

### **HugBag** – literally embracing soundscapes

# Type of Project Finished research project

### Summary

The thought behind HugBag was to explore potentials in continuous and colocated coupling to a child's gross motor activity. Concretely, leaning and hugging a big inflated shape creates evolving soundscapes. The construct is made of half an inflated ball resting on a base. A Microsoft® Kinect sensor mounted on the base detects the location and degree of deformation when the ball is indented. These sensors control evolving sounds and light patterns as a response to bodily engagement in such a way that a hit or kick is not as rewarding as leaning or hugging.

### Low-tech, high-tech products, services and contexts for play

HugBag has been used for exploration and musing over long periods of engagement. The soundscape is experienced as clearly responsive yet always slightly changing. This is due to coded behaviour, but also as it is nearly impossible to replicate such a movement. The effect is a dynamic balance between control and emergence,

which gives it its aesthetic appeal and hence, longer engagements.

#### The context of use

home and rehab center

# Type of play in this play system Cognitive

Practice	-	
Symbolic		

### Objectives related to play according to ICF-CY

Play for the sake of play: Major life areas - d880 enagement in play

d8800 solitary play

### Play-like activities: Therapeutic and educational objectives

b1 Mental functions
b7 Neuromusculoskeletal and movement related functions

### **Number of participants**

1-5

### **Chronological Age**

0-3 years	
3-6 years	
6-12 years	
12-18 years	

### **Development Age**

0-3 vears

### **LUDI Categories of disabilities**

EODI Gatogorico di alcabilitico		
Mental/intellectual impairments::		
moderate		
severe		
profound		
Communication disorders (speech and language disorders):		
Physical impairments:		
Moderate		
Severe		
Autism Spectrum Disorders:		

## Explanation on the use of low-tech, high-tech devices, services or contexts

### **Explanation**

No instruction, self-discovery of the participant/subject

Hand over hand: therapist/researcher leads the actions of the participant

### Involvement

Adult: therapist/educator/researcher

Parent or significant others

#### Role

Non-participatory observer

Multiple disabilities:

# Evaluation of objectives and outcome measures Description of outcome measure(s)

Observation by professional/researcher providing the play experience Video analysis

### Information about availability of outcome measure: publisher, website, contact person

This artefact is a prototype. See the references for possible availability.

### **Summary of achieved effects**

the design's potential for connecting in the sense of supporting attention and grasp of cause and effect, and immersion understood as a situated interplay between exploration and musing.

### References to the intervention or research project

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### Website

http://sid.desiign.org/portfolio/hugbag-design/

### **Publication**

Caltenco, H. A., & Larsen, H. S. (2014). Designing for Engagement: Tangible Interaction in Multisensory Environments. NordiCHI '14 Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational, 1055–1058. http://doi.org/10.1145/2639189.2670274