

# Dimensional Data Modeling: A Guided Practical Hands-on Tour of How and Why

## **Duration**

2 days

## **Instructor**

Wayne Little

## **Class Limit**

20 students

## **Prerequisite**

None

## **Price**

On-site

Please contact SPC for pricing (contact information on page 2)

Public Training

\$1,095 (2 days)

\*Discount available for early registration

## **Materials Provided**

- Student manual containing the course slides
- Student handouts with class exercises

Dimensional modeling has become the technique of choice in the Data Warehousing arena for the data designs used for Business Intelligence and analytical reports. This workshop introduces dimensional modeling from a non-technical perspective.

The analyst, modeler or manager participating in this workshop will be equipped with an understanding of how and why to apply the respective design tips as well as guidelines to create an understandable and well performing dimensional design. A complete framework for understanding and evaluating dimensional modeling will be presented which includes:

- An introduction to the basic dimensional modeling concepts (facts, dimensions, role-playing, drill-down, handling slowly & rapidly changing dimensions, etc.)
- The Two Guiding Principles (these will guide almost every design decision)
- Five Basics for Information Presentation & Foundations for Success
- An architectural framework for re-using and sharing common data
- Practical tips, case studies and illuminating hands-on exercises

## **Objectives:**

- Use dimensional modeling to provide the customer with understandable models for analytical reporting
- Make important dimensional design decisions and know the supporting principles and reasons
- Understand the difference between Fact and Dimension tables, and be able to properly allocate the appropriate information to each in the design
- Understand the basic types of fact tables and give a representative example of each
- Understand the data warehouse bus architecture
- Create and use an enterprise data warehouse bus matrix as a multi-faceted planning and communication tool
- Use common dimensions to facilitate information re-use and sharing
- Apply various techniques for handling changes in dimension data

## **Intended Audience**

This workshop is suited to business and data analysts and application developers responsible for the analysis and design of any component of business intelligence reporting applications. Business professionals and managers needing to understand how these techniques fit into enterprise information and reporting architecture will also find the content useful.

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# Dimensional Data Modeling: A Guided Practical Hands-on Tour of How and Why

## Instructor

Wayne Little is an independent consultant and owner of Lit Data Solutions, based in Portland, Oregon. Wayne began his IS career as a software developer in 1981, wandered into a large database development project in the early 90s and has been hooked on data related pursuits ever since. Over the last several years, Wayne has provided data architecture consulting services at a number of companies in the greater Portland area including significant projects at Intel, Flight Dynamics, Egghead, Vector Supply Chain Management, Banfield Pet Hospital, Menlo Worldwide Logistics, Freightliner and Les Schwab. Wayne enjoys making complex things simple and stealthily inserting understanding, fun and process improvement to the focused data solutions he helps facilitate.

Wayne also teaches database courses for University of Phoenix. Through a career of almost 30 years, he has worked in many roles including analysis and design, programming, data architecture, data base administration, system management, consulting and education. He has been data modeling and working with data base systems since 1991.

For more information on this or other SPC Springboard courses, please visit [www.spcspringboard.com](http://www.spcspringboard.com) or e-mail SPC at [info@spc.ca](mailto:info@spc.ca)

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## Outline

- Overview of dimensional modeling: terminology, major approaches, and key concepts
- Compare and contrast two major Data Warehouse Camps – Kimball & Inmon
- Dimensional models – where they fit in an enterprise reporting architecture and why
- A complete framework for dimensional modeling including:
  - The Two Guiding Principles (these will guide almost every design decision)
  - Five Basics for Information Presentation
  - Foundations for Success – within a project and across the enterprise
- The essential dimensional model components – facts and dimensions
- A Three Phase Logical Dimensional Modeling Process/Methodology
- Case studies and hands-on exercises
- Explanation and application of basic dimensional modeling concepts
  - Role playing, drill-down, drill-across, degenerate dimensions, “factless” fact tables
- Types of Fact Tables
- Motivating and designing good content
- Handling Changing Dimensions (Slow Changing and Rapidly Changing “Monster”)
- Exercises applying design trade-offs
- Wrap-up – summary, tips, and resources

## Prerequisites

An understanding of information systems concepts or equivalent experience. Some exposure to database concepts, relational data modeling and/or reporting systems is beneficial but not essential.



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