Understanding Risk Forum
Cape Town, June 3rd 2012

Crowdsourcing Earthquake Data
Open-source tools developed within the scope of GEM

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The tool is called *Faulted Earth*,
It is part of the *OpenQuake* Platform,
which is being developed by *GEM*.

Check out our booth!
The GEM Foundation is a public-private partnership that drives a collaborative effort aimed at developing and deploying tools and resources for earthquake risk assessment worldwide. Hundreds of organisations and individual experts, professionals and practitioners are working together on uniform global databases, methodologies, tools and open-source software.

Check out our booth!
The OpenQuake Platform

OpenQuake is a tool that allows users to model, calculate earthquake hazard and risk, explore earthquake hazard and risk by looking at maps, indicators and curves, capture and integrate new data, and finally use decision-making support tools that help users manage risk.

Again, check out our booth!
We are using GeoNode.

“GeoNode is a platform for the management and publication of geospatial data”

The GeoNode stack:

- OpenLayers
- GeoServer
- Postgres/PostGIS
- Django
The OpenQuake Platform
The Faulted Earth Tool

The tool is used to capture fault information and then to generate a fault source.

GEM is interested in capturing fault information in order to construct seismogenic sources in PSHA (Probabilistic Seismic Hazards Assessment) models to be used in hazard assessment.
OPENQUAKE – FAULTED EARTH

Map-centric layout
Digitize polylines & add attributes
Select records and join
Modify existing records & change the geometry
Filter for records by record name (or any attribute)
Upload features
The workflow
Generate a fault source
The final product
Why GeoNode?

OpenLayers + GXP

Django – User authentication & authorization (LDAP compatible)

- `gxp.plugins`
  - `gxp.plugins.AddLayers`
  - `gxp.plugins.BingSource`
  - `gxp.plugins.CSWCatalogueSource`
  - `gxp.plugins.CatalogueSource`
  - `gxp.plugins.ClickableFeatures`
  - `gxp.plugins.DeleteSelectedFeatures`
  - `gxp.plugins.FeatureEditor`
  - `gxp.plugins.FeatureEditorForm`
  - `gxp.plugins.FeatureEditorGrid`
  - `gxp.plugins.FeatureGrid`
  - `gxp.plugins.FeatureManager`
  - `gxp.plugins.FeatureToField`
  - `gxp.plugins.GeoNodeCatalogueSource`
  - `gxp.plugins.GeoServerStyleWriter`

- `gxp.plugins.GoogleEarth`
- `gxp.plugins.GoogleGeocoder`
- `gxp.plugins.GoogleSource`
- `gxp.plugins.LayerManager`
- `gxp.plugins.LayerProperties`
- `gxp.plugins.LayerSource`
- `gxp.plugins.LayerTree`
- `gxp.plugins.Legend`
- `gxp.plugins>LoadingIndicator`
- `gxp.plugins.MapBoxSource`
- `gxp.plugins.MapProperties`
- `gxp.plugins.MapQuestSource`
GeoNode wish list

If we could dream for a moment… we would love to see

• Federation
• Data revision control
• More documentation
• Mobile device integration
Pros & Cons

Pros
• Lots of ‘out of the box widgets’ to make your life easy
• It’s all open source & has a great community!
• Robust tool with a lot of capabilities
• Scalability
• It’s web based

Cons
• It’s web based
• Customization comes with a cost
Thank you, please come talk to us at our booth and don’t forget to check out our projects at openquake.org