Model Secondary Dimensional Attributes

Dimension attributes that are not the dimension's key, and not part of a hierarchy are called secondary attributes. Secondary attributes cannot be used to create relationships between datasets and dimensions.

Attribute Type: Dimensional

The default Secondary Attribute Type provides an independent "Dimensional" attribute for grouping Measure data. Dimensional Secondary Attributes may be referenced from AtScale Calculated Measures by following the canonical MDX syntax of [Dimension Name].[Hierarchy Name].[Level Name], however the "Hiearchy Name" and "Level Name" are both set to the Attribute's Name. For example, if you define a secondary attribute of "QuarterOfYear" on a hierarchy of the Date dimension, then such an attribute is referenced from a Calculated Measure as: [Date].[QuarterOfYear].[QuarterOfYear]. Note that the secondary attribute reference is independent of the Design Center Hierarchy that displays it.

Attribute Type: Level Alias

Secondary Attributes of type "Level Alias" enable the creation of tabular reports that select hierarchical expressions without forcing the user to drill down a hierarchy. For example, consider a tabular report of Monthly Sales vs Last Year Month Sales. The "Last Year Month Sales" calculation is easily computed using an AtScale ParallelPeriod function as follows:

```
(ParallelPeriod(
   [Order Date Dimension].[Order Retail445].[Order Reporting_Year], 1,
   [Order Date Dimension].[Order Retail445].CurrentMember),
   [Measures].[salesamount1])
```

Because this expression uses a hierarchy's CurrentMember function, it is necessary for the report designer to include the [Order Date Dimension].[Order Retail445] hierarchy in the report. When including a hierarchy in the report, most BI Tools force the user to navigate the hierarchy to the desired level, month in this case. Besides being a usability inconvenience, this interaction pattern causes the calculation of level subtotals that the report designer is not interested in.

These problems can be avoided by using a Secondary Attribute that aliases a hierarchy level. In this case, the problem is solved by defining an "Order Month" secondary attribute as an alias for the [Order Date Dimension].[Order Retail445].[Order Month] level. The report designer can then use the "Order Month" Secondary Attribute with the "Last Year Month Sales" calculation without forcing the user to navigate a hierarchy. As a result, the BI Tools display the data at the Month level without forcing the navigation of a hierarchy and without computing unnecessary subtotals.

When configuring the Secondary Attribute as an alias of a level, it is important that Calculated Measures continue to reference the Hierarchy Level directly. Do not rewrite the calculated measure to reference the level alias. Doing so executes an inner query which may return different results than expected.

Attribute Type: Metrical

Metrical Secondary Attributes are an experimental feature that must be enabled by your system administrator. See Add or Edit a Measure within a Dimension for more information.

Procedure

1. Open the dimension editor canvas.
2. Drag a dataset column directly on top of an existing level in the Hierarchies panel. The Create Secondary Attribute dialog appears.
3. Set properties of the attribute:

    - For **Attribute Type**, **Dimensional** indicates that this is a Secondary Dimensional Attribtute. **Level Alias** indicates that this attribute is an alias for the Level selected under the Level Alias control. **Metrical** indicates that this attribute is a Measure; this type can only be set if your system administrator has enabled the experimental feature. For more information about these types see the sections above.
    - For details about the other properties, see Edit a Secondary Dimensional Attribute.

4. Click Save.