The CDDIS has extensive partnerships through the IAG serving as one of the primary data centers for the geometric services and its derived products (e.g., positions of observing stations, Earth orientation parameters, precise satellite orbits, etc.). The CDDIS archive also plays an interdisciplinary role in supporting the derivation of a Terrestrial Reference Frame (the foundation for virtually all airborne, space-based, and on-ground-based Earth observations), precise orbit determination (POD) for NASA/International mission, atmospheric, etc.

The CDDIS is now a regular member of the International Council for Science (ICS) World Data System (WDS). The WDS strives to enable open and long-term access to multidisciplinary data, data services, and products. The WDS Community will promote the CDDIS and the ILS to new users and communities and show its commitment to the quality of data and services.

**Archive Contents:**
- Data:
  - Stations in the GNS, SLR, LLR, VLBI, and DORIS networks generate point data on a multi-day, daily, hourly, and sub-hourly basis.
  - Ground-based GNSS (Gallois, GSSN, Brodata).
  - Laser Ranging (LLR and LR): 40 sites tracking fixed satellites (including the Moon).
  - VLBI: 45 sites.
  - DORIS: 58 sites tracking 5 satellites.
- Products:
  - Precise network station positions (for the International Terrestrial Reference Frame, ITRF).
  - Satellite orbits for precise orbit determination, POD.
  - Station and satellite clocks (for timing).
- Earth rotation parameters:
  - Positions of celestial objects (for Celestial Reference Frame, CIP).
- Atmospheric parameters (ionosphere total electron content, TEC, and Troposphere zenith path delay, ZPD).
- Metadata information:
  - Non-standard metadata, data type specific.
- Extracts from incoming files.
- Internal access to metadata database.

**Archive Statistics:**
- File size is typically ~2MB/data “granule”, ~10GB/defined product “granule”.
- Archive size: ~81.17 MB.
- ingest rate: ~1.75GB/day.
- Distribution rate: ~2.24GB/day.
- Data 0.1, 1.6, products 0.2 derived from these data, and information about data and products.
- Multi-day, daily, hourly, sub-hourly.
- Varying latencies (minutes, hours, days).

**Archive Usage:**
- The CDDIS contains data and derived products from over 1500 observing sites located at about 1000 locations around the world, going back in time as far as 1975.
- The archive is updated with new data/product files on varying time scales, dependent on the data type, from a sub-daily to weekly basis.
- The archive provides continuous access to data for generation of products on pre-determined schedules.
- The average user of the CDDIS accesses the content through the archives by means of specified scripts executed on a variety of schedules (typically sub-daily).
- Analysts can use this method for data transfer because they are familiar with the structure of the online archive and thus know what data files/tracks they require, their availability schedule, and where to find them within the online structure.

**The CDDIS and the IAG:**
- The CDDIS is the principal data center for the geometric supporting services created under the umbrella of the International Association of Geodesy (IAG):
  - International Laser Ranging Service (ILR).
  - International SLR Service for Geodesy and Astronomy (ISSL).
  - International DORIS Service (IDS).
- These services function as cooperating federations dedicated to a particular type of data (e.g., GNS, SLR, VLBI, or DORIS).
- The services provide data and products on an operational basis to geodesy analysts as well as a broader scientific community and are an essential component of the community.
- Successful operations in cooperation with many international organizations who leverage their respective limited resources to all levels of service functionality.
- The CDDIS user community primarily consists of analysts supporting the services within the International Association of Geodesy.
- These groups produce derived products (e.g., positions of observing stations, Earth orientation parameters, precise satellite orbits, etc.) for use by a broader scientific community.

New CDDIS Developments:
- The CDDIS website has been redesigned and incorporated improved navigation.
- The design, development, and implementation of an enhanced search capability for the CDDIS archive.
- The CDDIS has added the ability to provide real-time products to the end user, allowing them to track the status of their request.
- The new website provides links to the ILS and EarthData web applications.
- The new CDDIS website was made operational in March 2014.

**SiteLogViewer Application:**
- **Background:**
  - The site log was introduced in the early 1990’s at the USNO as a mechanism for data analysis.
- **Use Cases:**
  - Users need to query the logs for a particular system to understand status configuration.
  - Users need to determine which sites have equipment with a particular configuration.
  - The CDDIS has developed an application, the SiteLogViewer, for the enhanced display of site logs.
- **Features:**
  - Select the log file to be searched.
  - Select the site to be searched.
  - Select the section of the site log.
  - Select the encrypted data to be extracted.
  - Display contents of all site logs for a specified topic (site log section).
  - Search the contents of all site logs for a specified parameter value.

**Data Discovery Developments:**
- **Recent CDDIS Developments:**
  - Supporting GGOS through the Crustal Dynamics Data Information System
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- **Data Discovery Developments:**
  - Developing web applications for display of data holdings to aid in discovering holdings from the CDDIS.
  - Queries will allow users to enter spatial and temporal parameters to determine holdings.
  - The new real-time products includes:
    - Data streams from a global network of high-quality GNS receivers (GDRs), plus dual frequency clock solution.
    - Products enable real-time precise point positioning at global scales used in scientific research and hazard detection applications.
    - The CDDIS has begun the process to capture incoming streams for generation and comparison of high-rate data files.
  - Real-time products will require user authentication which will be handled through a NASA GSFC User Registration System (URS).
- **System Upgrades:**
  - CDDIS in the process of procuring a hardware refresh.
  - System will be located within EROS infrastructure, which will provide for an enhanced stable environment.
  - Operations on new system expected in late Fall, 2014.
- **More Information/Feedback:**
  - The CDDIS data holdings were acquired as part of NASA’s Earth Science Data Systems and archived and distributed by the Crustal Dynamics Data Information System (CDDIS).
  - The CDDIS Data Discovery Information System: A resource to support scientific analysis by providing access and discovery of real-time GNSS data streams.
  - The CDDIS data holdings include the ability to drill through the site logs to view the official site log and service to ensure the user has access to the latest information.

The authors would like to acknowledge the contributions of Joseph Maurer, J. Michael, and James Abreu.