Client Name

Functional Specification

Freight Determination based on cumulative Quantity

Revision: Draft
Author(s): SIVA

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1. Revision History

The table below describes the versions of this document:

Revision	Date	User	Requirement Ref No.	Description
1.0	10/10/2014	SIVA	112111	Initial Draft for Review

2. Introduction

This specification contains functional and technical requirements for the freight determination based on cumulative quantity of materials.

3. Solution Overview

3.1.High Level Conceptual Design

Standard condition KF00 is used to determine freight for line items. However, not all materials need freight. For materials with minimum order quantity specified, the cost of freight is already included in the costing of the material and hence freight need not be charged to the customer. Also, the quantity should be calculated as a cumulation of all the line items that contain the same material.

For example, if the minimum order quantity of material A is 100 and for an order 1 below, Freight should not be charged

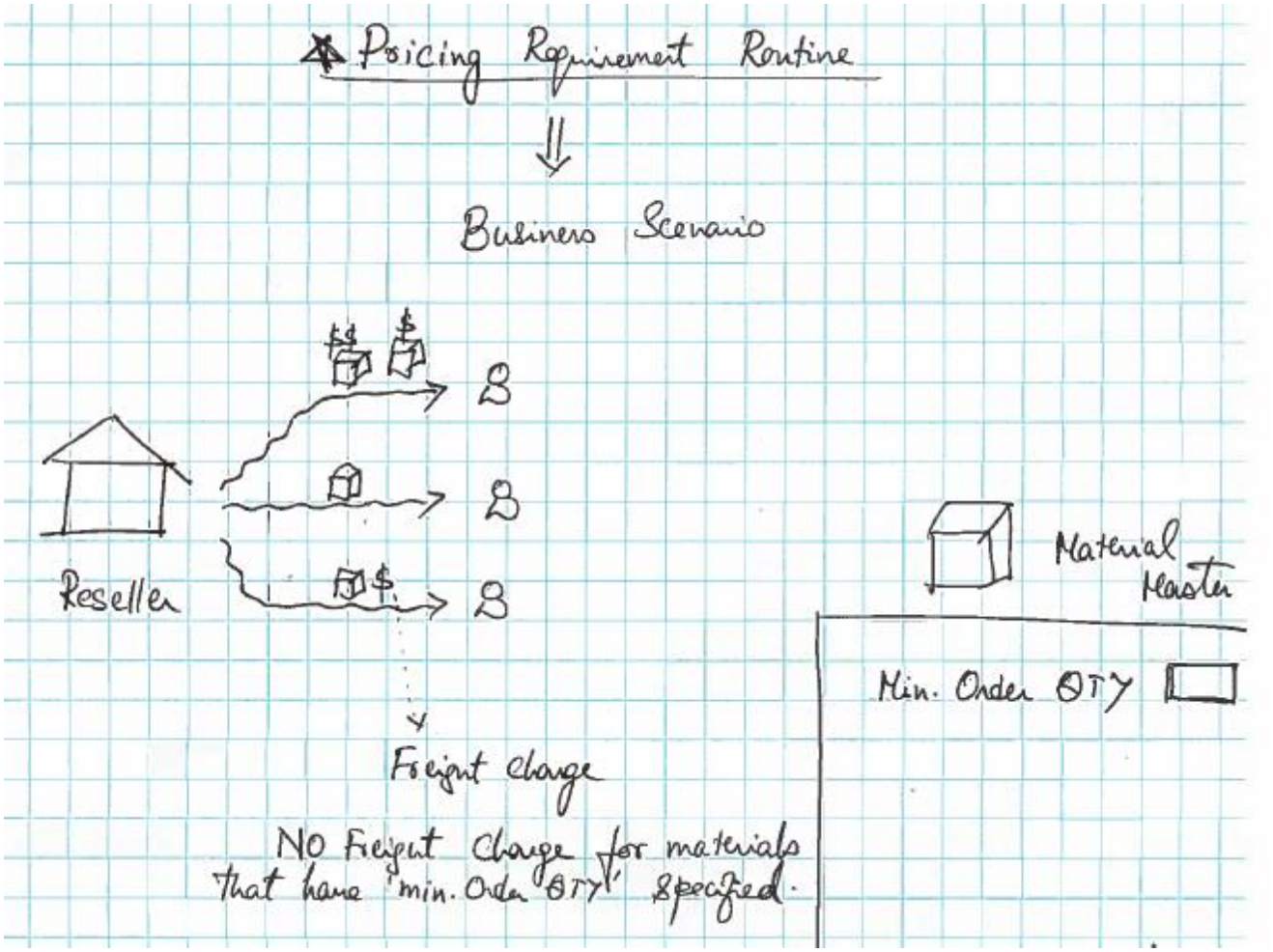
Order 1

Line No.	Material	Quantity	Frieght Charged ?
10	Material A	100	NO

Also for the Order 2 below, line item 10,30,40 will not be charged freight because the cumulative order quantity is 100 which is equal to the minimum order quantity of the material.

Order 2

Line No.	Material	Quantity	Frieght Charged ?
10	Material A	20	No
20	Material B	120	Yes
30	Material A	30	No
40	Material A	50	No



3.2.Assumptions and Dependencies

None

3.3.Out of Scope

None

3.4.Risks

None

4. Functional Design

4.1.GAP Analysis

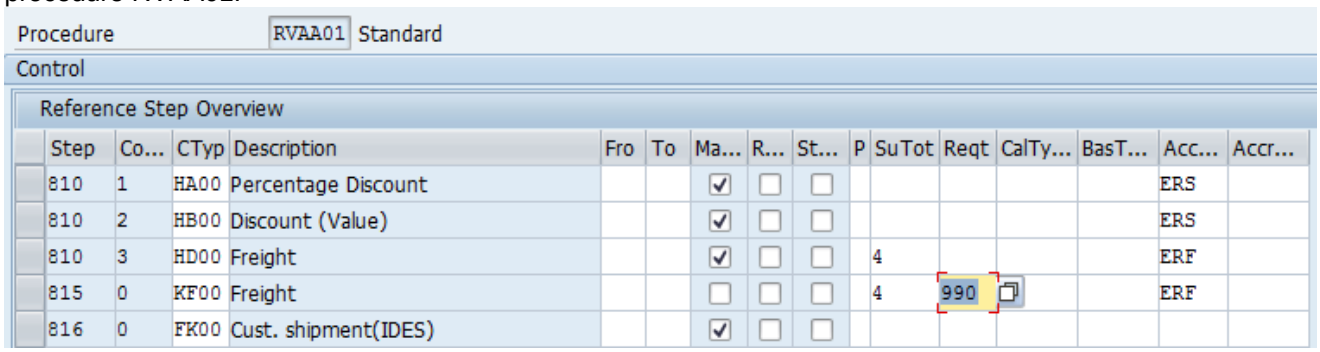
Standard SAP does have group condition types that could satisfy this criteria – But KF00 is not a group condition type and we would not want to change the definition of KF00 to be a group condition as it affects the existing freight functionality. In order to fill this gap, a custom requirement routine is proposed which will iterate through the existing line item quantity for the same material and compare the value against the minimum order quantity.

4.2.Flow Logic

A custom pricing requirement routine will be created in VOFM and assigned to the condition type KF00. This routine will be triggered for every line item and during line item change/deletion as well. This will ensure that the correct cumulated value is computed every time there is a change to the line item quantity or material number.

4.3.Detailed Design

Create a new Pricing requirement routine (say 990) and assign this to the condition type KF00 in the pricing procedure RVAA01.



Step	Co...	CTyp	Description	Fro	To	Ma...	R...	St...	P	SuTot	Reqt	CalTy...	BasT...	Acc...	Accr...
810	1	HA00	Percentage Discount			☑	☐	☐						ERS	
810	2	HB00	Discount (Value)			☑	☐	☐						ERS	
810	3	HD00	Freight			☑	☐	☐		4				ERF	
815	0	KF00	Freight			☐	☐	☐		4	990			ERF	
816	0	FK00	Cust. shipment(IDES)			☑	☐	☐							

The logic in the requirement routine should check for the following

1. Get the current material number of the line item in question
2. Loop through all the line items. For each line item
    a. Check if the material is the same as the material selected in step 1 above.
    b. If not, continue
    c. If yes, cumulate the quantity.
3. Compare the cumulated quantity in total for the entire order and compare it with the minimum order value at the material master level.
4. IF cumulated quantity > = minimum order value
    a. Do not calculate freight
5. ELSE calculate freight as usual.

5. Technical Design

5.1.Overview