



# Surveying, Mapping and Geosciences Subcommittee

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Richard Snay  
NOAA's National Geodetic Survey

The SM&G Subcommittee will host the  
CORS Users Forum at the CGSIC Meeting  
Savannah, GA  
September 16, 2008  
1:30 – 5:00 pm

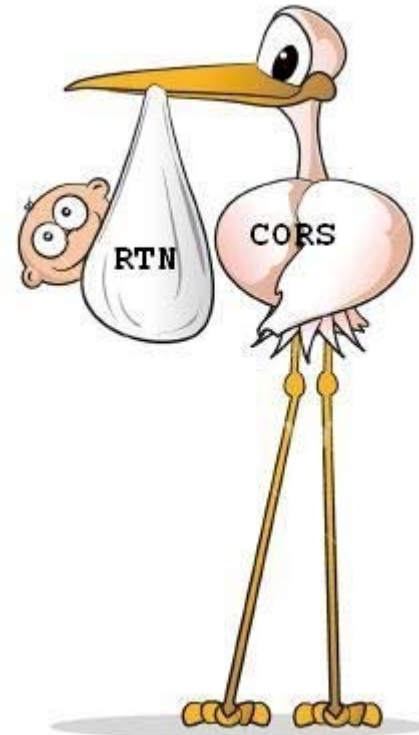


# CORS Users Forum



Theme:

Relationship between the CORS system and the rapidly growing number of real-time GNSS networks (RTN).



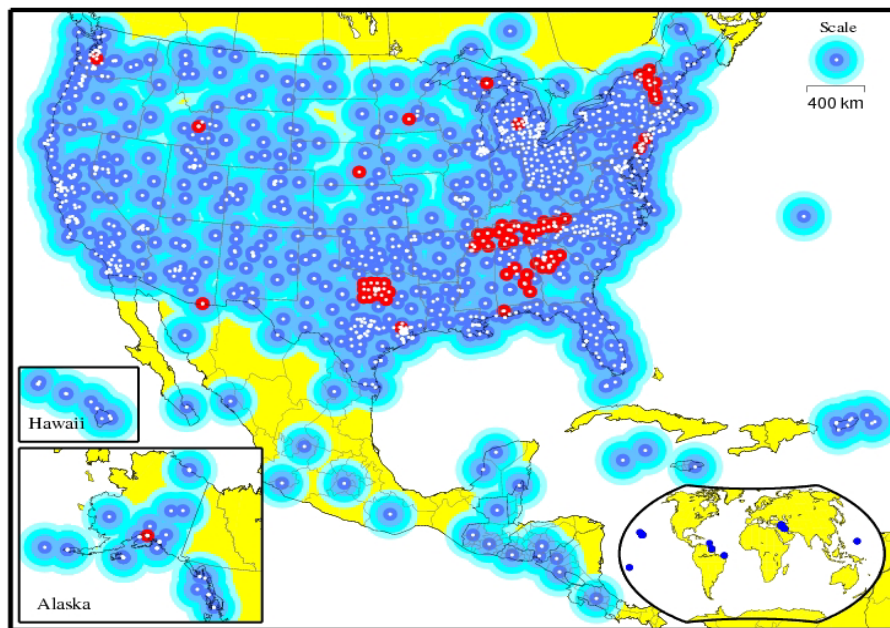


# CORS/OPUS: Overview & Status



**Presenter: Giovanni Sella, NOAA's National Geodetic Survey**

**CORS = Continuously Operating Reference Station**



**Red dots = GPS + GLONASS sites  
whose data will become available in 2009.**

The CORS network contains about 1,250 GPS tracking stations, and it is growing by about 200 stations per year.

OPUS is a Web-based service enabling its users to automatically post-process GPS data.



# NGS Support for Real-Time GNSS Positioning



**Presenter: Bill Henning, NOAA's National Geodetic Survey**

- NGS & friends have developed guidelines for users of “classical” real-time kinematic (RTK) technology.
- Now working on guidelines for administrating a real-time GNSS network (RTN).



NGS began streaming GPS data in RTCM format over the Internet for selected NGS-owned CORS (as an operational prototype).



# PANEL SESSION: Real-Time GNSS Networks



## Panel:

**Gavin Schrock**

Washington St. Reference Network

**Art Andrew**

Orange County, California

**Lew Lapine**

South Carolina Geodetic Survey

**Ken Bays**

Oregon Dept. of Transportation

**Jim Waters**

Tennessee Dept. of Transportation

**wsrn.org** A Regional Cooperative of Real-Time GPS Networks.  
Washington State Reference Network

The Washington State Reference Network is a cooperative of real-time GPS networks offering survey data and real-time GPS correction services for Washington state. GPS data files from a network of continuously operating reference stations (CORS) are available for download to all with real-time services available through partnerships, memberships and subscriptions.  
Visit [www.wsrn.org](http://www.wsrn.org) for more information...

**Technology.**  
Real-time GPS networks offering survey data and real-time GPS correction services.

**Cooperation.**  
Services available through partnerships, memberships and subscriptions.

**Precision.**  
Users achieve high accuracy location on the order of centimeters in seconds.





# Interactive Session within Small Discussion Groups



- From 3:45 – 5:00 pm, Forum attendees will be invited to participate in one of four small discussion groups (6 to 12 people per group).
- Each discussion group will address the relationship between the CORS system and the growing number of real-time GNSS networks.

# Vertical standard error achievable when a user submits 15 minutes of GPS data to OPUS-RS

