

TIME *and* NAVIGATION

Opens March 29, 2013 at the National Air and Space Museum



Exhibit

QUICK FACTS

Time and Navigation: The untold story of getting from here to there.

Explores the enduring connection between determining time and position.

Major theme:

“If you want to know where you are, you need an accurate clock.”

Collaboration of Two Smithsonian Museums:

National Air and Space Museum

National Museum of American History

Exhibit

QUICK FACTS

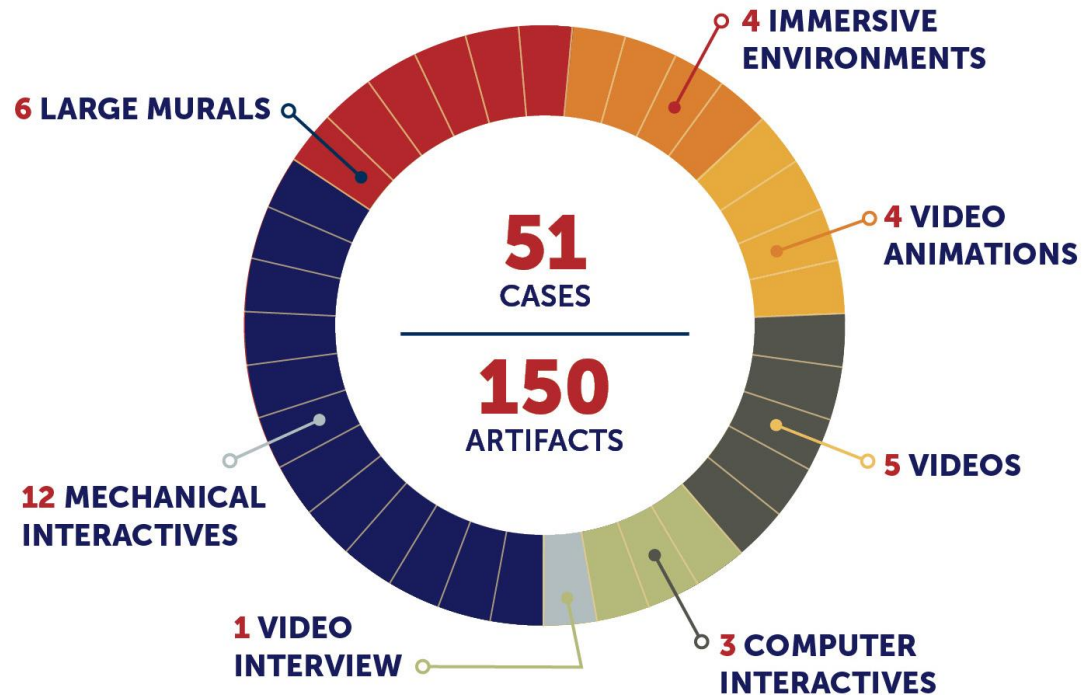


Exhibit Elements Include:

Sextant and chronometer station.

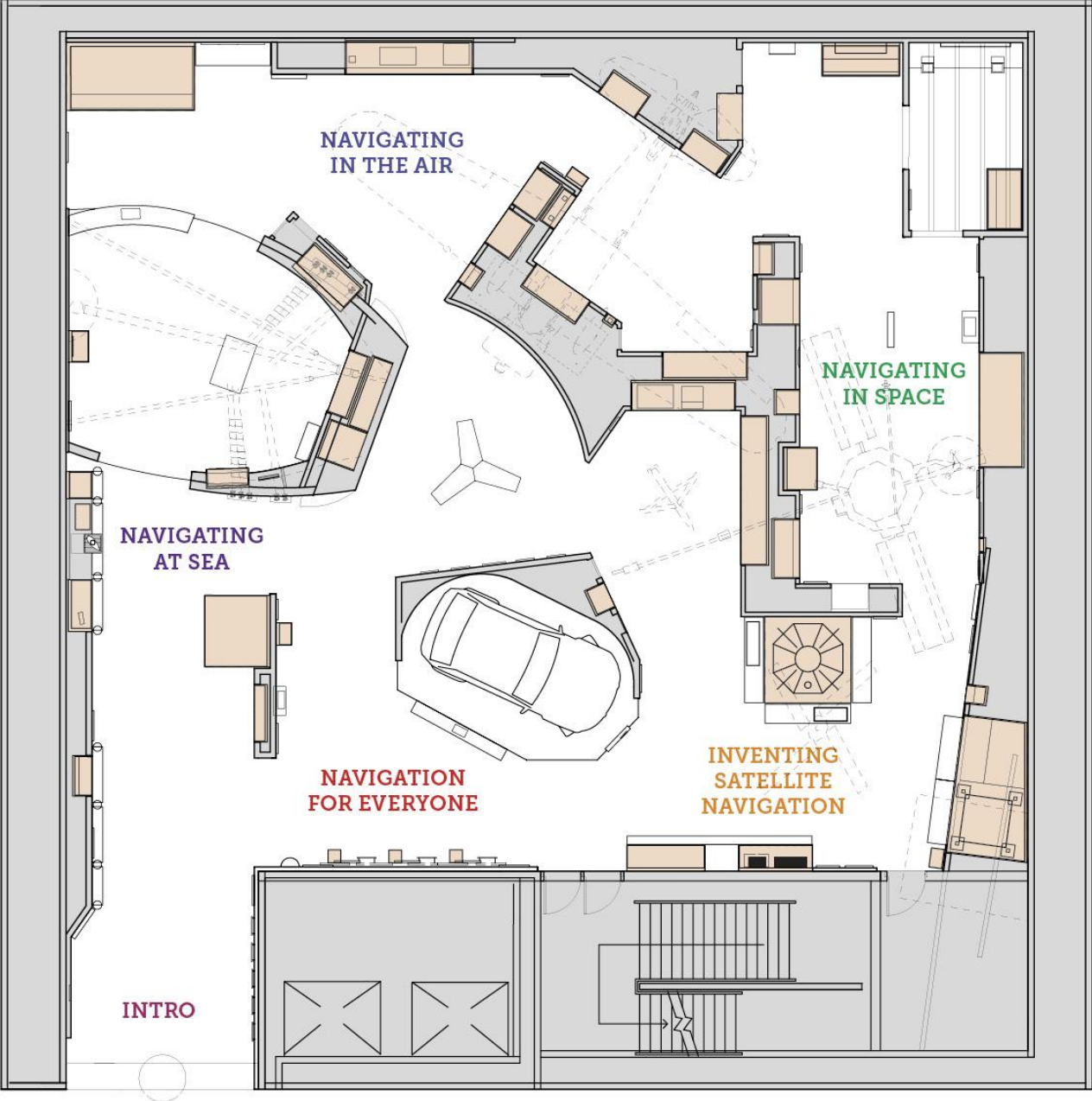
Dynamic presentation on new methods of air navigation.

Displays showing the impact of modern time and navigation technology.

Stories from real people about how they navigate.

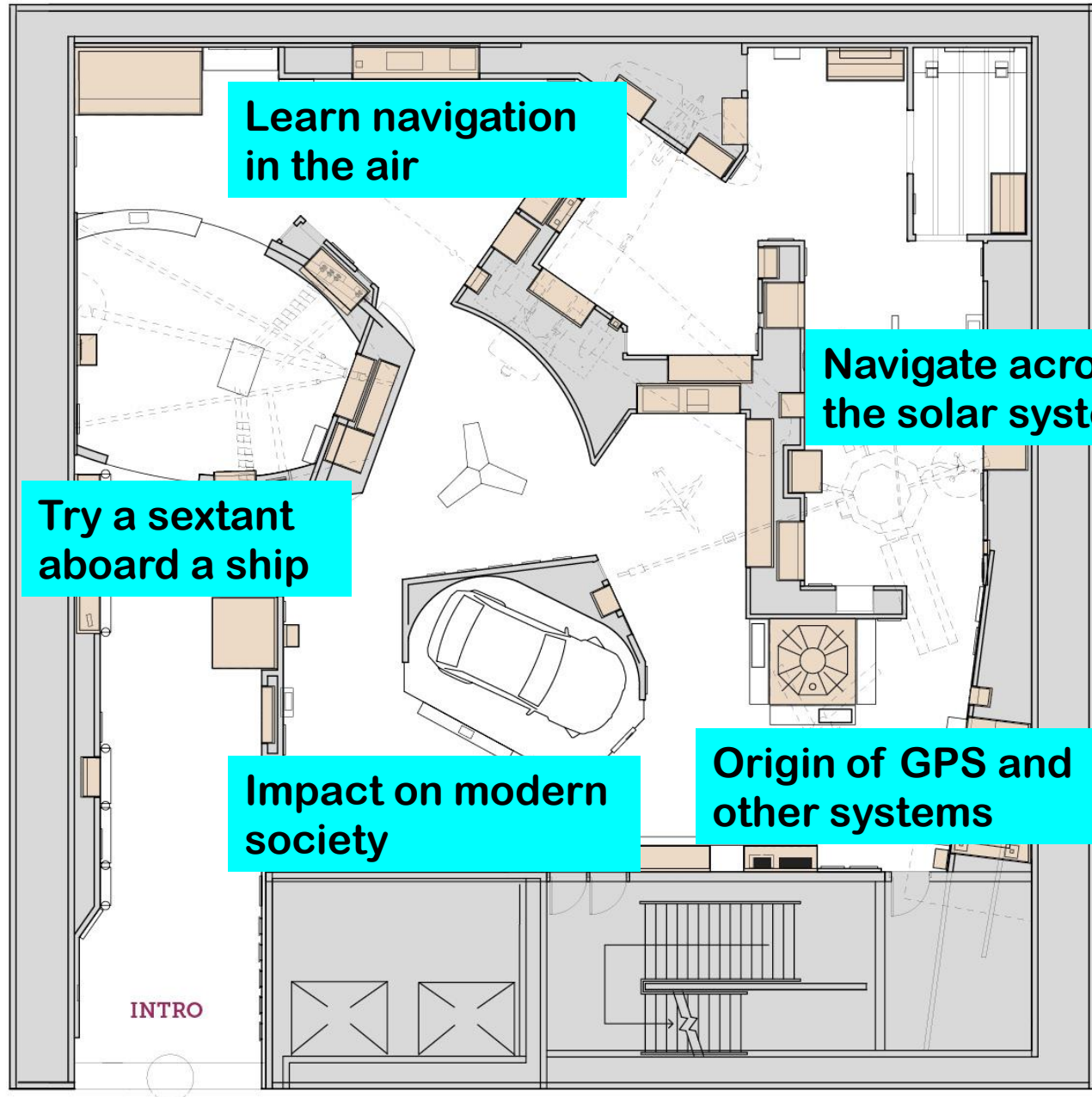
Video presentation showing navigators from different eras.

Exhibit Layout



100% Schematic Design
PLAN VIEW

Exhibit Layout



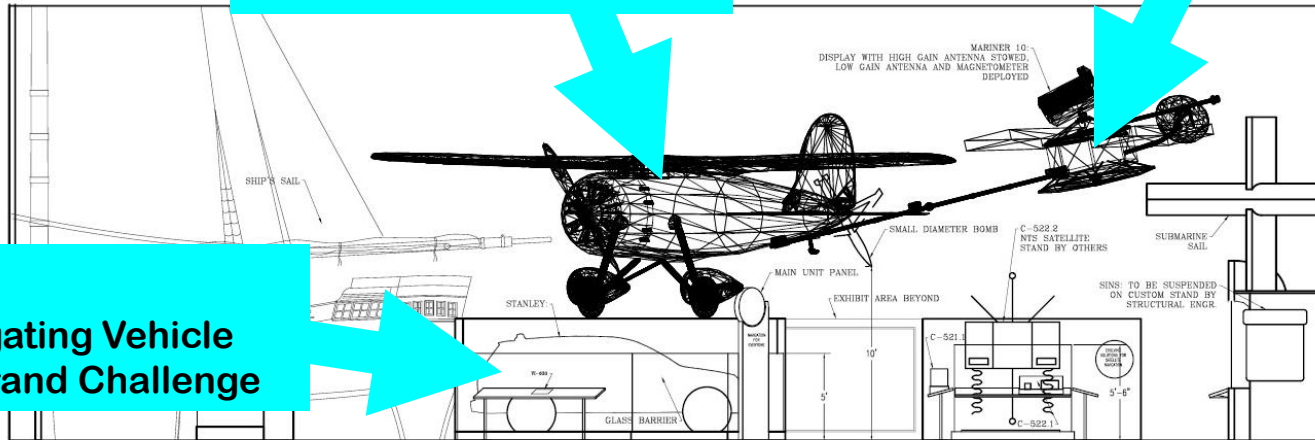
100% Schematic Design
PLAN VIEW

Exhibit Layout

Winnie Mae
Around-the-world aircraft

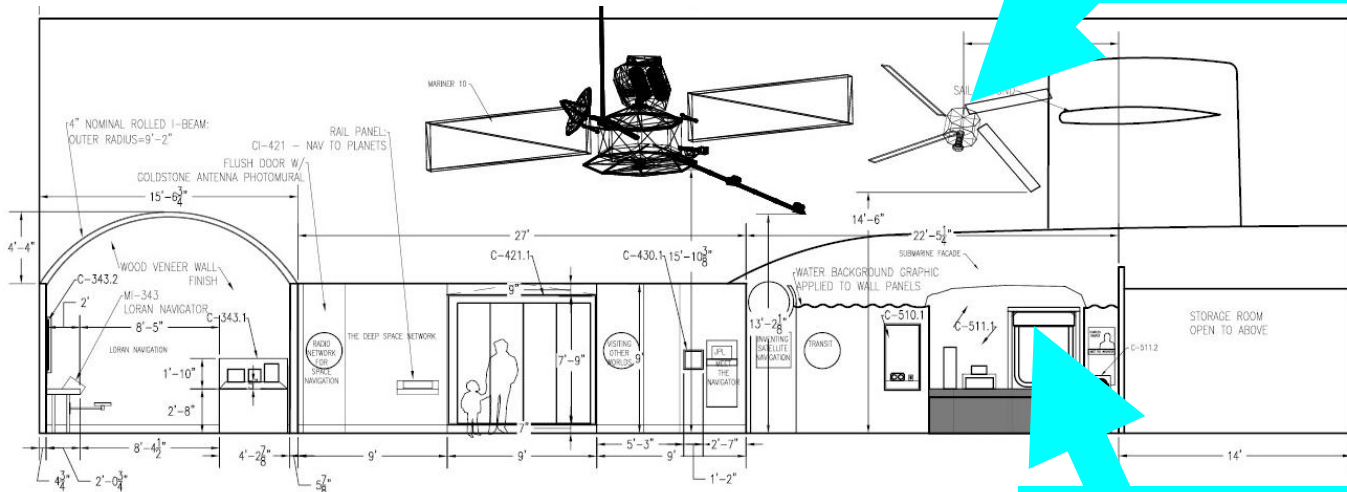
Mariner 10
Mercury flyby: First gravity assist

Stanley
Self-Navigating Vehicle
DARPA Grand Challenge



Section through gallery
Full gallery view

Transit satellite



East Elevation
Navigating in the Air, Navigating in Space and Inventing Satellite Navigation

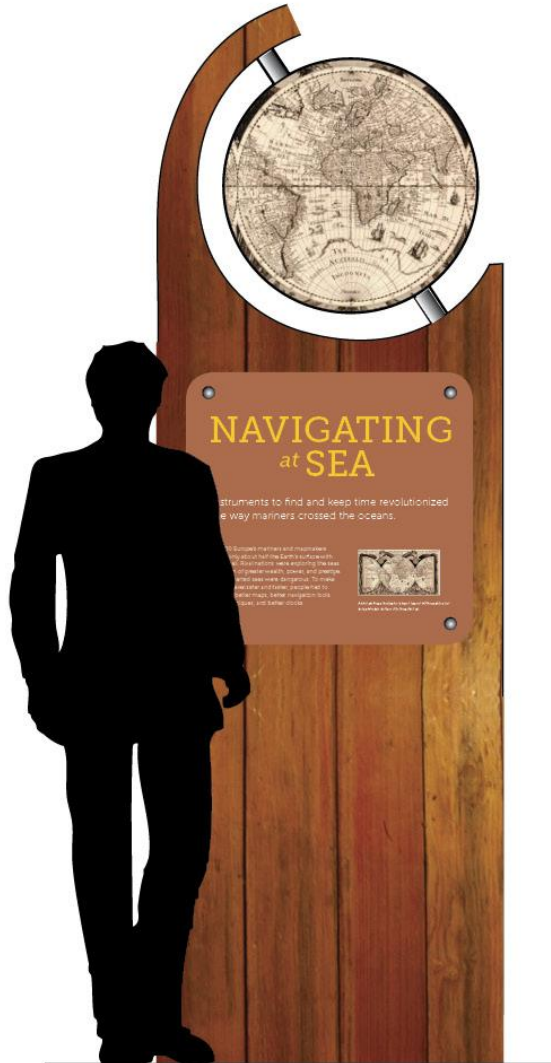
Submarine Navigation System

Highlighted Clocks in *Time and Navigation*

- 1812 Bond marine timekeeper—The earliest seagoing chronometer made in U.S.
- British chronometers: Arnold (1825), Earnshaw (1798), Barraud & Jamison (1786)
- Weems second-setting wristwatches
- Rubidium and cesium frequency standards from 1970s for GPS satellites
- NIST-7
- Chip-scale atomic clocks from NIST and Symmetricom

Major Graphic Features

(Not to scale)

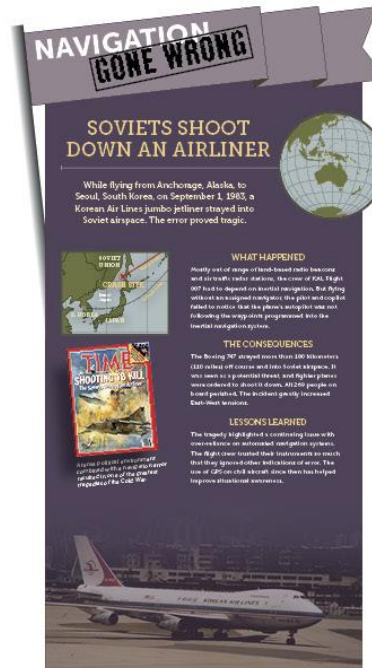


MAIN UNIT PANELS
(5 total)



Lockheed Sirius Tingmissartog
Pioneers of Flight Gallery
National Air and Space Museum

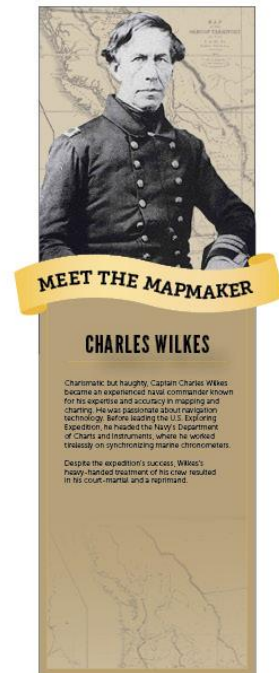
REFERENCE LABELS TO ARTIFACTS
ON DISPLAY IN OTHER EXHIBITS
(approx 5 total)



NAVIGATION GONE WRONG
(4 total)



MAIN SUBUNIT PANELS
(approx 15 total)



MEET THE... PANELS
(approx 11 total)

In PROGRESS

Exhibit Artifacts: —————→

Winnie Mae moved from Udvar-Hazy Center to Garber Facility for conservation.

Aircraft is now installed in *Time and Navigation*.

Web and Computer Interactives:

- Contracting process for exhibit website and computer interactives is underway
- Evaluations for interactive and website development coming soon

Mechanical Interactives:

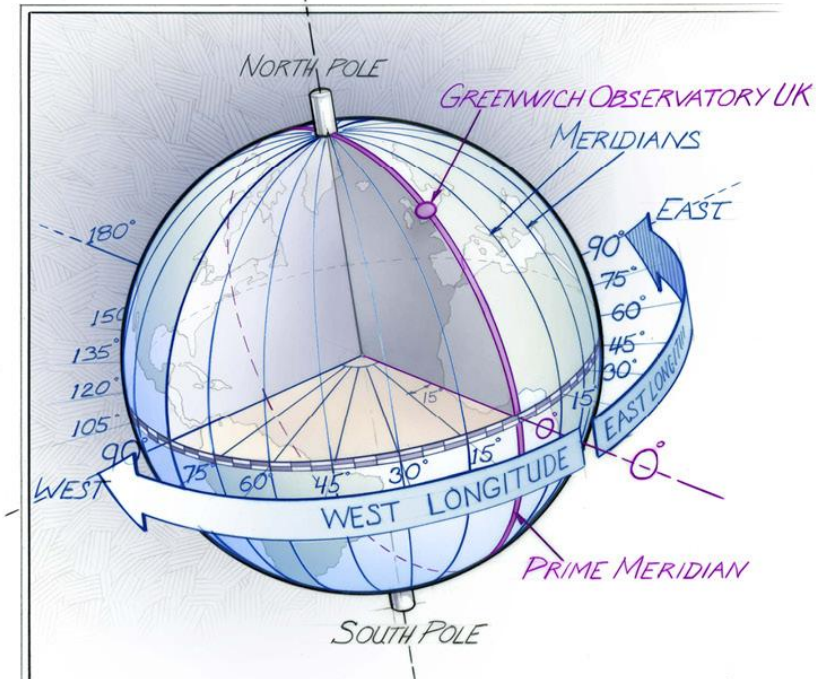
- Building prototypes and testing all hands-on interactive elements is underway

Videos:

- Contracting process for video production and editing is underway



LONGITUDE



Lines of Longitude are imaginary Lines circling the globe through poles. Also called meridians, they are designated in degrees east or west of a starting reference line from 0° at that prime meridian to 180° on the opposite side of the globe.

In PROGRESS

Communications:

- Developing a marketing plan and working with exhibits team to create press material

Education and Outreach:

- Planning social media engagement to support evaluation, inform online experience design, and explore learning objectives with museum audiences

← Special Features:

Illustrations and animations explain technical details.

Please visit web site for updates:
airandspace.si.edu/timeandnavigation

Questions?
Contact Andrew Johnston:

johnstona@si.edu



TIME *and* NAVIGATION

THIS EXHIBITION IS MADE POSSIBLE THROUGH THE GENEROUS SUPPORT OF

NORTHROP GRUMMAN

.....

ITT CORPORATION

HONEYWELL

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

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U.S. DEPARTMENT OF TRANSPORTATION

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MAGELLAN

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NATIONAL COORDINATION OFFICE FOR
SPACE-BASED POSITIONING, NAVIGATION & TIMING

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ROCKWELL COLLINS

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INSTITUTE OF NAVIGATION