UI Design and Prototyping

**Introduction**

During SAP implementation customers have a very hazy picture of the requirements to be given to consultants for developing custom reports.  
Added to that in most cases the development of reports is given a very low priority for development and quality assurance check.

Often the consultant’s uses the wrong model / approach to develop reports or they sometimes develop the report ad hoc without going through any process. The consultants go ahead with whatever requirement is gathered for development of report resulting in low quality delivery.

The reports which is developed often doesn’t satisfies the customer and lead to change in scope or change in logic altogether. Sometimes when the management doesn’t relent for change in scope or logic due to high development cost involved in changes, the report becomes useless. These leads to increase in implementation cost without any value add.

Due to the approach used for developing the reports consultants are not able to use the flexibility and functionality provided by the packaged software like SAP for development for custom reports.

Looking at the tools provided by SAP for development of reports like quick viewer and creation of query is very helpful in developing custom reports for customers.

With the usage of proper methodology for developing complicated reports there are very good results in reduction of development time and cost involved. In this blog I have used the prototyping methodology for development of complicated custom report. A case study is also provided wherein the above methodology is used in the ongoing project. The case study helps us understand the benefits of using a prototyping methodology for development of complicated custom report.

**The prototyping model**

When following the Prototyping Model development, the developer builds a simplified version of the proposed system and presents it to the customer based on the overall objective. The customer in turn provides feedback to the developer. Based on the feedback the developer goes back to refine the system requirements to incorporate additional information. Often, the prototype code is thrown away and entirely new programs are developed once requirements are identified.  
Prototyping is comprised of the following steps:

**• Requirements Definition/Collection**

Usually as the details requirements are not clear for customer so the focus is on overall objective. The requirements where ever known are identified and the overall objective of the report are agreed.

**• Design**

Once the overall objective and requirements information is collected it is rapidly integrated into a new or existing design.

**• Prototype Creation/Modification**

The information from the design is rapidly rolled into a prototype. This involves the creation/modification of coding or report. The tools such as quick viewer and SAP query provided by SAP for rapid development of report can be effectively used.

**• Assessment**

The prototype is shown to the customer for review / comments. The suggestions are collected from the customer.

**• Prototype Refinement**

Information collected from the customer is used to modify / refine the prototype. The iterations in this step occur for the prototype to fine tune and satisfy the needs of users. The detailed requirement which is gathered at each evaluation helps to understand what needs to be done. Often at this stage there would be change in requirement which were earlier captured.

**• System Implementation**

As such these prototypes are discarded in usual development environment. In packaged software like SAP as there is enough flexibility in have the report developed often there is no need to discard the prototype where as the same can be used as the final report upon performance fine-tuning and thorough testing.  
The packaged software like SAP provides enough flexibility both in ABAP programming and using tools, the prototype report can be made as final report.

The approach of prototyping paradigm offer the best approach where  
1. The customer are unsure of the detailed requirement such as detailed input, processing or output requirement but are only aware of general objectives of report.  
2. Where the consultants are unsure of the efficiency of the algorithm, adaptability of type of report.

**Case Study**

Using the method of prototyping model High level complexity report was developed during the on going SAP project.

During the initial startup of the development of the report the overall objective of the report agreed were  
1. The report should provide the open customer consignment quantities available at customer.  
2. The data that needs to be presented in the report were also identified.

Using the above objective a quick design of the report was presented to the users. The design was changed as per the user requirement and was taken up for development.  
Using tools such as quick viewer the report were shown to the user. Upon assessment of the report a multiple screen layout report were proposed with same ALV report design.  
To increase the complexity further constrains were added as per the business requirement to have the report as an extension to the existing report.  
A quick Prototype report was developed by ABAP development and presented to the users for further inputs. At this stage new objectives were added to the report to have the same used for FI report development.  
By this change in objective, overall logic of the report was necessary. Changes were made in the existing prototype to add new objective and logic in the report.

The report was again submitted for assessment and satisfied all the requirement of the users.

A thorough testing was done taking into account all the scenarios which would affect the report. The report was fine-tuned for performance and finally released for production.

**Conclusion**

Right approach to development of report can save huge amount of time and cost during the implementation of project as well as during post go live support. The prototyping model qualifies and is helpful in providing the right delivery to the customer in the report development scenarios of SAP implementation.