

9.6.2018
LAC
Berlin







Robert Wechsler

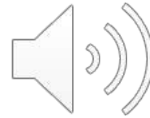
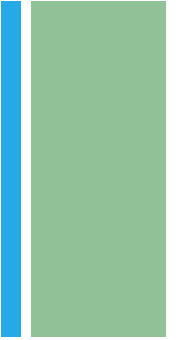
Palindrome Dance Company
Weimar, Germany

MotionComposer

+ The MotionComposer



+ The instinct...





System Hardware

■ MC Version 2.0

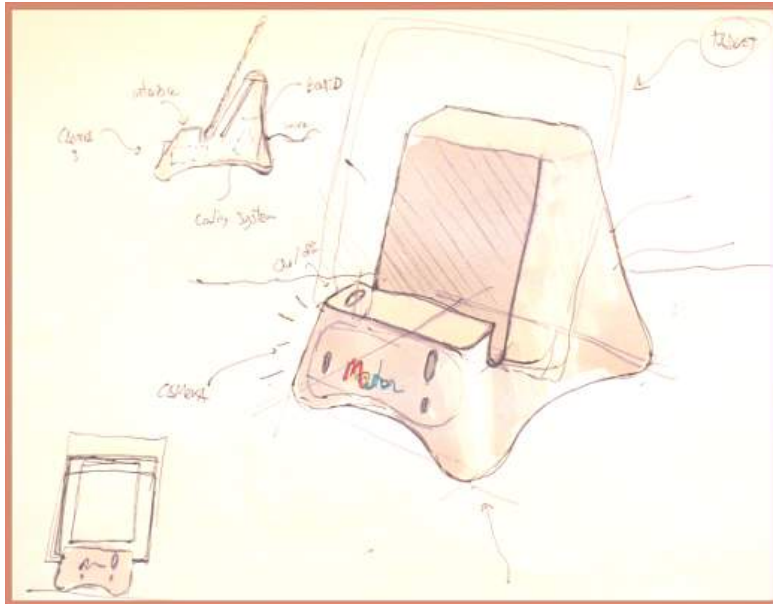


- + micro-ATX computer
- + plus separate sensor box
- + "active" stereo vision (PrimeSense)



System Hardware

■ MC Version **3.0** (release 2019)



+ mini-ITX computer

+ integrated chassis

+ tablet controller

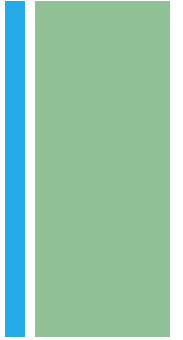
+ lights in chassis support causal relationship

+ "passive" stereo vision



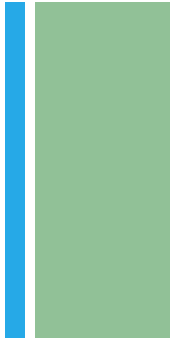


System Hardware



"active" vs. "passive" stereo vision

+ Mapping

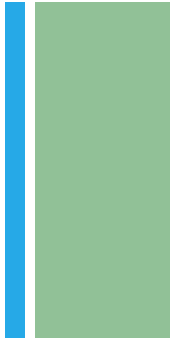
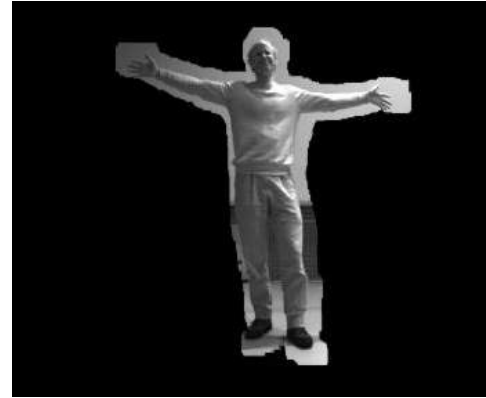


Activity	dynamic, QoM
Location	Location in the room
Shape	Form - Position
Gesture	usually a combination of activity and shape

+ 2D and 3D imaging

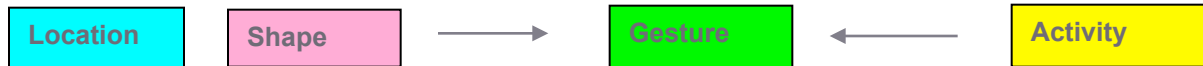


+ 2D and 3D imaging



■ 3D "blob"

- source of data for location, shape, gestures



- creates a mask to isolate "Active Player"
- latency tolerant

■ 2D "video image"

- source of data for activity, discretely, flow

- high resolution
- latency critical

+ Complex mappings

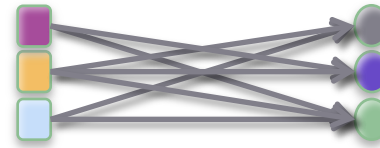


Figure 3. Parameter mapping in *Partici*

Another factor adding to the complexity is that parameters index a set of transfer functions consisting of point tables, thus changing the behavior for different parameters. For instance, we have taken care to ensure that gestural movements differ qualitatively from large

+ Therapeutic Applications Relationship body-music



L'effet de la musique: „Les patients peuvent reconnaître la musique et réagir émotionnellement à elle, alors même qu'ils ne peuvent comprendre que peu d'autre choses" -- Oliver Sacks

+ Therapeutic Application

Stimulate movement

- Enjoying the imitation of movements
- From stillness to movement
- Improve movement control
- Increase of movement repertoire
- Improve memory of movement sequences and location in space



+ Therapeutic Application

Encourage free self expression

- Improvement of body self-awareness ("I made this") and self-perception
- Increasing self-confidence ("I can do this")
- emotional /artistic expression through personification or else
- Empowerment



+ Therapeutic Application

Allow Inclusion: working with groups

- Equal footing with non-verbal communication (dance and music)
- Therapeutic settings with story-telling and role-play
- Improve communication qualities and attention to / perception of others
- Improve quality of life



+ Thank You!



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- robert@motioncomposer.org





References

- [1] Bergsland, A. and Wechsler, R., 2013. Movement-Music Relationships and Sound Design in MotionComposer, an Interactive Environment for Persons with (and without) Disabilities. In *Proceedings of the re-new* (Copenhagen2013), 56-62.
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5 CONCLUSION

While clearly rhythmic music is one of the easiest ways to engage people in a music-dance experience, ironically, it also presents large challenges for interactive system designers combining different strategies of body-mapping and music, and implementing them with care, the authors found that healthy movement can indeed be stimulated by such systems. The developers of the MotionComposer product based on this general concept, are thus encouraged to continue working on rhythmic environments for future versions of the device.

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