Typical Flight Simulators
Why do we care?
Captain Sullenberger – US1549

• Jan 15, 2009, made an emergency water landing.

• He stated: Training prompted him to choose ditch near boats to maximize the rescue.

• All 155 occupants safely evacuated

• He had trained for the exact manoeuvre in a training simulator.
CUSP

- New vision of flight simulators
- Edge-of-envelope flight training
- You will be the 21st year for the project
A Brief History
CUSP – Atlas
Mechanical Systems

- Halo Ring
- Passive Mecanum Wheels
- Halo Pneumatics
- Sphere & Cockpit
- Markers for Vision System
- Entry Hatch
- Interface Platform
- Active Wheel Pneumatics
- Motion Base
- Active Mecanum Wheels and Drives
The Systems

[Diagram showing the systems and their connections, including PXI, Real-Time FPGA, Health Monitoring System, Vision System, Mecanum Wheels, Motion Platform (MOOG), Operator Console (X-Plane), On Board Computer (X-Plane), Health Monitoring, On Board Computer (X-Plane), and Support Systems and Pneumatic Controls.]
Tasks

- Structural Reinforcements
- Component Improvements
- Vibration and Stress Testing
- Pneumatic Systems
- Dynamic Modelling
- Cockpit Design & Interface
- Safety Systems
- Human Machine Interface
- Electrical Interfaces & Sensors
- Vision Systems
- Operational modes
- Virtual Reality Integration

FULL SIMULATOR TESTING
Questions?

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