Dimensional Modeling Beyond the Basics: Intermediate and Advanced Techniques

Course Outline

Setting The Stage

- Top Down And Bottom Up Approaches To Data Warehousing
- Introduction to the Business Dimensional Model – The 'Technology Independent' Model
- Presenting Your Data Model

Handling Dimension Challenges

- Slowly Changing Dimensions
- Designing Junk Dimensions
- Considerations for Extremely High Volume Dimensions

Designing for Special Types of Facts

- Semi-additive, Factless and Derived Facts

Designing Multiple Fact Tables

- Using Multiple Fact Tables
- The Fact Group Matrix

Designing Conformed Dimensions

- What is a conformed dimension?
- Implementation Considerations
- Conforming Slowly Changing Dimensions

Gathering Business Requirements

Fact Table Design Challenges

- Common and Custom Facts
- Transaction and Snapshot Fact Tables
- Transportation Challenges

Advanced Dimension Table Challenges

- Dimensions With Multiple Roles
- Alternatives For Complex Hierarchies
- Date and Time Design Alternatives
- Handling Many-To-Many Relationships

Advanced Fact Table Challenges

- Problems With Mixed Grain Facts
- Using Multiple Fact Tables
- Logical Vs. Physical Primary Key

Design Approach For Complex Data Marts

- The Modeling Process within a Project
- Bridging to the Implementation Team
- Suggestions On How To Shorten The Project Schedule

Real World Dimensional Modeling

- Characteristics of Dimensional Models
- Guidelines for Modeling Complex Environments

Aggregation

- Dimensional Support For Aggregates
- Stars And Snowflakes
- Use Of Materialized Views

Workshops Throughout Class

Several hands on workshops will require the students to test their understanding and ability to solve modeling problems.

Instructor Bio

Laura Reeves, author of A Manager's Guide to Data Warehousing and co-author of the first edition of The Data Warehouse Lifecycle Toolkit, has 30 years of experience in end-to-end data warehouse development focused on developing comprehensive project plans, collecting business requirements, developing business dimensional models, designing databases (star/snowflake and entity-relationship designs), and development of enterprise data warehouse strategies and data architecture. As StarSoft Solutions co-founder, Laura has implemented data warehouses for many business functions for private and public sectors.