

# En Route Integration & Interoperability Facility

## Location

The En Route Integration and Interoperability Facility (EIIIF) is located at the FAA William J. Hughes Technical Center (WJHTC), Atlantic City International Airport, New Jersey.

## Description of Laboratory

The EIIIF provides laboratory and engineering services supporting En Route infrastructure modernization and integration of new systems or capabilities into the National Airspace System (NAS). These services support activities such as development of new En Route innovations, proof-of-concept prototypes, early engineering assessments for new systems, operational evaluations, risk reduction demonstrations, training, and operational procedure development for both Air Traffic and Technical Operations personnel.

The EIIIF is an ISO 9001:2008 certified laboratory, sponsored and funded by En Route and Oceanic Second Level Engineering (AJM-25) and is devoted to exploring the issues associated with modernizing the NAS En Route infrastructure. The EIIIF is available to both Government and Industry organizations that support the emerging NAS architecture.

Characteristics of the EIIIF include:

- The flexibility to support multiple NAS projects in various stages of development
- Complete, high fidelity en route air traffic systems
- A flexible environment that will accept both hardware and software modifications
- Diverse simulation capabilities
- Interconnectivity to other WJHTC laboratories
- Managed and maintained by a multi-disciplinary team
- Engineering services, operations, maintenance, and project support
- A 24 hour day, 7 day per week schedule

## Mission

The mission of the EIIIF is to foster the exploration and evaluation of air traffic concepts in the En Route domain within a prototyping environment and facilitate the integration of cutting-edge air traffic solutions into the existing En Route environments.

## Purpose

The EIIIF is dedicated to exploring the issues associated with modernizing the existing NAS En Route infrastructure. The facility provides engineering, simulation, and laboratory capabilities for the following activities:

- Proof-of-concept studies
- Prototype development
- Early engineering assessment
- System-level integration and verification
- Experimentation/studies
- Simulation/scenario development
- Demonstrations
- User evaluations
- Risk assessment studies
- Air traffic and technical operations familiarization
- System Development

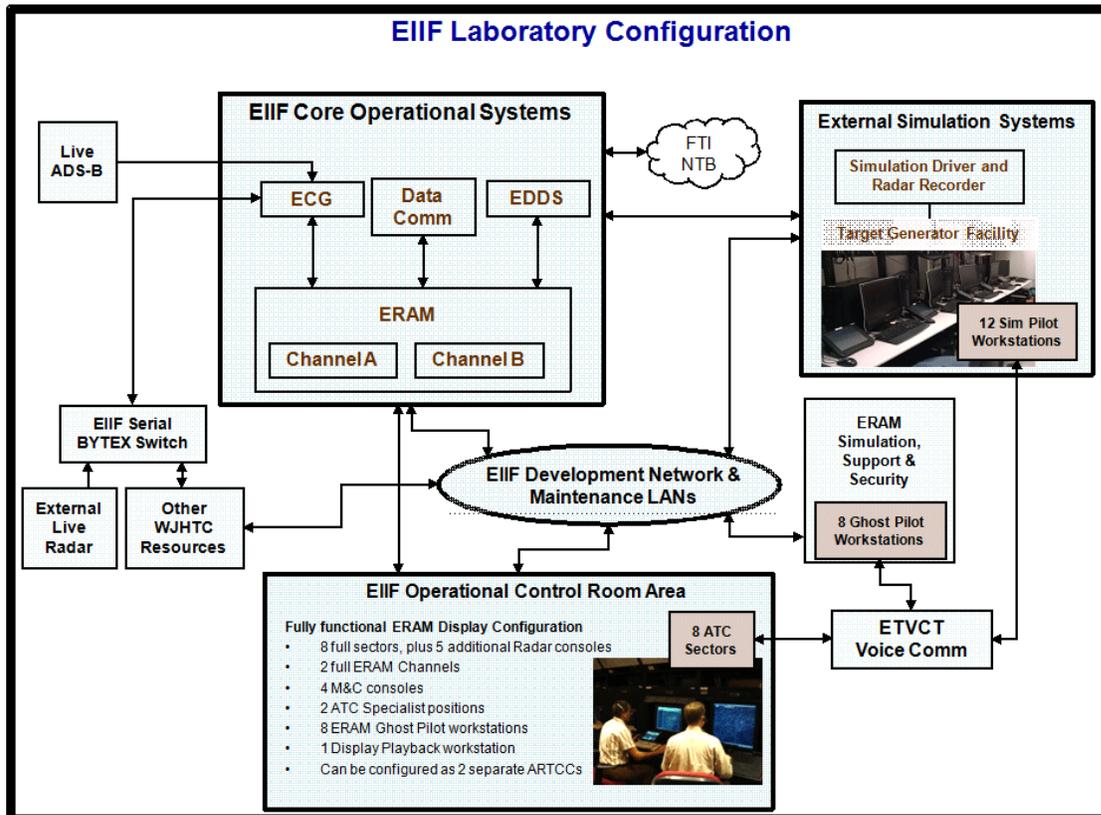
## Facility Capabilities

The EIIIF has been designed to represent an En Route air route traffic control center (ARTCC) with 8 air traffic sector positions. The EIIIF has the capability to conduct standalone experiments. The facility is also interconnected to other laboratory facilities located within the WJHTC. This enables both large-scale and inter-domain experimentation.

## EIIIF lab can be configured as:

- A single ARTCC with full redundancy and external or simulated interfaces
- Two independent ARTCCs capable of communicating with each other and/or other external air traffic facilities.





#### Fully functional ERAM configuration:

- 8 full sectors, plus 3 additional radar consoles
- 2 full channels
- 4 monitor and control consoles
- 2 supervisor positions
- 8 simulation pilot positions
- Support and security workstations and processors

#### Other systems:

- En Route Communications Gateway (ECG)
- En Route Backup System (EBUS)
- En Route Training Voice Communications Tool (ETVCT)
- Radar and Interfacility simulators including Target Generation Facility (TGF)
- Live radar feeds



#### Concepts and Systems Integration Branch Manager

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