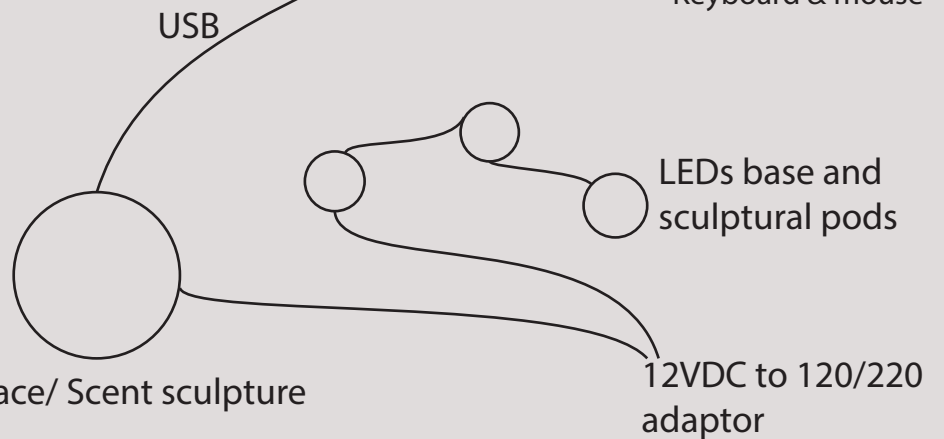
Mac Studio running TouchDesigner
Keyboard & mouse

Ceiling mounted Projector:

4-6000 lumens
1:1 throw ratio
1080P



Mac Mini running a Chrome Browser
Keyboard & mouse



Interface/scent sculpture:

LEAP motion to MAC mini

12VDC to run scent interface.

ESP-32: Needs wifi SSID and Password
Controls - ionizer, LED and fan.

The interface must have water with geosmin
added to the base on a regular basis.



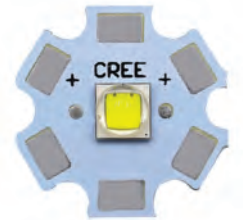
LED base with Sculptural Pods:

12vdc

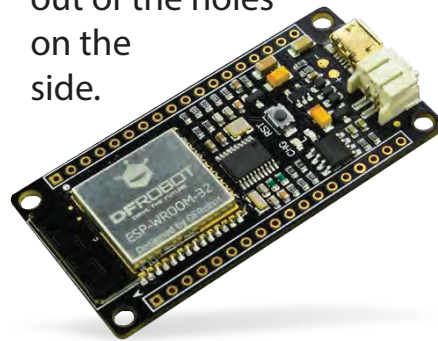
High-powered LEDs must be
turned on and off daily.



LEAP motion embedded in top of interface. USB out to Computer that controls the visualization (mac mini)



The scent sculpture is controlled with an ESP32. It contains a high-powered LED to create shadows, a fan, and an ionizer. When it rains the ionizer turns on, creates a mist and the fan blows it out of the holes on the side.



Firebeetle:
Needs SSID and password
12vdc



The base of the scent sculpture is a plant tray which must be filled with water regularly. The water will have drops of a Geosmin essential oil. The Geosmin will be provided.

Start-up instructions:

The Mac mini and studio can run 24-7.

At the end of each day turn off projectors.

At the beginning of every day turn on projectors.

The interface can remain plugged in.

The light bases/sculptural sensor pods are on a timer and will turn on and off regularly.

****If the gallery is closed for several days, it makes sense to turn everything off to give the technology a rest****

In the case of a full restart:

- 1) Turn on MAC mini
- 2) Double click the **(ex)tending towards** icon.

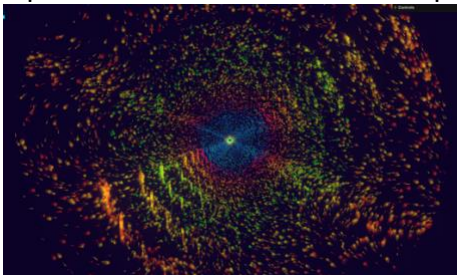
- 1) Turn on Mac Studio
- 2) Double click **(ex)tending towards** icon.

Leave the interface and the light bases/sculpture pods plugged in at all times.

Trouble Shooting Guide:

Jane: 416-316-7339

- 1) All of the colours in the visualization are the same colour:
Below shows a normal visualization. Unlike below - If all of the rings are the same colour – please contact the artist and explain the problem.



- 2) The TouchDesigner (pointcloud of the tree) is not running or there is no movement in the image.
Please restart TouchDesigner. No need to contact artist. Please take note of the date and time of restart.
- 3) There are no other known issues. Please contact the artist if something does not appear to be functioning.

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Bio:

Jane Tingley is an artist, curator, director of the SLOlab: Sympoietic Living Ontologies Lab and Associate Professor at York University in Canada. Her studio work combines traditional studio practice with new media tools - and spans responsive/interactive installation, performative robotics, and telematically connected distributed sculptures/installations. Her works is interdisciplinary in nature and explores the creation of spaces and experiences that push the boundaries between science and magic, interactivity and playfulness, and offer an experience to the viewer that is accessible both intellectually and technologically. Using distributed technologies, her current work investigates the hidden complexity found in the natural world and explores the deep interconnections between the human and non-human relationships. As a curator her interests lie at the intersection art, science, and technology with a special interest in experiential works and embodiment. Recent exhibitions include Hedonistika (2014) at the Musée d'art contemporain (Mtl, CA), INTERACTION (2016) and Agents for Change (2020) at the MUSEUM in Kitchener (ON, CA), and more-than-human at Onsite Gallery in Toronto (CA). As an artist she has participated in exhibitions and festivals in the Americas, the Middle East, Asia, and Europe - including translife - International Triennial of Media Art at the National Art Museum of China, Beijing, Gallerie Le Deco in Tokyo (JP), Elektra Festival in Montréal(CA) and the Künstlerhause in Vienna (AT). She received the Kenneth Finkelstein Prize in Sculpture in Manitoba, the first prize in the iINTERFACES – Interactive Art Competition in Porto, Portugal, and has received support from a number of funding agencies, including the arts councils of Canada, Manitoba, Ontario, and Québec, the Canada Council for the arts, and the Social Sciences and Humanities Research Council of Canada.

Credits:

Faadhi Fauzi: Three.js

Ilze (Kavi) Briede: 3D modelling and Touch Designer

Dr Derek Robinson, Modelling and Spatial Analysis Lab, University of Waterloo, ON. CA: Drone and Lidar scanning.

Rare Charitable Reserve, Cambridge, ON. CA.

Marius Kintel: Firmware support.

An Vu: Pod hardware duplication

Grace Grothaus: Photogrammetry

Financial Support:

Environments of Change Partnership Grant, University of Waterloo. ON. CA.



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

