INTERFACES Compiere MFG + SCM <-> ERP

Compiere Manufacturing and Supply Chain Management

Open Source Initiative

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ERP Interfaces proposal

Version 0.1b

For Public Use

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Revision	Description
05/05/03	Begin For restricted use
01/09/04	0.0a
16/03/05	0.1a For Public use
23/06/05	0.1b change format to xml

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INTRODUCTION

This document describes a very first proposition for interfaces between ERP and Compiere MFG + SCM.

PRINCIPLE

FILES EXCHANGE PRINCIPLE

Compiere MFG + SCM server sends or gets data to and from ERP in xml format using specialized plugins. These transactions are done in an asynchronous way. These transfers can be done in files inside directories of ERP server using http, ftp or in messages or directly in database or any similar way.

The data format and the transport layer can be customized in the ERP interface plugins : 1 for transfers from ERP, one for transfers to ERP. Interface structure describe below, will have to be implemented in dtd.

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INTERFACES STRUCTURE

REQUISITION ORDERS SEND (NOT NEED FOR ERP)

Compiere MFG + SCM record	Send Requisition Orders
Name	**REQ+dayNum+hour (hhmmss)**
Site	**/ERP/MFG_SCM46**
Structure	**xml**

Description	Fields	Format	
Kit code or Door Code		Char(15)	
Installation code		Char(10)	
Document code		Char(4)	
Quantity to made		Float	
Date asked		Date	
Message Identification		Char(1)	7 if synchronous message 0 if country 1 if retouching 2 if rotation 5 if offline order 6 if offline order without billing

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RECEIPT OF MANUFACTURING ORDRERS (NOT NEED FOR ERP

Erp record	
Name	**REQ+dayNum+hour (hhmmss)**
Site according to the manufacturing line	**/ERP/MFG_SCMXX where XX is the manufacturing line name**
Structure	**xml**

Description	Fields	Format	
Manufacturing order		Char(10)	
Installation code		Char(10)	
Document code		Char(4)	
Identifying message		Char(1)	7 if synchronous message 0 if country 1 if retouching 2 if rotation 5 if offline order 6 if offline order without billing
Kit code		Char(15)	
Product code		Char(15)	
Description of the manufactured article		Char(33)	
Family		Char(10)	Depend on production line
Quantity		Float	1
Date asked		Date	HHMMSS
Code composing used		Char(15)	
Quantity used		Float	
Operation number to which is used this component		Char(5)	

In the case of an O.F. of retouching, only the components not used are transmitted to Compiere MFG + SCM.

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RECEIPT OF THE COMPONENTS

Compiere MFG + SCM record	
Name	**Recep+date+hour**
Site	**/ERP/MFG_SCM10**
Structure	**xml**

Description	Fields	Format	
Order number		Char(10)	
Product code		Char(15)	
Received quantity		Integer	
Supplier delivery note		Char(10)	
Receipt date		Date	DDMMAA
Hour of receipt		Char(6)	HHMMSS
Labels number		Char(15)	
Batch number			

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CONSUMPTION OF COMPONENTS

Consumption of components parts sends information about components consumption and fabrication order info. Fabrication order is created in Compiere MFG + SCM automatically from requisition order and manually by offline creation order process. The flag Mflag.ford give information about the type of order. (See chapter 3.1). This enable to manage customer returns, service parts process and rotation.

Compiere MFG + SCM record	
Name	**Consump15+date+hour**
Site	**/ERP/MFG_SCM15**
Structure	**xml**

Description	Format	value	Transferred by Compiere MFG + SCM	
For every line of components				
Manufacturing order	Char(10)		Yes	
Component code	Char(15)		Yes	
Component quantity used	Float		Yes	
Label's serial number	Char(15)		Yes	
Motive rubbish	Char(15)	VALID so good OTHER if rubbish	Yes	
Operator code	Char(10)		Yes	
Time of station (date and hour)	Date		Yes	
Operation number	Char(5)		Yes	
Product code	Char(15)		Yes	
Kit code	Char(15)		Yes	
Installation order	Char(10)		Yes	
Flag	Char(2)		Yes	
Document code	Char(10)		Yes	

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EXPEDITION

ERP record	
Name	**Exp00+date+hour**
Site	**/ERP/MFG_SCM00**
Structure	**xml**

Description	Format	Value	Transferred by Compiere MFG + SCM	Tables ERP
A line by product (OF)				
Manufacturer order	Char(10)		Yes	
Installation order	Char(10)		Yes	

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BOM (PROPOSITION FOR ERP)

Record	
Name	**BOM**
Site	**/ERP/MFG_SCM00C**
Structure	**xml**

Description	Fields	Format	
Kit code		Char(15)	
Product code		Char(15)	
Description of the manufactured article		Char(33)	
Family		Char(10)	Depend on Production Line
For each operation			
Operation number to which is used this component		Char(5)	
For each component of each operation			
Code composing used		Char(15)	
Quantity used		Float	

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END-ITEMS REJECTS AND CUSTOMER RETURNS

ERP record	
Name	**PU10+dayNum+hour (hhmmss)**
Site	**/ERP/MFG_SCM00A**
Structure	**xml**

Description	Fields	Format	
Manufacturing order		Char(10)	

Costumer's returns are managed in the same manner than en-items rejects : Scan of a reject label then scans of the Product label. Erp then make a movement between end-items and reject tables. If the product has to be replaced, create an off line order in Compiere MFG + SCM. (see chapter 3.1).

COMPONENTS

ERP record	
Name	**Comp+dayNum+hour (hhmmss)**
Site	**/ERP/MFG_SCM00B**
Structure	**xml**

Description	Fields	Format	
Component code		Char(15)	Yes
Description of the component		Char(33)	
workstation		Char(15)	
Short Description		Char(15)	

Component list enable reception to control which components are allowed to go in the plant.
Description (and short Description) can be useful for users information. They can be sent directly to users or throw PLC's. The workstation ID is useful when components associates to one workstation have to be sent to several different workstations.