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Archive – Technical Training

Autodesk Topobase Administrator



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Chapter Overview

- The data model is modified by creating feature classes and domain tables, and by defining their relationships.
- The Topobase Administrator allows you to easily create such tables and maintain their relationships.

Modifying the Data Model

Chapter Objectives

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

- Understand how to extend the data model by adding new feature classes and domain tables.
- Create a domain.
- Create a new topic.
- Create a feature class.
- Relate a domain to a feature class attribute.

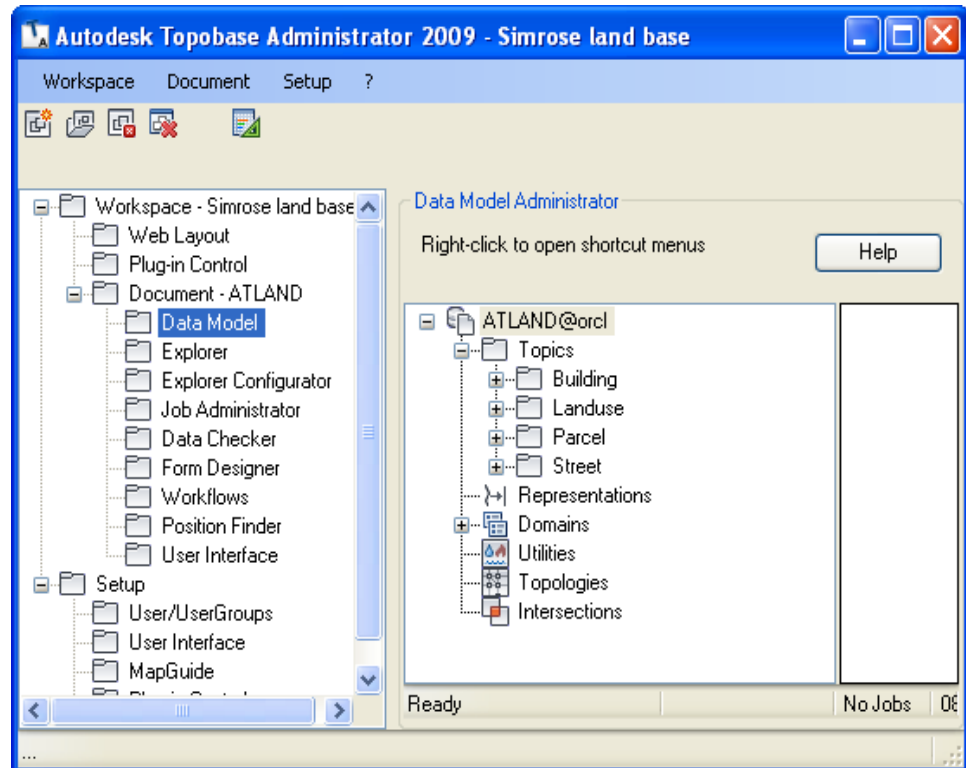
4.2 Data Models

To accommodate the new street lighting data, you must modify the Land data model:

- Add a new feature class.
- Add a new topic to contain the feature class.
- Create type and name attributes for the feature class.
- Create domain tables to constrain the values of the type attributes in Topobase.

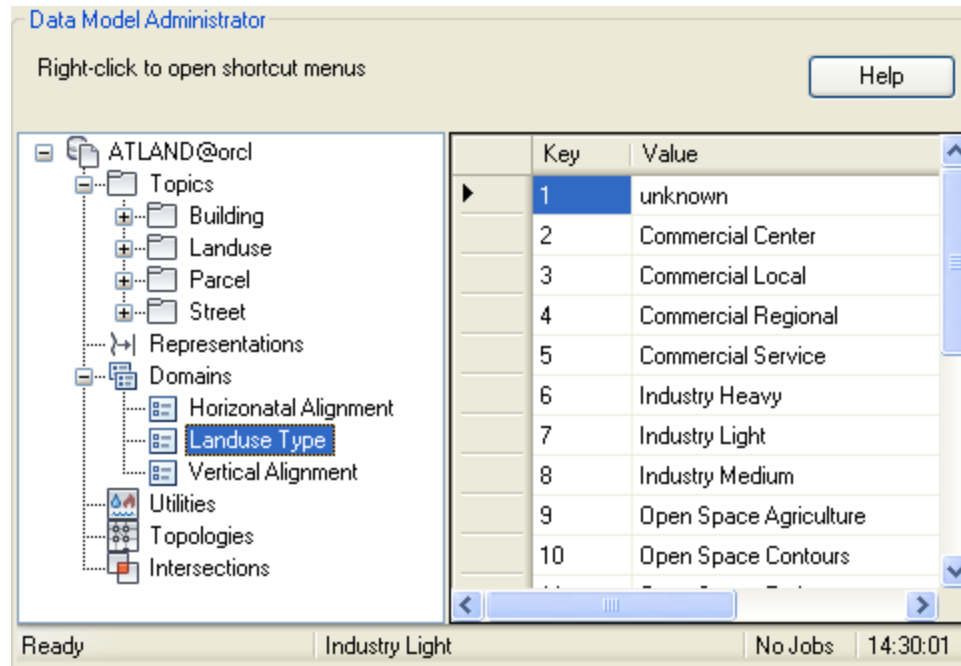
4.2 Data Models +

- Components of a data model:
 - Topics
 - Feature classes (not shown)
 - Domains
 - Utilities, Topologies, and Intersections



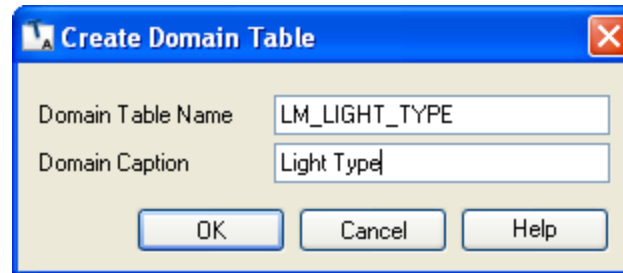
4.2.1 Domains

- Use the Data Model Administrator to access domains.
- Expand **Domains** in the Data Model Administrator explorer to see all the domain tables in the ATLAND data model.
 - The domain tables are used to constrain values in feature classes in the Land data model.



4.2.2 Creating a Domain

1. First, create a domain table.



2. The table appears in the domain table list.



4.2.3 Adding Values to a Domain

Data Model Administrator

Right-click to open shortcut menus

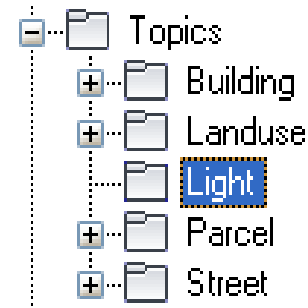
Help

	Key	Value	Short Value	Active
	1	High Pressure Sodium 100	100HPS	<input checked="" type="checkbox"/>
	2	High Pressure Sodium 250	250HPS	<input checked="" type="checkbox"/>
	3	Mercury V		<input checked="" type="checkbox"/>
*				<input type="checkbox"/>

4.3.1 Creating a New Topic

- Before you create a feature class for street lights, you need to create a topic as a container for it.
- Right-click **Topics** > **Create Topic**.

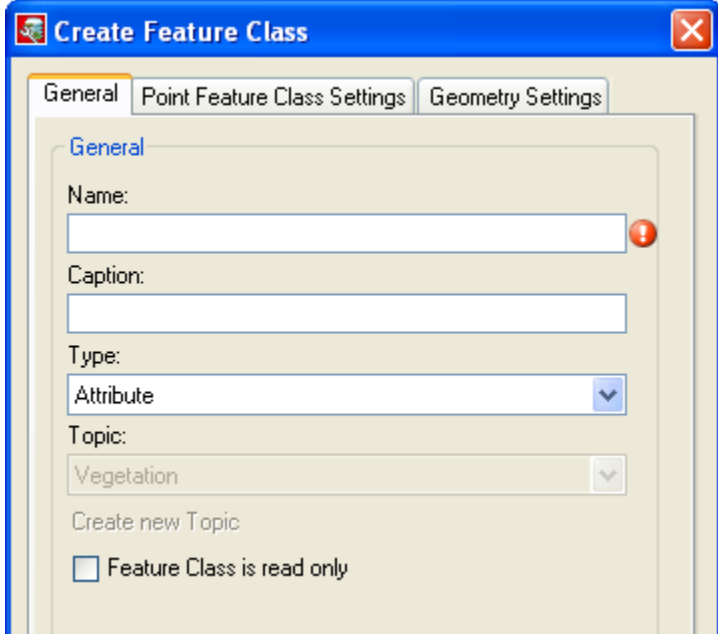
- Type the Topic Name.
- Type the Caption.



- The new topic folder is added to the Data Model Administrator explorer.

4.3.2 Creating a General Feature Class

- General tab:
 - From the Data Model Administrator, right-click the topic, and select **Create Feature Class**.
- Enter feature class:
 - Name
 - Caption
 - Type

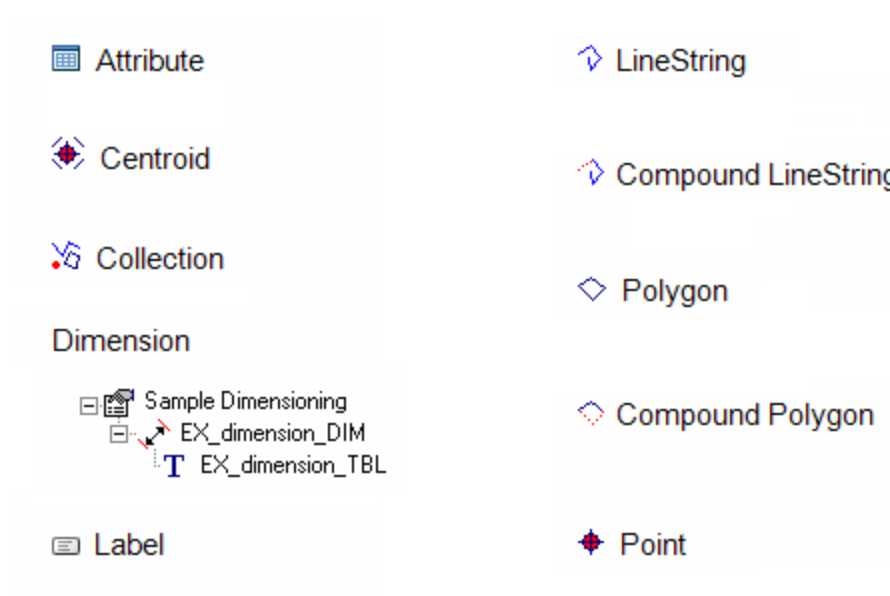


The screenshot shows the 'Create Feature Class' dialog box with the 'General' tab selected. The dialog has three tabs: 'General', 'Point Feature Class Settings', and 'Geometry Settings'. The 'General' tab contains the following fields and options:

- Name:** A text input field with a red warning icon to its right.
- Caption:** A text input field.
- Type:** A dropdown menu with 'Attribute' selected.
- Topic:** A dropdown menu with 'Vegetation' selected.
- Create new Topic:** A link to create a new topic.
- Feature Class is read only:** An unchecked checkbox.

4.3.2 Creating a General Feature Class +

Types of feature classes



4.3.3 Creating a Label Feature Class

- Topobase uses labels to display feature class attribute data as text in the map drawing area.
 - Use labels to display any attribute data attached to features.
 - Named <CLASS_NAME>_TBL.
 - Bears a child relationship to parent feature class.
 - A feature class can have only one child label feature class, but a label feature class can have multiple label definitions associated with it.



4.3.3 Creating a Label Feature Class +

- Label Name, Caption, and Type

- Label Definition

- Positioning and Orientation
- Absolute Offset
- Relative Offset
- Absolute Orientation
- Relative Orientation
- Alignment

Label Properties ID: 10010

Label Information

Name:

☐ Automatically create label when feature is created.

☒ Label is active.

Content to Display (Select Statement):

☐ Create a label, if the Select Statement returns NULL

Prefix: Suffix:

Parent Geometry (Select Statement):

Sample Text:

Positioning

☐ Absolute

☒ Relative

☒ User selects the Label Position.

Orientation

☒ Absolute

☐ Relative

degree counter-clockwise

☒ Preserve text readability (flip when necessary)

Alignment

Horizontal alignment:

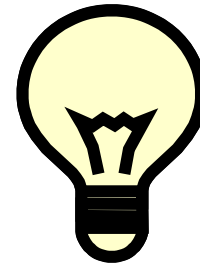
Vertical alignment:

Scaling (Optional)

Scale Factor (Select Statement):

4.3.3 Creating a Label Feature Class ++

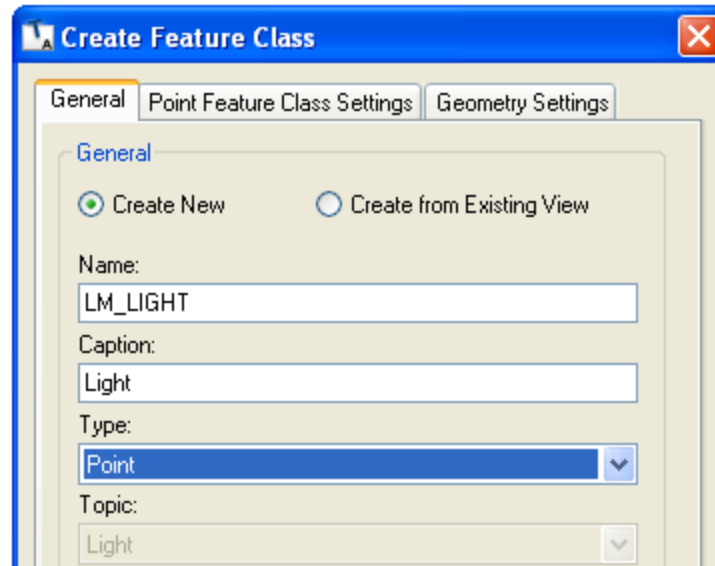
- Absolute offset
- Relative offset
- Absolute orientation
- Relative orientation



light bulb

4.3.4 Creating the Light Feature Class

- Navigate to the Create Feature Class window.
 - In the Name field, enter **LM_LIGHT**.
 - In the Caption field, enter **Light**.
 - In the Type box, select **Point**.



4.3.5 Adding Attributes to a Feature Class and Relating a Domain

- To add an additional attribute, right-click the feature class and select **Add Attributes**.
 - Type **ID_LIGHT_TYPE** in Name.
 - Type **Light Type** in Caption.
 - Type a descriptive phrase in Description.
 - Select **None** in Unit Type.
 - Select **Number** in Type.
 - Type **10** in Precision.
 - Select **Light Type** in Parent Tables.
This relates the ID_LIGHT_TYPE attribute to the Light Type domain table.
- Click **Add**.

Add Attributes

Light

Name: ID_LIGHT_TYPE

Caption: Light Type

Description: Street Light type

Unit Type: None

Unit:

Type: Number

Precision and Scale: 10 0

Default value:

☒ optional

Relation

Parent Tables

- ☐ Parcel Line
- ☐ Street
- ☐ Horizontal Alignment
- ☐ Landuse Type
- ☐ Light
- ☒ Light Type
- ☐ Street Label

☐ all

Relation Type

Set Relation to Parent to NULL when Parent is del

Add Close Help

4.3.5 Adding Attributes to a Feature Class and Relating a Domain +

Light Type domain:

ID	Value
1	High Pressure Sodium 100
2	High Pressure Sodium 250
3	Mercury Vapour Light
4	Incandescent
5	Decorative



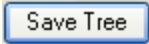
Light table:

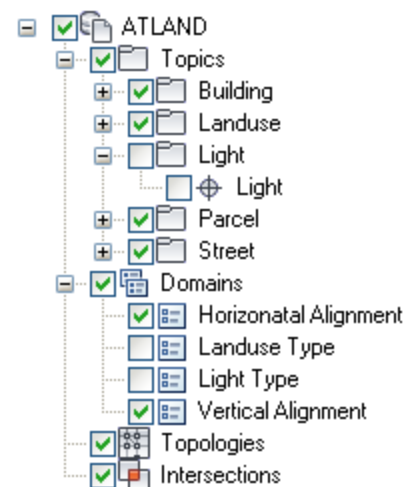
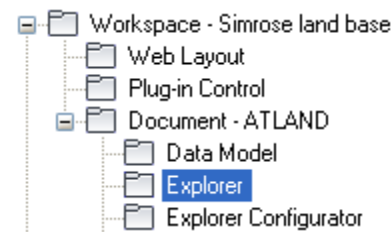
FID	GEOM	...	ID_LIGHT_TYPE
1	714464 4910882		4
2	714460 4910833		1
3	714456 4910785		5
4	714452 4910751		3
5	714469 4910921		4

4.3.5 Adding Attributes to a Feature Class and Relating a Domain ++

Name	Caption	Unit	Data Type	Length/Prec.	Scale	Optional	Default	Relation(s)
FID	Feature ID		Number	10		False		
GEOM	Geometry		Geometry	1		True		
ORIENTATION	Orientation	degree counter-clockwise	Number	6	3	False	90.0	
Z	Z	meter	Number	20	8	True		
QUALITY	Quality of the point		Number	10		True		
LIGHT_NUMBER	Light Number		Varchar2	10		True		
ID_LIGHT_TYPE	Light Type		Number	10		True		LM_LIGHT_TYPE_TBD.ID

4.3.6 Making New Feature Class, Topic, and Domain Visible in Document Explorer

- Your new feature class, topic, and domain are visible in the Data Model Administrator explorer, but they do not yet appear in the Topobase Client document explore
- Use the Topobase Administrator Explorer Manager.
- Toggle on **Light topic** and **Light feature class**. Then, expand the **Domains** item in the Explorer Manager and toggle on the **Light Type** domain.
- Click  to make all the items visible in the document explorer.



4.3.7 Emptying or Dropping a Feature Class

- Emptying a feature class
 - Keep the Oracle table with its attributes, but delete all the features in it.
 - Right-click the feature class in the Data Model Administrator explorer, and select **Empty Feature Class**.
- Deleting a feature class (the Oracle table and all its data).
 - Right-click the feature class and select **Drop Feature Class**.

4.5 Chapter Summary

You should now be able to:

- Understand how to extend the data model by adding new feature classes and domain tables.
- Create a domain.
- Create a new topic.
- Create a feature class.
- Relate a domain to a feature class attribute.

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