



KENNEDY SPACE CENTER



Pathways Final Presentation



Mercedes Zuk

KSC Engineering And Technology Directorate (NE)

May 12, 2015



Agenda

- Information about Mercedes Zuk
- CAIDA Lab
- NASA Engineering Directorate & Alignment
- NASA Vision, Mission, & Strategic Plan
- Acknowledgements

Information About Me

2000 – B.S. Electrical Engineering



2004 – M.S. Electrical Engineering



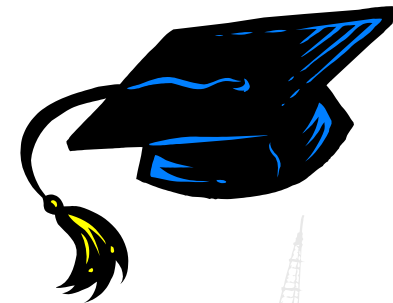
2004 – 2nd Lieutenant



2015 – M.S. Industrial Engineering



201? – Ph.D. Industrial Engineering



More Information About Me

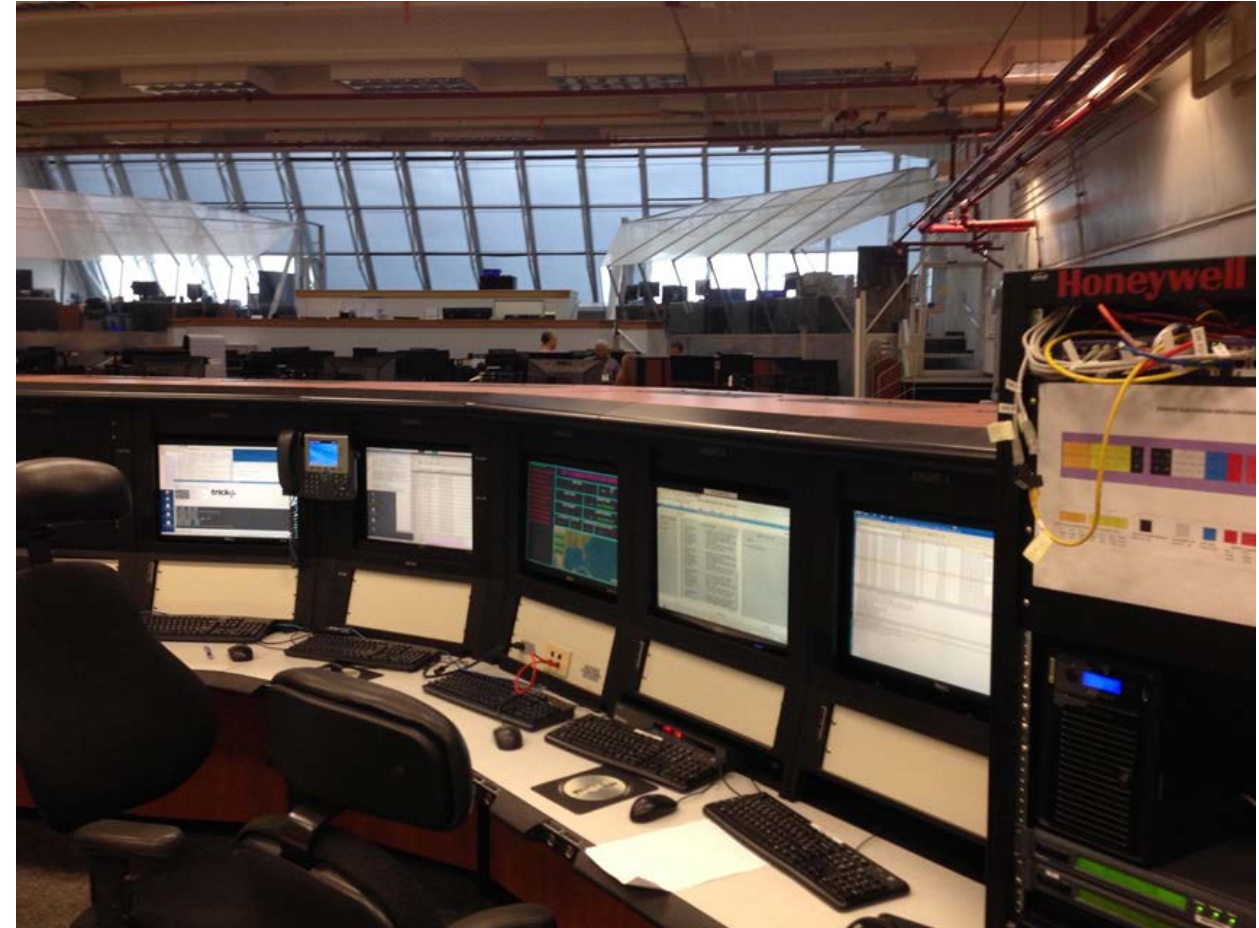


More Information About Me





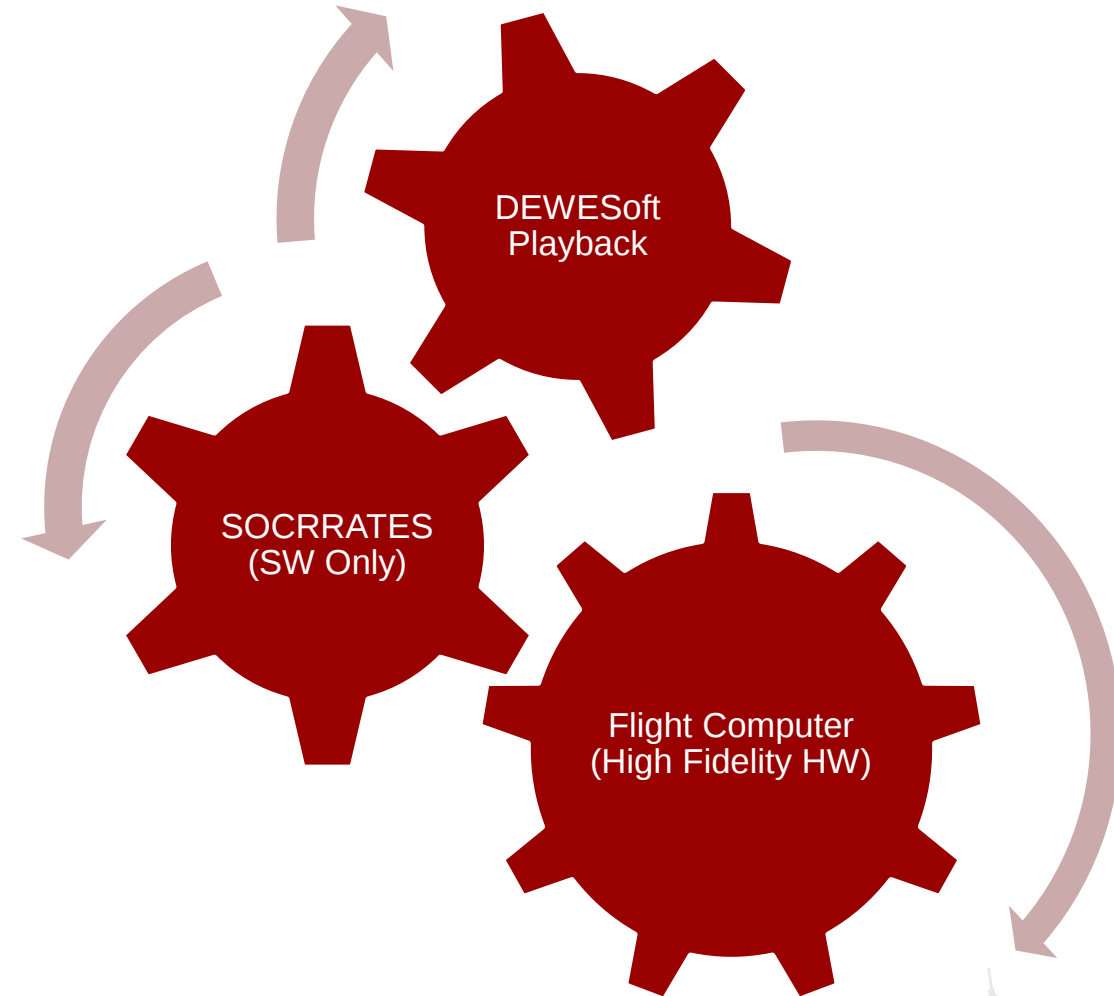
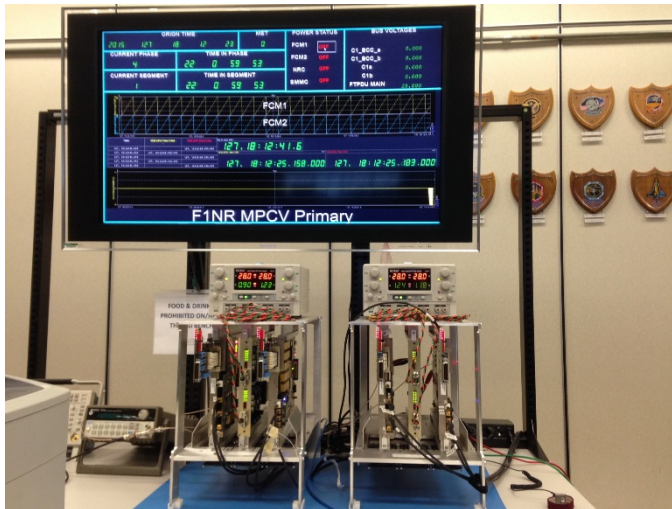
➤ The **Customer Avionics Interface, Development and Analysis (CAIDA)** Lab provides an environment to interface multiple customer *spacecraft avionics systems* with the KSC Spaceport Command and Control System/Launch Control Subsystem (SCCS/LCS).



➤ CAIDA Lab was primarily established to assist in ground to flight system Avionics command and data handling analysis.

- Supports development and risk mitigation of ground-to-flight interfaces
- Supports verification, validation, performance testing, and training

MPCV/Orion
flight computers



- Vision: KSC Engineering and Technology is nationally recognized for **innovative, effective and efficient space exploration solutions.**
- Mission: Our mission is to provide **leadership, capabilities and expertise** to make significant contributions in engineering, **research**, and technology development across the entire life cycle of government and commercial launch vehicles, spacecraft and their associated ground and surface systems.
- Core Values:
 - Integrity
 - Capability
 - Credibility
 - Innovation

NASA's Vision & Mission

➤ 2014

- Vision: We reach for new heights & reveal the unknown for the **benefit of humankind**.
- Mission: **Drive advances** in science, **technology**, **aeronautics**, and **space exploration** to enhance knowledge, education, **innovation**, economic vitality, & stewardship of Earth.

➤ 2006

- Vision: To **advance U.S.** scientific, security, and economic interests through a robust **space exploration** program.
- Mission: To **pioneer the future in space exploration**, scientific discovery, and **aeronautics research**.

➤ 2003

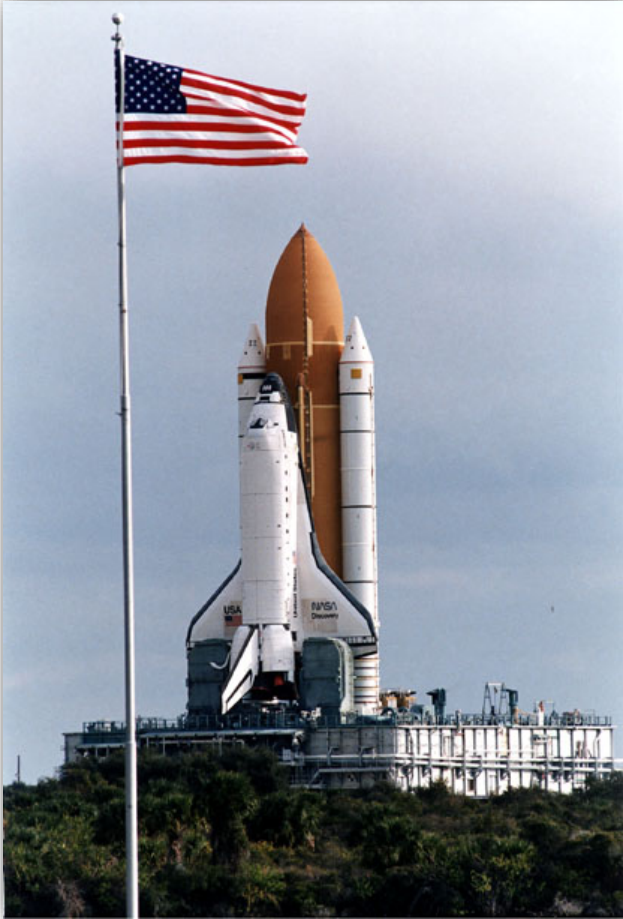
- Vision: **To improve life here**, to extend life to there, to find life beyond.
- Mission: To understand and **protect our home planet**, to explore the universe and search for life, to **inspire the next generation of explorers** ... as only NASA can.

NASA's Strategic Plan

- Expand the frontiers of knowledge, capability, and opportunity in space.
- Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.
- Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.



Shuttle → SLS



High Quality Products & Continuous Improvement

Customer Satisfaction

“Strategy is important, but it’s the execution that counts.”

Leadership & Internship



➤ Management

- Brian Luther
- Dean Orr
- Glenn Perez
- Arnold Postell
- Patrick Simpkins

➤ Pathways Program Staff

- Elizabeth Coughlin
- Josephine Pereira
- Lisa Singleton

➤ NE Mentor

- Curtis Williams

➤ The entire NASA KSC Family!

- Me
- CAIDA Lab
- NE & NASA's – mission, vision, strategy
- Acknowledgements

Thank you!

