Technology Grant Pre-Proposal

For

**PROCESS AUTOMATION OF MANUSCRIPT EVALUATION
FOR THE TEXAS A&M UNIVERSITY-COMMERCE
COLLEGE READING ASSOCIATION (CRA) YEARBOOK**

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INTRODUCTION

The College Reading Association (CRA), a non-profit professional corporation, encourages the continuing improvement of college and university curricula. It also encourages preparation programs for teachers and reading specialists. The CRA prepares and distributes professional publications and promotes standards and competency within the teaching profession. The Department of Elementary Education at TAMU-Commerce is the authorized entity for the year 2003, to evaluate and publish the manuscripts in the CRA Yearbook 2003.

Purpose Statement

The Department of Elementary Education at TAMU-Commerce wishes to automate the process of manuscript evaluation by installing computers with appropriate software and hardware capabilities because the current system of manuscript evaluation is not sufficient to meet the growing demands of the College Reading Association.

The principle objective of this project is to improve the quality of service by automating the process of submission, review, and approval of manuscripts that are submitted to the CRA Yearbook.

Potential Grant Funding Entity

The intended grant funding entity for this project would be the National Reading Conference (NRC). There are several organizations that are engaged in improving the literacy standards. National Reading Conference (NRC) is one such organization that engages in literacy research and dialogue around literacy and related topics. The process followed by NRC is similar to that followed by CRA. However, NRC has a slight technological advantage over CRA, as it accepts the softcopy of manuscripts along with the hardcopies. The softcopies are either received through email or as a file saved on a diskette. This copy is used in mailing the reviewers for evaluation. The process of evaluation is considered to be online only because it is carried out through email. But after successful implementation of the new system, CRA would have a greater technological advantage when compared to other such organizations. This helps CRA to expand its horizons.

JUSTIFICATION OF THE PROJECT

This project will provide for the design of a central database for the manuscript evaluation system. This database maintains records for the three essential groups' i.e., the authors, reviewers and the managing editors. Such a central database would enable easy access to updated information for authorized persons from any computer connected to the Internet.

This project involves designing a web site that acts as a principle tool in automating the manuscript evaluation process. This interactive web site caters to the needs of authors, reviewers and the managing editors alike. Considering the valuable time of these groups, this aspect forms the heart of the project. The authors may submit their proposals and manuscripts using

interactive online forms. The managing editors can assign the manuscripts to the reviewers along with the review forms and other instructions. Once the manuscripts are reviewed, reviewers can send the completed review forms to the managing editors. Managing editors then post their decision on the website. A tracking system would be incorporated that enables the authors and managing editors to know the status of a particular manuscript.

TARGET POPULATIONS INTENDED TO BENEFIT FROM THE PROJECT

The target populations intended to benefit from this project are the College Reading Association the Authors, the Managing Editors, the Reviewers and other members of the CRA.

SCOPE OF THE PROJECT

Locations

The automated manuscript evaluation system, upon completion, would be incorporated into the Department of Elementary Education, TAMU-Commerce website. After successful test implementation of the new system, it would be hosted by the official CRA website. The online manuscript evaluation system will be made available for all the three groups of CRA.

Data

> ➢ Proposals and manuscripts submitted by authors
> ➢ Approvals made by the managing editors
> ➢ Review forms and other instructions sent to the reviewers
> ➢ Completed review forms posted by the reviewers
> ➢ Decisions regarding the manuscripts
> ➢ Justifications for rejection of manuscripts

Stakeholders

> ➢ Client – College Reading Association and Department of Elementary Education at TAMU-Commerce
> ➢ End Users – The Authors, Managing Editors, Reviewers and other members of the CRA.

Limitations

The scope of this project is limited to the point where all the manuscripts are evaluated and decision can be made.

A Brief Description of The Process Model Diagram

The main processes involved in the **CONTEXT LEVEL PROCESS MODEL** are – the Process for Data storage & Updating and the Process for Information Exchange.

Process of Data Storage and Updating

The inputs for this process arrive from two subsystems i.e., the Authors and the Managing Editors. To this process, the Authors send their proposals and manuscripts; Managing Editors send their decisions on proposals and manuscripts. This process stores and updates the information regarding the proposals, manuscripts and their Authors. The outputs of this process are the proposals, manuscripts (to the Managing Editors) and decisions to the Authors.

Process of Information Exchange

The inputs for this process arrive from two subsystems i.e., the Managing Editors and Reviewers. To this process, the Managing Editors send the manuscripts; and the Reviewers send a report. This process stores and updates the information regarding the Reviewers. The outputs of this process are the completed review form (to the Managing Editor) and the manuscripts, review forms to the Reviewer.

CONTEXT LEVEL PROCESS MODEL
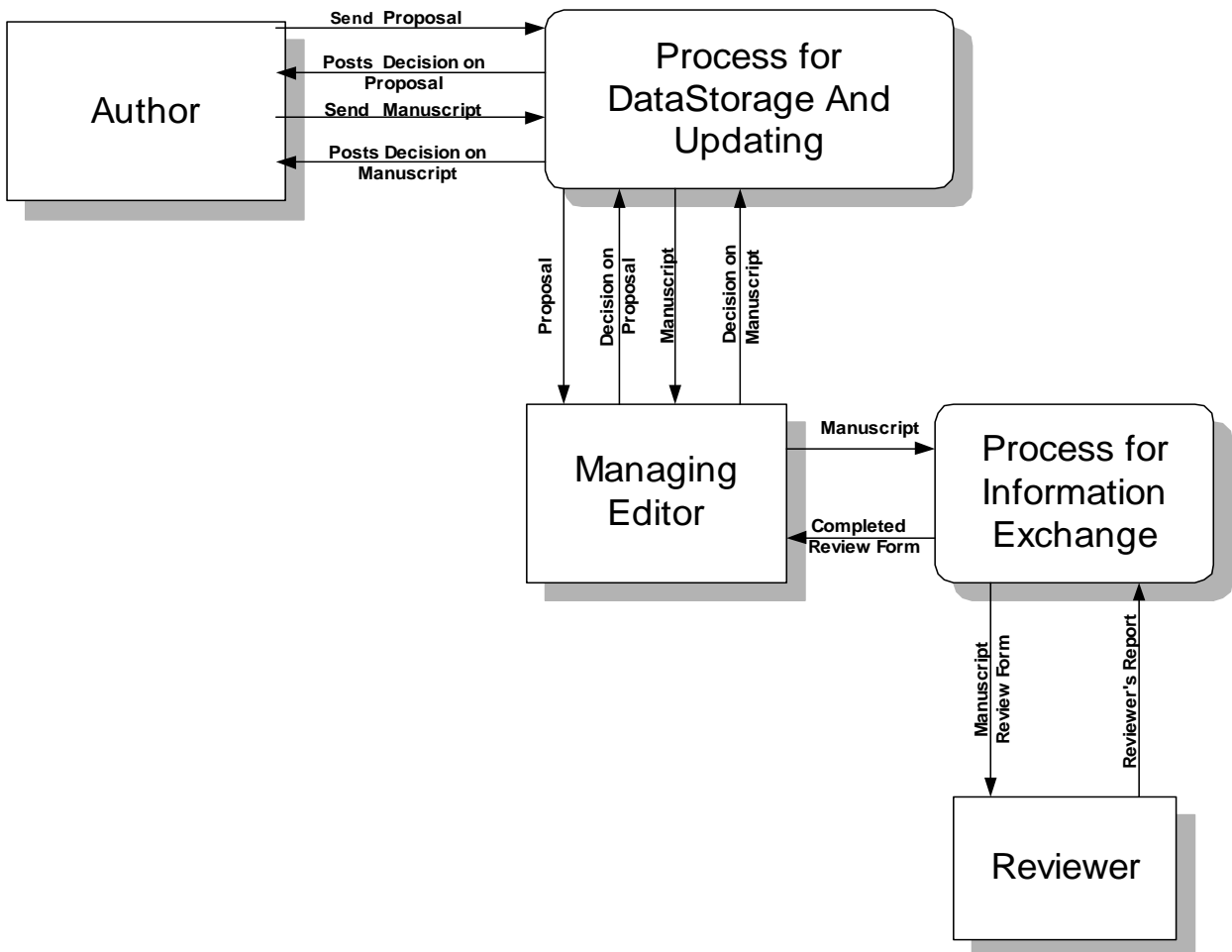
DURATION OF THE PROJECT

This is an 18 month project. Divided into phases as below:

- ➢ *Preliminary investigation and Planning Phase*   3 months
- ➢ *Analysis and Training*   3 months
- ➢ *Design*   4 months
- ➢ *Construction*   4 months
- ➢ *Implementation*   2 months

There may be an overlap of some of these phases.

GOALS OF EACH PHASE OF IMPLEMENTATION

Preliminary investigation and Planning Phase: Identify the problem and possible product concepts. Determine product objectives, key functionality, opportunity, feasibility, cost, & schedule. Specify the activities the company will pursue to create, introduce, and launch the product. These can be done through some fact-finding techniques such as interviews and questionnaires.

1. Determine whom to interview
2. Establish objectives for the interview
3. Prepare for the interview
4. Conduct the interview
5. Document the interview
6. Evaluate the interview

Other fact-finding techniques

-Document review
-Observation of the current operating procedures
-Questionnaire
-Conduct research
-Recording the facts
-The basic solution is to write it down.
-Use of software tools such as word processing, spreadsheets to record solutions.

Analysis and Training: This phase will start after completing a thorough investigation of the project and plan an approach to work on it. The goal of this phase is to determine the system boundary, product requirements, data objects priorities, definitions, feasibility, dependencies, impact on existing system. System requirement is a feature that in order for the system to be acceptable to the end users. Identifying typical system requirements.

- ➢ Outputs
- ➢ Inputs
- ➢ Processes

Design: In this phase, the actual designing of the project is done. Providing a detailed description of significant data objects, overall system organization and user interface of the system that will lead directly to the building of prototypes. In this phase we are also concerned with producing an introductory user manual and a test plan which will both be used to evaluate various prototypes.

- ✓ To design a central database comprised of the information from all the three groups of the CRA.

- ✓ To automate all of the processes and create a website that is accessible to all stakeholders (though with certain access restrictions). All of the information related to the manuscript evaluation is stored in a database and can be accessed using the World Wide Web.

Construction: In this phase, the actual building of the project (i.e. the software) occurs.

- ✓ Microsoft Access is the preferred software for developing the database required for the Project.
- ✓ Microsoft Visual Studio is used for developing forms and programming parts of the project.
- ✓ For designing the interface, the tool used is Dreamweaver. And for Database connectivity, ASP is the tool that is preferred.

Implementation: After the successful completion of the software development, it will be tested to identify any errors and bugs. If all is well and the project is acceptable by the client, the implementation phase of the project will be started.

The automated manuscript evaluation system, upon completion, would be incorporated into the TAMU-Commerce Department of Elementary Education website. After successful test implementation of the new system, it would be hosted by the official CRA website. The online manuscript evaluation system will be made available for all the stakeholders and the members of the CRA.

Benefits from the project

TANGIBLE BENEFITS	
✓ Reduction in paper work	✓ Increase in Throughput
✓ Reduction in time delays	✓ Easy access to organized data
✓ Cost effective by reducing the stationary and postal charges	✓ Prevents loss of Manuscripts in transit (post)
✓ Reduction in repetition of work	

INTANGIBLE BENEFITS	
✓ Improved quality of service	✓ High stakeholder satisfaction
✓ Increase in Memberships (15% – 20% on an annual basis)	✓ Enhanced member retention
✓ Save stakeholders time (Authors, Managing Editors, and Reviewers)	✓ Tracking System

BUDGET FOR THE PROJECT

The budget for this project estimated during the preliminary investigation and analysis phase is $50,000. This amount includes cost of buying new equipment, hardware and software licenses. Although there is no need to buy new software as the department already maintains software licenses, funds have been allocated for software in case future needs require additional software purchases. Following section describes the breakdown of budget items and costs.

EQUIPMENT LIST AND REMUNERATION PAID FOR PERSONNEL

DEVELOPMENT COST FOR THE PROPOSED SYSTEM

	PERSONNEL[1]	Amount
1	Systems Analyst (70 hours/ea $60.00/hr)	$ 4,200
1	Programmer (60 hours/ea $50.00/hr)	$ 3,000
1	GUI Designer (85 hours/ea $40.00/hr)	$ 3,400
1	Database Designer (75 hours/ea $40.00/hr)	$ 3,000
1	System Library (Documentation) (80 hours/ea $35.00/hr)	$ 2,800
	Total Expenses for Personnel	$ 16,400
	NEW HARDWARE & SOFTWARE	

	Hardware requirement for the proposed system including the cost of computers and computer peripherals such as printers and scanners.
	    10 Desktop Computers @ $1,500 = $15,000
	    2 Laser Jet Printers @ $2,000 = $4,000
	    2 Scanners @ $1,000 = $2,000
	    1 Copier @ $2,000 = $2,000
	    Cable Cost and Miscellaneous = $2,000
		$ 25,000

	No additional software is required to implement the proposed system. The existing system configurations meet the requirements of the proposed system. The software licenses acquired by the department hold good to run the necessary applications.	$00,000
	Total Development costs	$ 44,200

[1] The cost of personnel doesn't reflect salaries; it is the remuneration paid to the personnel for developing the software. Also, it is a one-time, contracted, investment and non-recurring in nature.

NET PRESENT VALUE ANALYSIS FOR A FIVE YEAR PERIOD

Cash Flow Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
EXISTING SYSTEM						
Development Cost:						
Operation & Maintenance Cost:	$20,200	$20,600	$20,800	$21,200	$21,400	
Discount Factors for 8%:	0.926	0.857	0.794	0.735	0.581	
Present Value of Annual Costs:	$ 18,705	$ 17,654	$16,515	$15,582	$12,433	
Total Present Value of Lifetime Costs:	$18,705	$36,359	$52,874	$68,456	$80,889	$80,889
PROPOSED SYSTEM						
Development Cost:	($ 44,200)					
Operation & Maintenance Cost:	($ 6,000)	($ 6,500)	($8,000)	($9,000)	($10,000)	
Discount Factors for 8%:	0.926	0.857	0.794	0.735	0.581	
Present Value of Annual Costs:	($ 5,556)	($ 5,570)	($6,352)	($6,615)	($5,810)	
Total Present Value of Lifetime Costs:	($21,956)	($27,526)	($33,878)	($40,493)	($46,303)	($46,303)

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[1] The net present value analysis is based on the findings of preliminary investigation and analysis phase of the project. All the figures/amount presented in the table above were supplied by the El.Ed Department at TAMU-Commerce.

MANAGERIAL APPROACH / ON-SITE ADMINISTRATION OF THE PROJECT

Team-building considerations

The Department of Elementary Education will outsource this project to a software consultant firm, which in tern will build a team to develop, administer, and implement the project. The team shall be comprised of five members who possess the diverse skill sets that are required for the successful accomplishment of the project. The tasks are delegated among the team members based on five different skill sets.

Project Leader and Interface Design: Ramesh Tangellamudi, a dynamic person, capable of coordinating a team, shoulders the responsibility of being the Project Leader. He is also well equipped with the skills necessary for developing/creating graphical images/applications. Therefore, the additional task of designing the Graphic User Interface that is required for the development of the website is assigned to him.

Database Design and Management: Information/data is the backbone of every organization. Data base design, creation, and maintenance are the primary aspect for this project. So, the expertise of Ravindranath Bommareddy, who has worked on some projects related to Database, can be aptly harnessed for this task.

Programming: The project involves integrating the front-end interface and the back-end database. ASP programming and database connectivity drivers are used to integrate them. A programmer like Lakshmi Reddyreddy can only accomplish this herculean task of programming.

System analysis, Testing & Debugging: Every project needs to be analyzed at each and every phase. It requires great presence of mind and a broader approach to analyze and synchronize various tasks related to the project. There was no shadow of doubt in assigning the task of system analyst to Ravindra Gadi, whose managerial skills can be put to the best use. He is also assigned an additional responsibility of testing and debugging, which is quite important before the rollout of every project.

Documentation: The success of every project depends on the effective and efficient documentation. Updating the repository is another key task in the project. The immaculate presentation skills of Raghunandan Manur will highlight the documentation task as a prominent feature of the project. He is also entrusted with the task of communicating with the business advisor, business manager, and the client.

INTENDED MEANS OF PROVIDING PERSONNEL SUPPORT FOR THE PROJECT

A team of two members with expertise in database maintenance, security, and recovery technology will be responsible for maintaining the day-to-day functioning of the system and provide technical support. These individuals are presently employed in the Department of Computing and Telecommunications and Information Systems (CTIS) at TAMU-Commerce; thus, no additional salaries are required to pay these personnel.

SOURCES FOR MATCHING FUNDS

Matching funds for this project will be provided by the following entities.

- ✓ College Reading Association (CRA)
- ✓ Department of Elementary Education, Texas A&M University-Commerce.

PERFORMANCE MEASURES

Success Criteria

The success of this project will depend on the satisfaction of the stakeholders. To accomplish this, the team will solicit critical feedback from all the stakeholders and end users on a regular basis. This feedback will enable the team to verify whether or not the project is progressing as intended. The team members are in constant contact with the Business Manager and the Business advisor for their indispensable and constructive suggestions.

Assumptions

Security issues such as hacking and manipulation of the posted manuscripts are assumed to be addressed by the client through certain organizations such as Verisign. Another assumption is that the online approval system designed is acceptable to the client and that the client has no additional project requirements.