TraCSS Data and Information Policy
Draft – July 9, 2024

1. Introduction
The Traffic Coordination System for Space (TraCSS) is being developed by the Office of Space Commerce to provide space situational awareness (SSA) data and services that support global spaceflight safety, space sustainability, and international coordination. This draft data and information policy was developed to support these objectives, and to align with the guidance in Space Policy Directive 3 to enable greater SSA data sharing, consistent with national security constraints.

This draft policy is provided below for feedback during our upcoming listening session. Dissemination of the data, information, and products described in this draft policy are not planned to be implemented in the Phase 1.0 release of TraCSS to a beta set of users in September 2024. Dissemination may occur across Phase 1 of TraCSS (through September 2025) and/or in Phase 2 and beyond, depending on technical implementation and program priorities.

TraCSS data, information, and products generally falls into three access levels:
- ***TraCSS Open Data:*** Open data will be made publicly available with no restrictions on use under the Creative Commons 0 Public Domain Dedication (CC0 1.0), eliminating the need for a separate user agreement. This data and information is proposed to be available on the TraCSS website and will not require users to sign in or register for a TraCSS account.
- ***TraCSS Restricted Data:*** Select user groups (i.e. satellite owner/ operators and government entities) will be able to access additional, non-open, data by registering as a TraCSS user and signing the TraCSS User Agreement, which will describe permissible use and redistribution.
- ***TraCSS Restricted Data, Open Archive after Delay:*** Select user groups (i.e. satellite owner/ operators and government entities) will be able to access additional, non-open, data by registering as a TraCSS user and signing the TraCSS User Agreement, which will describe permissible use and redistribution.
  - [TBD time] after receipt by OSC of Provider's Data, OSC may publicly release [Provider's Data or TBD subset of Provider's data] with no restrictions on use or dissemination, under the Creative Commons Universal Public Domain Dedication (CC0-1.0)

The following sections describe the types of data, information, and products in each of these categories. It also directly addresses policies relevant to information provided by TraCSS registered users (i.e. satellite owner/ operators and government entities).

2. TraCSS Open Data

The following data, information, and products are proposed to be provided free of charge to all users via the TraCSS website; implementation is to be determined. This ensures that data is available for all spacecraft owner/ operators, government and commercial space situational awareness (SSA) service providers, researchers, and members of the general public. Open sharing of this data promotes spaceflight safety and international coordination. It enables research and innovation that can lead to improved SSA techniques and improve spaceflight safety and sustainability in the future. It also promotes the growth of the value-added commercial SSA sector, which is able to build on these basic data and information to develop and provide advanced products and services.

2.1 **TraCSS Satellite Database (Public):** TraCSS proposes to maintain a public database that includes basic information on spacecraft. The database is proposed to include information from a variety of sources, such as:
- DOD Public SATCAT: includes the satellite name and NORAD ID, launch date, launch location, international designator, apogee, perigee, period, inclination, and size (binned RCS) provided by the DOD
- Owner/ operator-provided satellite attributes that satellite owner/ operators have opted to make publicly available.
- NASA mass and size catalog: NASA-developed and -maintained catalog of spacecraft mass and size information derived from U.S. sensor data and additional sources.
- Other public information, as relevant.

It will be possible to query this database to generate derived products, such as the following standard products currently available via space-track.org:
- Space ops tempo: statistics and associated charts that describe launch data, payload-to-launch ratio, public catalog growth and annual launches
- Space scoreboard: table showing the number of active payloads and debris currently tracked
- Satellite box score: table providing current information on the number of objects in orbit for each nation
- Satellite situation report: list of satellites that are currently in orbit and those that have previously orbited Earth. The report includes data such as the satellite's international designation, catalog number, launch date, and inclination, apogee, and perigee.
- Catalog change report: report that lists satellites that have recently been added or removed from the database
- Geosynchronous report: subset of the two-line element catalog that includes only GEO objects

2.2 DOD Public Two-Line Element (TLE) Catalog: General perturbation element sets for all publicly-available cataloged objects.

2.3 Close Approach Notifications (CANs): A close approach notification is a simplified version of a Conjunction Data Messages (CDM) that includes information in only a subset of fields. A CAN is generated when an event meets "emergency reportable criteria." The full list of all CANs generated by TraCSS, including those involving operational objects and/or debris, is proposed to be provided openly on the TraCSS website.

3. TraCSS Restricted Data

In some cases, access to data must be restricted due to privacy, national security, or other concerns. Access, use, and redistribution of this data is subject to restrictions.

3.1 Conjunction Data Messages (CDMs): CDMs are standard messages including spacecraft conjunction information. Access, use, and redistribution of CDMs are proposed to be subject to the following restrictions:
- CDMs are provided to spacecraft owner/ operators involved in the conjunction, for owner/ operators registered and verified in TraCSS.
- Government entities registered in TraCSS can access information for all spacecraft affiliated with their nation. (Note that a single satellite may be affiliated with more than one nation.)
- Registered TraCSS users can only redistribute CDMs to contractors or affiliates with whom they have a contractual relationship (e.g. SSA providers providing services under contract). Note that this redistribution must be implemented directly by the spacecraft owner/ operator; redistribution to additional entities is not implemented within the TraCSS system.
- Derived products developed based on CDMs may be redistributed.

3.2 Owner/ operator Operational Contact Directory: Operational contact information provided by owner/ operators registered in TraCSS is proposed to be included in a directory made available to all TraCSS registered users. Sharing this information among owner/ operators will facilitate timely coordination in the event of a predicted conjunction.

Operational contact information will also be shared with other government SSA providers. These entities may redistribute data to additional owner/ operators not registered in TraCSS to facilitate coordination in the event of a predicted conjunction.

3.3 TraCSS Satellite Database (Restricted): The restricted version of the TraCSS Satellite Database will include all information available in the public version of the database, and will also include owner-operated satellite attributes that owner/ operators have opted to make available only to U.S. government and other registered TraCSS users.
- All information in the public TraCSS Satellite Database (see above)

- Owner/ operator-provided satellite attributes that owner/ operators opt to make available only to TraCSS registered users.

3.4 Spacecraft Owner/ Operator Ephemerides (Restricted): Owner/ operators can opt to make their predicted ephemerides available only to U.S. government and other registered TraCSS users.

4. Data Provided by TraCSS Registered Users

To become TraCSS registered users, spacecraft owner/ operators and government entities will need to provide selected information as part of the registration process. They will also be encouraged to provide additional information on an ongoing basis. TraCSS will have three standard options to determine the extent to which owner/ operator-provided information can be accessed and used by others: owner/ operators can share their information 1) openly under a CC0 license, 2) only with TraCSS registered users, 3) restricted to TraCSS registered users and disseminated openly under a CC0 license as part of a TraCSS data archive after TBD delay.

4.1 Spacecraft Owner/ Operator Provided Information

Upon registration in TraCSS, spacecraft owner/ operators will be asked to provide information such as:
- Contact information (Organizational and 24/7 operational)
- Spacecraft Attributes (e.g. name, size, mass, maneuverability)[1]
- Predicted ephemerides with maneuver plans and covariance

Any changes in this information over time should be promptly updated, and spacecraft ephemerides and maneuver plans should be provided on a routine basis.

With respect to the spacecraft owner/ operator provided information, the following data and information sharing options and restrictions will apply:
- Contact information, including organizational contact information and 24/7 operational contact information, will be incorporated into an owner/ operator contact database, which will only be accessible to the U.S. Government and registered TraCSS users. It will also be shared with global SSA providers, who may redistribute the information to owner/ operators not registered in TraCSS to facilitate timely coordination in the event of a predicted conjunction.
- The default option for all other information provided by spacecraft owner/ operators will be designated as open under the Creative Commons 0 Public Domain Dedication (CC0 1.0). Data and information with this designation will be made openly available on the TraCSS website without restrictions and access and use will not require users to sign-in or register for a TraCSS account.
  - This option is consistent with industry best practice documents that call for improved sharing of spacecraft owner/ operator information. It facilitates increased SSA data sharing and transparency to support spaceflight

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[1] The full list of attributes collected as part of TraCSS registration is included as a separate appendix.

safety and international coordination by facilitating the broad sharing of basic spacecraft owner/ operator information, including basic spacecraft attributes, ephemerides, and maneuver plans.

4.2 Government Entity Provided Information

Upon registration in TraCSS, government entities will be asked to provide basic organizational information (organization name, location, contact information) as well as a list of spacecraft affiliated with their country.

- Organizational contact information will only be accessible to registered TraCSS users.
- Basic organizational information about the government entities registered in TraCSS (e.g. organization name and location) as well as the list of spacecraft affiliated with each entity will be made openly available under the Creative Commons 0 Public Domain Dedication (CC0 1.0). Data and information with this designation will be made available on the TraCSS website and access and use will not require users to register for a TraCSS account.

5. Commercial SSA Data and Information

TraCSS is planning to make use of SSA data and information purchased from commercial SSA providers. The policy governing access to and use of this data will be defined in the applicable purchase agreement.

Written Comment Submission

If you are not able to provide oral comments during the webinar for any reason, including not being provided time during the allotted time due to the capacity of the time being reached by the number of commenters or you are not able to attend the webinar for any reason, including electrical or power outages to your media systems due to weather or other events Force Majeure, you have the option to provide written comments as described below in the next paragraph.

For up to 5:00 pm Eastern Time Tuesday, July 23, 2024 and following the webinar on Thursday, July 9, 2024, written comments can be sent by email to the following email address
tracss.commerce@noaa.gov with the subject identified as "Comments on TraCSS Proposed User Agreement and Data Policy".

Written comments are to be no more than ten (10) electronic word-processed pages that are sized "8.5 inches x 11 inches" with "1 inch" margins top, bottom, left, and right and a font of any type at a "12-point" size. If more than ten (10) word-processed pages are submitted in a document but are within the physical criteria provided, only the first 10 pages will be read, the remaining pages not read, and not returned.

No confidential business information, or otherwise sensitive or protected information, are to be submitted orally or in writing. Any such information will be ignored.