Data Warehouse in the Insurance Industury

by Sudheer Sharma - Tuesday, July 28, 2009

http://dwhnotes.com/data-warehousing/dwh-insurance

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Data Warehousing in the Insurance Industry, A Strategic Advantage: Designing High-Performance DSS Databases

One of the biggest challenges in building decision support database structures is balancing the tradeoffs between high performance and flexibility in the physical design. Data Warehousing 101 quickly teaches us that access patterns are radically different in a decision support environment than in a traditional on-line transaction processing (OLTP) environment. However, sometimes we are too eager to forget the fundamentals of Database Design 101 related to the sins of denormalization and the implications of deviating from third normal form database structures. The result is all too often a massively denormalized set of database structures for which flexibility and adherence to the business model within an organization are sacrificed to the design principle of avoiding joins at all costs. This is a bad thing. Or sometimes it is merely an issue of not bothering to untangle data quality issues propagating from the source systems.

The reality is that neither fully denormalized nor fully normalized database structures are usually the right answer for a well designed decision support database. Each opportunity for denormalization must be approached as an engineering design decision – with quantification of costs and benefits determining the appropriate solution. These decisions are particularly difficult with data models in the insurance industry due to the complexity of the business and the sophistication of analyses typically required. Unfortunately, the naive approach of denormalizing into a single “fact” table is rarely appropriate because the relationships between core entities in the model are more complicated than in most industries. But it looked so easy in the text book example using a retail data model, right? Yes, but this is insurance and insurance is hard.

The key point here is that the business should be driving the technology decisions – not the other way around. If the relevant business questions cannot be answered in a reasonable way against the database structures, re-think the design. With this in mind, it is useful to review some of the basic rules of designing to third normal form database structures and to point out some of the common mistakes frequently made in denormalizing data warehouse database structures.

Courtesy : http://www.information-management.com/

Infact this was printed long back in information management website, Stephen Brobst had posted his white paper on DW in the insurance industry. Go thru the below link for more information

http://www.information-management.com/issues/19980601/368-1.html

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