Design's Boundary Conditions in Relation to Environmental Interactions GIGA-map

Systemic Approach to Architectural Performance and Wood as a Primary Medium to Architectural Performance project

Marie Davidová

This GIGA-map developed as a 2D analysis of GIGA-map's methodology lead by Roger Bødker that was revealing paradoxes from the project 'Wood as a Primary Medium to Architectural Performance'. As a mapping a panorama of all forest types, environmental, botanical as well as physical, architecture through a range of boundary conditions of different designs. The case designs were either authored or co-authored by the student of this author and were selected for their environmental impact and potential for environmental interaction. The map lays out a matrix of parameters and relating their interactions, while the colour gradient of lines and texts for each project represent a range from design's openness to closedness to the boundary.

Environmental - design responsive

Environment - material responsive

Physical environmental conditions
- Relative humidity impact
- Temperature responsive
- Air flow responsive
- Light responsive
- Sound responsive
- Radio waves responsive

Biological environmental conditions
- Symphysis with flora to fauna - HIV - polymer enzymatic concept
- Human - design responsive

Design - Environment responsive

Material - Environment responsive

Physical environmental conditions
- Relative humidity impact
- Temperature impact
- Air flow impact
- Light impact
- Sound impact
- Radio waves impact

Biological environmental conditions
- Individual interaction
- Interaction
- Elan
- Work
- Meeting points
- Commuters / residents
- Material loading
- Material storing

Social boundary conditions
- Public
- Public / private
- Accessible
- Useable
- Exposed
- Visible

Mládek, Adam de Pina and Eduard Seibert 2012

Mannsåker & Marie Davidová 2009

SpiralTreeHouse (Marie Davidová & Prokop Závada 2010-2013)

LOOP is a research and public pavilion in one. While being weather responsive, the pavilion was dancing in wind, responding by its height to the place of the disaster through horizon. It's main topic is the variosity of sound texture of preset and opportunistic. The project covers transformable furniture for periphery community gardens. It is made from recycled material from old buildings and from cars. The pavilion was made from old cars and it was an open semi-interior space of such system generate both, pleasant climate and public-private space. It was very open semi-interior space - the parasite generates public-private space.