

Smoothing up the Research Proposal Submission through Research Proposal Generation Tool

Dinesha H A¹ Poonam U² Rakesh R³ Sourabh V Savanur⁴ V.K Agrawal⁵

PES Institute of Technology, Bangalore-560085, India

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.

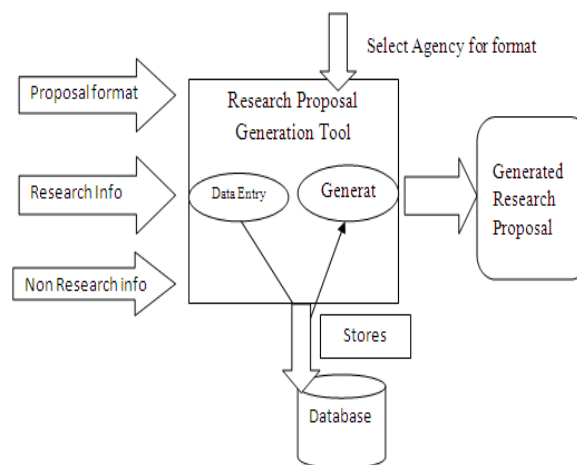


Figure 1: Architecture of proposal generation tool

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

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

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 make 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.

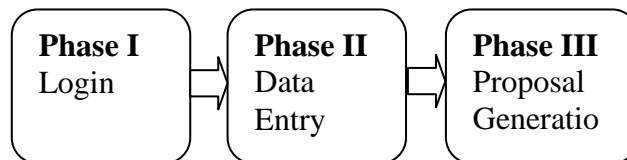


Figure 2: Proposal generation phases

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

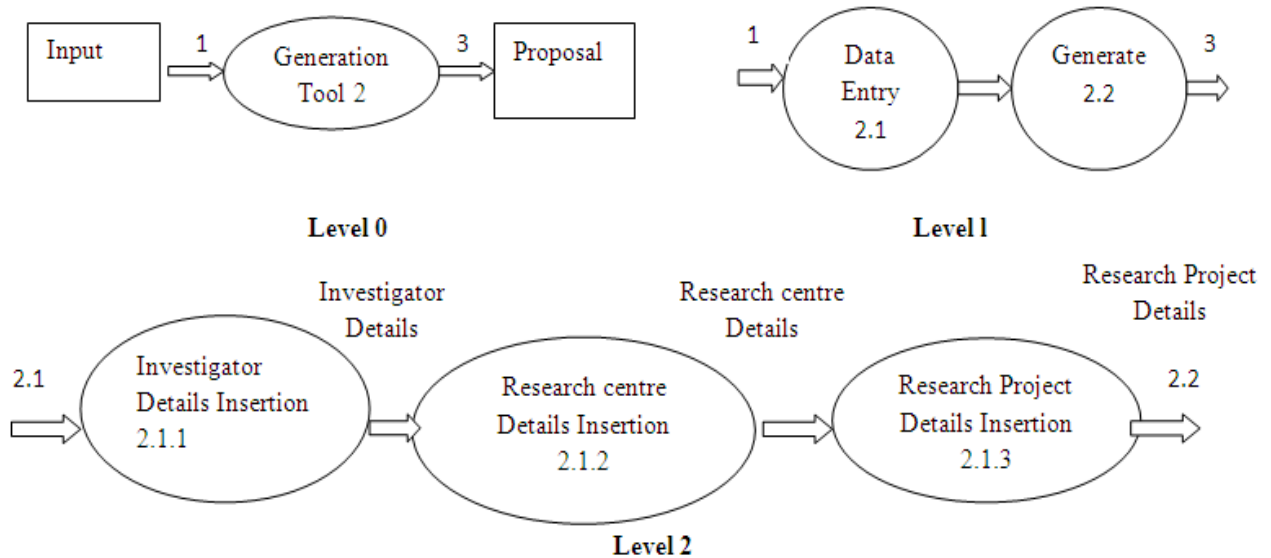


Figure 3: Data flow diagrams

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

International Journal of Innovative Research in Computer and Communication Engineering

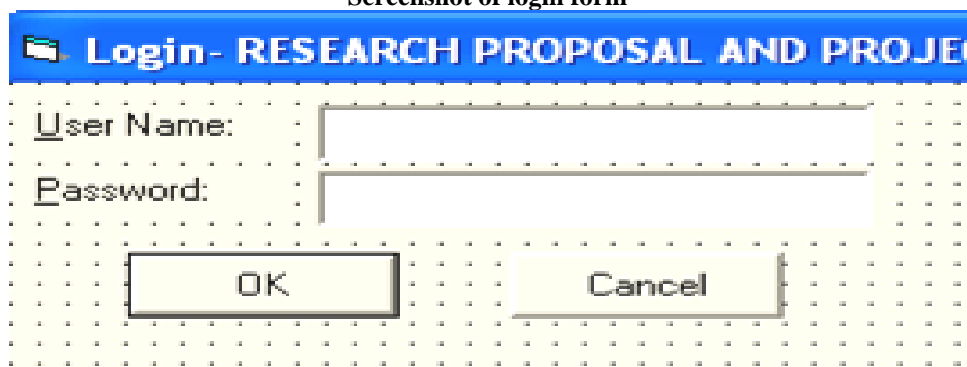
(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

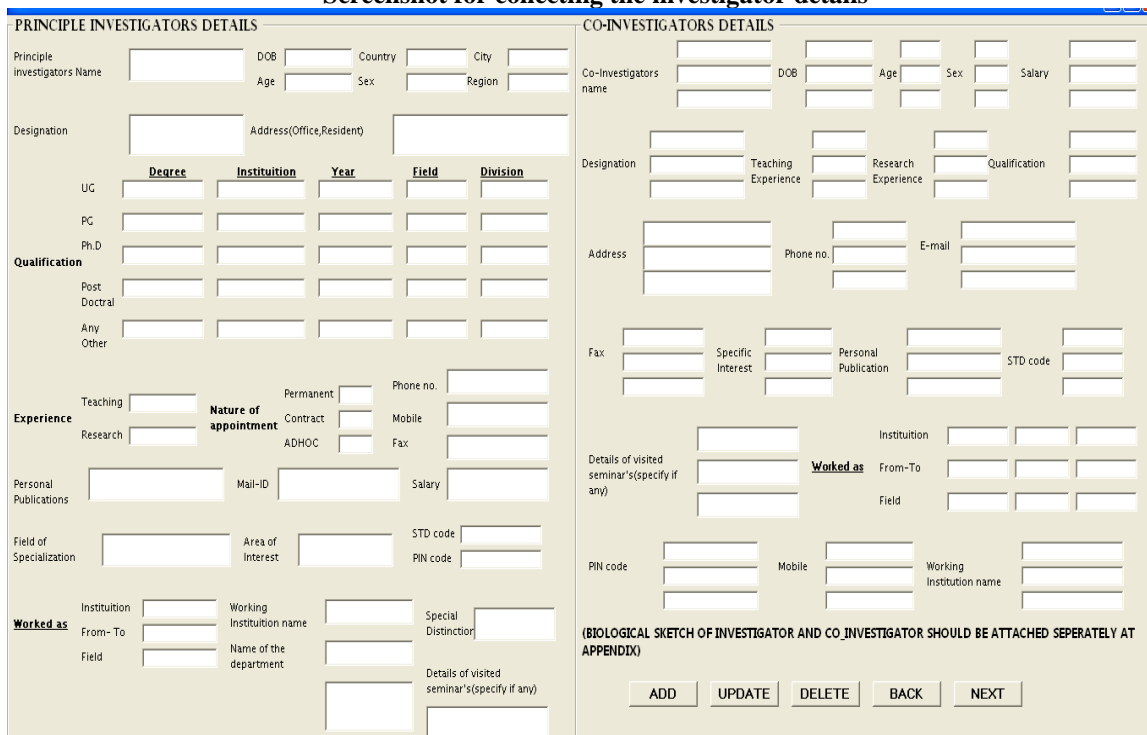
IV. INTERPRETATION OF RESULTS

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



PRINCIPLE INVESTIGATORS DETAILS

Principle Investigators Name DOB Country City
Age Sex Region

Designation Address(Office,Resident)

	Degree	Institution	Year	Field	Division
UG	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PG	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ph.D	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Qualification

Post
Doctral
Any
Other

Experience

Teaching Permanent Phone no.
Research Nature of appointment Contract Mobile
ADHOC Fax

Personal Publications Mail-ID Salary

Field of Specialization Area of Interest STD code
PIN code

Worked as

Institution Working Institution name Special Distinction
From-To Name of the department
Field

Details of visited seminar's(specify if any)

CO-INVESTIGATORS DETAILS

Co-Investigators name DOB Age Sex Salary

Designation Teaching Experience Research Experience Qualification

Address Phone no. E-mail

Fax Specific Interest Personal Publication STD code

Details of visited seminar's(specify if any) Institution
Worked as From-To
Field

PIN code Mobile Working Institution name

(BIOLOGICAL SKETCH OF INVESTIGATOR AND CO_INVESTIGATOR SHOULD BE ATTACHED SEPERATELY AT APPENDIX)

ADD UPDATE DELETE BACK NEXT



International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

Screenshot for collecting the research centre details

GENERAL INFORMATION

Institution Name Year of Established State Pin code

Mail Phone no. Fax Address

Std code Total strength of student(present year) No of UC course No of PG course

No of Staffs No of research staffs Head of institution

Academic status of the Institution

University Institution (UIN) Govt. Institution (GIN) Aided Institution (AII) Autonomous Institution (Aut. IIN) Private Institution (PIN) Others (please mention)

Infrastructure Facilities-Yes/No/ Not required Full or sharing basis

Library/Internet AC Facility Administrative Support Laboratory Facility Transport Facility Computational facilities Water and Electricity Any other special facility being provided Power Generator UPS Facility

Number of Faculty Members with Ph.D., Degree in the Institution

Special Distinction earned by faculty members like International Awards and National Awards Professional Societies (if any)

Whether the Department received any major research grant during the last 3 years from DST/DBT, UCC/AICTE/MCI/Other grant from Govt. of India. If yes, provide details

Indicate the major research area of the faculty members in the Department

Computing and networking facilities available in your department and institution (a brief summary)

Facilities available for carrying out the proposed research work Applicant's

Group Institution Country

other Institutions in the

GENERAL INFORMATION

List of Major Equipment available in the Department

Name	Justification of purchase	Total Amount	Specification in brief	Unit Price	Total Unit/quantity
1					
2					
3					
4					
5					
6					
7					

Additional equipments required for the proposed work with price and justification

Date of Accreditation by NAAC/NBA etc., Accreditation details of Grade (if any) Append a copy of NAAC)

Name of the Department (seeking VGST grant)

Application seeking VGST Grant for the programme

CESEM CISEE Programme SMYSR Programme

Subject Area (for which VGST grant is sought)

Chemical Science Engineering Biological Science Mathematical and Computational Physical Science Medical and Dental Pharmaceutical Science

(Name and designation of the Faculty member,,Mention the Title of the Major Research Work Presently being carried out in the Dept.,,Total Number of Ph.D., student being guided in the Dept.)

Number of Publications in Scientific journals (National ,International) published from the Department during the last 3 years (Provide details in a separate sheet if necessary)

Year 1 Year 2 Year 3

ADD UPDATE NEXT BACK DELETE

Screenshot for collecting the research project information

PROJECT DETAILS

Title of research proposal Type of project(Basic/Applied)

Specific aim of the project Aim of the Research Proposal

Summary

Keywords Duration of grant

Scientific Importance of the project Technical details

Main objectives of the proposal(not exceeding 50 words) Major Thrust area of the proposed area

Other Objectives(not exceeding 50 words) Referred Journals nation Referred Journals international

Classification of the Project: (Please state whether basic Research/ Dissemination of Information, Process Development, Hardware Development, Study or Exploratory or Review of

Proposed date of commencement of project/Facilities Origin of the proposal

Background/Justification of the Project with respect to the Department/Institution needs Proceedings nation Proceedings international

books national patents national any other national books international patents internatio anyother international

Approach (Details of approach intended to be adopted in the execution of the Project / Facilities indicating how each of the Objectives listed in item will be achieved).

Relevance of the Project with the Academic ,Research activities:

Please carry out a Literature and Patent search for Techno-Commercial Status of Proposed

Significance of undertaking the project in context of current status (in brief)

Does the project have any commercial application or patentability? (in brief)

PROJECT DETAILS

Duration of

Sno.	Activity block	Time required(in months)
1		
2		
3		
4		
5		

Organisation of work elements

Work Plan

Sub Area of the proposed project

Short title for reference for the propose project

Suggested plan of action for utilization of research outcome expected from the project.

Scientific and technical background (point wise, enumerate within 150 words)

RATIONALE (point wise, enumerate within 200 words)

APPROACHES TO BE FOLLOWED (point wise, enumerate within 150 words)

EXPECTED PROTOTYPE/PILOT PLANT, IF ANY (complete details) :

EXPECTED Ph.D., M.Phil. etc. from this project

EXPECTED PATENT ITEMS IF ANY (Complete details)

ANTICIPATED UTILISATION OF PROJECT OUTPUT (please give details)

NO. OF SHIP HOURS REQUIRED (IF ANY), AREA OF OPERATION AND PROPOSED TIME PERIOD FOR DATA COLLECTION ETC. (in detail)

BRIEF STATEMENT OF WORK PROGRESSING IN SIMILAR AREAS AT OTHER INSTITUTIONS / UNIVERSITIES / ORGANISATIONS IN INDIA AND IMPORTANT FOREIGN INSTITUTIONS / UNIVERSITIES / ORGANISATIONS

ADD UPDATE DELETE BACK NEXT

International Journal of Innovative Research in Computer and Communication Engineering

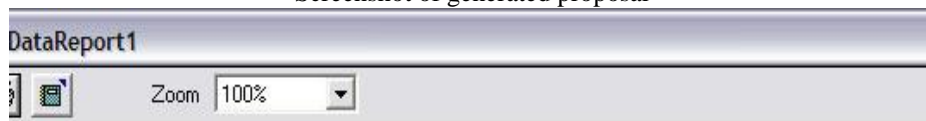
(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

Screenshot for selecting agencies



Screenshot of generated proposal



ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

7th Floor Chander Lok Building, Janpath, New Delhi-110 001

RESEARCH PROMOTION SCHEME

01. Title of the Project:

Research proposal

02. Major Area

Information

03. a) Project Details:

Project Summary (in brief)

To smoothen the process of form submission

Objectives of the Proposed Project (in brief)

saves time

Justification of the Project with respect to the Department/Institution needs:



International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 1, Issue 10, December 2013

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.

ACKNOWLEDGMENT

Our sincere thanks to Prof. K N B Murthy, Principal and Prof. Shylaja S S, Head Department of Information Science and Engineering, PESIT, Bangalore, for their constant encouragement.

REFERENCES.

1. IEEE, A Research Proposal to Address the Learning Strategies Used by Second Language Students in Accessing Online Resources, [Multimedia and Ubiquitous Engineering, 2007. MUE '07. International Conference on](#) 26-28 April 2007 ,662 – 667, 0-7695-2777-9
2. Title **visual basic 6.0**, Author –o'reilly, Year of publication -**2008**.
3. Title –**visual basic 6.0**, Author- **Mcgraw hill and juke**, Year of publication- **2009**.
4. Title-**Fundamentals of database system**, Author-**Elmesrinavathe**, Year of publication – **5th edition Pearson** publications-2008
5. [Vision Group on Science and Technology www.vgst.in/](#)