Themes
in MarushkaDesign

CONTENTS

1 Aim of the Example

In this example we will demonstrate work with themes in MarushkaDesign. This example was created in version 4.0.1.0, so it does not have to be compatible with older versions.

2 Working with Example

- In the installation path of MarushkaDesign (by default c:\Program Files\Geovap\MarushkaDesign\4-0-1-0\service\themes\) delete all the files except *ThemesBlankTemplate.xml* and *Blank.xml.*
- Copy the files *Themes.xml*, *Themes_EN.xml* and *Themes_EN1.xml* into this folder.
- Unzip the **Themes_EN.zip** into **c:\MarushkaExamples** folder. The target folder must be respected due to interconnection of paths with the project. In the case of placing the files in the different folder, it would not be possible to work with the project.
- Open the **Themes_EN.xml** in MarushkaDesign environment.
- Select nodes of form layers railways in data store SQLite (WKB), in the context menu choose *Data – Load all*:
- In map window choose *Fit all*:

- Launch the local web server:

3 Dialog Box Sample

Fig 1: Example of dialogue box with started project *Themes_EN* and query *Redirect Budapest* (smaller window)

Fig 2: Example of dialogue box with started project *Themes_EN* and query *Redirect Győr* (smaller window)

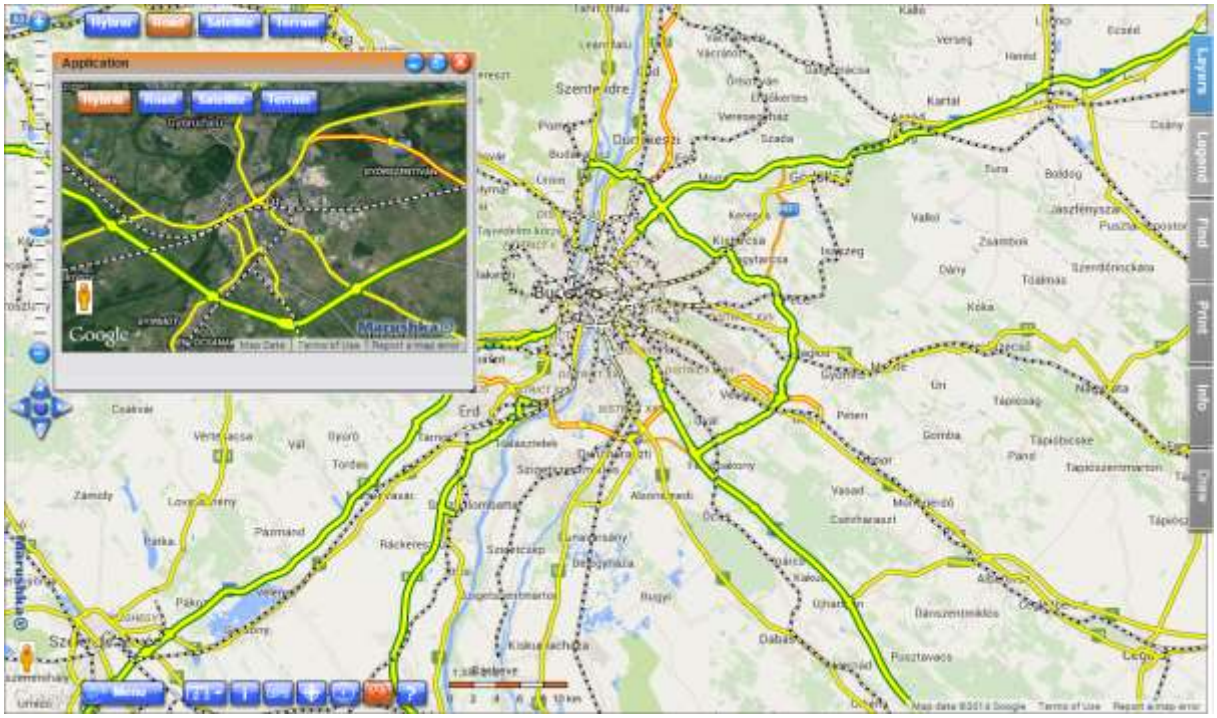
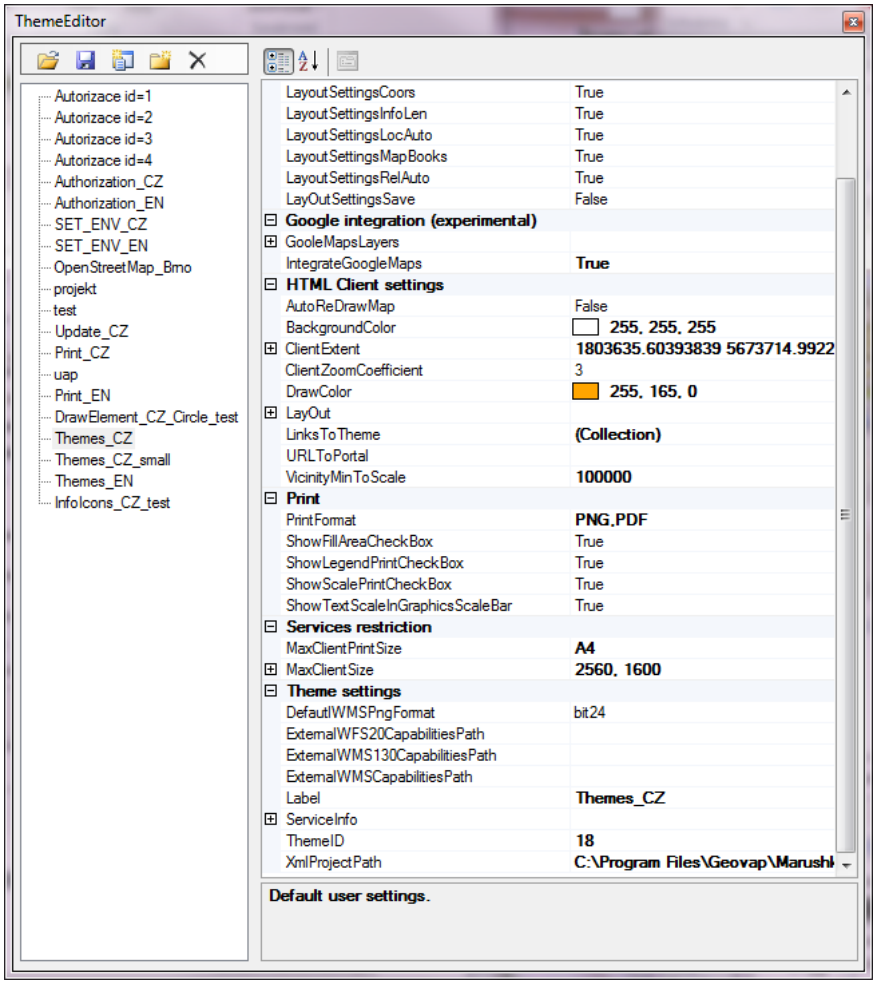


Fig 3: Example of Theme editor Dialog box



4 A Brief Description of the Example in Marushka Design

4.1 Theme

Theme is defined by the unique identifier ID, under which are saved individual settings of the given theme. Individual themes are displayed in the successive web publication. Each theme has its own settings of displayed publish layers, initial display area, settings of HTML client, print, and other settings. Within the whole web publication, there is always at least one theme, the maximum number is not set. One theme corresponds with exactly one configuration xml file of the given project. Above all the themes of the project is one configuration xml theme file, containing mainly paths to individual projects and their initial settings.

Additional information about themes is listed in the *Manual*.

4.2 Themes in New MarushkaDesign Installation

The new instance of MarushkaDesign does not include any project or a list of themes, it includes only file *ThemesBlankTemplate.xml*, which is an empty list of themes and file *Blank.xml*, which is an empty template of the project.

File *ThemesBlankTemplate.xml*, respectively subsequently created configuration theme file themes.xml contain a list of themes and for each of them especially definition of *Label*, *ThemeId*, *XmlProjectPath* (path to xml file of the given project), *LayOut* (important settings from the section settings of components of local web server LayOut), *ClientExtent* (setting of initial limiting rectangle in target units of target coordinate system) and *LinksToTheme* (list of available themes on which the user can switch during run of the local web server with the current theme).

File *Blank.xml*, respectively configuration xml files of individual themes include mainly definition of DataStores (here is defined the whole project including all its components, excluding projection and target units, *TargetUnits* and *TargetProjection*.

The new theme is automatically created after the first start of the local web server. After each other start of the local web server Marushka validates, if the ID and label of the started project corresponds with ID and label of the projects listed in list of themes (configuration xml themes file). If the ID and label do correspond, the theme is started. If not, the new theme is created with the name taken from an xml configuration file of the given project; this theme is automatically added to the list of themes and is assigned the next available ID in the order.

Themes are automatically numbered from 11, but using theme editor it is possible to set them also values 1 – 10. It is also necessary to resave control configuration theme xml file after any modification. Before leaving theme editor, it should be saved by the floppy disc icon into file themes.xml, which is usually located in the installation path of MarushkaDesign:
…/MarushkaDesign/version number in format x-x-x-x/service/themes/themes.xml.

Of course, it is possible to place this file into any other path, but it is also necessary to modify this path also in file *web.config*, otherwise it would not be possible to work with the project.

4.3 Theme editor

Theme editor is by default opened from *Menu – Tools – Theme editor*. Using the first icon in the left upper corner of theme editor dialog box is opened list of themes. The list of themes of the local webserver is by default located in path of MarushkaDesign installation:

`[current installation of Marushka Design]/service/themes/themes.xml.`

The configuration file can be of course located in any other location, the path to it can be found in the *Web.config* file, located in the service folder in the path of MarushkaDesign installation; it is an item *PathToThemeSettings*. Alternatively, a new configuration file can be created.

Theme editor is used to prepare web publication of the project/projects. The following paragraphs provide additional information to those which you can read about theme editor in *Manual*.

After clicking the right mouse button on individual theme item, a context menu will display. As the first is offered option *Set client extent from window*, after activation of this feature, the rectangle is defined directly in the map window. This value is then copied to the line *ClienExtent*, so it is not required to enter it manually. Function *Copy LayOut settings* and *Copy service settings* is used to copy the whole *LayOut* category, respectively whole *ServiceInfo* category and it accelerates work with themes.

The entire right side of the dialog box is reserved for particular items of setting of the given theme. Individual settings are divided into categories, each item has in the lower part of dialog box help, for closer specification of the given function.

A) Debug

This category contains only item *ShowInfoIconCover*, using which is possible to display clickable area of the transparent info icons created using pseudo column `SET_INFO_ICON_COVER`. If this feature is activated, the clickable area is shown in transparent red color; this functionality is applicable only for spatial distribution testing and to avoid possible overlap of individual clickable icons for area testing.

Instead of manually adjusting individual components by Theme editor it is possible to call parameters directly on URL address. This option is analyzed in more detail in tutorial *External call* on MarushkaDesign website.

B) Default User Client Settings

It is a category of user settings that can be changed in the web presentation of the theme in *Menu – Settings*. This only concerns the initialization settings that are also user-modifiable. In this category, it is possible to set on/off features: map animation in publication, show coordinates in vicinity map, show warning if there is too much info icons loaded, auto localization of first query result, map under main map window (if the value is *'False'*, the main map window of web publication is whole visible and e.g. dynamic legend or other components depending on map cutout of web publication are not distorted), refresh window on map resize, saving the user settings – the last position of map (uses cookies). The equivalent to this setting category is *Default user client settings* in theme editor, where it is possible to set the same parameters.

C) HTML Client Settings

The initialization settings that are modifiable only by the administrator of the project in the configuration xml file. Overview of features: *AutoRedrawMap* is an automatic map redraw on window change, *BackgroundColor* is a map window background color, *ClientExtent* is a start limiting rectangle in the target units of the target cartographic projection, *ClientZoomCoeficient* – number of times that zooms in/out map when zooming, *Layout* – is a very broad category that is described in detail in Manual, it enables inter alia, to turn on/off various user controls, auxiliary components, displaying vicinity map, headers, language mutations, etc. For parameter *LinksToThemes* it is possible to choose from a list of available themes the themes to which it is possible to switch during runtime of the given theme of the local web server. Using parameter *URLToPortal* is possible to set URL to a main portal in menu. Parameter *VicinityMinToScale* allows to set the minimum scale of the vicinity map. If the value is less than the minimum value *ToScale* of all layers labeled as vicinity, then the minimum value of all this form layers is used.

D) Print

In this category are listed individual items associated with print. You can read more about this category in tutorial *Print* on MarushkaDesign website.

E) Services Restrictions

This group of settings includes restrictions for print tasks. It is possible to define *MaxClientPrintSize*, the largest paper size that can be printed on and *MaxClientSize*, defining the maximum size of map client window in pixels. Attention! If the map window is too big, the large quantities of elements are being loaded and thus it occupies a large amount of memory. Therefore it is necessary to combine reasonably map window size with the desired number of displayed elements to achieve satisfactory display performance.

F) Theme Settings

- category of other theme settings

DefaultWMSPngFormat – using this parameter is set the default type of PNG images provided by the WMS service. It is possible to choose from three options:

- *bit8* – 8 bit color, supports color range of 256 colors (255 + 1 transparent), contains one color table, does not support semi-transparent colors, suitable for vector drawings, inappropriate for e.g. photographs, lossy compression

- *bit24* – 24 bit color, supports 16 million color scale (3 color tables, for each of RGB colors separate table), supports semi-transparent colors (image may be in different areas transparent differently), suitable for photographs, ortophoto, supports lossless compression

- *bit8Raw* – 8 bit color, supports color range of 256 colors (255 + 1 transparent), but also supports semi-transparent colors, it is a combination of previous two, this format has a smaller color scale than *bit24*, but it also supports semitransparency

ExternalWFS20CapabilitiesPath - absolute system path to an external WFS 2.0 capabilities file

ExternalWMS130CapabilitiesPath – absolute system path to an external WMS 1.3.0 capabilities file

ExternalWMSCapabilitiesPath – absolute system path to the external WMS capabilities file

These above mentioned externally stored files *ExternalCapabilities* and values contained within them can be adjusted in any XML editor and values of their parameters can be modified.

ServiceInfo – here it is possible to adjust some service information, mostly of informative character (especially contact and descriptive information). This information can be then obtained as a result of a request *GetCapabilities*.

Label – the name of the theme (is not or does not have to be unique)

ThemeId – ID of the theme (works as a unique theme identifier)

XmlProjectPath - physical path to the xml file of a specific project

4.4 Description of the Project

This project contains two form layer nodes, namely *railways* and *roads*. Node *railways* contain just two form layers, one for rendering of outline drawing (in project called *outline*), and the other for fill (in project called *inline*). These two form layers have identical symbology in all scales.

Folder *roads* contain three categories of form layers, the first category is displayed up to scale 1: 10 000, the second from scale 1: 10 001 to 1: 70 000 and the third is displayed from scale 1: 70 001. Each of the categories has a slightly different symbology for achieving better clarity of the whole project. Through this layer are displayed different types of roads in Hungary, namely motorways, trunks, first class roads, second class roads and third class roads.

To individual form layers was also created a legend that is displayed to the currently rendered layers in the map publication.

In the project are two queries type Redirect.

The first query is called ***Redirect Budapest***, this query invokes a dialogue box *InPopUpBubble* with the same theme (ThemeId=11). Using addition of parameters is called underlying *Google map ~ Sattelite*, along with publish layers *railways* and *roads*. In addition, the other *Extent* (limiting rectangle) is sent, which targets the map window to city Budapest and its surroundings. Furthermore, by sending external parameters, the most of control items is disabled. These control items would be redundant due to small window size. The query definition, including currently sent parameters can be viewed in the query properties in category *2. Query properties*, item *SqlStmtTemplate.* More about the external call parameters, you can learn in tutorial *External call parameters* on MarushkaDesign website. The query is executed by clicking the white smiley face button at the bottom of the map window. It is possible, because the query has set in category *5. Application* item *IsApplication* to "*True*" and in the same category it has set the mentioned *ApplicationButton*, which is the button that triggers a given application.

The second query is called ***Redirect Győr***, this query invokes the new window with the same project, which is started as a new theme (ThemeID=12). For this query, it is necessary to set in category *RedirectSettings* parameter *RedirectInternalParameters* to value *'False'*, otherwise the query would not return correct extent. In this project is set different underlying map *Google map ~ Hybrid*, project has set different *Extent*, it is targeted on city Győr and its surroundings. In theme editor, this project has disabled all the components from category *LayOut*, except *LayOutWheel*, which enables zooming by a mouse wheel. The query window is started by the red smiley face icon, which is situated next to white smiley face icon. The started project, unlike project with ThemeId=11 does not include any externally sent parameters.