Where the Goodies are

Knowing where the data is, what it does, and what happens is critical to managing SAP output. This document is to really show you the tables and data settings I am familiar with, which is not much, so do not expect much.

Data Tables

The data tables in SAP are usually (hopefully) locked, since they can cause complete chaos, system wide melt downs, utter and complete mayhem, to an organization. If they are not locked though, you can get some useful data. Or you can beg to get them on Z-Reports, downloaded at night. Just for fun, see if you have access to SE16. If you do, don't do anything. Just back slowly out of the transaction.

There are many tables that can be used for all kinds of spread sheet activities, often to the detriment of the business. It is very, very easy to get into the weeds on these things. It also can be incredibly useful to know what you have asked SAP to do for you, systematically, even if you do not like it

The ones I have used are below
- **MARD** – item level data from MM03
- **MARC** – Material Master MRP/Plant
- **MARA** – Display General Material Data
  MARM – Units of Measure for Material
- **MBEW** – Material Master Accounting Data

When running these tables wide open for a plant, the only comments I have are first, it can take awhile, and second, on the bottom of the data browser, two fields are "Width of Output List" and "Maximum number of Hits" that may need to be made larger than the default.
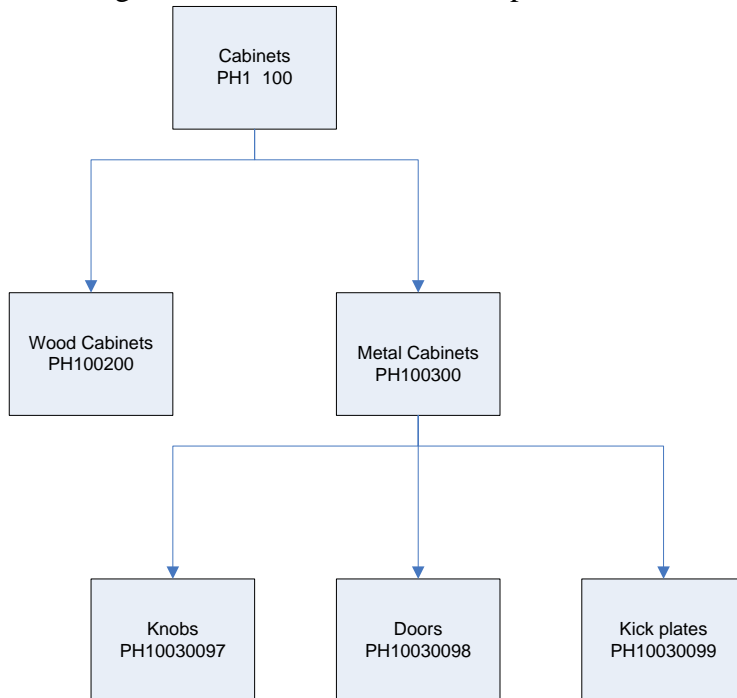
I do want to mention that a very good use of magic spreadsheets is in data standardization. By downloading all the materials master data into Excel and by putting on the filter option you can see how standard the fields are. If you are relatively new to SAP, I would encourage you to standardize as much as possible, using as few different planning types and settings an as possible. This way the data is all reacting the same way and if you want to make a change it is easier to see what is happening in the test box. If you go "Cowboy" and let everyone set their own master data settings, you will have a real mess.

Data Masters

What I discuss in this section is definitely incomplete, so take it for what it is worth, and remember, if you do anything with this data, and you break something, it is 100% your fault. I will skip the data I do not know much about, so like I said, this is going to be incomplete.

Product Hierarchy: The Product Hierarchy is a very important field to populate. The key to using this correctly is to understand its role in aggregating revenue streams upwards for accounting purposes.

To explain it, I will use an example from a prior life. At one company I worked at we made cabinets. So the first level of the Hierarchy was "Cabinets". This is also referred to as PH1. The cabinets were either metal or wood, so the next level of differentiation was for "wood" or "metal". This is PH2. We also sold replaceable parts so another level was designated for Doors, one for kick plates, one for knobs, etc. This is PH3.

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                    ┌──────────────┐
                    │   Cabinets   │
                    │   PH1  100   │
                    └──────────────┘
                           │
            ┌──────────────┴──────────────┐
            │                             │
   ┌──────────────┐              ┌──────────────┐
   │ Wood Cabinets│              │Metal Cabinets│
   │   PH100200   │              │   PH100300   │
   └──────────────┘              └──────────────┘
                                        │
                       ┌────────────────┼────────────────┐
                       │                │                │
               ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
               │    Knobs     │ │    Doors     │ │ Kick plates  │
               │  PH10030097  │ │  PH10030098  │ │  PH10030099  │
               └──────────────┘ └──────────────┘ └──────────────┘
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Basic Data 1 & 2: This is where you put part number, description, unit of measure, Product Hierarchy, weights, validity dates, etc.

MRP1: Of particular importance are the "Plant-sp. Matl. Status", "MRP Group", and "MRP Type". These fields determine how your planning system runs. I will also note some other fields to watch

- Plant-sp. Matl. Status – this is the plant specific materials status. An item maybe a production item (PR) in one plant, and inactive (IA) in another plant.
- MRP Group – Are you make to forecast (0040)? Reorder point (ROP)?
- MRP Type –There are a lot of options here and you do need to go through test to see what they are doing. Many of them involve MRP and time phased off sets (P1, P3, etc.) so play around.
- ROP – this field requires the preceding fields be set correctly to do anything. If you set an MRP setting in MRP type, it will not look at this field – it just skips it. You have to set Reorder point all the way through MRP1 for it to work. If you do

use reorder point, this is the field where you set what the reorder point quantity should be.

- Lot Size – you can get yourself in trouble here, so I will tell you how I like it and you can figure out what you want to do. I like all my lot sizes set at "EX" which is lot for lot. I do not like the weekly bucket or daily bucket feature, because I like my lot sizes to have some static characteristics. With this setting I will usually set my minimum at my container size (6 per skid for example) and my rounding value at the container size as well. This works really well when you are doing things like a Plan for Every Part (PFEP).
- Minimum and Rounding Values – see above on lot size
- Maximum – in general I do not use Maximum. I just leave it blank. My main issue with it is that it constrains the size of an order released to the floor, but does nothing to limit the number of orders released. For example, if I set a maximum of 2 pieces per order, and someone orders 100 pieces, I will end up with 50 orders for 2 pieces all due the same day, and I just hate that. It generates far more transactions than I want to deal with. I would rather just stare at one big old order for 100 pieces.

A special note on Reorder Point planning – Reorder point shuts off MRP. No forecast will be generated, which has implications for forecast to suppliers and any capacity planning screens that might be affected. I personally hate reorder point. I know it has rational uses, but I have an irrational bias against it and think it is just stupid planning and abused and the people who use it are the same, even though sometimes they are not.

MRP 2: This is where we differentiate between make and buy, and start to manage throughput times.
- Procurement: here you need to select, make, buy, or make/buy. Also determine a storage location and back flushing options.
- Scheduling: "In house production" needs to be populate if it is a make item. "Planned Delivery Time" gets populated if it is a Buy item. GR Processing Time is Goods Receipt put away time, how long from the dock to the rack, or the floor to the rack. You can use it with both make and Buy. When you are in test playing with these settings, note that the internal time is the (GR time + In House/planned Delivery time).
- Net Requirements: Safety Stock is plain old Safety stock. Service level theoretically does something, hit F1 and read the help and test. If you figure out what it really does, let me know. Coverage profile is a dynamic safety stock based on forecast and days coverage, which I do not like. I do not believe it works if you have safety stock set.
- "Safety Time/act Cov." Is used with "STime period profile" and is pretty cool. What it does is best explained with an example. I had a supplier that said they could delivery in 7 days, but they were always late by 7 days. To compensate, we left planned delivery time at 7 days, but set safety time to 7. This allowed MRP to release orders at 14 days out, but kept the date on the Purchase Order 7 days

out. That way we could continue to show the supplier they were missing the 7 day window, but we could get our parts in house on time.

MRP3: The strategy group, the availability check, and the consumption logic for the forecast are all set here, and are very, very important so in test run this a lot.

- Mixed MRP is where you will make some decisions about Gross Requirements Planning vs. Net Requirements planning (see section on forecasting).
- Be very careful if you start playing with the Total Replenishment Lead time field. You can do some damage here. The key take away is that if you populate a number like "70" here, and you go to zero on a product you sell, it will tell the next customer order that the promise date is 14 weeks out (70 divided by a 5 day week), regardless of when the next production order or purchase order is due in. I do not know what else it does, but I did not like what it did to me when we used it.

Forecasting: This tab defines the forecast periods and how much history it takes into account. I always thought it was a dull tab until I noticed the little consumption button at the bottom. When you click on it and click to total consumption, you will see all your consumption (usage, not customer orders) which can help planning going forward.