



Multi-Purpose Cockpit Display of Traffic Information

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FAA MOIE

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Problem

- **Delegation of traditional Air Traffic Control (ATC) tasks to the cockpit envisioned as a supporting capability in the National Airspace System (NAS) and elsewhere**
- **Over 100 Automatic Dependent Surveillance-Broadcast (ADS-B) applications have been proposed**
 - Many involve delegation, enabled by a Cockpit Display of Traffic Information (CDTI)
 - Benefits of individual applications often not clear
- **No single, coherent design supports the array of envisioned delegations**
 - Appreciable benefits would accrue over large set of available applications

Background



- **The Cockpit Display of Traffic Information (CDTI)**
 - Supports ADS-B applications
 - Enables delegation envisioned for the Next Generation Air Transportation System
 - Allows important advances in operational capacity, efficiency, and safety to be realized
- **Aircraft Operators**
 - Will likely be called upon to equip voluntarily
 - Do not necessarily understand the CDTI value proposition
 - Need to justify costs on the basis of anticipated benefits

Objective

- **Demonstrate that a Multi-Purpose CDTI is feasible**
 - **Comprehensive**
 - **Flexible**
 - **Extensible**
- **Develop Simulation Prototype**
- **Develop Technical Specification**
- **Show value through concept demonstrations**

Activities

- **Review of proposed ADS-B/CDTI applications**
- **Identification of algorithm requirements**
- **Identification of user interface requirements**
- **Development of a Technical Specification**
- **Design of a sample flexible, multi-purpose CDTI**
- **Implementation of the design**
- **Coordination with related activities**
 - **ADS-B Integrated Work Plan**
 - **Action Plan 23**
 - **CDTI Minimum Operational Performance Standards**

Highlight

- Initial review shows a need for a manageable set of functions that the CDTI should provide
- Example: Speed Guidance

Departure Spacing

Oceanic Delegated Separation

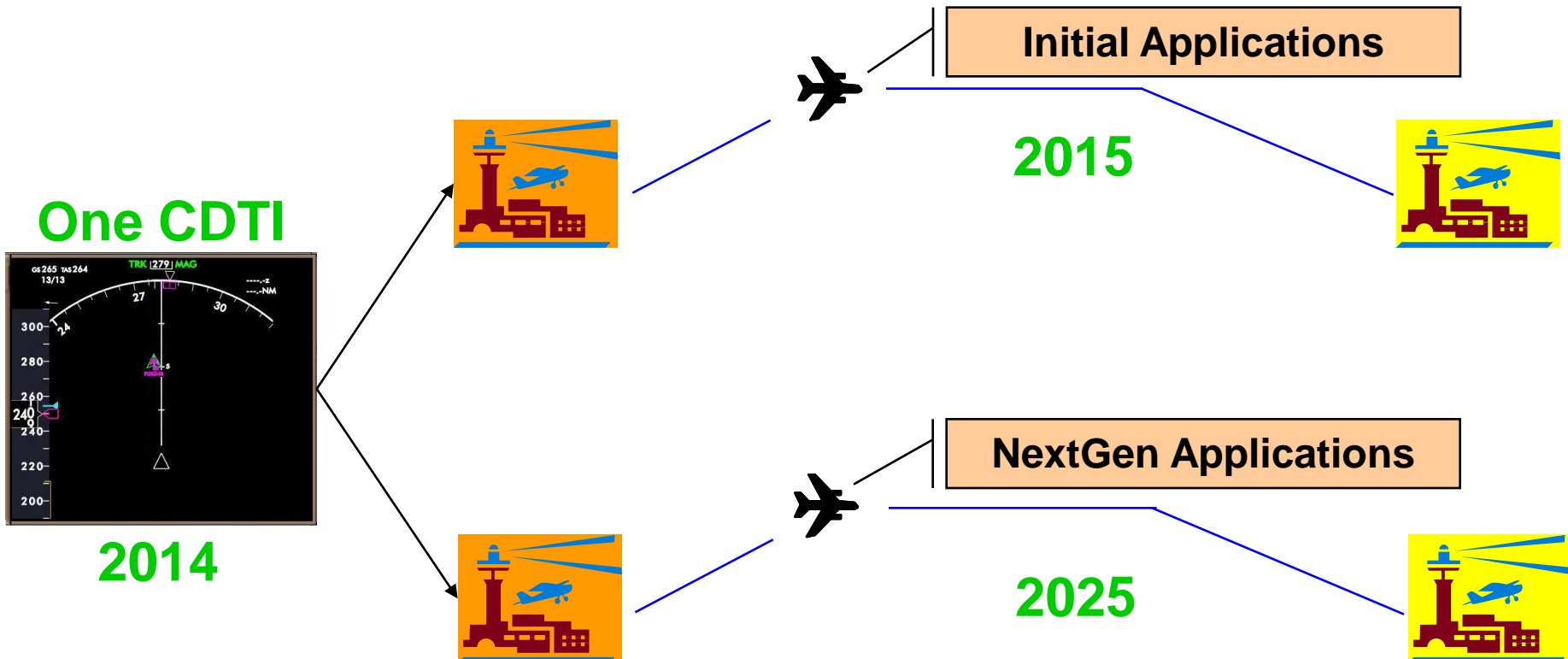
Closely-Spaced Routes (HiDensity)

Arrival Merging and Spacing



Demonstration

See how flight crews integrate CDTI into normal operations in 2015 and 2025



Impacts



- **Operators understand value proposition, thus positioning the cockpit now to meet future avionics needs**
- **Stakeholders understand the feasibility of CDTI**
- **CDTI standards efforts take a more comprehensive view**
- **Help define the evolution of the NAS**
- **Inform ADS-B link requirements**
- **Encourage implementation by providers**
- **Encourage equipage by operators**

Future Plans



- **Develop Vision for Role of CDTI in future states of the NAS**
- **Develop common interfaces**
- **Develop standardized procedures**

