



Digital Human Modeling

Product Design Comparison for an Automotive OEM

Client:

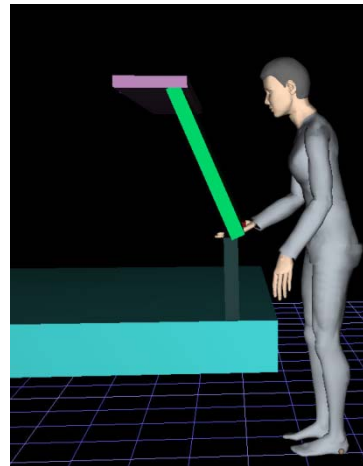
Automotive OEM Product Design Staff

Objectives:

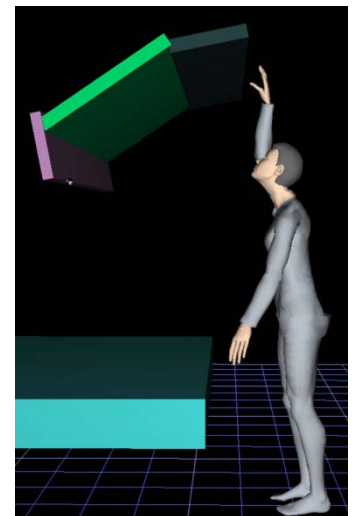
1. Evaluate their lift gate closing effort as a percentage of a person's maximum strength
2. Compare results of competitor's product design
3. Define target design closing effort requirement for demographic of interest

Project Description:

Client received customer feedback that efforts to close lift gate are too high. Sandalwood was commissioned to evaluate lift gate effort for client's design and benchmark efforts for competitor's lift gate applications. Additionally, a recommended target closing effort was requested to improve product design for the customer demographic of interest.



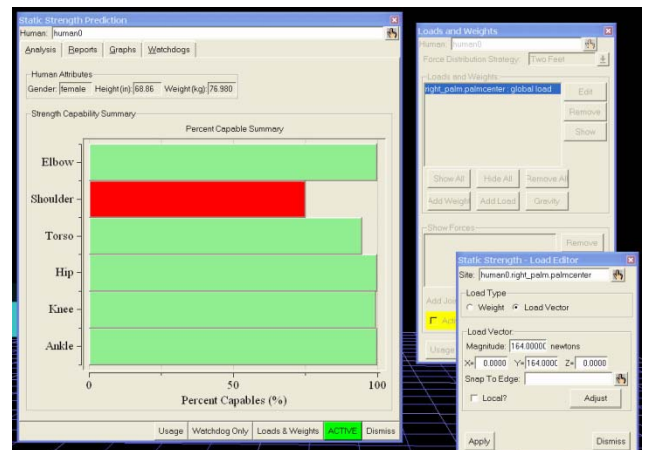
Used basic geometry for simulating results



Results:

- Quantified client's product design values for lift gate opening/closing efforts
- Developed benchmarking data for their competitor's product design lift gate opening/closing efforts
- Determined efforts correlated to lift gate angle and trajectory through the opening/closing travel of lift gate
- Provided direction on tail gate design opening/closing efforts for the customer demographic of interest

Similar results have been produced in other design areas to assist design engineering teams with ergonomically sound product designs



Population strength data – for demographic of interest

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