VOFM ROUTINES IN
SALES & DISTRIBUTION

PART 3: REQUIREMENTS

PRODUCT REQUIREMENTS PLANNING

Version 1.0
April 1999

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1. Introduction

Transaction VOFM is a tool that was developed in R/3 to facilitate the definition of both SAP delivered as well as customer defined routines / rules used in the system during various business processes. VOFM routines are ABAP code written in Forms. VOFM provides the user with the benefit of choosing from one of the standard delivered R/3 routines or writing their own. VOFM is intended for the implementation team when configuring the system. It is not intended for the end user.

VOFM is divided up into four main areas. These include copying requirements, data transfer, requirements, and formulas. This paper will focus on requirements that were delivered by SAP to support the Sales & Distribution (SD) and Logistics Execution (LES) applications. At a high level, requirements are rules that determine when a particular action should take place. For example, a pricing requirement defines the circumstances under which an access to a particular type of pricing record is made. Likewise, a material determination requirement specifies when a material determination record should be accessed. Requirements are a great tool to aid system performance by defining rules that eliminate unnecessary accesses to the database. They can also be used to set certain variables in the coding, or even to call other programs.

Section 2 defines how to create a new VOFM routine, in the event that the standard routines do not match the user needs. In the remaining sections, the SAP standard delivered VOFM routines related to Sales & Distribution and Logistics Execution are documented. Starting with Release 4.6A, this documentation is part of the standard product.

This paper assumes that the reader has a general understanding of the SD and LES modules in R/3 as well as a working understanding of the condition technique.

2. Creating a New VOFM Requirement

In each area of VOFM, SAP delivers routines using the name space from 1 to 599. SAP customers can create their own VOFM routines using the name space from 600 to 999. To create a new routine, follow these steps:

1. First check to see whether you can use one of the requirements delivered in the standard system.
2. Either overwrite an existing requirement or enter a new number on a new line from the customer name space 600 to 999. Also enter a short description of your requirement.
3. Program your requirement in the ABAP editor.
4. Activate the program.
5. Enter the application if you want to use the requirement in one particular application area. For example, you have defined a new requirement for Output control that is only relevant for deliveries.
6. Enter your new requirement in the appropriate area in customizing. For example, a new pricing requirement could be assigned to a pricing procedure or access sequence. As another example, credit check requirements would be assigned in customizing to the automatic credit controls.

New VOFM routines created at a customer site are not overwritten by a software upgrade.

3. Pricing

Pricing requirements are typically used to define when an access should be made in pricing. They can be assigned to a condition type in a pricing procedure or to an individual access in an access sequence. An access will only be made if the requirement is met. Using requirements can improve performance by eliminating unnecessary accesses to the database.

When pricing is carried out for a sales document, the system processes the pricing procedure one step at a time. For example, the user may have listed condition type PR00 first to determine the price. If a requirement has been assigned to PR00 in the pricing procedure, the system will check to see if it is met. If it is met, the system continues to look for prices using the assigned access sequence. If it is not met, the system skips that condition type and goes to the next level of the pricing procedure. The same holds true for the individual levels of the access sequence. If a requirement is assigned, the access is only made if the requirement is met.

When looking at the code for the standard delivered pricing requirements or when writing your own, two common work areas are used. These include:

KOMK – Pricing communication structure containing header related fields from the sales document.
KOMP – Pricing communication structure containing item related fields from the sales document.

Following is a description of the pricing requirements delivered in the standard system related to SD and LES.

PRICING REQUIREMENT 1: DIFFERENT PAYER

This requirement is met if the sold-to party in the sales document differs from the payer. This requirement can be assigned to an access level in an access sequence to aid performance when pricing condition records are maintained at both the sold-to party and / or payer level.

Example:
As part of their pricing program, a company sometimes defines pricing based on the sold-to or the payer. Within their customer base, some customers have a central payer that is used for many sold-to parties. Other customers are smaller where the sold-to party and the payer are identical. Within the pricing access sequence, the user sets up accesses for both the sold-to party and the payer. The first access looks for a price using the sold-to party of the sales document. The second access looks for a price based on the payer of the sales document. The user assigns requirement '1' to the second access to indicate that it is only necessary to look for a payer level price if the sold-to party differs from the payer.

PRICING REQUIREMENT 2: ITEM WITH PRICING

This requirement is met if the document item category is relevant for pricing and no previous condition in the pricing procedure has set the condition exclusion flag. This requirement can be assigned to condition types in the pricing procedure to avoid unnecessary accesses to the database when an item is not relevant for pricing or a condition exclusion indicator has been set.

Example:

A sales order is placed in the system. Some of the items in the order will be free to the customer and the customer service representative indicates this with the item category TANN. In the IMG, item category TANN has been configured as not relevant for pricing. Within the pricing procedure, the user assigns requirement '2' to all condition types. Using this requirement, the system does not access any pricing condition records for the free line item. In addition to offering free items, some of the prices for products in the sales order are defined as net prices. When a net price is found, no subsequent discounts or surcharges should be assigned to the item. Pricing requirement '2' also ensures that further condition records are not accessed when a net price has already been found for the item (condition exclusion has been set).

PRICING REQUIREMENT 3: FOREIGN CURRENCY DOCUMENT

This requirement is met if the sales document currency differs from the company code (house) currency. In a sales document, the company code is derived based on the sales organization. This requirement can be assigned to an access level in an access sequence to aid performance when pricing condition records are maintained in foreign and / or house currencies.

Example:
As part of their pricing program, a company sometimes defines pricing based on price lists. The price lists are defined based on a currency which is part of the condition table key. Price lists could be entered in the house currency or in a foreign currency. Within the access sequence, the user has two accesses for price lists. The first access is done using the document currency. The second access is done using the house (company code) currency. Requirement '3' is assigned to the second access so that is can be skipped if the document currency and company code currency are identical.

PRICING REQUIREMENT 4: COST

This requirement is met if the sales document item category has been configured to determine costs. It also verifies that the plant is set, the valuation area company code and the sales organization's company code are identical, and that the item is not a down payment item. This requirement can be assigned to the cost condition type in the pricing procedure (standard delivered condition type VPRS) so that the cost price is only determined for relevant item categories.

Example:
An order is placed that contains both stockable and non-stock items. Non-stock items are represented in the sales order with the item category TAX. TAX has been configured so that the cost is not determined during pricing of that item in the sales order. Stockable items have been configured to determine costs so that the net sales price can be compared against the cost price. Requirement '4' is assigned to the cost condition type in the pricing procedure so that the cost price is only accessed if the item category is relevant for cost determination.

PRICING REQUIREMENT 5: NO CONDITION EXCLUSION

This requirement is met if the condition exclusion indicator has not been set by a previous condition in the pricing procedure. This requirement can be assigned to a condition type in the pricing procedure to ensure that it is not accessed if an exclusion has been set. This requirement is intended for use in MM pricing versus SD pricing. For SD pricing, requirement '2' should be used which also checks to see if the item category is relevant for pricing.

Example:

Prices are defined in the system for purchasing. When certain prices are found, subsequent discounts should not be applied to the item. The condition exclusion field has been maintained in the pricing records to indicate this. Condition requirement '5' is maintained in the pricing procedure for the discount condition types to ensure that they are not accessed when condition exclusion has been set.

PRICING REQUIREMENT 6: CONDITION EXCLUSION <> 'X'

This requirement is met if the condition exclusion indicator is not equal to 'X'. This requirement can be assigned to a condition type in the pricing procedure to ensure that it is not accessed if a condition record with exclusion indicator 'X' has already been found. Condition exclusion is a general tool that can be used to exclude conditions from pricing based on previous conditions that have been found in the pricing procedure. This requirement is intended for use in MM pricing versus SD pricing. For SD pricing, a variation of requirement '2' should be used which would also check to see if the item category is relevant for pricing.

PRICING REQUIREMENT 7: DOMESTIC BUSINESS

This requirement is met if the departure country is identical to the destination country. This requirement can be assigned to a condition type in the pricing procedure or an access level in an access sequence that is only relevant for domestic sales or purchases.

Example:

Within a sales or purchasing document, the tax can be calculated in the pricing procedure using a condition type. In many cases, taxes may be calculated differently based on whether the transaction is a domestic transaction or an import / export transaction. Using an access sequence, the user can define different ways to access tax information for the document item. The user would assign pricing requirement '7' to those accesses that are only relevant for domestic transactions. Pricing requirement '8' can be used to indicate an export / import transaction.

PRICING REQUIREMENT 8: EXPORT / IMPORT BUSINESS

This requirement is met if the departure country differs from the destination country. This requirement can be assigned to a condition type in the pricing procedure that is only relevant for import / export business.

Example:

A company sells and procures products domestically as well as internationally. Every item that it imports or exports must have a statistical value associated with it when it passes through customs. The statistical value is the net domestic value (fair market value) of a product when it crosses a border. The statistical value is printed on the appropriate customs documents such as the Single Administrative Document (SAD) in the EC, the Shipper's Export Declaration (SED) in the US, and the export report in Japan. Within the standard delivered R/3 system, condition type GRWR is available to calculate the statistical value in the pricing procedure. Pricing requirement '8' should be assigned to this condition type in the pricing procedure so that is only calculated if the document is relevant for export / import.

PRICING REQUIREMENT 9: QUALIFIES FOR CASH DISCOUNT

This requirement is met if the material in the item is relevant for cash discounts and the 'Base amount for tax is net of discount' field in the company code is blank. This requirement can be assigned to the cash discount condition type in the pricing procedure to ensure that the cash discount is only accessed for items that are relevant for cash discount. This is used when the cash discount is calculated after the tax.

Example:
A company sells many products. Some of the products qualify for a cash discount and others do not. Within the material master, the user indicates which materials are relevant for a cash discount. Within the company code, cash discounts are calculated after tax. The user configures the cash discount condition type (SAP delivered condition type SKTO) after the tax calculation in the pricing procedure and assigns pricing requirement '9' to avoid the access for materials that are not relevant for the discount.

PRICING REQUIREMENT 10: PLANT IS SET

This requirement is met if the plant in the document item or the departure country of the document has been set. This requirement can be assigned to a condition type in the pricing procedure that is only relevant when one of these conditions is met.

Example:
Value added tax (VAT) is to be calculated for a document item. The VAT should only be calculated for documents where the departure country has been determined or the line item has an assigned plant. The user assigns requirement '10' to the tax condition type in the pricing procedure so that it only is calculated when these conditions are met.

PRICING REQUIREMENT 13: ROUNDING AS PER TABLE T001R

This requirement is met if an entry has been made in the 'Unit to be rounded up to' field in Table T001R. Table T001R stores the rounding rules for company code and currency combinations. This requirement can be assigned to the condition type in the pricing procedure that is used to calculate the difference when rounding. Using this requirement, the difference is only calculated when necessary.

Example:
A company has the requirement to carry out rounding for certain company code and currency combinations. This information is stored in Table T001R. In the document pricing procedure, the user has configured the SAP delivered condition type DIFF to calculate the difference when rounding occurs. The user also assigns pricing requirement '13' to the condition type DIFF in the pricing procedure so that the condition is only calculated when a corresponding entry has been maintained in the table T001R.

PRICING REQUIREMENT 14: CASH DISCOUNT BEFORE TAX

This requirement is met if the material in the item is relevant for cash discounts and the 'Base amount for tax is net of discount' field in the company code is set. This requirement can be assigned to the cash discount condition type in the pricing procedure to ensure that the cash discount is only accessed for items that are relevant for cash discount. This is used when the cash discount is calculated before the tax.

Example:

A company sells many products. Some of the products qualify for a cash discount and others do not. Within the material master, the user indicates which materials are relevant for a cash discount. Within the company code, cash discounts are calculated before tax. The user configures the cash discount condition type (SAP delivered condition type SKTV) before the tax calculation in the pricing procedure and assigns pricing requirement '14' to avoid the access for materials that are not relevant for the discount.

PRICING REQUIREMENT 21: INVOICE LIST CONTROL

This requirement is met if the document is relevant for invoice lists and the document is either a billing document, a credit / debit memo request, an invoice list, or a return. This requirement can be assigned to condition types in the pricing procedure that are only relevant for invoice lists.

Example:

A company creates invoice lists for their customers which include the billing documents for a payer for a given month. Within the invoice list, the payer earns an additional factoring discount. Within Germany, this factoring discount is taxed at a fixed rate of 15%. To recognize this tax, the user adds the R/3 delivered condition type MW15 to their pricing procedure and assigns it pricing requirement '21' so that it will only be applied in an invoice list process.

PRICING REQUIREMENT 22: INTER-COMPANY

This requirement is met if the document is an inter-company billing document. Inter-company billing documents are created for inter-company sales transactions and represent the delivering company code's bill to the sales organization's company code. This requirement should be assigned to those condition types in the pricing procedure that are only relevant in the inter-company billing document. In the standard system, this corresponds to delivered condition types PI01 and PI02.

Example:

A company receives a sales order from a customer. The company code of the shipping plant differs from the company code of the sales organization indicating an inter-company sales order. In addition to the invoice to the customer, an additional invoice is created by the system to indicate the delivering company code's charge to the sales organization's company code. The company's policy is to bill the sales company code a fixed amount per material unit for the transaction. The user configures R/3 delivered condition type PI01 in the pricing procedure to maintain the fixed amounts and also assigns pricing requirement '22' so that it is only accessed when the inter-company invoice is being generated. If the delivering company wanted to bill the sales company based on a percentage of the net invoice amount, they would use R/3 delivered condition type PI02 along with pricing requirement '22'.

PRICING REQUIREMENT 23: INVOICE LIST DISCOUNT

This requirement is met if the document is relevant for invoice lists and the document is either a billing document, a credit / debit memo request, an invoice list, or a return. The system also checks to see that the item is relevant for pricing based on the item category configuration. This requirement can be assigned to condition types in the pricing procedure that are only relevant for invoice lists and are only relevant for items where pricing is turned on. This requirement is identical to requirement '21' except for the check on the pricing relevance.

Example:

A company creates invoice lists for their customers which include the billing documents for a payer for a given month. Within the invoice list, the payer earns an additional factoring discount. To offer this discount, the user adds the R/3 delivered condition type RL00 to their pricing procedure and assigns it pricing requirement '23' so that it will only be applied in an invoice list process and will only be applied to items that are relevant for pricing.

PRICING REQUIREMENT 24: ONLY IN BILLING DOCUMENT

This requirement is met if the item category is relevant for pricing and the document is either a billing document, credit / debit memo request, or a return. Pro forma invoices are excluded. This requirement can be assigned to condition types in the pricing procedure that should only be determined in a billing document versus a sales order.

Example:

A company has implemented rebate processing to provide their customers with rebate payments at the end of the year based on the cumulative sales each customer reaches during the year. Rebate condition types have been configured in the pricing procedure to calculate the accrual amount that should be passed to financial accounting as the sales during the year are recorded. In order to aid performance, the user has assigned pricing requirement '24' to all of the rebate condition types in the pricing procedure that are related to sales volume. Using this requirement, the system only accesses and calculates the accrual in the billing document. If a user would prefer to see the accrual in the sales order, they would not use pricing requirement '24'.

PRICING REQUIREMENT 25: ONLY IN REBATE DOCUMENTS

This requirement is met if the sales document is a rebate document. Rebate documents include rebate settlement documents and rebate correction documents. This requirement is used for rebate agreements that are not based on sales volume and is assigned to the relevant rebate condition types in the pricing procedure. These condition types will then be excluded from normal sales orders and billing documents.

Example:

A company offers performance based rebate agreements to their customers. For example, a 2000 USD rebate may be offered to a customer who does a front-of-store display for the manufacturer. The user defines a rebate condition type in the pricing procedure (R/3 delivered condition type BO06) for this rebate that is not dependent on sales volume, but rather on a performance. The user also assigns pricing requirement '25' to the condition type in the pricing procedure since they are not interested in tracking sales volume for the rebate agreement. If the user would like to track sales volume for the rebate agreement anyway, pricing requirement '25' would not be assigned.

PRICING REQUIREMENT 32: LICENSE CHECK

This requirement is met if a tax exemption license exists for the customer in the customer master. This requirement can be assigned to a tax condition type in the pricing procedure. If a license exists, the tax classification for the customer is temporarily set to 'L'.

Example:

A company does business with various customers. Some of these customers qualify for tax exemption licenses. The exemption licenses are maintained in the customer master record in the

license table. When taxes are calculated in a sales document, the user would like the license table to be accessed to check for valid tax exemption licenses. The user assigns pricing requirement '32' to the tax condition type in the pricing procedure.

PRICING REQUIREMENT 33: TAX CODE 2 <> '0'

This requirement is met if the plant in the document item or the departure country of the document has been set. In addition, the system checks to ensure that the tax classification 2 for the customer is not equal to blank or '0'. This requirement was developed to support tax exemption licenses in Italy. This requirement should be assigned to the condition type for tax exemption licenses in Italy (R/3 delivered condition type LCIT) in the pricing procedure. For additional information on tax exemption licenses, please refer to Note 72040.

PRICING REQUIREMENT 40: TAXK2, TAXM2 <> '0'

This requirement is met if the plant in the document item or the departure country of the document has been set. In addition, the system checks to ensure that the tax classification 2 for the customer and material is not equal to blank or '0'. This requirement was developed to support tax exemption licenses in France. This requirement should be assigned to the condition type for tax exemption licenses in France (R/3 delivered condition type LCFR) in the pricing procedure. For additional information on tax exemption licenses, please refer to Note 72040.

PRICING REQUIREMENT 51: SHIPMENT COST PRICING

This is an example of a pricing requirement. This requirement was delivered in Release 4.0 along with shipment costing in the shipment cost document. The requirement is met if the item is relevant for pricing and no previous condition in the pricing procedure has set the condition exclusion flag. The requirement also checks the consistency between the calculation base of the condition type being processed and the item. This is the standard delivered requirement for shipment costing that should be assigned to condition types in the shipment costing pricing procedure.

PRICING REQUIREMENT 55: FREE GOODS PRICING

This requirement was delivered along with the Release 4.0 Free Goods functionality. This requirement is met if the item category for the item has the pricing indicator 'B' - 'Pricing for free goods'. Within R/3 free goods processing, the user has the possibility to determine price information for the free item and then to apply a 100% discount so that revenue and sales deductions can be tracked for the material. The 100% discount is applied automatically by the system using a condition type in the pricing procedure (R/3 delivered condition type R100). This requirement should be assigned to this condition type in the pricing procedure so that it is only applied for free items.

Example:
A company has a free goods agreement with their customers. For every 10 cases of Product A that the customer buys, the customer receives 2 cases of Product B for free. From a pricing perspective, the user wants to track both revenue and sales deductions for the free items since Product B is also sold by itself sometimes in the sales process. To do this, the user flags the free goods item category with the pricing indicator 'B'. In addition, the user adds the condition type R100 to the pricing procedure at the point at which the 100% discount should be applied. The user also assigns requirement '55' to the condition type in the pricing procedure so that it only applied for free goods items.

PRICING REQUIREMENT 57: NOT IN RETURNS

This is an example of a pricing requirement. This requirement is met if the document item is not a return item. The requirement also checks if the document item category is relevant for pricing and no previous condition in the pricing procedure has set the condition exclusion flag. This requirement can be assigned to condition types in the pricing procedure that should normally apply to a sales document, but not to a return.

PRICING REQUIREMENT 58: ACCOUNTING INDICATOR

This requirement is met if the accounting indicator is set on the document line item. This requirement can be assigned to an access level in an access sequence that references the accounting indicator so that the access is only made if the accounting indicator is set.

Example:
A company makes use of the service management functionality in the R/3 system to carry out a service repair. In the repair process, the technician records two hours for the repair and the need for a replacement part. It is recognized that the customer has a guarantee related to the replacement part. This is noted by entering an accounting indicator along with the replacement part. Within the billing process for the repair, a discount is applied for the guaranteed item using the accounting indicator in the access sequence. The requirement '58' is assigned to the access so that the discount is only accessed if the accounting indicator is set.

PRICING REQUIREMENT 62: SALES DEAL BASIS

This is an example of a pricing requirement. This requirement is met if the document item category is relevant for pricing and no previous condition in the pricing procedure has set the condition exclusion flag. This requirement also prepares an internal table with sales deal numbers (Release 4.5 feature for Dynamic Data Determination in Access) that should be used for the pricing access sequence. This requirement should be used for all condition types (R/3 delivered condition type PB1D) in the pricing procedure that are found with the sales deal in the key of the record. The internal table is filled with all of the sales deals that were found with a previous condition type in the pricing procedure (R/3 delivered condition type PB1).

PRICING REQUIREMENT 202: PRICING DATE DETERMINATION

This requirement was delivered in connection to the Release 4.5 feature for Dynamic Data Determination in Pricing. This requirement is specific to the dynamic determination of the pricing date. Using condition records, the user is able to dynamically determine the pricing date (R/3 delivered condition type PBUD). Subsequent conditions in the pricing procedure can be assigned pricing requirement 202 to indicate that they should use the pricing date determined from condition type PBUD rather than the normal pricing date from the document. Note, if you use a different condition type to determine the pricing date, you must copy requirement 202 to a new one as the condition type, i.e. PBUD, must be explicitly referred to in the coding. For additional information, please reference the R/3 Library under Sales and Special Pricing Functions.

4. Output Control

Output control requirements are used to define when a particular output document should be processed. They can be assigned to a condition type in an output procedure or to an individual access in an access sequence. The system will only process the entry if the requirement is met. Using requirements can eliminate unnecessary output be specifying exactly under what conditions it should be created.

When looking at the code for the standard delivered output control requirements or when writing your own, the following common work areas are used. These include:

Sales documents:
KOMKBV1 – Output determination communication area: Header data – Application V1
KOMPBV1 – Output determination communication area: Item data – Application V1
Delivery notes:
KOMKBV2 – Output determination communication area: Header data – Application V2
KOMPBV2 – Output determination communication area: Item data – Application V2
Billing documents:
KOMKBV3 – Output determination communication area: Header data – Application V3
KOMPBV3 – Output determination communication area: Item data – Application V3
Shipping units:
KOMKBV6 – Output determination communication area: Header data – Application V6
Shipments:
KOMKBV7 – Output determination communication area: Header data – Application V7

Following is a description of the output control requirements delivered in the standard system related to SD and LES.

OUTPUT CONTROL REQUIREMENT 1: DELIVERY GI POSTED

This requirement is met if goods issue has been posted for the delivery document. This requirement can be assigned to delivery output condition types that should only be processed once goods issue has been done. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 2: ORDER CONFIRMATION

This requirement is met if the sales document is complete, does not have a delivery block that blocks printing, and is not blocked for credit. This requirement can be assigned to sales document output condition types that should only be processed when the document has a status of complete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 3: DELIVERY NOTE

This requirement is met if the delivery document is not blocked for credit. This requirement can be assigned to delivery document output condition types that should only be processed when the document is not blocked due to credit management. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 4: BILLING W/O INVOICE LIST

This requirement is met if the billing document is complete and not relevant for invoice lists. This requirement can be assigned to billing document output condition types that should only be processed when the document is complete, but not relevant for invoice lists. This requirement can only be used with billing documents.

OUTPUT CONTROL REQUIREMENT 5: QUOTATION

This requirement is met if the quotation has a status of complete. This requirement can be assigned to quotation output condition types that should only be processed when the document has a status of complete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 6: SCHEDULING AGREEMENT

This requirement is met if the scheduling agreement has a status of complete. This requirement can be assigned to scheduling agreement output condition types that should only be processed when the document has a status of complete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 7: CONTRACT

This requirement is met if the contract has a status of complete. This requirement can be assigned to contract output condition types that should only be processed when the document has a status of complete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 8: BILLING WITH INVOICE LIST

This requirement is met if the billing document is complete. This requirement can be assigned to billing document output condition types that should only be processed when the document is complete. This requirement can only be used with billing documents.

OUTPUT CONTROL REQUIREMENT 9: SALES DOCUMENT CREDIT BLOCK

This requirement is met if the sales order has been blocked for credit and the order is due for shipping activities within 2 days. This requirement can be assigned to a sales document output condition type, such as the R/3 delivered output type KRML to control when a mail should be sent to the credit representative. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 10: DELIVERY DOCUMENT CREDIT BLOCK

This requirement is met if the delivery has been blocked for credit and the delivery is due for dispatch within 2 days. This requirement can be assigned to a delivery document output condition type, such as the R/3 delivered output type KRML to control when a mail should be sent to the credit representative. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 12: QUALITY CERTIFICATE DELIVERY 1

This requirement defines when a quality certificate is generated. A quality certificate is not generated for individual batch split items. In this case, a certificate describes the batches in the main item. The certificate can only be generated when the delivery has been picked completely.

Example:

The delivery has been picked completely.

- „ Item 10 has no batch: certificate is generated for item 10.
- „ Item 20 has one batch: certificate is generated for item 20.
- „ Item 30 has two batches - in items 900001 and 900002: certificate is generated for item 30.

OUTPUT CONTROL REQUIREMENT 13: QUALITY CERTIFICATE DELIVERY 2

This requirement defines when a quality certificate is generated. If the sold-to party and goods recipient are identical, the certificate is only processed once. The picking status and batch split items are also checked as in requirement 12.

OUTPUT CONTROL REQUIREMENT 14: CASH SALE

This requirement is met if the net value of the document has changed. This requirement can be assigned to sales document output condition types that should only be processed when the net value has changed. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 15: QUALITY CERTIFICATION GI POSTED 1

This requirement defines when a quality certificate is generated. A quality certificate is not generated for individual batch split items. In this case, a certificate describes the batches in the main item. The certificate can only be generated once goods issue has been posted for the delivery. This ensures that the certificate is only output when it is no longer possible to change the item data.

Example:

Goods issue has been posted.

- „ Item 10 has no batch: certificate is generated for item 10.
- „ Item 20 has one batch: certificate is generated for item 20.
- „ Item 30 has two batches - in items 900001 and 900002: certificate is generated for item 30.

OUTPUT CONTROL REQUIREMENT 16: QUALITY CERTIFICATION GI POSTED 2

This requirement defines when a quality certificate is generated. If the sold-to party and goods recipient are identical, the certificate is only processed once. The goods issue status and batch split items are also checked as in requirement 15.

OUTPUT CONTROL REQUIREMENT 20: ORDER HEADER INCOMPLETE

This requirement is met if the sales document header is incomplete. This requirement can be assigned to sales document output condition types that should only be processed when the document is incomplete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 21: ORDER ITEM INCOMPLETE

This requirement is met if the sales document item is incomplete. This requirement can be assigned to sales document output condition types that should only be processed when the document item is incomplete. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 22: MESSAGES IN BATCH INPUT MODE

This requirement is met if the sales document is being entered via batch input. During a batch input transaction, the system keeps track of any messages that have been issued in an internal table. Using output, this information can be sent to a user in the system. In the R/3 standard system, output condition type ESYM is delivered for this purpose. In output configuration, it is assigned output requirement '22'.

OUTPUT CONTROL REQUIREMENT 24: DELIVERY ENVIRONMENTAL RELEVANCE

This requirement is met if the environmental relevance indicator is set for the delivery document. This requirement can be assigned to delivery document output condition types that should only be processed when environmentally relevant. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 26: SALES ENVIRONMENTAL RELEVANCE

This requirement is met if the environmental relevance indicator is set for the sales document. This requirement can be assigned to sales document output condition types that should only be processed when environmentally relevant. This requirement can only be used with sales documents.

OUTPUT CONTROL REQUIREMENT 30: SHIPPING UNITS COMPLETE

This requirement is met if the shipping unit is contained in a delivery and has a status of complete. This requirement can be assigned to shipping unit output condition types that should only be processed when the shipping unit is complete. This requirement can only be used with shipping units.

OUTPUT CONTROL REQUIREMENT 31: SHIPPING UNIT IN DELIVERY

This requirement is met if the shipping unit is contained in a delivery. This requirement can be assigned to shipping unit output condition types that should only be processed when the shipping unit is within a delivery. This requirement can only be used with shipping units.

OUTPUT CONTROL REQUIREMENT 32: WM TRANSFER ORDER

This requirement is met if the delivery document is relevant for R/3 Warehouse Management. This requirement can be assigned to delivery document output condition types that should only be processed when the delivery will be passed to Warehouse Management. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 35: GOODS ISSUE POSTED / PACKED

This requirement is met if goods issue has been posted for the delivery and at least some of the items were packed. This requirement can be assigned to delivery document output condition types that should only be processed when goods issue and packing have been done. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 40: DELIVERY TO EXTERNAL TPS

This requirement is met if the delivery note is relevant to be passed to an external transportation planning system. This requirement is assigned to R/3 delivered delivery output condition type TPSO which controls the communication with the third party system. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 42: DELIVERY RELEVANT FOR R/3 TPS

This requirement is met if the delivery document is relevant for transportation planning. This requirement can be assigned to delivery output condition types that should only be processed when transportation planning will be done. This requirement can only be used with delivery documents.

OUTPUT CONTROL REQUIREMENT 50: SHIPMENT COMPLETION STATUS SET

This requirement is met if the completion status has been set for the shipment. This requirement can be assigned to shipment output condition types that should only be processed once the shipment has a status of complete. This requirement can only be used with shipment documents.

OUTPUT CONTROL REQUIREMENT 60: BILLING DOCUMENT COMPLETE

This requirement is met if the billing document is complete checking the header, pricing, and all items. The requirement also checks that the document is not relevant for an invoice list. This requirement can be assigned to billing document output condition types that should only be processed when the billing document is complete. This requirement can only be used with billing documents.

OUTPUT CONTROL REQUIREMENT 61: ESR : INCOMPLETE / ZERO

This requirement is met if the billing document is complete checking the header, pricing, and all items. The requirement also checks that the document is not relevant for an invoice list and that the document value is not equal to zero. This requirement can be assigned to billing document output condition types that should only be processed when the billing document is complete. This requirement can only be used with billing documents.

OUTPUT CONTROL REQUIREMENT 62: BILLING DOC RELEASED TO ACCTNG

This requirement is met if the billing document is complete checking the header, pricing, and all items and has already been passed to financial accounting. The requirement also checks that the document is not relevant for an invoice list. This requirement can be assigned to billing document output condition types that should only be processed when the billing document is complete and forwarded to accounting. This requirement can only be used with billing documents.

5. Account Determination

Account determination requirements are used to define when an access should be made. They can be assigned to a condition type in an account determination procedure or to an individual access in an access sequence. The system will only process the entry if the requirement is met.

When looking at the code for the standard delivered account determination requirements or when writing your own, the following common work areas are used. These include:

KOMKCV – Account determination communication area: Header data
KOMPCV – Account determination communication area: Item data

Following is a description of the account determination requirements delivered in the standard system related to SD.

ACCOUNT DETERMINATION REQUIREMENT 1: SAMPLE

This requirement is met if document sales organization is '0001' and the condition type being processed is 'PR00'. This is provided as an example and is not meant to satisfy any specific business scenario.

ACCOUNT DETERMINATION REQUIREMENT 2: WITH CO ACCOUNT ASSIGNMENT

This requirement is met if a CO account assignment exists. This requirement can be assigned to a condition type in an account determination procedure that is relevant for CO (R/3 delivered condition type KOFK.

ACCOUNT DETERMINATION REQUIREMENT 3: W/O CO ACCOUNT ASSIGNMENT

This requirement is met if a CO account assignment does not exist. This requirement can be assigned to a condition type in an account determination procedure that is not relevant for CO (R/3 delivered condition type KOFI).

6. Material Determination

Material determination requirements are used to define when an access should be made. They can be assigned to a condition type in a material determination procedure or to an individual access in an access sequence. The system will only process the entry if the requirement is met.

When looking at the code for the standard delivered material determination requirements or when writing your own, the following common work areas are used. These include:

KOMKD – Material determination communication area: Header data
KOMPD – Material determination communication area: Item data

Following is a description of the material determination requirements delivered in the standard system.

MATERIAL DETERMINATION REQUIREMENT 1: SAMPLE

This is a sample of a material determination requirement. No rules have been defined in this sample.

7. Listing / Exclusion

Listing / exclusion requirements are used to define when the system should access these records. They can be assigned to a condition type in a listing / exclusion determination procedure or to an individual access in an access sequence. The system will only process the entry if the requirement is met.

When looking at the code for the standard delivered listing / exclusion requirements or when writing your own, the following common work areas are used. These include:

KOMKG – Listing / exclusion communication area: Header data
KOMPG – Listing / exclusion communication area: Item data

Following is a description of the listing / exclusion requirements delivered in the standard system.

LISTING / EXCLUSION REQUIREMENT 1: DIFFERENT PAYER

This requirement is met if the sold-to party in the sales document differs from the payer. This requirement can be assigned to an access level in an access sequence to aid performance when listing / exclusion condition records are maintained at both the sold-to party and / or payer level.

Example:
A company uses listing / exclusion to control the materials that customers can order. Listing / exclusion condition records are based sometimes on the sold-to party or the payer. Within their customer base, some customers have a central payer that is used for many sold-to parties. Other customers are smaller where the sold-to party and the payer are identical. In the listing / exclusion access sequence, the user sets up an access for both the sold-to party and the payer. The first access looks for a record using the sold-to party of the sales document. The second access looks for a record based on the payer of the sales document. The user assigns requirement '1' to the second access to indicate that it is only necessary to look for a payer level record if the sold-to party differs from the payer.

8. Free Goods

Free goods requirements are used to define when the system should look for free goods agreements. They can be assigned to a condition type in a free goods determination procedure or to an individual access in an access sequence. The system will only process the entry if the requirement is met.

When looking at the code for the standard delivered free goods requirements or when writing your own, the following common work areas are used. These include:

KOMK – Pricing communication structure containing header related fields from the sales document.
KOMP – Pricing communication structure containing item related fields from the sales document.

Following is a description of the free goods requirements delivered in the standard system.

FREE GOODS REQUIREMENT 1: SAMPLE

This is a sample of a free goods requirement. No rules have been defined in this sample.

9. Risk Management

Risk management requirements are used to define when a level in the payment guarantee procedure should be processed. The system will only process the entry if the requirement is met.

When looking at the code for the standard delivered risk management requirements or when writing your own, the following common work areas are used. These include:

VBAK – Header of order
VBAP – Order line item
VBKD – Business data
VBUK – Header status
VBUP – Order line status
XFPLT – Billing plan

Following is a description of the risk management requirements delivered in the standard system.

RISK MANAGEMENT REQUIREMENT 1: SAMPLE

This is a sample of a risk management requirement. This requirement is met if the document has a payment card plan type assigned.

10. Credit Checks

Credit check requirements are used to define when the system should carry out certain credit checks. This requirement can be assigned in customizing to the automatic credit controls. The system will only process the credit check if the requirement is met.

When looking at the code for the standard delivered credit check requirements or when writing your own, standard work areas are available. For a complete list, look at the code associated with the examples below.

Following is a description of the credit check requirements delivered in the standard system.

CREDIT CHECKS REQUIREMENT 1: SALES ORDER SAMPLE

This requirement can be used to exclude certain credit checks from taking place. This sample requirement contains checks for example that would skip the credit check if the document contained no line items.

CREDIT CHECKS REQUIREMENT 2: DELIVERY SAMPLE

This requirement can be used to exclude certain credit checks from taking place. This sample requirement contains checks for example that would skip the credit check if the document contained no line items.

11. Card Authorization

Payment card authorization requirements are used to define when the authorization process should occur. Card authorization requirements are assigned to payment card checking groups in customizing. The system will only process the authorization if the requirement is met.

When looking at the code for the standard delivered card authorization requirements or when writing your own, standard work areas are available. For a complete list, look at the code associated with the examples below.

Following is a description of the card authorization requirements delivered in the standard system.

CARD AUTHORIZATION REQUIREMENT 1: COMPLETE

This is an example of a payment card authorization requirement. A payment card authorization requirement is used to determine when the authorization should occur. Requirement '1' defines that the system carries out the authorization only if the sales order is complete. In addition, the authorization is done automatically when the sales order is saved.

CARD AUTHORIZATION REQUIREMENT 2: COMPLETE, ONLY IN BATCH

This is an example of a payment card authorization requirement. A payment card authorization requirement is used to determine when the authorization should occur. Requirement '2' defines that the system carries out the authorization only if the sales order is complete. In addition, the authorization is only done if the authorization was initiated using the batch program. Payment card authorization requirements are assigned to payment card checking groups in customizing.

12. Subsequent Functions

Subsequent function requirements are used to define when certain system functions should occur. These include, for example, confirm available to promise (ATP) quantities, create a purchase requisition for a sales document line item, etc. Subsequent function requirements are divided into two categories. The first category is the checks that are carried out by the system when one of the subsequent functions is processed in the system. The second category is the checks that a user can add on their own. The system checks are always processed first followed by any user checks. The system will only process the subsequent function if both requirements are met. Examples of user requirements are delivered in the standard system and are mentioned below.

Following is a description of the subsequent function requirements delivered in the standard system.

SUBSEQUENT FUNCTIONS REQUIREMENT 1: SYSTEM: ATP CONFIRMED QTYS

If this requirement is met, then the system will confirm quantities for the sales document line item. If not, then no quantities will be confirmed. ATP requirements, however, will still be passed to planning. This requirement contains the system checks that are carried out automatically to determine if the confirmed quantities should be set to zero or not. In this case, the system checks to see if a delivery block has been applied to the sales document. If so, it checks to see if the block allows confirmed quantities. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '101' which adds the additional requirement that confirmed quantities should be set to zero if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 2: SYSTEM: PURCHASE REQUISITION

If this requirement is met, then the system will create a purchase requisition for the relevant sales document line item. This requirement contains the system checks that are carried out to determine if the purchase requisition should be created. These checks require, for example, that the plant is set, the purchase document type has been defined, and the item is not rejected. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '102' which adds the additional requirement that the purchase requisition should not be created if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 3: SYSTEM: ATP REQUIREMENT

This requirement is not currently used by the system.

SUBSEQUENT FUNCTIONS REQUIREMENT 4: SYSTEM: DELIVERY DUE INDEX

If this requirement is met, then the system will generate the delivery due index for the sales document line item. This requirement contains the system checks surrounding the delivery due index creation. Currently, there are no predefined checks in this requirement. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '104' which adds the additional requirement that the delivery due index should not be created if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 5: SYSTEM: ASSEMBLY ORDER

If this requirement is met, then the system will create the assembly order for the sales document line item. This requirement contains the system checks that are carried out automatically. These checks require, for example, that the plant is set, the assembly type has been defined, and the item is not rejected. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '105' which adds the additional requirement that the assembly order should not be created if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 11: SYSTEM: PICKING

If this requirement is met, then the system will permit picking. This requirement contains the system checks that are carried out automatically. For example, the system checks to see if a delivery block has been applied to the header of the delivery. If so, it checks to see if the block allows picking. In addition, a legal control check is done on the document item. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '111' which adds the additional requirement that picking is not allowed if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 12: SYSTEM: PACKING

If this requirement is met, then the system will permit packing. This requirement contains the system checks that are carried out automatically. For example, the system does not permit packing if goods issue has already been posted for the delivery. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '112' which adds the additional requirement that packing is not allowed if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 13: SYSTEM: GOODS ISSUE

If this requirement is met, then the system will permit goods issue. This requirement contains the system checks that are carried out automatically. For example, the system checks to see if a delivery block has been applied to the delivery document header. If so, it checks to see if it blocks goods issue. It is also possible to create additional requirements for an installation that would run after the system checks. R/3 comes with the sample requirement '113' which adds the additional requirement that goods issue is not allowed if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 101: ATP CONFIRMED QUANTITIES

If this requirement is met, then the system will confirm quantities for the sales document line item. If not, then no quantities will be confirmed. ATP requirements, however, will still be passed to planning. This is an example of a user requirement to determine if the confirmed quantities should be set to zero or not. A user requirement would run after the system requirement '1' for confirmed ATP quantities. The sample requirement '101' adds the additional requirement that confirmed quantities should be set to zero if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 102: PURCHASE REQUISITION

If this requirement is met, then the system will create a purchase requisition for the relevant sales document item. This is an example of a user requirement to determine if the purchase requisition should be created or not. A user requirement would run after the system requirement '2' for purchase requisitions. The sample requirement '102' adds the additional requirement that the purchase requisition should not be created if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 103: ATP REQUIREMENT

This requirement is not currently used by the system.

SUBSEQUENT FUNCTIONS REQUIREMENT 104: DELIVERY DUE INDEX

If this requirement is met, then the system will generate the delivery due index for the sales document line item. This is an example of a user requirement to determine if the delivery due index should be created. A user requirement would run after the system requirement '4' for the delivery due index. The sample requirement '104' adds the additional requirement that the delivery due index should not be created if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 105: ASSEMBLY ORDER

If this requirement is met, then the system will create the assembly order for the sales document line item. This is an example of a user requirement to determine if the assembly order should be created. A user requirement would run after the system requirement '5' for the assembly order. The sample requirement '105' adds the additional requirement that the assembly order should not be created if the credit block is set. If the user would prefer that the assembly order be created and blocked if a credit block is set, then requirement '106' can be used. Reference the documentation of this object for additional information.

SUBSEQUENT FUNCTIONS REQUIREMENT 106: BLOCK ASSEMBLY ORDER

This is a special example intended only for the situation where the user would like to create the assembly order and then block it for a particular reason. When working with subsequent functions for assembly orders, the user has the option to enter two user requirements. The user requirements will run after the system requirement '5' for the assembly order. The first user requirement defines whether the assembly order should be created or not. The second user requirement defines whether the assembly order should be blocked or not. If the second requirement is not met, then the assembly order will be blocked. The sample requirement '106' adds the rule that the assembly order should be blocked if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 111: PICKING

If this requirement is met, then the system will permit picking. This is an example of a user requirement to determine if picking is allowed. A user requirement would run after the system requirement '11' for picking.   The sample requirement '111' adds the additional requirement that picking is not allowed if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 112: PACKING

If this requirement is met, then the system will permit packing. This is an example of a user requirement to determine if packing is allowed. A user requirement would run after the system requirement '12' for packing.   The sample requirement '112' adds the additional requirement that packing is not allowed if the credit block is set.

SUBSEQUENT FUNCTIONS REQUIREMENT 113: GOODS ISSUE

If this requirement is met, then the system will permit goods issue. This is an example of a user requirement to determine if goods issue is allowed. A user requirement would run after the system requirement '13' for goods issue.   The sample requirement '113' adds the additional requirement that goods issue is not allowed if the credit block is set.