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Design Win Registration-Product Distribute List

By

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Of

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE

A PROJECT REPORT

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COIMBATORE - 641006

BONAFIDE CERTIFICATE

Certified that this project report titled **"Design Win Registration-Product Distribute List"** is the bonafide work of **"Mr. Sinthanai Selvan"** (Register Number: 71206621049) who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Supervisor   **Head of the Department**

Submitted to Project and Viva Examination held on ___06·07·09___

Internal Examiner   **External Examiner**

Inowits
Technologies

TO WHOM SO EVER IT MAY CONCERN

PROJECT COMPLETION CERTIFICATE

This is to certify that Mr.G.Sinthanai Selvan (Reg No: 71206621049) was associated as a Project trainee in the development department of projects from December 2008 to May 2009.He Was involved in development of "Design Win Registration-Product Distribute List" for one of our project requirement.

He has proved himself to be a good technical person with good learning skills and aptitude. We wish him all the best in his future endeavors.

The source code of the project modules in which he was involved will not be released to any third party as per company policy.

Place: Bangalore   Best Regards
Date: 28·05·09

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ABSTRACT

The project **"Design Win Registration-Product Distribute List"** is developed for the company **Inowits Technologies Pvt Ltd,** Bangalore.

The objective of this project is, Companies want to send a "catalogue" of products to the channel partners. The product list, as we will call it, has to conform to the Rosetta Net standards. Rosetta Net provides the PIP for such an exchange. This development will generate an IDoc, containing the information about the products, and send it any sub-system, which can convert this IDoc into an XML document, with the information listed as per the PIP's requirements.

The program, on each execution, will generate a single IDoc which can contain information related to multiple products.

The "Distribute Product List" Partner Interface Process (PIP) enables a provider to distribute a list of products eligible for design registration to party needing differentiated products (Manufacturer). The Partner Interface Process is not part of CRM Standard functionality and hence this is the proposed solution.

The outbound interface program will distribute a list of design registrable products to the respective channel partners. The new interface program will generate an outbound IDOC containing design registrable products. A single IDOC will be generated for every run, having all products as per selection criteria.

Develop application for user to select the Design registrable products based on criteria [extendable by customers] that can be published to the distributors using PIP message definition

It can be achieved by following two processes

1. Design UI Search component
2. Program to distribute product list

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List of Abbreviations

Registration Request	A request from the demand creator (disti) to the product provider(manufacturer) to approve the request for a demand creator to act as the party supporting the design activities at the OEM so as to be able to claim rebate at design win.
Design Registration	Design registration is a process, by which the distributor registers the design project at OEM with manufacturer. This ensures that the distributor will receive the rebate incentives for the design win for the project.
Design In	Design Registration goes into status "Design In" when the OEM has finalized that the manufacturer's component will be part of final design of the OEM product. This might be verbal or written communication of the decision.
Design Win	Design Registration becomes "Design Win" when the OEM places a purchase order or a certain sale is made for the design registration. The decision criteria for achieving a Design Win vary from manufacturer to manufacturer.
Channel Partner	Channel Partner is the person responsible at the distributor for managing the Design Registration for the sales area
Channel Manager	Channel Manager is person responsible at Manufacturer/Brand Owner for managing the channel partners in the sales area
DWE	Design Win Exchange
Disti or Distributor	Distributor is the demand creator working with the manufacturer to design a particular product for the OEM end customer and brings opportunity.
XIF	External Interface Adapter
ALE	Application Link Enabling
IDOC	Intermediate Document
BDOC	Business Document
BADI	Business Add In's
XI	Exchange Infrastructure

Table Names

Name	Description
ZCRMC_PRDCLAS	Check table for Classification attribute
ZCRMC_PRDCLAST	Text table for Product classification
ZCRMC_PRDACT_STA	Check table for Activity Status attribute
ZCRMC_PRDACT_STT	Text table for Activity Status attribute
ZCRMC_CSDR_ATTR	Check table for Design Registrable attribute
ZCRMC_CSDR_ATTRT	Text table for Design Registrable attributes
ZCRMC_CSDR_CDIND	Core/Device Indicator
ZCRMC_CSDR_CDINT	Text table for Core/Device indicator

CHAPTER 1

1. INTRODUCTION

1.1. ORGANIZATION PROFILE

INOWITS COMPANY PROFILE

Inowits Technologies is the No.1 provider of integrated business, technology and process solutions on a global delivery platform.

Inowits Technologies is a global services provider delivering technology-driven business solutions that meet the strategic objectives of our clients. Inowits has 'Centers of Excellence' that create solutions around specific needs of industries.

Inowits delivers unmatched business value to customers through a combination of process excellence, quality frameworks and service delivery innovation. Inowits is the CMMi Level 3 certified software services company and the first outside USA to receive the IEEE Software Process Award.

Inowits's complete range of IT Services addresses the needs of both technology and business requirements to help organizations leverage leading-edge technologies for business improvement.

Inowits takes charge of the IT needs of the entire enterprise. The gamut of services extends from Enterprise Application Services (CRM, ERP, e-Procurement and SCM), to e-Business solutions. Inowits's enterprise solutions have served and continue to serve clients from a range of industries including Energy and Utilities, Finance, Telecom, and Media and Entertainment.

Inowits's TIS is the largest Indian IT infrastructure service provider. Inowits's Technology Infrastructure Services (TIS) is the largest Indian IT infrastructure service provider in terms of revenue, people and customers with more than 50 customers in US,

Europe, Japan and over 150 customers in India. It is powered by the expert skills of over 1,500 technical specialists and state-of-the-art BS 300 certified infrastructure for operations support.

Inowits provides a broad range of services from customer relationship management, back office transaction processing to industry-specific solutions.

The key element of services delivery is an integrated approach towards providing increasing value over the entire course of our client relationships. This involves a phased approach towards process standardization, process optimization and process re-engineering.

True value from technology requires an in-depth understanding of business strategy. Today's businesses need partners who can talk about strategy and technology in the same conversation. At Inowits, we believe true value from technology requires an in-depth understanding of business strategy.

Our cross-industry consulting services help you craft a vision for your organization and then provide a specific, practical business and technology framework that will make that vision a reality. Our consulting competencies spread across business, process, quality and technology consulting.

As product manufacturers and platform vendors across the world strive to make better products with shorter development cycles and reduced total cost of ownership, we at Inowits Technologies partner with them to provide comprehensive solutions in product lifecycle management and product realization.

At Inowits, we've developed a model called "Extended Engineering" that allows you to leverage synergies across the value chain and progress swiftly from concept to market.

1.2. CLIENT COMPANY PROFILE

VLSI Technology, Inc.

Company Perspectives:

Customer satisfaction is fundamental to VLSI Technology business. Their success is the basis of our success and their perception of our service is reality. VLSI Technology people are our most valuable resource. Company encourages mutual trust, integrity and open communication throughout the organization. Company strives for technical excellence through the development of innovative products.

VLSI Technology goal is to achieve consistent profits to ensure continued prosperity for all who depend on us through our Customer Excellence philosophy; we strive to inspire those with whom we work. VLSI Technology fosters an environment where teamwork, risk taking, and willingness to change define our culture. VLSI Technology is pledged to continuously improve, to create a challenging and rewarding work environment, and to be good world citizens.

Company History:

VLSI Technology, Inc. is known as a pioneer in ASIC technology. It designs, manufactures, and sells customized integrated circuits called application-specific integrated circuits (ASICs) and application-specific standard products (semi-custom chips designed for a particular market application). In addition, the company has become a leader in the chipset business through its personal computer division, where it develops and manufactures computer peripheral devices.

1.3. OVERVIEW AND ARCHITECTURE

Introduction

Rosetta Net Partner Interface Processes (PIPs) define business processes between trading partners. PIPs are specialized system-to-system XML-based dialogs.

PIPs fit into seven Clusters, or groups of core business processes, that represent the backbone of the trading network. Each Cluster is broken down into Segments - cross-enterprise processes involving more than one type of trading partner. Within each Segment are individual PIPs.

The PIP falls in the Marketing Information Management Cluster and the Design Win Management Segment. The PIP provides the ability to notify partners of products eligible for design registration.

The application, that is going to be explained here, will create an IDoc and dispatch it to any system which can convert IDocs to XML.

Architecture

Companies want to send a "catalogue" of products to the channel partners. The product list, as we will call it, has to conform to the Rosetta Net standards. Rosetta Net provides the PIP for such an exchange. This development will generate an IDoc, containing the information about the products, and send it any sub-system, which can convert this IDoc into an XML document, with the information listed as per the PIP's requirements.

The program, on each execution, will generate a single IDoc which can contain information related to multiple products.
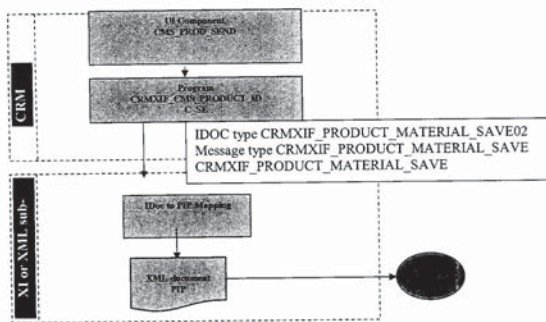
Overview

Product Master Enhancements

System shall provide High Tech specific view in the product master with sample set types to maintain sales area [Sales Organization/Distribution Channel] dependent data.

SAP has already delivered Following SAP Design Registration Attributes (Sale org Dependent)

And now following set types (Sale org Dependent) that needs to be delivered are as follows

Opportunity Thresholds

To determine the minimum threshold value [Amount in currency] or minimum threshold quantity [quantity with UoM] submitted in the opportunity by the distributors that needs to be met in order to be qualified as an opportunity

Win Metrics

To determine the basis for making the opportunities as design win based on point of sales data sent by the distributors

PIP - Distribute Product List.

The "Distribute Product List" Partner Interface Process (PIP) enables a provider to distribute a list of products eligible for design registration to party needing differentiated products (demand creator). The Partner Interface Process is not part of CRM Standard functionality and hence this is the proposed solution.

The outbound interface program will distribute a list of design registrable products to the respective channel partners. The new interface program will generate an outbound IDOC containing design registrable products with data. A single IDOC will be generated for every run, having all products as per selection criteria.

Develop application for user to select the Design registrable products based on criteria [extendable by customers] that can be published to the distributors using message definition

It can be achieved by following two processes

1. Design UI Search component
2. Program to distribute product list

CHAPTER 2

2. SYSTEM CONFIGURATION

The minimum requirements for the system to run effectively are:

2.1. HARDWARE REQUIREMENTS

- Hard disk   :   80 GB
- Main memory   :   512 MB ram
- Processor   :   Pentium iv 2.4 GHz

2.2. SOFTWARE REQUIREMENTS

- Operating system   :   Windows server 2003
- Language   :   ABAP
- Database   :   SQL Server ,Oracle or db2

2.3. ABOUT THE SOFTWARES

2.3.1. System Application Product (SAP)

1. ABAP

ABAP is a programming language developed by SAP for programming commercial applications in the SAP environment. Since the introduction of SAP Net Weaver, SAP also offers a programming environment for Java.

ABAP and SAP Net Weaver

In SAP Net Weaver, ABAP is the programming interface of the SAP Net Weaver Application Server ABAP. Prerequisite for the use of the ABAP programming language is the installation of an SAP system based on SAP Net Weaver Application Server ABAP. An SAP system of this type is based on three-tier client-server architecture with presentation, application, and database layers.

- The presentation layer is distributed on the workstations of individual users and represents the user interface of the ABAP-based SAP system (SAP GUI or Web browser).

- The application layer is realized by one or more application servers. The ABAP runtime environment contains the ABAP runtime environment in which ABAP programs are executed.

- The database layer consists of a database system in which the central dataset of an ABAP-based SAP system is stored.

The main role of ABAP programs in the application layer is the processing and formatting of data from the database layer and its transfer to, and receipt of user input from the presentation layer.

Scope and application areas of ABAP

ABAP is a 4GL language developed specifically for the mass processing of data in commercial applications. It offers the following advantages in comparison to elementary languages in which these functions are stored in libraries:

- Database access integrated into the language as Open SQL.

- Performance optimization of database accesses integrated into the ABAP runtime environment through the use of SAP buffering.

- Internal tables for dynamic storage and processing of tabular mass data in the working memory.

- Concept of Online Transaction Processing (OLTP) integrated in the ABAP runtime environment, enabling several users to access the central database at the same time using the SAP LUW.

- The language has an integrated interface to other programming environments via Remote Function Call.

- The language has an integrated interface to XML.

2. SAP FINANCE

The SAP FI Module has the capability of meeting all the accounting and financial needs of an organization. It is within this module that Financial Managers as well as other Managers within your business can review the financial position of the company in real time as compared to legacy systems which often times require overnight updates before financial statements can be generated and run for management review.

The real-time functionality of the SAP modules allows for better decision making and strategic planning. The FI (Financial Accounting) Module integrates with other SAP Modules such as MM (Materials Management), PP (Production Planning), SD (Sales and Distribution), PM (Plant Maintenance), and PS (Project Systems).

The FI Module also integrates with HR (Human Resources) which includes PM (Personnel Management), Time Management, Travel Management, Payroll Document transactions occurring within the specific modules generate account postings via account determination tables.

3. FI MODULE COMPONENTS

- Accounts Receivables
- Accounts Payable

- Asset Accounting
- Bank Accounting
- Consolidation
- Funds Management
- General Ledger
- Special Purpose Ledger
- Travel Management

Accounts Receivable records all account postings generated as a result of Customer sales activity. These postings are automatically updated in the General Ledger. It is within the Accounts Receivable Module that you can monitor aging of the receivables and generate customer analysis. The Accounts Receivable Module also integrates with the General ledger, Sales and Distribution, and Cash Management Modules.

Accounts Payable records account postings generated as a result of Vendor purchasing activity. Automatic postings are generated in the General Ledger as well. A payment program within SAP enables the payment of payable documents by check, EDI, or transfers.

Asset Accounting is utilized for managing your company's Fixed Assets. SAP allows you to categorize assets and to set values for depreciation calculations in each asset class.

Bank Accounting allows for management of bank transactions in the system including cash management.

Consolidation enables the combining of financial statements for multiple entities within an organization. These statements provide an overview of the financial position of the company as a whole.

Funds Management allows management to set budgets for revenues and expenses within your company as well as track these to the area of responsibility.

General Ledger is fully integrated with the other SAP Modules. It is within the General Ledger that all accounting postings are recorded. These postings are displayed in realtime providing up-to-date visibility of the financial accounts.

Special Purpose Ledger is used to define ledgers for reporting purposes. Data can be gathered from internal and external applications.

Travel Management provides management of all travel activities including booking trips and handling of expenses associated with travel.

4. SAP CONTROLLING

The SAP CO (Controlling) Module provides supporting information to Management for the purpose of planning, reporting, as well as monitoring the operations of their business. Management decision-making can be achieved with the level of information provided by this module.

Some of the components of the CO (Controlling) Module are as follows:

- Cost Element Accounting
- Cost Center Accounting
- Internal Orders
- Activity-Based Costing (ABC)
- Product Cost Controlling
- Profitability Analysis
- Profit Center Accounting

The **Cost Element Accounting** component provides information which includes the costs and revenue for an organization. These postings are automatically updated from FI (Financial Accounting) to CO (Controlling). The cost elements are the basis for cost accounting and enable the User the ability to display costs for each of the accounts that have been assigned to the cost element. Examples of accounts that can be assigned are Cost Centers, Internal Orders, WBS (work breakdown structures).

Cost Center Accounting provides information on the costs incurred by your business. Within SAP, you have the ability to assign Cost Centers to departments and /or Managers responsible for certain areas of the business as well as functional areas within your organization. Cost Centers can be created for such functional areas as Marketing, Purchasing, Human Resources, Finance, Facilities, Information Systems, Administrative Support, Legal, Shipping/Receiving, or even Quality.

Internal Orders provide a means of tracking costs of a specific job, service, or task. Internal Orders are used as a method to collect those costs and business transactions related to the task. This level of monitoring can be very detailed but allows management the ability to review Internal Order activity for better-decision making purposes.

Activity-Based Costing allows a better definition of the source of costs to the process driving the cost. Activity-Based Costing enhances Cost Center Accounting in that it allows for a process-oriented and cross-functional view of your cost centers. It can also be used with Product Costing and Profitability Analysis.

Product Cost Controlling allows management the ability to analyze their product costs and to make decisions on the optimal price(s) to market their products. It is within this module of CO (Controlling) that planned, actual and target values are analyzed. Sub-components of the module are:

- Product Cost Planning which includes Material Costing (Cost estimates with Quantity structure, Cost estimates without quantity structure, Master data for Mixed Cost Estimates, Production lot Cost Estimates) , Price Updates, and Reference and Simulation Costing.
- Cost Object Controlling includes Product Cost by Period, Product Cost by Order, Product Costs by Sales Orders, Intangible Goods and Services, and CRM Service Processes.

5. SAP MATERIAL MANAGEMENT

SAP MM (Materials Management) is a module of the SAP Enterprise Resource Planning (ERP) package that is used for Procurement Handling and Inventory Management.

The module has two important master data - material and vendor. Broadly, the various levels that can be defined for a SAP MM implementation are: Client, Company Code, Plant, Storage Location and Purchase Organization.

This is the largest and most complex in all of SAP modules. It can be divided into five major components. There are: materials management, plant maintenance, quality management, production planning and control, and a project management system. Each is divided into number of subcomponents.

SAP Materials management covers all tasks within the supply chain, including consumption-based planning, planning, vendor evaluation and invoice verification. It also includes inventory and warehouse management to manage stock until usage dictates the cycle should begin again. Electronic Kanban/Just-in-Time delivery is supported.

SAP Plant Maintenance supports the activities associated with planning and performance repairs and preventative maintenance. Completion and cost reports are available. Maintenance activities can be managed and measured.

The SAP Quality Management capability plans and implements procedures for inspection and quality assurance. It is built on the ISO 9001 standard for quality management. It is integrated with the procurement and the productions processes so that user can identify inspection points both for incoming materials and for products during the manufacturing process.

6. SAP PRODUCTION PLANNING

SAP Production Planning and Control supports both discrete and process manufacturing processes. Repetitive and configure-to-order approaches are provided. This set of modules supports all phases of manufacturing, providing capacity leveling and requirements planning, material requirements planning, product costing, bills of material explosions and implosions, CAD dialog interface, and engineering change management. The system allows users to link re-work orders to production schedules.

SAP R/3 has highly integrated Production Planning System. The PP module is divided into two Sub-modules, 'PP-PI' and 'Production General'.

Production planning module of SAP takes care of Master data needed like Bill of Materials, Routings and Work Centers and stores it in one separate component.

Various stages of planning system can be planned by using components like

- Sales and Operation Planning
- Long Term Planning
- Demand Management
- Materials Requirement Planning

SAP has distinguished various styles of production like Kanban, Repetitive Manufacturing and Production Order processing. It can take care of various planning strategies like 'Make-to-stock', 'make-to-order', 'planning without final assembly' etc.

SAP R/3 PP module can also plan Capacity. The capacity Planning sub-module is taking into account various capacities like pooled capacity etc.

Production Orders reporting has flexibility of confirming orders with or without back flush. The material can be staged to production site from the Warehouse after

releasing order. Costing can be triggered automatically by integrating the module with Cost Accounting Module.

Integration with other modules like Material management, Financial Accounting, Cost Accounting, Human Resources & Development, Sales and Distribution etc adds on to reliability of the production planning system in SAP R/3. The system is a real time system. The changes in demand (cancelled or added sales order etc) and supply (high/low rejection, early/late supply from supplier, breakdown of facilities etc) are reflected in real time and the production controller can react fast to these changes.

7. SALES AND DISTRIBUTION

The SAP sales and distribution is part of the logistics module that support your customers, starting from quotations, sales order and all the way towards billing the customer. It is tightly integrated with the MM and PP functional modules. It allows companies to input their customer sales price, check for open orders and forecast etc.

The most important basic functional features in the SD module are:

- Pricing
- Availability Check
- Credit Management
- Material Determination
- Output Determination
- Text Processing
- Tax Determination
- Account Determination

CHAPTER 3

3. SYSTEM ANALYSIS

3.1. EXISTING SYSTEM

ERP's like Siebel CRM and Oracle do not having any proper attention to performance monitoring of the selling products. Hence this project has been allocated and the same will be cooperated.

DISADVANTAGES OF EXISTING SYSTEMS

- Existing System is said to be highly unstructured and were not organized too.
- There was no proper maintenance of the performance, so the higher officials found it hard to monitor the performance of the selling products.
- Lack of co-ordination between the higher officials and team members.
- Generating reports was laborious and the consuming process.

3.2. PROPOSED SYSTEM

The proposed system is designed to eliminate the drawbacks of the existing systems.

Our system monitors the selling products as well as the channel where the products are sold. And it will send the IDoc to the higher official who monitors the sales division of the company.

ADVANTAGES OF PROPOSED SYSTEMS

- To automate the project functionalities makes the management more flexible, easy, fast and efficient.
- It is a web based system which makes web interaction easy.
- Maintain the customer related data in centralized database.
- Provide value added service for the customer.

3.3. USER INTERFACE REQUIREMENTS

L shape customizing to view PUBLISH REGISTRABLE PRODUCTS in UI for BUSINESS ROLE Hi-Tech Channel Manager (HT-CHM-CM)

Step 1: Create Target ID CMS_PRO_SR for the component CMS_PROD_SEND.

Use customizing path as given below

Display IMG
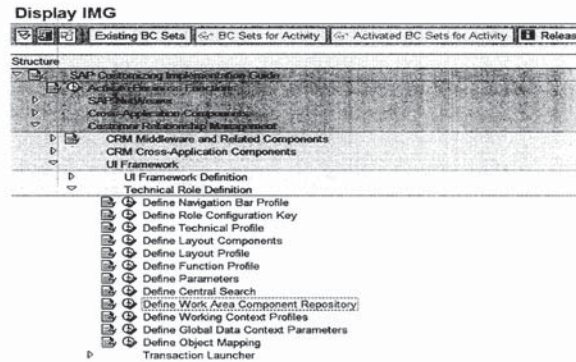
Step 2: Create Logical Link

Use customizing path as given below to create logical link CMS_PRO_LK for target ID CMS_PRO_SR

Change View "Define Logical Links": Overview

Step 3: Define work center link groups and assign our logical link CMS_PRO_LK to work center link group HT-CHM-SR

Change View "Assign Links To Work Center Link Group": Overview

Step 4: Assign work center link groups to business role HT-CHM-CM (Hi Tech Channel Manager)
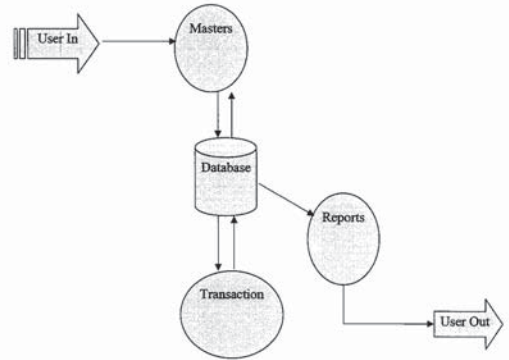
Change View "Adjust Work Center Group Links": Overview

4. SYSTEM DESIGN
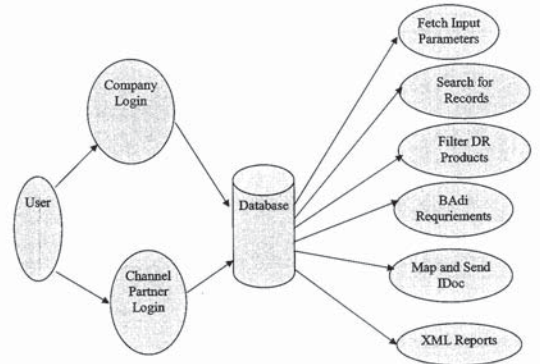
4.1. DATA FLOW DIAGRAM

4.1.1. Level-1

4.1.2. Level-2
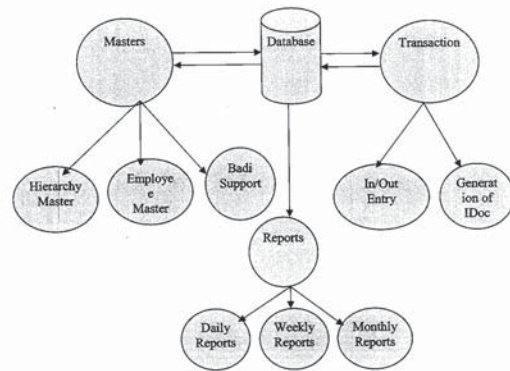
4.2. CONTEXT ANALYSIS DIAGRAM

4.3. SEQUENCE DIAGRAM
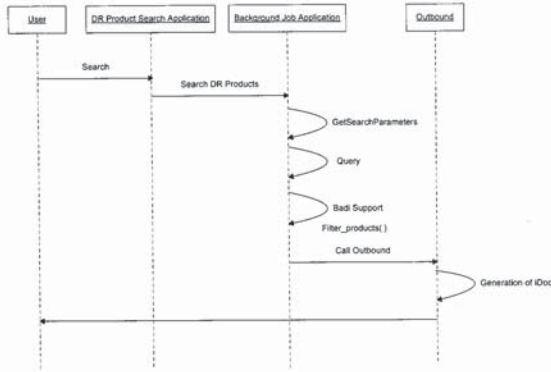
4.4. FLOW CHART DIAGRAM
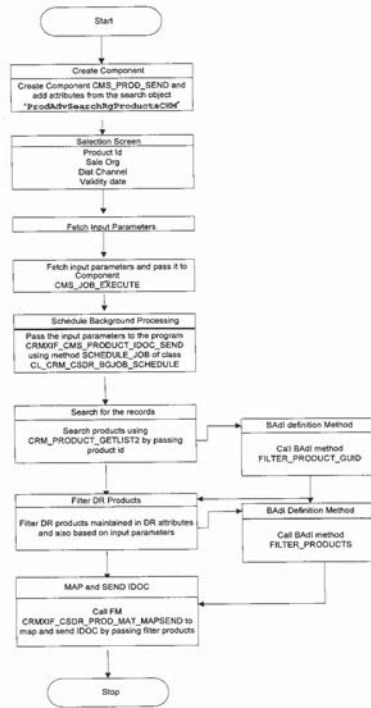
CHAPTER 5

5. ARCHITECTURAL DETAILS

5.1. BADI REQUIREMENTS

BAdI definition BAdI: CMS_CSDR_PDL

Method Name: **FILTER_PRODUCT_GUID**

The method has to be implemented to add or modify the products by customer fields

- The changing parameter for this method will be the internal table with the current products which are searched by standard fields. On implementing this method, the user can extend the range of products.

Method Name: **FILTER_PRODUCTS**

The method has to be implemented to filter products by customer fields

- The changing parameter for this method will be the internal table with the current filtered products. On implementing this method, the user can extend the range of products.

Technical Details

BAdI Definition   : **CMS_CSDR_PDL**
Enhancement SPOT Name: **CMS_CSDR_PDL**
Interface   : **IF_EX_CMS_CSDR_PDL**

Method Name   : **FILTER_PRODUCT_GUID**
Interface Parameters

IS_SEL_PARAMS   Importing   Type
    CMS_PRD_SELECTION_PARAMS
CT_PRODUCT_LIST Changing Type
    COMT_PRODUCT_SELECTION_TAB

Method Name   : **FILTER_PRODUCTS**
Interface Parameters

IS_SEL_PARAMS   Importing   Type
    CMS_PRD_SELECTION_PARAMS
CT_PRODUCT_DETAILS   Changing   Type
    COMT_PRODUCT_TAB

5.2. DESIGN

Delivers standard set type - Product Master Enhancements

System shall provide High Tech specific view in the product master with sample set types to maintain sales area [Sales Organization/Distribution Channel] dependent data.

We already delivered Following SAP Design Registration Attributes (Sale org Dependent)

- Registration status ([Registrable, Not Registrable, New Product]
- Date from
- Date to

And now following set types (Sale org Dependent) that need to be delivered are as follows

- Opportunity Thresholds (CRM_CSDR_THRSL)
    1. Min. Opp. Value (CRM_CSDR_THLD_VAL)
        - Type: Amount
        - Length: 15
    2. Min. Opp. Qty (CRM_CSDR_THLD_QTY)
        - Type: Quantity
        - Length: 15
- Win Metrics (CRM_CSDR_WINMS)
    1. Win Metric Value (CRM_CSDR_WINMCS_VAL)
        - Type: Amount
        - Length: 15
    2. Win Metric Qty (CRM_CSDR_WINMCS_QTY)
        - Type: Quantity
        - Length: 15

The opportunity thresholds shall be used to consider whether Request is accepted as valid DR opportunity or rejected.

5.3. GENERATION OF SET TYPES IN WEB UI

Set types are created in GUI. Created set types in GUI would be displayed in UI only after doing below UI specific customization.

Following are the steps to create set types in Web Client UI.

Step 1: Creation of attributes and set types in GUI.

Create following attributes and set types in GUI from SAP menu->Master data -> products ->Maintain set types and attributes

Set type: **Opportunity Thresholds** (CRM_CSDR_THRSL)

Attributes

1. Min. Opp. Value (CRM_CSDR_THLD_VAL)
    - Type: Amount
    - Length: 15

2. Min. Opp. Qty (CRM_CSDR_THLD_QTY)
    - Type: Quantity
    - Length: 15

Set type: **Win Metrics** (CRM_CSDR_WINMS)

Attributes

1. Win Metric Value (CRM_CSDR_WINMCS_VAL)
    - Type: Amount
    - Length: 15

2. Win Metric Qty (CRM_CSDR_WINMCS_QTY)
    - Type: Quantity
    - Length: 15

Step 2: Assignment of Set type to the Overview-page.

- Assign set types to relevant overview pages on the *SAP Easy Access* screen under *Master Data Products Assign Set Types to Overview Pages*. This report (CRM_UIU_PROD_REPOSITORY) generates runtime repository for the set types so that they can be displayed on the overview page.
- Execute the report for every set type and overview page in which the set type is to be included (PRDDC).

Step 3: Generate UI Configuration for Set Type.

a) Create UI configuration for set types on the *SAP Easy Access* screen under Master *Data-> Products-> Create UI Configuration for Set Type.*

b) The type of set type involved determines on which view(s) of the component PRDGENSET the configuration is created

c) The configuration has been created with the object = PRODUCT and object subtype = <set type ID>

Step 4: Add the set type as new assignment block to the OV Page.

To add set types to overview pages as new assignment blocks, add your views to the relevant overview page in transaction BSP_WD_CMPWB:

a) Select the relevant component PRDDC/DCOV.

b) Select the relevant overview page view, for example, PRDDC/DCOV and go to the tab Configuration.

c) Choose *Show* Technical Details to display the technical view name.

d) Switch to change mode to move assignment blocks from the set of available assignment blocks to the set of displayed assignment blocks.

e) Make sure that the views are in the correct order and the relevant load option has been selected.

f) Change the title of the view, as appropriate. This will be displayed on the overview page.

CHAPTER 6

6. SYSTEM IMPLEMENTATION

6.1. UI COMPONENTS AND UI FLOW

Logic to develop view 'PUBLISH REGISTRABLE PRODUCTS' in UI

<u>UI Processing logic</u>

Step 1: Create component **CMS_PROD_SEND** with new search page SEARCH with context node 'Query' using BOL entity **'ProdAdvSearchRgProductsCHM'**.

Step 2: Create Configuration and select the following attributes from context node Query.

1) **PRODUCT_ID,**
2) **SALES_ORG,**
3) **DISTR_CHAIN,**
4) **VALIDITY DATE**

Technical Details

1	PRODUCT_I D	Product Id	COMT_PRODUCT_ID	Optional	Multiple values
2	Sales organization	Sales Organization	CRMT_SALES_ORG_SHO RT	Optional	Multiple values
3	Distribution	Distribution	CRMT_DISTRIBUTION_C	Optional	Multiple

	Channel	Channel	HANNEL		values
4	Validity Date	Validity Date for Design Registration	Date	Optional	Single value

Step 3: Create a new button 'Background Process'. Following logic will go into the event handler for this button.

- Get selection parameters to an internal table using **GET_CURRENT_DQUERY -> GET_SELECTION_PARAMS.**

- Transfer those values to range table 'SELPARAMS' as follows.

  ➢ ATTR_NAME
  ➢ SIGN
  ➢ OPTION
  ➢ LOW

Transfer those values to component 'CMS_JOB_EXECUTE' from where we can trigger Background job to search products and process IDOC

1) Create Component usage 'BACKGROUND' for new component 'CMS_JOB_EXECUTE' which triggers background process
2) Create Component interface with outbound plug 'TOSCHEDULE'
3) Create Navigation link to navigate from search view to CMS_JOB_EXECUTE'
4) Create context node OBJECT in component controller with attributes 'object' and 'REPNAME' to pass search parameter values and interface program name from component 'CMS_PROD_SEND' to component 'CMS_JOB_EXECUTE'

5) Bind this node OBJECT with component usage CMS_JOB_EXECUTE in method 'WD_USAGE_INITIALIZE'
6) In event handler EH_ONBACKGROUND, set search parameter values to the attribute OBJECT using set property method and call outbound plug TOSCHEDULE.

Develop Component 'CMS_JOB_EXECUTE' with following views

1) View 'VJobGeneral' will be created with the following attributes JOB NAME and JOB TYPE
2) View 'VPeriodwithType' will be created with the following attributes 'Period_flag' and 'Period_date'.
3) View 'VPeriodwithoutType' will be created with the following attribute 'Period_flag'.
4) View 'VStartDate' will be created with the following attributes 'date' and time.
5) View 'VStartImme' will be created without any attributes.
6) View 'VToolbar' will be created with following buttons ' EXECUTE' and 'CANCEL'
7) View set 'VSJob' will be created with two rows and two columns

To get selection screen values and trigger background job

1) Create context node OBJECT in component controller with attribute 'object' and 'REPNAME' to get search parameter values and interface program name from component **'CMS_PROD_SEND'**
2) Create event handler ONEXECUTE for button EXECUTE in Toolbar view to process background job
3) Get search parameter values and JOB details from corresponding context node and export those values to method

This method CL_CRM_CSDR_BGJOB_SCHEDULE=>SCHEDULE_JOB contains the following logic

Importing parameters:

JOBNAME	Importing	Type	BTCJOB
PROGNAME	Importing	Type	SOBJ_NAME
STARTDATE	Importing	Type	TBTCJOB-SDLSTRTDT
STARTTIME	Importing	Type	TBTCJOB-SDLSTRTTM
SELPARAMS	Importing	Type	RSPARAMSLS_TT
SITEID	Importing	Type	CRMXIF_SMO_NAME
STARTTYPE	Importing	Type	CRMT_JW_START_TYPE
JOB_GENERAL	Importing	Type	CRMT_JW_API_JOB_GENERAL

1) Job Scheduling process will be initiated by calling FM 'JOB_OPEN' by passing JOB NAME
2) Submit ABAP program (Interface Program) VIA JOB AND SELECTION TABLE and Return.
3) Close JOB by calling FM 'JOB_CLOSE'.
   Check if Start type is Immediate, and then call FM 'JOB_CLOSE' and set interface parameter **strtimmed** as 'X'
   Check if Start type is Date, and then call FM 'JOB_CLOSE' and pass Interface parameters **sdlstrtdt, sdlstrttm** with start date and start time

6.2. LOGICAL FLOW OF THE CODE

Interface Program logic

The outbound interface process enables to distribute a list of design registration products to the demand creator. The program will send a list of design registrable products to the respective channel partners. Business Add-in will be provided to fill customer defined attributes in the outbound interface program. An IDOC will be generated containing all DR Products as per selection criteria.

Program Name: CRMXIF_CMS_PRODUCT_IDOC_SEND

Step 1: Design selection screen with key-value pairs to get search parameters and their values and parameter to get site ID
Read search parameter values from key-value pairs into corresponding range table

Step 2: To get product GUIDs in internal table, call FM CRM_PRODUCT_GETLIST2 by exporting product IDs
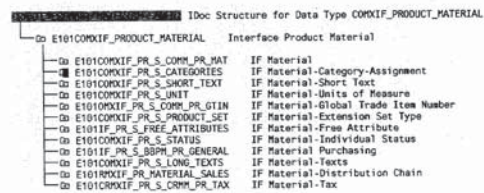Provide BAdI definition **BAdI: CMS_CSDR_PDL**

- BADI method 'FILTER_PRODUCT_GUID' will be provided to add or modify the products by customer fields

  ➤ The changing parameter for this method will be the internal table with the current products which are searched by standard fields. On implementing this method, the user can extend the range of products.

Step 3: loop internal table, Get product details including set type attributes using FM 'COM_PRODUCT_GETDETAIL_API' by exporting product ids and Requested set type as 'CRM CSDR REGS'

Step 4: Check if those products are design registrable

Read the value for attribute design registrable (REGS) from set type CRM_CSDR_REGS and check if this value is 'X' then select only those products

Step 5: *Get all* Distribution Chains defined for the product using FM 'CRM_PRODUCT_GET_DISTR_CHAINS'

Step 6: Check if distribution chains which are entered in selection screen are present in the list of distribution chain defined for the product, if it is present, select only those products.

Step 7: Check if a start date has been maintained in the design registration set type CRM_CSDR_REGS, if it is maintained, select only those products.
If user searches products using validity date, it checks with start date of DR and if it matches, select those products

Step 8: Provide BAdI definition **BAdI: CMS_CSDR_PDL**

- BADI method 'FILTER_PRODUCTS' will be provided to further filter the products

  ➤ The changing parameter for this method will be the internal table with the current filtered products. On

implementing this method, the user can extend the range of products.

Step 9: Use IDOC type CRMXIF_PRODUCT_MATERIAL_SAVE02 and Message type CRMXIF_PRODUCT_MATERIAL_SAVE to send IDOC to external system

```
                              IDoc Structure for Data Type COMXIF_PRODUCT_MATERIAL
└─ ⊡ E101COMXIF_PRODUCT_MATERIAL    Interface Product Material
    ├─ ⊡ E101COMXIF_PR_S_COMM_PR_MAT    IF Material
    ├─ ⊡ E101COMXIF_PR_S_CATEGORIES     IF Material-Category-Assignment
    ├─ ⊡ E101COMXIF_PR_S_SHORT_TEXT     IF Material-Short Text
    ├─ ⊡ E101COMXIF_PR_S_UNIT           IF Material-Units of Measure
    ├─ ⊡ E101OMXIF_PR_S_COMM_PR_GTIN    IF Material-Global Trade Item Number
    ├─ ⊡ E101COMXIF_PR_S_PRODUCT_SET    IF Material-Extension Set Type
    ├─ ⊡ E101IF_PR_S_FREE_ATTRIBUTES    IF Material-Free Attribute
    ├─ ⊡ E101COMXIF_PR_S_STATUS         IF Material-Individual Status
    ├─ ⊡ E101IF_PR_S_BBPM_PR_GENERAL    IF Material Purchasing
    ├─ ⊡ E101COMXIF_PR_S_LONG_TEXTS     IF Material-Texts
    ├─ ⊡ E101RMXIF_PR_MATERIAL_SALES    IF Material-Distribution Chain
    └─ ⊡ E101CRMXIF_PR_S_CRMM_PR_TAX    IF Material-Tax
```

Step10:

CALL FUNCTION 'CRMXIF_CSDR_PROD_MAT_MAPSEND' by exporting attributes HEADER, MESSAGE EXT, CURRENT STATE, and RECIPIENT to map data with IDOC structure and send to external system.

➤ Set BDOC HEADER by calling method 'CL_SMW_MFLOW=>SET_HEADER_FIELDS' by exporting attributes BDOC type 'PRODCUT_MAT', Message type, Site ID.

➤ MESSAGE_EXT will have product list which are searched and filtered by user

CHAPTER 7

7. FUTURE ENHANCEMENT

The Proposed System could be effectively implemented using **Design Win Registration-Product Distribute List** with PC's. In the future, Mobile phone technology will be implemented. In this system we have send the IDoc reports through mobile in future.

Mobile phone will be used by all the business in future; so our system requires a GPRS technology mobile phone with pdf reader. Because IDoc reports should be generated and send through GPRS only.

CHAPTER 8

8. CONCLUSION

This project **Design Win Registration-Product Distribute List** was prepared with guidance and discussion with personal involved in this project and technical staff.

This project has developed with maximum care. It has been developed with an eye on expansion and flexibility at every stage of all the modules. This is, developed to meet almost all the requirements of the user. This will replace the existing manual system.

This is more advantageous over the existing system as it takes into account the speed and efficiency of the system. It is accurate and very fast and produces various kinds of detailed reports.

Further enhancements can be made at any later point of time. Reports can be represented in all-necessary perspectives. Added options can be included in designing reports. This project is developed in a user friendly manner in GUI software.

Special Great thanks go to the open source community for the wonderful web support sdn.sap community. Thanks for everyone. I the developer of Design Win Registration-Product Distribute List am very grateful to my internal guide, external guide and all other staff members for their invaluable support.
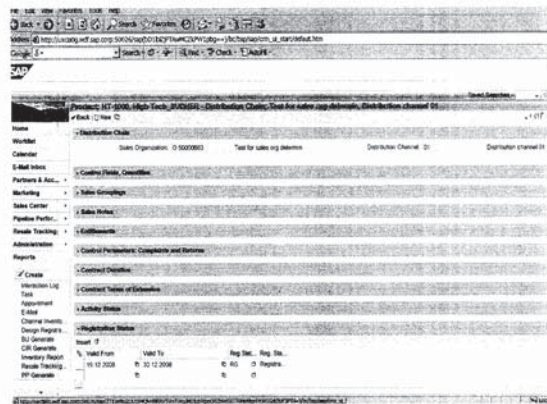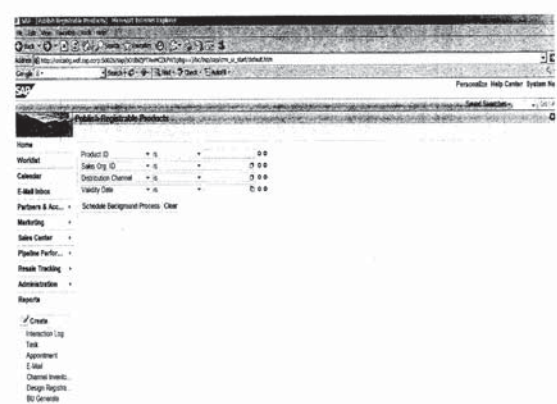
CHAPTER 9

9. APPENDICES

APPENDIX 1: SAMPLE SCREENS

SAP Login Screen
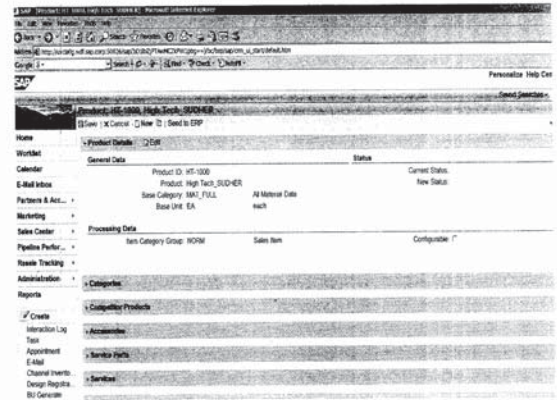
Test for Sales Organization

Publish Registrable Products Main Page

Search DR Product Screen

Search DR Product through Sales Organization

Job Schedule Page

Job Schedule through Background Process

Easy Access Product Screen

SAP Easy Access Customer Relationship Management

Favorites
- Assign Symbolic Account Key
- Maintain Billing Documents
- Transfer Billing Docs to Accounting
- Edit Billing Due List
- Release Billing Due List for Billing

SAP menu
- Master Data
  - Organizational Model
  - Business Partners
  - Products
    - Maintain Set Types and Attributes
    - Assign Set Types to Overview Pages
    - Create UI Configuration for Set Type
    - Create UI Configuration for ID Type
    - Recategorize Products
    - Recategorize Objects
    - Administration
    - Data Archiving
  - Product Catalog
  - Listings

Job Selection Screen

Simple Job Selection

Execute | Extended job selection | Information

Job name	PRODUCT
User name	

Job status
☑ Sched.   ☑ Released   ☑ Ready   ☑ Active   ☑ Finished   ☑ Canceled

Job start condition
From 02.04.2009   To   02.04.2009

or after event:

Job step
ABAP program name:

Job Overview Screen

Job Overview

Release | Spool | Job log | Step | Application servers

Job overview from: 02.04.2009 at: : :
            to: 02.04.2009 at: : :
Selected   job names: PRODUCT
Selected user names:

☑ Scheduled ☑ Released ☑ Ready ☑ Active ☑ Finished ☑ Canceled
Event controlled   Event ID:
ABAP program   Program name :

☑			02.04.2009 15:54:38	3	0
*Summary				3	0

Log Display Screen

Display logs

Date/Time/User	Number	External ID	Object text	Sub-object text	Trans	Program	Mode	Log number
02.04.2009 15:54:41 TAMILARASAN	3		DME,DR Products				Batch proce...	000000000000367471
Problem class Other	3							

Type	Message Text
	1 product found
	Data processed successfully
	Doc generated successfully. Doc number 0000000001170A0.

Process Overview Screen

Overview Page of IDoc Processing

Win Metric Value IDoc Screen

CHAPTER 10

10. REFERENCES

BOOK REFERENCE

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- ➢ **Sams Teach Yourself SAP in 24 Hours,** Second Edition, (November 2005) By George Anderson, Danielle Larocca.

- ➢ **ABAP programming** © Copyright 2001 SAP AG.

- ➢ **IDoc Interface** © Copyright 2001 SAP AG.

ONLINE REFERENCE

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