Instructions for Creating a Dimensional Schema in ERwin

Dimensional modeling and ER modeling notation is similar in ERwin. Refer to page 118 in Todman for a discussion of dimensional modeling concepts.

1. Open ERwin.
2. Select File|New to create a new ERwin diagram.
3. Choose DIMENS from the ERwin Template Selection dialog box.
4. Click OK.
   - If you have multiple templates with the name DIMENS in the list, you may get an error message when trying to use some of the templates. If you encounter an error trying to use one of the DIMENS templates, choose another DIMENS template until you do not get an error. One of the templates will work.
5. Bring up ERwin Toolbox, by pressing CTRL+T, if it is not already present.
6. You should be in the Dimensional View by default. To determine which view you are in, look at the drop-down box on the standard ERwin toolbar (pictured at the right). If you are not in Dimensional view, switch to the Dimensional view by using the drop-down box.
7. Create an entity by clicking on the either the "Independent table" or "Dependent table" icon in the ERwin Toolbox and then clicking on the workspace.
8. Add attributes and primary key by double-clicking on the table and using the Column Editor.
9. To turn on/off display attributes:
   - Right click while pointing to a blank area of the workspace,
   - Choose Display Options/Tables,
   - Then Uncheck/Check the attributes you would like to display.
   - As a starting point, it is recommended that Foreign Key Designator and Dimensional Icon be checked.
10. ERwin determines if a table is a fact, dimension, or outrigger table based on its dimensional modeling role.
   - By default, ERwin automatically assigns a role to the table based on the relationship(s) drawn to other tables. ERwin considers a table with no relationships to be a dimension table. When you draw a relationship from one table to another, ERwin determines if the child table in the new relationship acts as a parent in any other relationship.
   - You can override the manual assignment of roles by ERwin on a table-by-table basis in the Dimensional tab of the Table Editor.
   - When you manually assign a dimensional modeling role, ERwin does not automatically change your role setting based on relationships drawn to other tables. However, if you select the Display conformance warnings option in the Preferences dialog, ERwin displays a conformance-warning if the role you manually assign conflicts with dimensional modeling standards.
11. Double click on an entity to specify additional options for the dimensions/fact tables. Double click on a relationship line between two entities two specify additional options for the relationships
12. You can create data marts in the same diagram by creating the schema of each data mart in different subject areas.
- A subject area (data mart) is a subset of objects taken from the whole pool of objects in your diagram. You can create multiple subject areas in your diagram. Typically, you create a subject area to help you manage a large diagram, to reduce the number of objects that you work with, or to focus on a particular business function. Working with subject areas is especially useful when designing and maintaining a large or complex data model. Dividing the Main Subject Area into several smaller subject areas allows different groups within an organization to concentrate on the processes and tasks pertinent to their business area.

- You create a subject area in the Subject Area Editor, which includes options for selecting the members of a subject area. In the Subject Area Editor, you name the subject area, set global options, and select members (objects) to include in the logical model or the physical model, or both. In addition, you can use the ERwin Neighborhood feature to specify how many generations of ancestors or descendants, or both of the members you select to include in a subject area.

- By default, a new data model includes one subject area (Main Subject Area) and one stored display (Display 1). For each subject area you create, ERwin adds its name to the Subject Area list on the ERwin toolbar. You can switch to a different subject area by selecting the area from the list. If you have multiple subject areas in your diagram, you can create a unique set of stored displays for each subject area. When you switch to a different subject area, you only see the stored display tabs for the current subject area. See Working with Stored Displays for more information.

- When you create a subject area for a logical model, ERwin automatically creates a similar subject area for the physical model and vice-versa. If you add or remove members from a subject area, the membership change is reflected in the corresponding physical or logical model but will not affect the membership of any other subject area. However, if you add or delete objects in a subject area, such as entities and attributes, those objects are added to all other subject areas and stored displays in the diagram.

13. To create a subject area:

- Click the button on the ERwin toolbar or choose Subject Area on the Edit menu.
- Select the subject area that you want to use as the source for the new subject area.
- Click New to open the New Subject Area dialog.
- Perform the following steps:
  - Type the name of the new subject area.
  - Select the Copy Members from <Subject Area Name> check box to copy all of the entities, tables, and views that are members of the currently selected (source) subject area to the new subject area.
  - Click OK.
- Click the following tabs to specify the properties of the new subject area:
  - Click the General tab to specify the author’s name. In this tab, you can also exclude references to tables in the Main Subject Area that are not in the currently selected subject area during schema generation.
  - Click the Members tab to specify the objects (entities, tables, or views) in the subject area.
  - Click the Text Blocks tab to specify the text blocks in the subject area.
  - Click the Definition tab to type text that describes the function of the subject area.
  - Click the UDP tab to assign user-defined properties to the subject area.
- Click OK.