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Smoothing up the Research Proposal Submission through Research Proposal Generation Tool

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ABSTRACT: Many government and non-government research funding agencies across the world are advertising continuously to encourage research activities. These agencies are used to accept the proposals from professionals and potential expertise. Accepted proposals are then evaluated and approved by technical experts committee to support best research proposal. Research proposals, requires both technical and non-technical details. Every funding agency has its own proposal format which needs to fill by research centre investigators. These proposals have to submit along with both technical and nontechnical information. Maintaining non-technical information like research center data, principal investigators data and past achievements record is very essential but it is time consuming. Again, presenting this information as per the proposal format requires efforts and time. It requires smoothing the process by mean of some assistant tools. In this paper we present the research proposal generation tool which maintains the both technical and non-technical information and generates the proposal as per the given format.

Keywords: Keywords: Funding Agencies, Research Proposal, Research Centre.

I. INTRODUCTION

Many organizations and institutes are pursuing rigorous research on advanced technologies. Using these technologies, many government agencies can improve its working and deliverables. Research proposals are the means of communication between research institutes and funding agencies. Many government agencies like NRB, DST, VGST, UGC, AICTE and etc. [2] are supporting researchers by providing funds for their research projects and their infrastructure, manpower, facilities and etc. Technology focus varies from one funding agency to other agency. Focus of the agencies are varies depends on the requirements. To approach research agencies, researcher needs to submit proposal along with all the research information, infrastructure requirements, research institute information, investigators profile and etc.

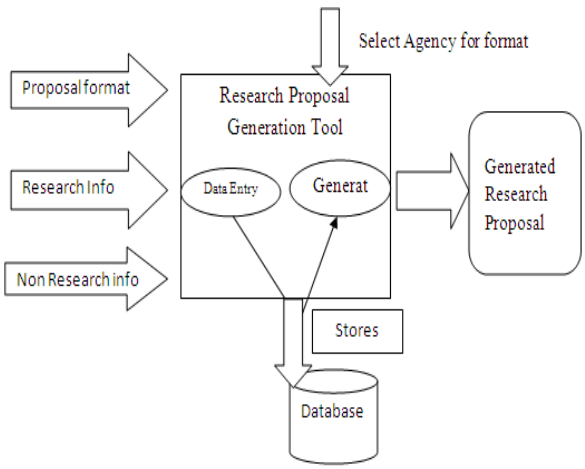

Figure 1: Architecture of proposal generation tool

Application formats vary from one agency to other. Application filling, requires lots of time to collect and fill the research and non-research information as per format. It needs hands on of MS office and latest tool. To avoid the complexity of collecting non-research information, formatting application and etc [1], we are proposing research proposal generation tool. It smoothen the process of proposal submission. The architecture of proposal generation tool

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is illustrated in figure 1. As shown in figure 1, the proposal generation tool accepts the data entry of research information, non-research information and application format as input and stores permanently in a database. As soon as researcher gets research idea, they enter that idea in a database. It's a centralized database, accessed only to privileged user to access the information. As soon as agency advertised, investigator can makes use of stored information and can generate the proposal.

This paper is organized as follows: section 2 describes the design information of tools. Section 3 describes implementation algorithms. Section 4 presents the interpretation of results. Section 5 concludes the paper.

II. SYSTEM DESIGN

This section describes the research proposal generation tool design details. System designed based on the **software requirements specification specified in table 1**. The minimum hardware requirements to build this tool are: RAM Size: 512 MB and Hard disk space: 1GB. Software Requirements are Operating System used is windows XP/7, software developed on Microsoft visual basic 6.0 [3][4] and oracle database 10g Express Edition [5].

We designed this tool in three different phases. First phase is login phase, second data entry phase and third phase is proposal generation phase. Figure 2 describes the design diagram phases.

SRS 1: **Login**: Login form for authenticating the investigator.
SRS 2: **Data Entry:** Investigator has to input the details of research and non-research (proposal format, institution details, research history and etc.).
SRS 3: **Proposal Generation**: Select agency and generate the proposal
SRS 4 : **Generate reports** : Reports of submitted proposal

Table 1: Software Requirements Specification

In Phase I Login, login facility provided for administrator and investigator. Investigator has to enter his login details to use this tool. After successful login, he will come to phase II i.e. data entry phase. Here, he is either can add and modify the research and non-research information respectively or he can continue without add/modify. In phase III proposal generation, he needs to select the agency and research topic then should click on generate proposal button. Figure 3 shows the flow of data among the different process.

Figure 2: Proposal generation phases

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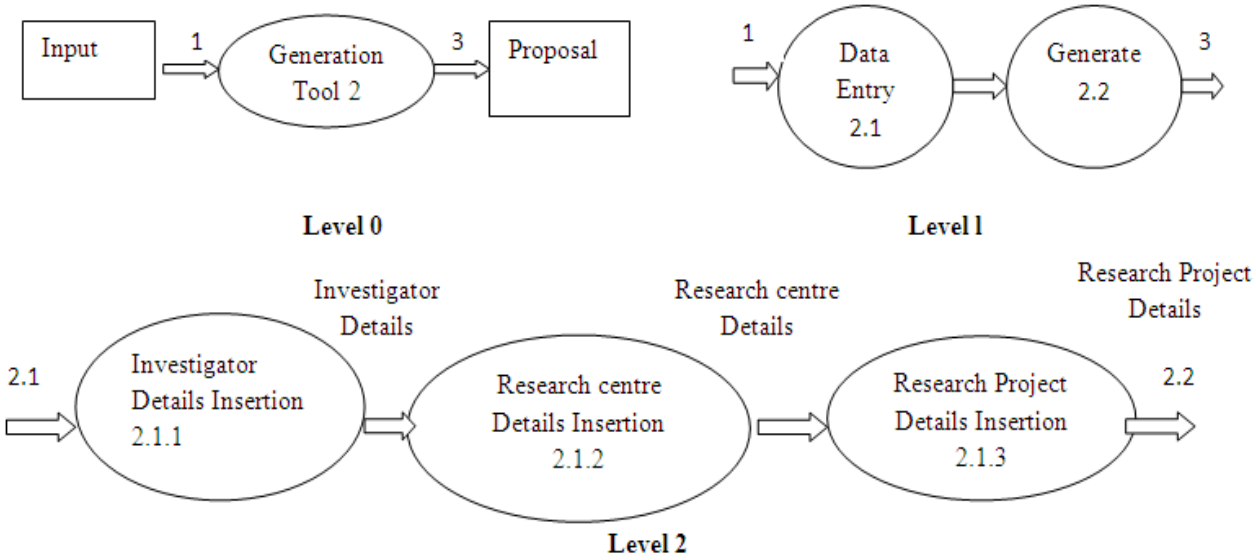

Figure 3: Data flow diagrams

III. IMPLEMENTATION

The project basically segregates the huge pool of information into a proposal which meets all the requirements and also the format in which it has to be submitted; initially the user gives in all the relevant information about the institute/research center , technical and nontechnical information, research center data, principal investigators data and past achievement records this information is stored in the database , once this process is complete the can now select the required format in which the proposal needs to done smoothing the process by mean of this assistant tools.

Algorithm 1 describes the Research proposal generation tool implementation steps

Algorithm 1: Research proposal generation tool

Step 1: Welcome page and login type and details

Login type<- Administrator and Investigator

Uname<- Username Pword<- password

If authenticated then

Data entry else invalid user

End if

Step 2: Data Entry form

Investigator form <- enter investigator details

Research center form <- enter research center details

Institution form <- enter institution details

Research idea form <- enter research details

Format <- enter all agency format details

Step 3: Generate proposal

Select investigator, agency for format and idea for research idea then click on generate button

Step 4: Evaluate Generated proposal and submission

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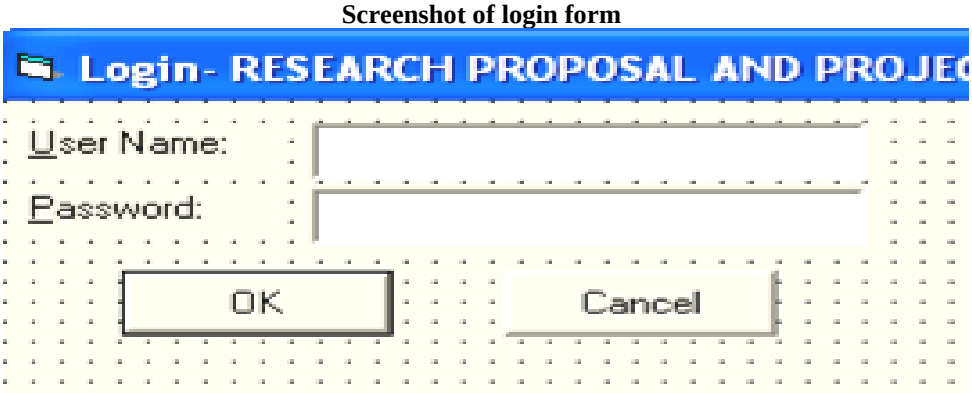
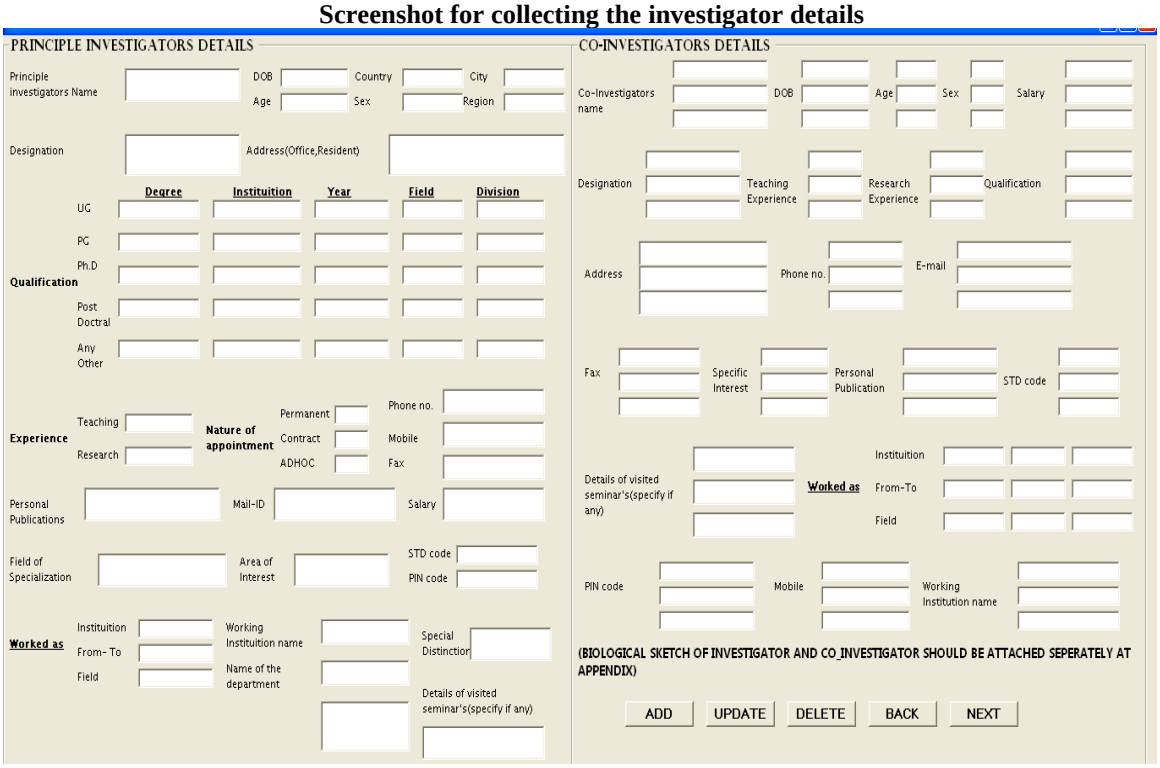
IV. INTERPRETATION OF RESULTS

Research proposal submission is a combination of graphical user interfaces information i.e., it includes GUI information about the project, principle investigator, co-investigator and institute research center where the project is being developed. The aim of this tool is to create a user friendly graphical interface tool which consist all general information about the agencies under single platform. A proposal submission requires N number of information which based on various different topics related to the project undertaken by institute. This tool consists of information as well as the formats of major agencies and provides the segregated information to the user, by this tool the user can also easily update the database. Below figure shows the screenshots (GUI) for representing the tool usage.

Screenshot of login form



Screenshot for collecting the investigator details



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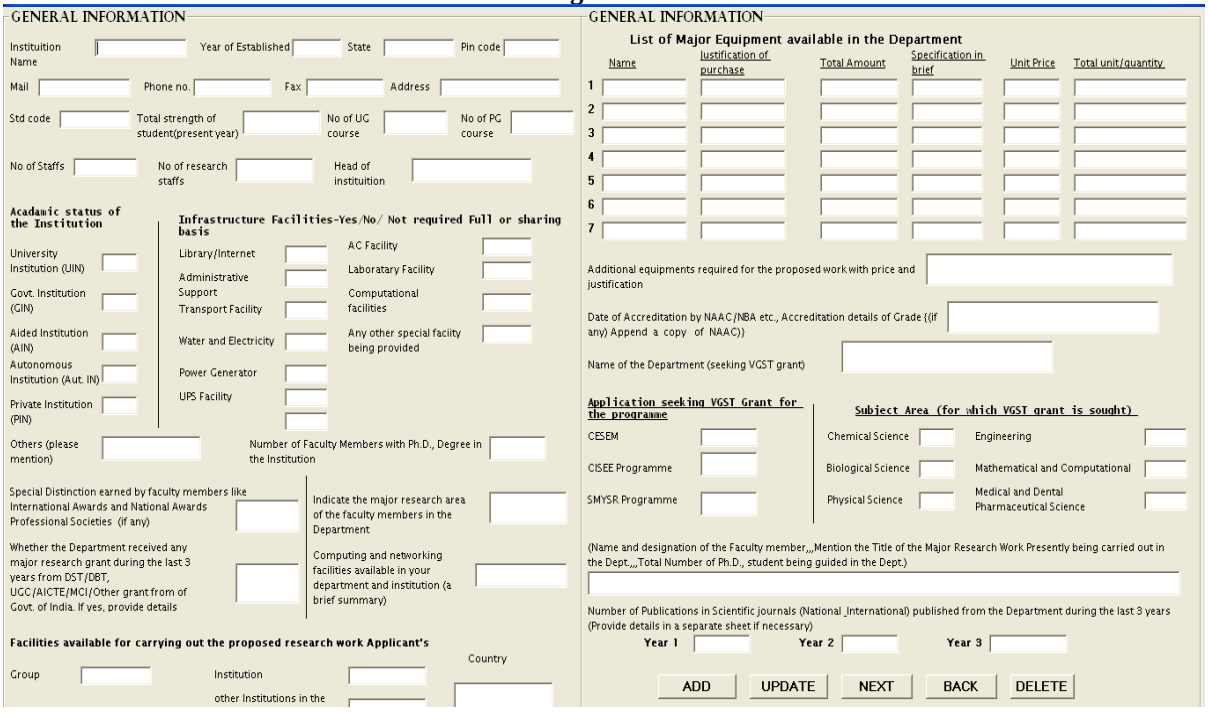
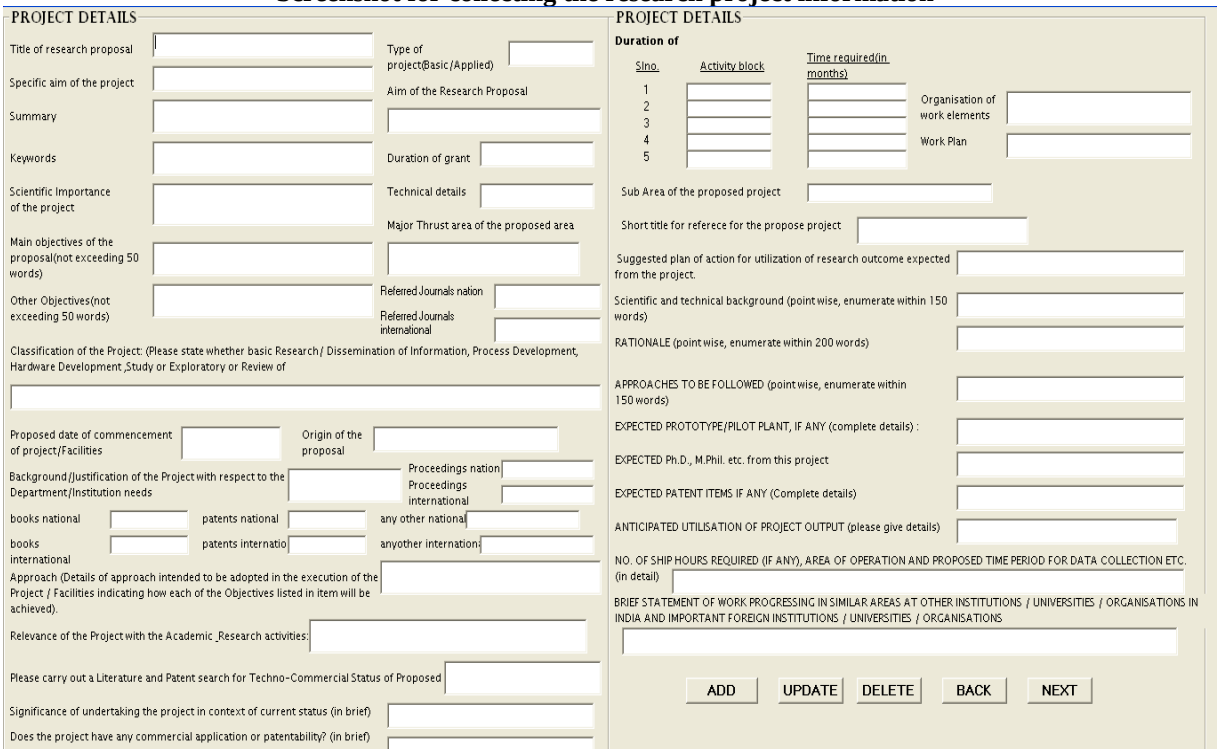
Screenshot for collecting the research centre details



Screenshot for collecting the research project information



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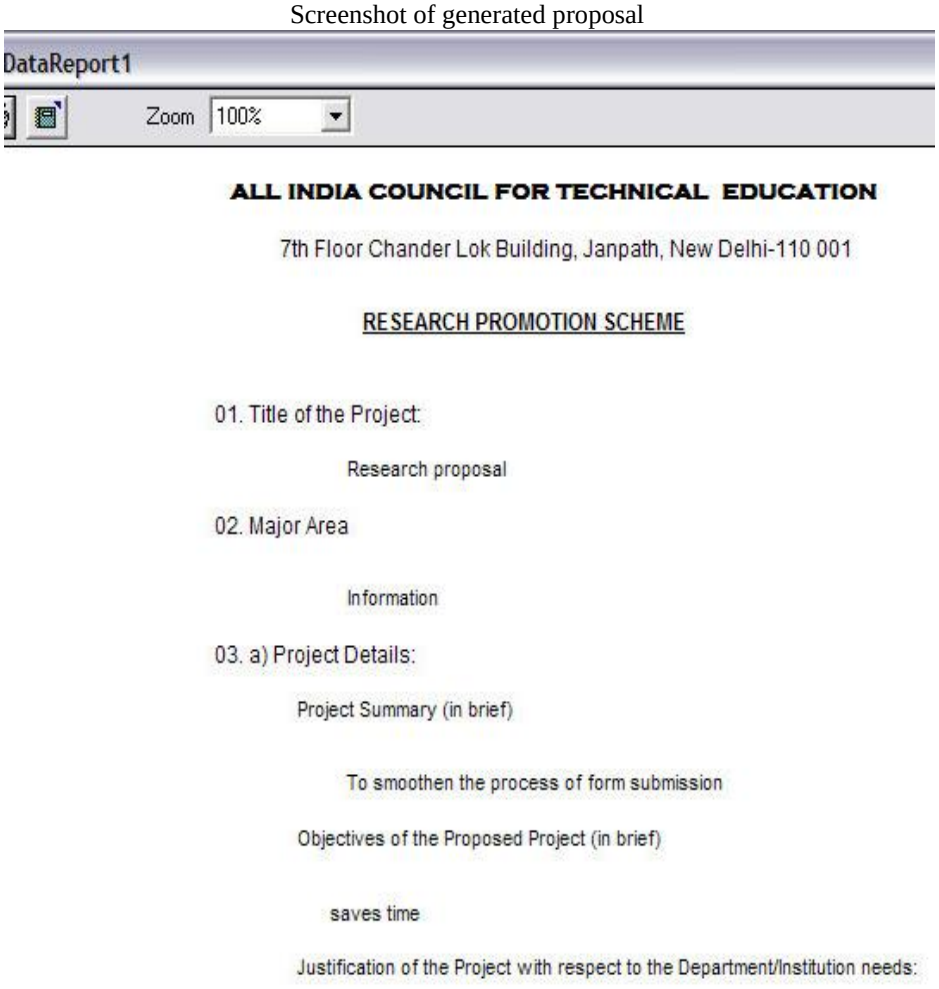
Screenshot for selecting agencies

Screenshot of generated proposal



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V. CONCLUSION AND FUTURE WORK

Research proposal generation tool provides GUI to get different information as input. It stores the information permanently in the database. It generates proposal based on the investigator inputs. Research Proposal generation tool smoothen research center proposal submission process by automatic generation.

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