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Information Quality Enabled by Quality Database Schemas

The Staggering Cost of Poor Information

According to several studies, the cost of poor information to U.S. businesses alone is between 6%–13% of the U.S. GDP. Larry English, the Father of Information Quality, states these costs are much higher. He states corporations are losing between 10%–20% of their revenue due to the poor quality of their information. Even if you believe your loses are lower, shouldn't you start reducing the percentage of revenue that is an expense, due to poor information, thereby moving that expense to net profit?

Mission Critical: The Database Foundation

The database is a mission critical component to a business' ability to produce quality information. It serves as a cornerstone of the enterprise's information technology infrastructure. To ensure quality information, the heart of an enterprise's database—its schema—must be sound and comply with the relational model.

Flawed Schema—Flawed Information

With a flawed, inconsistent schema, data is not reliable, which means applications will be processing inaccurate information and business people will be making bad decisions based on invalid information. In addition, applications will be delivered late, at a higher cost, and will not perform well.

Examiner—Enterprise Class Solution

DBE Software's Database Examiner addresses the critical consistency and integrity issues of a database throughout the many phases of an application's life cycle. Information quality and operational integrity are paramount to producing quality information at a reduced cost.

The Examiner solution significantly improves the consistency and quality of information across the entire enterprise IT infrastructure. Its comprehensive set of diagnostics validate the structural integrity of relational database schemas by enforcing the rules of the relational model and ensuring the schema has consistency and integrity; it also provides performance related diagnostics.

Examiner pinpoints design discrepancies, recommends precise improvements and corrections, and generates scripts to implement these corrections. Schemas are graphically depicted and documented in a user-friendly format.

Risk Mitigation—What Can Go Wrong?

The database schema changes with the business requirements of the enterprise. The schemas rarely get manually validated because this process is a complicated and tedious task. With Examiner, multiple days of manual work are eliminated in minutes. Your company can rest assured, knowing that it is operating on an architecturally sound database foundation.

Improve Database Design Quality

Examiner is an intuitive analytical platform that validates the database schema whether manually created or generated by popular modeling tools. This powerful product provides numerous benefits, helping organizations:

- **Improve productivity and accuracy** by analyzing relational database schemas to identify integrity and consistency issues. Examiner accelerates database design and deployment by improving the consistency and quality of data structures across the enterprise. Detailed diagnostic reports illustrate structural inconsistencies in a conveniently organized format. This powerful platform fine-tunes database design to ensure solid foundations for any business application.
- **Enhance database design** by automatically generating scripts to fix problems based on the results of its comprehensive diagnostics. Examiner recommends changes to database schemas, providing an efficient and consistent approach to improving database design.

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– **Maximize design efficiency** by analyzing databases being built or databases already in production. Examiner does so by: 1) direct interfacing with popular modeling tools, 2) reading SQL/DDL scripts directly, or 3) reverse engineering the database schema. Examiner allows users to check and validate alterations to a database design as a result of maintenance or new inclusions to the database structures. Design changes can be simulated before implementation.

– **Increase database performance** by identifying violations of good practices that adversely affect performance. Suggested changes are scripted for easy implementation.

Features

Comprehensive Diagnostics and Reporting – Examiner analyzes the schema's data structure, keys, indexes, columns and relationships for violations of relational theory. It also generates graphical documentation of the entire database structure, including column cross-reference and relationship listings. The diagnostics can be customized by selecting those most important to your organization and assigning a severity level for each selected diagnostic. Diagnostic results are conveniently organized by categories or severity levels.

Design Discrepancy Isolation – Examiner provides detailed diagnostic reports that can help increase productivity by accelerating the schema review process. Its innovative "Show Me" facility isolates specific design issues in complex database models, eliminating the task of finding the problem in a large model. A window displays the particular part of the database structure that requires modifications. Modelers can also define and work with a subset of the model.

Teach Me Facility – In addition to providing specific diagnostics and recommendations, Examiner explains the theory behind the violations. This valuable "Teach Me" facility reveals the impact of design choices or modifications in light of relational theory.

By instructing data modelers on the effects of their design decision, Examiner helps modelers construct the perfect database design. It is also a superb instrument for tutoring new personnel in correct database design.

No Learning Curve – Examiner can be used immediately, without having to go to an extensive training session. One half-an-hour web session is more than enough to get the data architect, data designer or database professional to be a competent user.

Industry Independence – Examiner applies to any kind of industry. It is being used by over 2,500 customers, in the U.S. and abroad, by corporations, system integrators and government entities across all vertical markets.

Uses of Examiner

Examiner has been used for many types of requirements, such as:

- Development & Maintenance
- Data Warehouse applications
- Discovery Projects (IM assessments)
- Database Consolidations & Conversions
- IT Audits
- Training for new designers
- Compliance (Data Governance enabling)
- Design Certification for Contractors

Supported Environments

Examiner runs in any version of Windows and supports the major RDBMS platforms: ORACLE, DB2 for OS/390 and z/OS , Sybase, Microsoft SQL Server, and DB2 UDB LUW (Linux, Unix, Windows).

Strategic Plan — Information Quality

There are two components necessary to implement an "Information Quality Initiative" using Database Examiner. First, senior management mandates the use of Examiner, enterprise wide, for all new production databases being built; this includes the schemas for the feeder systems for every new Data Warehouse being developed. Second, for databases that are in production, a plan must be established determining the priority for each database to be reviewed and fixed. This process will take some time, but will pay big dividends in the long run.