

Accelerometers and You

ASU Capstone Project

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Why are we here?

- To present a capstone design project focused on microelectromechanical systems (MEMS), specifically accelerometers.



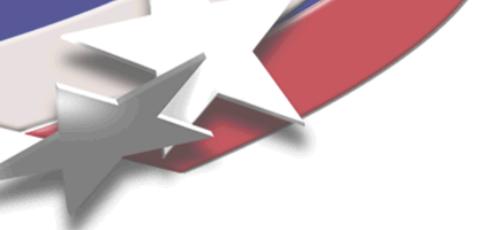
Outline

- The Need
- The Project
- The Participants



The Need

- Do you have a smartphone?
- Do you have a Wii?
- Do you have a nuclear submarine?
- All of these things need to know which way and how fast they are moving, though the precise requirements for measurement change with the application
- The market for devices which can self-sufficiently determine their motion/position at the human scale is growing



The Project

- **Sandia has manufactured a batch of accelerometers that have not been characterized**
- **Goals**
 - Characterize the performance of these raw sensors
 - Evaluate their potential in the context of human motion measurement
 - Provide design recommendations to improve performance



The Participants

- **ASU**
 - Electrical Engineers
 - Mechanical Engineers
 - Design Engineers
 - Systems Engineers
- **Sandia National Laboratories**
 - Hardware
 - Technical expertise when necessary
 - Educational seminars