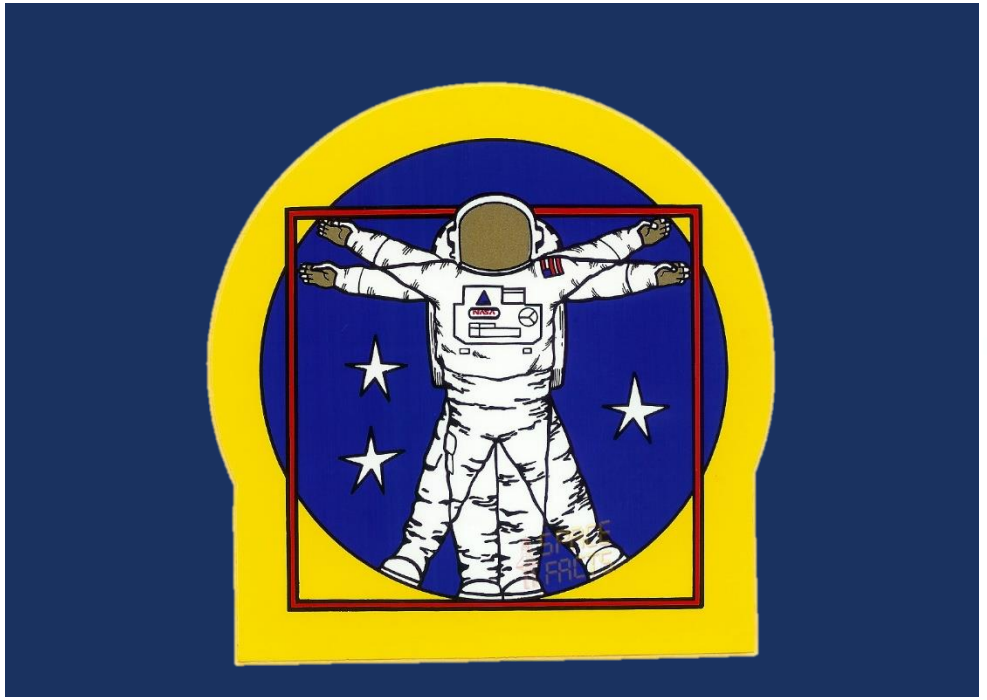
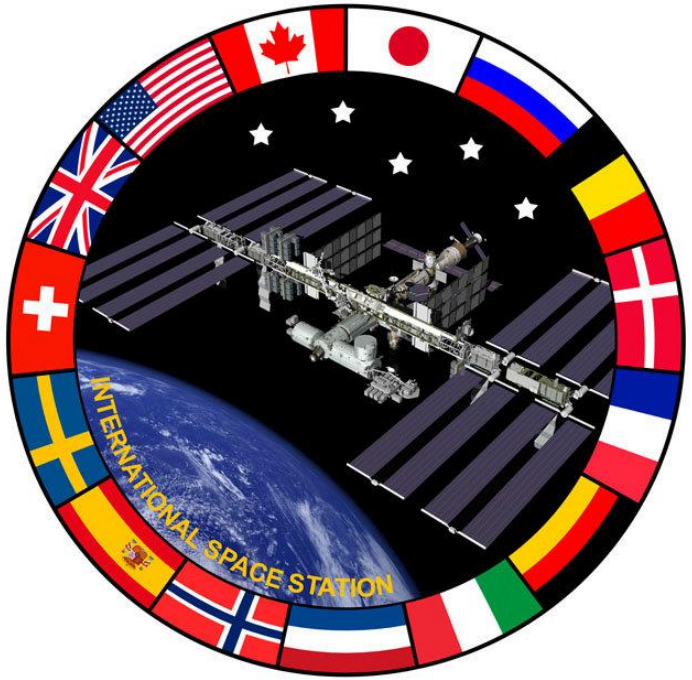
https://ntrs.nasa.gov/search.jsp?R=20190001585 2019-08-30T11:22:56+00:00Z

GRAPHICS, VIRTUAL REALITY AND TRAINING

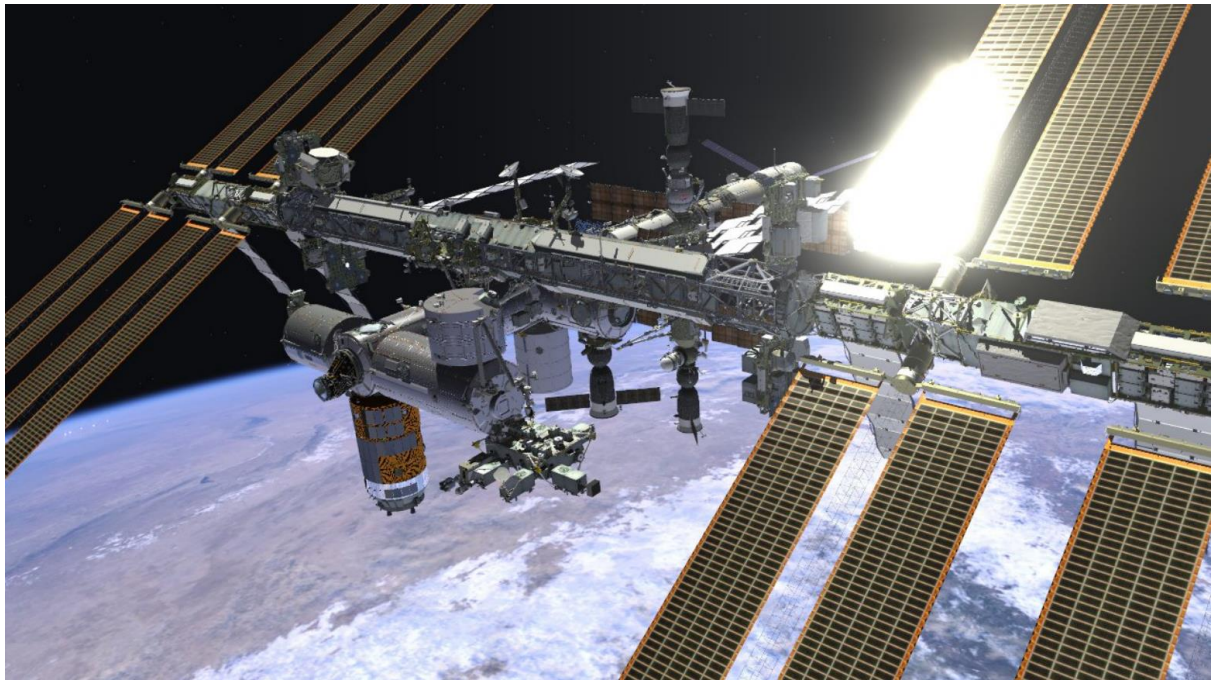
AN OVERVIEW OF THE VIRTUAL REALITY TRAINING LAB AND THE PROTOTYPE IMMERSIVE TECHNOLOGIES LAB





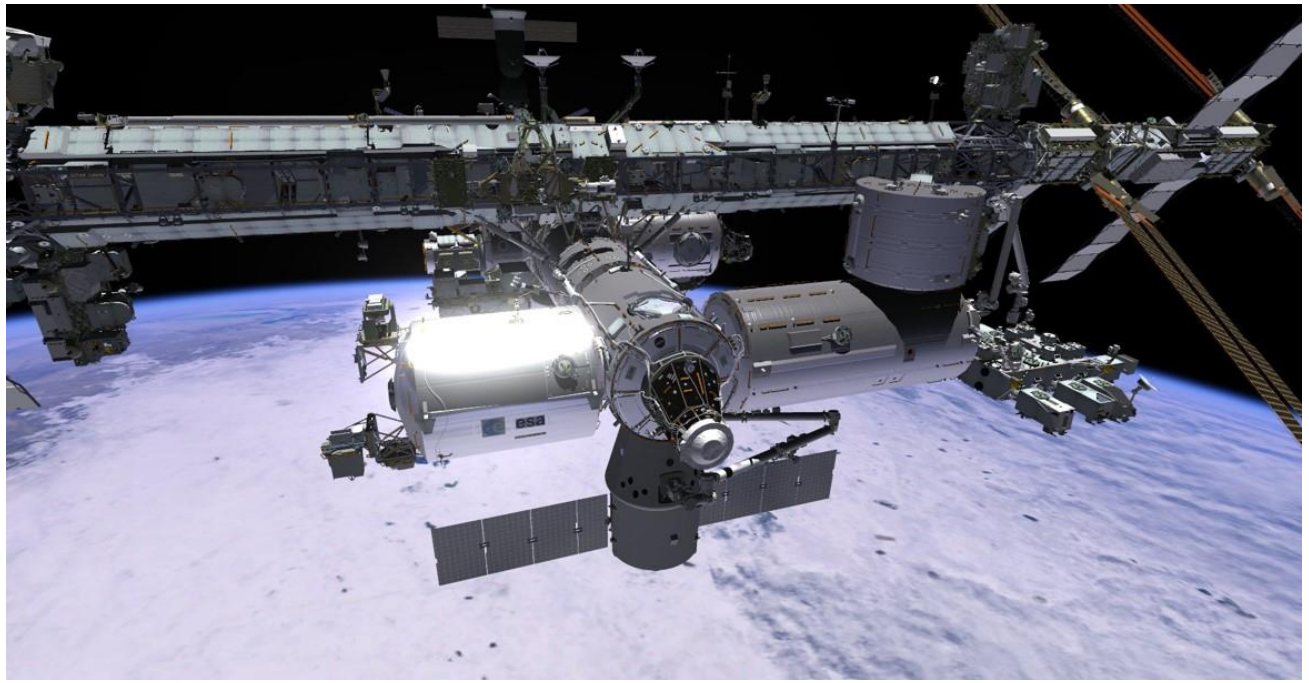
HISTORY AND PURPOSE

- Started in the 90s
- Need for reconfigurable graphics
- Need for an analogous immersive training environment

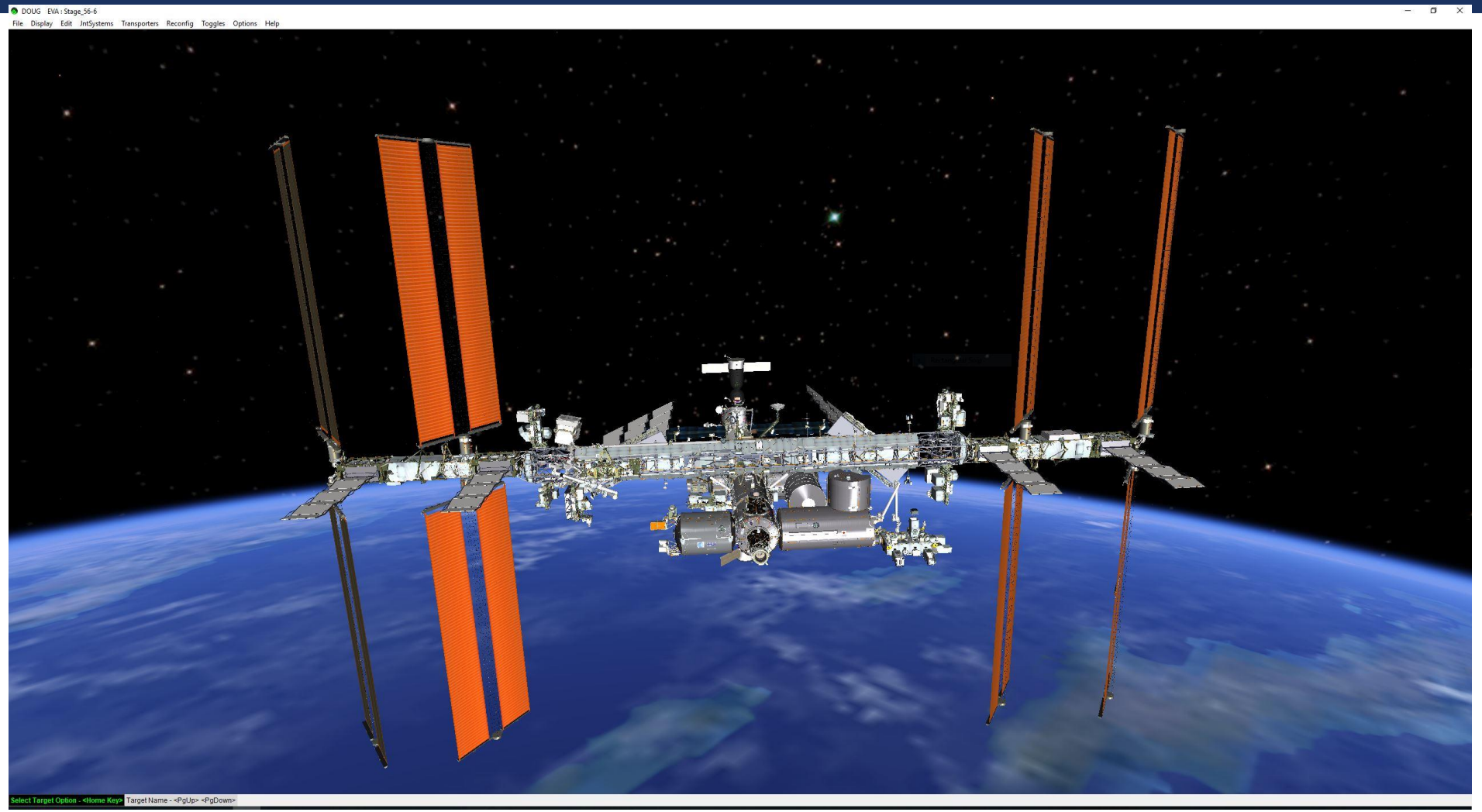


TRAINING SYSTEMS AND PRODUCTS OVERVIEW

- Dynamic On-board Ubiquitous Graphics (DOUG)
- Mass Handling Training Scenarios
- Robotic Workstation (RWS) Training
- EVA Training Procedure Development (Reconfigs)
- Simplified Aid for EVA Rescue (SAFER)
- Virtual Reality Trainer System (on-board)

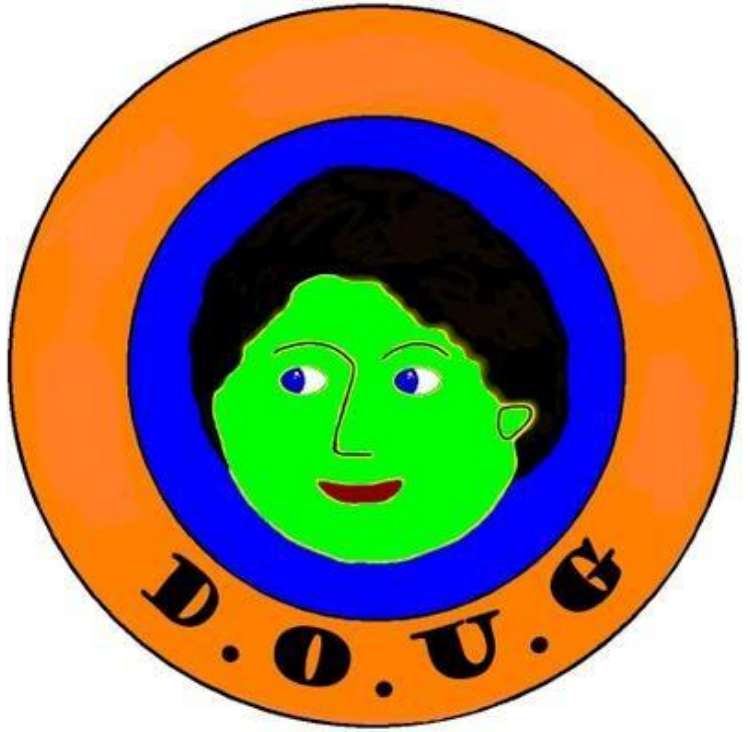


DYNAMIC ONBOARD UBIQUITOUS GRAPHICS

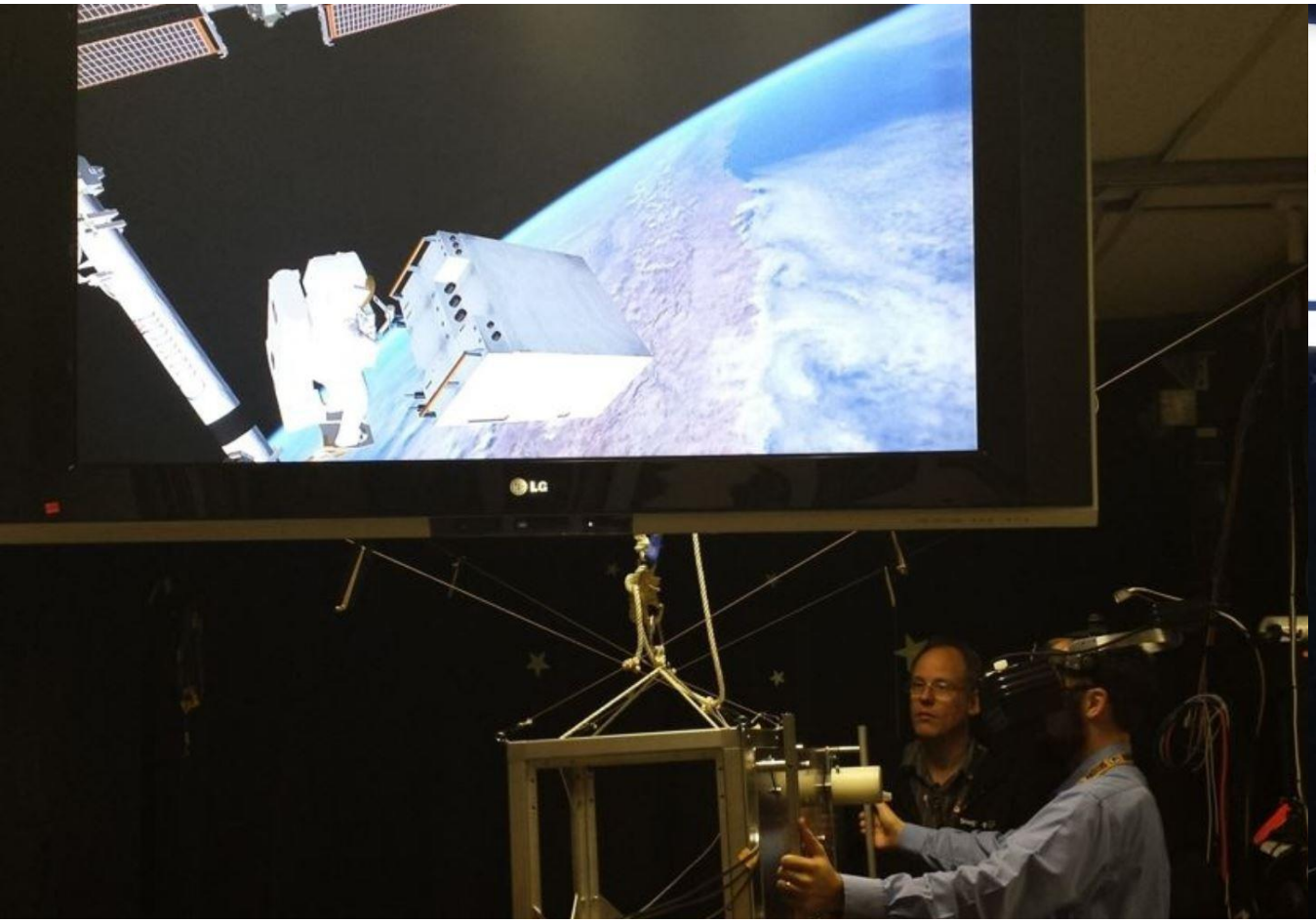


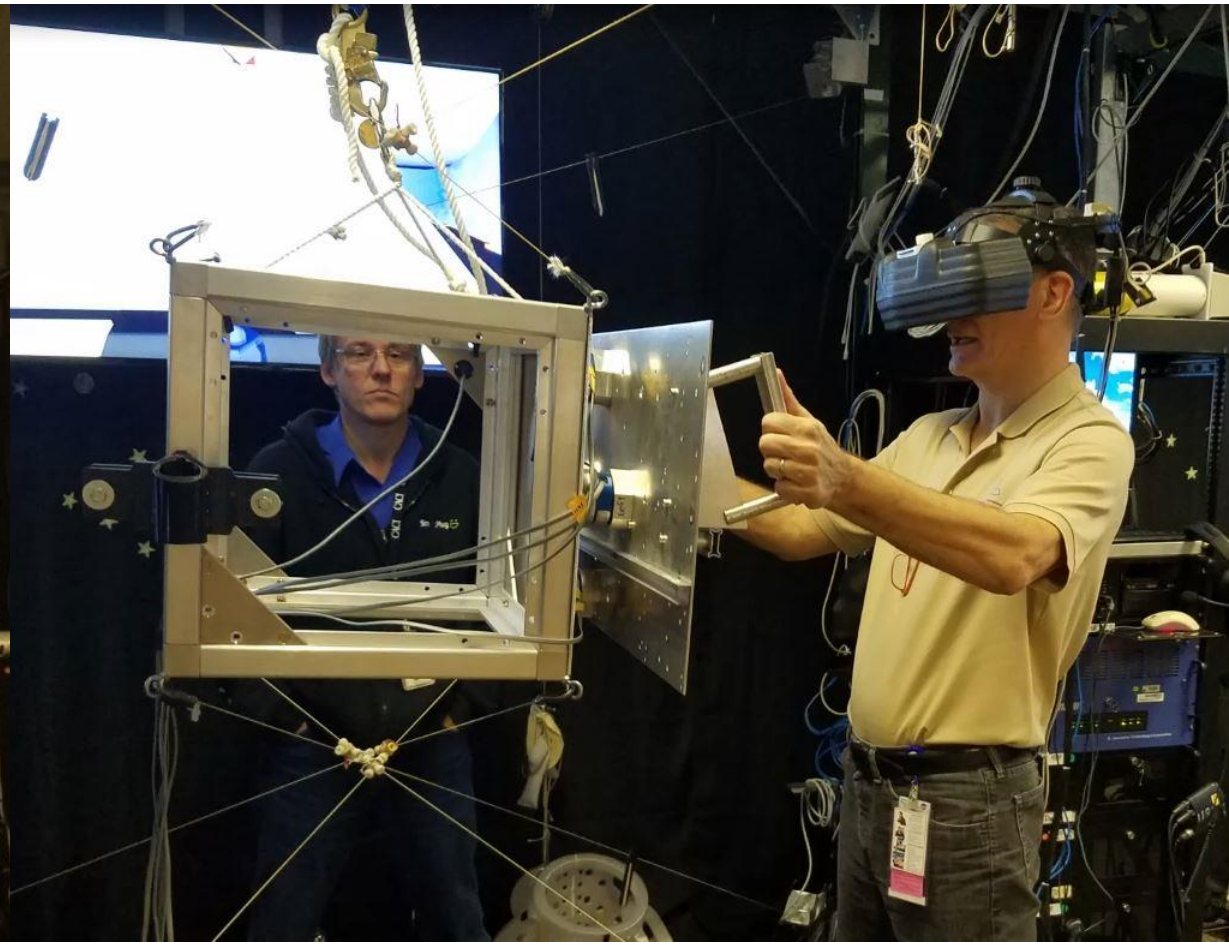
WHAT IS DOUG?

- 3D Viewing tool and graphics engine
- Can load up-to-date scene configurations
- Used for Exploration Applications (EDGE)
- Utilized on-ground and on-board for training simulations and planning

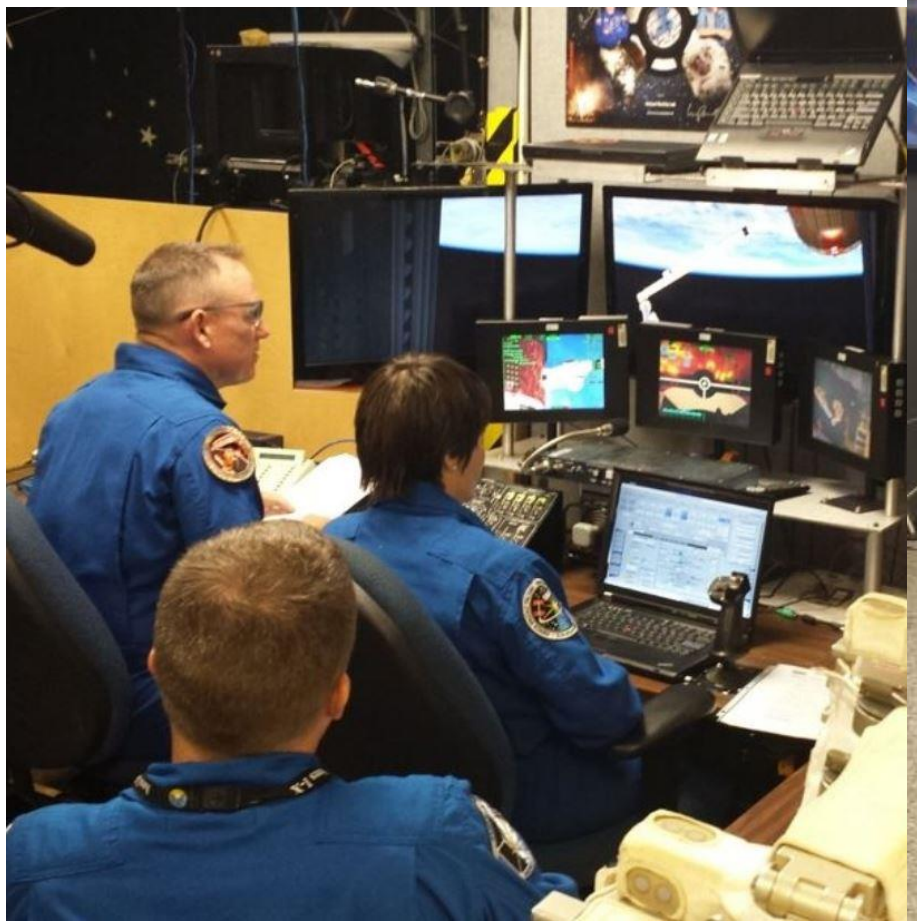


MASS HANDLING TRAINING





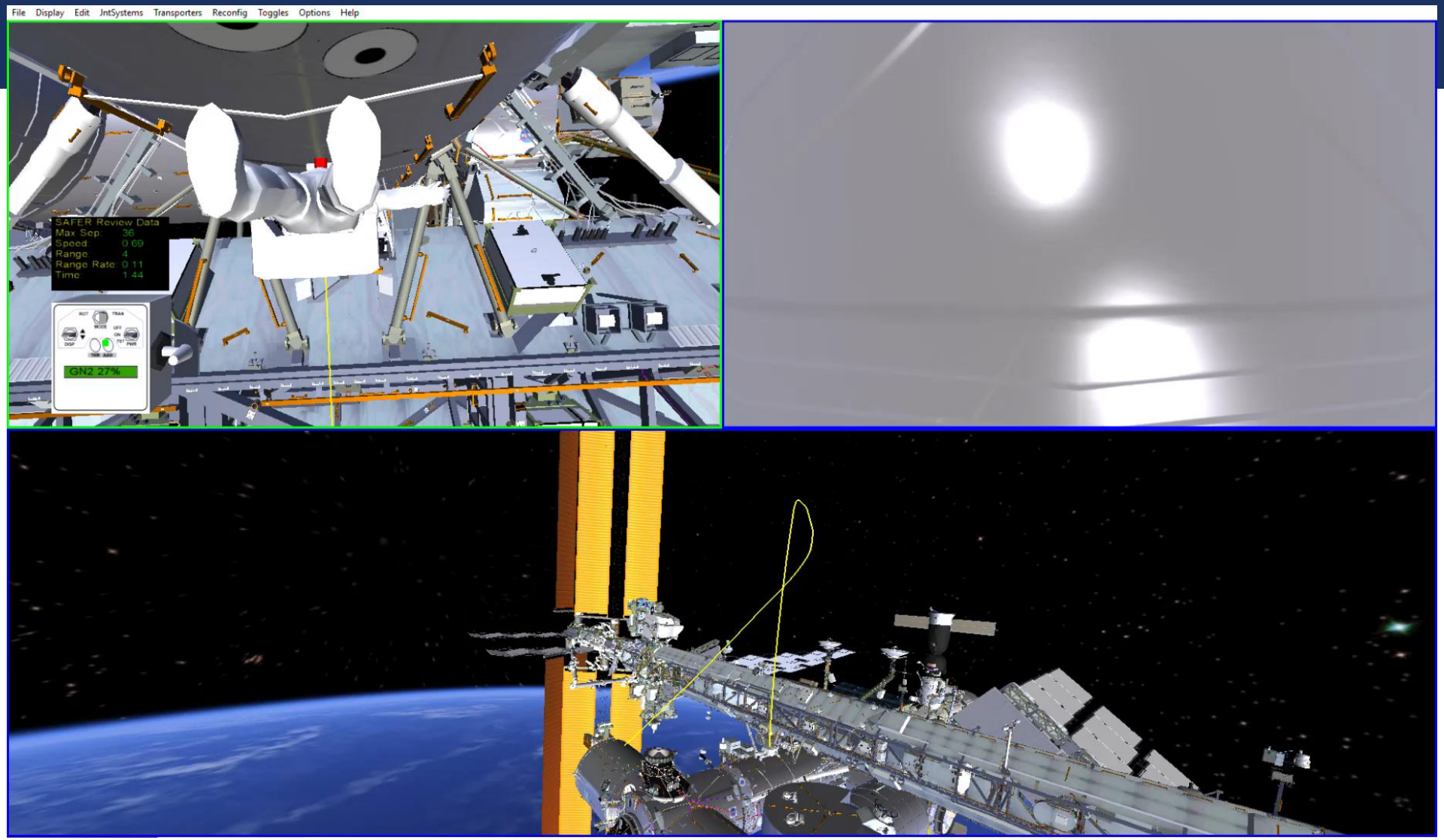
ROBOTICS WORKSTATION TRAINING



EVA (SPACE WALK) TRAINING PROCEDURES

SAFER TRAINING

SAFER REVIEW TOOL



VIRTUAL REALITY TRAINER

VIRTUAL REALITY TRAINER EST. SPRING 2018

THE VIRTUAL REALITY TRAINING LAB

PROTOTYPE IMMERSIVE TECHNOLOGIES ...AND BEYOND