

# CSRC, CRTN, and Executive Committee Election Results

Maria Turingan

CSRC Coordinating Council Fall Meeting

October 6, 2016

Caltrans Hosts: Mark Turner and Scott Martin

Caltrans TransLab, 5900 Folsom Boulevard

Sacramento, CA 95819



# 2006 - Last Meeting in Sacramento with Workshop Co-sponsored by CSRC and Los Rios Community College District

## SCHEDULE

>> TUESDAY, OCTOBER 17, 2006

- 8:00 a.m. Introduction, Opening remarks,  
Workshop goals  
**Marti Ikehara**,  
National Geodetic Survey (NGS)
- 8:15 a.m. Geoid Modeling and  
Corrector Surfaces  
**Greg Helmer**,  
RBF Consulting
- 10:00 a.m. Break
- 10:30 a.m. The Inaugural Bill Young  
Memorial Lecture  
The Application of InSAR for  
Optimizing and Designing GPS  
Networks; and an Overview of  
InSAR Measured Subsidence  
Throughout California  
**Gerald Bowden, Ph.D.**,  
United States  
Geological Survey
- 12:00 p.m. Lunch. Exhibits open.
- 1:00 p.m. Real Time GPS Issues,  
California Real Time Network,  
Use of CRTN  
**Yehuda Bock, Ph.D.**,  
California Spatial  
Reference Center (CSRC)
- 3:00 p.m. Break in Exhibit Hall
- 3:30 p.m. OPUS and OPUS-related Issues  
**Joe Evjen**,  
National Geodetic Survey
- 5-6:30 p.m. Exhibitor's Reception in Exhibit Hall



## REGISTRATION FORM

Please register me for the Spatial Reference  
Systems Workshop

Registration includes continental breakfast, lunch for  
both days and exhibitor reception. The conference hotel

cut out  
and send

# Overview

- 1. CSRC – founded in 1999, 17 years ago**
  - \* CSRC Coordinating Council**
  - \* CSRC Executive Committee (Board) & Election Results**
- 2. CRTN**
  - \* Consortium (2009/2010) and Users**
- 3. Sources of Support for CSRC/CRTN**

# CSRC - Understanding Our Organization

- \* **California Spatial Reference Center (CSRC)**
  - \* **Coordinating Council – UCSD Support Group**
  - \* **CSRC Executive Committee**
    - \* **Election Results**
    - \* **In-Kind Support**
- \* **Our Research Group – Scripps Orbit and Permanent Array Center (SOPAC)**
- \* **The University – UCSD and SIO**

# The University – UCSD and SIO



UNIVERSITY  
OF  
CALIFORNIA

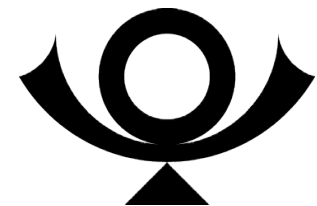
The Regents of the  
University of  
California (UC)  
Founded 1868



University of  
California San  
Diego (UCSD)  
Founded 1960



Scripps Institution  
of Oceanography  
(SIO)  
Founded 1903



Institute of Geophysics and  
Planetary Physics  
(IGPP Department)  
Founded 1960's

## Coordinating Council - Responsibilities

- \* **Attend Biannual CSRC Coordinating Council Meetings (generally May in Southern California and October in Northern California)**
- \* **Fosters Cooperation and Partnerships**
- \* **Education and Outreach**
- \* **Promotes the Center and assists in obtaining funds for the Center**

# Coordinating Council Membership

- \* Professional Surveying Organizations
- \* Geographic Information Systems (GIS) Organizations
- \* Geophysical Research
- \* Federal Government
- \* State Agencies
- \* Cities, Counties, and Local Agencies
- \* Utility Organizations
- \* Educational Professionals
- \* Private Organizations

# Executive Committee - Responsibilities

- \* Serves as the CSRC Board**
- \* Participate in Monthly One-hour Teleconferences**
- \* Attend Biannual CSRC Coordinating Council Meetings**
- \* Pursues and Solicits Funds for the Center**
- \* Develops and Reviews CSRC Priorities**
- \* Fosters Cooperation and Partnerships**
- \* Education and Outreach**



# Executive Committee Elections Results

## Newly Elected Members

- \* EC Member: Kimberley Holtz (City of Long Beach)
- \* EC Member: Ken Joyce (DigitalGlobe)

## Re-Elected in 2016

- \* Treasurer: Jim McNeil (Riverside County Flood Control)
- \* EC Member: Bryan Banister (Caltrans)

# Continuing Executive Committee Members

## Elected Members

- \* **Chairperson: Richard Maher (KDM Meridian)**
- \* **Vice-Chairperson: Scott Martin (Caltrans)**
- \* **Secretary: Thomas Dougherty (City of Fremont)**
- \* **EC Member: Greg A. Helmer (Psomas)**

## Non-Elected Members

- \* **Director CSRC: Dr. Yehuda Bock (SIO, UCSD)**
- \* **Director IGPP: Dr. Steve Constable (SIO, UCSD)**
- \* **Chancellor UCSD Designee: Dr. John Orcutt (SIO, UCSD)**
- \* **Past Chairperson: Art Andrew (Orange County Public Works)**
- \* **NGS Pacific Southwest Regional Advisor (CA, NV): Dr. Dana John Caccamise (NOAA/NGS, office located at SIO, non-voting member)**

# Executive Committee (EC) - In-Kind Support

- \* City of Fremont
- \* City of Long Beach
- \* County of Orange
- \* DigitalGlobe
- \* KDM Meridian
- \* Psomas
- \* Riverside County Flood and Water Conservation District



# California Spatial Reference Center (CSRC) and California Real Time Network (CRTN)

## CSRC Coordinating Council (CC)

- UCSD Support Group
- Education and Outreach
- Builds Collaborations

## CSRC Executive Committee (EC)

- Oversees CSRC
- Board and subset of the Coordinating Council

## CRTN Consortium

- Provides funding support
- Guides CRTN

# California Real Time Network

- \* **CRTN exists through collaboration between many organizations that operation and maintain the various stations throughout California:**
  - \* **Bay Area Regional Deformation (BARD) Network (Berkeley Seismological Laboratory (BSL) and the United States Geological Survey (USGS) at Menlo Park)**
  - \* **Caltrans**
  - \* **Plate Boundary Observatory/UNAVCO**
  - \* **SOPAC**
  - \* **USGS at Pasadena**
  - \* **Orange County**
  - \* **San Diego County**
  - \* **Metropolitan Water District (MWD) of Southern California**

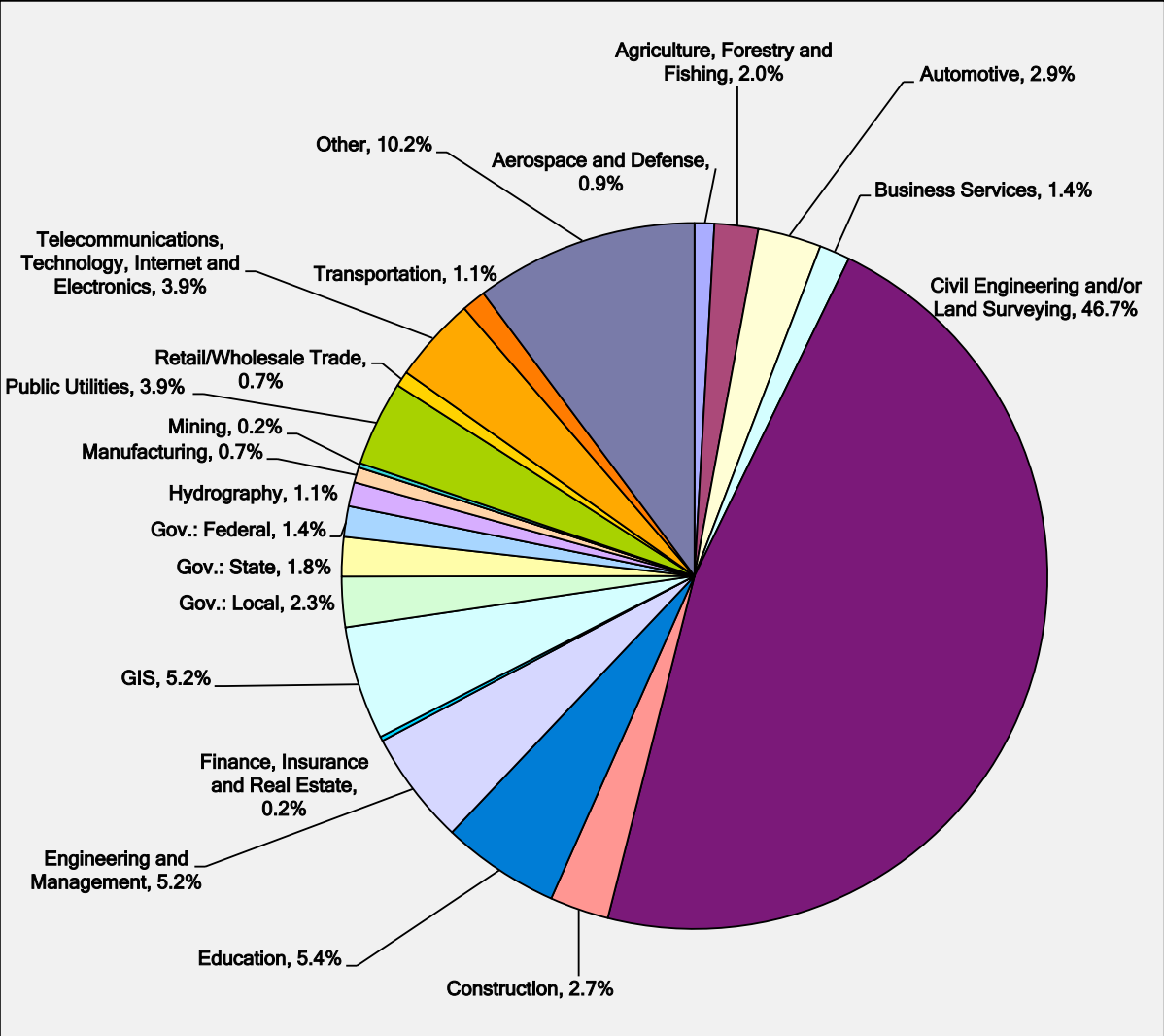
# CRTN Consortium Agencies

1. City of Los Angeles, Department of Public Works, Bureau of Engineering, Cesar Bregaudit, John Tosto, Robert Nielsen
2. Riverside County Flood Control and Water Conservation District, Jim McNeil
3. Orange County Public Works, Art Andrew
4. San Diego County, Department of Public Works, Ray Mathe
5. Riverside County Transportation Department, Rick Lantis, Ed Hunt, Tim Rayburn
6. Santa Clara Valley Water District, Kris Puthoff
7. City of Long Beach, Gas and Oil, Kimberley Holtz
8. California Land Surveyors Association, Michael McGee
9. California Department of Transportation, Scott Martin, Mark Turner
10. Swift Navigation, Rob Hranac
11. California Spatial Reference Center, Rich Maher
12. Scripps Institution of Oceanography, UCSD, Yehuda Bock

# CRTN Users by Industry

## 47% Civil Engineering and/or Land Surveying

(CRTN Registration Form - 441 Respondents)



# Industries/Organizations Using CRTN

- \* **Telecommunications, Technology, Internet, Electronics**
  - \* Qualcomm, Panasonic, Cannon
- \* **Automotive Industry**
  - \* Tesla Motors, Inc., Delphi Automotive, Honda Research Institute, Ford
- \* **Agricultural Industry:**
  - \* Terra Firma Farm, TriCal, Inc.
- \* **Research and Education**



# What is CRTN used for? – Other uses

- \* **Unmanned Aerial Systems**
  - \* Applications across Natural Resource disciplines
  - \* To survey-in targets and produce rough topos for ground truth.
- \* **Agriculture**
  - \* Tillage and planting of annual and perennial crops
  - \* Precision agriculture
  - \* Vineyard layouts
- \* **Sea level rise research**
- \* **FEMA Risk Map Assessment**
- \* **Testing and development such as testing Rugged GNSS Tablets**

# Sources of Support for CSRC/CRTN

- \* Beginning – Grew from grass roots partnerships and local support**
- \* Past – Shifted from State and local support to Federal**
- \* Currently**
  - \* No direct Federal support**
  - \* Shifted back to State and local support through the CRTN Consortium and Contributing Memberships**

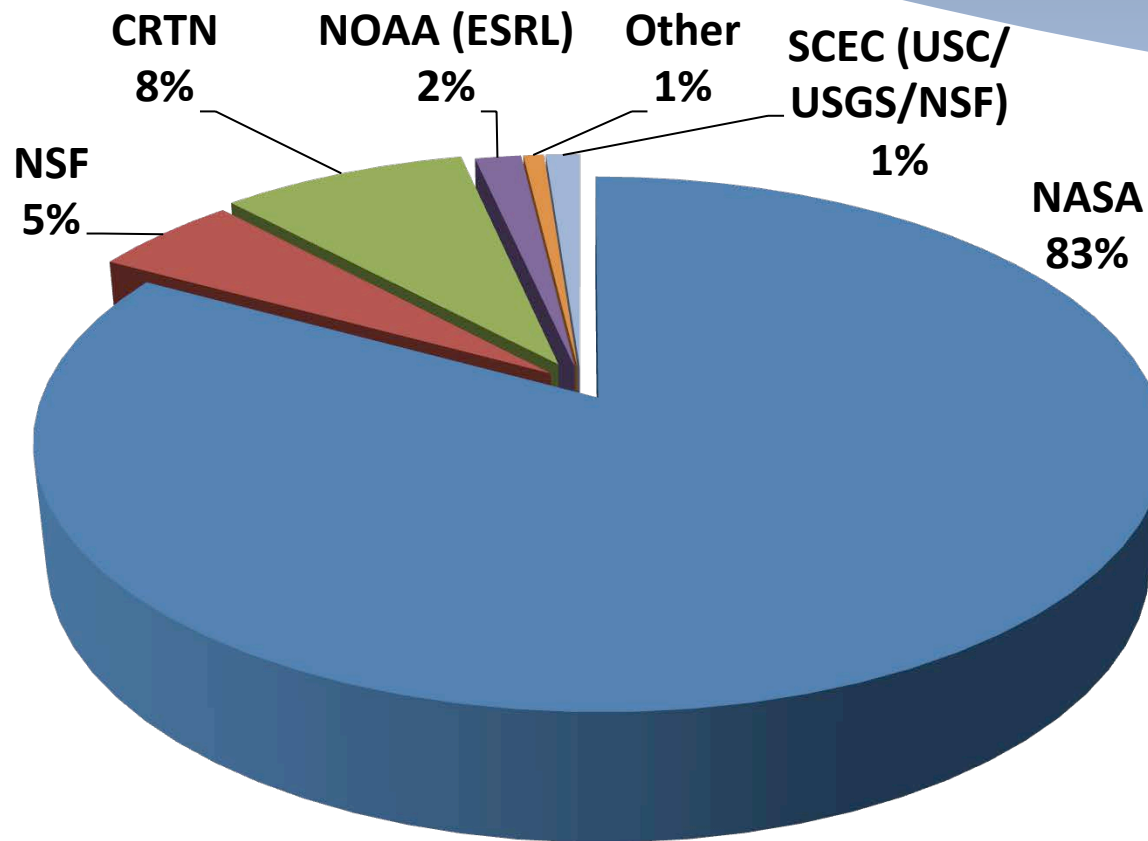
# Current CRTN Budget

## July 1, 2016 to June 30, 2017

➤ <b>Projected Revenue primarily from Consortium Memberships and Donations</b>	<b>\$140K</b>
➤ <b>Caltrans Contract</b>	<b>\$236K</b>
➤ <b>Minus Indirect Costs</b>	<b>(\$83K)</b>
➤ <b>CRTN Budget</b>	<b>= \$293K</b>

# Current - CSRC Operations Leveraged by SOPAC Research Grants

## Breakdown by Funding Source Over 1 Year



### Acronyms from Chart (left to right):

- NSF – National Science Foundation
- NOAA – National Oceanic and Atmospheric Administration
- ESRL – Earth System Research Laboratory
- SCEC – Southern California Earthquake Center
- USC – University of Southern California
- USGS – United States Geological Survey
- NASA – National Aeronautics and Space Administration

# Future Funding Efforts

## CRTN Consortium Membership and Contributions

## New Ideas and Adding Value to CRTN Membership

## New Collaborators and Partners

- Private Companies

## Building Collaborations in New Areas

- Structural engineering and monitoring, public works, office of emergency services, etc.

## Educational and Outreach

- New users and potential collaborators through meetings, workshops, and presentations

## Research Opportunities Through SOPAC

- Helps leverage costs

# Questions, Next Meeting & Thank you!

**CSRC Meeting Twice a Year  
May and October**



**Next Meeting in the Spring  
May 4, 2017 (Thursday)  
in San Diego at SIO/UCSD**

