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Date: Signature:

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Frank Pillukeit, inSITE Design and Build Lead Finance,

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Marc Kötter, inSITE Stream Lead Validation, Fresenius Medical Care

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Lars Weisbrich, inSITE Stream Lead Validation, Fresenius Netcare

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# Change History

|  |  |  |  |
| --- | --- | --- | --- |
| **Ver.** | **Created, Changed** | | **Remarks, Kind of change** |
| **Name** | **Date** |
| 0.1 | Emily Huang | 30-Aug-2017 | Creation of Initial Version |
| 0.2 | Frank Pillukeit | 15-Sep-2017 | Peer Review |
| 0.3 | Dirk Koeritz | 5-Oct-2017 | Dev Review |
| 0.4 | Emily Huang | 11-Oct-2017 | Update the Assumptions & Conditions of Chapter 15 |
| 0.5 | Dirk Koerbitz | 19-Oct-2017 | Dev Review |

Table 1: Change History

# Attachments

The below listed FS attachments are part of the FS document.

|  |  |
| --- | --- |
| S. No | Attachment Name |
| 1 | N/A |

Table 2: Attachments

# Terms, Definitions, Abbreviations

| Term / Abbreviation | Name / Description |
| --- | --- |
| HIS | Hospital Information System |

Table 3: Terms, Definitions, Abbreviations

# Reference Documents

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Document ID.** | **Version No.** | **Document Title** |
| 1 | TBD | TBD | TBD |

Table 4: Reference Documents

# Reference to URS

| **Requirement ID** | **Requirement Title** | **Domain** |
| --- | --- | --- |
| Deviation ID 131 TBR 1 | The application receives and processes revenues by category from HIS Lenovo. | Finance |
| Deviation ID 131 TBR 2 | The application receives and processes account receivables by account from HIS Lenovo. | Finance |
| Deviation ID 131 TBR 3 | The application receives and processes cash collections by payment from HIS Lenovo. | Finance |
| Deviation ID 131 TBR 4 | The application receives and processes refunds by account from HIS Lenovo. | Finance |
| Deviation ID 131 TBR 5 | The application receives and processes advances by account from HIS Lenovo. | Finance |
| Deviation ID 131 TBR 6 | The application supports the data transfer in a flexible parameter based frequency, i.e. every x days, y hours or z minutes. | Finance |
| Deviation ID 131 TBR 7 | The application allows transfer frequency parameter maintenance. | Finance |
| Deviation ID 131 TBR 8 | The application creates automatically sales invoice in inSITE based on received HIS information. | Finance |
| Deviation ID 131 TBR 9 | The application processes automatically incoming customer payments in inSITE based on received HIS information. | Finance |

Table 5: Requirements

# Purpose of the Interface

The Hospital Information System (HIS) has to be connected to SAP P11 system for the end to end process “Treat To Reimburse” in order to handle the associated data:

* Revenues
* A/R account receivables
* Cash collections by payment
* Refunds
* Advance payments

This Functional Specification has been designed based on the assumption that all aforementioned data is transferred to P11 not on individual customer account level, but on customer group or “dummy” customer level.

The design foresees the connection between HIS Lenovo and SAP P11, with SAP PI as an intermediate system.

The purpose of this Functional Specification is to set up the interface with the following objects to be transferred to SAP P11:

* **Revenue / Sales postings (once the treatment has been performed)**For insurance providers / NGOs, individual customer master data (according to HIS) will be maintained manually on SAP P11.  
  Revenue postings will be transferred and posted to these P11 customers via the interface.  
  For private customers a dummy customer will be created on P11.

Revenue postings will be transferred and posted to this P11 dummy customer via the interface.

* **Cash Collection / Refunds / Advance payments**A G/L payment posting (on bank accounts) will be generated on P11 in each of these cases.

# Data Flow Diagram

SAP ERP

P11

SAP PI

Hospital Information System (HIS)

IDOC

Figure 1: Data Flow Diagram

# Functional Description

The scope of this functional specification is the creation of the FI document in SAP P11.

Since the interface must exchange information between HIS and SAP systems it utilises IDOCs to distribute the FI documents. Thus, the distribution of FI data is dependent on the data object coming from the HIS system (via SAP PI) and takes place in real time with the posting of an FI document in SAP P11. In SAP P11 the IDOC is received, processed, and submitted to the financial accounting interface for posting in the FI module.

## **FI Document Creation**

From the HIS system, data objects will be sent to SAP PI which are related to Revenue by category, AR by account, Cash collection by payment method, Refund by account, Advance by account. The data object is received by SAP PI, processed further (both not in scope of this functional specification) and an IDOC is generated and sent to SAP P11.

In SAP P11, the IDOC Basic type FIDCCP02 (inbound) with the message type FIDCC2 must be used to complete the FI Documents sent from HIS system.

### Control record segment

|  |  |  |
| --- | --- | --- |
| **Control record** | | |
| **Field** | **Value** | **Description** |
| DIRECT | 2 | Direction (2 = Inbound) |
| IDOCTYP | FIDCCP02 | Name of basic type |
| MESTYP | FIDCC2 | Message type |

Table 6: IDOC FIDCCP02 Control Record

### Data Record

#### E1FIKPF Segment IDOC: FI Document Header (BKPF)

| **Field** | **Value** | **Source** | **Description** |
| --- | --- | --- | --- |
| BUKRS | Company code | HIS | Name of global company code |
| GJAHR | Fiscal Year | HIS | Fiscal Year |
| BLART | DR (A/R invoice w/o SD)  DG (A/R cred.memo w/o SD)  DZ (A/R Customer payment)  SK( Petty cash I) | SAP默认为SA，外加Reference里标注HIS。 | Document Type |
| BLDAT | Document Date | SAP | Document Date |
| BUDAT | Posting Date | SAP | Posting Date |
| WWERT | Translation Date | SAP Default | Translation Date |
| MONAT | Fiscal Period | SAP, same posting date | Fiscal Period |
| USNAM | User Name from P50 | SAP Default | User Name |
| XBLNR | N/A |  | Reference |
| BKTXT | N/A | HIS-(默认值: 费用分类名称) | Header Text |
| WAERS | Document currency | HIS | Currency Key |
| AWREF | N/A | HIS-(默认值: HIS凭证号码) | Reference document number (external document number) |
| AWSYS | N/A |  | Logical System |
| XREF1\_HD | N/A | “HIS” | Reference Key 1 Internal for Document Header |
| XREF2\_HD | N/A |  | Reference Key 2 Internal for Document Header |

Table 7: IDOC FIDCCP02 Segment E1FIKPF

#### E1FISEG Segment IDOC: FI Document Item (BSEG)

| **Field** | **Value** | **Source** | **Description** |
| --- | --- | --- | --- |
| BUZEI | Position Number | SAP | Number of Line Item Within Accounting Document |
| BSCHL | 01 Invoice  11 Credit  19 Special G/L Credit  29 Special G/L Debit  40 Debit Entry  50 Credit Entry | HIS | Posting Key |
| KOART | D : Customer  S: G/L Account  K: vendor | HIS | Account Type |
| SHKZG | H: Credit  S: Debit | HIS | Debit/Credit Indicator |
| MWSKZ | N/A | N/A | Tax on sales/purchases code |
| DMBTR | Amount in local currency | HIS | Amount in local currency |
| WRBTR | Amount in document currency | HIS | Amount in document currency |
| PSWBT | Amount for Updating in General Ledger | HIS | Amount for Updating in General Ledger |
| VALUT | Value Date | Posting date from SAP | Value Date |
| ZUONR | Assignment number | N/A | Assignment number |
| SGTXT | N/A | HIS | Item Text |
| BEWAR | N/A | N/A | Transaction Type |
| VBELN | N/A | N/A | Billing Document |
| SAKNR | G/L Account Number | HIS | G/L Account Number |
| HKONT | General Account | SAP | General Account |
| MATNR | Material Number | N/A | Material Number |
| PRCTR | Profit Center | 根据INSITE规定提供的profit center | Profit Center |
| XREF1 | N/A | N/A | Business Partner Reference Key |
| XREF3 | N/A | N/A | Business Partner Reference Key |
| XREF2 | N/A | N/A | Reference key for line item |

Table 8: IDOC FIDCCP02 Segment E1FISEG

#### E1FINBU Segment: IDOC: FI Subsidiary Ledger (FI-AR) (BSEG)

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Value** | **Source** | **Description** |
| UMSKZ | N/A | HIS | Special G/L Indicator |
| KUNNR | SAP Customer Number according to P11 | HIS | Customer Number |
| ZFBDT | Baseline date for due date calculation | SAP document date | Baseline date for due date calculation |
| ZTERM | Terms of Payment Key | Based on customer master | Terms of Payment Key |
| KIDNO | N/A | N/A | Payment Reference |

Table 9: IDOC FIDCCP02 Segment E1FINBU

#### E1FISET Segment: IDOC: FI Tax Data (BSET)

| **Field** | **Value** | **Source** | **Description** |
| --- | --- | --- | --- |
| BUZEI | N/A | HIS | Number of Line Item Within Accounting Document |
| MWSKZ | N/A | N/A | Tax on Sales/Purchases Code |
| SHKZG | H | HIS | Debit/Credit Indicator |
| KTOSL | MWS | N/A | Transaction Key |

Table 10: IDOC FIDCCP02 Segment E1FISET

# Source & Target System

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| System | Source/Target | Application name | SAP/Non-SAP | Comment |
| SAP ERP | Target | P11 | SAP | N/A |
| SAP ERP | Source | P50 | SAP | N/A |

Table 11: Source & Target Systems

# Volume of the Data

N/A

# Dependencies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Description | System | System | E2E process | Comment |
| N/A | N/A | N/A | N/A | N/A | N/A |

Table 12: Dependencies

# Type and Frequency of Interface

The implementation on ERP is done by using IDOCs. The processing is done in background. Frequency (Daily) of this interface is required.

# Data Transfer

The detailed structure of the required data to be transferred is described in chapters 8.1.2ff.

|  |  |  |  |
| --- | --- | --- | --- |
| Fields in source system | | | |
| S.No | Field | Field Length (Opt) | Field Description |
| 1 | N/A | N/A | Revenue by category |
| 2 | N/A | N/A | AR by account |
| 3 | N/A | N/A | Cash collection by payment method |
| 4 | N/A | N/A | Refund by account |
| 5 | N/A | N/A | Advance by account |

Table 13: Fields in Source system

|  |  |  |  |
| --- | --- | --- | --- |
| Fields in Target System | | | |
| S.No | Field | Field Length (Opt) | Field Description |
| Line item | | | |
| N/A | N/A | N/A | N/A |

Table 14: Fields in Target system

# Special Functions

In SAP P11, Profit Center accounting (EC-PCA) and Profitability Analysis (CO-PA) are active. This means that when the FI document is posted, the CO-PA document and the EC-PCA are created simultaneously. Therefore, the FI documents received and processed by the IDOC in SAP P11 from SAP PI must create those documents as well.

However, the IDOC basic type FIDCCP02 transports only FI data and it is not be able to generate the CO-PA and EC-PCA documents. Since one of these documents is required in SAP P11, for the document types DR (A/R invoice w/o SD) and DG (A/R cred.memo w/o SD), the interface needs to provide the functionality according to the following logic:

1. Based on the segment field E1FIKPF -BLART (document type) if the document is equal to SK, proceed as standard. In other cases, do the following:
   1. Map the segment fields to internal tables using the follow mapping:

Structure ACCIT\_PA: FI/CO document: CO-PA segment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Data Type** | **Length** | **Field Description** | **IDOC field** |
| BUKRS | CHAR | 4 | Company Code | E1FIKPF- BUKRS |
| KNDNR | CHAR | 10 | Customer | E1FINBU- KUNNR |
| PRCTR | CHAR | 10 | Profit Center | E1FISEG-PRCTR |
| ARTNR | CHAR | 18 | Product number | E1FISEG-MATNR |

Table 15: Fields Structure ACCIT\_PA:FI/CO document: CO-PA segment

Structure ACCCR\_PA: FI/CO document: CO-PA segment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Data Type** | **Length** | **Field Description** | **IDOC field** |
| ERLOS | CURR | 15 | Revenue | BSEG- DMBTR  BSEG-KOART= S |

Table 16: Fields Structure ACCCR\_PA:FI/CO document: CO-PA segment

# Assumptions & Conditions

N/A

# Authorization Requirements

The system needs to check the authorization of the user executing the custom transaction to ensure that the user is allowed to create financial postings.

# Error Handling

The IDOC is transferred from SAP PI to SAP 11 system for further processing. The automatic creation of FI documents is triggered once the IDOC is successfully posted. The IDOC is directly processed in SAP P11.

Error code management should be carried out using the SAP standard messages and SAP standard IDOC monitoring.

# Open Issues/Remarks for a subsequent revision

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Description | Responsible | Status | Impact on | Proposed solution |
| N/A | N/A | N/A | N/A | N/A | N/A |

Table 17: Open Issues/Remarks

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