

National Aeronautics and Space Administration



NASA Education

Linking students and educators with NASA to inspire the next generation of scientists

Digital Learning Network

Free interactive programs allow you and your students to journey into space with NASA's Digital Learning Network (DLN)

- ...Access directly to NASA operations
- ...Demonstrate key concepts
- ...Take learning to a whole new level

Massively Multiplayer Online Learning Game

Use the power of immersive online games to teach a range of complex subjects

Virtual environments allow users to:

- Challenge your own perceptions of air and atmospheric conditions
- Experience real-time weather
- Develop skills for:
 - Strategy, training
 - Mathematical analysis
 - Problem solving
 - Plan formulation and execution
 - Team building
 - Cooperation
 - Adaptation to rapid change

From NASA in your classroom

www.nasa.gov

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Aviation SimNet

Real time, state-of-the-art, human-in-the-loop air traffic management simulation

Extending simulation capabilities beyond the limitations of a single laboratory

Partner Organizations:

- Federal Aviation Administration
- NASA Langley Research Center
- Smith Center for Advanced Research and Learning
- Center for System and Simulation Integration
- National Traffic & Management Administration

Human:

- Learners/Trainees
- Instructors
- Analysts
- Ops
- Air Ops/Flight Recorders
- The Public
- Researchers

An aviation community project, utilizing an open, standards-based set of shared hardware, protocols, and software for distributed Air Traffic Management simulation over the Internet

Enabling distributed control evaluation

Meeting various the simulation community

Building upon existing process standards



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Entry, Descent, and Landing

Meeting the Challenges of Getting to Mars

High-fidelity trajectory simulation and modeling capabilities at NASA Langley extend beyond Mars atmospheric flight...

Any trajectory of any vehicle can be monitored and propagated through any environment

In only seven minutes, a spacecraft must slow down from an incredible speed of 12,000 mph to nearly zero. This entry, descent, and landing phase is referred to as the nail-biting "Seven Minutes of Terror."



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NASA Langley Research Center

Flight Simulation Facilities

Real time, state-of-the-art, human-in-the-loop flight simulation

Testing and validating aircraft and systems flight technologies through simulation

Simulator configurable for many types of aircraft and spacecraft

Custom test hardware simulation facilities to conduct large-scale, multi-scale experimentation



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Innovative Partnerships Program

NASA Langley Advanced Planning and Partnership Office

Jump start your R&D success by collaborating with NASA

- Tap into NASA's innovative technologies
- Enhance your R&D with NASA's cutting-edge capabilities
- Leverage NASA's state-of-the-art facilities
- Access NASA's award-winning experts

NASA is...

- Contributing to industry and consumer products
- Launching start-ups and new technologies
- Advancing petroleum industry

Find out more at: <http://technologypartnership.nasa.gov>



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Entry, Descent, and Landing

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- NASA Langley Research Center
- MITRE Center for Advanced Aviation System Development
- Center for Applied ATM Research at Embry-Riddle Aeronautical University
- National Oceanic & Atmospheric Administration
- Raytheon
- Lockheed Martin Transportation and Security Solutions
- Federal Express
- UPS
- Air Line Pilots Association
- The Boeing Corporation
- Eurocontrol

An aviation community project defining an open, standards-based set of object models, protocols, and software for distributed Air Traffic Management simulation over the Internet

Enabling distributed concept evaluation

Working across the aviation community

Building upon existing proven standards





NASA Langley Research Center

Flight Simulation Facilities

Real-time, state-of-the-art, human-in-the-loop flight simulators

TRANSPORTATION



**Testing and validating
aircraft and spacecraft flight
technologies through simulation**

Simulators configurable for many types of aircraft and spacecraft

Can be tied to remote simulation facilities to conduct large-scale, multi-vehicle simulations





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EDUCATION

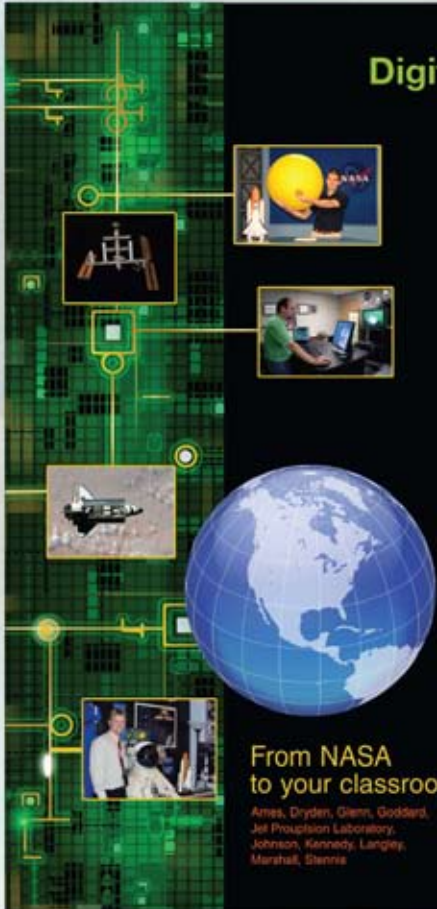
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...speak directly to NASA specialists

...demonstrate key concepts

...take learning to a whole new level



From NASA to your classroom

Ames, Dryden, Glenn, Goddard, Jet Propulsion Laboratory, Johnson, Kennedy, Langley, Marshall, Stennis

Massively Multiplayer Online Learning Game

Use the power of immersive online games to teach a range of complex subjects

Virtual environment draws users into challenging game-play immersion within an educational laboratory and massive collaborative workspace

Develop skills for:

- Strategic thinking
- Interpretative analysis
- Problem solving
- Plan formulation and execution
- Team building
- Cooperation
- Adaptation to rapid change

under development



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IPP

