48727 Fall 2024 Final Project Proposal

**Exploring/design Tech approach**

*Part 1, Preface:*

This paper/project strongly bind/extend from with the below module

* A6 Hybrid: a hybrid world, view virtual world as the same as the physical world and include it in our daily or non-daily product design (including virtual or physical). The spatial sense as a data, how can it include in our tech approach (空间感知)

Support module:

* A5 Cybernetics: Implementing the concept of “user vs agent”
* A4 Tangible Interaction: Exploring way of interaction

It’s a explore thoughts of finding ways of users approach the info from virtual world -> Interface. (Can be critic)

*Part 2, Support readings & references:*

1. Levy, Pierre. Becoming Virtual. New York: Plenum Trade, 1998.

**Annotations in the book:**

“ut manifests itself as the very pro­ cess of humanity's "becoming other"— its heterogene­ sis.” (Lévy, 1998, p. 18) 🔤

“If virtualization were nothing more than the transition from a realitxcy to a col­ lection of possibles, it would be derealizing. But it im­ plies as great a sense of irreversibility in its effects, indeterminacy in its processes, and creativity in its striv­ ing, as actualization.” (Lévy, 1998, p. 29)

“Virtualization is one of the princi­ pal vectors in the creation of reality.”   ()(Lévy, 1998, p. 29)

我的想法从这里出发，那么在虚拟世界里的interaction人的感觉如何设计？如何和现实产生交集？ fro example建筑？

Besides, what is the element of virtual: memories? (the example maldov brought) data?   
How much accurate are we going to bring it to real life, for matching our objective and better experience? (for example the 3d messenger application)

“Its elements are nomadic, dispersed, and the pertinence of their geographic position signif­ icantly diminished.” (Lévy, 1998, p. 29) 🔤

更是影响到文化wise是diverse的

“if running a computer program, a purely logical entity, implies a relationship between the possible and the real, then the interaction be­ tween humans and computer systems implies a dia­ lectic between the virtual and the actual.” (Lévy, 1998, p. 27) 🔤

The relationshiop btwn in short (the logic)

“Imagination, memory, knowledge, and religion are the vectors of vir­ tualization that have enabled us to leave this "there" long before the appearance of computerization and digital networks.” (Lévy, 1998, p. 30) 🔤

Not only that the media itself is also “a message” From a pov of commercial, what kind of portial or message media will 精准map down the users need?

To feed the deterritorialized era nowadays, 让messgae跨越时空 & also map down ““Imagination, memory, knowledge, and religion”

“They are not totally independent of a referential space-time since they must still bond to some physical substrate and become actualized somewhere sooner or later.” (Lévy, 1998, p. 31)

“Yet the process of virtualization has caused them to follow a tangent. They intersect classical space-time intermittently, escaping its "realist" clichés: ubiquity, simultaneity, massively parallel or distributed systems. Virtualization comes as a shock to the traditional nar­ rative, incorporating temporal unity w ithout spatial unity” (Lévy, 1998, p. 31) 🔤

“(by means of real-time interactions over electron­ ic networks, live rebroadcasts, telepresence systems),” (Lévy, 1998, p. 31)

“continuity of action coupled with discontinuous time (answering machines and electronic mail, for example). Synchronization replaces spatial unity, interconnection is substituted for temporal unity.” (Lévy, 1998, p. 32)

That’s the 切入点 of my work!! What, when, how to “reconstruct” & “represent” their message in another time&space.

“Taking a profoundly actual constraint (time and place) and making it a contingent variable clearly in­ volves the creation of an effective solution to a prob­ lematic and thus of virtualization in the sense in which we defined it earlier. It was therefore to be expected that deterritorialization, the escape from the "here" and "now " and "that," would be encountered as one of the royal roads to virtualization.” (Lévy, 1998, p. 32) 🔤

“For example, each new system of communi­ cation and transportation modifies the system of prac­ tical proximities, that is, the pertinent space for human communities. When we build a railway network, it is as if we had physically joined the cities or regions connect­ ed by rail and dissociated those that are not part of the network. For those who don't travel by train, however, the former distances are still valid. The same is true of the automobile, air travel, the telephone, etc. Several systems of proximity coexist, several practical spaces.” (Lévy, 1998, p. 33)

the scale of measuring stuffs 会因此改变，进而影响我们看事情和做决策的视角; but at the same time formal scale is still exist and also the realtion btwn diff scale, the way to coexist is also good to explore

For example, we can hv our daily life in physical, but also remote working online, as a open source programming contributing to the online world. doing hybrid lifestyle. So here is the question. To hybrid living, is the webcam, zoom/vid meeting the best way/typical way to communicate? exchang infomation btwn users?

For example me, remote dating & physical working, vice versa? The point here is think the way of gather data, filter and reconstruct data at the another side of world. Also think about the hidden, technical data that only engineers are able to identify.

“The member of the conventional corporation travels from the private space of his home to the public space of the workplace. In contrast, the telecommuter transforms his private space into a public space and vice versa.” (Lévy, 1998, p. 35)

**link it to Archi is Interface that Josh Bard involved, talking about how the virtual member of the grp can join the physical grp (offline gp) more actively**

“Systems of virtual reality transmit more than im­ ages; they transmit a quasi-presence. Clones, the visible agents or virtual marionettes that we control by our gestures, can affect and modify other marionettes or visible agents and can even remotely activate "real" de­ vices and operate in the ordinary world. Some bodily functions, such as the ability to manipulate objects, coupled with real-time sensorimotor activities, can thus operate at a distance, along a complex technological pathway that has become increasingly well understood in industrial environments.” (Lévy, 1998, p. 41) 🔤

**we can think back what we interested to make with our skill set, what we wannna build in virtual world and how it connected to the physcial world (Design in computation).  
As I mentioned in front cuz the user of building, the social event was expand to virtual aldready in this era.**

*Part 3, My work:*

1. Concept to explore:

* Exploring/design the way of approaching technologies, amplified the massive power of technology which allows the virtual power of it can impact out real life.
* This ultimate goal including 3 aspect, the XR system, Really capture (input-sensing/scaning, data encoding, real-time, multi sensor function), semantic understanding (Generative AI, Large language, models, image classification, segmentation), Interfaces & Visualization (out-respond, Haptic feedback, Interoperability, positionally aware, realism); in order for us to be able to bridge to the virtual and physical world, get “help” from the virtual end (it can be a trained model, a person, agent, data analyse dict/map or anything)
* So here’s the question to explore: What is “good” way/system to interacting with the virtual end (no matter what is it at the another side); and I am showing this with an sample project.
* In Levy, Pierre. Becoming Virtual. New York: Plenum Trade, 1998.

“Yet the process of virtualization has caused them to follow a tangent. They intersect classical space-time intermittently, escaping its "realist" clichés: ubiquity, simultaneity, massively parallel or distributed systems. Virtualization comes as a shock to the traditional nar­ rative, incorporating temporal unity w ithout spatial unity” (Lévy, 1998, p. 31)

To map down, what when how to reconstruct & represent, (when for example real time? Or delayed? Or 配合实际location motion?)

* (chat gpt help me solid it down)

1. What is “good” way/system to interacting with the virtual end:
   1. humanizing technology
   2. Seamessly include tech
   3. Human lead tech/model not the else way
   4. Examples:
      1. the good example:
      2. the bad example: hyper realistic human 3d reconstrcut
2. Goal:

* Notes, I am not being a designer, but my aim is being a design engineer. So my project goal should be exploring the design approach to feed an objection, with an amazing technical approach that not a ordinary designer can think of. For example, what kind of hidden data that only technical expert can think of? For example we can use the motion data to represent the virtual mode of a person, which is a valuable data for someone.

1. Prototype project:

* Aiming to show the potential ways of the XR systems (in – analyse – out)
* I am extending my project at A6-2, 3D messenger, that aiming to explore the method of sending an emotional/包含情绪的 message through body motion. (detail see the another pdf that named A6-2.pdf)

Reference:

Nourbakhsh, Illah Reza. Robot Futures. Cambridge, Massachusetts: The MIT Press,

2013

Vernelle A. A. Noel. “Digitally Displaying and Interacting with Historic Artifacts of

Spatial, Temporal, Corporeal, and Kinetic dimensions,” Studies in Digital Heritage

(December 2017): 251-268. <https://doi.org/10.14434/sdh.v1i2.23277>

Intersting project:

1. The approach:

<https://kilthub.cmu.edu/articles/thesis/Building_a_Bidirectional_Bridge_Between_the_Digital_and_Physical_Worlds/23103263?backTo=%2Fcollections%2FMaster_of_Computational_Design%2F5279693&file=41108270>