

# Guidelines for LSMW data transfer for PM, MM, SD



## Applies to:

LSMW data transfer techniques in PM, MM and SD modules.

## Summary

This document briefs about general guidelines during master data transfer via LSMW tool in PM, MM and SD modules during implementation stage. Mostly suitable for consultants who are rigorously uploads data through this tool. This will help as a handy dictionary to refer in case any kind of error occurs while data uploading in LSMW.

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## Guidelines

Before starting data upload with LSMW take care for the below points.

Make sure that the configuration is completed.

Don't hide/suppress any screens if you are using standard object. Open all screen and open at least one field in the corresponding screen. This will not disturb the screen sequence for batch input data and uploading process. If required, after uploading do the necessary changes in configuration.

Check the object to be uploaded whether it is internal numbered or external numbered. If external numbered, then the same file with error correction can be uploaded. Otherwise in case of internal numbering, special care to be taken for error correction.

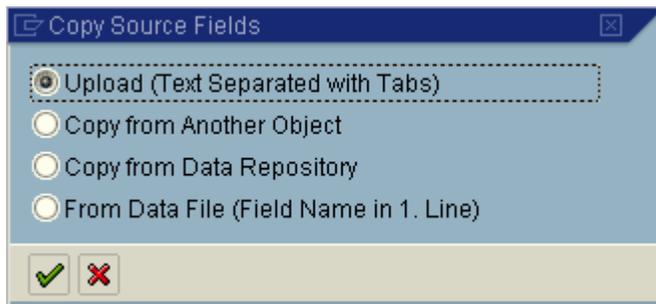
### Step1: Maintain Object Attributes

Select the import methods you want to proceed based on the following details.

1. Standard Batch/Direct input: For batch Input Method: refer specific example like Equipment, Vendor, Customer master. For direct input : Refer material master
2. Recording : Refer Recording in Page number 15
3. Bapi : For upload of Purchase order .
4. IDoc : For upload of Service master

### Step2: Maintain Source Structures

While making structure you can create the structure as duplicate of standard structure as per following. Like copy from data repository e.g IBIPTLOP for task list operation. Unless you are very sure, make all source structure data type as 'C' means CHAR. If you are copying, you need to change the data type to 'C' manually.



For external numbered object, **source structure join identifier** can be the object code itself. Like for vendor – vendor code, Customer-- Customer code etc. You can map old vendor number to any unused free text field so that you can keep track of your old data to new data through this key field.

**Note: Source structure join identifier:** it means when we are going to handle one to many relation ship data of any object, we join the record through Source structure join identifier. For example : SEQNO : Sequence Number

### Step3: Maintain Source Fields

Fields with same names:

Go to Source field, press 'check fields with same name', system will highlight all same name filed with different color. This will always occur if a field appears in header, and in many details structures. Change the field names in the details structure, if you want the system to read it. This does not apply to source structure join identifier like sequence number.

**Step4: Maintain Structure Relations**

If we are using source structure as a copy of standard SAP structure. To do so, firstly go to 'Maintain Structure Relations' and get a feel of the sap standard structures and field and the relationship between them.

**Step5: Maintain Field Mapping and Conversion Rules**

If a field is maintained in source structure, however do not have data in the excel sheet, due to which system gives error, make the field initial in field mapping.

Please don't change the field mapping without understanding the implication.

Auto field mapping helps in mapping the source field and destination fields quickly if the source structure is made as a copy of Sap standard structure ( data repository).

**Step6: Maintain Fixed Values, Translations, User-Defined Routines**

While migration, you have legacy Org element and new org element mapping like plant mapping, you need not change the new plant in the load file. System will automatically convert the based on the translation. You can have you own logic of changing the dat in this step also.

File preparation: Excel file is the source file, hence don't change the original file given by the user, otherwise it will be difficult for you to trace the error. Whatever you want to change in the excel file, do it by saving it by another name. Finally save the excel file before converting it into a Tab delimited file.

Please delete the content of the all row and columns after which the last data row. Rows and columns to be till the last row( 65536<sup>th</sup> row) and last (IV) column. This activity is to be before making the file(s) as tab delimited file. This will eliminate the additional written records during reading.

Please ensure that record not written as always zero. (-ve ) not written will come due to wrong one- -to-many relationship at header source structure join identifiers( e.g. Sequence Number)

While converting excel file to tab delimited file, system will un-necessarily create " at texts. To eliminate, fist find all "(original) and get it replaced by ^ which is assumed to be not used in original file. Thereafter, convert the excel file to tab delimited file. Find all " and get it replaced by space(). Then find all ^ and get it replaced by ". Hence your original excel file which was containing " will be intact.

### Step7: Specify Files

During specifying file(s), file path should not be very lengthy, keep delimiter as 'Tabulator' and File structure as 'Field names at start of file' and others setting as per standard.

The screenshot shows the 'File on Front End: Maintain Properties' dialog box. The 'File' field contains the path 'C:\Shiba\pm\lecc 6.0\conversion\vendor\Vendor\_upd3.txt' and the 'Name' field contains 'upd'. The 'File Contents' section has 'Data for One Source Structure (Table)' selected. The 'Delimiter' section has 'Tabulator' selected. The 'File Structure' section has 'Field Names at Start of File' checked. The 'File Type' section has 'Record End Marker (Text File)' selected. The 'Code Page' section has 'ASCII' selected. At the bottom, there are 'OK' and 'Cancel' buttons.

### Step8: Assign Files

Please check all unassigned source field and ensure that these are OK except all source structure joining identifies like sequence number etc.

Don't make as source structure filled like T code and Tabname as suggested by system. Like in case of task list, Material master you can use the T codes.

## Step9: Read Data

There are three programs through which LSMW works for standard objects. Read program, Conversion Program and uploading Program. Correctness of read program depends on the correct field in source structure and excel file. Based on the field mapping (source structure fields with destination [SAP field] structure fields), conversion program creates the converted data which finally get uploaded through uploading program.

If we want to read the data from text file based on our conditions, please tick "Selection Parameter for "Import/Convert Data". If you set this flag, the source field appears as a selection parameter for the process steps "Import Data" and "Convert Data". Please remember, if you have read 100 records, system will only convert 100 records by default. Hence need not to give the same selection criteria during converting read data.

The screenshot shows the 'Change Source Field' dialog box. The 'Source Structure' is 'EQUIPMENT' and the 'Field Name' is 'HEQUI'. The 'Field description' is 'Superordinate Equipment', 'Field Length' is 18, and 'Field Type' is 'C' (Character Field). The checkbox 'Selection Parameter for "Import/Convert Data"' is checked. An arrow points to this checkbox.

While reading first check the 1<sup>st</sup> record and the content and ensure all content of the excel file have been read by the system, check one random record and check the last record. If found some fields contents are unread,

either source structure doesn't have the field (as not read) Or field name in the source structure and excel file field name does not match with each other.

Sometimes message during reading may come as "Not all field are read by the file .....". then please check the source structure and excel file structure. For correct uploading, this message should never appear.

The screenshot shows the 'Information' dialog box with the message: "Not all field names of file 'C:\Documents and Settings\shiba\Desktop\SHTO\_SA\_31' are defined in the source fields."

### Step10: Display Read Data

Please remember, read program and conversion program are flexible and can be changed automatically by changing source fields and field mapping with destination structure respectively, however, uploading program is of SAP, hence can't be changed. Like in case of PM object the uploading program is 'RIIBIP00'

### Step11: Convert Data

Constant values for fields are to be used, if we are very sure that during upload, content of the excel file is constant. The facility can also be used for few fields during initial testing.

While converting the read data, first check the 1<sup>st</sup> record and the content and ensure all content of the excel file have been converted by the system (here system will assign the content of the field based on the field mapping including constant and '/' for all un-assigned/un-mapped fields), check one random record and check the last record. If found some fields contents are not converted,

either

Field mapping is not proper Or

Field is mapped is changed to initial or not mapped

You can check how system behaves by manually creating one record and by this authorization check can also be taken care of.

### Step12: Display Converted Data

You can debug the read program, conversion program and uploading program by break point(s) in LSMW.

### Step13: Create Batch Input Session

Batch input session is not created by system by showing message as 'Session terminated' if external numbering is applicable. System gives message at which line of the record, system encounter errors like already created vendors are tried to be created again.

### Step14: Run Batch Input Session

While uploading the data for an object for the 1<sup>st</sup> time in a system, first run a single record ( by converting a single record)in foreground mode, check all fields are correctly being uploaded. After reaching last screen of the object, you can log off and decide not to save 1<sup>st</sup> record or otherwise you can create the 1<sup>st</sup> record, then you start converting remaining records by selecting 2<sup>nd</sup> record and to 999999 record. If the text file contains 568 record, then system will convert 568-1 =567 records. You should upload it in background mode.

It is always advisable to use standard objects if provided by SAP. All master objects in PM except service assignment in Task list, and MIC assignment in task list is possible in PM though standard objects(IBIP).

You can check all batch input data during error analysis of every record by double clicking the header transaction though Program and screen number e.g. Program: 'SAPLSTXX' and screen number '1100'.

Any time you want to abort the uploading, then log off by menu system>log off>Exit Batch Input.

Always maintain log of how many records have been uploaded. How many with errors etc for your own consolidation apart from system consolidation.

Keep the error log in excel to analyze the error > Run Batch Input Session>Log by selecting the session>

display after selecting the queue ID> Press printer button as 

**Batch Input Log for Session EQUIPMENT**

Log time	Log message	Trans.	Index	Modules	Scr.	Ind	ID	No.
18:06:27	Session EQUIPMENT is being processed by user SHIBA in mode N on server stdevap1							
18:06:29	Equipment created with the number 7000004180	IE01	1	SAPMIEQO	0101	6	IS	300
18:06:30	Transaction was processed successfully	IE01	1				IS	816
18:06:31	Equipment created with the number 7000004181	IE01	2	SAPMIEQO	0101	6	IS	355
18:06:31	Transaction was processed successfully	IE01	2				IS	816
18:06:31	Equipment created with the number 7000004182	IE01	3	SAPMIEQO	0101	6	IS	355
18:06:31	Transaction was processed successfully	IE01	3				IS	816
18:06:31	Equipment created with the number 7000004183	IE01	4	SAPMIEQO	0101	6	IS	355
18:06:31	Transaction was processed successfully	IE01	4				IS	816
18:06:32	Equipment created with the number 7000004184	IE01	5	SAPMIEQO	0101	6	IS	355
18:06:32	Transaction was processed successfully	IE01	5				IS	816
18:06:32	Equipment created with the number 7000004185	IE01	6	SAPMIEQO	0101	6	IS	355
18:06:32	Transaction was processed successfully	IE01	6				IS	816
18:06:32	Equipment created with the number 7000004186	IE01	7	SAPMIEQO	0101	6	IS	355
18:06:32	Transaction was processed successfully	IE01	7				IS	816
18:06:32	Equipment created with the number 7000004187	IE01	8	SAPMIEQO	0101	6	IS	355
18:06:32	Transaction was processed successfully	IE01	8				IS	816

## PM Module

If the number of characters in FL is more than 30, please read it through TPLNR field, but cross map it like TPLNR->STRNO in field mapping and make TPLNR as initial for all objects like FL, Equipment, Measuring point, FL task List, Maintenance Plan.

Functional location:

No special care to be taken except, cross mapping TPLNR-> STRNO and making TPLNR as initial.

### Equipment:

If internal numbered, for sub equipment creation up to one level,

Make the sequence number and map it to a non-utilized free text field like sort field.

Make field 'HEQUI' : Superior equipment at source field and make 'Selection Parameter for "Import/Convert Data" flag ticked.

The screenshot shows the 'Change Source Field' dialog box with the following details:

- Source Structure: EQUIPMENT
- Equipment Details
- Field Name: HEQUI
- Field description: Superordinate Equipment
- Field Length: 18
- Field Type: C (Field with Alphanumerical Contents (Character Field))
- Identifying Field Content: (empty)
- Selection Parameter for "Import/Convert Data"

Put the following code if sort field is used as sequence number

```
IF NOT equipment-hequi IS INITIAL.
  SELECT SINGLE eqnr FROM V_EQUI INTO ibipequi-hequi
  WHERE eqfnr = equipment-hequi.
ENDIF.
```

HEQUI	Code: IBPEQUI-SUBMI = EQUIPMENT-SUBMI. Superordinate Equipment Code: *IBPEQUI-HEQUI = EQUIPMENT-HEQUI.
HEQNR	Code: Equipment position at InstallLoc. (Superior Equip./FunctLoc)

read as per below for superior equipment 1<sup>st</sup>. ( selection = blank)

LSM Workbench: Import Data For MASTER\_DATA, DATA\_PM, EQUIPMENT

General Selection Parameter

Transaction Number [ ] to [ ]

Value Fields -> 1234.56

Data Value -> YYYYMMDD

User-Defined Selection Parameters

EQUIPMENT-HEQUI (Superordina) [ ] to [ ]

Create the super-ordinate equipment. Then read the file for sub-equipment. ( selection = non blanks)

LSM Workbench: Import Data For MASTER\_DATA, DATA\_PM, EQUIPMENT

General Selection Parameter

Transaction Number [ ] to [ ]

Value Fields -> 1234.56

Data Value -> YYYYMMDD

User-Defined Selection Parameters

EQUIPMENT-HEQUI (Superordina) [ ] to [ ]

It is always advisable to upload equipment and FL master data with class, characteristics and values assignment in a single upload. Other wise, Equipment change object can be used for the same instead of trying some object for the Tcdoe CL20N

## Task List

If general maintenance task list, go to field mapping, press layout button 

Determine Layout

Technical Fields

Initial Fields

Code

Global Data Definitions

Processing Times

Form Routines (ABAP Subroutines)

Select the technical fields as ticked, the put the T code as 'IA05'.

If it combination of FI task list, Equipment task list and GM task list, then create one source field as TCODE and maintain this in Excel file based on the task list type.

For operation long text uploading, make first line of the long text same as Operation sort text as system by default over write the operation short text from long text line.

For Maintenance package assignment, structure join identifiers are to be sequence number and operation number. Assign the package(s) for a operation horizontally in the excel file.

Don't put any values for the field provided in 'DAUMI' and 'DAUME' provided by IBIPTLOP.

Make Plant, Work center field name in the source structure different so that these can be read be the system differently for TL header and operation.

You can keep blank main work centers in TL header and TL operation if not mandatory and if the task list is common and is used by various Main work centers. The same can be maintained in Maintenance item master data sheet.

In case of FL task list and equipment task list, system will automatically assign the group and group counter. Hence no need to mention it in the excel file.

### **Maintenance Plan**

In case of Functional location and equipment task list, you have to mention the system generated(internally) group, group counter into the maintenance item excel file.

### **Measuring Point**

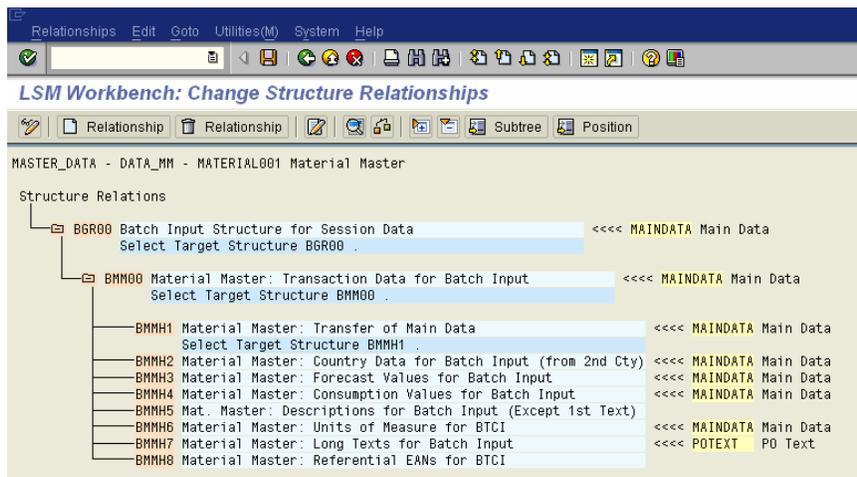
Measuring point upload file, additional short text is to be maintained at DSTXT rather than ATEXT

## MM Module

### Material Master

Materials are created as per the Material types. Hence the LSMW object would be created as per the material type. The related view maintenance can be ticked as constant field a in the filed mapping.

Firstly fro ERSA , Maintain T code : 'MM01' tick A/C view, MRP 1, MRP2, Purchasing, PO text, Basic Data, storage view, quality assurance and MRP3 view at 'BMM00' structure based on the requirement in the 1<sup>st</sup> LSMW object. Hence materials will be created at for one plant and storage location with its views.



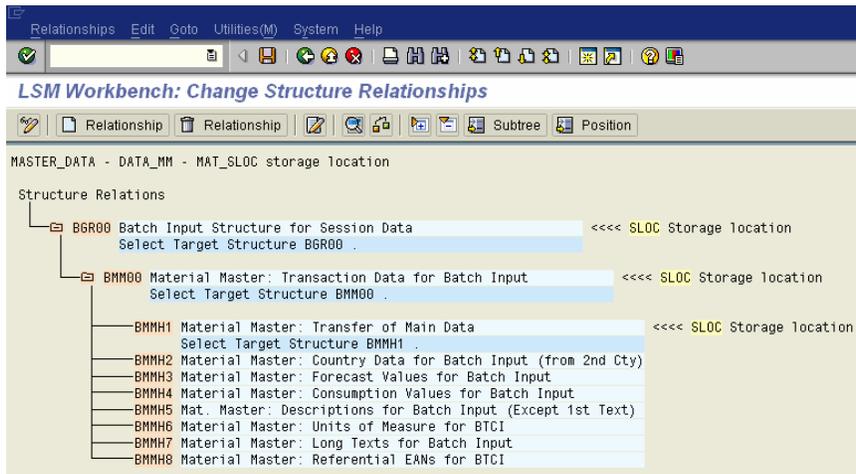
For PO text, map TDID='BEST', TDSRAS='E', TDFORMAT ='\ ' an maintain material number and text multiple lines.



For Plant extension of the material, maintain Plant specific fields in the structure. Make T code : MM01 and also tick the plant specific views like A/C view, MRP 1, MRP2, Purchasing, quality assurance and MRP3 view at 'BMM00' structure.

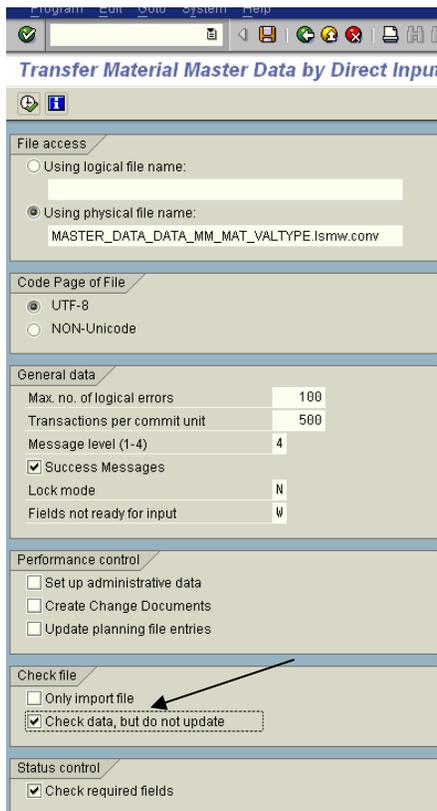
For Storage location extension, maintain T code:MM01, and storage view ticked.

Maintain source relationship upto BMMH1 with header structure with only Material, Plant storage location, Storage bin etc in the excel file.



For split valuation and valuation types will be maintained at a/c view as those many a/c views. At step number 2, a/c view at valuation area = plant level has been maintained. Now at different valuation category, valuation type and price control and prices, valuation class to be maintained as per requirement. Maintain source relationship upto BMMH1 also in this case.

Use Program 'RMDATIND' which is a direct input program which hits directly the relevant database tables for data uploading. However, please run the data in always in test mode as per below.

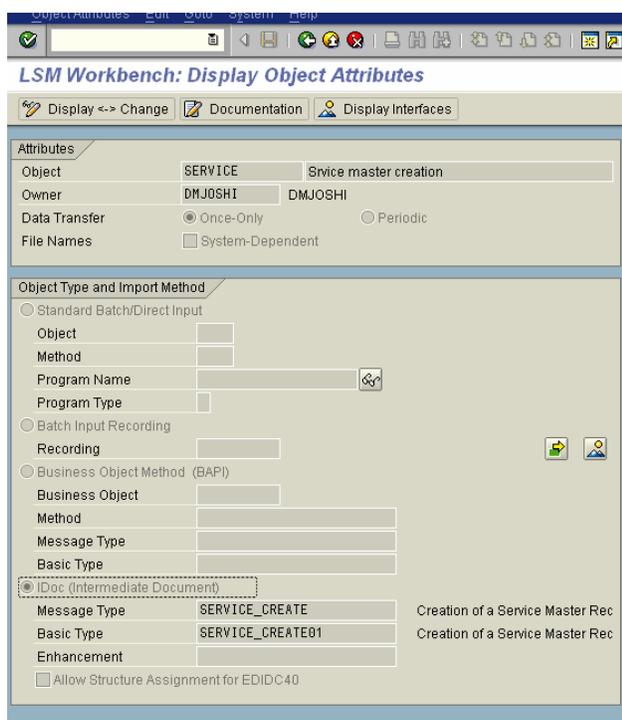
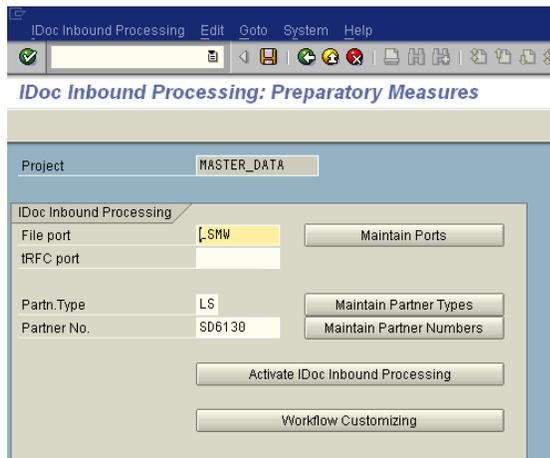


Clear all the errors in the input file, then un-tick above mentioned filed for final uploading. It upload 500 material in a batch without problem.

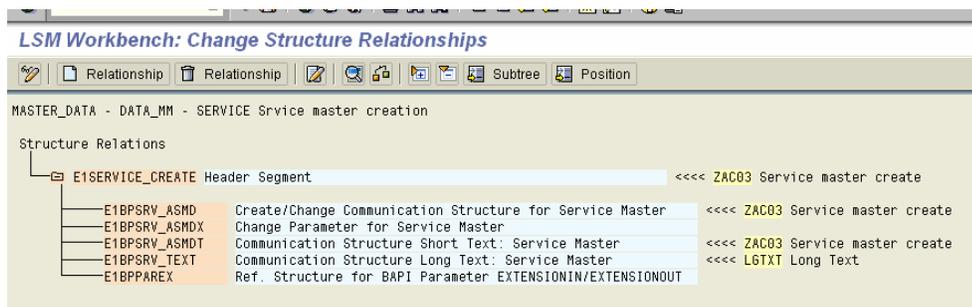
## Service Master

Services can be uploaded by standard Idoc method. IDoc setting is to be done prior to uploading.

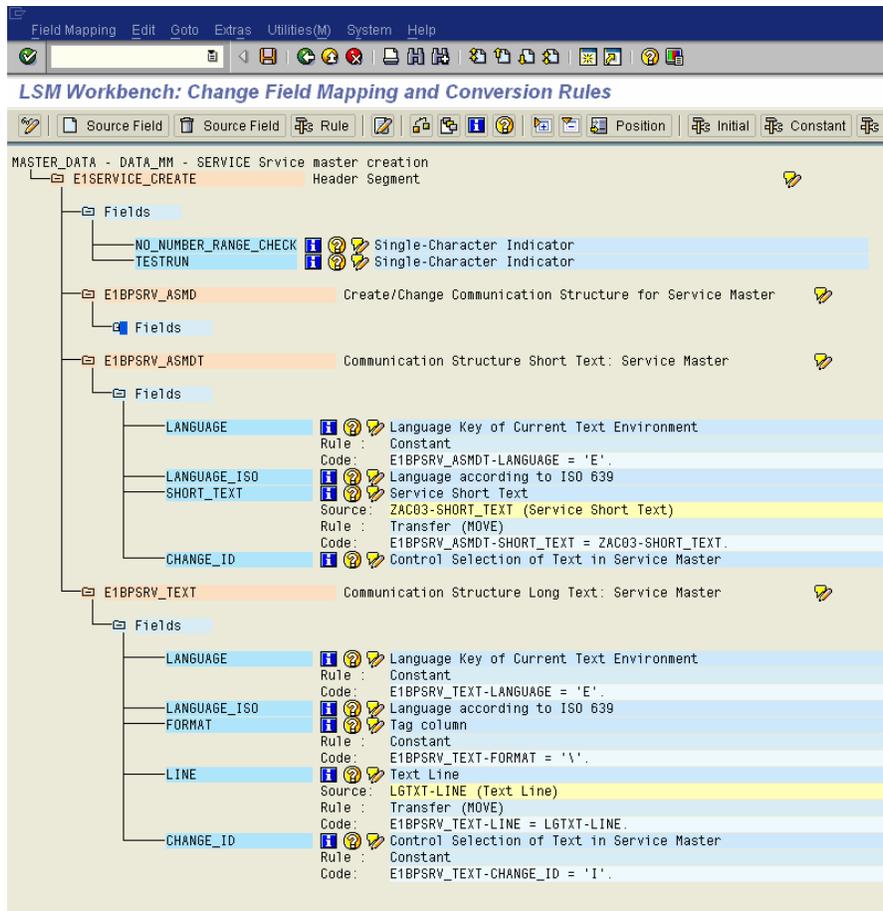
Idoc setting is to be done as per below.



Maintain the relation like below.



Field mapping as per below. Maintain change ID as 'I' for service long text uploading.



### Vendor Master

As vendor will be always uploaded based on the account group, it is always advisable to create those many LSMW objects for each a/c group. But, LSMW can be combined if Organizational data maintenance Like Purchase org data, Company code or general data are same for some a/c groups.

Some fields in address data are not maintained like

Field Name	Date Type(No of Char)	Field Desc
STR_SUPPL1	C(040)	Street 2
STR_SUPPL2	C(040)	Street 3
STR_SUPPL3	C(040)	Street 4
LOCATION	C(040)	Street 5
LANGU	C(002)	Language Key
TEL_NUMBER	C(030)	First telephone no.: dialling code+number
TEL_EXTENS	C(010)	First Telephone No.: Extension
MOB_NUMBER	C(030)	First Mobile Telephone No.: Dialing Code + Number
SMTP_ADDR	C(241)	E-Mail Address

You may go for a recording to update the same. Or you can change the Standard SAP uploading program code to accommodate the fields. The BLFA1 structure and LFA1 table is to be appended with above fields

Multiple telephone numbers and multiple email IDs is not supported in standard SAP LSMW object. You may go for a recording.

First decide what one to many relation ship you will maintain in the source structure. However, during Maintaining Structure Relations, we have assign header source structure to destination structures BGR00, BLF00 and BLFA1 and assign the same other relevant destination structures.

If purchasing data is not to be maintained for certain a/c group, don't maintain a relation of source hdr structure to BLFM1.

## SD Module

### Customer Master

As customers are created based on the a/c group, hence the sequence of uploading is very important in case of internal numbering.

As sold to party customer is the master record to which ship to and FME etc will be assigned. Hence codes of Ships to and FMEs are to be first created and then assigned to partner structure BKNVP of Sold to Party LSMW object.

Same is the case with customer like vendor address data but few fields are available in the structure BIADDR2, you can use.

### Recording

We should use recording method for uploading data in LSMW if

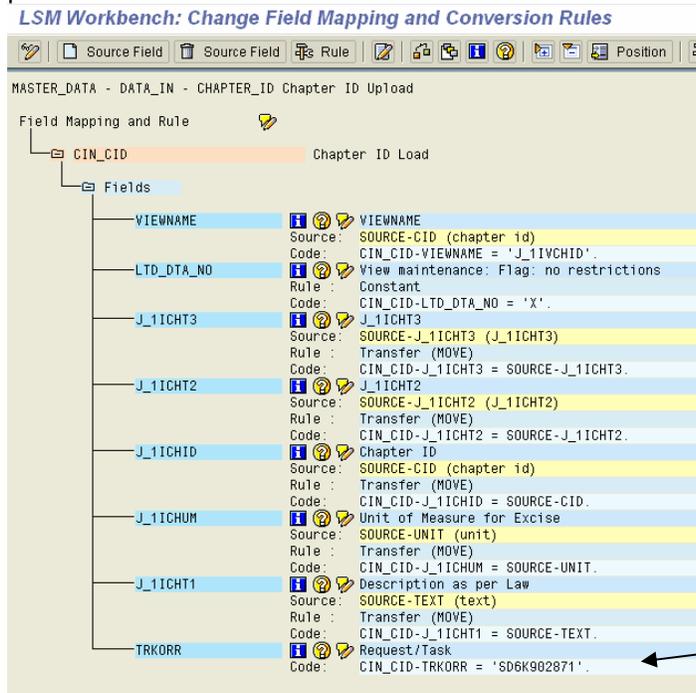
There is no standard method

No one-to-many relationship exist in the input data or if exist it is manageable.

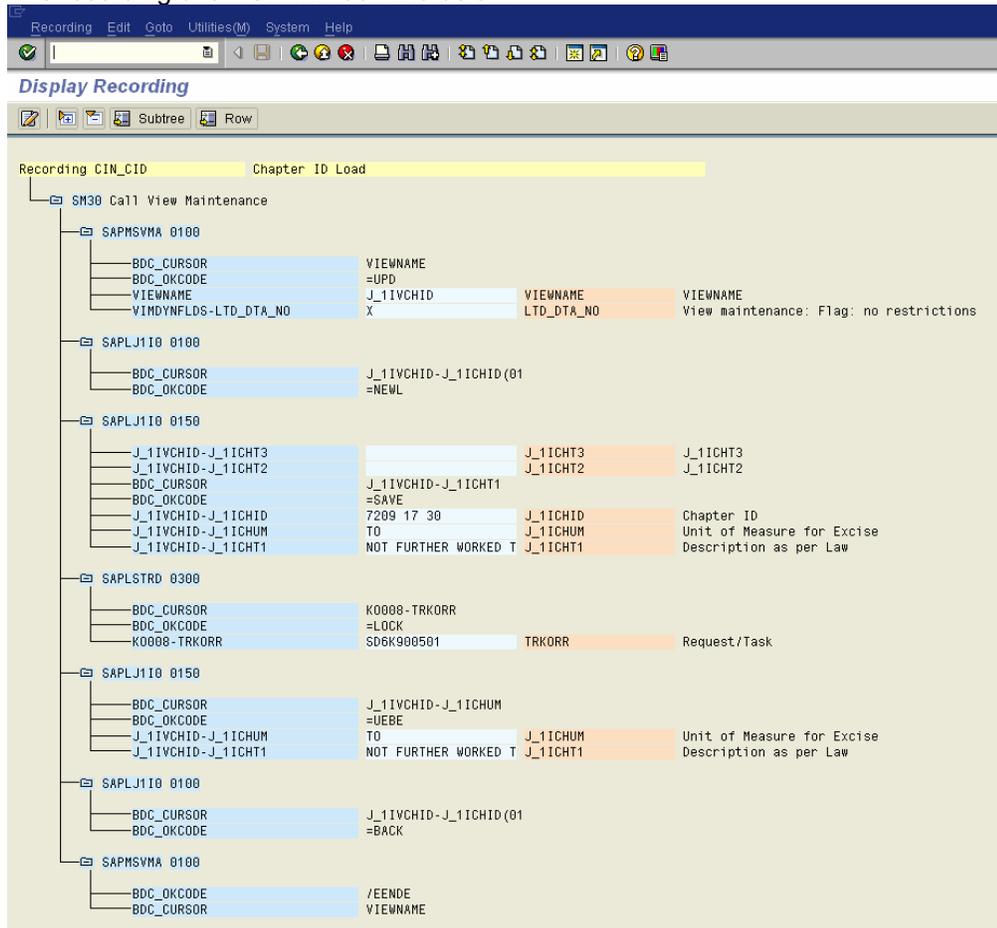
Updating identified fields for a master one to one record.

We should be sure about the fields to be recorded and the screen sequence. First make the list of field and the data to be entered during recording. Better to create one manual transaction before recording. There should not the any error during recording a transaction.

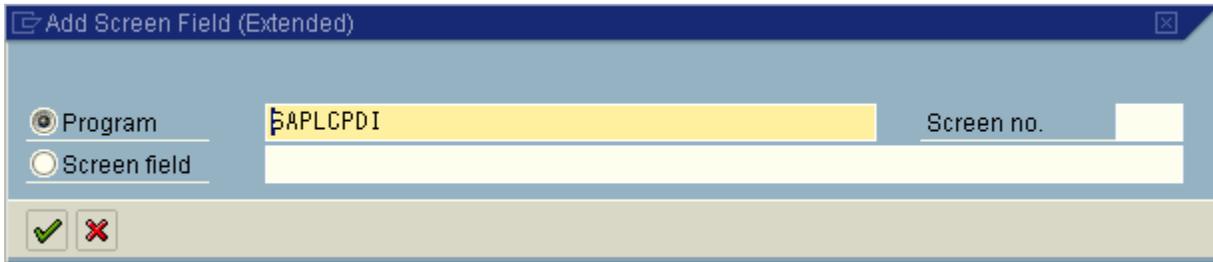
If a change request is generated during saving, like chapter ID in CIN data upload, then first create one request. During recording, record with change request screen also and make it constant in field mapping as per below.



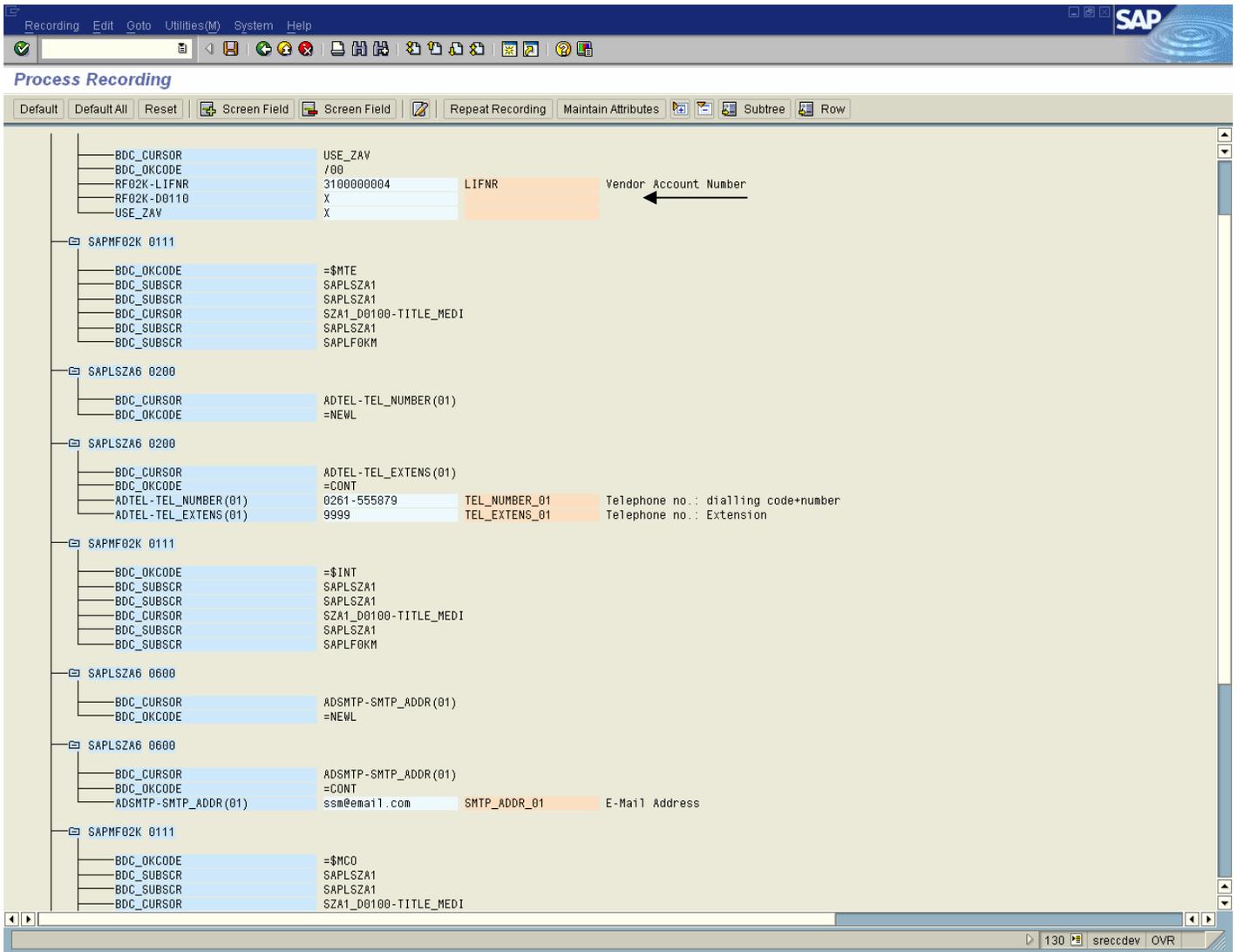
The recording overview will look like below.



If you want to add a screen field you can add but it will added based on the same Program name and screen number. But if you want to add to different program name and screen number, then go to menu Edit>add screen field (extended) and screen appears as per below.



Sometime while making delta upload through recording like in Vendor for 2<sup>nd</sup> Mail id and 2<sup>nd</sup> tel number, maintain the recording overview like below. Knowingly USE-ZAV and RF02K-D0110 has not been maintained as input fields and are made constant as 'X' in recording overview itself. Because the field USE-ZAV can't be made constant in field mapping. You may have to pass it through excel file



## Related Content

[Reference 1](#) : Web log for Key word search as LSMW

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