BRAIDED SCREEN

Braided Screen is an exploration in structure, rethought as an attribute of the surface, rather than as its delineating boundary or frame.

BY MAXIMILIANO SPINA
The proposition seeks to design a continuous, porous screen: a highly permeable envelope, structurally articulated as a lattice, in which its porosity and structure allow for the gradual modulation of the interior environment.

Conceived as a hybrid, operating in between the mass produced and the crafted as well as the inert and the malleable, the screen is designed to fulfill a wide range of architectural applications that respond to local conditions and desires, facilitated by its novel structural features, light-diffusing properties and an unprecedented cultivation of interstitial spaces within the screen. In this way, this project is an endeavor to further re-examine our ability to mass-produce non-standardized yet repetitive industrial components by synthesizing their conception, new serial logic and local variation and differentiation in series.

The design seeks to delaminate and thicken the surface to physically interweave different environments while allowing for formal and material continuity by employing a topological iterative technique that operates at various scales. Successive iterations of finer and finer scale surface striation integrate and articulate geometry, structure and material as the screen’s shape along with its modulation, or locally constituted architecture, change elastically. A number of patterns, a result of this technique’s infinite expansion through repeating convoluted configurations, were explored.

The braided screen uses a composite material, wire-meshed rubber, and a simple construction technique such as the torque, which allows the stranded surface to operate locally both as surface and structure in a varying continuum, from stiffness to pliability, responding in this way to changing parameters.

Maximiliano Spina is the visiting Maybeck Professor of Architecture for the 2007-2008 academic year at the UC Berkeley College of Environmental Design.