

Field Architecture

This section of the book presents ideas on the spatial experience of the exhibit. Multiple approaches are shown, and taken as a whole, they become our proposal on how to “make invisible fields visible” through architecture. We took as our brief the Phoebe’s Field™ Principles:

Fields Exist

Fields are Invisible

Fields have Sources

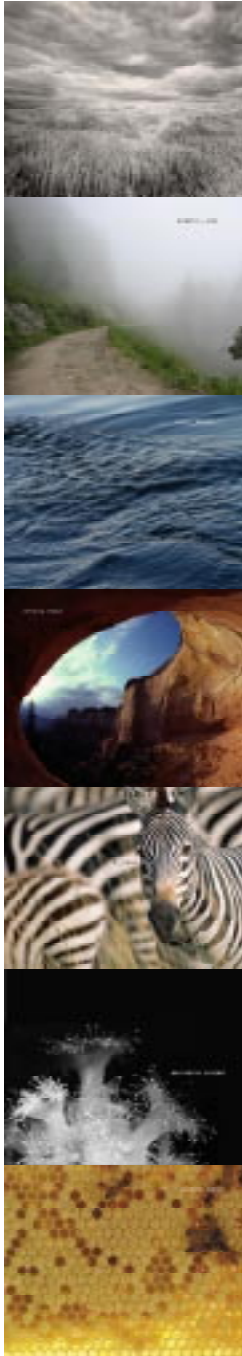
Fields are Measurable

Fields are 3D

Fields can be Blocked or Distorted

To which we added the task of creating a terrain for parallel learning and engagement. The project brief was to create a continuous spatial landscape in which the exhibit and the architecture were one and the same; ours was to be a new kind of exhibit quite different from the typical science museum experience of discrete, object-like demonstrations placed within a gallery space.

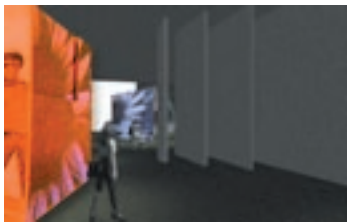
Our inspiration came from fields we found in nature,



and we realized that inside familiar objects around us exists an invisible world. Making the ordinary “strange” became a primary strategy to engage the children in learning, both in the environment of the exhibit, and as a “take-away.” Since fields have no boundaries, not only should the process of learning spill out of the Phoebe’s Field Exhibit, but also so should the implied space.



The **Wind_Board** pulls a piece of the exhibit out to the street, and will act as a “billboard” for the project. It can be hung on the facade of the building, placed on the sidewalk, or occur as several frames in an open space such as a park or parking lot. Wind produces energy, and this could either feed a wall of SmartSlab panels inside the exhibit or be used to create light at night. Conceptually, the Wind_Board breaks down the boundaries between inside and outside.



The four schemes of the **Edgeful_less** project tackle the problem of the boundaries of the gallery space. The aim is to perceptually dissolve the edges of the room, in order to create a kind of “white space.” The schemes shown here are selected from a dozen strategies that take into account different conditions in the museums themselves, and the spatial requirements of the exhibit.



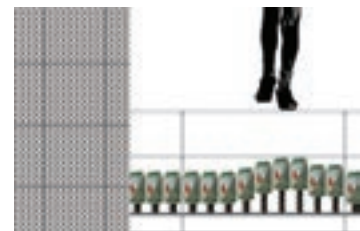
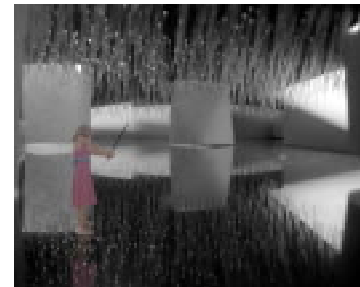
Phoebe’s journey into the grid paper, the transition between 2d and 3d, is a metaphor for a process of acquiring and remembering knowledge through spatial stories that are spun in the imagination. Inhabiting the world inside (or on the other side) of Phoebe’s grid paper happens in the architecture of the grid and in the experience of dimensional shifting that occurs in the **N_odes**, **Infinity Field** and the **Porcupine Project**. This completes our set of three primary strategies:

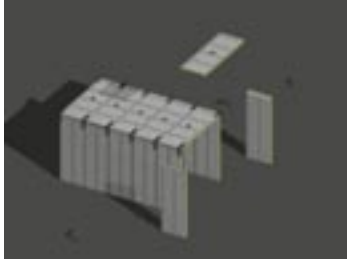
1. Dissolve the boundaries of the exhibit.
2. Displace the ordinary (*Entfremdung*).

3. Distort the threshold between 2d/3d.

N_odes and **Infinity Field** are constructed on a 2' x 2' x 2' module, which blankets the entire space. The **N_odes** scheme creates visual distortions within a Cartesian environment, inspired by camouflage techniques. Three-dimensional objects alternately appear "flat" or as closed volumes. When the children approach for a closer look, gaps appear between the planes that allow them to slip into discrete spaces hidden inside the grid. **Infinity Field** also uses the language of a three dimensional grid, but with topological manipulations. Here the grid is mapped on a surface, which becomes a thickened version of Phoebe's graph paper. The "paper" is stretched and warped to frame a fluid and continuous space. The technology of the exhibit "lives" within and is projected upon the thickness of the structure's dynamic surface. The **Porcupine Project** is made of a flexible surface that hovers slightly above the floor of the museum. The students enter into the exhibit space through a tear in the surface, which is lifted up to create a space underneath. The underside is covered with waving stalks of "intelligent grass," (or acoustic wheat) which respond to the sounds and movements of the children beneath. Observation and measurement stations are provided within the support structure and in the outer edges of the Field.

Initiating or sparking a mode of learning which is portable – the "take-away" – is a key function that we addressed in our approach to the field architecture. All of our primary strategies---dissolving, displacing, and distorting---act to connect the experience of the field to the child's imagination. The **Parallel Field** and **Module Project** suggest "low-tech" as an alternative to the information & technology overload common to young students today. Both of these projects rely on how they are made and what they are made of to reveal connections between the visible and invisible, and between the ordinary and the extraordinary. The surprise of mundane





objects used in unexpected ways creates a threshold from “high tech” to “low tech.”

Speaking as architects, we believe that whether the journey through Phoebe’s Field™ is between dimensions or between technologies, that this spatial experience will prepare and prompt the students to look around their own world with the fresh eyes of engaged learners.

Project Credits:

Wind_Board	Shawn Nelson
Edgeful_les	Danielle Jones, Shaun Salazar
N_odes	Dave Bowen, Ian Wolfersteig
Infinity Field	Oliver Rodrigo Romo
Porcupine Project	Joe David, Mark McCulloch, Alissa Priebe
Parallel Field	Stephanie Francis, Katie Scallon
Module Project	Thomas Allen

Phoebe’s Field™

Planning Inside Phoebe’s Field is a \$75,000 National Science Foundation (NSF) Planning Grant # 0442469. Principal Investigator: Mitzi Vernon; Co-PI Investigators: Katherine Cennamo, Steve Harrison, Margarita McGrath (architectural advisor) and Michael Ermann. Planned submission Fall 2006 for \$1.5 to \$2 million dollar grant to fund the children’s traveling exhibition called Phoebe’s Field™. All ideas in the project (in the book) are filed as a provisional patent with Virginia Tech and everything in the book is copyrighted to VT.