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Form Follows ~~Software~~ Concept
Boldly Going Where Computers Can't

AN INTRODUCTION BY MURALI PARANANDI, ASSOCIATE PROFESSOR

Software tools are made to be implements of definable tasks. They are great if used in ways that exploit their strengths while avoiding their weaknesses. But they reveal productive inadequacies when adapted to architectural design processes. Particularly when the logical constructs of the design idea do not parallel that of the underlying algorithms of the computer implementation, production of design alternatives takes significant effort. This lack of fluidity encourages a fixation towards one alternative that is best supported by the tool at hand.

Woodrow Wilson once described Golf as a game in which one endeavors to control a ball with implements ill adapted for the purpose. Just as a golfer changes clubs to suit the game, a designer needs to employ the right tools at the right time in order to develop ideas to fruition. This brings up an important instructional challenge of teaching a digital design studio–to prepare students to compensate for the computer's wimpy (Windows, Icons, Menus, Pointers) nature, as it lacks kinesthetic interaction. This may mean mixing corporal with non-corporal: pencils with pixels, piano wire with NURBS, paper with patches, chipboard with polygons, real with virtual. A careful balancing can take the students on a kaleidoscopic and endoscopic journey that explores phenomena where computer simulation cannot go, forms that defy the limits imposed by materiality, and places yet to be discovered. After all, as Albert Einstein said, the secret to creativity, is knowing how to hide your sources.

Following is a description of one of such successful journey, embarked upon by a student team (James Diewald, Jon Pietro, and Mike Rudolphsen) in the fall 2004 studio under my direction at Miami University that used **form·Z**'s 3D modeling/rendering/animation capabilities very eloquently during conception, development, and presentation stages of design. At each stage, these students ran into stumbling blocks with **form·Z** tools but effectively negotiated them by shifting media, and while staying on course with the idea, ended up with poetic results that could not have been achieved otherwise. Ideas that started out with plaster models and pencil sketches on paper, reaped the benefits of kinesthetic explorations involving tactile manipulations only possible in the corporeal world. Then these physical entities entered the **form·Z** dimension through a rigorous process of digitizing and building of NURBS surfaces; where the investigation took an endoscopic twist by entering the interiors and inventing the spatial patterns and structural connections via walkthrough animation. Next, the designers prepared a spectacular presentation of the project by using the capabilities of **form·Z** rendering (exporting image information with alpha channels) as a basis for artistic compositing in Illustrator, Photoshop, and various digital video-editing packages. This is a truly successful MULTIMEDIA project that utilized **form·Z**'s capabilities of 3D modeling to extend the capabilities of pencil sketches, plaster/cardboard models, digital drawing, imaging, modeling, and video.
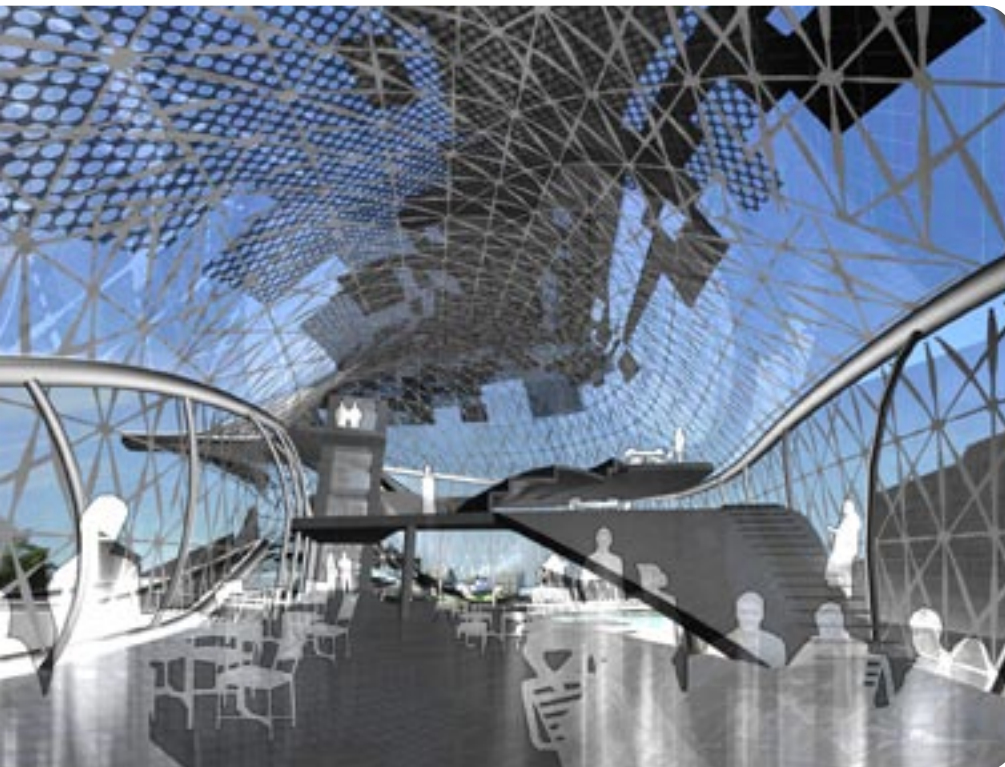
Perspective in Restaurant Lower Level looking West