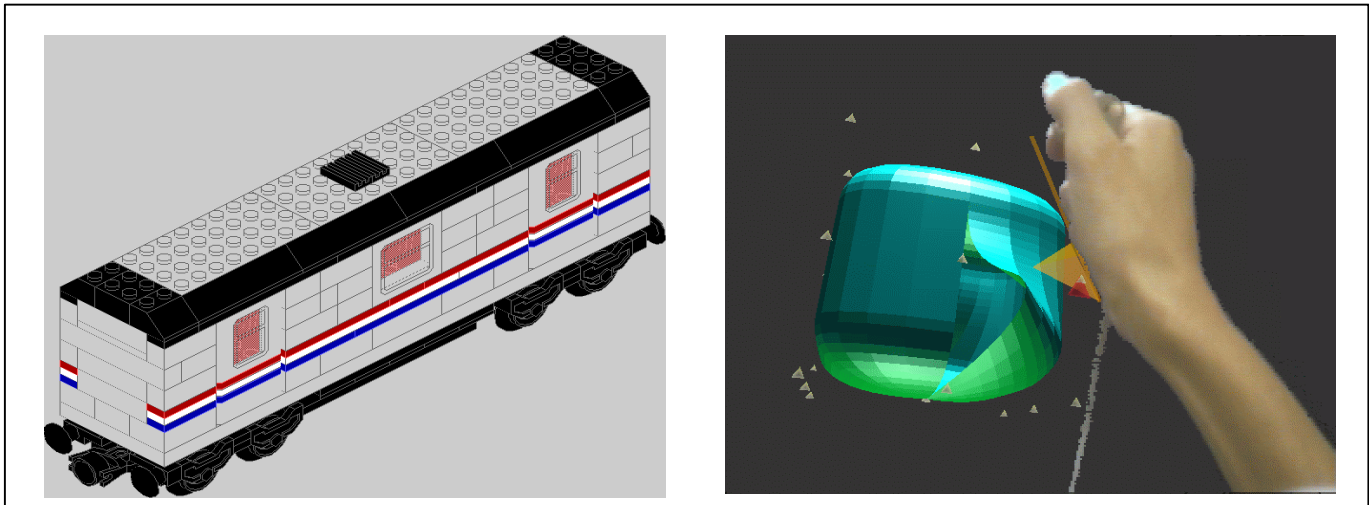


**Project Title: Virtual “LEGO”, A COLLABORATIVE DESIGN ENVIRONMENT FOR 3-D MODELLING**



**Project Leader:** Miranda Baladi, Masters Student  
Tel: (864) 656-7189  
mail-to: [mirandb@ces.clemson.edu](mailto:mirandb@ces.clemson.edu)

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**Funding:** In House

**Project Abstract:**

CAD (Computer Aided Design) has become an essential tool in modern design. CAD enables designers to construct precise 3-D models, and run preliminary tests before the first prototypes are ever built. Advances in this technology have been key in cutting costs and reducing the time required for design modification. CAD has become even more indispensable as companies have become more international. With the trend of industry toward globalization, the make-up of design teams has followed suit; they are consisting more often of members working from locations distributed across the globe.

Virtual “LEGO” is CAD modeling brought into a virtual environment. LEGO’s are a very elegant example of design, because from a finite number of simple shapes, children have been known to assemble buildings, bridges, and cars. Taking advantage of this methodology, a CAD system is being developed in which multiple users at distributed locations may collaborate in the creation, construction, and editing of 3-D models. Through the use of Virtual Reality, team members at different locations could be immersed in the same design environment, so that they may work together as if they were in the same room. This application will enable designers to intuitively communicate ideas and collaborate across distances at an early stage of the design process.