

Making a Difference:

The Development of Oregon Sea Grant's Management Information and Accountability System

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Preface

During the first 30 years of its existence, the National Sea Grant network determined the quality of projects and even entire university-based programs largely by reviewing individual and institutional proposals. Because each biennial proposal period followed quickly on the heels of the last one, Sea Grant program managers rarely had time to look back to see how well their programs had accomplished stated objectives. Examining or even recording past accomplishments in detail was rarely possible. With a few exceptions, Sea Grant based its own sense of success and productivity as much on proposals as on well-documented outcomes. All that changed in the late '90s when the Sea Grant network, the Sea Grant National Review Panel, and the National Office of Sea Grant together made the decision to end the practice of reviewing each proposal at the local program level and then again at the national level. A new process was initiated, requiring each program to solicit and review individual research proposals, to make funding decisions, and to submit for approval institutional plans rather than institutional proposals. The new system emphasizes competitive funding at the program level rather than at the level of individual projects, and that competition is based not on proposals, but on the accomplishments and products of past work. More than anything else this change set the stage for the development and refinement of systems for collecting, archiving, and displaying the many and varied accomplishments of the Sea Grant programs. Development of such systems was immediately raised from something that would be “nice to do” to most programs’ highest priority. Oregon Sea Grant was no exception.

Several years ago Oregon Sea Grant considered adapting existing software for use in organizing and displaying the results of projects, but other demands on our time prevented us from pursuing the idea. It was only about a year ago that we set in motion the process of creating the computer-based system that is described in this document. That system, which is now a reality, represents a considerable investment of time and money. Because we are committed to obtaining the greatest possible good from our investment of public funds, it is our intention—and it is the purpose of this document—to make the software system, which we call Making a Difference, available to any Sea Grant program that wants it.

—*Robert Malouf, Director,
Oregon Sea Grant*

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Introduction

Since early 1998, Oregon Sea Grant (OSG) has been developing a graphical database system to display how OSG is organized, what activities and programs it supports, and what those activities and programs accomplish. The database was originally designed to be used by program managers in a small-group setting to explain the program to critical clientele—typically either those who make decisions about program funding or those who are supporters of the program. Other plans included selecting some elements of the database for much broader display on the World Wide Web, thus allowing Sea Grant staff, researchers, and the public to access information about OSG's programs and funded projects. The project's name captured the main message it conveys: Making a Difference.

Making a Difference was inspired by Oregon Invests!, the Oregon Agricultural Experiment Station's accountability system and database developed by former OSG communicator Gwil Evans (Dutson and Evans, June 1995). Evans had also been instrumental in encouraging several university agricultural programs to develop accountability systems from the Oregon Invests! model. Among them are programs in Florida, Indiana, Minnesota, Missouri, Tennessee, and Washington.¹

As with the agricultural programs, Sea Grant's receipt of public funding means that not only program reviewers, but constituents, legislators, and the public have legitimate concerns in knowing that their funds have been used effectively. Over the last few years, there has been a growing interest in computer-based accountability systems that store, sort,

retrieve, and display information about federally funded programs.

At OSG, the development of Making a Difference has been a priority for program managers and management associates since autumn 1997. The active support and involvement of top management has been recognized by Evans and other innovators as a key ingredient. The OSG program director, Robert Malouf, has been an advocate for the system since its beginning.

Goals for the OSG Accountability System

Audience Goals

A key factor in OSG's goals for an accountability system was a willingness to be accountable to various stakeholders and the general public. The intent was to present OSG program information, resources, and project outcomes to these audiences. Plans thus included an Internet version of Making a Difference that would form an information bridge to the public, including on-line publication-ordering capabilities, e-mail contacts, and a search engine to facilitate exploration of Sea Grant-funded activities and programs.

Among the most important goals of Making a Difference were the following:

- To show how a Sea Grant program and its projects directly benefit local, regional, and national constituents, particularly with respect to identified priority goals and issues
- To monitor the long-range effects created by funded projects and researchers

- To document researchers' effectiveness in achieving project objectives and associated real-world results
- To track project participants (including students) throughout their careers

The system would also track interaction between projects. For example, new projects are sometimes inspired by older projects. Similarly, existing projects may be enhanced and modified in response to the results of another project. This "tree" effect—when projects branch out to other projects—is an important measure of effective programming.

Development Goals

More efficient access to project information, such as outcomes and funds spent, would facilitate management tasks. OSG's development priorities for the database system were sixfold:

- To allow efficient administration of projects
- To interface with existing record formats, such as paper files, databases, and word processing documents
- To facilitate identification of holes in information and provide a central location for collecting scattered documentation as it is tracked down
- To be flexible enough to accommodate new reporting requirements as they arise
- To be exceedingly user friendly while being sophisticated enough to manage the necessary fields, searches, and presentations desired
- To make presentations portable through use of laptops and the Internet

Development of Making a Difference Version 1.0

Planning

The initial concept for Making a Difference was to increase access by OSG funding entities to descriptive information about OSG research, outreach, and education projects. Long-term plans for the system were to use the Web as a means for the public to interact with OSG program information, resources, and personnel (by means of searches, on-line publication ordering, and e-mail).

The OSG management team, composed of Director Robert Malouf, Assistant Director for Programs Jan Auyong, Assistant Director for Communications Joe Cone, and Extension Sea Grant Program Leader Jay Rasmussen, worked closely to outline system operations. They spent several months discussing the various tasks and types of information that the system would need to handle to meet the needs of communicating information to funding administrators. As an organizational strategy, the team decided to use the topical categories (for example, economic leadership) as outlined in the Sea Grant Network Plan 1995–2005 (NOSG, 1996). The use of the categories and their underlying topics for information delivery enabled the system to introduce users to OSG and to the important issues addressed by Sea Grant programs. At the same time, the categories provided users with a navigational tool within the system.

Software Selection

OSG chose FileMaker Pro (version 4.0) as the application software for a number of reasons. It is flexible and easy to use. Its graphic capabilities are superior to those of many other database programs. The Oregon Invests! model had been developed on it. Many colleagues at Oregon State University (OSU) are experienced in its use. And finally, the use of FileMaker Pro would facilitate any future merging of Making a Difference with Oregon Invests! or a proposed expanded university-wide version at OSU.

The software has other important features:

- FileMaker Pro is available for both Macintosh and Windows platforms, both of which are used within OSG.
- The same database can be used interchangeably on either platform or be made accessible on the Web.
- The software can import data from a variety of digital file formats (spreadsheets, videos, photographs, and databases).
- This relational database software allows efficient storage, retrieval, and updating of data (FileMaker Pro provides seamless interaction between the separate, discrete sets of data).
- Password security options were possible for different audiences and confidential information.

Making a Difference was designed to include photographs and videos to complement textual elements. We incorporated videos as 20- to 30-second video clips saved as QuickTime compressed movies; we developed photographs and graphical elements of the interface design using Paint Shop Pro. Both Paint Shop Pro and QuickTime are inexpensive and readily available. Other image-editing software

can be used to manipulate digital photographs.

In addition to photos, videos, and hand-entered text (from paper records), the database would at some point need to incorporate data from other database formats (for example, Paradox, Excel, and dBase) and word processing files (for example, Microsoft Word and Corel WordPerfect). FileMaker Pro's facility in importing multiple formats was a key advantage to this software package.

The Making a Difference design also required flexibility to accommodate unforeseen future system requirements. Its widespread popularity and planned enhancements for future releases of FileMaker Pro promised a dynamic, stable platform that would fill both OSG's present and future needs.

System Design

The first step in designing the database was to map out the types of information to be presented to target audiences. The OSG management team created lists of project descriptors (for example, project title, tracking number, and name of principal investigator) to include in the database. One critical criterion was to include all of the information required for the Sea Grant project summary—the 90-2 form.

The resulting unified list became the preliminary field list for Making a Difference (a field is a particular category or type of information in the database, such as "Date" or "Address"). The design team of Auyong and Jennifer Gilden, a program associate, created a set of data entry screens in FileMaker Pro and gave copies to the management team and office staff members for examination and testing. FileMaker

Pro's flexibility in altering field names, moving fields on the data entry screen, and automatically advancing to the next field was a boon in finalizing the data screens.

The next step in the design was to identify the various information presentation screens that would greet users as they searched for project information, that is, designing the constituent user interface. Making a Difference includes six levels of screens that provide a general introduction to OSG, offer selection options based on OSG's three main issue categories, and finally give access to a detailed breakdown of OSG's projects (see figure 1). The design team presented several different looks for the user interface to the rest of the management team. After a couple of revisions, the teams settled on an attractive, but function-driven, graphic design.

One of the key graphic features was the use of color to represent the different major categories of Sea Grant topics. For example, the color blue is used with all topics in the "Economic Leadership" category, green for "Coastal Ecosystem," and burgundy for "Education and Human Resources." Further, the design team decided to use photographic icons to represent various topics, such as crabs for seafood production. These visual "handles" are shown when a record is called up by a database user. These handles were added to the database by cutting and pasting into FileMaker Pro images from a CD-ROM of OSG photographs.

An important design step for the prototype was the creation of a one-page navigational Topics Map (figure 2) that included pointers to all of the different topical areas in the OSG program. With this element, the first

draft of Making a Difference was complete. See figure 2 for a full description of the version 1.0 screen arrangement.

Once Gilden began programming, the development of the first prototype version of Making a Difference took about two months (using a small number of topics and records from the two most recent program cycles). Although none of the staff was working on it exclusively, development and update of the system was an ongoing commitment. As version 1.0 was tested, a number of new requirements became evident and the system continued to evolve.

Expanding the System— Version 2.0

The prototype version of Making a Difference went through several months of trials to evaluate its usefulness in presenting and retrieving the initial set of entered information. We used feedback to refine and enhance the system. We also added to the database additional project records from a broader range of topics.

During the initial trial period, we presented the system to Sea Grant colleagues² and to Ron Baird, the director of the National Office of Sea Grant (NOSG) (in May 1998). During this period, the OSG management team realized that the system could be a powerful tool for Sea Grant outreach at several levels, in addition to the original target audience. For example, OSG stakeholders such as Oregon researchers and clients could look up the progress of current projects. Other Sea Grant state programs and researchers could keep abreast of the

programs and projects being funded by OSG. The OSG system could also be accessed by the network as a whole to identify redundant projects or identify gaps in how the network addressed priority research and education issues. Ultimately, an expanded version could be developed to serve a region or the national network.

The management team reviewed the range of possible audiences and presented a short list to the design team, which now included Susan Lynds, a program associate. The designers then spent several weeks assessing the needs of the new audiences and evaluating the best way to accommodate the expanded range of requirements. Programming by Lynds began in earnest in early 1999.

By mid-1999, version 2.0 of Making a Difference was nearing completion. During development of this version, Lynds enhanced program features for use by OSG managers. The system was greatly expanded to enhance the ability of OSG managers to track project progress as well as to report on activities and program outcomes.

Outreach Features

In addition to addressing the needs of specific administrative and funding stakeholders (for example, OSU, the Oregon university system, state and federal legislators, and NOSG), version 2.0 of Making a Difference has been modified for other users. These prospective users include OSG principal investigators, non-Sea Grant researchers interested in OSG's priority topics and research program, members of the K-12 and community college education communities, the general public, and the Sea Grant national network.

Objectives for Outreach Features in Version 2.0

There are four objectives for this aspect of the system:

- To provide increased and easy access to information about OSG projects
- To offer a means, ultimately in a Web iteration of the system, for interacting with OSG program information, resources, and personnel
- To enable users to make keyword searches, order publications, and send comments to staff or researchers
- To demonstrate OSG's willingness and intent to be accountable to stakeholders and the public

Version 2.0 offers instructions for how the public may obtain information about programs, products, and personnel. Other features of the public or outreach presentation of the information include

- Lay descriptions of project issues and outcomes
- Stories of research and outreach accomplishments and bulleted information
- Titles and publishing information of longer, more in-depth, feature stories
- Types of products (both printed and electronic) produced from project
- Dollars spent and personnel supported
- Photos
- Video clips, when available, that increase understanding of the projects
- Technical details for those wanting further information on objectives, methods, and the project team

Design Modifications for Outreach Objectives

We designed Making a Difference 2.0 to provide external audiences with stratified access to information about OSG projects and project outcomes. Once past the introductory interface screens, the user reaches summary project information written in lay terms. This first project information screen presents a general description of the project and an overview of project outcomes as they become available; this information can often be derived from such communication products as program directories and press releases.

At this point, the user then has several options for viewing additional details or technical information. From this screen, users can choose to view stories of accomplishments, information bullets, lists of products, or information on the technical aspects of the project, such as the methods, objectives, and project team. Project activities, accomplishments, and products are presented in a variety of ways. For example, one screen lists printed, electronic, and computer-based products. This screen joins the video and photograph screen that already existed in version 1.0. Thus, the tangible outcomes of the project are featured by type of media or outreach method instead of being submerged in the narrative description.

The Topics Map navigational screen (figure 2), which offers a topic-based overview of the project database, has been enhanced with search features. When a particular topic is chosen by clicking a button, the system runs a search and offers the user a listing of related projects from which to choose. This search feature retrieves projects based on topic category or keywords.

The graphical presentation of information in the system was also modified for version 2.0. In this version, both navigation and descriptive information are streamlined for the public user. Navigation bars with common placement and wording are emphasized. Specific information about the associated destination page is now presented on each button rather than using generic "previous" and "next" buttons. This permits users to select the amount and type of information they want to view rather than have to wade through all available screens to find the information they desire.

In version 1.0, the inclusion of the topical graphic on the output screen had required a separate set of output screens for every topical area. In version 2.0, the topical graphic and topic color are included in each project's data record (just like any other piece of information) instead of being a fixed visual feature on the output screens. The result of this modification is that there is no longer a need for a separate set of output screens for each topical area, cutting the number of output screens from 51 to 27. Thus, we have enhanced graphic continuity by a more efficient use of screens, and we have reduced editing work if screen layouts need to be modified.

Management Features

Making a Difference version 2.0 allows the system to be used for tracking projects from initiation through completion and beyond. We have expanded the scope of the system in response to program evaluation requirements by NOSG.

Figure 1.

Making a Difference, version 1.0, included the following output screens:

Home Page (Level 1)

The home page explains what OSG is in a nutshell. The background image was selected because it was a neutral, ocean-oriented photo. The sea star graphic was blurred and faded to make it seem more abstract. The banner at the top shows up in all top-level screens to provide a sense of continuity. The buttons were placed so they would be visible without users having to scroll down. A bold font was used to show up clearly.



Level 1

Topical Overview Page (Level 2)

This is the second screen a user proceeds to after the home page. A large headline font was used to catch the reader's attention, and a smaller font was used for the explanatory text. Three photos were picked from Sea Grant's collection to represent the three topic categories outlined in the Sea Grant Network Plan. The dominant color in each of these photos was identified. The photos were then altered by changing them to black and white in Paint Shop Pro and were, subsequently, tinted with the dominant color.

The same three colors were used in the graphics throughout the system to create a consistent color theme for each topic category.

Four navigation buttons appeared on every screen: "Previous," "Publications Directory," "Program Guide," and "Topics Map." As much as possible, screens were kept small to minimize required scrolling.



Level 3 Screens—Topic Areas

For these screens, two or three photographs were selected for the corresponding topics within each Sea Grant topic category. Color theming and tinting was continued as in level 2. One advantage to the photograph tinting was to make the pages seem less busy than they would if the graphics were in full color.



Level 3



Level 4



Level 5



Level 6



Photos and Video Screen

Level 4 Screens—Subtopic Buttons

These pages contained the photo corresponding to their topic in the upper left corner. Subtopic buttons were placed in the center of each fourth-level screen; these buttons directed the reader to the specific projects associated with each subtopic. The color theming and navigational buttons were continued as with other levels.

Level 5 Screens—First Data Output Screen

Each fifth-level, or project, screen provided specific information on the project (for example, the investigator and co-investigator's name, project number, and description) The topic photo was placed in the upper left corner for continuity with upper levels. The navigation bar was similar to that of level 4, but included a "More information on this project" button that led to the sixth-level screen (replacing the "Publications Directory" button).

Level 6 Screens—Further Information Screen

The sixth-level screens contained more text, and so these appeared a little more cramped. The same navigation buttons appeared with the substitution of a "Photos and Video" button.

Photos and Video Screen

The photos and video screen had the same design elements as the previous levels, i.e., topic photo, color scheme, and navigation buttons.

However, the data fields on this screen were special fields that could be filled with a photograph and a video clip.

Objectives for Management Features in Version 2.0

Objectives for the management aspects of Making a Difference include the following:

- To present essential program effectiveness measures, such as (a) return on investment, (b) project impact information, including economic, social, and environmental impacts, and (c) value to constituents
- To develop, test, refine, and disseminate Making a Difference to the SG network as a presumptive national model of an accountability system
- To refine the system for possible integration into an accountability system that could be used throughout a university or a system of higher education

Design Modifications for Management Aspects

The enhanced version 2.0 system incorporates information that is necessary for Sea Grant managers to effectively use Making a Difference for tracking projects and reports and for assessing project performance. We added some additional data fields (figure 3) and presentation screens (see figure 4). The new output screens display technical details on what exactly was done, how it was done, and what the objectives were. A number of the new fields and screens often deal with information that might be more technical or detailed than the general public desires, e.g., 90-2 information. Therefore, these pieces of information have been made options from the main project information screen or have been restricted to output presentation screens for administrative personnel.

Version 2.0 also furnishes information for completed projects on what was accomplished by the project as well as project impacts and activities planned for follow-up projects. When appropriate, the system presents information on return on investments for projects, a critical feature in looking at overall program effectiveness.

Discussions of outcomes include at least the following information:

- What good things were done?
- Who did it?
- Who else played a role?
- What long-term benefits accrued?
- Who benefited?
- What was learned?
- What other projects has this work led to?

Since not all audiences should receive or would want to receive every piece of information entered, different presentation screens could be developed as needed to deliver information desired by various users.

Related Databases for Internal Use

We developed several related databases in 1999 to interface with the general Making a Difference database (which lists descriptive information about projects, such as title, investigator, funding, and topic). A relational database system stores information in a collection of databases, each containing pertinent data about one aspect (e.g., students). Storing data in related databases is very efficient because a fact is stored only once, which reduces disk storage requirements and makes updating and retrieving data much faster. Because the databases are related, information from more than one file at a time can be combined into a single display format (for example, a report or table).

In Making a Difference version 2.0, eight separate but related databases constituted the file structure: (1) the general database (containing project descriptions and personnel data); (2) the management database, through which OSG personnel would track the status and progress of projects, major decisions and modifications, and the timely delivery of reports; (3) the technical outcomes database; (4) the student database; (5) the publications and products database; (6) the multimedia products database; (7) the fiscal database; and (8) the contact database. All eight databases contained fields for the primary investigator's name and the OSG project number; these two "key" fields provided the common reference points to connect all related files. Through FileMaker Pro, users would never know the information was contained in many separate files.

The Making a Difference **management database** contains details about

- Decision-making comments
- Reporting activity and program status
- Ongoing accomplishments
- Implementation obstacles
- Outreach activities

The **technical outcomes database** also includes (where available) information on how the completed project did the following:

- Addressed a critical opportunity or problem
- Met proposed objectives
- Resulted in physical or tangible payoff
- Resulted in better knowledge, behaviors, and activities
- Demonstrated potential for new knowledge, behaviors, and activities

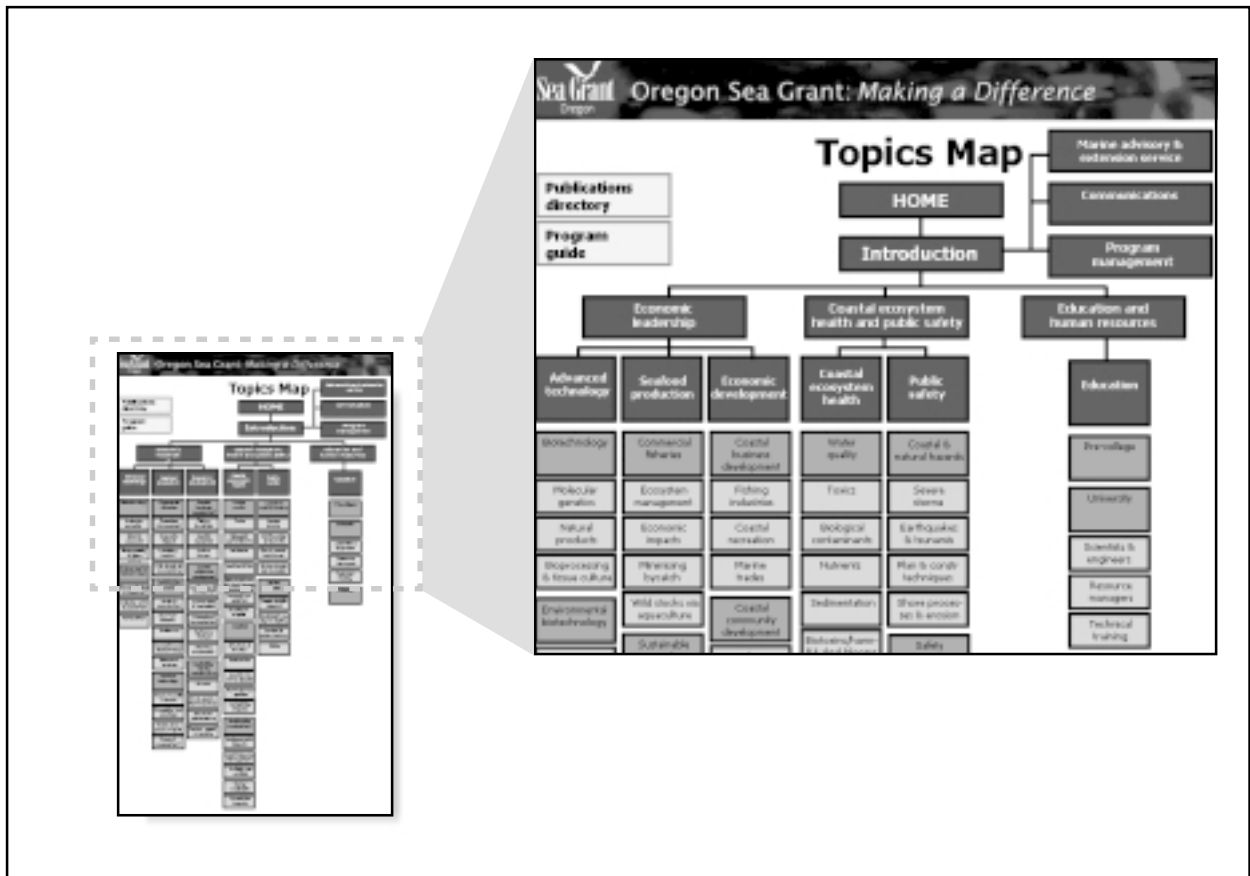


Figure 2.

The Topics Map screen is a one-jump navigational page that enables users to move around in the database in a nonlinear fashion. An inverted tree structure was chosen for the display because it seemed to be the easiest structure to understand. The darkest buttons connect to screens at levels 1 (Home) through 4; clicking on them takes the user to the corresponding screen. The lighter buttons activate a search script that will retrieve all data records in the corresponding subject area and present them to the user through the data output screens.

- Found or resulted in something new or significant
- Added value to industry, product, environment, or learning
- Offered a clear return on investment—either economic, social, or environmental
- Identified next steps to take, including future directions for research
- Had application beyond the region
- Met NOAA plan priorities
- Met NOAA performance measures

The Making a Difference **student database** includes the following information:

- Current contact
- Project support (e.g., advisor, project, dates)
- Thesis title and topic
- Career impact description
- Cost tracking (salary, tuition)
- A longitudinal record of whether OSG support made a difference in the student's career and field over time
- Fellowship and networking opportunities (e.g., an annual symposium for Sea Grant scholars)

The Making a Difference **publications and products database** includes lists of

- Printed products (e.g., journal articles, conference proceedings)
- Printed media (e.g., abstracts, flyers)
- News releases (including release dates, slug titles)
- Electronic products

The Making a Difference **multi-media database** provides samples and information on multimedia products, including

- Photos and captions
- Videos and video clips
- Transcripts of radio spots

The Making a Difference **contact database** will maintain up-to-date information about existing or potential principal investigators, reviewers, and relevant stakeholders, such as agency members for Sea Grant projects. The information includes the person's

- Title and affiliation
- Mailing address
- Phone/fax numbers
- E-mail address/Web site(s)
- Expertise

The Making a Difference **fiscal database** maintains information on budgets, cost-share and returned overhead, subcontract and personal service agreements, and account numbers.

Current Limitations and Future Plans

The transferability of FileMaker Pro data to a Web environment was one of the deciding factors in selecting this software package for Making a Difference. Currently, although the data contained in the files are easily exported to a Web-oriented table structure, the presentation screens (layouts) are not translatable to a Web-readable format. In view of this situation, FileMaker Pro version 4.0 software is only halfway to being fully Web compatible. It is anticipated that a translation option (such as is available with Microsoft Word and Adobe PageMaker) will soon be offered with FileMaker Pro.

Another limitation was FileMaker Pro 4.0's incompatibility on PC platforms with QuickTime 3, one of the most commonly used digital video formats (there was no similar problem for Macintosh platforms). For videos to be imported into the database, QuickTime 2, instead of

QuickTime 3, must be loaded onto PC platforms.

Creation of high-quality video clips is a limiting factor as well. Production can be time-consuming and requires additional, sometimes expensive, equipment and special training for staff.

OSG personnel also encountered limitations in the data available for entry. The amount of information on past projects is not as complete or detailed as the information available for recent projects. As the procedures for proposals and funding have changed over the years, the project details stored in files have, of course, changed as well. OSU staff members may need to conduct extensive investigations and contact investigators to eventually produce much of the missing (but required) information.

In addition to finding missing data and ongoing database updating, OSG's next challenge is disseminating Making a Difference. Plans include providing the general interest sections on the Web. Quickly and easily (or automatically) converting the layout screens to HTML format is the greatest obstacle to this task. With the support of a Web site developer, in-house staff, or contractor, this challenge could be met by the end of 1999. Improvement of the FileMaker Pro software would expedite this task, but some Web page editing will be required in any case. If the Web issues are resolved, OSG may choose to provide portions of the OSG project database on the Web, as Evans will be doing with Oregon Invests!

OSG is considering other formats, too. We will develop an application version of the system by late 1999. This will be a subset of the entire system, provided as an executable file for downloading (for

Figure 4.

Making a Difference, version 2.0, includes new output screens for levels 5 through 11. The navigation buttons have been moved to the left margin of the screen (to provide greater visibility on a variety of monitors); this feature is included on all screens of levels 5 through 11. New buttons are included to jump to the featured accomplishment, technical detail, product, and photo/video screens. The Topics Map and Return buttons are retained from version 1.0.

Level 5 Screen—First Data Output Screen

The four levels of topic classification (category, topic, subtopic, and element) are included beneath the topic graphic, now displayed in white letters on a background of the themed color for the area. The project title, principal investigator, and description have also been retained from the previous version. In addition to description, a large outcomes section is included here to summarize the results of the study as well.



Level 5

Level 6 Screen—First Technical Details Screen

The information on the level 6 screen is very similar to that in version 1.0, with the exception of the navigation bar placement and additional buttons.



Level 6

Level 7 Screen—Second Technical Details Screen

Personnel information (for PI, Co-PIs, and students) is listed on the level 7 screen, including names and affiliations.



Level 7

Level 8 Screen—Featured Products

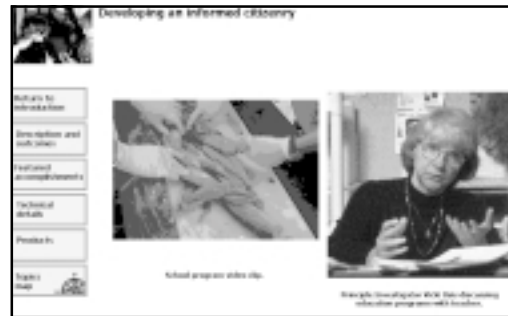
Products of the project, including printed, electronic, and computer products, are described on the level 8 screen.



Level 8

Level 9 Screen—Photos and Video

The level 9 screen contains the same information (a photograph and a video clip) as it did in version 1.0, but it is displayed with the new navigational button arrangement.



Level 9

Level 10 Screen—Featured Accomplishments

The level 10 screen highlights specific success stories that arose from the project.



Level 10

Level 11 Screen—Highlights

The level 11 screen displays brief statements (bullets) relating to the project.



Level 11

example, FTP) or distribution on a storage device (for example, Zip disks). Users will not need to purchase the FileMaker Pro software to use this file. This stand-alone version will enhance OSG's ability to share Making a Difference with its audiences as well as present the system by means of laptop computers and projectors.

Systems like Making a Difference or Oregon Invests! have the potential for use as collaborative accountability systems that integrate program databases within a university or a state system of higher education or among state programs. One scenario for OSU is described here. The model, as proposed by Evans, builds on a central relational database that holds data for all participating units but allows for unique "front ends" that permit retrieval and display of information in ways that are tailored to the individual participating units. However, this model also enables the creation of a "universal" front end that would allow access by people wishing to use it to retrieve information for institutional purposes.

Summary

The goal in the Making a Difference project was to address the needs of OSG's stakeholders through a graphically based, user friendly, accessible accountability system. The system contains information that enhances OSG's ability to present information of interest or as required to the university and the National Sea Grant Office. Making a Difference will interact with future accountability systems used by OSU and the Oregon university system through the sharing of fields, development guidelines, and decision-making procedures. Through this

effort, the awareness of OSG projects will be broadened, and information about their products, significance, and long-term effects will be made available to a wide range of audiences. It is hoped that OSG's system will encourage the development of a similar collaborative system in the national network as well.

References

Dutson, Thayne R., and Evans, Gwil. June 1995. *How a Database Helps the Oregon Agricultural Experiment Station Describe the Contributions Made by Research*, College of Agricultural Sciences, Oregon Agricultural Experiment Station, Oregon State University.

National Sea Grant Office, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. 1996. *Sea Grant Network Plan 1995-2005, Coastal and Marine Resources for a Sustainable Economy and Environment*.

¹ Two examples available on the Web as of May 1999 were Purdue University's Impact (<http://www.agcom.purdue.edu/AgCom/news/impact/writingImpact.html>) and Minnesota Impacts! at the University of Minnesota (<http://www3.extension.umn.edu/mnimpacts/>).

² (A) Extension Sea Grant staff meeting, Coos Bay, Oregon, May 1998, (B) Communicators National Steering Committee meeting, Houston, Texas, December 1998, and (C) Sea Grant Webmasters national workshop, Gainesville, Florida, January 1999.

What is Oregon Sea Grant?



Sea Grant is a national network that supports research and carries out programs of education, communication, and extension that contribute to the rational use and conservation of marine and coastal resources. Sea Grant responds to the needs of ocean users and works to enhance both the environment and the economy of the state, region, and nation. The “grant” aspect of Sea Grant comes from the National Oceanic and Atmospheric Administration (NOAA) and is matched by state funding.

Begun in 1968, Oregon Sea Grant (OSG) was one of the first of 30 such university-based, state and federal partnerships, and it remains one of the largest. The program is administered by Oregon State University, but OSG is a statewide program that actively solicits and supports research, outreach, and education projects at any institution of higher education in the state of Oregon.

Sea Grant devotes considerable attention to identifying critical issues for program investments that are important to Oregon and the region, while also relating these issues to national needs and priorities in three major areas: (1) economic leadership, (2) coastal ecosystem health and public safety, and (3) education and human resources. Key assistance during this planning process comes from an advisory council of Oregon coastal leaders and knowledgeable individuals.

During the 1998–2001 period, Sea Grant funds are supporting more than 15 major two-year research projects and 10 to 20 short-term projects annually, as well as the diverse Extension Sea Grant and Communications programs. Each project selected for support addresses a program priority and has been subjected to a rigorous review process, which has found it to be scientifically and technically sound as well as likely to yield useful new information. Issue importance and program potential are key ingredients in evaluating proposals.

OSG is more than a collection of valuable projects. The program is designed so that the research, extension, education, and communications activities of the program work together and complement each other. Overall, Sea Grant is determined to make a difference in the development and dissemination of knowledge, using innovative approaches, responding to needs, and collaborating with partners.

