

Products and Software Working Group

Report to ITSC-23

June 2021

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Agenda

1. Introduction
2. Review of open actions and recommendations from ITSC-22
3. Status of existing software packages
4. New and future sensors and plans for supporting software
5. DBNet status and plans
6. Cloud services and cloud data distribution
7. CGMS High Level Priority Plan
8. PSWG web site
9. Any other business

Scope of group (reminder)

- Both Level 1 and Level 2 satellite products;
- Software tools and packages for generating, analyzing, and visualizing products;
- Enabling end users to obtain or generate the products they need;
- End user feedback and training;
- Exchange of information for validation of products;
- Informing the user community about requirements for future missions; and
- Informing agencies about requirements of the users.

Actions review

- 7 actions were closed from ITSC-21 and ITSC-22
- 1 remains open (refresh of the PSWG web site)

New actions and recommendations arising from these:

New Action PSWG-1: PSWG co-chairs to liaise with the ASWG and NWPWG co-chairs with the aim of agreeing a coordinated approach to the cluster analysis of VIIRS radiances on the CrIS footprint.

New Action PSWG-2: PSWG co-chairs to monitor developments in PC representation, liaising with the ASWG, and report back to PSWG at the next ITSC.

Actions review (cont.)

New Action PSWG-3: Nathalie Selbach to test new NOAA/CLASS access options, including cloud access, and report back to PSWG. Other PSWG members are also encouraged to test the new features and provide feedback.

New Recommendation PSWG-1: NOAA, JAXA and the CSPP team to continue exploring ways in which the AMSR-2 level 1 software and direct broadcast transmission availability could be shared with DB users.

Existing software packages

The group was updated on the status of:

- CSPP LEO
- AAPP and MWIPP
- CSPP GEO
- IMAPP

Highlight: *IMAPP is funded once again!*

Aqua and Terra have potential to operate until at least 2025

New and future sensors and plans for supporting software

The group was updated on

- NOAA-21 (will be supported in CSPP)
- FY-4B (launched 2 June 2021)
- EPS-SG (dedicated talk about software in Session 3)
- Arctic Weather Satellite: *ESA have agreed to include DB software in its mission specifications*
- GEO-XO

New Recommendation PSWG-2: Software providers should, where possible, offer their software with a choice of either pre-built binaries or source code.

New Recommendation PSWG-3 to Software Providers: For software that will be built from source by the user, software providers should list recommended versions of required external (COTS) libraries.

DBNet status and plans

The group discussed:

- Progress with new network covering Africa (supported by SAWS and EUMETSAT)
- Inclusion of microwave imagers (currently MWRI)
- Hardware upgrades for future missions, particularly EPS-SG – funding can be challenging

No specific actions or recommendations from the group

Cloud services and cloud data distribution

New Recommendation PSWG-4 to Agencies: Costs to users should be considered when migrating software and data distribution to the cloud.

New Recommendation PSWG-5 to Agencies: Users should continue to have free access to satellite data.

New Recommendation PSWG-6 to Software Providers: Software providers are encouraged to provide and test software in a cloud-ready format.

Cloud services (cont.)

New Action PSWG-4: CSPP and IMAPP teams to share UW/SSEC/CIMSS experiences on working with containers (Docker, Podman, Singularity), including lessons learnt, via the PSWG web site.

New Action PSWG-5: CSPP and IMAPP teams to provide information on running Linux packages in Windows, via the PSWG web site.

CGMS High Level Priority Plan (HLPP)

Progress was noted against several items:

2.3.2 Facilitate the transition to new LEO direct broadcast systems (JPSS, FY-3, Meteor-M, Metop-SG)

- Information related to JPSS and Metop-SG has been shared with the direct broadcast community by NOAA and EUMETSAT. Plans for software have been shared, and further presentations will be made during the course of ITSC-23.

2.3.3 Advance the implementation of the CGMS Agency Best Practices in support to Local and Regional Processing of LEO Direct Broadcast data for operational satellites

- we noted the document ***CGMS Agency Best Practices in support to Local and Regional Processing of LEO Direct Broadcast data***

4.3 Foster the continuous improvement of products through validation and inter-comparison through international working groups and SCOPE-type mechanisms, and 4.3.3 Conduct an intercomparison study between the different methods to derive level 2 data from infrared hyperspectral sounders, recognising that there are several software packages available that utilize AIRS/IASI/CrIS data.

- NPROVS intercomparisons (Tony Reale)
- ITSC-23 poster by Eva Borbas on HIRS/MODIS/VIIRS/CrIS moisture retrievals (Paul Menzel)

CGMS HLPP (cont.)

New Action PSWG-6: PSWG co-chairs to provide feedback on the High Level Priority Plan and CGMS Best Practices document to ITWG co-chairs by end 2021.

New Action PSWG-7: Paul Menzel and Tony Reale to send a few sentences summarising their validation studies to the PSWG co-chairs, for inclusion in High Level Priority Plan feedback.

PSWG web site

- In need of refreshing. Much of the content is old or out of date.
- The table of software packages is valuable
- Imminent move to Wordpress will allow co-chairs to update content

Continuation of existing Action ITSC22-PSWG-6: PSWG co-chairs to update the group web page by next ITSC, assuming Wordpress is implemented by CIMSS as planned.

Conclusion

- On-line format worked OK, but not as easy to solicit input from the group as an in-person meeting

Thank you to all who attended!