



## Mechanical/Biomedical Sustainability Project

### Solo Transfer Wheelchair

#### Mission Statement

The mission was to develop a wheelchair which facilitates the transfer of a patient to and from a bed with minimal caregiver assistance.

#### Synopsis

Approximately 500,000 people in America are wheelchair bound. The challenges of living from a wheelchair are often frustrating including the challenge of getting in and out of bed. Structured Solutions II LLC of New Canaan, CT partnered with a team of LSSL students to design and fabricate a proof of concept wheelchair.

The project was broken into five phases. The team worked concurrently on all the phases dividing the research based on team member expertise.

- Market Research and Current State-of-the-Art
- Legal and Regulatory Research
- Design Research
- Virtual Design Prototypes
- Proof of Concept Fabrication

The five phases of the STW culminated with a proof of concept prototype fabrication made by using wood and other inexpensive materials.

The project used the very latest 3D solid modeling computer software during the design thanks to a grant from the SolidWorks Corporation.

Phase II of the project will commence during the 2010-2011 academic year.



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