Hyper-Media Wall

MATTHEW GINES
University of New Mexico

TIM CASTILLO
University of New Mexico

The design and fabrication of the "Hyper-Media Wall" began with a series of 3-D models presented to a collaborative team of University Communication and Marketing (UCAM) and two research labs; ARTS Lab (Art Research Technology and Science) and CRAF+T (Center for Research in Advanced Fabrication and Technology) at The University of New Mexico. These models were manipulated over several weeks to accommodate the need of the visualization, aesthetic and marketing components of the project.

The first scaled mock-up was CNC milled from a solid block and vacuum-formed with polystyrene to create a smooth screen-like surface for projection mapping. Through the applied mapping of this first surface it was determined some of the elements, including angles and undercut surfaces were not appropriate for the projection. After additional iterative 3-D modeling a second scale prototype was fabricated in the same solid block CNC milled subtraction process.

The full-scale mock-up resulted in two minor changes to address some fall-off pixelization. The full-scale mock-up demonstrated the egg-crate strength and durability were not appropriate for the needs of the traffic the airport generates. These issues were addressed in a final mock-up built for the visualization team to begin mapping the content.

The final façade was broken down into seven triangulated parts that come together to make the final façade assembly. The team redesigned the assembly sets to be CNC milled with 2-dimensional panels, using the router to digitally control the milled angles in order to join the flat pieces in to triangulated assemblies. This process allowed the panels to come together quickly, reducing weight and shipping costs. The seven forms were sent to Warner Bros. Studio in Los Angeles, CA. Warner Bros. vacuum formed the panels and shipped only the skins back to the fabrication team. The structural system was updated for maximum durability. The design used CNC milled aluminum sub-frames on a cross-braced rigid back structure. The sub-structure used racing parts and rod extenders to attach the skin at each angle, removing the need for custom-made brackets at each moment.

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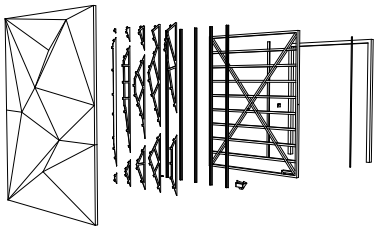

Assembly Sets

TimeLapse

Fabrication