

Observations and Recommendations

Expanded GOES DCS

Benefits

- Increased Capacity from Improvements in Timing and Channelization
- Good for NOAA, NWS, & Users
 - Increased DCP Deployment
 - Increased Data Collection
- Good for Manufacturers
 - Increased DCP Demand
 - Increased DCP Components (DCPI)
- Benefits from Increased Demand
 - Competitive Pricing
 - Technological Innovation
 - Better System Management (DCPI)

Potential Disadvantages

- Increased DCP Complexity => Cost
- Second Changeover – User's already replacing DCPs to transition from 100 to HDR
- Delay in HDR Deployment
- Over Dependence on GPS or Other Time Source
=> Lost Data

What Needs to Be Done Regardless of SRRC vs. Current

- Tighten Frequency Tolerance
 - 30 Hz (0.075 ppm) to 100 Hz (0.25 ppm)
- GPS Timing Requirements for 300 BPS
 - 0.1 s to 0.5 s
 - Continuous Time
- Other Certification Cleanup
 - Adjustable power at DCP implies separate antenna cert.
- System Management/Transition Plan
- Plans designed, verified, and tested

Decision on SRRC vs. Current

- 300 BPS Not a Determining Factor
 - Current system will support 750 Hz channel spacing and meet DAMS-NT ACI tests with 100 Hz uncertainty. Now demonstrable.
- 1200 BPS Capacity is the Decision
 - SRRC needed to allow 1500 Hz Channels
 - SRRC costs 1.2 dB increase in power
 - Current system will support 2250 Hz channel spacing and meet DAMS-NT ACI tests with 100 Hz uncertainty. Now demonstrable.

Current verses Potential Capacity

- Current is 5 to 10 % utilization at 200 K messages per day.
- With 300 BPS / 750 Hz and 1200 BPS / 2250 Hz capacity can be projected to 20 M + messages per day.
- With rapid decision on Frequency tolerance users will not require hardware upgrades. (firmware).