Development of Web-GIS system for 3-D geological information using open standard

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We have developed Web-GIS syetem for management and Web publishing of 3-D geologic model. In this presentation, we will introduce an outline and main functions of the system.

This system is composed of free and open source softwares based on Linux, Apache, PostgreSQL, and PHP (LAPP). MapServer is used as Web-GIS engine and GRASS GIS is used as GIS software.

The system is used via Web browser such as Internet Explorer. The basic functions are shown below.

1) Navigation of map.
2) Overlay of horizontal cross sections.
3) Display of east-west and the south-north cross sections.
4) Display of specified cross section.

OGC WMS, WFS and WPS are supported to connect it with other systems. By using open standaed, following have been achieved.

1) Delivery of horizontal cross section to WMS request.
2) Creation and delivery of specified cross section by WPS request.
3) Overlay of geological map and borehole position map which are delivered by WMS server.
4) Reception and display of borehole information using WFS request.