



Autodesk®
Topobase™

Archive – Technical Training

Autodesk Topobase Administrator



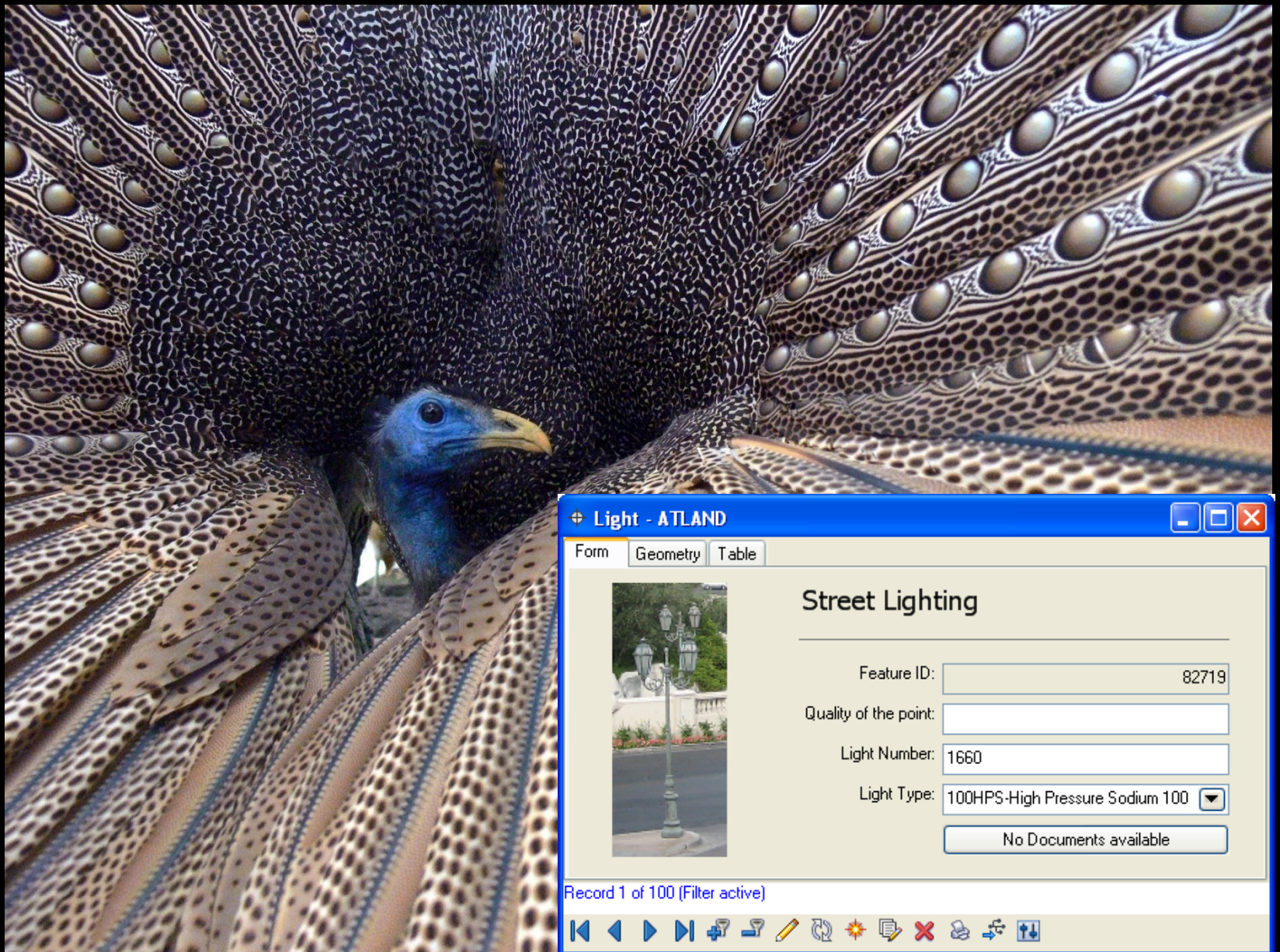
Autodesk®

Disclaimers

This course was created for Autodesk Topobase 2009. The contents of this course are not intended for other versions of Autodesk Topobase.

We may make statements regarding planned or future development efforts for our existing or new products and services. These statements are not intended to be a promise or guarantee of future delivery of products, services or features but merely reflect our current plans, which may change. Purchasing decisions should not be made based upon reliance on these statements.

The Company assumes no obligation to update these forward-looking statements to reflect events that occur or circumstances that exist or change after the date on which they were made.



Autodesk®

Chapter Overview

- This chapter shows you how to customize the appearance and functionality of Autodesk Topobase 2009.
- You can modify the forms which are the primary means for users to interact with data in the application.
- Understanding how to customize enables you to:
 - better enforce organizational standards and
 - organize your data in a way that best suits your needs.

Forms Designer

Chapter Objectives

By the end of this chapter, you will be able to:

- Explain how standards are enforced by means of customization
- Change the “look and feel” of a form
- Change properties of controls
- Add tabs for better clarity
- Modify the listed items of a combo box
- Create a Master-Detail form
- Show coordinates in a form
- Add spatial queries to forms
- Change the forms toolbar for a group of users
- Verify that changes in forms are made only once in Topobase Administrator, and that the changes are reflected in both Topobase Client and Topobase Web

6.2 Customizing Feature Class Forms

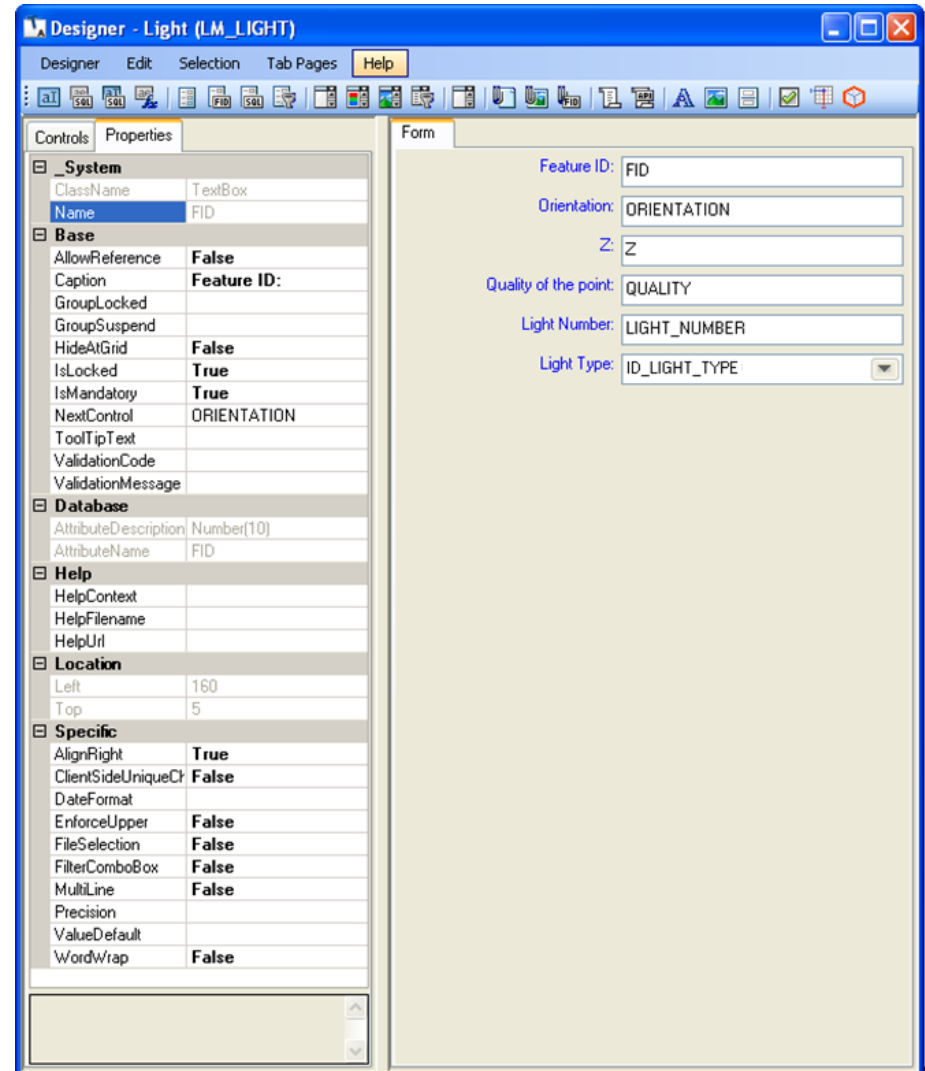
- **Using the Topobase Form Designer**
 - Use the form designer to show or hide text boxes, or create controls, check boxes, radio buttons, or combo boxes.
 - You must have Administrator login rights.
- 1. Launch Topobase Administrator, and open a workspace.
- 2. From the Document folder, select **Form Designer**.
- 3. Click the feature class, and then click **Designer**.

6.2.1 Using the Topobase Form Designer

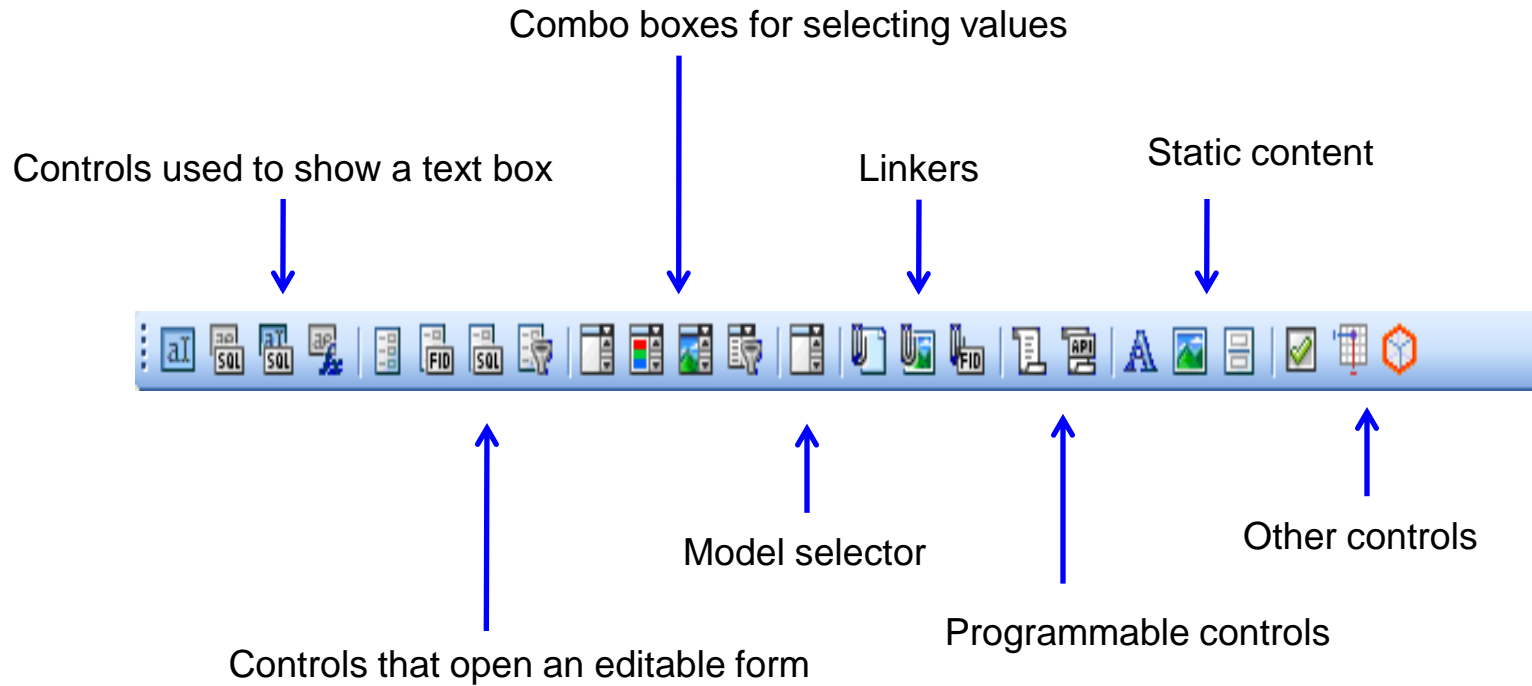
Right pane = Existing controls

Left pane = Modifiable properties

Use the Controls tab to define what appears in the form.

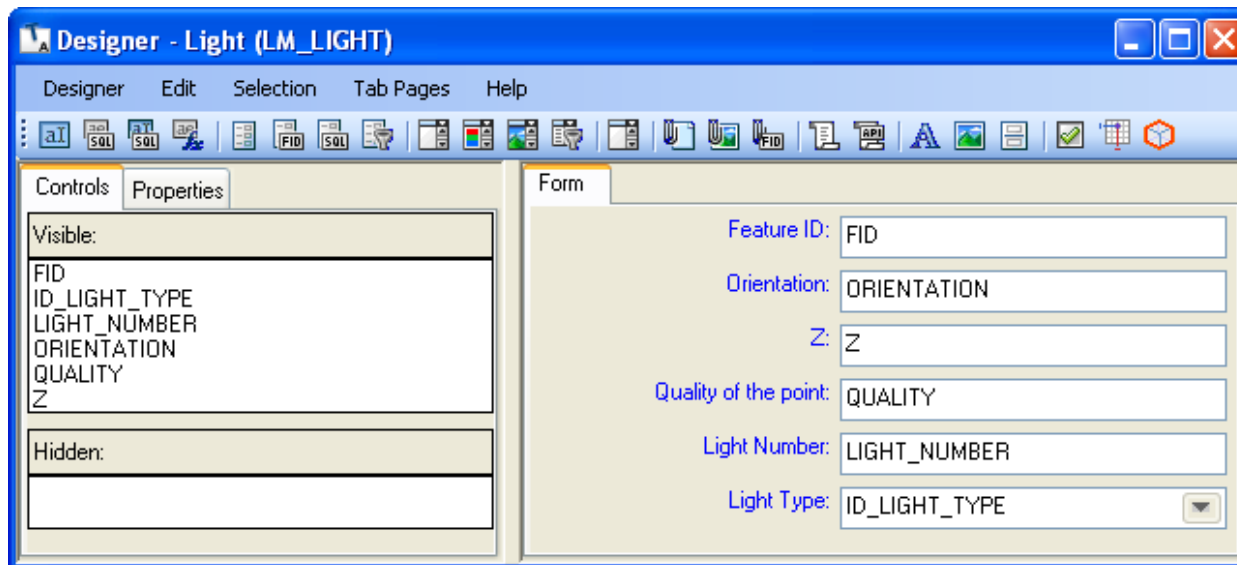


6.2.2 Forms Designer Controls



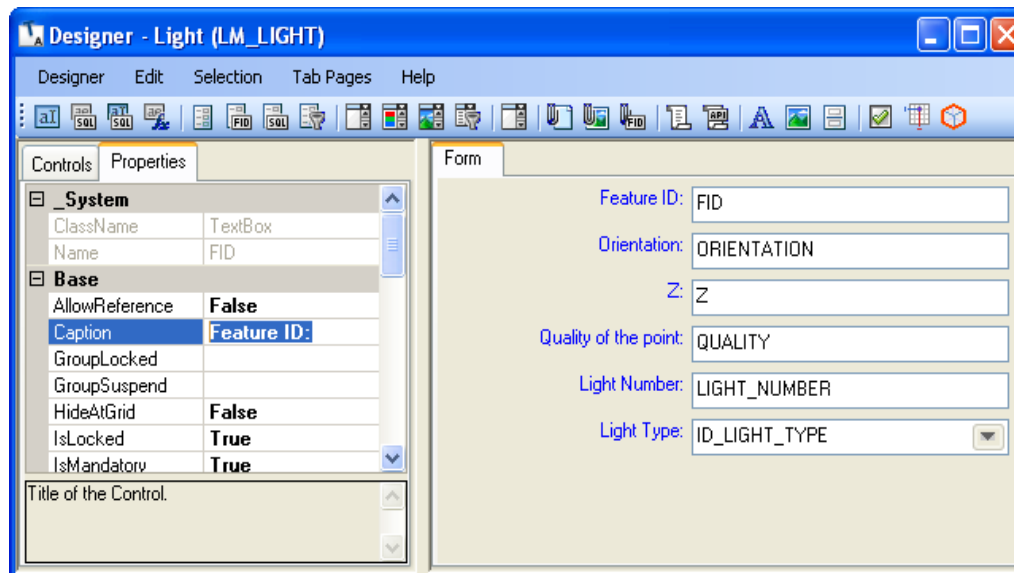
6.2.3 Hiding or Showing Controls

- To hide an attribute so that users do not see it, drag it to the Hidden box.



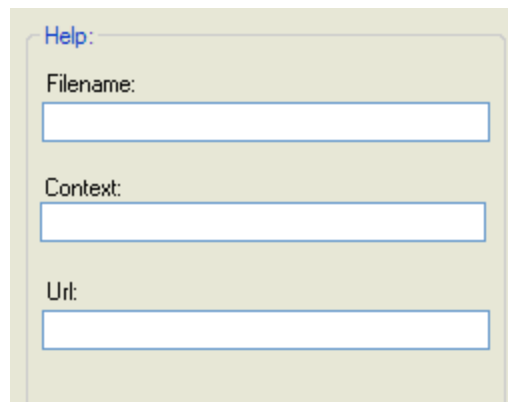
6.2.4 Modifying the Caption (Field Name) and Displaying Tool Tips

- Use the Properties tab to modify:
 - Captions
 - Tool tips



6.2.5 Assigning a Help File to a Form Control or Entire Form

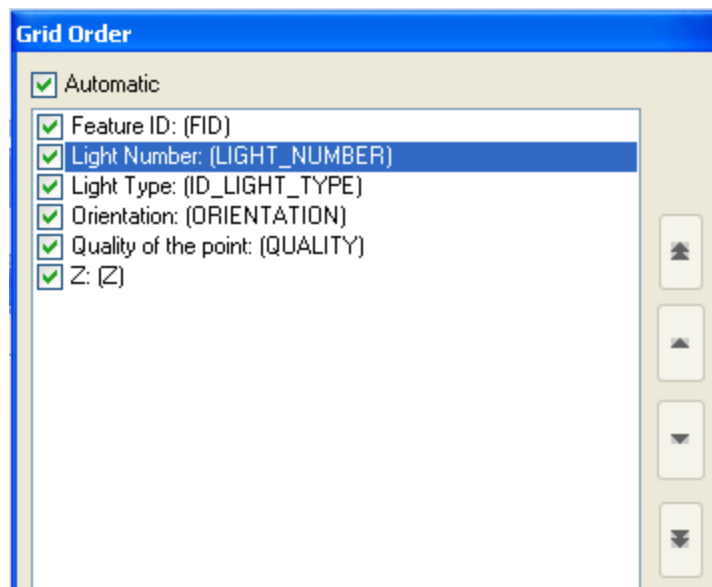
- Help for a feature class control appears if users press **F1** while the focus is on that control.
- Values include:
 - **HelpFilename**
 - **HelpContext**
 - **HelpUrl**



A screenshot of a 'Help:' dialog box. The dialog has a title bar with the word 'Help:' in blue. Inside the dialog, there are three labels with corresponding text input fields: 'Filename:' with a text box, 'Context:' with a text box, and 'Url:' with a text box. The dialog has a light beige background and a thin border.

6.2.6 Changing the Alignment of the Form Controls

- The easiest way is to drag the controls.
- To change the sort order, **Designer > Grid Order**.
 - Use arrows to change the order.



6.2.7 Using Mandatory Fields and Locking Input

- By default, all fields are set to *IsMandatory* = *false*.
- Setting the property to true creates a light red background in Edit mode.
 - Users cannot close the form unless they enter data.

1. Select the control.
2. Click **Properties** tab.
3. Under *IsMandatory*, select **True**.

[-] _System	
ClassName	ComboBox
Name	ID_LIGHT_TYPE
[-] Base	
AllowReference	True
Caption	Light Type:
GroupLocked	
GroupSuspend	
HideAtGrid	False
IsLocked	False
IsMandatory	True ▼
NextControl	True
ToolTipText	False
ValidationCode	

6.3.1 Modifying the List Displayed in Combo Boxes

- A combo box is automatically assigned and populated for all attributes related to a domain table.
- You can change the text displayed in a combo box.

Top	145
Specific	
AllowDoubleClick	True
ClientSideUniqueCh	False
DetailAttribute	ID
DetailDocument	
DetailFilter	ACTIVE=1
DetailList	VALUE
DetailOrderBy	VALUE
DetailTable	LM_LIGHT_TYPE_TB
FidButton	False
HighlightButton	False

Detail Table

Detail Document: ATLAND

Detail Table: LM_LIGHT_TYPE_TBD

Detail Attribute: ID

Detail Listfield: SHORT_VALUE||"VALUE

Detail SortOrder: SHORT_VALUE

Detail Listfilter: ACTIVE=1

Preview:

100DEC-Decorative

100HPS-High Pressure Sodium 100

250HPS-High Pressure Sodium 250

300INC-Incandescent

400MVL-Mercury Vapour Light

Refresh

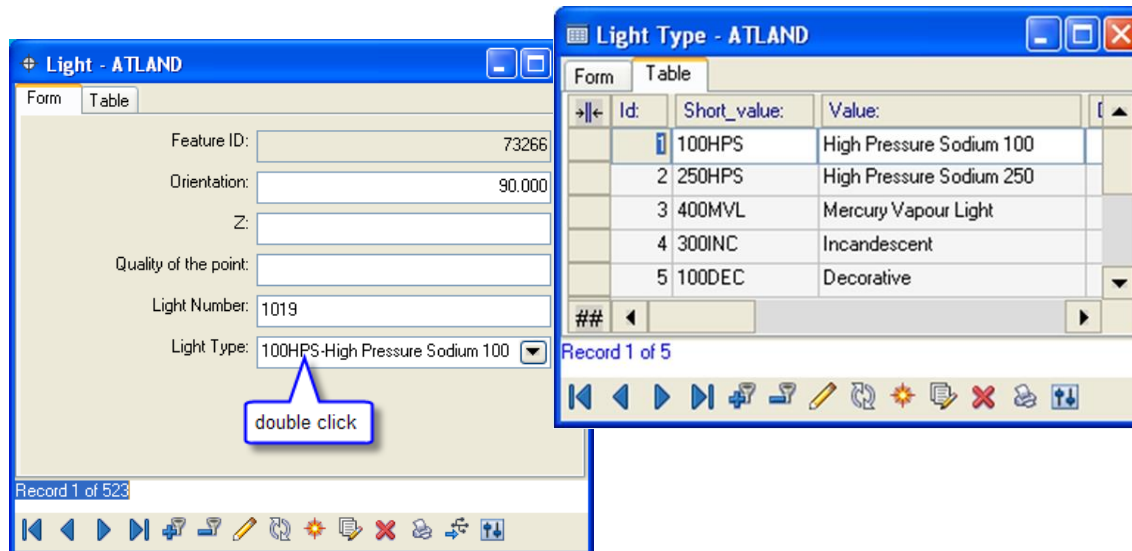
OK Cancel Help

6.3.2 Enabling Double-Clicking for Combo Boxes

- Select a combo box in the sample form and set *AllowDoubleClick* = *True* on the Properties tab.



- Users can double-click the form combo box to make the form of the related domain form appear.



6.3.3 Showing Coordinates on a Form

- Use the **Geometry** tool to add x and y coordinates.

The screenshot shows the Autodesk Light Designer interface with the title bar "Designer - Light (LM_LIGHT)". The menu bar includes "Designer", "Edit", "Selection", "Tab Pages", and "Help". The toolbar contains various icons for design and editing. The left pane has two tabs: "Controls" and "Properties". Under "Controls", there is a tree view with a collapsed "_System" folder and an expanded "Base" folder. The "Base" folder contains a table of properties:

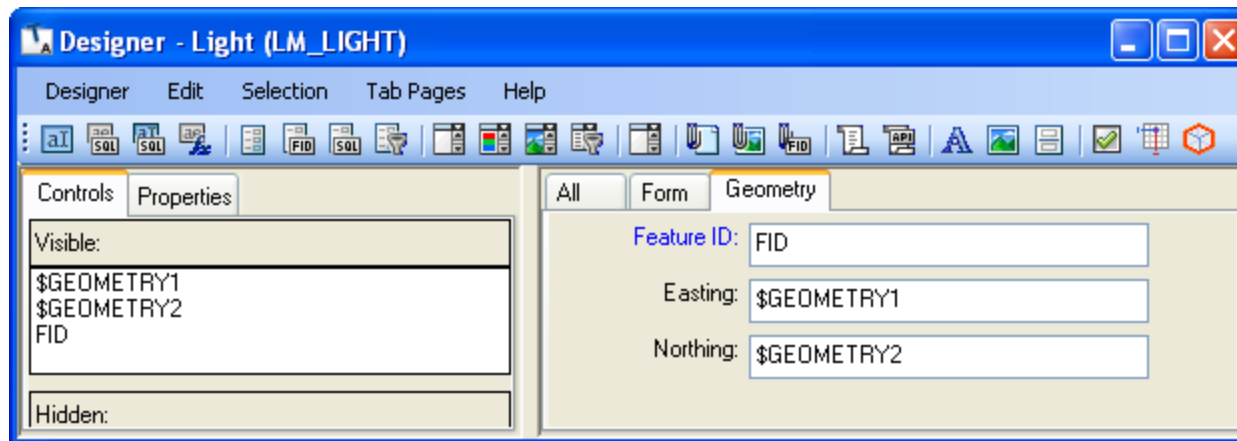
Base	
Caption	Northing
GroupLocked	
GroupSuspend	
HideAtGrid	False
IsLocked	False
NextControl	
ToolTipText	

Below the table, a text box contains the text "Shows the X Coordinate". The right pane has a "Form" tab with a configuration form for the Geometry tool. The form contains the following fields:

- Feature ID: FID
- Orientation: ORIENTATION
- Z: Z
- Quality of the point: QUALITY
- Light Number: LIGHT_NUMBER
- Light Type: ID_LIGHT_TYPE (dropdown menu)
- Easting: \$GEOMETRY1
- Northing: \$GEOMETRY2

6.3.4 Adding Tab Pages to Forms

- From the form designer menu, select **Tab Pages > Add Tab**.
- Enter the name of the new tab.
- *Note:* After you create a second tab, the system adds an **All** tab.
- Controls visible on the All tab appear on every tab.



6.3.5 Creating a Master-Detail Form


- In the form designer, select **Designer > Master-Detail**.
- Drag the table to **Current Details**.
- After you restart, you will see the form you created.

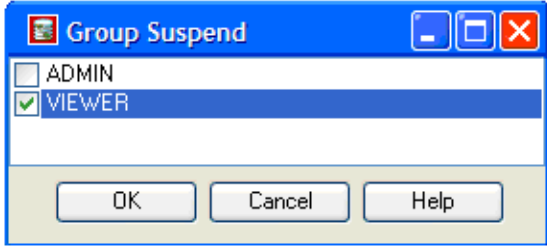
The screenshot displays the 'Light Type - ATLAND' form designer interface. The top section, titled 'Form', contains fields for 'Id' (3), 'Short_value' (400MVL), 'Value' (Mercury Vapour Light), 'Date_of_creation' (with a calendar icon), 'Designer', 'Commentary', 'Active' (Yes, with a checked checkbox), and 'Priority'. Below this is a status bar indicating 'Record 3 of 5 (Filter active)'. The bottom section, titled 'Light', shows a table with columns 'Feature ID' and 'Orientation'. The table contains six rows of data, with the first row highlighted. The status bar at the bottom indicates 'Record 1 of 6 (Filter active)'.

Feature ID	Orientation
73729	90.000
73730	90.000
73731	90.000
73732	90.000
73733	90.000
73734	90.000

6.3.6 Controlling Access to Form Controls

- You define access in the form designer.
- Use the GroupSuspend property to specify which user groups have access to which form controls.

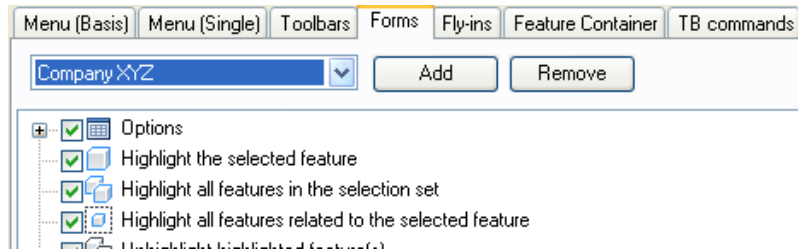
Controls	Properties
_System	
ClassName	ComboBox
Name	ID_LIGHT_TYPE
Base	
AllowReference	True
Caption	Light Type:
GroupLocked	
GroupSuspend	
HideAtGrid	False
IsLocked	False
IsMandatory	True
NextControl	FID
ToolTipText	
ValidationCode	
ValidationMessage	
Database	
AttributeDescription	Number(10)
AttributeName	ID_LIGHT_TYPE



A dialog box titled "Group Suspend" with a blue header bar and standard window controls. It contains a list of user groups: "ADMIN" (unchecked) and "VIEWER" (checked with a green checkmark). Below the list are three buttons: "OK", "Cancel", and "Help".

6.3.7 Configuring a Form Toolbar

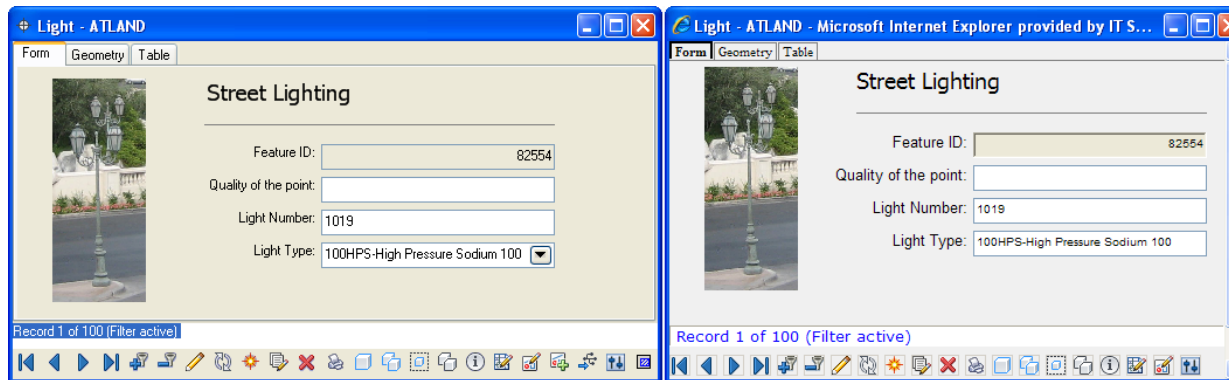
- You can create a custom toolbar.
 1. In the **Forms** tab, click **Add** and provide a name for the new item.
 2. Enable/disable the various tools available.



- To associate a custom toolbar with a form:
 1. Open the form designer for the feature class you want.
 2. Select **Designer** menu > **Options**.
 3. Use the Toolbar combo box to associate the custom toolbar.

6.3.8 Configuring a Topobase Web Form

- The configuration settings of any changes done to the forms in the Topobase Administrator are stored in the database.
- The application reads the forms configuration directly from the database.
- Any changes are reflected in Topobase Client and Web.



6.4 Spatial Queries in Forms

- Autodesk Topobase 2009 data comprises:
 - Spatial data—specifies locations relative to a map
 - Attribute data—supplies qualitative or quantitative information
- Users request information or pose questions about data by making *queries* to a database.
- Topobase supports two types of queries:
 - **Spatial queries**
 - **Attribute queries**

6.4.1 Opening Forms Based on Queries

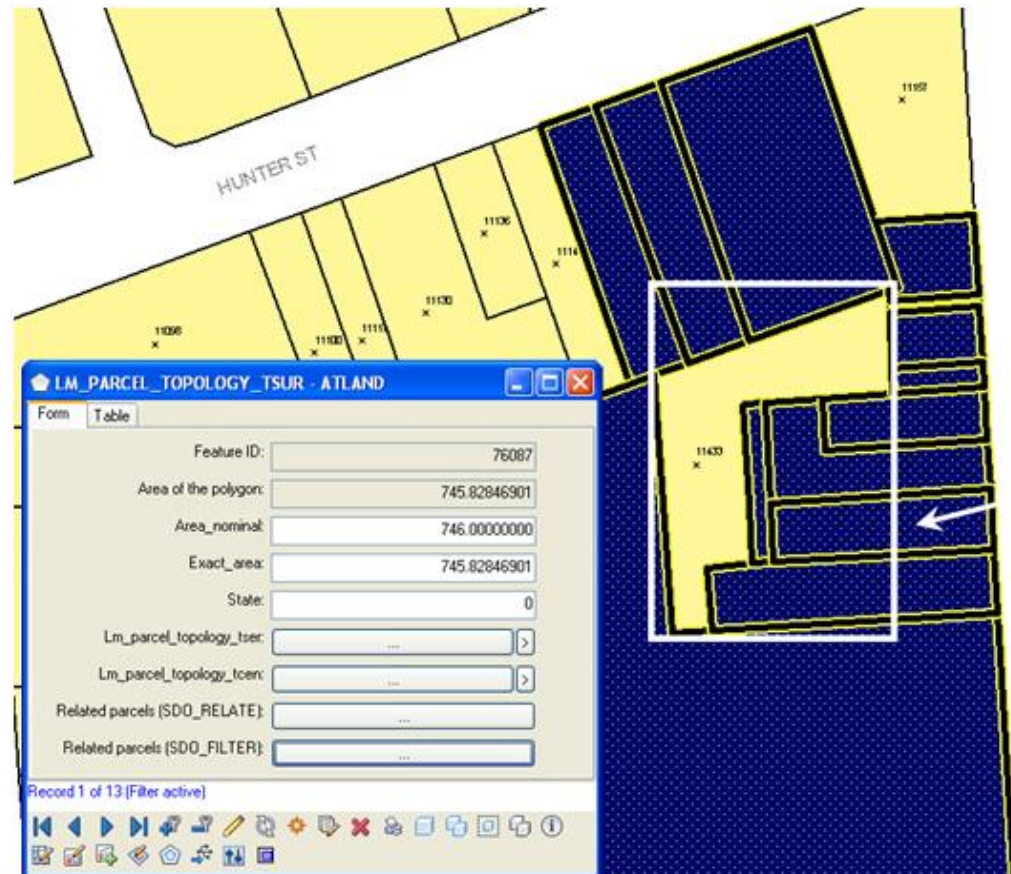
- The SQL Form Launcher control is designed to open a form given an attribute or spatial query.
- The main properties of this control are:
 - DetailTable: Specify the name of the feature class to be opened
 - Filter: Specify the attribute or spatial query

6.4.2 Spatial Operators

SDO_FILTER

- Used to perform the primary filter in spatial queries

```
SDO_FILTER  
(<geometry-1>,  
<geometry-2>  
) = 'TRUE'
```

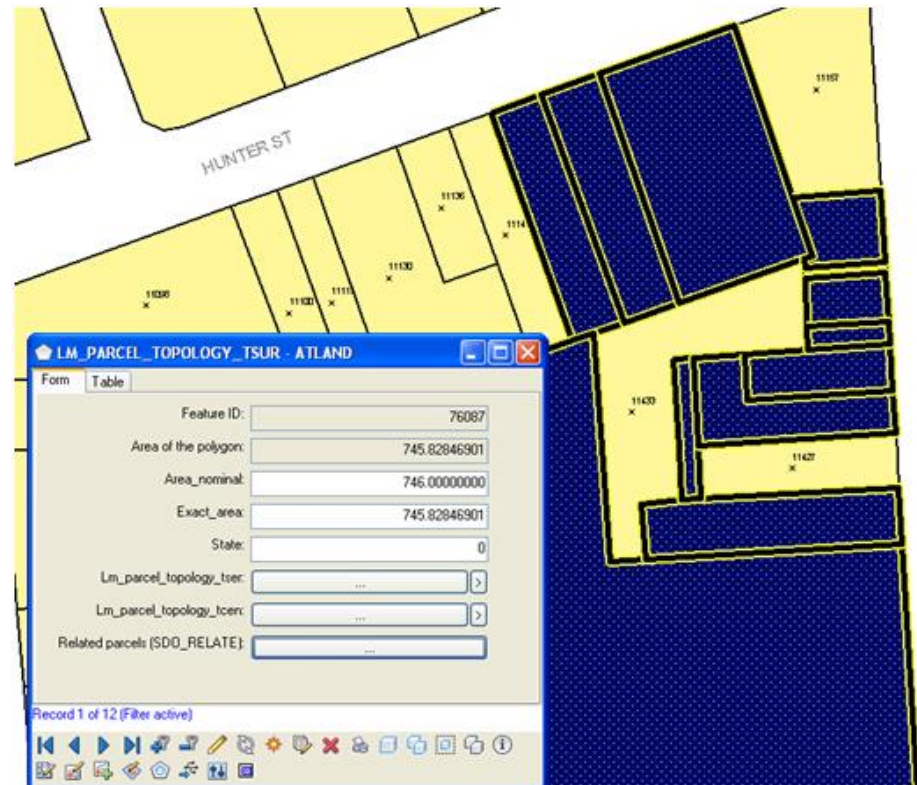


6.4.2 Spatial Operators

SDO_RELATE

- Performs both primary and secondary filtering, returning as a result the exact set of geometries that interact with a given geometry.

```
SDO_RELATE  
(  
  (<geometry-1>,  
  <geometry-2>,  
  'mask=<topological-relation>'  
)
```



6.4.2 Spatial Operators

SDO_WITHIN_DISTANCE

- Determines the features that are within a given distance from a feature

```
SDO_WITHIN_DISTANCE  
(<geometry-1>,  
<geometry-2>,  
'distance = <n>'  
)
```

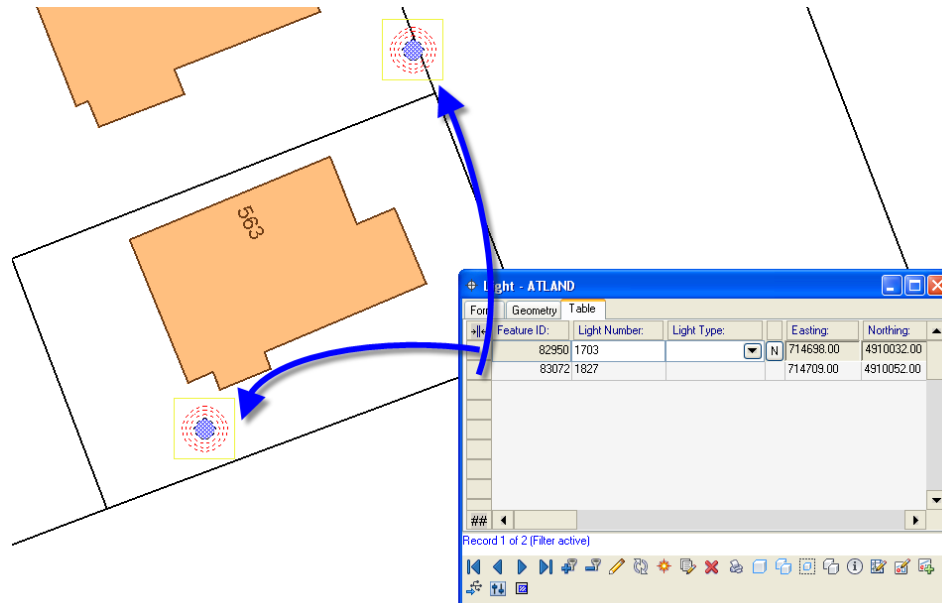


6.4.2 Spatial Operators

SDO_NN

- Determines the nearest neighbors of a feature

```
SDO_NN  
(<geometry-1>,  
<geometry-2>,  
'sdo_num_res = <n>'  
)
```



6.4.2 Spatial Operators

SDO_RELATE convenience operators

- These operators apply a specific mask.
- An example is the SDO_INSIDE operator
 - Evaluates the features that are inside a given feature. This is equivalent to using the SDO_RELATE operator with the mask INSIDE.

```
SDO_INSIDE  
(  
  (<geometry-1>,  
  <geometry-2>  
  )
```

6.6 Chapter Summary

You should now be able to:

- Explain how standards are enforced by means of customization
- Change the “look and feel” of a form
- Change properties of controls
- Add tabs for better clarity
- Modify the listed items of a combo box
- Create a Master-Detail form
- Show coordinates in a form
- Add spatial queries to forms
- Change the forms toolbar for a group of users
- Verify that changes in forms are made only once in Topobase Administrator, and that the changes are reflected in both Topobase Client and Topobase Web

Autodesk®