

# AMHS Implementation Workshop 2013

## Understanding Management Domains and Routing

**Dominican Republic  
September 24-26, 2013**



**Federal Aviation  
Administration**



# Agenda-Key Issues

- ✓ What is an Air Traffic Services (ATS) Message Handling System (AMHS) Management Domain
- ✓ Considerations in transition from AFTN to AMHS
- ✓ Examples of AFTN routing
- ✓ Examples of AMHS routing
- ✓ Conclusions



# Management Domains

- ✓ An organizational entity which manages at least one Message Transfer Agent (MTA) and is responsible for the users connected to its MTA.
- ✓ A Management Domain can be :
- ✓ ADMD (Administrative Management Domain), generally operated by a public telecom operator or
- ✓ a PRMD (Private Management Domain), generally operated by a private company or organization.
- ✓ Usually an ADMD provides services to the public or a community, while a PRMD serves only its own organization.

# Management Domains – cont'd

- ✓ In accordance with ITU-T, it was recommended that ICAO register with the ADMD name “ICAO” as an international ADMD under the “XX” country code. ICAO is a „virtual’ ADMD, as it does not manage any MTAs.
- ✓ The AMHS shall be organizationally composed of AMHS management domains.
- ✓ In the ATS/AMHS Messaging service, the Management Domain is globally represented by 3 standard X.400 attributes:

C=XX, ADMD=ICAO, PRMD= usually the 2 character ICAO country code or the country name associated with the ICAO country code.

# Management Domains – cont'd

- ✓ The minimum set of systems implemented and operated by an AMHS management domain shall be:
- ✓ a) an ATS message server and one or several ATS message user agents;
- ✓ b) an AFTN/AMHS gateway; or
- ✓ c) any combination of a) and b).



# Management Domain – cont'd

- ✓ An interconnection between two AMHS management domains shall be implemented as a connection between:
  - ✓ a) two ATS message servers;
  - ✓ b) an ATS message server and an AFTN/AMHS gateway; or
  - ✓ c) two AFTN/AMHS gateways.



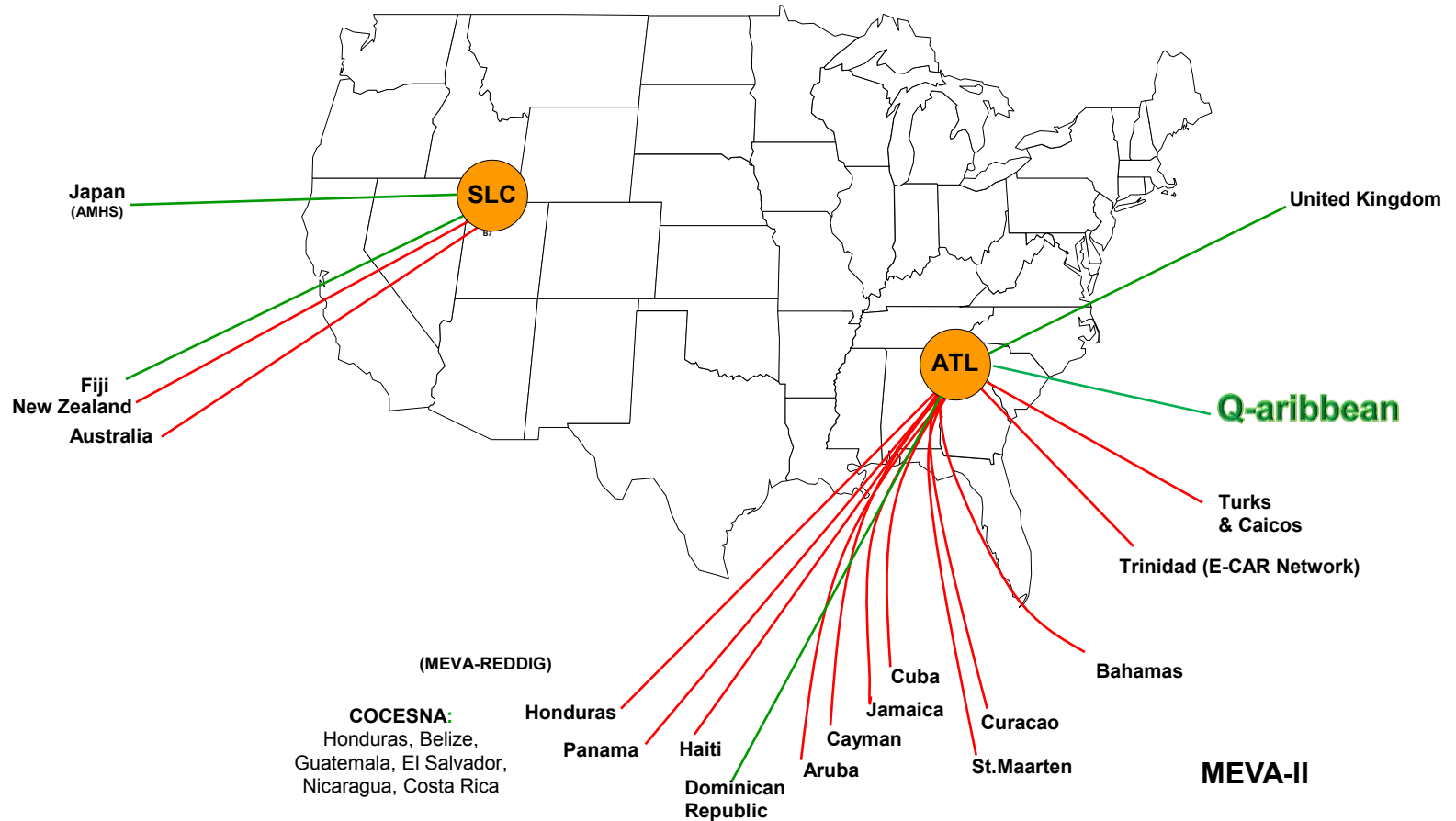
# Consideration during Transition to AMHS

- ✓ The first 4 characters of the AFTN address shall be a Doc 7910 location indicator (these are also listed on AMC)
- ✓ What AFTN traffic is currently sent out of my country
- ✓ What AFTN traffic is currently received by my country
- ✓ Self addressing traffic for confirmation of receipt or other reasons.
- ✓ Using Group addresses to multiple copies within my domain.
- ✓ Like email, duplicate addresses are typically dropped from X.400 Messaging systems.



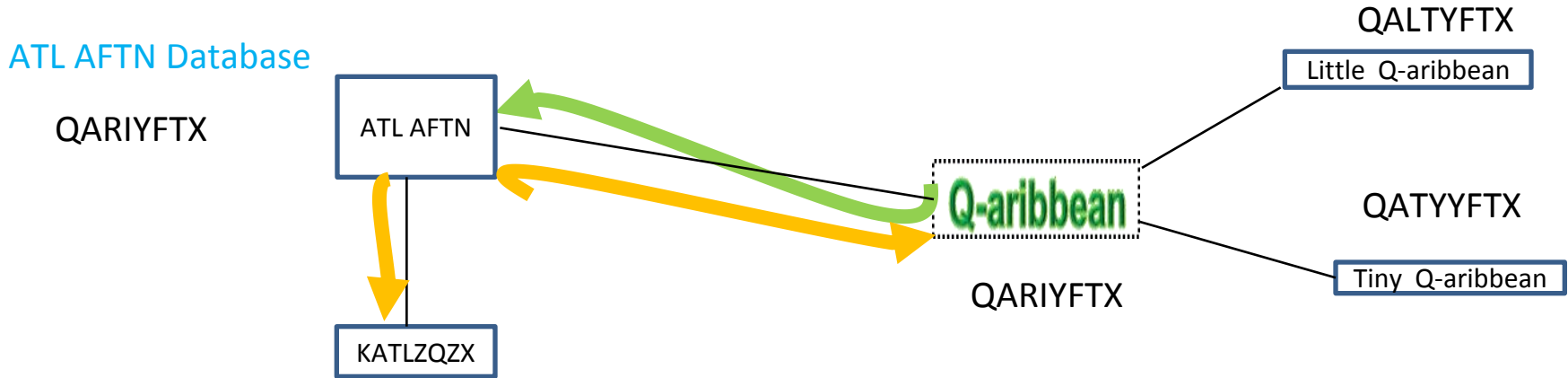
# AFTN and AMHS in the Caribbean

\*AMHS shown in green





# Q-aribbean (QA) → Atlanta AFTN Routing



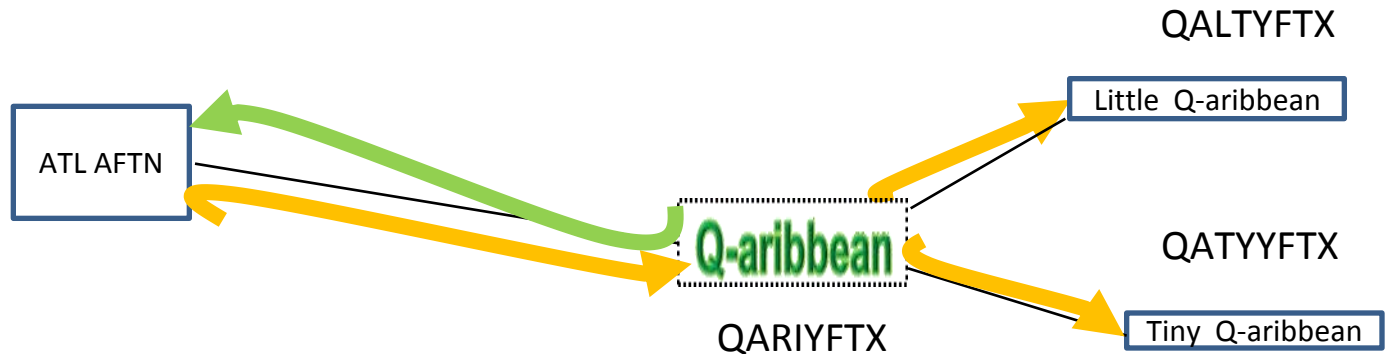
A user in Q-aribbean, sends an AFTN message to the ATL AFTN center, addressed to KATLZQZX (an Area Control Center) and QARIYFYX (an AFTN office on the Main island).

Message is sent by ATL AFTN, to the ATL area Control Center and sent back to the AFTN office on the Main island.

# Q-aribbean (QA)→ Atlanta AFTN Routing (Cont.)

## ATL AFTN Database

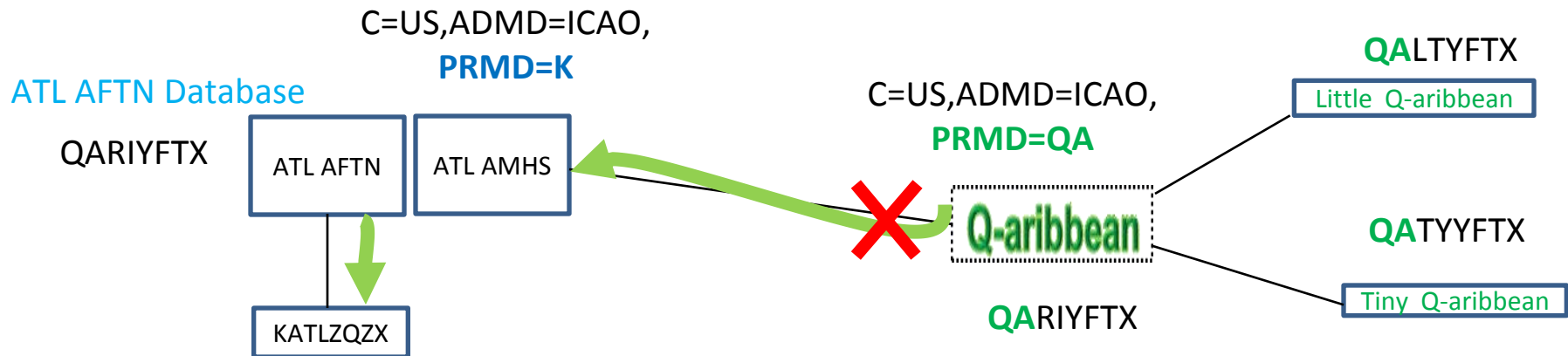
QARIXXX-  
QARIYFYX,  
QALTYFYX,  
QATYYFYX



A user in Q-aribbean send an AFTN message to the ATL AFTN center, that is addressed to QARIXXX(a Group Address).

Message is sent by ATL AFTN, back to an AFTN office on the Main island, on the Little island, and on the Tiny island.

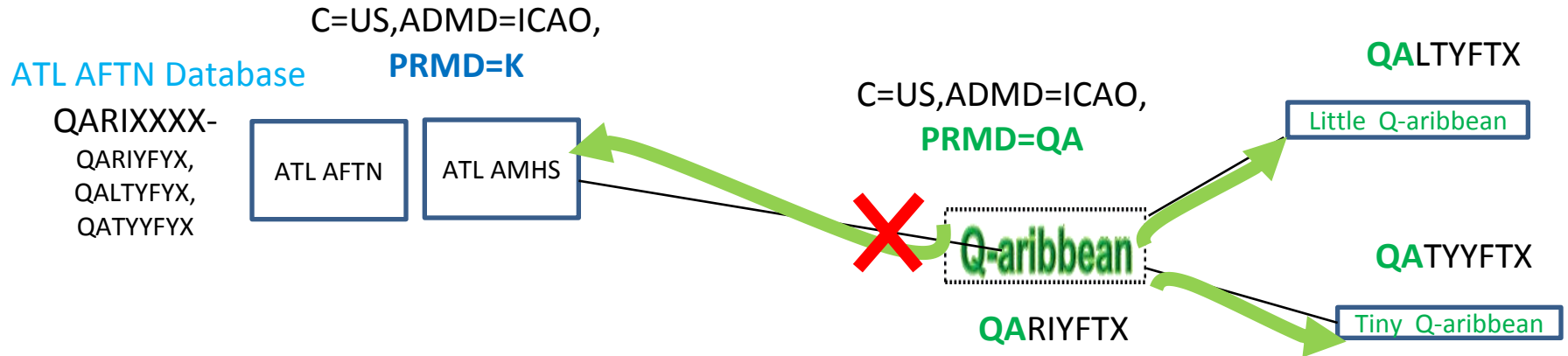
# Q-aribbean (QA) → Atlanta AMHS Routing



A user in Q-aribbean, sends an AMHS message addressed to KATLZQZX (an Area Control Center) and QARIYFYX (an AFTN office on the Main island).

The message for QARIYFYX, will not be sent to the ATL AMHS, as the PRMD is the Q-aribbean's own Management Domain, PRMD=QA. The MTA or Message Store in Q-aribbean will be responsible for distribution of the message. The message for KATLZQZX will be sent to the ATL AMHS.

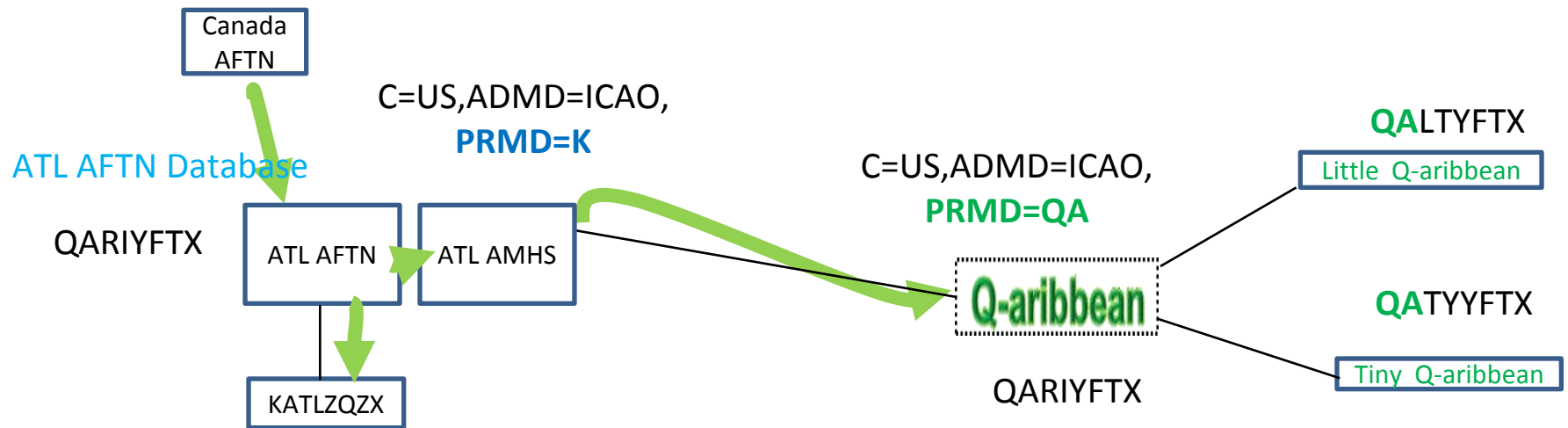
# Q-aribbean (QA)→ Atlanta AMHS Routing (Cont.)



A user in Q-aribbean sends an AMHS message addressed to QARIXXXX, a Group Address for the AFTN office on the Main, Little, and Tiny islands.

The Message for QARIXXXX, will not be sent to the ATL AMHS, as the PRMD is the Q-aribbean's own Management Domain, PRMD=QA. The MTA or Message Store in Q-aribbean will be responsible for distribution of the message.

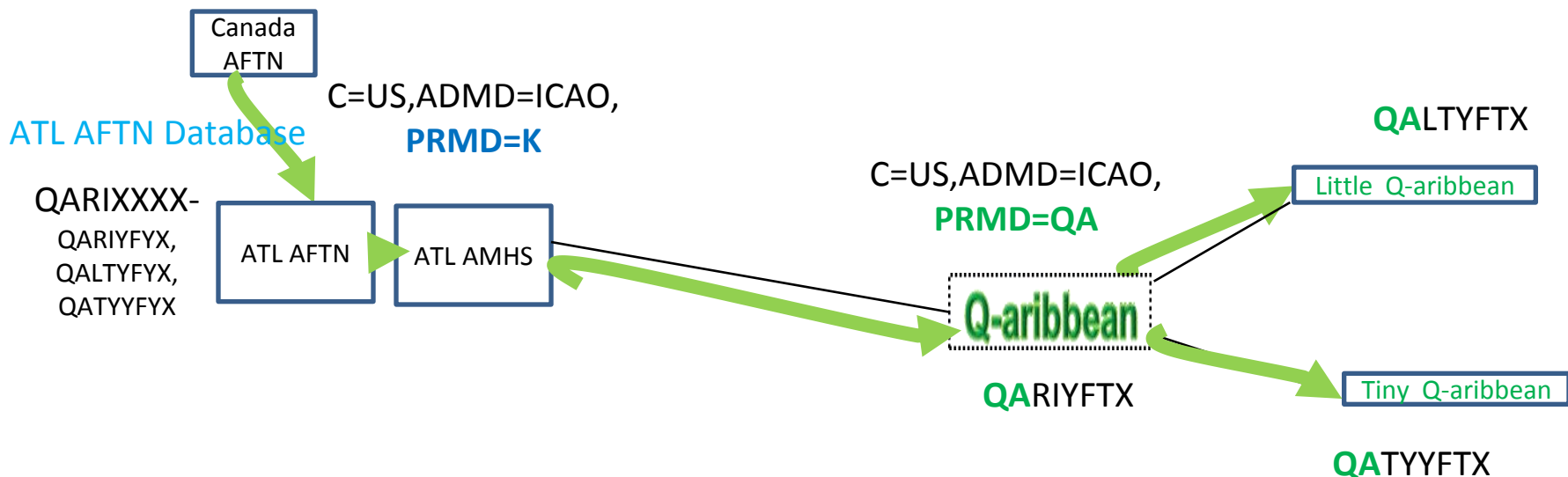
# Atlanta->Q-aribbean (QA) AMHS Routing



A user in Canada, sends an AFTN message to the ATL AFTN center, addressed to KATLZQZX (an Area Control Center) and QARIYFYX (an AFTN office on the Main island).

The message for QARIYFYX is sent by the ATL AMHS, to the Q-aribbean AMHS, on the Main island.

# Atlanta->Q-aribbean (QA) AMHS Routing (Cont.)



A user in Canada, sends an AFTN message to the ATL AFTN center, addressed to QARIXXXX (an AFTN office on the Main, Little, and Tiny islands).

The message is sent by the ATL AMHS, to the Q-aribbean AMHS, on the Main island for distribution within its Management Domain.

# Conclusions

- ✓ The first 4 characters of the AFTN address shall be a Doc 7910 location indicator (also on AMC).
- ✓ Careful analysis of current AFTN traffic being sent to and from country.
- ✓ There may be a need for some exception cases to be configured in MTA routing rules, but these should be analyzed closely and eliminated if possible.
- ✓ Like email, duplicate addresses are typically dropped from X.400 Messaging systems.

# The END

✓ Thanks for your time !

