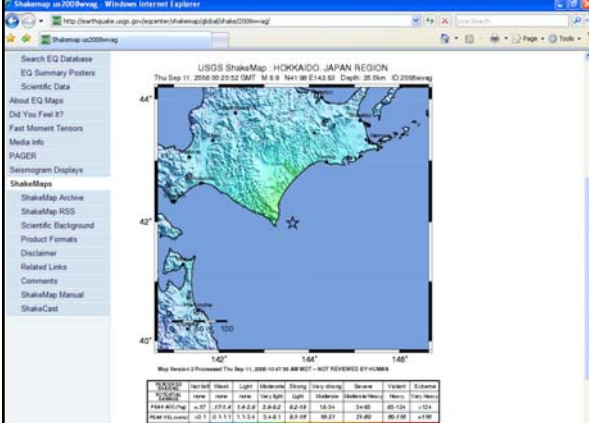


CISN California Integrated Seismic Network
California's Partner to the **ANSI**
Advanced National Seismic System

Earthquake Scenario Simulation using CISN Display

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USGS
Menlo Park, CA



ShakeMap v3.0009evg Windows Internet Explorer
http://earthquake.usgs.gov/operational/shakemap/Global/View/0309evg

Search EQ Database
EQ Summary Posters
Scientific Data
About EQ Maps
Did You Feel It?
Fast Moment Tensors
Media Info
PAGER
Seismogram Displays
ShakeMaps
ShakeMap Archive
ShakeMap RSS
Scientific Background
Product Formats
Disclaimer
Related Links
Comments
ShakeMap Manual
ShakeCast

USGS ShakeMap: HOKKAIDO, JAPAN REGION
Thu Sep 11, 2008 10:20:52 GMT M 6.9 N41.08 E143.83 Depth: 20.5km ©2009evg

Station	Station Name	Mag	Dist	Mag	Dist	Mag	Dist	Mag	Dist	Mag	Dist	Mag	Dist	Mag	Dist
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



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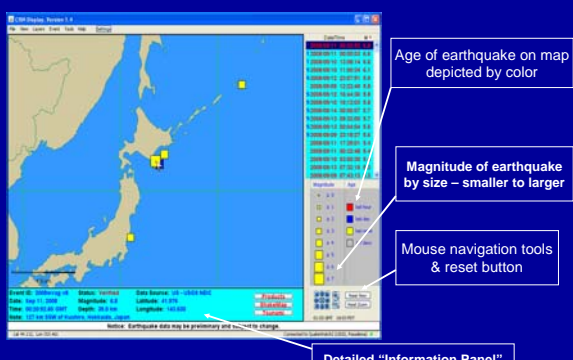
CISN Display

- Developed by California Integrated Seismic Network under funding from California OES and the USGS
- Real-time push of earthquake information (or scenario information) to Java application via the Internet
- CISN Display is a GIS application
- Provides customized notification based on user needs based on location and magnitude
 - Email
 - Short text message to cell phone/pager
 - Visual and audible alarms
- Usage restricted

~125 Connected Users
~700 registered

- 10news.com
- abc.com
- atsb-malaysia.com.my
- bnsf.com
- bppd.com
- ci.piedmont.ca.us
- cityofalhambra.org
- co.monterey.ca.us
- co.pierce.wa.us
- dalycity.org
- degenkolb.com
- dhn.mil.pe
- dnr.wa.gov
- dogami.state.or.us
- dot.ca.gov
- emd.wa.gov
- hko.gov.hk
- incis.gov.in
- kmi.com
- koz.com
- lacofd.org
- mca.gov.io
- meteorology.gov.mv
- mwdh2o.com
- nbunt.com
- noaa.gov
- oes.ca.gov
- ptwc.noaa.gov
- quileutenation.org
- redlandspolice.org
- reuters.com
- sbcfire.org
- scc.hawaii.gov
- seasidepd.org
- sed.ethz.ch
- tribune.com
- unesco.org
- usgs.gov
- ventura.org
- water.ca.gov
- wsdot.wa.gov
- + 14 .edu 's

CISN Display - Example



Age of earthquake on map depicted by color

Magnitude of earthquake by size – smaller to larger

Mouse navigation tools & reset button

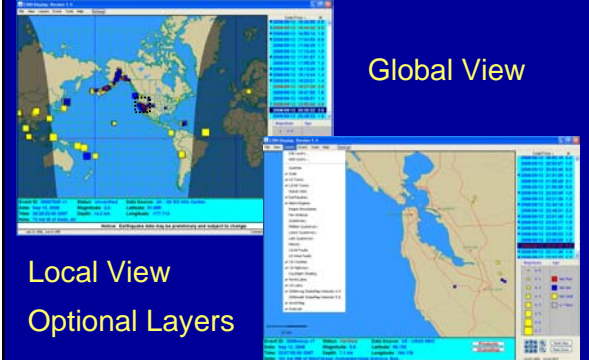
Detailed "Information Panel"

CISN Display

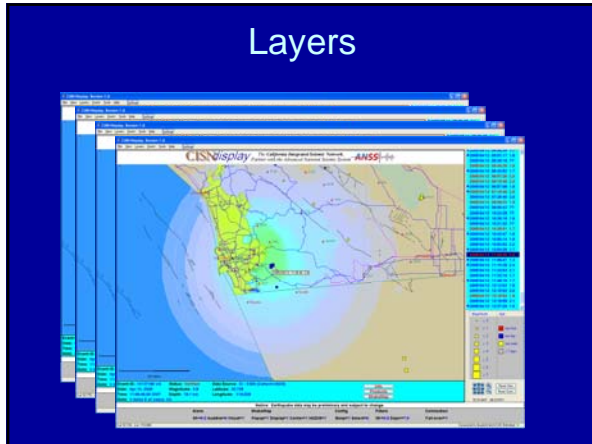
Global View

Local View

Optional Layers

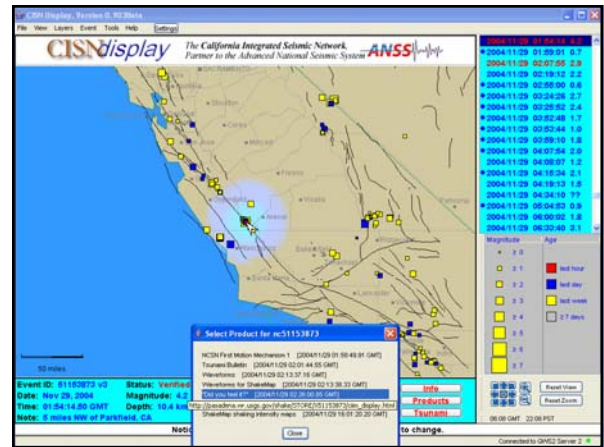
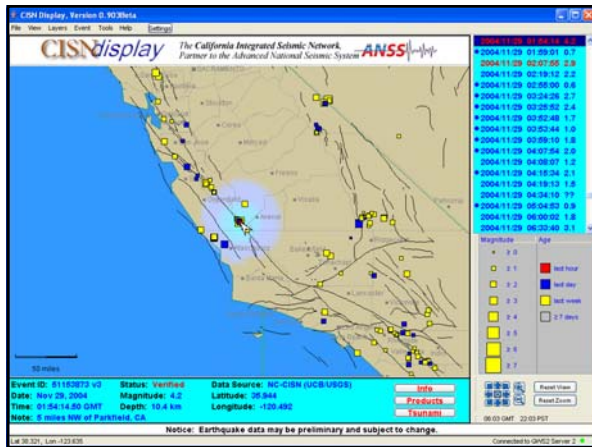
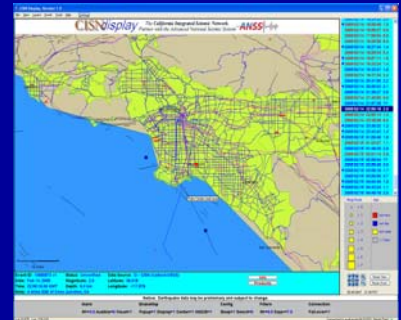


Layers



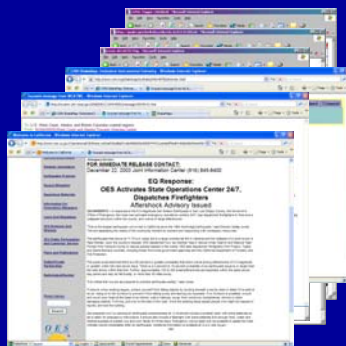
CISN Display – Available GIS Layers

- US/Global Cities
- Major Roadways
- Major Railways
- Faults
- Runways
- Add your own...



CISN Display interface to Web-based Products

- URLs provide realistic information
 - Waveform GIFs
 - Focal Mechanisms/ Moment Tensors
 - CIIM pages (Felt Reports)
 - ShakeMap
 - Tsunami Alerts
 - Aftershock Forecasts
 - HAZUS Input files



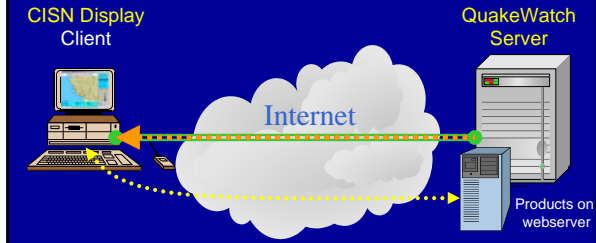
The CISN Display – How does it work?

- Client requests a connection from the Server
- Client authenticated
- Client Subscribes to 'Event Channel' on QWServer



The CISN Display – How does it work?

- Client subscribed to 'Event Channel (waiting)'
- Earthquake Message!
- ShakeMap Message (URL)!
- Client goes out-of-band to retrieve ShakeMap from web

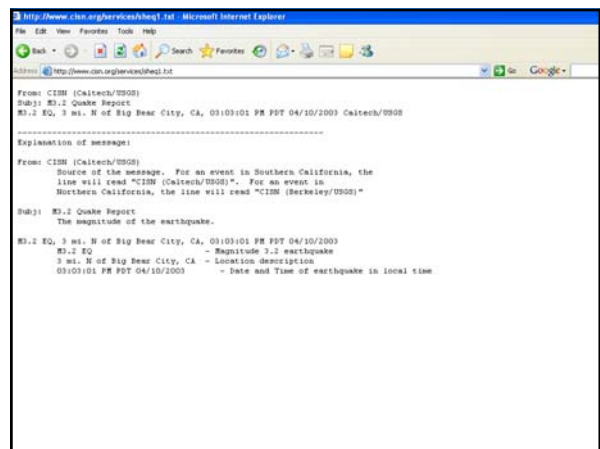
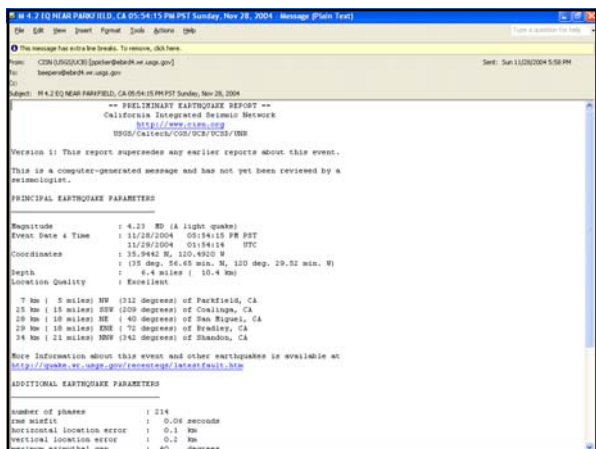
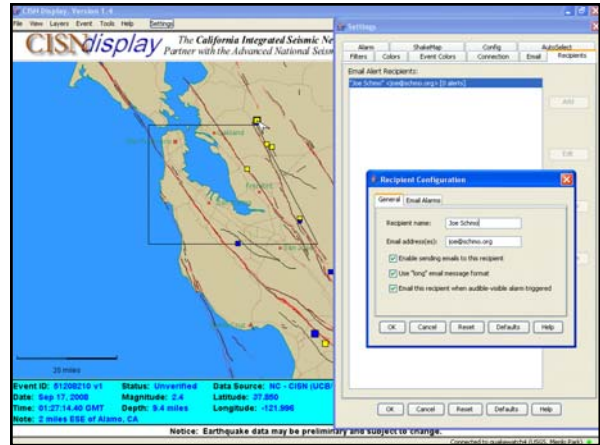
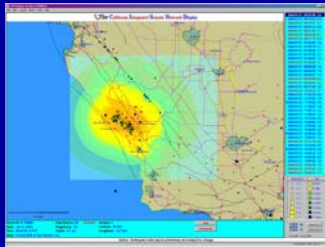


How to Make a Scenario Seem Like the Real Thing

- Before scenario
 - Construct the mainshock
 - Magnitude, when, where, length, mechanism, ground motions
 - Generate aftershock catalog
 - Same information needed as for mainshock
 - Generate supporting information for web
 - ShakeMap, probability reports, tsunami warnings, DYFI, mechanisms, HAZUS
 - Establish private QWServer in advance
 - Install CISN Display clients on user computers
 - Configure to connect to private server
 - Configure for email, audible alarms
- On day of Scenario
 - Participants run CISN Display
 - Operator submits information into scenario QWServer
 - Catalog and URL links submitted in "real-time"

Table-top exercise features

- Scalable
- Offline
- Automated
- Highly configurable
- Integrated
- Platform Independent
- Audible alarms
- SMS and email notification



The CISN Display - System Requirements

- Recommended Hardware (Minimum)
 - CPU: 1 GHz
 - RAM: 384 MB or Higher
 - Monitor Resolution 1024 x 762 or higher
- System Software
 - JAVA (JRE 1.4) installed
- Network Connectivity
 - IP address (Registered or Private)
 - Inbound/Outbound access on ports 39988/39977 to a QuakeWatch Servers (without Proxy Server)
- Client Software
 - CISN Display application
- CISN Display User
 - CISN 'User Account' → www.cisn.org/software

Summary

- CISN Display provides
 - automated, configurable scenario simulation
 - Realistic (alarms, SMS, email, real-time)
 - Scalable usage
 - Secure
- More information
 - www.cisn.org/software
 - Handouts
- Take it out for a test drive! It's easy.