

Client Side Customization for Data Migration of Dataset (Non CAD Files) in Teamcenter-PLM

Suresh Giram¹, Umesh Patil²

¹M.Tech in Mechanical Engineering, Dept. of Mechanical Engineering, DIEMS Aurangabad, Maharashtra, India

²Assistant Professor, Dept. of Mechanical Engineering, DIEMS Aurangabad, Maharashtra, India

Abstract - In present days of increasing software development environment sometimes it turns into challenging to mold the Product Lifecycle Management software as per requirement of clients. Most of the time user requires some simplified applications for its business solution and simplified process for their organization. To solve this problem client side customization is necessary means customize the client User Interface by using the Rich Architecture Customization and also used different Application Program Interface and Java language. Product Lifecycle Management is mainly concern about the data and through the Product Lifecycle Management we can integrate the data, people, processes and business systems. My aim is to migrate the Dataset means Non CAD files in Teamcenter application. For this work we used Teamcenter 8.0 version along with Eclipse Galileo tool, for client side applications. Data Migration is very useful activity when we implement Product Lifecycle Management in any Organization. By using the Eclipse plug project, I have made Swing Custom User Interface from that I can read any folder recursively and also the datasets which in that specific folder easily migrated in Teamcenter application.

Key Words: Product Lifecycle Management, Rich Application client Customization, Data Migration, Teamcenter 8, Eclipse Based Plug in Project, User Interface.

1. INTRODUCTION

Product Lifecycle Management frameworks offer assistance organizations in adapting with the expanding complexity and designing challenges of creating unused items for the worldwide competitive markets. Product lifecycle Management ought to be recognized from product life-cycle Management (marketing). PLM depicts the designing perspective of a product, from overseeing depictions and properties of a product through its improvement and valuable life; while, PLCM alludes to the commercial administration of life of a product within the commerce showcase with regard to costs and deals measures. Product Lifecycle Management is the method of overseeing the whole lifecycle of a product from initiation, through designing plan and make, to benefit and transfer of made products and also PLM manages data from raw material to finished products [1]. Product Lifecycle Management integrates data, people, processes and business systems and provides a product information backbone for companies and its enterprise. Product Lifecycle Management tool has wider scope and

there are various types of Product Lifecycle Management tools that integrate the data according to company needs. Companies have decided which PLM software is better but now days Siemens PLM has covered 70% of global competitive markets [2]. Today's point of view Teamcenter has covered 70% of the global market. There are lot of Product Lifecycle management tools available in the market such as Siemens Teamcenter, PTC Windchill, Dassault ENOVIA, SAP PLM, Oracle Agile, Aras PLM, Arena PLM, Fuse PLM, Bamboo Rose, Autodesk Vault, Autodesk Fusion Lifecycle but Siemens Teamcenter is very popular among all of this due its flexibility and user friendly interface and also lot of Out of the Box (OTB) are available in the teamcenter.

2. PLM CUSTOMIZATION

2.1 Need of PLM

Product Lifecycle Management can be utilized to build yield with consistent assets, to expand incomes or to diminish the assets used to deliver a steady yield. This all assists with improving the reality. Product Lifecycle Management encourages association to accomplish this through: Productivity upgrades, Improving advancement for new business objects (products), Decreased expenses, Increment efficiency, improved nature of business objects (products)

Integration of data is the need of global market also integrated data consumes the memory so market needs integrate data with least consumable memory. From that concern has discovered the concept of PLM and its tools.

2.2 Objective

This Research work has developed the solution for data migration of dataset means non CAD files when we can implement the Product Lifecycle Management in any Organization.

This work has main objective is Migration of legacy data into Teamcenter 8 version by using Rich Application Client Customization means by using client side customization.

2.3 Types of Customization

2.3.1 Client Side Customization

The client side customization can be performed by using programming language means Java and various wizards

available in Teamcenter. This type of customization can be used for including new Application in Teamcenter, such as Menu bar, Toolbar, User Interface form on client side. By using this type of customization we can easily solve the customer requirement.

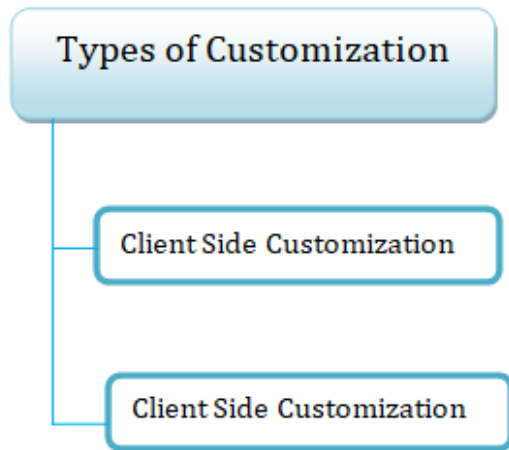


Fig -1: Teamcenter Customization types

2.3.1 Server Side Customization

The server is being customized using Teamcenter API (Application program interface) called as Integrated Tool Kit (ITK), C++. Integrated Tool Kit (ITK) is a set of software tools which you can use to integrate third party or user-developed applications with Teamcenter and we can use this customization for server side issues.

2.4 Customization Tools

Customization in Teamcenter can be performed in different ways and we have seen below [3].

2.4.1 Non-programming Customization

Non-programming customization can be performed by using the wizards available in Teamcenter and making the entries in the registry files.

2.4.2 Programming Customization

Programming customization can be performed by using programming languages i.e. C, C++, Java. This can be classified into server side and client side customization. Client side is customized using Java language and server side is by using ITK.

2.4.3 ITK (Integration Tool Kit)

The Integration Toolkit (ITK) is a set of server-side software tools that you can use to integrate third-party or user-developed applications with Teamcenter. The ITK is a set of C and C++ functions used directly by Teamcenter and UNIGRAPHICS. The Integration Toolkit is a set of software tools that act as a programmatic interface to Teamcenter. It is the means by which both internal and external applications integrate with the Teamcenter. Internal applications are those supplied such as Unigraphics. External

applications (third party) are those that you decide to integrate into Teamcenter.

2.4.4 Portal Customization

Portal customization is performed by using Java programming. This can be used to add the new application or customize the menu bar and toolbar within Teamcenter engineering application.

3. METHODOLOGY

We have to be implementing Product Lifecycle Management in any organization; the main concern is data so we have to manage that data. Data migration is key phenomenon so my aim I have to read the all dataset in that folder of respected drive by using the Rich Application Client Customization. I have made custom dialog in Eclipse plug in project and name of the project is com.teamcenter.testproject. From that custom User Interface has created in Teamcenter 8. We can browse the path by automatically by the help custom User Interface.

3.1 Configuration of Eclipse IDE with Teamcenter

In this, project is build for molding the Teamcenter software as per the business need and the client need. The steps required for configuration of Eclipse Galileo IDE with Teamcenter are given below [4]:

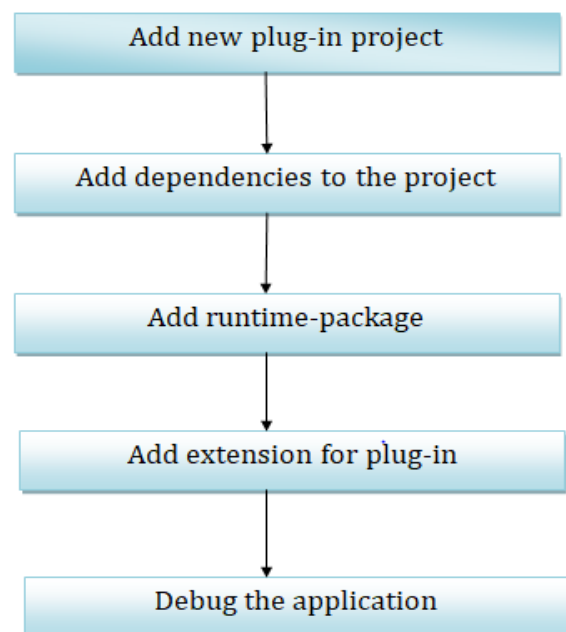


Fig -2: Configuration of Eclipse Galileo with Teamcenter

For the plug-in project, I have written the source code in core java language and also used the swing concept for the designing the user interface. I have browsed any folder from client side and also migrated all dataset in the teamcenter with same format with same name.

3.2 Steps of Execution Data Migration for Dataset

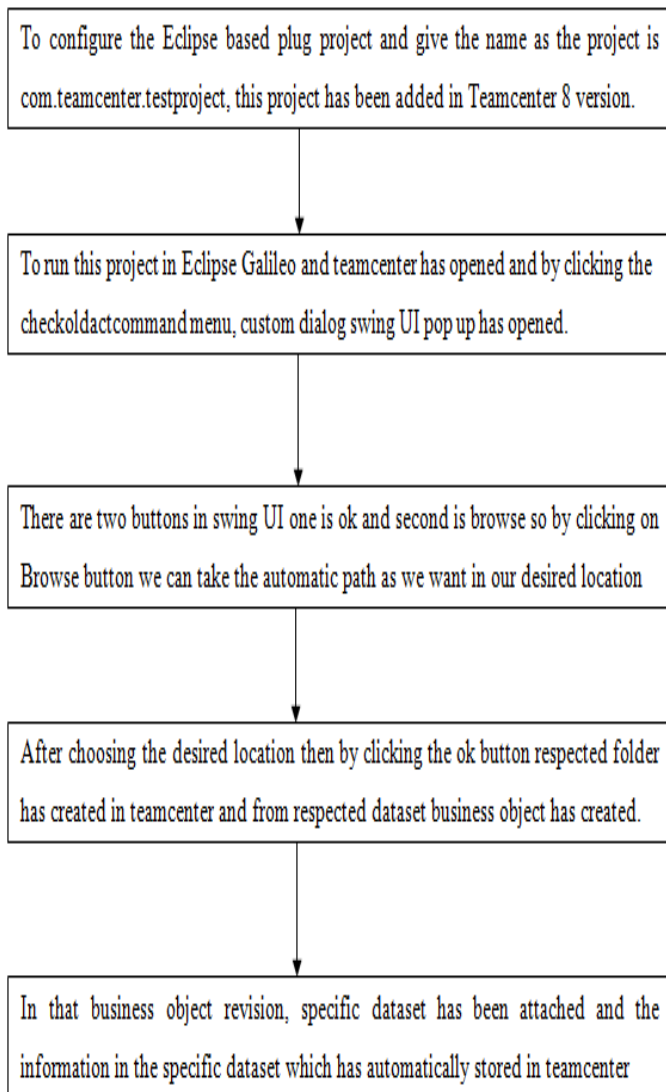


Fig -3: Flow chart of Execution Data Migration for Dataset

3.3 Document representation of how to execute data migration for dataset

1. To create Eclipse based plug in project by using Ellipse Galileo and write the coding which is required for my data migration activity. In that I have wrote the code for custom swing User Interface and reading the folder by using recursion methods. All the datasets which in specific folder will become business objects in Teamcenter.

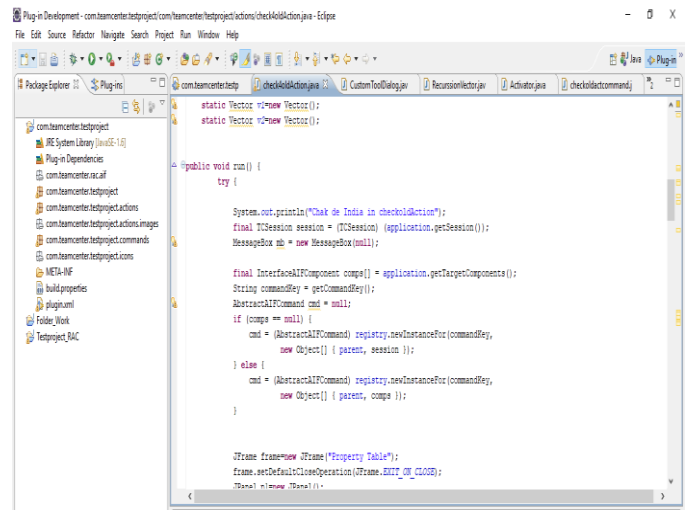


Fig -4: Eclipse Galileo IDE User Interface

2. We have seen the checkoldactcommand menu in teamcenter and this menu has added in teamcenter.

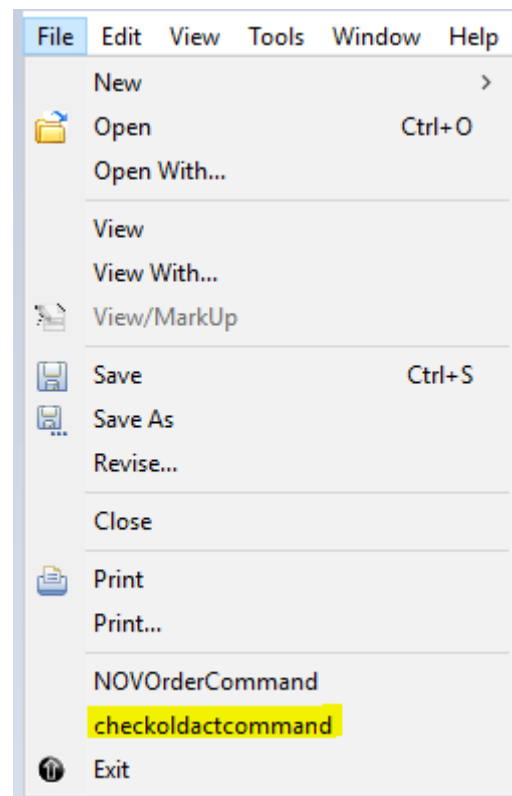


Fig -5: New Customized Menu Interface

3. By clicking the checkoldactcommand, custom swing UI get opened and there are two buttons one is Browse and second is ok. By using the browse button select the desired location folder. Folder name Teamcenter pdf and in that folder some dataset in pdf, text, ppt, word files form then click the ok button.

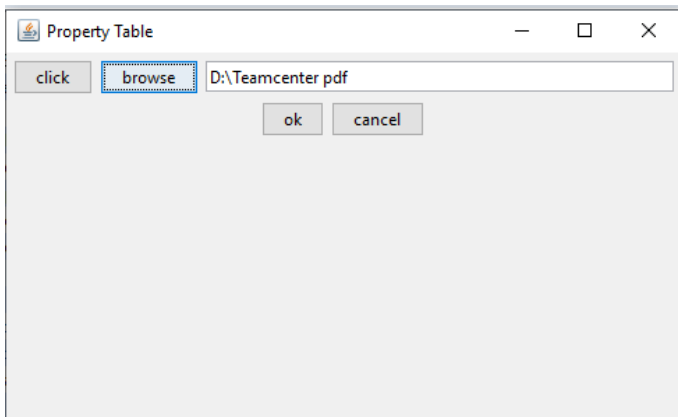


Fig -6: Custom Swing User Interface

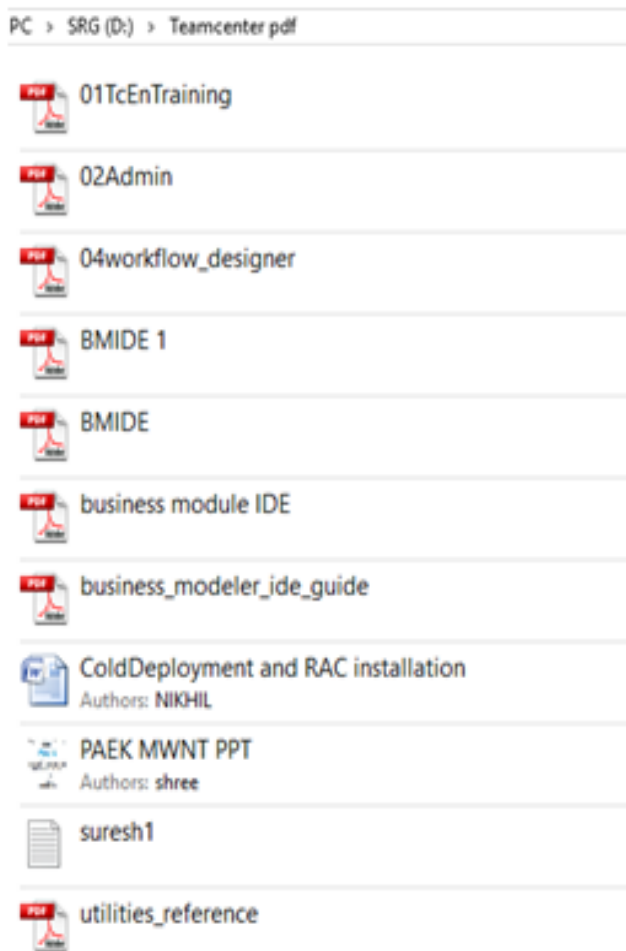


Fig -7: Browse Folder Name and its Datasets

4. Folder has automatically created in the teamcenter and datasets available in that folder will be become the item or business object with same and also that datasets has been attached to Item revision with same format.

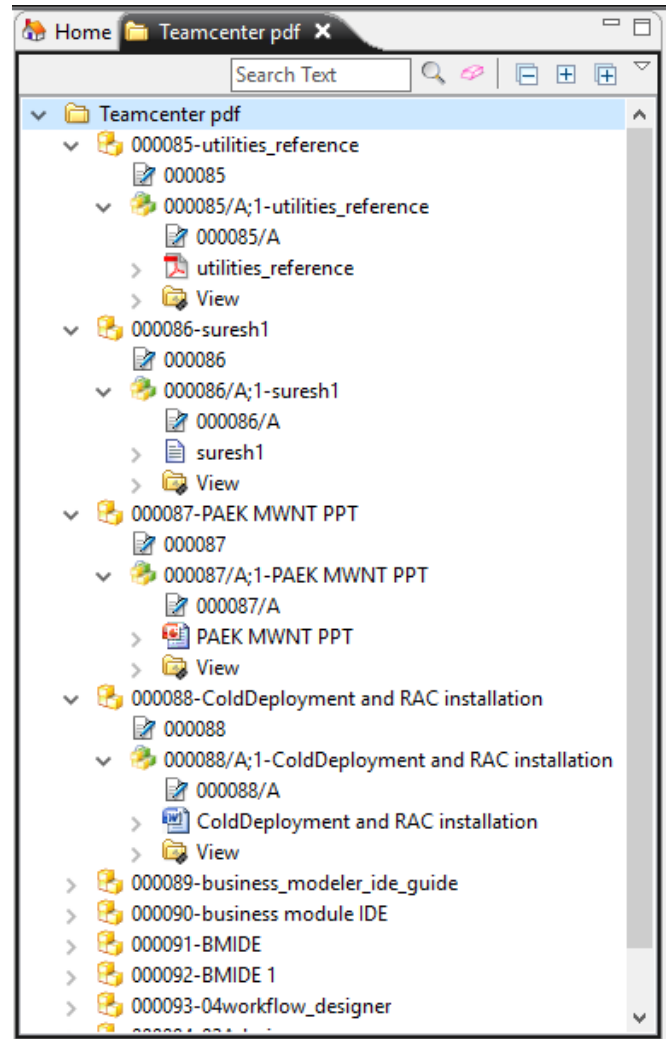


Fig -8: Teamcenter User Interface

5. Like this way we can migrate data in teamcenter by using client side customization (RAC). From this we can conclude we can implement the Product Lifecycle Management in any organization. Teamcenter PLM is best solution for the data migration.

4. RESULT AND DISCUSSION

All datasets which have in different forms like Pdf, PPT, MS word, MS excel has stored in Teamcenter with the help of RAC customization. Folder has read recursively and the selected folder which has created in teamcenter with same name and all datasets which in folders has been created in that folder with same name and they become a business objects and also the information stored in dataset automatically attached to the Business objects revision with respected format. I have browsed folder and name of the folder is Client Dataset for Data Migration has created in Teamcenter and also the information in folder has automatically stored in that folder as in business object form. Below the diagram I have seen that selected folder information.

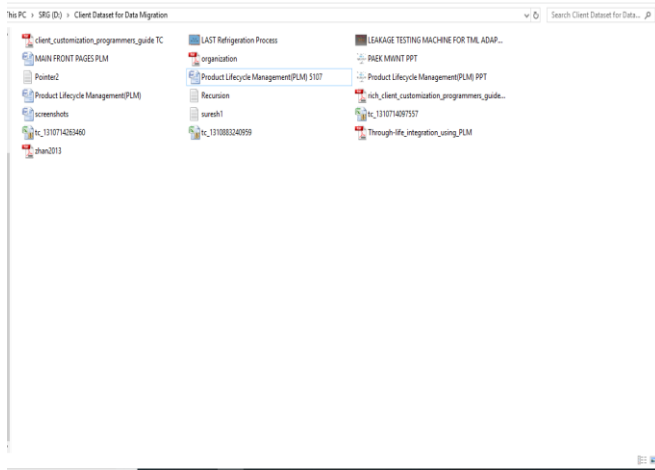


Fig -9: Folder selected from specified location

I have observed that total information stored in the Teamcenter with same name. Also datasets attached to the business objects revisions. Below see the pictorial User Interface of Teamcenter with the folder has name Client Dataset for Data Migration.

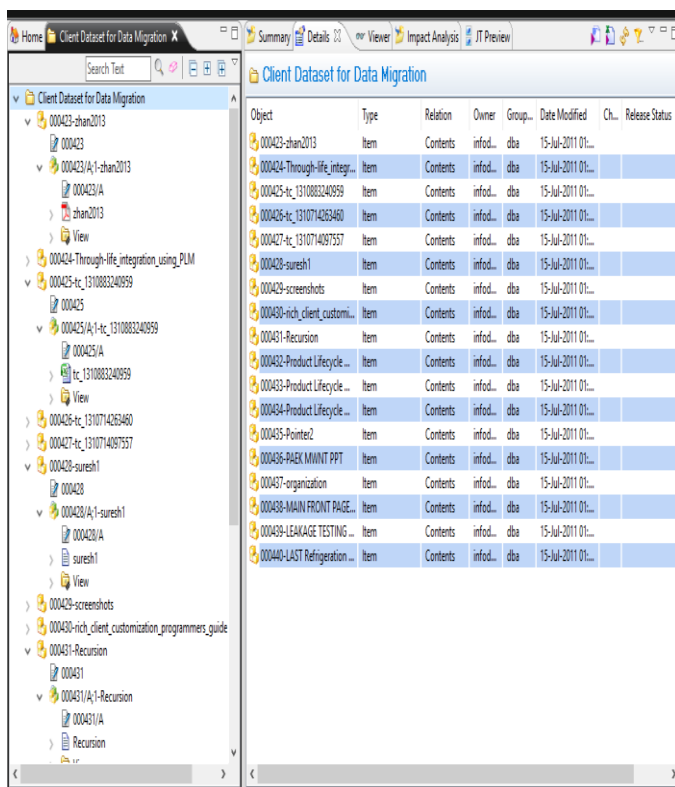


Fig -10: New Customized Teamcenter User Interface with migrated CFDM folder and its datasets

5. CONCLUSIONS

From the research I have concluded that we can easily migrate the client data means datasets in Teamcenter with

consuming the least memory and saving the time by using the swing based custom user interface.

ACKNOWLEDGEMENT

Special thanks to my guide Prof. U. S. Patil and my sister Supriya Giram who is working as Research Associate in GVK Bioscience, Bangalore. She always motivates me about my project and work.

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BIOGRAPHIES



Mr. Suresh Giram, M tech in Mechanical Engineering from Deogiri Institute of Engineering and Management Studies, Aurangabad with having knowledge of PLM tools, Teamcenter, Java Language and RAC Customization



Prof. Umesh Patil, Assistant Professor in Deogiri Institute of Engineering and Management Studies, Aurangabad with having command on Thermal Stream and also He was the H.O.D of Mechanical Engineering.