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Earthquake Information Products and Tools from the Advanced National Seismic System (ANSS)

This fact sheet provides a brief description of a series of new or updated post-earthquake tools and products. The focus is on products specifically aimed at providing situational awareness in the period immediately following significant earthquake events.

ANSS Background

The Advanced National Seismic System (ANSS) is a partnership of the U.S. Geological Survey (USGS), academia, other government agencies, and industry that monitors earthquakes in the United States and collects seismic data. Since its inception in 2000, funding has provided for the installation of over 700 new seismic stations to collect high-quality seismic data to serve the needs of the emergency management and response, engineering, and scientific communities.

According to recent estimates by the Federal Emergency Management Agency (FEMA), the annualized earthquake losses in the United States are $5.6 billion per year, with a single earthquake potentially causing losses greater than $100 billion. Such losses can be mitigated by using information from seismic monitoring to effectively focus resources in regions of significant risk, to perform seismic rehabilitation, to improve the overall performance of earthquake engineering designs, and to plan for the response to hazardous events.

In addition to these basic and fundamental scientific and hazard monitoring roles, a modern seismic system is vital for providing timely and accurate information about earthquake activity and earthquake effects, and for reducing loss of life and property from earthquake disasters. Rapid dissemination of post-earthquake information about shaking effects can promote situational awareness, benefiting residents of seismically active regions by allowing rapid mobilization of emergency response at the level appropriate for the need.

ANSS Products and Tools

In addition to greatly enhanced web pages, the ANSS now provides post-earthquake decision-making tools and routinely disseminates information to users who have a need for near real-time earthquake analysis.

This list is not intended to be a comprehensive treatment of ANSS post-earthquake products. Rather it is a summary of ongoing developments deemed of interest to the public, the media, and those responding to earthquakes, be it from the critical lifeline, utility, government, emergency response, emergency coordination, recovery, planning, business continuity, and other relevant communities.

Following are tools recommended for various types of user categories. For each category, see the URLs associated with each of the products portrayed on the back of this fact sheet for more detailed information.

Earthquake Information User Categories:

General Public and Media

- Latest Earthquakes
- Earthquake Notification Service (ENS)
- Real-time Feeds and Data
- Did You Feel It?
- ShakeMaps
- Seismogram Displays

Emergency Responders and Managers, Disaster and Business Continuity Planners and Coordinators

- Earthquake Notification Service (ENS)
- Real-time Feeds and Data
- ShakeMaps
- CISN (California Integrated Seismic Network) Display
- Prompt Assessment of Global Earthquakes for Response (PAGER)

Critical Lifeline and Utility Operators

- All of the above, plus
- ShakeCast

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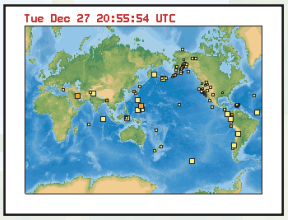
ANSS Earthquake Information Products and Tools

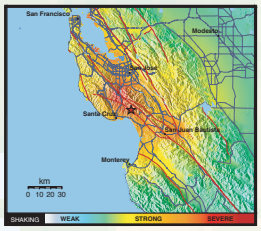


Latest Earthquakes

Maps and information for United States and worldwide earthquakes within minutes after they occur.
http://earthquake.usgs.gov/eqcenter/

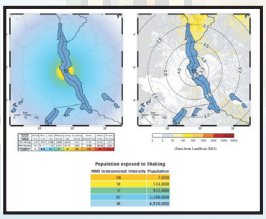
Earthquake Notification Service (ENS)

Customizable earthquake information automatically sent to your wireless device or email account.
http://earthquake.usgs.gov/ens/



ShakeMaps

Distribution of shaking from an earthquake anywhere in the world within minutes.
http://earthquake.usgs.gov/shakemap/

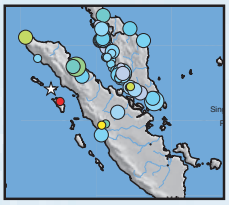


PAGER

Estimates of population exposure to significant earthquake shaking anywhere in the world within minutes.
http://earthquake.usgs.gov/pager/

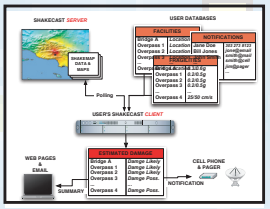
Real-time Feeds and Data

Real-time earthquake data in a variety of formats including RSS, CAP, CSV, and KML.
http://earthquake.usgs.gov/eqcenter/recenteqsww/catalogs/



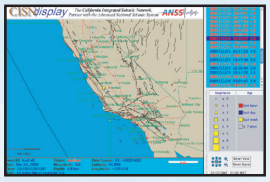
Did You Feel It?

Citizen-science webpage where shaking intensity maps are created by the people who felt the earthquake.
http://earthquake.usgs.gov/dyfi/



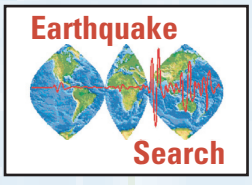
ShakeCast

Automated ShakeMap delivery, damage assessment, and notification for critical lifeline operators.
http://earthquake.usgs.gov/resources/software/shakecast/



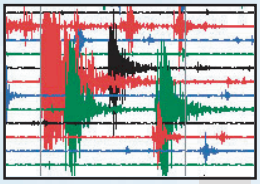
CISN Display

Downloadable software to visualize and receive notifications for seismicity anywhere in the world on your computer.
http://www.cisn.org/software/cisndisplay.html



Earthquake Data

Catalog search, recent and historic earthquake archive, "Top 10" lists, scientific data, and so on.
http://earthquake.usgs.gov/eqcenter/historic_eqs.php/

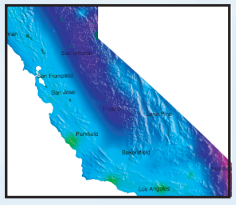


Seismogram Displays

Electronic versions of the pen-and-paper seismograph in near real time.
http://earthquake.usgs.gov/eqcenter/helicorders.php

Info by Region

Pick a State or a country and find out about historical earthquakes, seismic hazard, local agencies, and more.
http://earthquake.usgs.gov/regional/states.php or world.php



Aftershock Forecast Map

Map giving the probability of aftershocks at any location in California within the next 24 hours.
http://pasadena.wr.usgs.gov/step/

Contact Information: http://earthquake.usgs.gov/contactus/
A PDF of this fact sheet is available at http://pubs.usgs.gov/fs/2006/3050/