MIR Assignment Four

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1 Question One

Check out the tangible music interfaces in http://modin.yuri.at/tangibles.[web] Look at all the categories(tangibles, blocks, toys). Pick 3 that you find interesting and write a short summary (1 paragraph for each interface) of what you find interesting about them.

1.1 Audiopad Interface

Audiopad interfaced is electrical instrument for playing digital music that can converts every movements of objects on the table. It allows people to change effects, choosing sound, or adjust volume by moving different parts of interface.

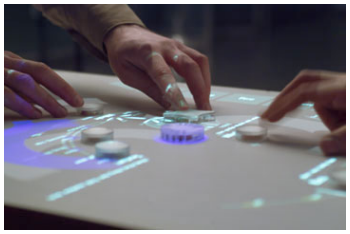

Figure 1: Audiopad allows for spontaneous reinterpretation of musical compositions and creates a visual and tactile dialog.[JP]

The reason that I find this interface is so special is that is because music has become visualized and reactively perceivable in sense as it compare to the music playing method as before.

1.2 orai/kalos Interface

Orai/Kalos is an interface which can represent images and sounds in an interactive way using computer. Sounds and images are manipulated by parameters, and it is pretty much similar to idea of music visualization. Audio changes duration, pitches, timbres by using granular synthesis. Granular synthesis is a technique that uses multiple overlapping layers of short samples. The reason why I am a fond of this interface is because it has a potential to allows people to mix geographical locations and persons together into new constellations.

Figure 2: In orai, sound and image events are controlled by the same underlying parameters, and an interactive work.[Her02]

1.3 Reactable Interface

The react-able table is also a electronic muscial instruments that is looking more advanced comparing to Audiopad interface. It can allow users to play music and observe music on the tabletop. People such as DJ can have a better visualization through tabletop rather than just playing music on the normal devices.

Figure 3: Reactable can be played by manipulating a set of objects that are distributed on top of an interactive table surface.[MK]

The most fascinating part of this interface is that Users are no longer constrained on boring buttons and adjustment bars, instead more interesting tangible parts can be used to make users and music more react-able.

2 Question Two

Propose a tangible interface that is somehow combined or related to the concepts we have covered in this course. Basically it should somehow combine the algorithms/tasks we have learned with some form of physical tangible interaction. Describe the user interaction and motivate its usage contrasting it with a traditional screen/keyboard/mouse graphical user interface. Although you don't need to do any hardware design try to propose something that can be engineered using existing technologies.

2.1 Designed Interface:

The creation is referred on the music reactive interfaces that were introduced above, particularly Orai's idea. I am thinking rather than connecting sounds and images, why not connecting sounds with holography? Typically, the traditional hologram was recording of a light field, rather than of an image formed by lens, it is used to display a fully three-dimensional image of the holographed subject.The hologram itself is not an image and it is usually unintelligible when viewed under diffuse ambient light.

Figure 4: Japanese animation character concert made by hologram.

So in this case we could have different tangibles to construct audio implementations. For example music table or reat-able tables use different music parts to control the atmosphere, effects, volume of audios, meanwhile observe them on table display. Whereas in hologram case, the observation can be transformed as hologram, which by this method the interface is more appreciated.

This interface has the following features:

- Music and analog input supported
- Environment react-able

- Ornamental

The advantage is similar as previously mentioned interfaces. In the traditional version of music reactions, people are getting used to using buttons or keyboard. However, by tangible pieces we are able to let user to interact with music which seemed to be abstract and untouchable. It also becomes more visualized than displayed on electrical screens. User are not limited to mouses and other traditional graphical interfaces.

References

[Her02] Paul Hertz. Orai/kalos: Installation proposal. 2002.

[JP] Hiroshi Ishii James Patten, Ben Recht. Audiopad: A tagged based interface for musical performance.

[MK] Gunter Geiger Marcos Alonso Martin Kaltenbrunner, Sergi Jorda. The reactable*: A collaborative musical instrument.

[web] http://modin.yuri.at/tangibles.