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Topobase™

Archive – Technical Training

Autodesk Topobase Administrator



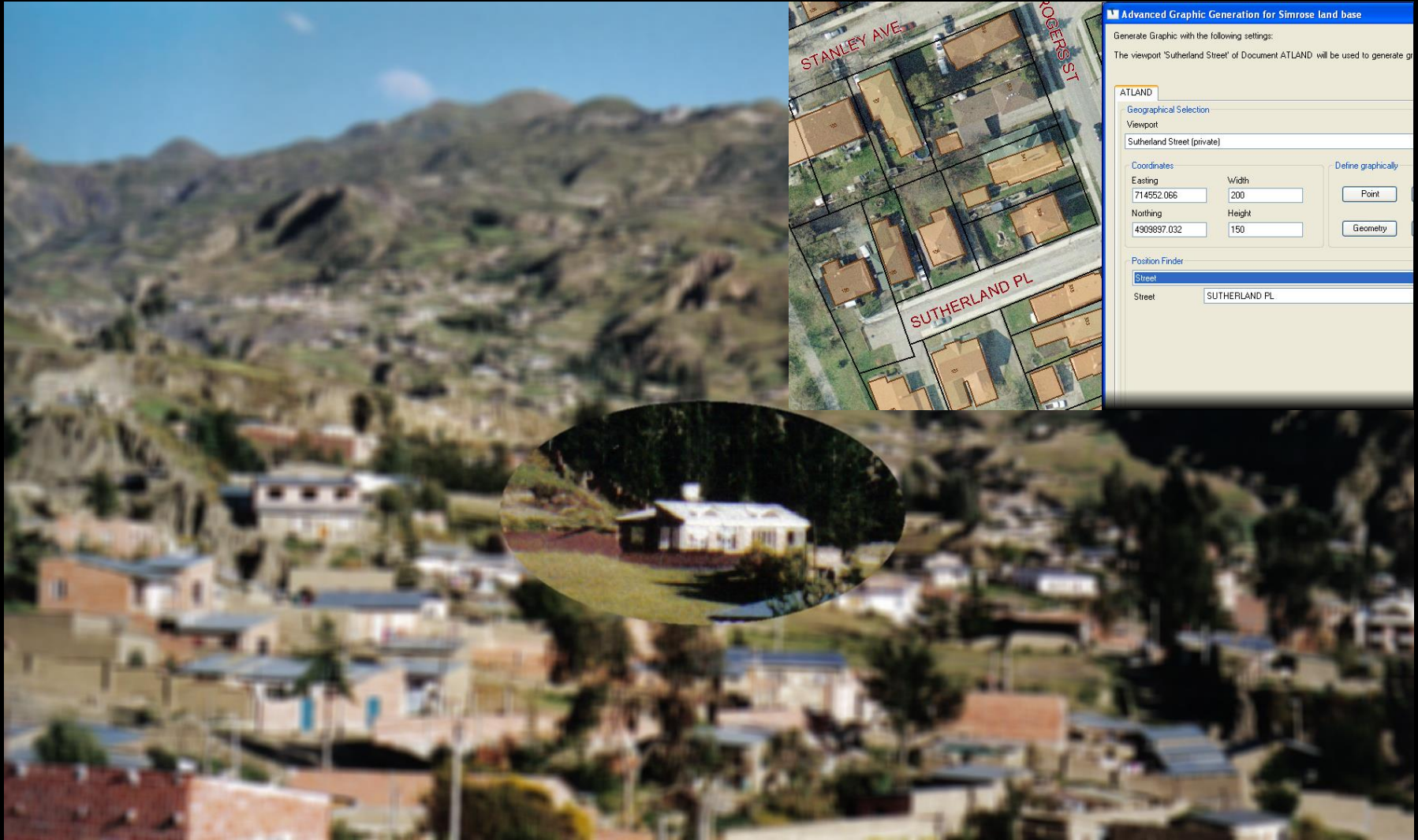
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Advanced Graphic Generation for Simrose land base

Generate Graphic with the following settings:

The viewport 'Sutherland Street' of Document ATLAND will be used to generate g

ATLAND

Geographical Selection

Viewport

Sutherland Street (private)

Coordinates

Easting

714552.066

Width

200

Northing

4909897.032

Height

150

Define graphically

Point

Geometry

Position Finder

Street

SUTHERLAND PL

Chapter Overview

- The document explorer in Topobase Client is an easy way to access tables in the database. This chapter covers the customization of the explorer to show new node items.
- The advanced graphic generation allows the user to zoom in on a specific area based on specific. This chapter covers how to customize the search when generating graphics.

Explorer Configuration and Position Finder

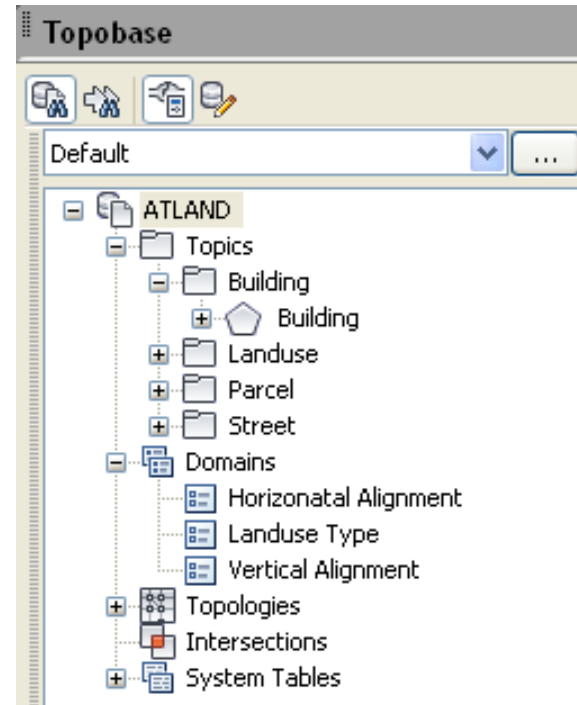
Chapter Objectives

- At the end of this chapter, you will be able to:
 - Extend and configure the Topobase Explorer
 - Understand how to build node items in the explorer
 - Create position finder definitions for the advanced graphic generation in Topobase Client
 - Create different types of position finders
 - Understand the difference between input types in a sequential search

Explorer Configuration

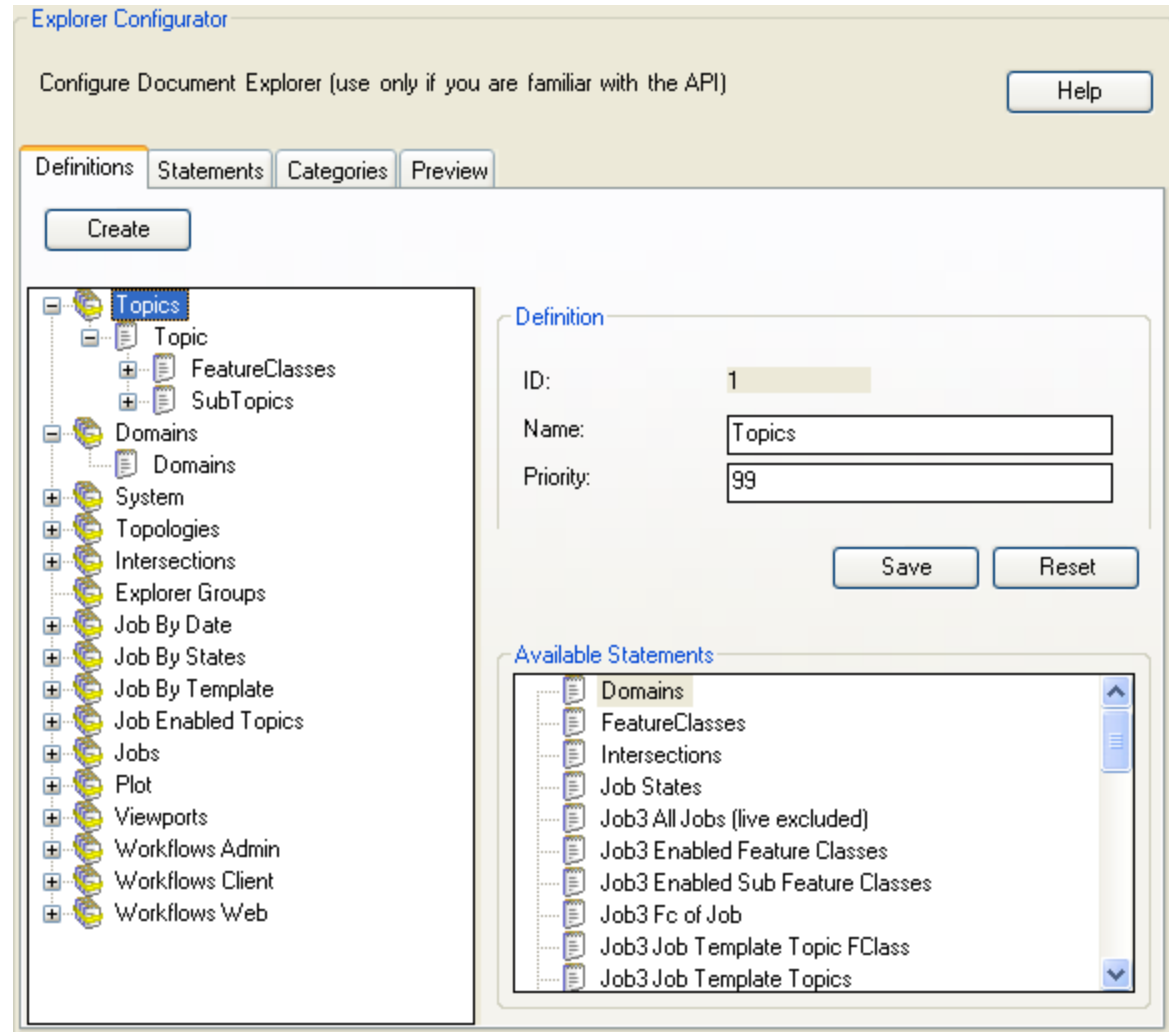
11.2 Explorer Configuration

- The Topobase Explorer or Document Explorer displayed in the Client shows the list of topics, feature classes, domains, topologies, intersections, system tables and others.
- The Topobase Administrator allows the extension of the document explorer.



11.2.1 Accessing the Explorer Configuration

- Launch Autodesk Topobase Administrator 2009 and open the **Simrose land base** workspace.
- Select **Document – ATLAND > Explorer Configurator**.

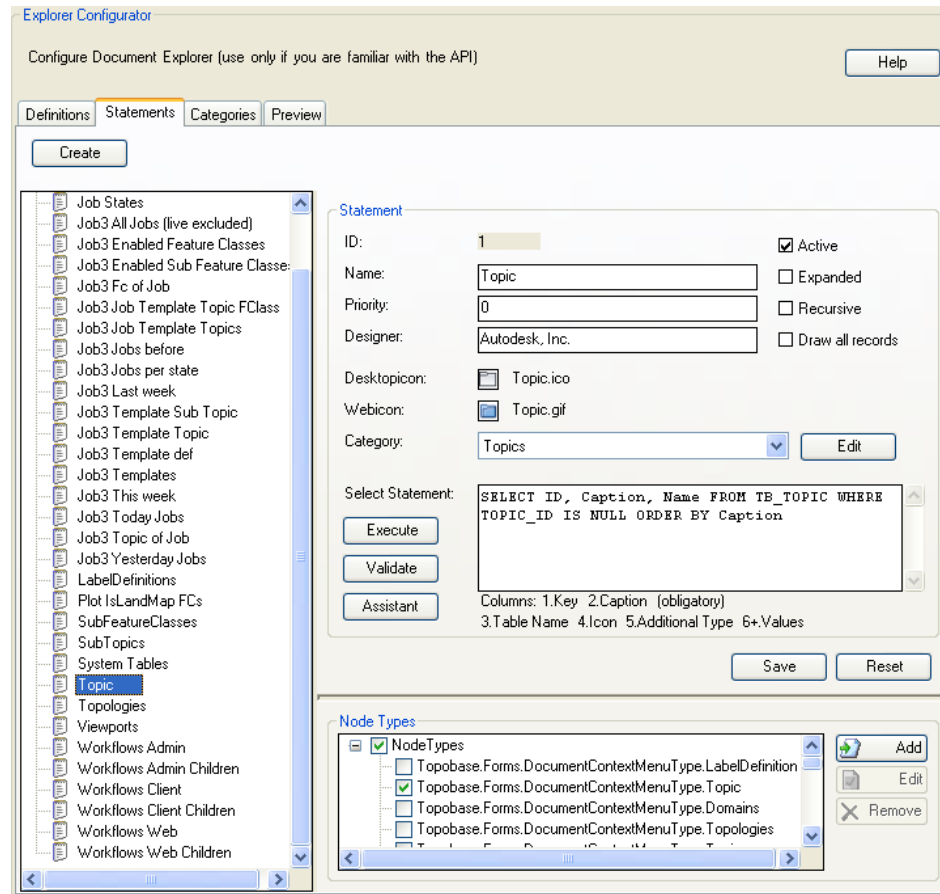


11.2.2 Definitions

- The definitions are the items that can be assigned to the document explorer.
- They can contain one or more statements. These are the SELECT statements.

11.2.3 Statements

- The document explorer is built of SELECT statements.
- The Statement tab shows the list of statements.

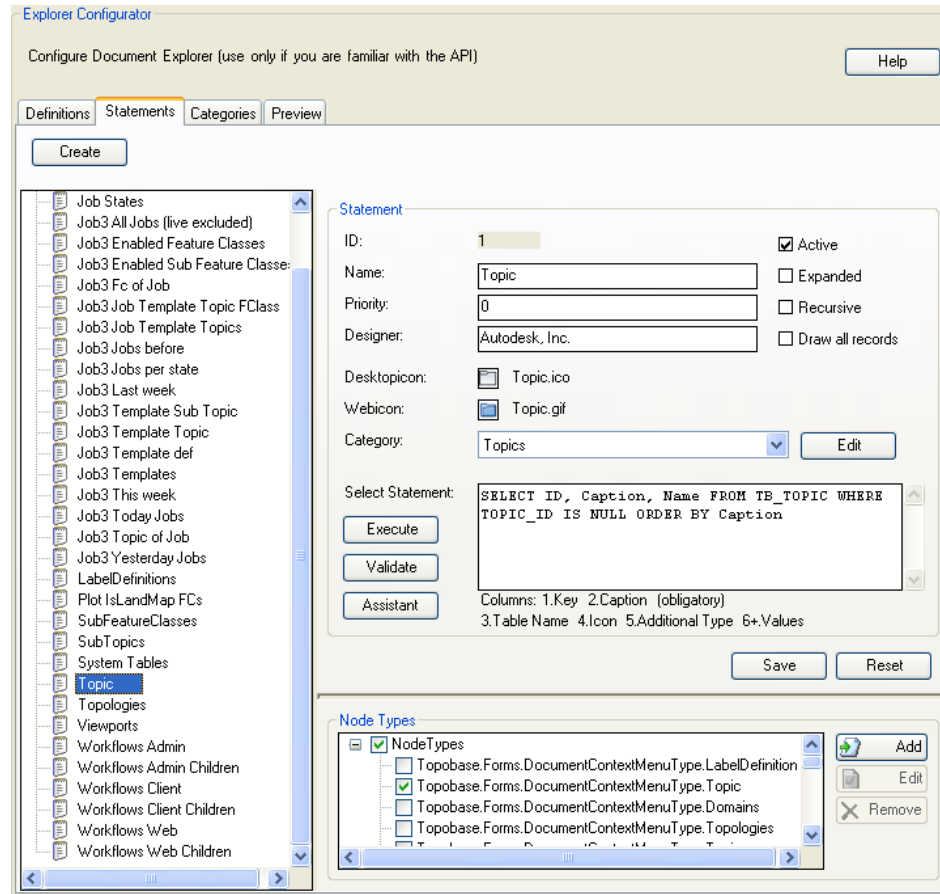


Do not alter the existing statements or definitions; the misuse of this may affect the proper functioning of the application.

11.2.3 Statements +

Main properties:

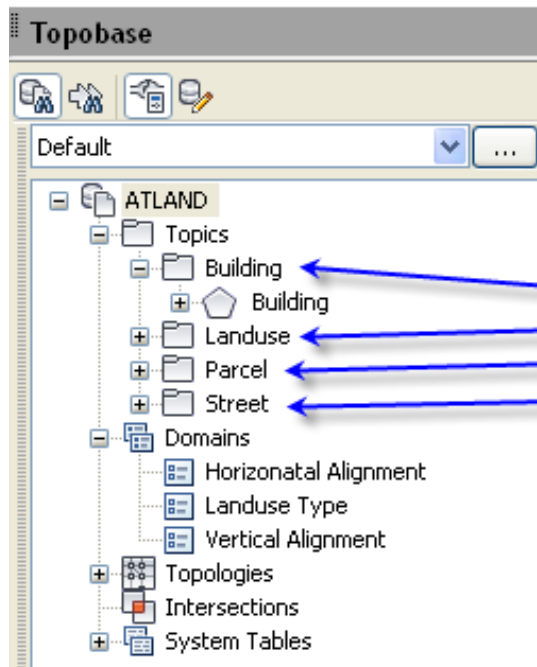
- **Name**
- **Desktopicon**
- **Webicon**
- **Category**
- **Select Statement**
- **Node Types**



11.2.3 Statements +++

Main properties:

- **Select Statement**



```
SQL> SELECT ID, Caption, Name
2 FROM TB_TOPIC
3 WHERE TOPIC_ID IS NULL
4 ORDER BY Caption;
```

ID	CAPTION	NAME
1	Building	BUILDING
4	Landuse	LANDUSE
2	Parcel	PARCEL
3	Street	STREET

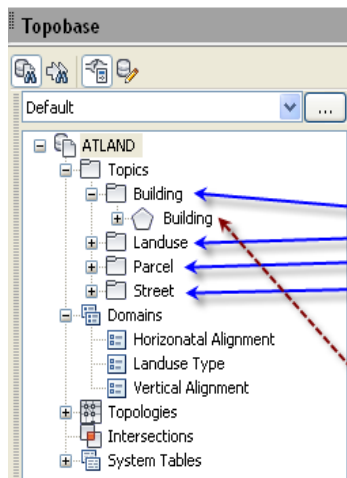
11.2.3 Statements ++

Main properties:

- **Parameters in Select Statement**

```
SELECT F_CLASS_ID, Caption, F_CLASS_NAME,  
       DECODE ( F_CLASS_TYPE, 'O', 'Polygon.ico',  
               ...) as Type
```

```
FROM TB_DICTIONARY  
WHERE PARENT_F_CLASS_ID IS NULL  
      AND TOPIC_ID={0}  
ORDER BY Caption
```



Topic statement

ID	CAPTION	NAME
1	Building	BUILDING
4	Landuse	LANDUSE
2	Parcel	PARCEL
3	Street	STREET

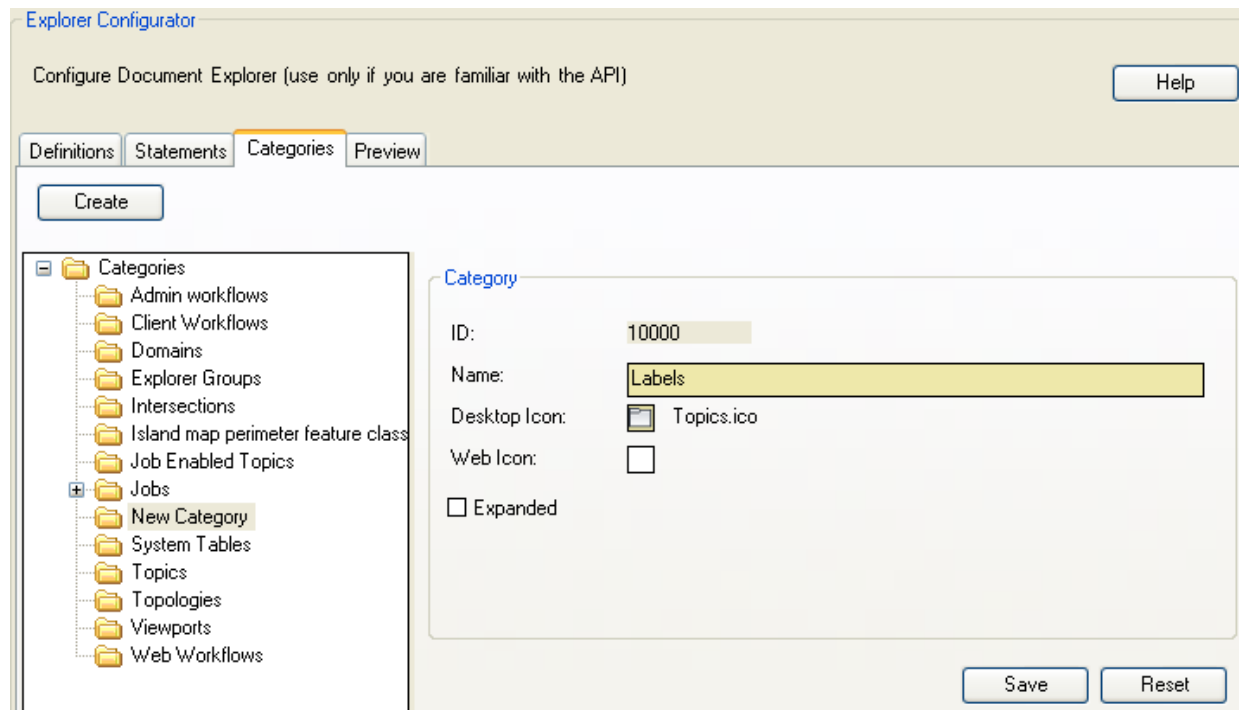
FeatureClasses statement

F_CLASS_ID	CAPTION	F_CLASS_NAME	ICON	TYPE
1	Building	LM_BUILDING	Polygon.ico	Topobase.Data.FeatureClassType.Polygon

11.2.4 Example Extending the Explorer

Create Category

- In the Data Model Administrator, select the **Explorer Configurator**.
- Select the **Categories** tab.
- Click **Create**.



11.2.4 Example Extending the Explorer +

Create Statement

- Select the **Statements** tab.
- Click **Create** and create a new statement.

Statement

ID: 10001 ☒ Active

Name: ListLabels ☐ Expanded

Priority: 0 ☐ Recursive

Designer: TOPOBASE ☐ Draw all records

Desktopicon: ☐

Webicon: ☐

Category: Labels

Select Statement:

```
SELECT F_CLASS_ID, Caption, F_CLASS_NAME,  
       'Label.ico' as Icon,  
       'Topobase.Data.FeatureClassType.Label' as Type  
FROM TB_DICTIONARY  
WHERE F_CLASS_TYPE = 'A'  
ORDER BY Caption
```

Columns: 1.Key 2.Caption (obligatory)
3.Table Name 4.Icon 5.Additional Type 6+.Values

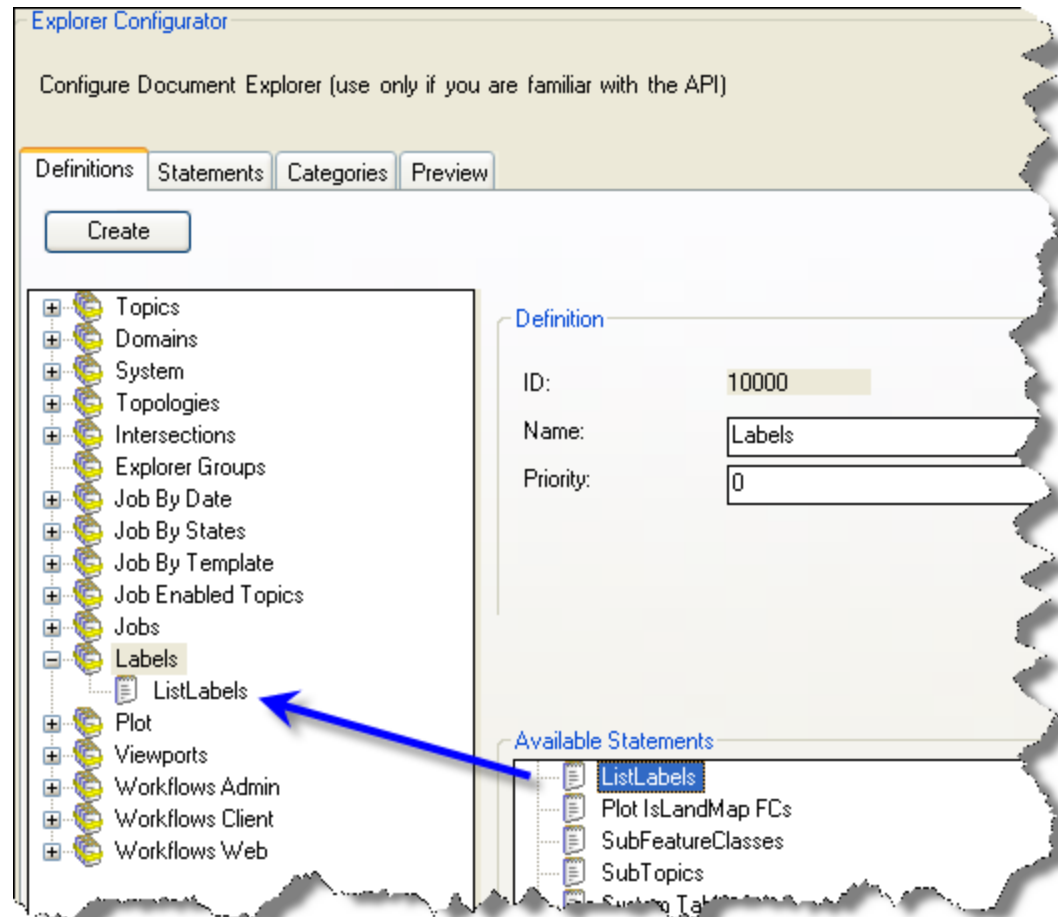
Node Types

- ☐ Topobase.Forms.DocumentContextMenuType.Document
- ☒ Topobase.Forms.DocumentContextMenuType.Topology
- ☒ Topobase.Data.Table
- ☒ Topobase.Forms.DocumentContextMenuType.AllFeatureTypes
- ☐ Topobase.Forms.DocumentContextMenuItemType.Domain
- ☐ Topobase.Data.Sys.Viewport
- ☐ Topobase.Data.Sys.Viewports
- ☐ Topobase.Data.Explorer.TreeGroup
- ☐ Topobase.Data.Explorer.TreeGroups
- ☐ Topobase.Data.IntersectionType.PolygonPoint

11.2.4 Example Extending the Explorer ++

Create Definition

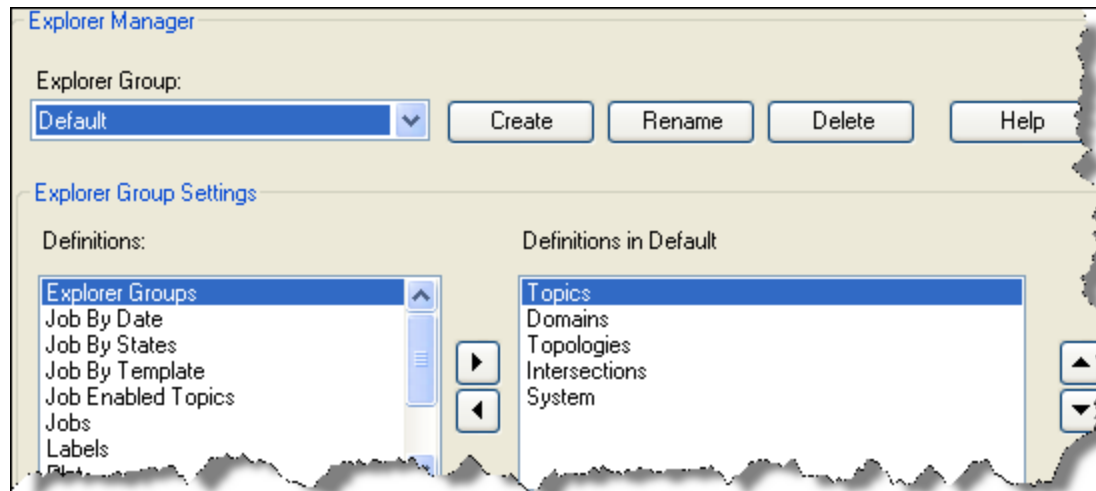
- Select the **Definitions** tab.
- Click **Create**, and create a new definition.



11.2.5 Explorer Groups

Assigning definitions to explorer groups

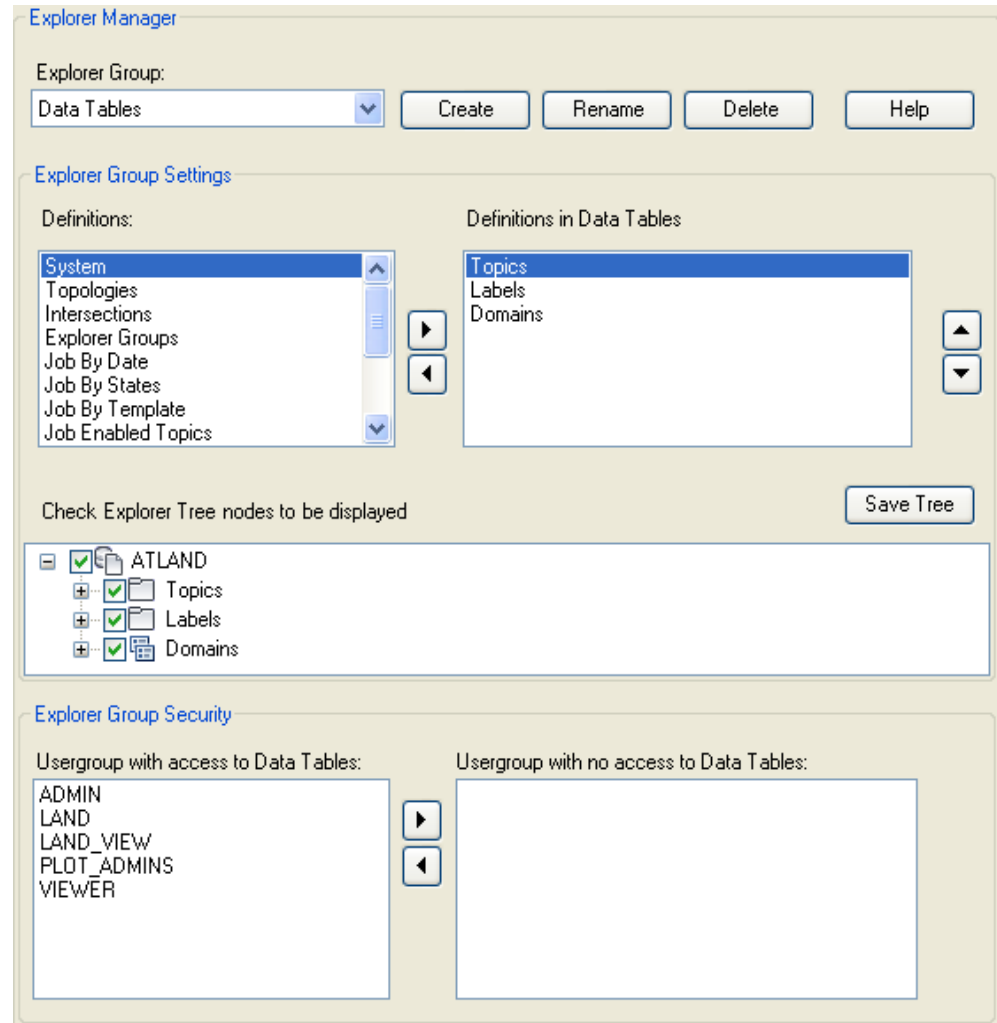
- Use the left and right arrow buttons to add/remove definitions
- Use the up and down arrow buttons to order the definitions



11.2.5 Explorer Groups +

Creating explorer groups

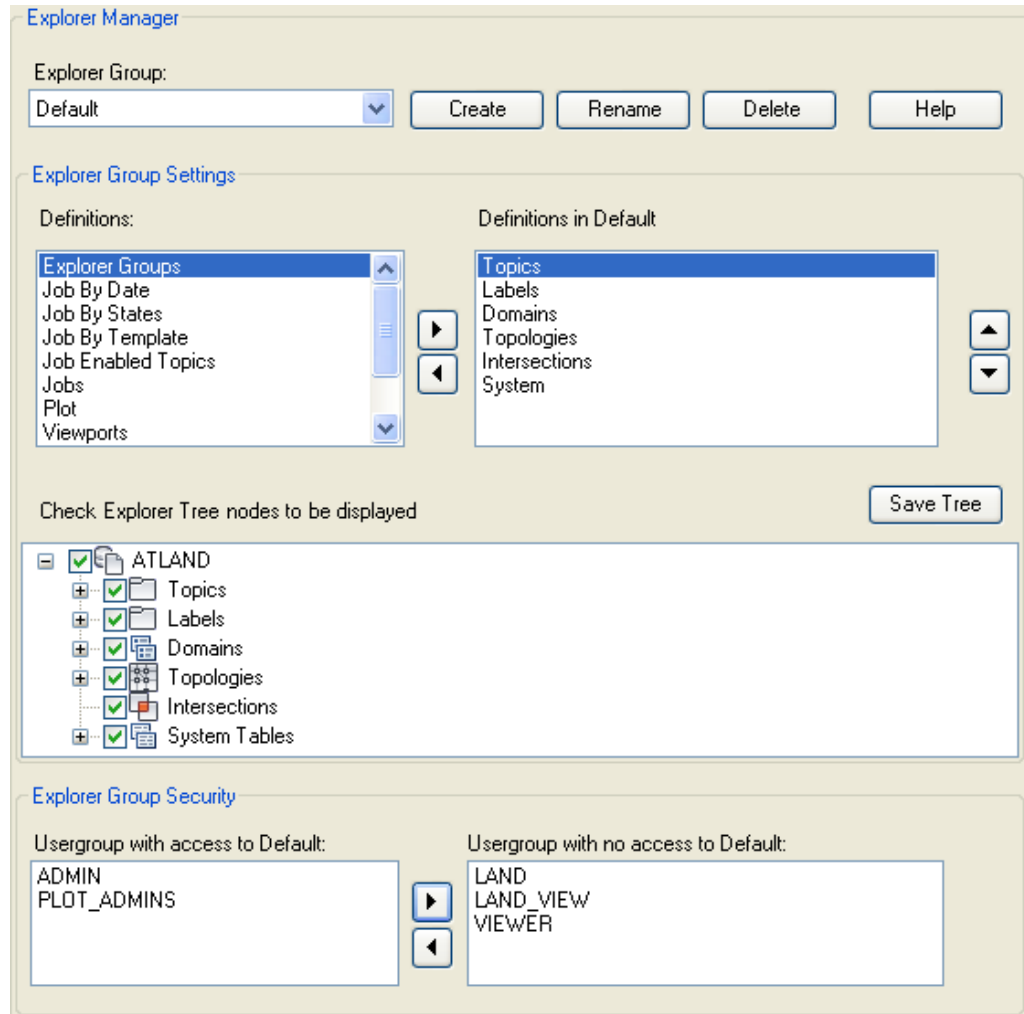
- The main use of the explorer groups is the ability to show and hide node items from the document explorer for different users.



11.2.5 Explorer Groups ++

Assigning user groups

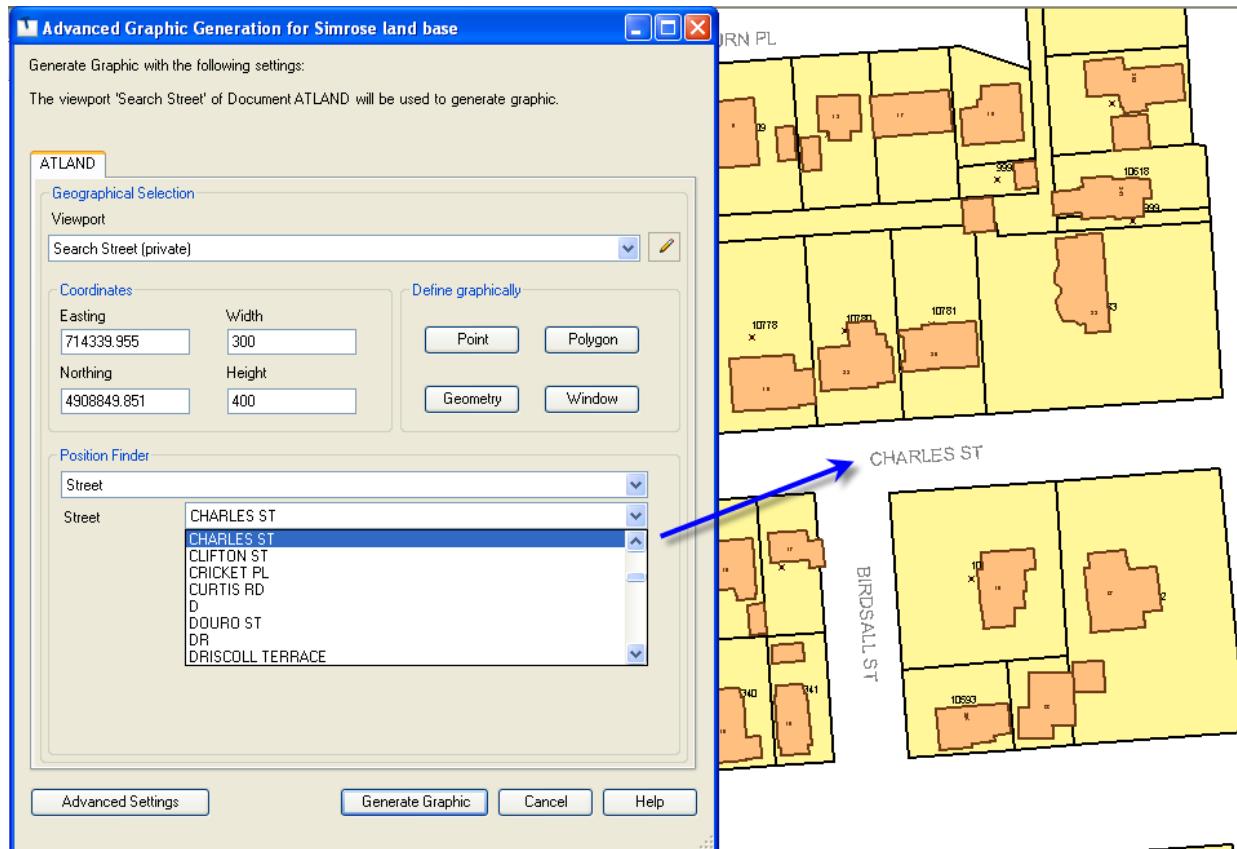
- The use of Explorer groups is not a method to restrict or grant access to feature classes.
- Items are just not visible in the Document Explorer.



Position Finder

11.3 Position Finder

- The Position Finder in Topobase allows the creation of viewports based on the selection of specific features when you generate graphics.



11.3.1 Position Finder Administrator

- Launch Autodesk Topobase Administrator 2009 and open the **Simrose land base** workspace.
- Select **Document – ATLAND > Position Finder**.

The screenshot shows the 'Position Finder Administrator' window. At the top, the title bar reads 'Position Finder Administrator'. Below it, the 'Definition:' section has a dropdown menu set to 'Street', with 'Create', 'Rename', 'Delete', and 'Help' buttons to its right. The 'Type:' field is set to 'Sequential search' and the 'Priority:' field is set to '0'. Below these are four tabs: 'Statement 1', 'Statement 2', 'Statement 3', and 'Statement 4'. The 'Statement 1' tab is active. Inside this tab, the 'Title:' field contains 'Street'. The 'Input type:' dropdown is set to 'Selection list'. The 'Select statement:' text area contains the SQL query: `SELECT DISTINCT label_text FROM LM_STREET_TBL WHERE geom IS NOT NULL ORDER BY label_text`. Below this text area are 'Execute', 'Validate', and 'Assistant' buttons. The 'Geometry select statement:' text area contains the SQL query: `SELECT geom FROM LM_STREET_TBL WHERE label_text LIKE '{0}'`. At the bottom right of this section are 'Validate' and 'Assistant' buttons.

11.3.2 Types

Sequential search

- This type of search is built by consecutive SELECT statements; the search is refined until you get the desired result.

Flat search

- In this case you get a list of attributes that you can fill in; the search is executed applying the filter in each attribute

PlugIn search

- In this case, the coordinates for the position finder come from the memory.

11.3.3 Sequential Search—Statements

Properties

```
SELECT f_class_name, caption  
FROM TB_DICTIONARY  
WHERE f_class_type <> 'T'  
ORDER BY f_class_name
```

The screenshot shows the 'Position Finder' dialog box with the following configuration:

- Statement 1** is selected in the tab bar.
- Title:** FeatureClass
- Input type:** Selection list
- Select statement:** SELECT f_class_name, caption FROM TB_DICTIONARY WHERE f_class_type <> 'T' ORDER BY f_class_name
- Feature over Attribute:** FeatureClass
- Choose...** button is highlighted, showing a list of feature classes: Building, Building Label, Landuse, Landuse Label, Parcel Centroid, Parcel Centroid Label, and Parcel Line.

Blue arrows indicate the flow of data from the 'Select statement' field to the 'Feature over Attribute' field and the 'Choose...' button.

11.3.3 Sequential Search—Statements +

Parameters

```
SELECT column_name
FROM COLS
WHERE table_name = '{0}'
AND column_name NOT IN
(SELECT column_name
FROM USER_SDO_GEOM_METADATA
WHERE table_name = '{0}' OR table_name = '{0}_HOST')
```

The screenshot shows a software interface with a tabbed window containing four tabs: Statement 1, Statement 2, Statement 3, and Statement 4. Statement 2 is selected. The main area displays a SQL statement with a blue dashed arrow pointing from the '{0}' placeholder to a 'Position Finder' dialog box. The dialog box has a 'Feature over Attribute' dropdown set to 'Building'. Below it, the 'Attribute' dropdown is open, showing a list of attributes: 'Choose...', 'FID', 'AREA', and 'BUILDING_NUMBER'. A solid blue arrow points from the 'Attribute' dropdown in the dialog to the 'Attribute' field in the main window. The 'Geometry select statement' field is empty.

Statement 1 Statement 2 Statement 3 Statement 4

Title:
Attribute

Input type:
Selection list

Select statement:
SELECT column_name FROM COLS WHERE table_name = '{0}' AND column_name NOT IN (SELECT column_name FROM USER_SDO_GEOM_METADATA WHERE table_name = '{0}' OR table_name = '{0}_HOST')

Geometry select statement:

Position Finder

Feature over Attribute: Building

Attribute: Choose... FID AREA BUILDING_NUMBER

11.3.3 Sequential Search—Statements ++

Parameters

```
SELECT DISTINCT {1}  
FROM {0}
```

Statement 1 Statement 2 Statement 3 Statement 4

Title:
Value

Input type:
Selection list

Select statement:
SELECT DISTINCT {1} FROM {0}

Geometry select statement:

Position Finder

Feature over Attribute

FeatureClass Building

Attribute BUILDING_NUMBER

Value

Choose...
Choose...
127
357
343
434
290
298
...

11.3.3 Sequential Search—Statements +++

Parameters

```
SELECT fid  
FROM {0}  
WHERE {1} = '{2}'
```

The screenshot shows a software interface with a tabbed window containing four tabs: Statement 1, Statement 2, Statement 3, and Statement 4. The active tab is Statement 4. Below the tabs, there are several input fields and a dialog box.

The main form has the following fields:

- Title: Feature
- Input type: Selection list
- Select statement: SELECT fid FROM {0} WHERE {1} = '{2}' ORDER BY fid
- Geometry select statement: SELECT geom FROM {0} WHERE fid = {3}

A blue dashed arrow points from the {0} placeholder in the 'Select statement' field to the 'Feature over Attribute' dropdown in the 'Position Finder' dialog. A solid blue arrow points from the {1} placeholder in the 'Select statement' field to the 'FeatureClass' dropdown in the 'Position Finder' dialog. Another solid blue arrow points from the {2} placeholder in the 'Select statement' field to the 'Attribute' dropdown in the 'Position Finder' dialog. A fourth solid blue arrow points from the {3} placeholder in the 'Geometry select statement' field to the 'Value' dropdown in the 'Position Finder' dialog.

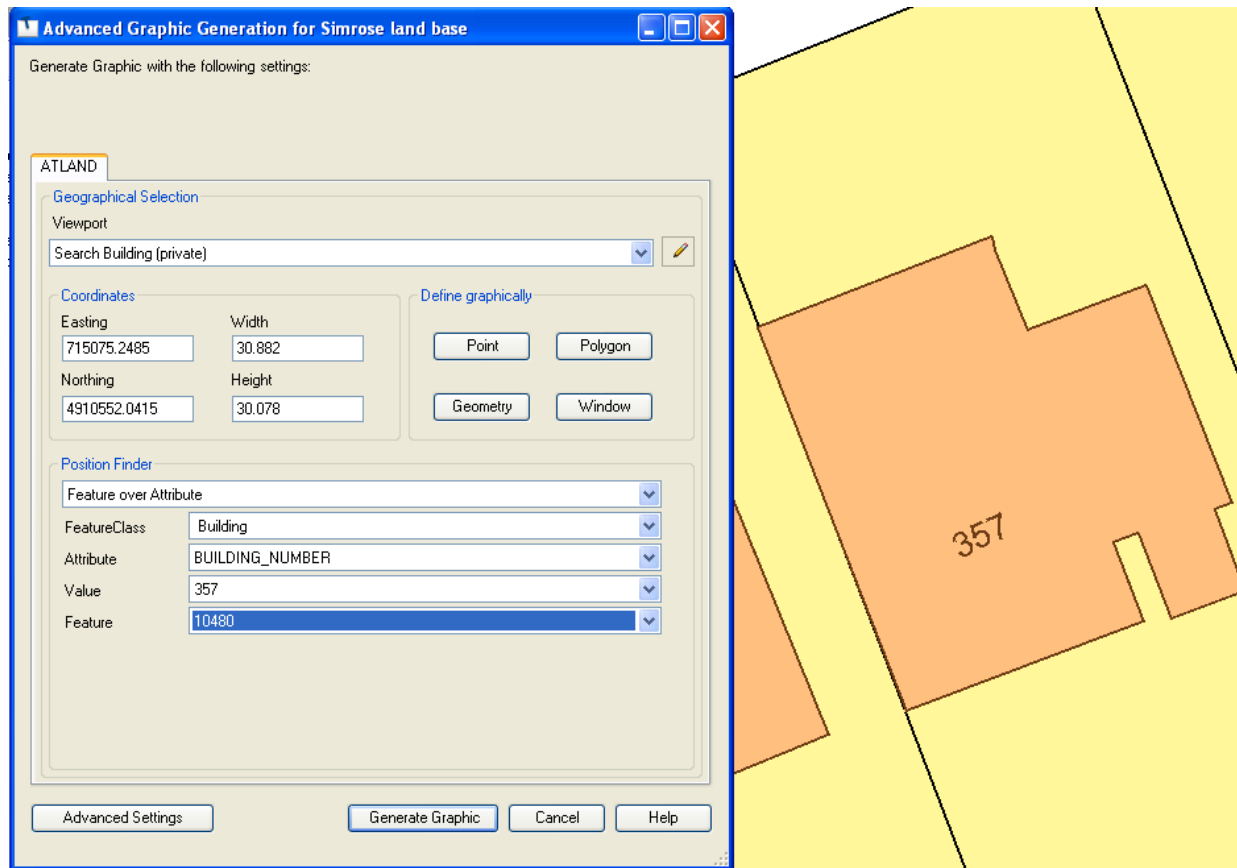
The 'Position Finder' dialog has the following fields:

- Feature over Attribute: Feature over Attribute
- FeatureClass: Building
- Attribute: BUILDING_NUMBER
- Value: 357
- Feature: Choose...

The 'Feature' dropdown is currently open, showing a list of values: Choose..., 10480, 10537, and 11995.

11.3.3 Sequential Search—Statements +++++

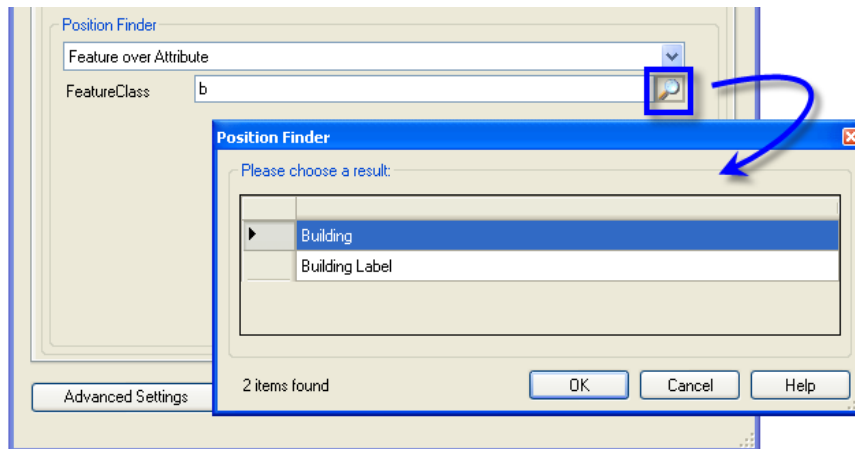
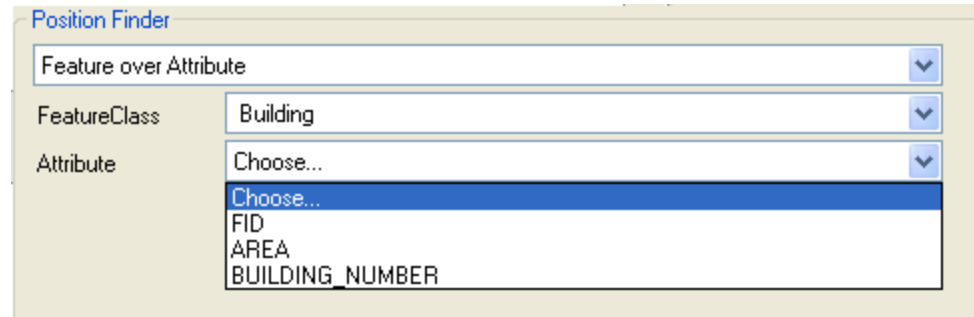
Retrieving Coordinates in Position Finder



11.3.3 Sequential Search—Statements +++++

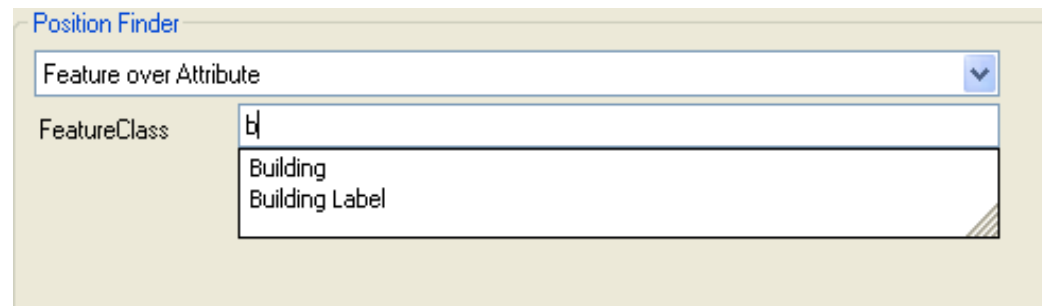
Input types

- Selection list



- Text box

- Text box
with auto complete



11.3.4 Flat Search +

- The Flat Search is useful when you want to get the result filtering by several attributes
- In the Position Finder Administrator, click **Create** and create a new Definition.
- Select Type **Flat Search**.
- Enter the basic settings and attributes.

Position Finder Administrator

Definition: Search Hydrant

Type: Flat search Priority: 0

Settings

Basic

Table name: WA_V_HYDRANT

Key attribute: FID

Geometry attribute: GEOM

Sort attribute: COLOR_RATE, STATUS, NAME_N

Search attributes

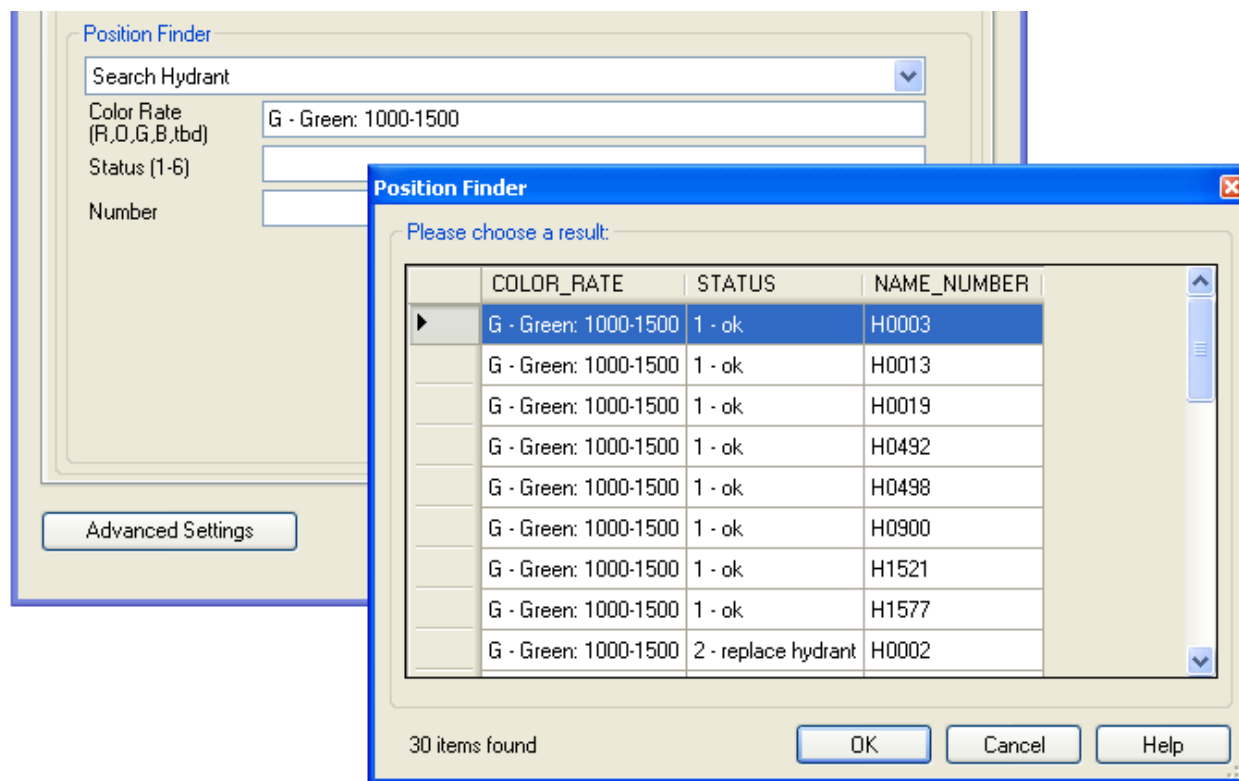
Attribute	Description
Attribute 1: COLOR_RATE <input type="button" value="..."/>	Color Rate (R,O,G,B,tbd)
Attribute 2: STATUS <input type="button" value="..."/>	Status (1-6)
Attribute 3: NAME_NUMBER <input type="button" value="..."/>	Number
Attribute 4: <input type="button" value="..."/>	<input type="text"/>
Attribute 5: <input type="button" value="..."/>	<input type="text"/>

Additional where clause:

Preview select statement:

```
SELECT FID,COLOR_RATE,STATUS,NAME_NUMBER FROM WA_V_HYDRANT WHERE UPPER(COLOR_RATE) LIKE UPPER('0') AND UPPER(STATUS) LIKE UPPER('1') AND UPPER(NAME_NUMBER) LIKE UPPER('2') ORDER BY COLOR_RATE, STATUS, NAME_NUMBER
```

11.3.4 Flat Search ++



11.5 Chapter Summary

- You should now be able to:
 - Extend and configure the Topobase Explorer
 - Understand how to build node items in the explorer
 - Create position finder definitions for the advanced graphic generation in Topobase Client
 - Create different types of position finders
 - Understand the difference between input types in a sequential search

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