A Convergence of Art + Technology

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The underlying thread of continuity in my work is to bridge art and technology to create sculpture by using knowledge of textile science and materials. The foundation of the works to be exhibited at INTEDEC 2003 integrates processes including weaving, nonwovens, and composite materials incorporating plaster, wax and resin, as well as other means of chemical manipulation. This work demonstrates a technical as well as a conceptual complexity.

The selection of work transcends mere structural configuration and is an expressive artistic statement. The creation of this work is a synthesis of processes, materials, aesthetics and technology using both traditional and industrial equipment in production. Encasing and casting textiles in plaster, wax and resin creates permanence and sculptural quality to ephemeral materials. The dichotomous relationship between pliability and 2- and 3-dimensionality of textiles is emphasized throughout.

In order to engage in conversation regarding the potential between the realms of art, design and engineering a language for dialogue is required. All of the works represented are a result of the development of a language, both materially as well as theoretically and conceptually. A specific venue for this work is in question. Whether it be industry or gallery or a synthesis of both realms is yet to be concluded. As an artist, the concern is to use the creation of these materials as a means of executing a conceptual vision and commentary. The vision as a designer is a product for an intended application. Both of these initiatives can be attained via a specific set of processes such as experimentation with developing nonwoven materials, weaving, mold making and casting production.

Discovering these processes satisfies the need to reveal the mystery of making and the symbolism of creating; much of this work can also be research for potential product development. It is essential in all works to recognize that all materials have meanings beyond their appearance. Their creation and maker encodes them with time, place, use of technological capabilities, and resources available. By limiting the palette of materials, these experiments and manipulations maintain continuity.

Objectives of this work are to discover interactions of materials; multiple processes; to invent combinations of possibilities using a set palette of materials; and to understand new technologies and means of making and manufacturing. Beyond the pragmatic approach, these materials are used to create conceptual environments, a fusion of sculpture and architecture. As an artist working as an industrialist, I use a multitude of technologies in response to the need to create, experiment, and contemplate the meanings of materials and their environments.
Needlepunched polyester nonwoven material is a pliable textile. By cutting it into strips and realigning them, convex and concave forms are made. The possibilities for these forms are infinite. Making a rubber mold of this object allows for multiple units to be cast in plaster, wax or resin. Casting nonwoven and other textile forms in rigid materials such as these maintains the original surface quality of the textile, while increasing the application possibilities. Multiples again create modular surface options. Moving into a very rigid, structural material approach creates a permanence and sculptural quality to the ephemeral textiles, becoming objects for built environments.
The primary material in this work is Kudzu: a native plant material from Asia. Kudzu is an invasive plant material found growing up trees and structures in the eastern United States. This research was initiated in collaboration with my colleague, Dr. Brian George, Ph.D., in the Nonwoven Laboratory at Philadelphia University. Kudzu webs were initially created in an attempt to find potential use for this overly abundant plant material. Integrated with plaster, and surrounded by wax, these kudzu webs are able to maintain structural stability. This initial creation of a modular unit offers the potential for segmented applications including building materials. Used as a substrate for rye grass seed germination, these tiles question the potential for their use in geotextile applications. Research has yet to be conducted if this would remedy the invasiveness of Kudzu, or proliferate it.
Contour maps provide the source of the imagery in this work. In essence, maps are a way-finding mechanism enabling an artistic concept within material experimentation. They provide both context and identity of place, time and journey. A jacquard woven textile, emphasizing the contrast of black ground with white outline, creates a 3-dimensional surface when needlepunched to a nonwoven. Layers can be added and manipulated in order to create a depth of surface.