



FAA
Air Traffic Organization



Proposed Space Based ADS-B with HF Communications Minima

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ASEPS Minima

- ICAO developed the separation minima “ATS surveillance systems where VHF voice communications is not available.”
 - More commonly know as ASEPS
- ASEPS and PBLs utilize RCP240 Communications.
- RCP 240 communications are subject to periodic outages
 - HF Comm is the most frequent backup communication method.
 - Controllers must revert to much larger separation minima
 - SBA and HF are usually still available during RCP240 outages.

RCP240 Aircraft Equipage

- Many Traffic Flows have lower levels of FANS equipage.
 - CEP: California – Hawaii
 - WATRS: Western Atlantic
- COVID Pandemic has had a severe financial impact on operators.
 - Unlikely these operators will be able to upgrade these aircraft for many years.
 - Most of these aircraft have ADS-B out and HF communications.
- To assist operators in recovering from the global COVID pandemic, a smaller HFSBA minima would allow operators to operate at more efficient profiles.

Potential HFSBA Separation Minima

- These numbers below are based on early CRM and need global HF performance data and ICAO SASP vetting.
- This early CRM is based on US HF performance only
 - ~25 NM Lateral
 - ~18 NM Longitudinal

Potential HFSBA Separation Minima

- HF Communications are not as susceptible to unpredictable outages.
 - Can be affected by solar radiation.
 - Solar Weather forecasts have become more reliable.
 - Solar Weather forecasts allows ANSPs to know when HF Comm. will be affected and allow them to mitigate the impacts.

Potential HFSBA Separation Minima

- HF SBA separation lateral minima would support the development of 25 NM laterally spaced route structures.
 - Backup lateral minimum

Potential HFSBA Separation Minima

- ASEPS CRM uses a Communications and Intervention Model.
- Adjust the ASEPS Communications and Intervention in the CRM to allow for HF Clearance Intervention times.
- Need to have Global HF Clearance delivery performance.

FAA HF ACP Calculations

- FAA has tracked the time it takes from the Controller sending the HFRO clearance to when the WILCO is received.
- Some Clearance Delivery Data not included in the FAA HF ACP calculations:
 - Routing Clearances
 - Communication changes
 - Island Departure Clearances

FAA HF Jan-Mar 2021 ACP Calculations

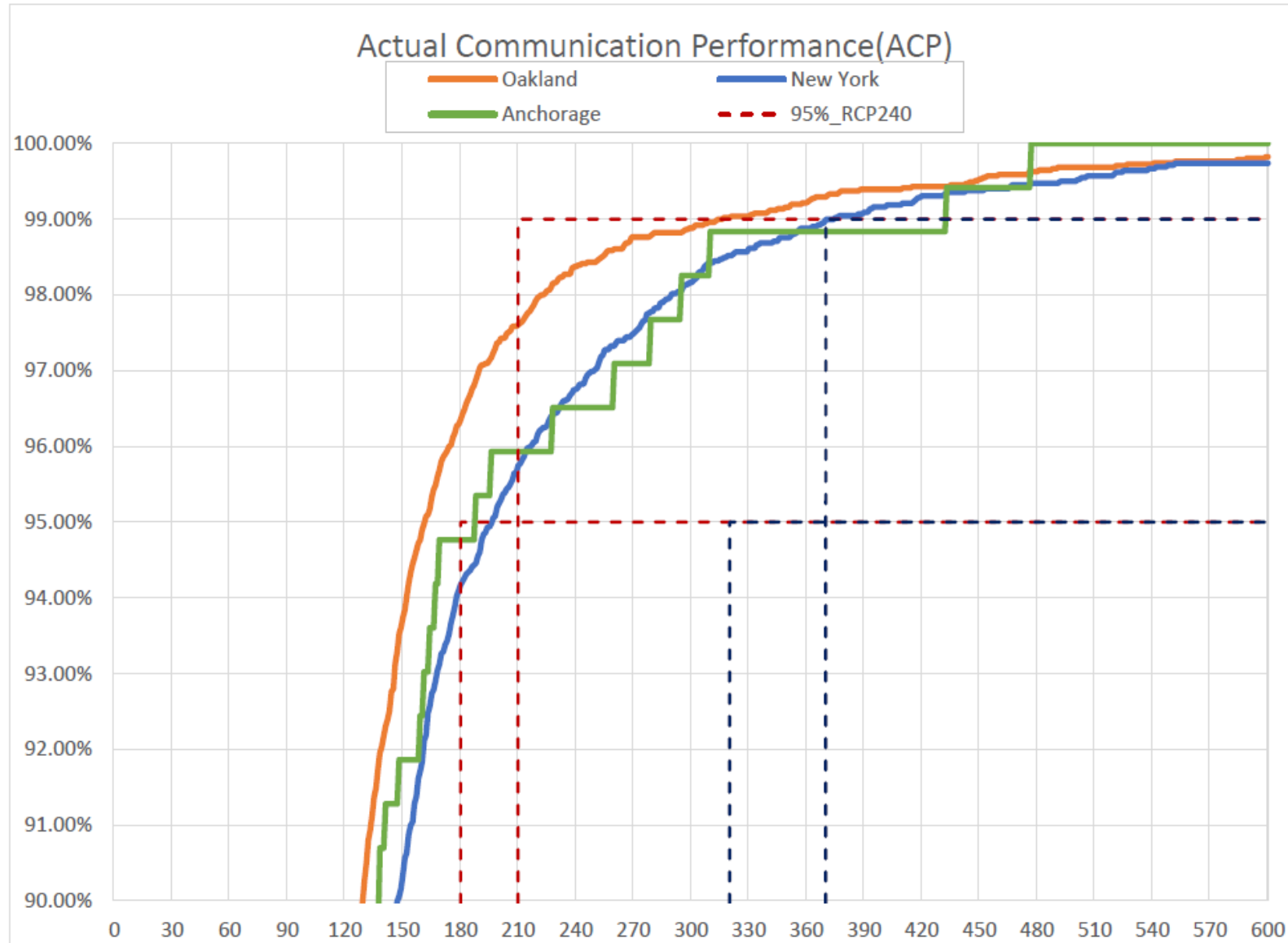


Figure 2-1 HF Clearance ACP

Request for HF SBA Minima Support

- FAA requests fellow ANSPs to share HF Clearance Delivery Times with the FAA or ICAO SASP to support the development of a HFSBA minima.
 - ISPACG Action Item 34.5-11: ANSPs with HF Clearance delivery times are requested to share the data with the FAA.
- FAA requests support for their efforts with ICAO to develop Global HFSBA minima.



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