

Smart Access

Solutions for Microsoft® Access™ Developers

Flexible Normalization and Denormalization: Case 1

Garry Robinson



Normalizing your data design is an essential part of creating a database that can be easily updated. However, Garry Robinson found it necessary to denormalize his data to provide the users with a user interface that met their needs.

EVERY now and again you'll get a casual inquiry from one of your important clients that makes you fear that your beautiful, normalized data model won't support your users. I had one of those moments recently: A client asked if I could redesign a data entry form, and I realized that my data model just didn't support the new format. My first tactic was to look for a diversion (i.e., pretend to have a lot of work on my plate) and just hope that the request would go away. It didn't. Fortunately, I was browsing through Helen Feddema's Access Watch newsletter when she published an article that suggested a solution to my problem. This article describes how I adapted her approach to denormalizing a fully normalized table to support unique user requirements. I'll also describe how I further adapted Helen's original solution and turned a denormalized table with lots of fields into a normalized table suitable for grouping by queries.

Some details on my client's problem: The database that I was working on was for a metallurgical plant that extracted zinc, lead, and silver from high-grade ore for a mine near the center of Australia. The main purpose of the database was to store and report on about 200 different measurements that are taken twice every day at many different places around the plant. What was interesting about the problem was that my client was constantly adding new measuring points to their process. When I was designing the solution, I decided that I needed to avoid adding new fields to the tables every time a

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