

Web Services Implemented During System Wide Information Management (SWIM) Segment 1



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The “Problem”

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Key Deficiencies in Current Approach

- The National Airspace System (NAS) is not an agile air traffic system
- Costs to develop, test, deploy, and support new NAS interfaces and NAS applications are too high
- Data sharing in the NAS is labor-intensive
- Timely access to common data is lacking in the NAS
- The underlying tools to support becoming a performance-based organization are currently lacking

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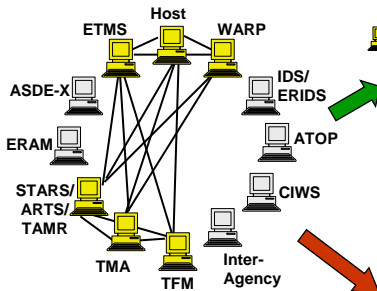


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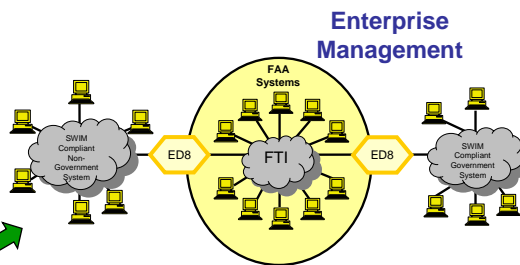
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The Challenge

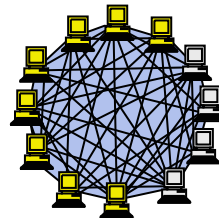
Today



- Existing point-to-point, hardwired NAS
- Unique interfaces, custom designs



Business as Usual (NextGen without SWIM)



- More unique, point-to-point interfaces
- Costly development, test, maintenance, CM
- New decisions linked to old data constructs
- Cumbersome data access outside of NAS

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The “Solution”

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NAS Transformation to Next Generation Air Transportation System

- **Ensure interoperability between systems as required by Next Generation Air Transportation System (NextGen)**
- **Lower costs for information exchange**
- **Reduce time needed to establish new interfaces**
- **Increase common situational awareness**
- **Increase NAS agility**

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What is SWIM?

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Key Concepts

- **Implement a federated Service-Oriented Architecture (SOA) in the NAS**
- **Use best commercial practices to the extent practical, while ensuring all FAA safety and security requirements are met**
- **Commercial Off the Shelf Software (COTS) based to the extent possible**
- **Establish governance policy, process, mechanisms and metrics**
- **Delegate applications to SWIM Implementing Programs (SIPs), regulate the interfaces with a combination of requirements (paper) and products**

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Details of Segment 1

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SWIM Program

•The SWIM Program will promote state-of-the-art information management and exchange technologies to:

- ensure information is available to SWIM-enabled systems
- allow more distributed decision-making
- improve the speed, efficiency, and quality of distributed decision-making

•SWIM-enabled systems will have the ability to:

- request and receive information when they need it
- subscribe for automatic receipt of new or updated data
- publish information and services as appropriate

•The SWIM Program

- is an integral part of the NAS Enterprise Architecture roadmap and will close the performance gap by promoting the development of a secure NAS-wide information web to connect FAA systems
- will enable interaction with other members of the decision-making community including other agencies, air navigation service providers, and airspace users

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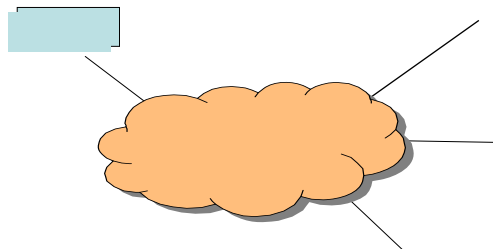
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