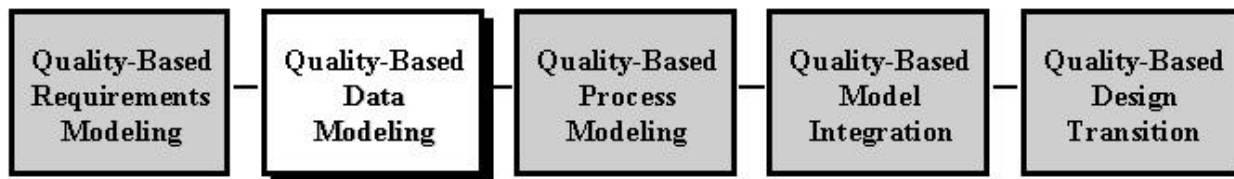


Software Engineering Series



An entire analysis curriculum built on the synthesis of quality management and software engineering principles.

Quality-Based Data Modeling

Quality-Based Data Modeling improves the identification and analysis of data requirements at the enterprise, project, and data base levels. Through a synthesis with basic quality management principles, data model specificity and rigor is increased, resulting in the absence of data omissions and defects often encountered with traditional data analysis techniques.

By adding analysis paradigms to the data analysis toolkit, data errors encountered in spite of rigorous normalization are corrected early in the modeling process. The result is more complete data definitions, clearer models, and an opening up of data-related issues that often remain buried until late in the project implementation cycle.

This seminar explains how to define, verify, and validate data models for information systems:

- ◇ Enables an *understanding of the business* through a focused data analysis of customers, products, and the infrastructures that bring them together. The resulting Enterprise Data Model can be used to align organizational data and mission.
- ◇ Extends the *value of traditional model components* by altering modeling techniques to use additional quality-based criteria; for example, using supply-demand concepts to properly decompose many-to-many relationships into their component associations according to how they will actually be viewed and used by the business rather than simply by some non-value-adding mechanical technique.
- ◇ Internalizes *business exceptions* by forcing the delineation of additional levels of detail in the model as general rules so that exceptionless processes become possible; reducing project requirements, and increasing business value.
- ◇ Forces *containment of business event data* within the business allowing for project and process segmentation through the differentiation of maintenance-vs.-processing data requirements. Such segmentation allows resources to be properly prioritized toward increased normalization of dynamic processing requirements.
- ◇ Requires *explicit definitions* of troublesome data characteristics that traditionally cause significant development and testing problems on projects; e.g. status codes.

This seminar supports the broadest range of data analysis activities. From enterprise-wide data planning, through traditional, relational, and object data base design, data warehousing and expert systems, to APPLET design for the latest Web pages.

Seminar Rationale...

Organizations practicing data modeling activities during analysis and design often fail to achieve the intended benefits typically associated with data modeling. This seminar emphasizes the addition of quality management principles to the data modeler's toolkit in order to overcome the common obstacles that prevent data models from having the desired impact on projects.

The traditional push for logical data base design is deferred in order to allow knowledge of the organization's data requirements to emerge. This allows a better alignment of the business process under analysis with the mission and trends in the business. Project scope and complexity are emergent properties of this modeling activity.

Seminar Uniqueness...

Quality-Based Data Modeling continually de-emphasizes the technical considerations of data and databases, instead emphasizing logical data as a tool for understanding and impacting the business. The result is an emphasis on creating an exceptionless data processing environment by embedding what would have been process exceptions into the robustness of the data models.

Traditional concepts in data models that are often taken for granted as effective tools for analysis are shown to be among the most troublesome features of many modeling projects. Among these: normalization; entity, attribute, and relationship naming; and bi-directional relationships emerge as troublesome obstacles to quality data analysis.

QUALITY-BASED DATA MODELING

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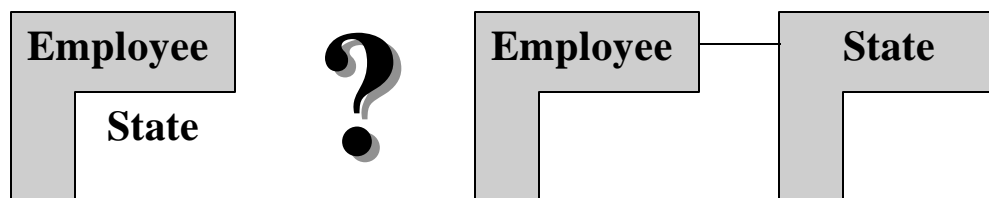
Role Removal Paradigm™

EVOLUTION OF DATA MODELS

Time & Space

Negatives & Denials

Fuzziness & Completeness



DATA-ORIENTED QUALITY SOLUTIONS

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