# FAA Process for Interoperability Test

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# Overview

At ATNICG WG/6 in September 2009, the FAA presented a Working Paper regarding the use of the AMHS Manual for Interoperability Test.

This presentation provides further information regarding how the FAA incorporates that process into its planning of Interoperability Test.

# Factors in Interoperability Test Planning

The following factors must be considered in the planning of AMHS Interoperability Test:

- Regional Considerations
- Planned Configuration and Implementation
- Available Test Configurations and Resources
- Utilization of Existing Test Procedures
- Commonality of Equipment Under Test
- Compliance to Standards

Each of these factors is discussed in greater detail in the upcoming slides.

# Regional Considerations

- Differences between regions mandate differences in test planning
- Example: Use of ATN Router
- These differences dictate both the utilization of the AMHS Manual and the equipment necessary for test activities

# Planned Configuration and Implementation

- Planned network topology must be considered in planning for interoperability configuration
- Examples:
  - Will connection be point-to-point?
  - Will configuration involve only two end systems, or will tri-party test be involved?
  - Is this an entirely new implementation, or the integration of a new end system(s) into an existing AMHS implementation?

# Available Test Configurations and Resources

- Interoperability test planning must consider not only the intended implementation, but the available resources for testing
- For example, while the planned operational circuit may be a point-to-point leased circuit or VPN, time and cost limitations may make this impractical for testing
- Need to consider all alternatives
  - Leased line (X.25 of IP)
  - Dialup line
  - Public internet
  - Others

# Utilization of Existing Test Procedures

- As discussed at ATNICG WG/6, test cases provided by the AMHS Manual of either Asia/Pac or Europe should be used in interoperability testing
- Test case selection should be a bi-lateral activity involving all parties of the interoperability test
- Additional tests can be defined as needed, again subject to agreement by all parties

# Commonality of Equipment Under Test

- Interoperability test planning should consider all equipment in the planned implementation
- May make sense to focus efforts on new or dis-similar pieces of equipment
- For example, recent interoperability test between Fiji and USA focused the effort on the AMHS systems rather than the ATN routers, as the ATN routers were from the same provider
- At some point prior to system cutover, however, need to verify entire configuration end-to-end

# Compliance to Standards

- Interoperability test planning must consider level of standards compliance of existing implementations as well as new systems to be incorporated
- Standards compliance of currently fielded implementation may be different from that of new system
- Dictates the need to ensure backward compatibility as well as tri-party verification

# FAA Plan for Future Interoperability Activities

- Support interoperability test requests from all AMHS partners
- All requests for test are handled through FAA AMHS Program Office
- Technical staff will then examine needs and options based upon factors detailed in this presentation
- FAA strives for the careful planning and successful completion of interoperability test in order to ensure a high level of confidence in successful deployment and operation of AMHS systems with its partners

# Conclusion

Careful planning and consideration of all factors discussed in this presentation provide the opportunity for thorough and successful interoperability test between two or more network partners.