# FOSS4G2006 - Free And Open Source Softwa

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## GRIFINOR: a new platform for 3D geo-visualization

Friday 15 Sep 2006 at 11:00 (00h30')

This contribution will present a new Geographical Exploration System, called GRIFINOR, developed at the Center for 3DGI at Aalborg University. Like other GESs (Nasa World Wind, Google Earth...) it provides a three-dimensional, interactive representation of the Earth, through the Internet. The presentation will focus on the original aspects of this open source GES, and on its potential applications. GRIFINOR is not currently thought of as an end user product, but more as a platform for applications. It uses TIN as a data structure, which can be used for analytical applications and geometrical modeling, building the foundations for a true 3D GIS. The programming language used (Java) also gives GRIFINOR many interesting features. Another main originality of GRIFINOR is its peer-to-peer decentralized structure, that allows to share and visualize data over the network without passing though a central server. Attendants to this presentation will have the opportunity to see the beta version of GRIFINOR, working over the Internet. More information is available on www.grifinor.net.

This contribution will present a new Geographical Exploration System, called GRIFINOR, developed at the Center for 3DGI at Aalborg University. Like other GESs (Nasa World Wind, Google Earth...) it provides a three-dimensional, interactive representation of the Earth (a global model-map), through the Internet. The presentation will focus on the original aspects of this open source GES, and on its potential applications.
GRIFINOR is not currently thought of as an end user product, but more as a platform for applications. It focuses on 3D objects and analytical applications. The data referencing is based on a geocentric coordinate system. GRIFINOR's data structure is based on a Triangulated Irregular Network, which can be used for analytical applications and geometrical modeling. This offers a great potential for GRIFINOR to be not only a visualization tool, but also an analytical tool, building the foundations for a true 3D GIS.
GRIFINOR is programmed in Java. It allows to start the viewer directly from a web page and to avoid tedious installation and update processes. The GRIFINOR platform also takes advantage from the fact that Java is an object-oriented language. Each feature in the model-map is treated as an object from a programming point of view.

This offers a great potential for the communication between the model-map and
future applications.
Another main difference with other GESs is that GRIFINOR is a decentralized system.
The design is such that both client and server components are tightly coupled. This
means that a GRIFINOR instance can behave as both client and server, which allows
to build a peer-to-peer network. Any users with a GRIFINOR instance on  their
computers can use it to visualize their own data, and share their model map over
the Internet, without passing through a central server.
This system provides a platform for applications in many different fields,
including urban planning and development, management for local communities,
tourism, gaming, environmental management ...
The source code is available under the LGPL license. GRIFINOR is at the moment
functional on a client-server mode. Attendants to this presentation will have the
opportunity to see the beta version of GRIFINOR, working over the Internet. More
information is available on www.grifinor.net.


**Primary authors** : Ms. JAEGLY, Marie (GRIFINOR project)

**Co-authors** : Mr. KOLAR, Jan (Centre for 3DGI, Aalborg Universtity)

**Presenter** : Ms. JAEGLY, Marie (GRIFINOR project)


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