

---

## Order Management

**Geoff Cammell**

Oracle Practice Manager

*Mi Services Group*

A powerful new module fully integrated with 11i Financials.

Order management is at the heart of commercial ERP systems. This presentation talks about:

- How Order Management integrates with other modules
- Experiences of a recent Order Management implementation
- Oracle advanced pricing

## New and Improved

Oracle Order Management is a major step forward in bringing together a toolset that allows for high volume and complex orders to be entered, managed and shipped. At the same time it can be configured so that even an occasional user can quickly get in and enter an order, or check a status.

Oracle have replaced the Order Entry module of old, and introduced a lot of new functionality based on the Fast Moving Consumer Goods (FMCG) requirements learnt the hard way through application of the Consumer Packaged Goods (CPG) solution. The new module also follows the trend of bringing together all the tools needed to complete a business process flow, from Quotations through to Shipping with ties in to Financials, Inventory and Manufacturing along the way.

The standard Order Management licence covers Order Entry, Pricing, Picking / Packing, and Shipping Execution. It can be extended by adding Advanced Pricing, and a web based product Configurator. It is designed to be tightly integrated with Advanced Planning and Scheduling (for Global Available to Promise (GATP) information), Warehouse Management (for advanced pick and pack), and Transportation (for carrier selection and costing).

Order Entry will handle quotes, as well as orders for either goods or services. It will also cover returned goods, either on a separate order or as part of a mixed order.

While there is a common order entry engine, orders may be taken via the order pad (professional forms), via Sales Online (end customer web pages), or via electronic interface. All orders will end up in the same database tables.

## Fully Integrated

One of the major changes between 10.7 and 11 is the massive extension of 'core' modules to take the e-business suite well beyond Financials and HR. Larry Ellison has said that Oracle now provides '100 percent of what you need, and 80 percent of what you want'. Having tried 'best of breed' Larry is now firmly of the belief that the ideal system is from a single vendor, and as Vanilla as possible. If you have ever spent time trying to get System ESS to talk to Oracle Financials and Inventory you will understand and appreciate the new approach.

The integration comes in several guises. Not only is there the single point of entry (data only ever

entered in one place), there is also the streamlining of business processes flows. This can be seen in the interaction between Customers (set up in Accounts Receivables) and Pricing. Attributes set up against the Customer drive defaulting rules in Order Management, which may be used to select pricing lists, or work out discounts. The two areas have been designed to work together, compared to the more traditional stovepipe approach. This is repeated over Inventory, Manufacturing, Planning and Scheduling, Financials and the e-commerce gateway.

## Workflows

Perhaps the other single most notable change from 10.7 is the use of Workflows to control the order processing cycle.

These workflows are all user defined, with a number of seeded flows supplied. The flows can be extensive, and may run for several days or weeks for any given order. The progress of a flow can be monitored using an option on the tools menu for an order, or a line on an order.

The workflows may cover multiple modules. Most will obviously have Order Management, but may also include one of the manufacturing modules (Process or Discrete), Purchasing and Accounts Receivables. Depending on the item being ordered, it may be sourced directly from stock, or it may need to be purchased or manufactured. Once it is finally shipped an invoice needs to be raised. All of this is workflow controlled and monitored.

The particular workflow to use on an order is entered on the order header screen. It is possible to have one workflow go down quite different branches for each line item. An example is the 'Mixed' seeded workflow, which allows order lines and return lines to be entered in the same order.

Workflows also provide yet another way of having Order Management behave very differently without needing to go through and change a lot of set-up. For example, two workflows can be defined, one that follows the invoice on delivery flow and one which invoices on order entry. As the order is entered the user can choose which workflow to use. As will be seen next in defaulting rules, the choice of workflow can be defaulted, for example based on the customer.

## Defaulting Rules

Oracle has expanded on the defaulting rules and folder technology to the point where it is possible to enter an order using just three fields (Customer name or number, Item and Quantity). Almost every

field on the order header and line detail screens can be defaulted, in a user-defined sequence, using multiple sources of information.

Folder technology controls both what fields appear on a screen, and in what position. By setting up the screen to reflect the defaulting rule sequencing, the user is led through to enter in the key information from which the remaining fields will be defaulted.

For each individual field that is to be defaulted, it is possible to define a sequence of places to look for information. This can include named fields on related documents (like the Customer or Inventory records), or can be derived data using calculated values, constants, or even PL/SQL calls.

All together, workflow, defaulting rules and folder technology make it possible to cater for very different order entry requirements with a minimal number of keystrokes.

## Standard Pricing

The pricing functionality in 11i is promoted as one of the product differentiators. Oracle Order Management offers both Standard and Advanced Pricing. Standard Pricing is very powerful in its own right, and includes multiple price lists, terms and promotions. The same pricing engine and approach is used with either method, with Advanced Pricing extending the complexity of the promotions that can be modelled.

Oracle pricing is based on the concept of having base price lists, and modifiers – which may either increase or decrease the price. Choosing which price list and modifiers to apply involves the use of qualifiers and characteristics. Qualifiers are used to weed out non-applicable lists or modifiers. Characteristics are then used to select the most appropriate price list, and a range of modifiers to be applied.

There are many ways to use pricing to arrive at the same price. You may set up a different price list for each customer you deal with, or each type of customer you deal with. Setting a base price list and defining modifiers for each customer or customer type can achieve the same result. You may also set up a base price list and use a formula to work out or look up variations by customer.

## Advanced Pricing

The following is not a full list of differences between standard and advanced pricing, but rather a list of requests we have received from various people, that are addressed in advanced pricing.

The most common request is for the ability to cope with volume based price breaks. Oracle offers both individual line based discounts, or whole order based discounts.

As mentioned in standard pricing there is the option to use a formula on the price list to work out a selling price. With advanced pricing this is extended to allow the formula to be evaluated at the time of order entry (rather than a concurrent program as for standard).

Modifiers are also extended, with greater flexibility in the qualifiers and more modifier types including promotions, deals, item upgrades, and discounts on another item (buy a computer and get a printer half price). Coupon issues provide for off invoice discounting and annual redemption. Advanced pricing allows for terms substitution.

If you do not always want to give a discount, but have pre-approved discounts available if the customer requests a discount, you can use the 'Ask for' modifiers in advanced pricing.

It is also possible to allow the order entry clerks to over-ride the price and give their own discounts on an order-by-order basis. However, feedback from an Order Management user that works this way suggests that Oracle is not a good fit for this type of business. The reason being that most of the analysis and control that Oracle offers is based on pre-defined rules and values. Each rule has a reason for being applied. Sales figures can be analysed based on the discounts given, and cash projections can be made by applying the pricing engine to a forecast. None of this is possible if the user is entering their own price or discount as orders are taken.

If you are applying a number of discounts you will often want to layer them. This means applying some discounts to the original price from the price list, and then applying further discounts on the discounted price. Advanced pricing allows you to have multiple 'buckets' for applying discounts.

## **Implementation Feedback**

We have received very positive feedback on the use of Order Management from a FMCG distributor. However, much of this appreciation only came after using the product for a period of time. In order to provide a system that will work for all types of industries and markets Oracle have included a lot of functionality that will not be used by any given company. At Mi Services we have now changed our approach to demonstrating Order Management. Rather than showing all it can do, we use a very basic set up, and then turn things on as clients ask for more functionality.

The most obvious example of this can be seen with the default Order Management screens, which are totally packed with information. When users first look at the screens the impression is that a lot of information is needed to enter an order, and that the system is very complex. However, as already noted above it is possible to enter an order using just three fields and we have found that most of the order line detail required can be fitted onto a single tab without any need for scrolling. The real power of folder technology is that there is no need to have to choose. It is easy to set up both the cut down version and a comprehensive version, and simply swap between them as required – without having to leave the order.

The defaulting rules that come with Advanced Pricing really do make it possible to set up complex conditional clauses to absolutely minimise the number of occasions when the defaulted values need to be over-ridden. For the above client we have created an extensive item classification system, multiple levels deep, which is stored in flex fields against the item. A similar multiple level classification is stored against the customer. For any given order line a combination of these two classifications is used to determine which modifiers are to be used. This works extremely well in situations where some sort of business rules are used to determine pricing and discounting, no matter how convoluted.

Another feature not really mentioned above is the ability to take orders from a number of sources, including EDI. Oracle have extended and combined a number of their electronic gateways, with a good range of hooks into the applications. The client mentioned above is a FMCG wholesale distributor, mainly supplying to supermarkets. As such they have high volumes of product ordered from a relatively small number of customers. This is an ideal situation for the use of EDI, which was implemented for both their major customer and their primary supplier. EDI can take many forms, and in this case problems with the customer being able to produce an XML file mean that a text file is electronically transferred and loaded directly into the Order Interface Table. This took just 3 days to implement and test.

One of the major problems faced by FMCG is keeping track of inventory, or knowing what is on-hand or pending receipt and when it will be available to meet a sales order. Order Management includes time phased Available To Promise (ATP) functionality, which can be combined with the reservation functionality to keep a tight and

accurate link between inventory and sales orders. If stock is projected to be available at the order request date, that stock can be either soft or hard reserved for the order. If the total quantity will not be available when requested, ATP can give details of what will be available, and when the remainder is expected. If there is an outstanding quantity with no scheduled receipts this can be flagged at the time of order entry, giving the option of trying to sell an alternative product, trying to delay the sale to give enough time to organise another scheduled receipt, or putting all or part of the order line on backorder.

So far workflows have been mentioned in relation to high-level control of a sales order through the system. They can also work at a detailed level, controlling when orders are released for picking, when they are shipped, and when they are invoiced. They may also be used to solve another common problem, that of credit checking. Integration with the Accounts Receivables module ensures that when an order is taken it is checked against an up to date credit status. The credit check is typically done after the order is entered, but before it is booked. If there is a problem workflow can use credit profiles to determine how to proceed. Credit checks can optionally be repeated before the order is picked or shipped.

## Summary

Our experience with the new Order Management module has been very positive. It has proven capable of handling high order volumes, and complex pricing. While it may be based on 10.7 Order Entry, it is more than just a 'face lift'.

We have had common feedback that the system appears too complex, although this view is largely dispelled once we have configured according to the specific business processes used by a client. After that most users say it is easy to use, with minimal repetitive keying and good control to help prevent bad entries.

Real time pricing, credit checking and delivery scheduling / ATP make the order easy to enter. Integration with other Oracle modules makes it easy to progress the order through to shipping and invoicing, and provides easy access to the real time status of the order from the order entry screen.

The structure of the pricing engine means that the use for each price or discount is explicitly stated through the qualifiers. This makes it easy to turn on or off specific price lists or discounts, or to copy them – for example if a customer is sold or a new one introduced.

If you have been put off by 10.7 Order Entry, or unlucky enough to have seen System ESS (Oracle CPG order entry module) you should have a good look at Order Management.

## About The Author

Geoff Cammell has been consulting to industry for over fifteen years. His experience with Oracle dates back to 1996 when he joined Oracle to help implement CPG at the NZ Dairy Group.

Somehow he managed to survive CPG, and Geoff is now the Oracle Practice Manager at Mi Services Group, looking at how to make Oracle applications more accessible by New Zealand and Australian users. This includes developing functionality for Asia Pacific, and extending the Fast Forward approach for low cost, fixed price implementations.

Geoff combines many years of industry experience with a strong academic background, including a Doctorate of Engineering on the use of Artificial Intelligence to optimise production.

Mi Services can be contacted by phone on +64 (09) 358 4114, or on the web at [www.mi-services.com](http://www.mi-services.com)