SEO Report to WGISS

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COVE Tool Updates

- The CEOS Visualization Environment (COVE) is a browser-based suite of tools for searching, analyzing, and visualizing actual and potential satellite sensor coverage.
- COVE is FREE and OPEN for anyone to use! There is a large international user base with 4000+ users in 2017.
- COVE includes 131 missions and is linked to several mission archives to get metadata and browse images for past acquired data: Landsat, SPOT, Pleiades, Radarsat-2, ALOS-1, TerraSAR-X, Sentinel-1, Sentinel-2, CBERS-4 and ResourceSAT-2.
- Coverage Analyzer and Data Browser: New tools for coverage assessments and scene data to support data ordering.

www.ceos-cove.org
Coverage Analyzer

- Support for CBERS-4, Landsat 5/7/8, Sentinel-1A/1B, and Sentinel-2A.
- Output using discretizations for Landsat WRS, Sentinel-2 tiles, and various Lat-Lon degrees (0.10, 0.25, 0.5, 1.0).

- **Example Case:**
  Sao Paulo,
  28-Dec-2017,
  Sentinel-1A,
  IWS Mode
  - Table Output with scene information
  - View Browse image
  - Link to ordering
CBERS-4 over Brazil 2017 coverage (all instruments)
Data Browser

- Support for CBERS-4, Landsat 5/7/8, Sentinel-1A/1B, and Sentinel-2A ... similar to Coverage Analyzer
- Filtering for cloud cover threshold (optical missions)
- **Example Case:**
  - Japan, Nov 2017 Sentinel-2A, <50% cloudy
  - Table Output with scene information and browse images
  - Links to view the acquisition details, zoom into footprint on the map, and order the scene
The CEOS Data Cube “Road to 20”

43 total countries in the 16 months!
Data Cube Plans

- New Open Data Cube deployments: Vietnam, U.K., Uganda and the Africa Regional Data Cube
- Progress collaborations with Google and Amazon
- This week ... **Swiss Data Cube Hackathon**
- IGARSS Conference in Valencia, Spain (July 2018) ... dedicated paper session and training course
- New technical additions: Jupyter (Python) Notebooks, Web-based User Interface tools
- New user applications and algorithms: Land Classification, Water Quality, NDVI Trend
Maintain and expand the connections from satellite mission archives to the COVE tool.

Investigate approaches for on-demand Data Cube creation using cloud-based (e.g. AWS), mirror sites (e.g. USGS, ASF), or other data sites (e.g. Copernicus Services) for discovery, processing, and ingesting of Data Cubes to support global users.

**WGISS-44-08 Action**: Rob Woodcock and Yonsook Enloe to further discuss the possibility to create a Python client to allow ingest of WGISS connected data assets into the CEOS Data Cube.