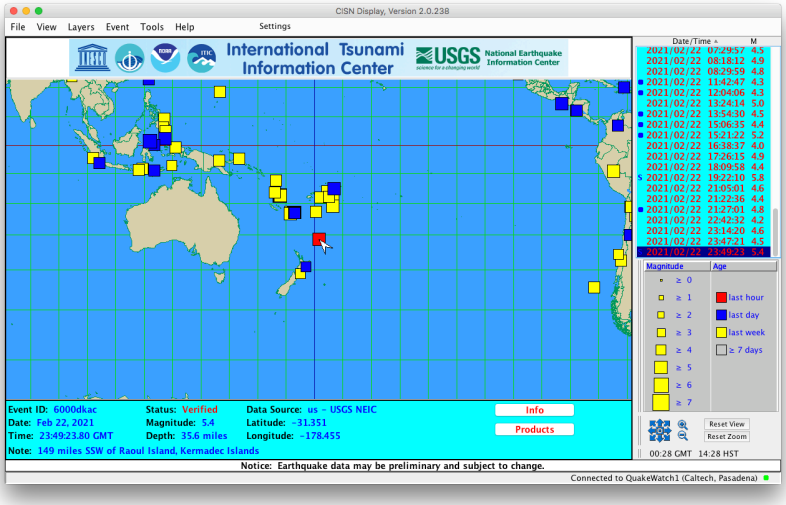
Real Time Earthquake Display (RTED)
California Integrated Seismic Network (CISN) tool
Version 1.72, October 2017

Summary:
The RTED (or originally CISN) Display provides reliable delivery of real-time earthquake information, including rapid notification and ShakeMap to critical end users. Users are able to customize the tool according to their own local needs, including the setting of thresholds for display and alarming and import of additional graphics data layers. The tool was developed by the US Geological Survey in collaboration with the California Office of Emergency Services, and further supported by the US National Tsunami Hazard Mitigation Program.



Recent program improvements included: Web Services middleware that allows data to get through firewalls; improved layers, including more detailed coastlines; integrated e-mail capability; new event sorting options; a "T" for events for which a tsunami warning has been generated and "I" for Internal messages in the event list (emergency version only). The CISN has 4 servers online to provide reliable access to earthquake information.

Eligibility:
Freely available to everyone. ITIC is a CISN-registered organization serving as a focal point for institutions interested in using CISN for tsunami warning and mitigation in their country.

Minimum System requirements for operating CISN Display:

- Java Runtime Environment 1.8.X or higher
  (available from Sun at http://java.com/en/download/manual.jsp)
- Pentium-III, 1GHz CPU speed or comparable hardware 384 Mb RAM or more
- IP Address (private or public)
- Access to Internet on ports 39977/39988

Instructions for obtaining RTED/CISN:

1. Send request for account to ITIC Director (laura.kong@noaa.gov). ITIC is the administrator for those wishing to register as tsunami institutions. Alternatively, you may register as your own institution directly with CISN.

2. ITIC will approve and send you a Registration Code (*regcode*).

3. Create a User account by visiting http://www.cisn.org/software/login/index.php and clicking "Create a New User" and typing in *regcode* and personal information. Users must create their own CISN Display (CD) accounts in order to be registered in the CISN server database to receive information from the QuakeWatch server. After creating a user, you will receive an email asking you to confirm your contact information – please follow the directions given to validate.

4. ITIC will then approve the User, and send an email providing instructions on how to download and

install the software. Your username is your email address and your password will be 6 characters.

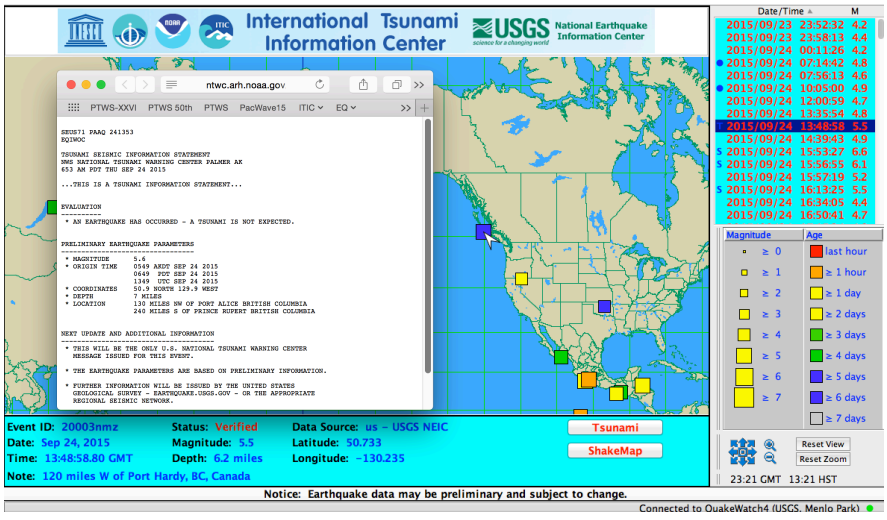
5. Install the software, copy the folder from the TWTools disk. The Emergency version is currently not available for download on the CISN website. You will be required to upgrade to version 2.0.238 in order to use the software. Please upgrade when the software prompts you.
   Installation options:
   - Windows XP, Vista, Windows 7, Windows 10, Mac OS X, UNIX/Linux
   - Manual (not recommended)

6. Check to make sure you have Java Runtime Environment (JRE) 1.8.X or higher installed. To get Java (it's free), visit http://java.com/en/download/index.jsp. Note: installation of new software sometimes requires administrative privileges on the host machine. If any part of the installation fails, contact your local systems administrator for assistance.

   Installation of the software. Follow the instructions as outlined in the installation shield. Once complete, launch the application, enter your user-account username/password and check the lower-right corner for a green status light that indicates a good connection to a QuakeWatch Server. There should be no need to specify a server address; the client comes preconfigured with one. A shortcut icon should be created on your desktop to use to access the software.

7. Refer to the CISN Display User's Guide to learn more about customizing your user-interface settings… every organization should do this! Documentation available includes:
   - Revision History
   - User's Guide (v1.2, 2005)
   - Display Settings Manual
   - Event Viewer Manual

For example, you may wish to have your organizations' logo displayed instead of the default CISN logo. To do this, create a .gif file and place it in the "banners" directory of the "CISN_Display" folder. The banner is then selected from the Settings/Display menu once the program is started.



The ITIC Display Configuration is an example of a useful default display for tsunami warning centers.

Tsunami messages, when issued by the US NTWC or PTWC, are also available by clicking on the "Tsunami" button. This opens another window where the message is shown. The example below is from a M4.7 earthquake in Barbados on 30 March 2007. To display the "Tsunami" button on the screen, choose it as a Product button from the Settings/Config tab.

Acknowledgements:

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OTHER ALERTS:

Receiving email/SMS alerts through RTED/CISN:
The CISN tool allows the configuring of parameter thresholds for sending email and SMS text messages to customers. Systems administrator privileges may be required; you will need to know the name of your SMTP server. Because your own mail servers are used, SMS dissemination and its timeliness will be dependent on your servers and configuration. To receive alerts as earthquakes occur, the CISN must always be running (7x24 basis). While issuance may only take only a few seconds, message receipt may be much longer. Regular tests should be performed to monitor performance.

USGS Earthquake Notification Service (ENS) - Alternative to RTED/CISN alerts:
An easy-to-configure and maintain tool for receiving email information is provided by the USGS. Visit https://earthquake.usgs.gov/ens/help to sign up and configure the thresholds for notification. ENS is functional in English and Spanish.

IMPORTANT NOTES:

- ***The above services have NOT been tested as operational tsunami warning tools. Users will need to assess the timeliness of information delivery to their own country and operations centers.***
- ***For highest reliability, enable all the services to ensure redundancy, and monitor to see if one service is more timely than the other. It is wise practice for any important message to always be received through at least two different communications methods.***