The Redesign of a Ski Plate to Reduce Knee Injuries

Team Members
Nikhil Bagadia, Department of Biomedical Engineering: Team Leader and Communications
Jason Berta, Department of Biomedical Engineering: BME Web Implementation Group (BWIG)
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Client
Dr. Ray Vanderby, Jr.

Advisor (s)
Dr. Willis Tompkins
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Reporting Period
Week 1: Thursday, September 6th through Wednesday, September 12th, 2001

Problem Statement
Over the past two decades, a number of advances in ski equipment technology have led to a significant decrease in the incidence of ski-related ankle and foot injuries. Unfortunately, a number of these same advances have led to an increase in the incidence of knee injuries.

The current design project seeks to redesign one of the components of the ski binding, the ski plate, in a manner that should lead to a reduction in ski-related knee injuries. This may be accomplished by designing a ski plate system that allows some degree of rotation, thereby transferring torque that would normally be placed on the knee to the ski plate.

Summary of Accomplishments
Selection of team members
Assignment of team roles
Client contacted and meeting set up
Collection and organization of subject literature already obtained
Design notebooks created

Statement of Team Goals
Thoroughly understand problem
Review current ski designs
Collect literature already addressing this problem
Start solidifying direction of the project

Project Schedule
To be provided in next progress report

Difficulties
Making sure we can continue this project

Activities
This section is vague and grey this week. Refer to the accomplishments section for this week. More detailed accounts will be provided in the next report.