



Space Weather Advisory Group (SWAG)

Comprehensive User Survey

**Space-Based Positioning Navigation & Timing
National Advisory Board**

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SWAG Members



SWAG Members

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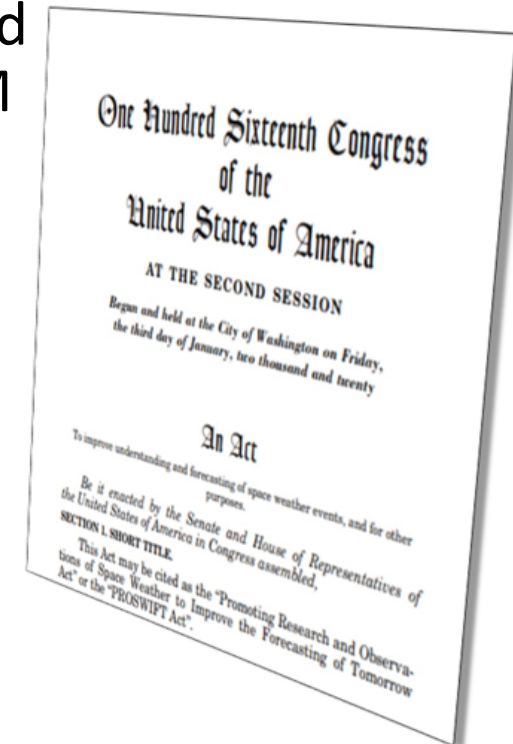


Promoting Research and Observations of Space Weather to Improve Forecasting of Tomorrow (PROSWIFT) Act

Purpose: “To improve understanding and forecasting of space weather, and for other purposes.”

Basic Elements

- 60601 Space weather
 - Role of Federal Agencies
 - Interagency Working Group (SWORM)
 - Interagency Agreements
 - **Space Weather Advisory Group (SWAG)**
- 60602 Integrated strategy
- 60603 Sustaining and advancing critical observations
- 60604 Research activities
- 60605 Space weather data
- 60606 Knowledge transfer and information exchange (NASEM Roundtable)
- 60607 Pilot program commercial sector
- 60608 Benchmarks





PROSWIFT Act - SWAG Duties

Advise White House SWORM Subcommittee on:

- Facilitating advances in the space weather enterprise of the US
- Improving the ability of the US to prepare for, mitigate, respond to, and recover from space weather phenomena
- Enabling the coordination and facilitation of R2O2R
- Developing and implementing the integrated strategy for coordinated observation

Conduct a comprehensive user needs survey of space weather products



Comprehensive Survey Overview

Goal: Enhance our national infrastructure's resilience to space weather.

- Determine the affect of Space Weather on various sectors in terms of
 - Technology
 - Current end user activities
 - Future space weather forecasting needs
- High-level anonymized summary created by STPI for the SWAG
- As required by the PROSWIFT Act, the results including recommendations will be compiled into a report that will be delivered to Congress and made public
- Sectors under review:
 - Aviation
 - Electric Power Grid
 - Emergency Management
 - **GNSS**
 - Human Space Flight
 - National Security
 - Research
 - Satellite Operations
 - Space Traffic Management/Coordination



User Survey Questions

1. Current use of space weather observations, information, and forecasts
2. Current technological systems, components or elements affected by space weather
3. Current risk reduction and resilience activities
4. Future needs of space weather observations, information and forecasts
5. Future risk reduction and resilience activities
6. New or non-traditional sources of Space Weather Data
7. Next generation technologies, research, instrument, and models to address Space Weather



GNSS Sector Survey (1 of 3)

- Extremely large sector with many types of users and technologies relying on integrated GNSS data and systems
 - Sector broken into two focus areas based on dependency:
 - *Precise Timing*
 - *Position/Navigation*
- Each area broken into “community groups”

Precise Timing Communities	Position/Navigation Communities
Finance	Transportation
Communication Networks	Public Safety & Services
Social Services	Data Markets
Manufacturing	Land Usage
Distribution	



GNSS Survey (3 of 3)

- Survey conducted over 2 years.
- Combination of web survey and small panel in-depth interviews
- Year 1 Survey Communities:
 - **Communications Networks** (e.g., wireless access services, satellite access services, and internet connection, routing, and access services)
 - **Manufacturing** (e.g., robotics, chemical production, fuel refining and processing)
 - **Distribution** (e.g., pipeline transport, water distribution, electricity distribution)
 - **Land Usage** (e.g., construction, land survey, mining & drilling exploration, agriculture)
 - **Public Safety & Services** (e.g., cyber incident management, fire protection, hazardous material management, law enforcement)



Survey Request

- On-line survey is available!
 - https://idaorg.gov1.qualtrics.com/jfe/form/SV_6VabsNUU8uKmhzE
- The survey will remain open until **Friday, December 29, 2023**; we anticipate that it will take 10-15 minutes to complete.
- Please Help Connect to the Communities!
 - Looking for end users, technologists, engineers in each of the 5 communities
 - Suggestions for distributing survey?
 - Newsletters
 - Associations
- Contact Rebecca.Bishop@aero.org or swxsurvey@ida.org for questions



THANKS!

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BACKUP SLIDES