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Design and Developmentof Token Generate Toll for Future Phone Technologies

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***Abstract*— "Design and Development of Token Generate Toll for future Phone Technologies" project summarizes the various key areas and technologies This Project gives a brief history about to Generate the Token resource files in different languages with respect to default language as US English from TMS sheet. The generic requirements for "Tool" that will be used in LG Android Platform for generation of Token resource files in XML format. It takes TMS sheet and UK English as a reference tokens and generates token resource files in XML format in more than 40 languages. This Project is implemented by using C++ Language on Qt Platform (Tool).. It also gives a good representation of the organizational and the interconnectivity (communication) of the various Languages between Country to country, Engineering and Services Departments. This project mainly deals with creating XML files for generating resources in different languages. Main window of this project contains GUI components like Progress bar, Token Table, Settings and Help Menu. GUI Window display supports horizontal and vertical scroll bars to view the contents. Token Table is the list of Input and output tokens displayed in the GUI display window. Settings menu shows the Tool version name and the Release Date. Help Menu shows the information about the tool components usage. Parses the XML files and extracts the tokens from the resource files. The extracted tokens will be stored in a buffer.**

I. INTRODUCTION

This document details the generic requirements for Token Generator Tool that will be used in Android Platform for generation of Token resource files in XML format. It takes TMS sheet and UK English as a reference tokens and generates token resource files in XML format in more than 40 languages as mentioned below based on the user input selection. This development Tool Project details the generic requirements for Token Generator Tool that will be Android Platform for generation of Token resource files in XML format. It takes TMS sheet and UK English as a reference tokens and generates token resource files in XML format in more than 80 Languages through-out the world based on the user input selection. This document identifies the requirements that shall or shall not be met by the system. The objective of this document is to act as the sole, Authoritative and controlled source of technical requirements to be implemented in the software. The Token Generator Tool Project details the Token Generator Tool related software requirements. The Token Generator tool must comply with the requirements mentioned in this Report.

1.1 Plan of Project Development

The project of "Token Generator Tool" has been developed in following stages:

Analysis:In the analysis phase, information about the current technology. In the field of to generate the tokens resources and on C++ has been collected and studied from the concerned websites and books. We have also gone through the Qt tool in the concerned field, to have a look & feel of their mode of operation.

Design: In the design phase DFD's and flow charts of the software are developed, and the software has been modularized. To develop the interface referenced has been taken from the already available software in the concerned field.

This design captures the details about the system, components, and dependencies among the modules of the Token Generator Tool. Sequence diagrams are also drawn to show the major activities
and interactions. Component architecture diagram is explained with input, processing and outputcomponents/modules. The Token Generator Tool interacts with the git server for auto updating whenever the tool is launched and downloads the
latest version of the Token Generator Tool if available.

Coding: The coding part of the software is done in Qt framework, and the C++ Language Token Generator tool will be deployed through the single installation setup file. User can install the tool by double clicking on the installation file.

1.2 Scope of the Application

The purpose and scope of this Tool is to define the high level design for Token Generator Tool. Token Generator Tool will be developed on QT SDK 1.2.1 version (Build 4.7.4 for Desktop). Provide a descriptive overview of the components that you are documenting. Describe what the component in the system is supposed to do, where it is in the overall system, how it is expected to perform, and any other

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information that is important to convey to somebody interested in understanding what the documented system is all about.

II. LITERATURE SURVEY

This document identifies the requirements that *shall* or *shall not* be met by the system. The objective of this document is to act as the sole, authoritative and controlled source of technical requirements to be implemented in the software.

This document details the Token Generator Tool related software requirements. The Token Generator tool must comply with the requirements mentioned in this document. This tool is used by the LGSI R&D team to generate token resource files in XML format for the Android platform phones.

2.1 Development Tools

If we are developing tools that require speedy delivery to our customers and features like integration with some version control software then simple Notepad may not serve our purpose. In such cases we require some Integrated Development Environment (IDE) that allows for Rapid Action Development (RAD). The new Qt tool is such an IDE. Qt tool is a powerful and flexible IDE that makes developing C++ applications a breeze. Some of the features of Qt tool that make you more productive are:

- Drag and Drop design
- IntelliSense features
- Syntax highlighting and auto-syntax checking
- Excellent debugging tools
- Integration with version control software such as C & C++
- Easy project manage.

Designer

Qt tool includes a host of UI designers to aid in the development of applications.

Windows Forms Designer

The Windows Forms designer is used to build GUI applications using Windows Forms. Layout can be controlled by housing the controls inside other containers or locking them to the side of the form. Controls that display data (like textbox, list box, grid view, etc.) can be bound to data sources like databases or queries. Data-bound controls can be created by dragging items from the Data Sources window onto a design surface.

2.2 Hierarchy Of threads

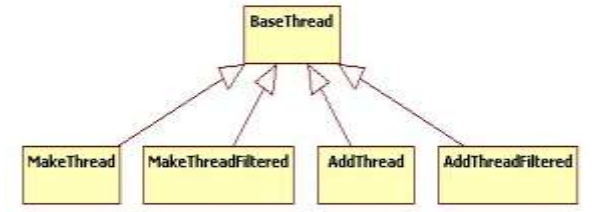

Figure2.1Hierarchy Of threads

2.6 Threads Flow Chart

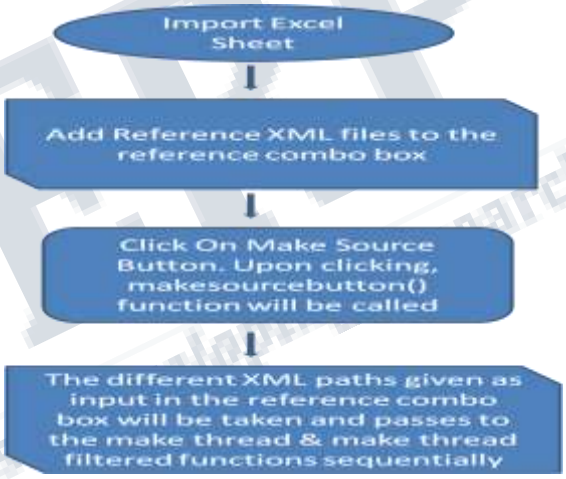

Figure2.1 Threads Flow Char

III. SOFTWARE REQUIREMENT SPECIFICATION

Software requirements deal with the requirements of the proposed system, i.e., the capabilities that the proposed system should have. The requirements phase ends with S\w requirements Specification (SRS)

The SRS is a document that completely describes 'What' the proposed software should do without describing 'How' the software will do it. The basic goal of the requirements phase is to produce the SRS, which describes the complete external behavior of the proposed software.

The basic limitation for producing the SRS is that the user needs keep changing as the environment in which the system was to functions changes with time. This leads to

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a request for requirement changes even after the SRS is produced.

This document details the requirements of management system for distributed network. The software requirements shall be specified for all the phases of the application.

3.1 Need for SRS

Software systems are in the need to automate an existing manual system or desires for a new software system. There are three major parties interested in a new system: the client, the users and the developer but the problem is that the clients usually do not understand the software and the developer often do not understand the client's problem. This causes a communication gap between these parties. This gap is bridged by the SRS.

1. Basis of Agreement between Client and Developer.
2. Reference for validation of the final product
3. A high quality SRS is necessary for high quality software.

3.2 Overall Description

A Software Requirements Specification (SRS) is a complete description of the behavior of the system to be developed. It includes a set of use cases that describe all the interactions that the users will have with the software. Use cases are also known as functional requirements. In addition to use cases, the SRS also contains non-functional (or supplementary) requirements. Non-functional requirements are the requirements which impose constraints on the design or implementation (such as performance engineering requirements, quality standards or design constraints.

3.2.1 Product Perspective

The project work is basically intranet based development intended to highlight TMS sheet. The project framework is designed in C++ using Qt platform which provides the framework with various rich features of user interface. In this dissertation, we show that consistency and extensibility increases for code reusability or searching of files. The product design is also focused on making the model for consistency maintenance, usability, testability and portability. Portability is ensured with the help of object-oriented programming language which is C++.

3.2.2 Requirement Analysis

1. Easy navigation.
2. Provide good GUI.
3. Provide latest design technique.
4. Easy to handle and Easy to understand.
5. Provide client- server utilities

3.2.3

3.2.4 Assumptions and Dependencies

The following assumptions are being made in the development of our project:

- The data file must of the TMS sheet must be imported.
- The project work also assumes the tool goes down during the imprting process maintaining the same availability.

The following are the dependencies of our project:

- This project is code in C++ and the application requires proper Qt framework
  QT (SDK 1.2.1 and Build 4.7.4),
- So anyone who wishes to work on further development of this project should know this programming language.
- Proper configuration of the tool has to be done before running the token generator tool.

3.3 General Constraints, Assumptions, Dependencies, Guidelines

- Array.xml and string.xml will be generated at the first instance. Other formats will be generated one by one by user.
- Sub folder file structures are created using text file.
- Source code file structure will be extracted manually
- Token generator will generate XML 1.0
- Tool will support only TMS 1.0
- OS Environment supported is Windows XP.
- Output report will be generated in XLS format
- XML Start Tag and End Tag is matching.
- UK English token is taken as a reference.
- Start Tag and end Tag is not missing in XML.
- correct Syntax in XML
- TMS token Format should be proper (Example X:liff)
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IV. SYSTEM ANALYSIS

4.1 How to Develop Software

Application of systematic, disciplined, quantifiable approach is to development, operation, and maintenance of software. It is a layered technology. It rests on organizational commitment to quality.

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Token generator inputs

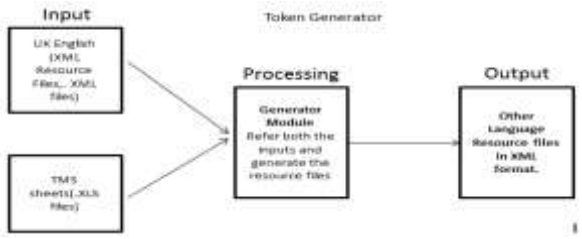

Figure4.2Token generator inputs

Token Generator processing:

- Before token generator, user should be able to validate the TMS sheet with respect to XML format, for eg. XML Tag missing, string format etc.
- Create different language folders
- Generate the Token resource files in XML format.

4.2 Data Flow Diagram (DFD)

A Data Flow Diagram is graphical representation that depicts the information flow and the transforms that are applied as data moves from input to output; it can be used to represent software at any level of abstraction. In fact, DFD's may be portioned into levels that represent increasing information flow and functional detail. Therefore, it provides mechanics for functional modeling as well as information flow modeling.

DFD's are defined in levels with every level decreasing the level of abstraction, as well as defining greater details of the functional organs of the system. A "0" level, DFD, also known as Context or Fundamental System Model, represents the entire software elements as a single bubble, with input and output data entities which are indicated as incoming and outgoing arrows.

SYMBOLS OF DFD

1. **Bubble**:A circle is used to depict a process. Both inputs and outputs to a Process is data flows.
2. **Arrow**: Data flows are represented by a line with an arrow.
3. **Rectangle**: Rectangles are used to represent the entities and are outside the System.
4. **Parallel Lines**: Parallel lines are used to depict data stores. Process may store or Receive data from data stores.

4.2.1Configuration Settings

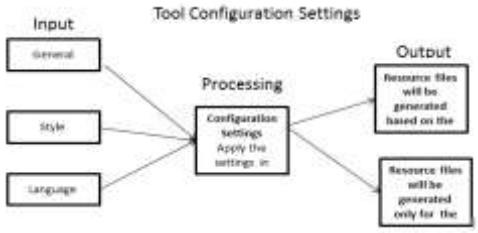

Figure4.5Configuration Settings

V. SYSTEM DESIGNARCHITECTURE

System design is the process of developing specifications for a candidate system that meet the criteria established in the system analysis. Major step in system design is the preparation of the input forms and the output reports in a form applicable to the user. The main objective of the system design is to make the system user friendly. System design involves various stages as:

1 Data Entry
2 Data Correction
3 Data Deletion
4 Processing
5 Sorting and Indexing
6 Report Generation

System design is the creative act of invention, developing new inputs, a database, offline files, procedures and output for processing business to meet an organization objective. System design builds information gathered during the system analysis.

5.1 Characteristics of a Well Defined System

In design an efficient and effective system is of great importance to consider the human factor and equipment that these will require to use. System analyst must evaluate the capabilities and limitations of the personal and corresponding factors of the equipment itself.

The characteristics associated with effective system operations are:

- ❖ Accessibility
- ❖ Decision Making Ability
- ❖ Economy
- ❖ Flexibility
- ❖ Reliability
- ❖ Simplicity

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5.2 Architecture System Design

Architecture: Block diagram having all the subsystems depicting the complete system as given below

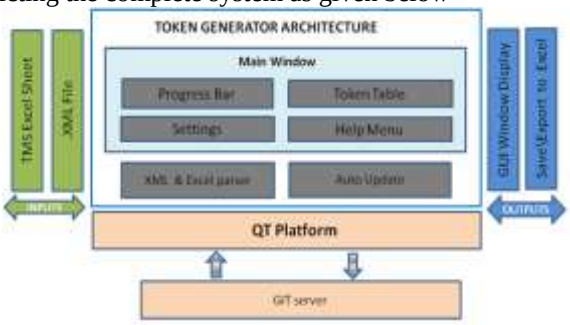

Figure5.1 Architecture SystemDesign

5.2.1 Component Architecture

Token Generator Tool Provide a descriptive overview of the components that you are documenting. Describe what the component in the system is supposed to do, where it is in the overall system, how it is expected to perform, and any other information that is important to convey to somebody interested in understanding what the documented system is all about.

5.2.2 Input->Source TMS EXCEL SHEET:

TMS Excel Sheet will be downloaded from the TMS data base server for each model. Then user will give the above files as input to the tool.

5.2.3 Component Dependency: Token Generator Tool Provide the dependencies of the various components with each other in the system and how they are interacting with each other in the following table. Mark in the intersecting cells, if component listed in the first column depends on corresponding component list in row

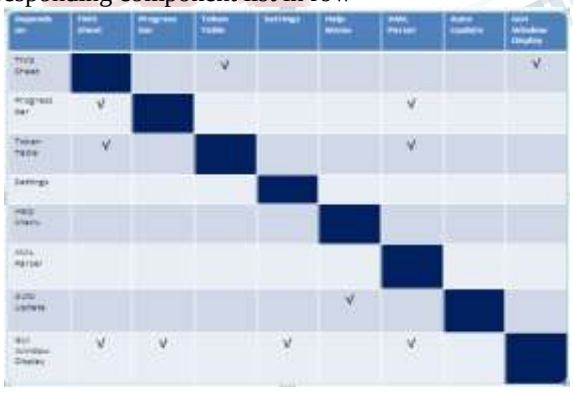

Figure5.2 Component Dependency

5.3 Design of Makethread():

The main design of make thread function is "it will import TMS excel sheet and take input as UK or US English XML and generate XML files for the rest of the languages present in TMS. So to handle different XML files parallel they used threads concept.

5.4 UML Diagrams

The Unified Modeling Language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules. The Unified Modeling Language (UML) is used to specify, visualize, modify, construct and document the artifacts of an object-oriented software-intensive system under development. UML offers a standard way to visualize a system's architectural blueprints, including elements such as:

- activities
- actors
- business processes
- (logical) components
- programming language statements
- Reusable software components.

UML combines techniques from data modeling (entity relationship diagrams), business modeling (work flows), object modeling, and component modeling. It can be used with all processes, throughout the software development life cycle, and across different implementation technologies.

5.5 Sequence Diagram

5.5.1 GUI Table Display:This sequence diagram reads the Input Migration Template and displays in the GUI window.

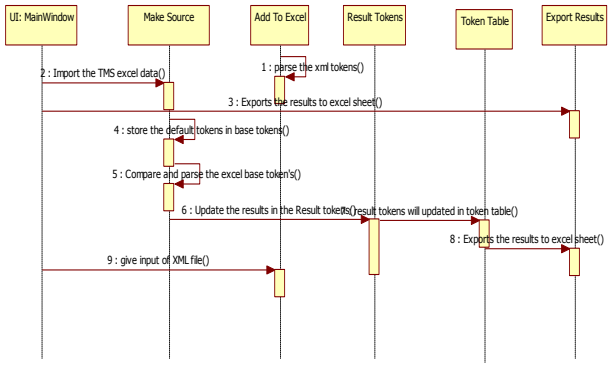

Figure5.5 Sequence Diagram for GUI Table Display

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GUI Table Display: This sequence diagram shows how importing of an excel sheet is done and displayed in the GUI window.

5.5.2 Auto update:This sequence diagram shows how the auto update feature works when the tool is launched.

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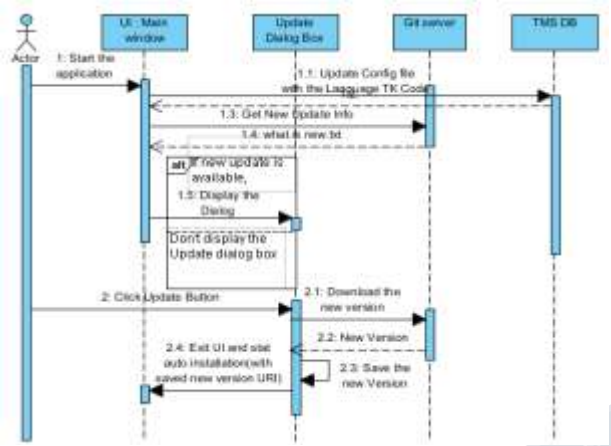

VI. SYSTEM IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system and is giving confidence on the new system for the users that it will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the changeover, an evaluation, of change over methods. Apart from planning major task of preparing the implementation are education and training of users. The more complex system being implemented, the more involved will be the system analysis and the design effort required just for implementation.

System Implementation is the stage in the project where the theoretical design is turned into a working system. The most critical stage is achieving a successful system and in giving confidence on the new system for the user that it will work efficiently and effectively.

The existing system was long time process. The proposed system was developed using Java Swing. The existing system caused long time transmission process but the system developed now has a very good user-friendly tool, which has a menu-based interface, graphical interface for the end user. After coding and testing, the project is to be installed on the necessary system. The executable file is to be created and loaded in the system. Again the code is tested in the installed system. Installing the developed code in system in the form of executable file is implementation.

An implementation co-ordination committee based on policies of individual organization has been appointed. The implementation process begins with preparing a plan for the implementation of the system. According to this plan, the activities are to be carried out, discussions are made regarding the equipment and resources and the additional equipment has to be acquired to implement the new system.

Implementation is the final and important phase. This is the most critical stage in achieving a successful new system and in giving the users confidence that the new system will work is effective. The system can be implemented only after thorough testing. This method also offers the greatest security since the old system can take over if the errors are found or inability to handle certain type of transactions while using the new system.

There are several activities involved while implementing a new project. They are

- End user training
- End user Education
- Training on the application software
- System Design
- Post implementation Review

6.1 End user Training

The successful implementation of the new system will purely upon the involvement of the officers working in that department. The officers will be imparted the necessary training on the new technology

6.1.1 End User Education

The education of the end user start after the implementation and testing is over. When the system is found to be more difficult to understand and complex, more effort is put to educate the end used to make them aware of the system, giving them lectures about the new system and providing them necessary documents and materials about how the system can do this.

6.1.2 Training of application software

After providing the necessary basic training on the computer awareness, the users will have to be trained upon the new system such as the screen flows and screen design type of help on the screen, type of errors while entering the data, the corresponding validation check at each entry and the way to correct the data entered. It should then cover information needed by the specific user or group to use the system.

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6.1.3 Post Implementation View

The department is planning a method to know the states of the past implementation process. For that regular meeting will be arranged by the concerned officers about the implementation problem and success.

6.2 Qt with C++ Emulators

The Token Generator Tool can be tested and viewed with different emulators.The Token Generator Toolenables you to test the Generation of tokens in the different languages and generate the xml files with respective languages.

Advantages

- Full screen presentation mode.
- Perfect for testing/presenting your location-aware of the tool
- Save high quality screen shots.
- C++ Error Detection.
- Perfect for presentations.
- Test local and remote machines
- Works great with C++ and Qt tool

VII. CONCLUSION AND FUTURE ENHANCEMENTS

8.1 Conclusion

The Token Generator Tool System has been developed for the given condition and the system was tested with proper data and is found working effectively. The developed tool is flexible and changes whenever can be made easy. The Token Generator Tool software has been developed in a neat and simple manner, thereby reducing the Approvers or Users work. In comparison with the manual system, the benefit under a generation of tokens considerable in to saving of manpower, working hour and Increases the sales efficiency.

The speed and accuracy are maintained in proper way. The user friendly nature of this software developed in Qt framework is very easy to work with both for the higher management as well as other employees with little knowledge. Online massage has been provided to help the user to take necessary, correct action while using the system. The results obtained were fully satisfactory from the user point of view.

Various validation techniques have been used to implement accuracy of data in all formats of input. The system is run with an insight into the necessary modifications that may require in the future. Hence the system can be maintained successfully without much network.

8.2 Future Enhancements of Token Generator Tool

Every tool or project is always open to enhancements that can be made to make it more featured or friendly. The Token Generator Tool is only the part of LG Soft India company management system. We have been designed the Token Generator Tool for the approval process. Future Enhancements for Token Generator Tool are: take it as a continuous activity generating the tokens different languages

- Maintaining and providing new features to the smart phone technologies.
- We can provide a facility to the user by that can import the any excel sheet which contain the tokens in US language.
- In future, we can make this application to support for multiple Languages.

REFERENCE

[1] http://www. google.com /

[2] http://qt.nokia.com/products/

[3]http://10.22.68.40/dokuwiki/doku.php/tokengenerator

[4] http://10.22.68.40/dokuwiki/doku.php/tokendetector

[5] Complete Reference for C++ Text book

[6] Qt Tool text book.