

Request for Quotation

For software distribution, maintenance, possible upgrade

February 3, 2014

MIT Sea Grant College Program

Massachusetts Institute of Technology, E38-300
77 Massachusetts Avenue
Cambridge, MA 02139
(617) 253-7042



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Confidentiality Statement

All information contained herein is Copyright 2014 MIT Sea Grant College Program

Submission Details

Submission Deadlines

Submissions for responding to this request must be submitted no later than:

Friday, May 5 2014
No later than 5:00pm EDT

Submission Delivery Address

The delivery address to be used for all submissions is:

Kathy de Zengotita
Program Coordinator
MIT Sea Grant College Program
77 Massachusetts Ave., E38-300
Cambridge, MA 02139
Voice: 617-253-7042
Email: kdez@mit.edu

Submission Questions and Clarifications

You may contact Kathy de Zengotita at the above email/phone if you have any questions or require clarification on any topics covered in this Request for Proposal:

Electronic Submissions

Electronic submissions in response to this Request for Proposal will be accepted as long as they meet the following criteria:

Sent via email to: kdez@mit.edu

Document standards: Microsoft Word or PDF format

Introduction and Executive Summary

A network of government-funded marine research programs seeks a software developer to manage a complex, interactive, web-based, document-management system called “Electronic Sea Grant,” or eSG. The system includes interactive capabilities for research proposal submission, peer review, and report submission. In addition eSG serves as a content management system for each program’s website including a news feed and online document library. The successful candidate’s mission is to roll out the eSG application to member programs around the country with some customization; maintain and upgrade the application as needed. Upgrade to be determined by the developer in consultation with the network. We seek a five-year commitment at minimum.

Business Overview & Background

The National Sea Grant College Program consists of a network of 32 programs located at colleges, universities and research institutions in coastal states. The program is funded by the U.S. Department of Commerce's [National Oceanic and Atmospheric Administration](#) (NOAA) to promote the conservation and sustainable development of marine resources through research, education, and outreach. Each of the 32 programs issues periodic calls for research proposals and other funding opportunity announcements, including student fellowship applications. Once funded, the activities of the programs result in published articles, reports and other documents and materials that must be offered to the public and submitted, in various formats, as formal reports to various oversight groups in government and academia.

In order to manage the volume of proposals, reviews, reports, publications, data delivery functions, etc., a computerized system called “Electronic Sea Grant,” or eSG, was developed by the MIT Sea Grant College Program and adopted by some other programs in the network. eSG is designed to be a cradle-to-archive database system that also serves as CMS support for the public websites through which reports, proposals, reviews and publications are submitted, managed and produced in various formats compatible with National Sea Grant requirements. The eSG system is currently in use by eight Sea Grant programs nationwide, and has been requested by at least 10 additional Sea Grant programs.

Interested parties have contributed to the design of eSG over the past six years of its development. However, the current version of eSG reflects the administrative process of MIT Sea Grant with some attempts to accommodate the variations in process of the other programs in the network. For example, some programs are required to report to their state governments, while MIT is not. These variations are not yet fully accommodated in the design of eSG. Below is a basic outline of the steps in the “business process” managed via eSG; this process is applicable to all Sea Grants:

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1. The Sea Grant administrator uses the FileMakerPro interface with eSG to issue a “call.” This involves assigning a name and selecting requirements from among such components as types of project summary, budgets, narratives, CVs, etc.
 2. A Request for Proposals (RFP) or, in the case of a Fellowship, an Application Announcement is sent out using the auto-email and web posting functions set up in FMP
 3. The administrator sets permissions for applicants (and later, reviewers) via FMP
 4. Initial online submission by a principal investigator (PI) or applicant of required documents and forms is conducted through the web interface
 5. Seed proposals and Fellowship Applications are essentially done at this point and are packaged for submission to the ultimate funder
 6. PIs who score well during the initial online assessment are encouraged to submit a full proposal with a higher level of documentation, more detailed budgets and descriptive narratives, submission of a data management plan, etc.
 7. Peer reviewers are recruited, assigned to a particular proposal via FMP, and then use the web interface with eSG to enter their comments and scores online
 8. PIs view blinded versions of the reviews and enter a rebuttal online
 9. A final review is undertaken of all the materials by Panels/Committees assigned to this call via the web. If the Panel or Committee meets to discuss the proposals, further comments may be added after the meeting
 10. Sea Grant staff prepare material for grants.gov submission as required by regulations using the FMP interface
 11. Once the funding is approved, or the student receives the fellowship, the project/appointment is “promoted” to the Program Management database and automatically appears on the website
 12. At regular intervals over the next several years the PI is asked by automated email from eSG to provide reports via the web
 13. To do these reports, the PIs enter various data in answer to questions, upload documents, images, audio/video clips, links to websites, published works, etc.
 14. Reporting requirements vary depending on the nature of the report and on the stage of the project – the modularity required for tailoring reporting calls is not yet in place and will be part of the upgrade
 15. Administrator edits the reported material through the FMP interface
 16. Material can be extracted by the administrator for report preparation, but some output is automated, namely, eSG produces a pre-formatted Excel sheet that is sent to the Sea Grant National Office and fed into their PIER system
 17. Most of the material submitted during report gathering then appears on the program’s website automatically in connection with the project

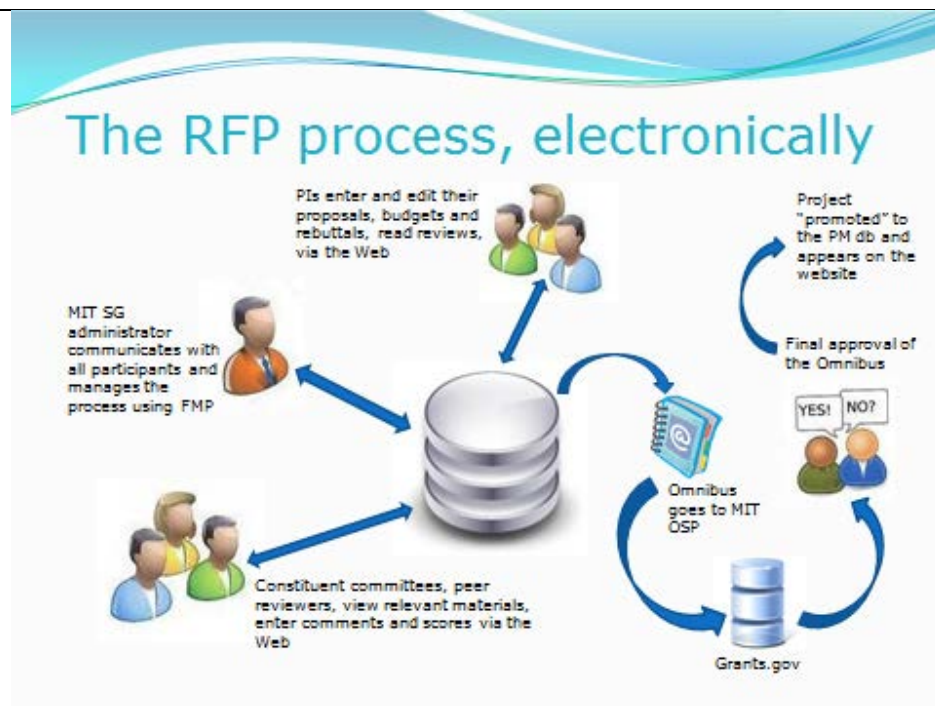
Detailed Specifications

SYSTEM SUMMARY

Currently, eSG uses two MySQL databases, from which information is accessed through web-browsers and through Filemaker Pro interfaces (via ODBC).

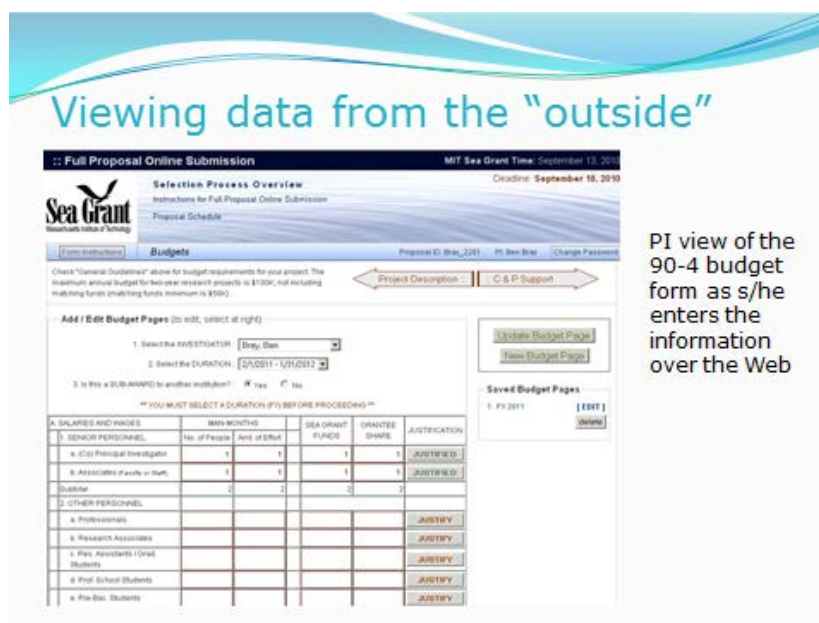
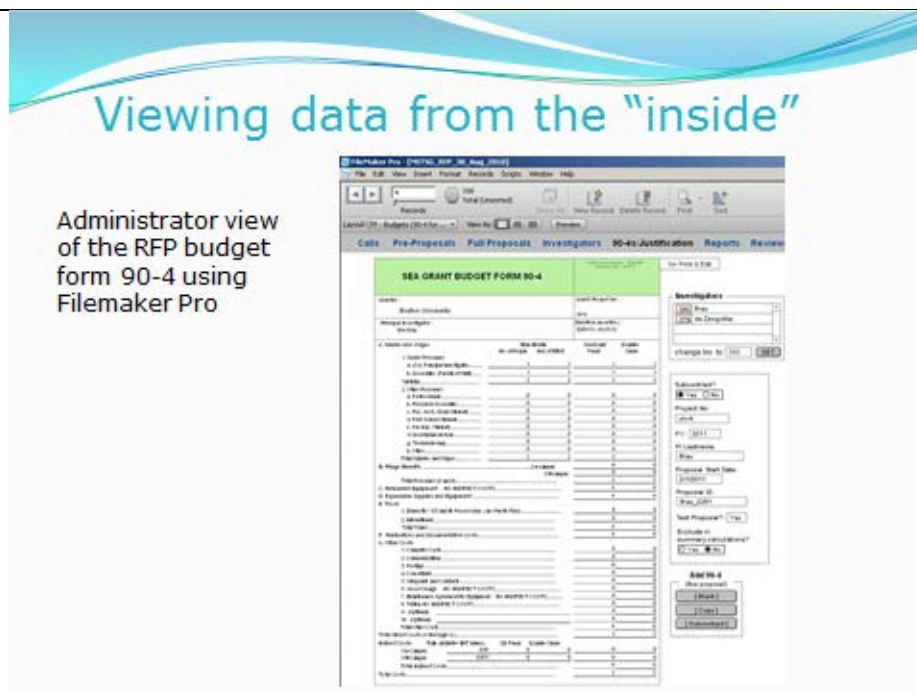


The system has multiple user groups who have different levels of access to different subsets of information.



Certain interfaces are coded for web-browsers and others are set up in Filemaker Pro. This has facilitated rapid customization by programs adopting the system from MIT: Filemaker Pro knowledge is widespread and Filemaker interfaces are easier to develop than web interfaces. The same data can be viewed through the web and through FMP but is more easily manipulated in FMP:

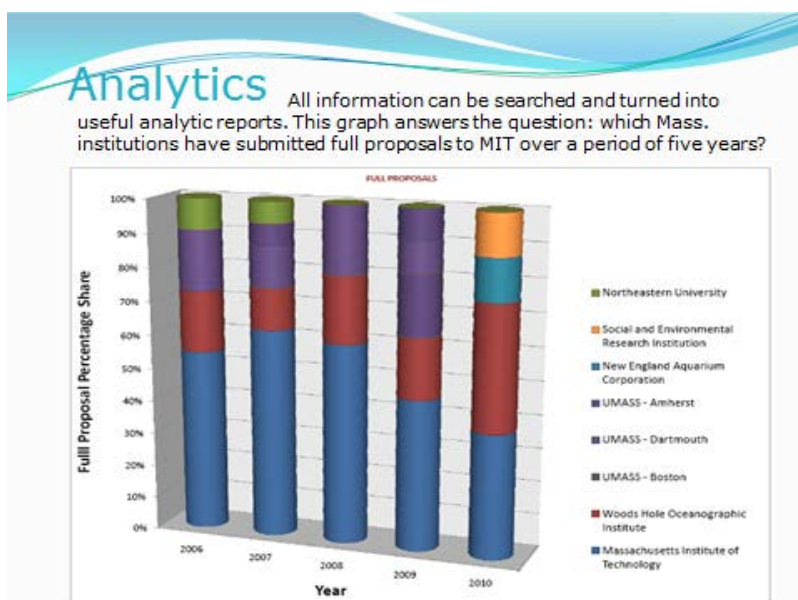
For software development, maintenance and distribution



Project information undergirds each program's website. Data for dropdown lists -- deadline dates, focus areas, call types, degree types, etc. -- and the content of automated emails are managed by administrators through the FMP interface.



FileMaker can mine data and create reports in different formats, allowing for great flexibility. We wish to maintain these useful capabilities in the next version of eSG.



The system collects reports and data of various kinds and generates documents in pre-programmed formats for submission to grants.gov or PIER at the National Sea Grant Office.

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Data and documents that are reported and uploaded by PIs are automatically displayed and accessible online. eSG is the CMS for the entire website (the search function needs some work.)

Result: searchable projects and pubs

Projects can be searched by PI's name, dates and keywords. The results page → → gives instant access to all materials collected for that project. (Items may be tagged for exclusion from public display, like update reports.)

Publications can be searched by title, last name and type, and downloaded if a pdf is available.

The FMP interfaces are geared toward SG administrators, rather than public users, so versioning with FMP is manageable for this group of knowledgeable administrators. However, this architecture has ultimately led to a system that is feature-rich but less-than-ideal for version management.

At this time we have two pressing issues:

1. Multiple Sea Grant programs across the network would like to have eSG installed and maintained at their own sites. MIT Sea Grant does not have the resources to deliver, maintain, customize and update these installs.
2. eSG may need to be converted from a hybrid PHP/Filemaker Pro platform to an exclusively browser-based system (maybe cloud-based?) to improve system security, maintenance, and ease of adoption. We do not have the expertise or the resources to do this.

In terms of distributing the software, two modes of distribution have been discussed: 1) local installation on a server maintained by user programs, and/or 2) a cloud/node system where a single installation may support several programs. ArcGIS is an example of such a dual-mode distribution, though the online version is considerably more expensive than the local-install version when the user base reaches a significant size.

Assumptions & Constraints

Respondents to this RFQ will have a proven record of the programming capabilities necessary for distributing, installing, changing and upgrading the eSG system. In addition the individual or company must fully understand the Sea Grant “business process,” and ensure that eSG supports that process. The respondent must be able to communicate, work with and train a variety of Sea Grant staff with varying levels of expertise at various locations around the country.

Based on discussions within the Sea Grant network, we specifically assume that current and future users of eSG will pay for services characteristic of any commercial software such as bug fixes, requested features, versioning, technical support, training, etc. Some programs may also require assistance in data migration and program-specific modifications. Modifications that are likely to be requested by individual programs are: ability to personalize instructional text; expansion of the current capability to modify or remove steps in the workflow; ability to make changes interactively through a web interface instead of through program-specific code changes or changes made by a database administrator directly to the database.

Two modes of software distribution have been considered for rolling out the system to members of the Sea Grant network: 1) local installation on a server maintained by user, and/or 2) a cloud/node system where a single installation may support several programs in the same geographical region. ArcGIS is an example of such a dual-mode distribution, though the online version is considerably more expensive than the local-install version when the user base reaches a significant size. Our assumption is that the successful respondent to this RFQ will advise us on the best solution, and be able to implement it.

Terms and Conditions

MIT licensing rules apply on all eSeaGrant code.