

# EarthEd Online, Version 3

## EarthEd course configuration, answered questions, and “Vision for the Future,” a great project for a new leader

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### Introduction

All course information is stored on the oceanography server. The expansion of the record system to accommodate courses from multiple institutions is scheduled for completion this summer. Most of the critical modifications were made prior to my spring oceanography course, but it was not possible to finish the details prior to this workshop. Because this system is being changed, the detailed documentation is left for later.

Here are some questions and answers that you may be interested in:

**What will the course configuration system look like, ultimately?** New Media Studio programmers (Marty Landsman and Art Clifford) are helping me create a teacher’s interface that will insulate you from the messy details. It will be possible to configure a course quite quickly. One of the features of the new system is that each course has a common area that contains the assignment files. This means that there could be multiple courses being taught which use the same assignments (or some of the same assignments) without the need for duplicating the files.

**What is the basic technology that is used?** Currently, the entire record system uses a single perl cgi and the server file system. This makes it quite easy to implement the server. I have run the course server on Macintosh and Sun Unix computers. It will also run on Linux and Windows servers, but I have not tested it and expect minor modifications to the perl headers. A Macintosh computer makes an ideal server platform. I use a Mac with OSX, which is basically Unix.

**When will a real distribution version be released?** That depends on what new features you ask for during this workshop. The modifications to make the current system work for multiple classes at multiple universities, are relatively minor and could be completed by the end of the summer. The teacher’s configuration software could also be completed by the end of the summer. The documentation could also be completed if the number of changes to the system were minimal.

**How will a teacher get technical support?** Again, I am hoping that we can invent a strategy for this during the workshop. If I personally have to support everyone, very little else will get done. I am expecting New Media Studio folks to help support the system. Also, I hope that the documentation and teacher configuration module is so clear that the support needs will not be large. I also have implemented a threaded discussion forum for this project, where questions and answers can be posted.

**How would I implement the system for a test course?** The easiest way for me to support is if your course is hosted on my server. The files are easily downloadable to your own computer so any work you do configuring a course will not go away if you host the course on your own computer in the future.

**What additions and improvements are planned?** First and foremost, I try to fix all bugs that show up. These manifest as *Script Errors*, which are sometimes annoying, sometimes fatal. The software currently does not support group projects. This is a high priority for me. The other data browsers also need to be integrated. GLODV is nearly ready and Rick Hou is modifying the Fishbanks game (with UCSB support) to work in an online environment. I also want to improve the user interface by moving the data browser navigation to a new module where it can be configured for different classes, and new modules can be seamlessly added.

In order to implement the 5 star forum post rating system, I will have to incorporate a database system for the records. Much of this was designed and tested last year. A database has the advantage that it is more robust when multiple users attempt to post to it. Also, data can be extracted more flexibly and efficiently. I have implemented the mySQL database with PHP to interface with it. The Macintosh comes with PHP and mySQL is easily downloaded. There are version of mySQL and PHP for windows and unix servers, so I see no problem with running this on other platforms.

The group projects module needs to be created. This is a significant project and will take at least a month. I hope to have this module completed before I teach a small oceanography course in Winter quarter, 2004.

### **A vision for the future (a complementary project I hope someone will develop):**

As I was beginning the database work on an image library and homework problem library, which is nearly finished, I realized that an assignments library that is co-created and shared among a large number of oceanography teachers would be a wonderful resource. The database technology could allow this. The library would be accessed every time a student does an assignment. Problems would be delivered directly from the library. The advantage to this is that the creation of assignments and various kinds of problems and activities is intimately connected to the library itself. The library is built each time a professor builds new assignments for a course. When a professor builds a new course, he/she has access to all of the assignments that have been used in other courses. A major problem in library building is solved by this approach, as the library is built as it is used. Current library building frameworks involve special effort by educators and developers to catalog resources.

I recently had a conversation with Mary Marlino, Technology Director of DLESE at UCAR in Boulder. She agrees with me that this is an ideal NSDL project and offers her cooperation and advice. NSDL is an NSF program with a focus on building digital libraries. I hope that one of the workshop members will find this project interesting enough to take the lead in developing it. The library access interface could be EarthEd or other systems as well, but I hope that EarthEd would be a very high priority. I will serve in whatever support capacity seems best for the project, but I don't have the time to take the lead. The New Media Studio could also play a role in the programming, or an in-house programming staff could be used.

If you are interested in this, let's talk.

