

Vivarium: A Habitat for the Study of Biodiversification

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Instigating a spatiotemporal bridge between biology, cybernetics, media, and architecture, Vivarium fuses organic, inorganic, robotic and virtual life-forms in an attempt to create a differential alien ecology. Key to creating this condition is an open feedback loop that exists within the project; a feedback loop that was created through the integration and interaction of hardware data collection devices, custom software suites, natural and artificial organisms, as well as human participants. This direct, reciprocal involvement of interactive technologies with various other agents and bodies causes the project, at the meta level, to act as an exchange terminal that evolved and self-stabilized over a period of three months.

Architectural installation has the capacity to move beyond issues of figure, program, and permanence. This project synthesizes full-spectrum sensory 'scapes'—visual, audible, tactile—that are mediated through a series of feedback loops interacting with, and generating, a wide range of natural and artificial organisms. Organic material acts as the origin for these feedback loops, producing the initial conditions from which data is derived. Multiple agents, such as insects hatching, algae growing, and water turning brackish, work at multiple scales and temporalities to produce a field that was seemingly stable at the global level, while remaining constantly variable at the local level. While these global conditions were changing slowly and the local conditions changing rapidly, information was being collected through sensors (temperature, humidity, motion, proximity, salinity), microphones (micro, macro), and cameras (motion, still), producing a complex set of data. Once collected, integrated, and organized, this data is then interpreted through a digital brain (hardware, software) in order to produce ever-evolving environments of sight, sound, smell, taste, and touch. As these environments developed over time, the results were again sampled, merged, and restructured progressively, ensuring the continuity of the project's feedback loop. This gave Vivarium two distinct modes of operation: while the gallery was closed, it existed as an object evolving outside the realm of human influence and interaction; while the gallery was open it reacted to the involvement of human participants becoming both anthropocentric and kinetic. Working in tandem, these two modes of operation allowed for additional variation and evolution throughout the lifecycle of the project, while also pushing it towards a form of planetary self-stabilization where the whole was always legible even while the constituent parts were in constant flux.

