Data Modelling Fundamentals
20-21 September 2010
1-2 March 2011, London

Data Modelling Masterclass
22-23 September 2010
3-4 March 2011, London

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About Data Modelling Fundamentals
"Best instructor of any course I have ever been on."
Trish Daniells, Designer, The AA

About Data Modelling Masterclass
"Steve was enthusiastic, very knowledgeable, humourous and a great instructor."
Jacqueline Tomlinson, Data Analyst, Pension Protection Fund

Presenter

Steve Hoberman is a world-recognized innovator and thought-leader in the field of data modelling. He has worked as a business intelligence and data management practitioner and trainer since 1990, and is a popular and frequent presenter at industry conferences, both nationally and internationally. Steve is a columnist and frequent contributor to industry publications, as well as the author of Data Modeler's Workbench and Data Modeling Made Simple. He is the founder of the Design Challenges group and inventor of the Data Model Scorecard™.

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Data Modelling Fundamentals

Build a Foundation in Data Modelling Concepts &Techniques

Data Modelling Masterclass

Sharpen Your Data Modelling Skills

Steve Hoberman

Overview

Data Modelling Fundamentals contains a complete explanation of data modelling concepts and terminology, along with techniques for producing solid relational and dimensional data models. This course is designed to give you a practical understanding of data modelling that can be applied to your current projects.

Data Modelling Masterclass If you already know data modelling basics and want to sharpen your data modelling skills, then this Masterclass is for you. You will first apply a best practices approach to building and validating data models through the Data Model Scorecard™, a tool for validating data model quality. Next we focus on a collection of intermediate and advanced modelling techniques, including advanced normalization and enterprise data modelling. The final section contains guidelines used to gain consistency across our data models in areas such as in abstraction and whether to star schema or snowflake.

Learning Objectives

Data Modelling Fundamentals

- Data modelling concepts and terminology
- How to read a data model
- Steps to building a subject area model
- Logical data modelling techniques of normalization, abstraction, and dimensionality
- Physical data modelling techniques of denormalization, partitioning, views, and indexing

Data Modelling Masterclass

- How to apply the Data Model Scorecard™
- Advanced normalization rules and limitations of the logical data model
- A value-driven approach to building the enterprise data model
- Techniques for converting the logical into an physical design
- Factors to consider in deciding whether to Star Schema or Snowflake
- Three key questions to ask yourself before you abstract
- When to use a surrogate key

Seminar & Workshop Outline

Data Modelling Fundamentals

Modelling Basics
- What is a data model and why is a piece of paper with boxes and lines so valuable to our organizations?
- How does a data model improve communication during the analysis process and after the model is complete?
- What two situations can degrade a data model's precision?
- What are five key skills every data modeler should possess?
- What are entities, data elements, domains, and relationships?
- Why subtype and what are the four subtype types?
- What are the different types of keys on a model?
- Explain cardinality and how to read the relationships on a data model.

Subject Area Modelling
- Why build a subject area model?
- What are the three types of subject area models?
- Describe the three approaches used to build subject area models.
- Where does subject modelling fit within a data management framework?
- What challenges exist in building a subject area model?
- What tips can help with subject area modelling?

Logical Data Modelling
- What is a logical data model?
- How do relational and dimensional logical data models differ?
- Discuss the strict modelling constraints placed on the dimensional model.
- Why do we have a love/hate relationship with dimensional models?
- What is normalization and why is it so great?
- Why is abstraction dangerous?
- What business and IT roles are critical for building the logical data model?
- Which roles will most benefit from the logical data model?
- Why do we often skip the logical data modelling phase and when do we pay the price?

Physical Data Modelling
- What is a physical data model?
- Explain the difference between a star schema, snowflake, and starflake.
- Where should denormalization be performed on your models?
- What are the five different ways of denormalizing?
- Where should views be chosen over denormalization?
- Why is indexing the modeler's best friend?
- Explain vertical and horizontal partitioning.

Data Modelling Masterclass

Overview to the Data Model Scorecard™

The Scorecard is a set of ten categories for validating a data model. Each of the following categories heavily impacts the usefulness and longevity of the model, and will be discussed accompanied by many examples:

- Understanding subject area, logical, and physical data models
- Ensuring the model captures the requirements
- Validating model scope
- Applying acceptable modelling principles
- Determining the optimal use of generic concepts
- Using consistent naming standards
- Arranging the model for maximum understanding
- Writing clear, correct, and consistent definitions
- Matching the model with the enterprise
- Comparing the meta data with the data

Intermediate and Advanced Data Modelling Techniques
- Useful templates for capturing and validating business requirements
- Rapidly reaching Fifth Normal Form (5NF)
- How organizations leverage industry data models
- A value-driven approach to building the enterprise data model
- Top Down vs. Bottom Up vs. Hybrid techniques

Data Modelling Guidelines
- Guidelines on converting subtypes in the physical
- When to use each type of Slowly Changing Dimension
- Factors to consider in deciding whether to Star Schema or Snowflake
- Three key questions to ask yourself before you abstract
- When to use a surrogate key

Audience

- Data Modeller/Architect/Analyst
- Enterprise Architect/Solutions/ Applications
- IT Consultant
- Business Analyst
- Project/Programme Manager

IIBA Accreditation

The Data Modelling Fundamentals and Data Modelling Masterclass seminars have been endorsed by the International Institute of Business Analysts. As such, these courses have been approved as being aligned to the Business Analysis Body of Knowledge (BABOK) and hence are recommended training for business analysts who wish to sit the exams to become Certified Business Analysis Professionals (CBAP). For further information on how to register for the CBAP examination please refer to certification at www.theiiba.org. The IIBA's endorsement is registered by Steve Hoberman & Associates.

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