2020 TWG STIWG Report

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2020 DCS Technical Working Group Meeting
05 May 2020
Virtual/Teleconference

2019 Meetings

- Spring TWG/STIWG: 25 APR 2019 USACE Risk Management Center, Lakewood, CO
  - OpenDCS Standardization/Interagency Agreement Status
  - Spectrum Study: Site Visits, Reports, Experiences, etc.
  - Spectrum Update
  - Secondary Processors of GOES Data
  - DADDS Modernization Feedback
  - EDDN and Configuration Repository
  - HRIT: New Format, Full Spectrum Processing
  - Securing the Future of GOES DCS: STIWG Whitepaper and PowerPoint Updates
- Fall TWG Technical Review/STIWG Teleconference: 05 DEC 2019
  - SPRES Study
  - Small-Sat Update
  - Two-Way Update
  - Unsupported Windows CE Device Issues
  - DigiRIT/XRIT Visualization
  - DCS Future Status
  - Spectrum Update
  - Random Channel Working Group
  - OpenDCS MOA/Unified Platform Status

Working Groups

- DCS Preservation
  - Tasked with addressing issues pertaining to matters that impact the viability, availability and integrity of GOES DCS data from the GOES satellites.
- OpenDCS Standardization
  - Tasked with establishing an executable plan that will unify existing OpenDCS variants and capabilities into a single platform. The second objective is to establish a way to jointly plan and fund the new platform's development and support by the STIWG agencies.
- *New:* Random Channel Coordination
  - Will be tasked with reviewing existing documentation and establish appropriate guidance on the use of random transmission channels.

STIWG OpenDCS Support Agreements

- Interagency Support Agreements
  - Existing MOA/MOU's allow USACE to establish SA's to receive funds from STIWG agencies in support of OpenDCS development through the RMA contract
    - 2018 Completed draft of agreement under existing 7600A between USACE and NOAA
  - Interagency agreements have been delivered to STIWG agencies
    - Continue engagement to ensure proper routing
    - Each agency handles SA's differently for review and approval

Radio Frequency Interference Analysis and Mitigation

- Spectrum Pipeline Reallocation Engineering Study (SPRES) projects are complete
  - Awaiting publication of final SPRES report
- The NOAA **SPRES** contract objective was to quantify the sharing challenges for federal Earth station users as well as identify techniques to facilitate successful spectrum sharing without causing harm to the integrity or access to NOAA data.
  - Covers the 1675 – 1680 MHz spectrum (DRGS downlink)
- Want to compare SPRES with other agencies' studies

2-Way DCP Communication

- Will provide the ability to send commands to DCP's
- STIWG is actively advocating the continued research and development of this capability
- Await live demonstration of prototype

High Rate Information Transfer (HRIT)

- HRIT Full Spectrum Processing
  - Will expand ingest to include imagery, reports, etc.; non-DCS data
  - Actively discussing the level of effort and scope of work
    - Porting the Rice Compression Algorithm
    - "Universal" format
      - Testing ingest with existing software
    - Cross-platform option

2019 Activities

- Quarterly COES (Committee for Operational and Environmental Satellites) Meetings
- Quarterly Subcommittee on Hydrology Meetings
- Streamflow Information Collaborative Meetings
- HRIT/EMWIN User Group Meetings
- Submitted collective STIWG response to FCC NPRM 19-116
  - Protection of 1675 – 1695 MHz spectrum from mobile radio interference
  - Detailed operational, economic and life-safety benefits of GOES DCS
- Coordination with other federal and state agencies
- Approved formation of a group to develop Random Channel User Guidelines
  - Revise DCS documentation for current conditions

On-Going Activities

- OpenDCS Standardization

- CS2 Migration Deadline – May 2026

  - Users are migrating 100 baud DCP transmitters to 300 baud CS2 compliant

  - Bandwidth savings from narrowband transmitters allow for creating additional channels

  - More frequent critical site transmissions (e.g. 15-minute interval)

  - Channel expansion for increasing system use

- DCS Administration and Data Distribution System (DADDS) Modernization

  - System for managing GOES DCS platforms and access to data

- Future of GOES DCS

  - Spectrum Analysis/Studies

  - Agency investments

  - Finalize Random Channel Guidelines

END