Web Applications

Sample Plan Review Service Components

Participatory mapping is a general term to describe use of the Internet by multiple participants to collaborate in preparing spatial information of interest to them or a wider group. Sharing your current location or photo locations with friends, adding street locations to the OpenStreetMap project (www.openstreetmap.org), or adding opinions to a proposed urban development plan are all examples of participatory mapping.

TNTmips in combination with other common web site components, such as HTML, Google or Microsoft Map APIs, and OpenLayers can be used to build a participatory mapping site. The www.microimages.com/gallery/geocomment/index.htm site discussed here is an example of a specialized participatory mapping application. Such a site can be designed to solicit and manage public comments on specific locations on project or proposed plans presented in the form of one or more maps, images, graphics, or other source materials. It uses a simple geoviewer component familiar to public users of Google Maps. It illustrates how one or more plans can be graphically selected and comments on specific geographic points can be reviewed and further comments appended. In a typical application such a system might present only one layer or a series of related plans illustrating some proposed change in land use. Examples of the use of a simple participatory system to solicit local public review of proposed rail and road routes in Finland can be reviewed on the Technical Guide entitled *Web Applications: Plan Review Service*.

The sample web page cited above consists of three distinct sections: the heading, map area, and tabbed panels. The content of each of these components can vary with the individual needs of a particular plan.

Heading/Banner

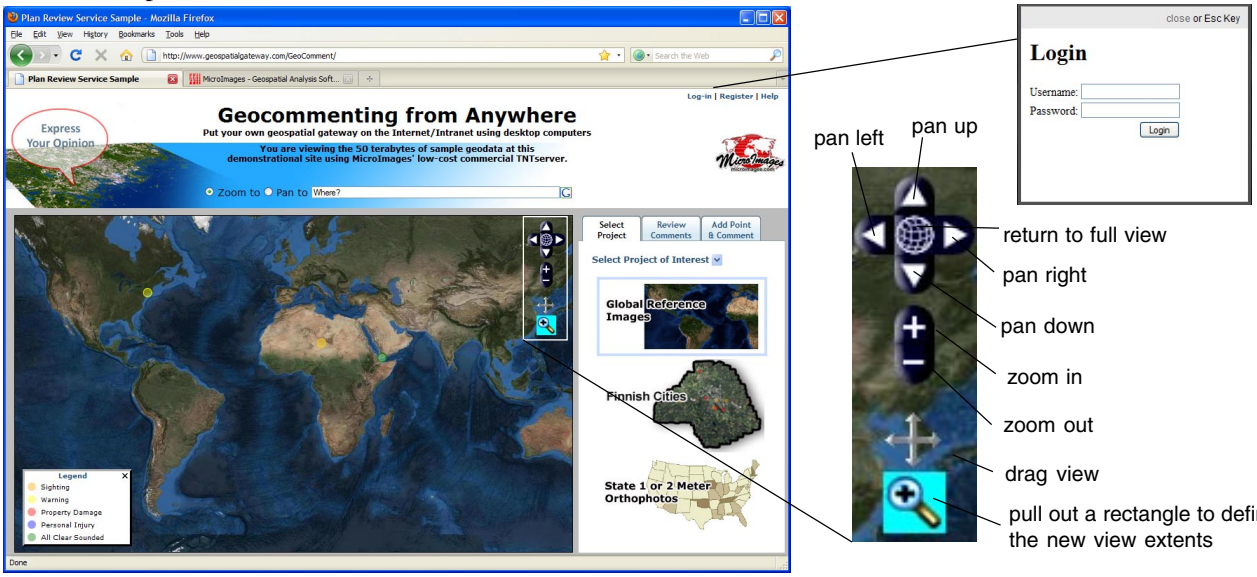
The heading for the web page that serves as the landing site for your Plan Review Service (PRS) can be a simple graphic or can incorporate additional scripted features. The Finnish rail and road route PRSs discussed on the Technical Guide entitled *Web Applications: Plan Review Service* use a simple graphic that includes a title and logo, as well as the buttons to register, log in, and access help. In addition to similar components in the heading, the MicroImages sample PRS includes some search capabilities for zooming or panning to specific geographic positions in addition to the zoom and pan tools based on those developed by OpenLayers. When you include this capability, the user can enter geographic names (cities, states, featue names, addresses, and so on) rather than using the mouse to define where to zoom in, and the map view will zoom to that location. This address search uses the Google Maps database and, thus, requires that the web site offering the search must have a registered Google Maps Key.

Plan Map View Panel

The imagery used for your PRS can come from a TNTserver or one or more Google Maps Tile Overlays. The plan view panel may also include one or more legends that provide information about the elements in the plan map. The legends can be reduced in size and by clicking on the X in the upper right of the legend and returned to its full size by clicking anywhere on the reduced size legend.

Tabbed Panels

Single Plan Design. The first tabbed panel can have various uses and names. Unlike the more complex sample site illustrated here, a typical PRS might open with a plan or geoview already loaded. This automatically loaded content for the PRS is selected using links from a list or graphic presented on the controlling HTML page. This approach is simpler because the user of the PRS does not have to make any selection of the plan from within the PRS. The first tabbed panel presented automatically with a particular plan can be titled *Instructions* and used for that purpose. This approach is demonstrated by two PRSs at http://tango-227.srv.hosting.fi in use in Finland to so-



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licit comments on proposed road and rail routes.

Multiple Plan Design. The Geocommenting from Anywhere sample site is only a demonstration site. It illustrates how the Select Project tabbed panel can be used in different ways to select between multiple plans. In this sample the PRS instead of an HTML page(s) provides access to multiple but discrete plans of the project and/or multiple projects. For example, this panel might show thumbnails and allow graphical selection of five different plan views of a project.

The Global Reference Images and Finnish Cities project components on this sample site are selected from thumbnail representations of the layers available for review and comment. The state 1- or 2-meter orthophotos graphic is used to illustrate access to a list of state layers available for viewing as base maps for a geocommenting application.

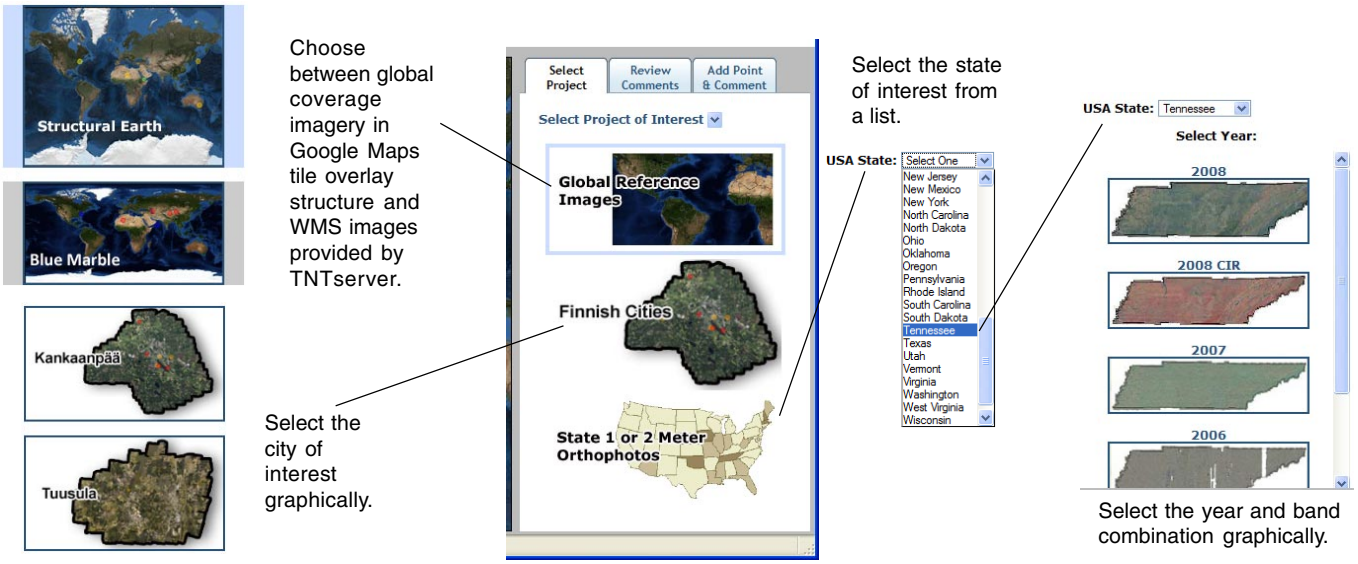
Review Comments. This panel is used to review comments on specific points plotted and logged by others. In a single component design, this panel automatically becomes the active tabbed panel (i.e., replaces the Instructions panel) when the user selects a visible point. All points may be shown initially and be available for selection or point selection may require that the user is zoomed in far enough at some location in the plan so that existing comment points are shown. The zoom level at which existing comment points become visible can be controlled by a scale parameter set for the plan layer. When these previously plotted points are shown, each can be selected and the comments about that point can be read from this panel. After reviewing the existing comments for a point placed by others, comments for the selected point can be added using the text input section at the bottom of this panel. These additional comments can be appended to the point by using the Send button below the input text area.

Add Point & Comment. When the user selects this tabbed panel, the plan view converts from selection mode (reading existing comments) to plotting mode, and a new point can be added together with the text for this new comment. Before adding a point, check that the correct category is highlighted or change the category to the one desired. This selection determines the symbol to be plotted that categorizes the new comment. The new point and comments can be added to the PRS using the Send button below the input text area.

Management

Registration. Comments on any symbollically represented point in the PRS can be viewed by any visitor by selecting it. Visitors who wish to add a new comment point or extend an existing comment can be required to register an email address and password. Registration will minimize inappropriate comments from the non-interested or disgruntled user. As part of the registration, additional anonymous profile information, such as the visitor's occupation, can be collected to assist in stratifying and evaluating comments collected by the PRS. The user's email address, profile, and comment content, location, and category are stored in a relational database (this sample site uses PostGIS).

Administration. The manager of the PRS can log in using an administrator name and password, which permits review of all the comments added to the PRS. This list can be organized in various manners. For example, it can show only comments added since a selected date, only those of a particular registered user, and other groupings. When logged in as administrator, the manager of the PRS can easily moderate it. For example, all comments added since the last review can be evaluated for obusive use of the PRS. Derogatory comments and/or comment points can be directly deleted using this list view.



The Structural Earth and Finnish cities images are examples of plan layers accessed directly from Google Maps Tile Overlays in Spherical Web Mercator projection. No special web services are used if these layers are selected.

The hundreds of statewide 1- or 2-meter orthophotos are each accessed via a TNTserver providing a Web Map Service. Each is a statewide mosaic in an appropriate UTM projection. Each individual state is being read from a TNT tileset using JPEG2000 compressed tiles of 2048 by 2048 cells.