

ACCESS <<<<<<<

By Patricia Cox

The Master Budget Project: Detailed Analysis

Last month we began an overall analysis of the Master Budget components and how they relate to a database design. We started organizing ideas about how to design the database components, including tables, relationships, potential queries, reports, form use, and possible macros for processes.

This month we'll hone in on some tables and see what elements to consider as we make our design. It's important that we keep the result we want to achieve first and foremost in our view.

Some tables in our design seem straightforward, and some are a little more complex to conceptualize. Let's start with some straightforward examples. If we look at Products and Materials, we can design two tables: the Product table to store data on the products and the Material table to store data about the materials used to make a

product. We also need a Parts table to store the data about the parts that will be used as materials. Looking at Tables 1-3, with field names in the top row and data examples, can you imagine what data types and sizes you would use for each field? Remember, only values that will be used in calculations are set as numbers, and dollars and cents are always set as currency. (Note: The data shown in the Material table in Table 2 is only for the basic bike as an example. The actual Material table will include data to show all the materials.)

Working on a database design is time-consuming, and we are creating something that will be used multiple times. Notice the generic names for some fields, such as "Previous Year Ending Inv." Just like with the Excel project, the goal is to create something that will let us simply enter a few numbers and

crank out a result each year as well as examine a number of alternative strategies by changing some "what if" values to produce a new budget projection. At this point, you could be asking why we would do this in Access instead of Excel. Good question. The Excel example considers only two products—a basic bike and a deluxe one—but what if you had 100 products? A database structure allows for ease of entering the additional 98 products when a spreadsheet would get a little unwieldy. Thus, when choosing to use Access or Excel, you definitely want to consider the volume of products. You might not want to put this much time into design if you were dealing with only two products.

You can probably envision how to add direct labor hour and indirect labor hour fields to the Product table as additional fields, as well as the values that would

Table 1. Product Table

Product Number	Product Name	Product Description	Selling Price	Projected Sales in Units 1st Qtr...etc.	Previous Year Ending Inv
1001	Basic Bike	Basic Model	150.00	4,000 (etc)	807
1002	Deluxe Bike	Includes special features	350.00	2,000 (etc)	98

Table 2. Material Table

Product Number	Part Number	Units Needed
1001	100001	2
1001	100002	2
1001	100003	1
1001	100004	1
1001	100005	2
1001	100006	1
1001	100007	1

Table 3. Parts Table

Part Number	Description	Cost Per Unit
100001	Steel	\$15.00
100002	Rubber Handles	2.00
100003	Seat	4.00
100004	Chain	6.00
100005	Tires	10.00
100006	Gear Shift	8.00
100007	Brake Unit	6.00

populate them. As we work on the design (on paper), you may feel the urge to start creating tables, relationships, etc. in Access. But your patience will be rewarded by reducing what we have to redo in Access because we took the time to look at the design conceptually before

we ever started working in Access. For those of you who are used to going into Excel and just starting to enter things, this may be hard to resist. But in Access, we first want to create our entire design before beginning anything.

Next month we'll take a look at the

Pro Forma statements and consider the best method of storing data in order to be able to create them. After that, we will be able to finalize our data tables and move on to looking at how we will create forms to enter our "What if" values and then use them to create budget projections.

For those of you who have been asking about the location of the Access articles online, they can be found in the IMA Publications Group of *LinkUp IMA*, listed under "Excel & Access article reference." Here is a link to them:

<http://linkupima.com/resources/8630edc398/summary>.

As always, let me know if you have any questions. **SF**

Patricia Cox has taught Excel and Access to management accounting students and other college majors and has consulted with local area businesses to create database reporting systems since 1998. She is also a member of IMA's Greater Milwaukee Chapter. To send Patricia a question to address in the Access column, e-mail her at kathrynmann@tds.net.