Proposal

THIS = THEN = THAT

“We are hybrid”

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https://lx-muse.github.io/cart360/

Artifact proposal

Creating a bridge between different worlds and disciplines is now a common approach for the contemporary arts and it was the starting point of this creative learning process.[1] The first wearable technology I holded in my hand was a hat we had to recreate for a dance performance in the entertainment industry. What we were able to accomplish there as a team of performers and technicians might not have been the same approach as anyone in the academic field but it did open up my eyes and mesmerized the audience.[2] I thought we weren't doing any harm and creating wonders when in fact I was empowering a state of incompleteness that still follows me today.

The **convergence** in media and technology brings us in a hybrid environment, body and mind, and **confronts us with our own humanity.** I won't pretend to reinvent or redefine anything, but I'll create something that will represent skills set up to now and might challenge my ecosystem.

1. We are hybrid

1.1 Think of a context and an environment where you would like to intervene. Where will you present your project? Who is it made for?

The goal of this project is to create a **wearable ornament that self-regulates** with the user, a living human model in this case. It wouldn't work without you. It is because you are and you are because it is.

Using and **salvaging the electronics in our information age,** I aim to give a purpose to the abundance of consumables surrounding us. In this field of practice, I'm often merging traditional tailoring techniques with knowledge newly acquired to reshape materials; giving them a **second lifecycle**.

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[1] RYAN, Susan Elisabeth, Garments of Paradise: Wearable Discourse in the Digital Age (2014)
[2] Michael Jackson: The Immortal World Tour (2014) https://youtu.be/6FAAEt1ADuM

This initiative starts with **finding what is available and what is possible** in terms of soft-electronics. I particularly enjoy Pulsea's hybrid jewelry workshop[3] approach in using natural materials rather than plastic based hi-tech 3d printing. (Even though I'm not against operating one)

Being an hybrid in itself, this artifact will be an ornamental and devotional object, closer to materiality and a piece of art on its own. It should still be beautiful and have some aesthetic function in the afterlife of electronics.

Meaning and interaction with the artifact happens using the skin of the wearer as sensor and soft electronics as analogue input. It communicates with the user personality in form and choice of colors but also expresses uniqueness of the wearer in exploring different skin capacitance. It could have been used as a light-up performance props in nightlife events when artists needed to be seen and capture attention, in places one wished to escape normalization and stereotypes. There is a digital division in society and in accessibility of devices too, but my sensors should not privileged situations or an able body.

> **1.2** Think about the kind of **relationship you wish to foster among and between your users and the artifact** or installation. What will your project **afford users and how would the experience make them reflect on themselves, their environment, society and your intentions?**

How might we explore the relationship between the body and everything cybernetics? What kind of other signals than precise biometrics and location can we extract from ourselves?

Electronics are fragile and delicate, they require dexterity and intelligence to integrate. Their construction patterns remind of weaving where the artist is also the machine with its state of mind; operating, counting, balancing. Technicians are slowly but surely being replaced and one could see itself challenged with the quickness with which computation is learning, a lot quicker than any specialist with years of repetition. Copied techniques but custom made unique handmade items that leads to an intimate relationship with its wearer.

This artifact lives in symbiosis with the user. It is not there to judge, track, regulate or enhance like would a smartphone. We are now wearing and converging many mediums in a

[3] Blurring Bundaries (2017) http://www.plusea.at/?p=6120

single one, with VR someone will start living in the machine for days and own its digital twin. I believe too that we're nothing after all but our crafted fiction. Or has Proust would say:

> "Every reader finds himself. The writer's work is merely a kind of optical instrument that makes it possible for the reader to discern what, without this book, he would perhaps never have seen in himself." [4]

Where fashion is a mean for personal branding, expression and statut, or mesmerized the audience, this artifact will still be useful as a piece of visual art / sculpture. 'Alive', the wearable shows uniqueness of its wearer when the 'dead' artifact'[5] has layers of details, hidden purposes.

Example of keywords one could feel : grace and human pleasures, organic and delicate, romantic nostalgia, information - communication - accumulation - redefined essentials or boundaries

1.3 Think about the notion of empowerment. Is your artifact really helping or challenging users or is it just another psychological prosthesis?

It is meant to expose our relation to what's new and hypnotizing. In itself, the artifact should be visually appealing without electricity and surprise the audience if they're used to common plastic and square electronics.It represents our materialistic world, a new rite of passage for a designer of our era.

The discomfort we could feel in front of ubiquitous computing and mass production of consumer goods is rather transformed in art and craftsmanship. Stitching autonomy and some material literacy, this artifact aims to educate beyond the convergence of digitals technologies into our physical world.

We are all very sensitive to light for many reasons; we evolved to like the distraction of screen media. Show-business' explicit role was mostly our greatest distraction; we might not have perceived the forces and agenda at work. The need for beauty, art and reflecting on society was once the realm of the theater, how can we preserve the same values?

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[4] PROUST, Marcel, *In remembrance of things past* (1927)
[5] JUNICHIRO, Tanisaki, *In praise of shadows*, (1933)

1.4 Think about how to successfully communicate your intentions - what Interaction Design Strategies will you employ? What are you trying to tell us?

The goal of this project is to create a wearable ornament that self-regulates with the user, a human model in this case. It is a hybrid between technologies and handmade props, between humans and cybernetics. It is calm and silent as ubiquitous computation and most electronics are today. Used as ornaments and as a wearable, it has multiple layers of reactions and meaning. The electrodes on its surface connecting to the skin allows the user to reflect on its own materiality and conductance while also offering unique analogue signals used for light and mouvement effect. When at rest, using it as an interior art piece reflects a culture of reuse and brings in the conversation about why it was created.

Was the point of starting from the tech or from creators needing to communicate and identify to a group and social values? Sensing can function both inward and outward, from the artifact itself and from the enrironement.

Will the user feels a reward?

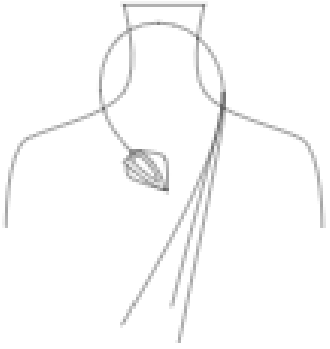
** add remote control to storyboard
quote ying gaos

2. Storyboard

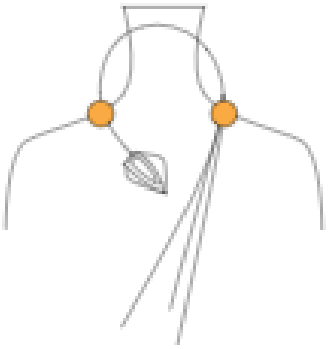
The jewel rest on it's stand

User pick it up and decide which mode to express

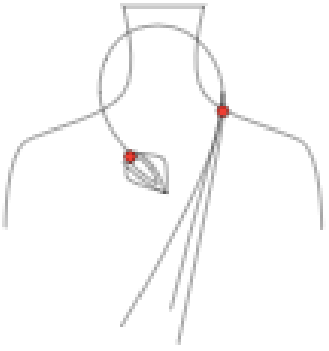
User puts it on body



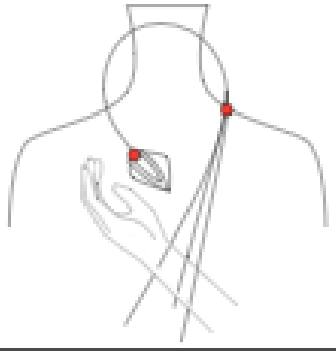
Electrode or analogue sensor generates signal: skin conductance



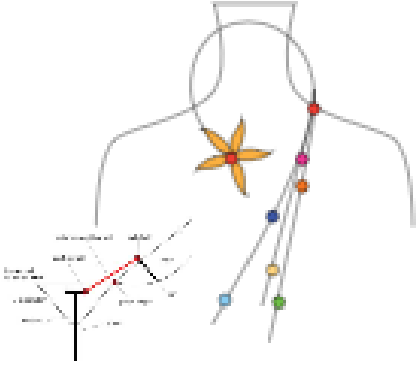
Small visual impact of body signal on textile art



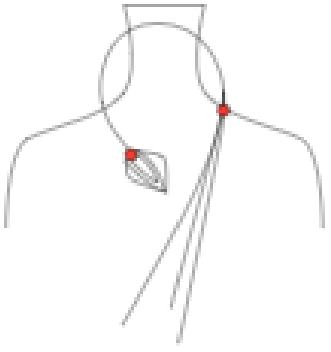
User explore the surface of its gadget



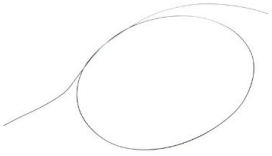
Big visual and mouvement feedback from textile art



The artifact will finished its sequence until next touch input



3. Material Evaluation - Selon qui?



3.1 Sensors and their associated affordances

- EEG Electrodes as touch sensor & Conductive thread and fabric for handcrafted soft circuits

Electrodes provides the analogue signal and a sci-fi metallic feeling on the skin. (Signal may need filtering) Will close circuit and detect if worn properly. Should detect differences between different user

Soft electronics: For the same purpose then electrodes but with less precision on signal

Also explore:

- Metallic zipper and conductive thread as a potentiometer
- Stroke sensor, safety pins
- Shape memory wire (Nitinol)

Actuators when an electrical current of ~200mA is applied to the wire, or is heated to ~100C it reverts to its previous shape with great force

Showing the wires' heat with thermoreactive pigments

Other

- KY-008 Laser Transmitter Module
- Heart pulse sensor, breath of the opening artifact vs dead artifact?
- Eye blink detector - QTR-1A Reflectance Sensor (2-Pack)

3.2 Techniques exploration

laying of copper thread - embroidery - batik - etching[6]
e-textile[7]
static?
Thermochromic pigment

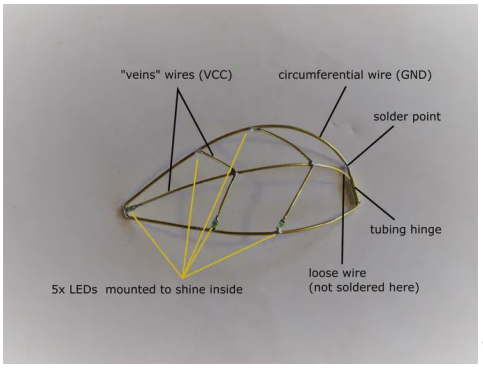
[6] http://steampunkworkshop.com/etching-tins-salt-water-and-electricity-compliment-steampunk-bible-article/
[7] https://www.lessemf.com/fabric.html

4. Case studies (use case / misused / hacked)

4.1 Pulsea' hybrid jewelry & arduino open projects[8] (use)

Most important is the impact of Pulsea's reasearch in my semi analogue crafting practice. Seeing her pushing the boundaries of materials but in a very harmonious way with nature reminded me of our role and place in an ecosystem when we can't control or regulate. She exposes the electronics and uses copper and microcontrollers as visual art themselves. It is the closest project to my intentions of ornament.

I want my wearable to be closer to a piece of visual art then to a fashion statement. It will have a purpose with or without a battery, and so will be different than fashion technologies made for a stage or entertainment. Its main purpose is to incorporate sustainable practice in the means of maintenance and know-how and delicacy.



[9]

4.2 Ying Gao's Interactive Fashion and Cultural Critique [10] (hacked)

Exploring the future of fabrics, Gao's dresses tend to consider the environment in which it lives before the actual needs for comfort of the model.

Mostly available in research centered, her reactive garments are each unique and serve a purpose of innovation. The way she's pushing materials boundaries with advanced

[8] Blurring Bundaries (2017) http://www.plusea.at/?p=6120
[9] https://create.arduino.cc/projecthub/jiripraus/ever-blooming-mechanical-tulip-1b0323
[10] Ying Gao's https://www.azuremagazine.com/article/ying-gao-interactive-fashion-technology/

engineering methodologies and machinery represents the state of research today. Her collection isn't easily reproduced or distributed for the mass market.

Research and fashion often go hand in hand in terms of quality and care. Gao's approach isn't about performance but rather about exploring and speculating on our environment until she finds something that might break the loop of manufacturing and embrace what's different. She challenges our perspective and uses her influence to bring meaningful technological artwork to the stage.

4.3 Crystal dress with embedded laser for catwalk[11] (misused)

Also made for the stage, this dress uses a remote control, embedded red laser and DMX communication system. It was sponsored by Swarovski crystals to a team of engineers in 2008 and is made of red lasers that could hurt your vision, suggesting a weapon or a robot tracking system. Was it made to provoke fear in a dystopian future? Was it a marketing campaign? This collection was cyber in its form but did not offer any state changes light motion we can get from micro-controllers today.

The 'wow' effect now must be developed to offer a new perspective; not just mesmerize the audience with high-tech gadgets, but also propose an accessible approach to learning and entertainment.

Bonus inspiration because it's beautiful & interactive:

Pu Gong Ying Tu (Dandelion Painting) https://www.youtube.com/watch?v=C1-pdgGn0SI

[11] Chalayan & Waldemeyer (2008) https://www.dezeen.com/tag/Moritz-Waldemeyer/