



Whitemarsh  
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Section of  
Database Principals

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## 1.0 Introduction

Enterprise database must embrace an environment that:

- ! Is database object centered as opposed to data only or process only centered
- ! Has a metadata repository as the locus of all specification development, implementation, and ongoing maintenance
- ! Allows for the implementation of continuous-flow, evolutionary systems development as well as the traditional discrete cradle-to-grave systems development

Critical to successful enterprise database is:

- ! The metadata repository that contains the metadata representing the enterprise business model upon which all the database applications are founded
- ! The discovery of the metadata for the enterprise's mission and the database objects that reflect the enterprise's past, present and future existence

This paper addresses the set of principles which, if followed, led to quality database. The other points above, that is, methodology and metadata repositories are addressed in other Whitemarsh *On Databases* papers. This paper concentrates solely on enterprise database object principles.

## 2.0 Enterprise Database Principles

The fundamental set of activities that form the basic operations of an enterprise are timeless. While these activities are subject to changes around the edges such as presentation layer technologies, deployment strategies, and access and storage strategies, these activities need to be specified only once, and if practical, be implemented only once. And, when maintenance is required, the single instance of the specification and the attendant implementation must be modified and reimplemented in unison. The first principle then is that:

1. *Enterprise database fundamentals must be specified only once, and where practical are implemented only once. Database objects result when implemented through ANSI SQL/3 DBMS.*

The second principle is that:

2. *Enterprise database's specifications and, in turn, its implementation are modified together as a single unit according to well defined rules that*



*govern the metadata based information systems (repositories) that accomplish its unambiguous transformations.*

