INSTRUCTION

YOU TOO CAN BE AN OCEAN TEACHER

Barbara Butler
Oregon Institute of Marine Biology
PO Box 5389
Charleston, OR 97420 USA

Abstract:
Three years ago IODE (part of IOC) began to develop a collection of instructional videos called OceanTeacher and, as of this writing, there are 425 items in this Vimeo-based resource (http://vimeo.com/iode). An MOU between the IAMSLIC and IOC has been signed, and IAMSLIC members have been appointed to a joint IAMSLIC-IODE Group of Experts on Marine Information Management (IAMSLIC/IODE GE-MIM). IAMSLIC members have also been encouraged to contribute their expertise to the OceanTeacher video collection. This paper describes the creation of the first collaborative IODE/IAMSLIC instructional video (and supporting instructional document) and chronicles how the resource was promoted and vetted by a GE-MIM member.

Keywords: IAMSLIC (International Association of Aquatic and Marine Science Libraries and Information Centers); OceanTeacher; Intergovernmental Oceanographic Commission (IOC); International Oceanographic Data and Information Exchange (IODE); Ocean Data and Information Network (ODIN); Group of Experts on Marine Information Management (GE-MIM); Screencast-O-Matic; Google Earth; GeoCommons.

A Primer On IODE and IAMSLIC
For those who may not know, the Intergovernmental Oceanographic Commission (IOC) has provided travel support to individuals associated with their Ocean Data and Information Network (ODIN) groups to allow them to attend and present at International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) conferences. They routinely pay IAMSLIC membership dues for a significant number of ODIN participants as well. This provides ODIN members with both voting rights as well as access to the IAMSLIC Resource Sharing program and Z39.50 Distributed Library. A Memorandum of Understanding (MOU) between the IOC and IAMSLIC in 2011 (http://www.iamslic.org/wp-content/uploads/2010/07/IAMSLIC-MoU-IOC-2011.pdf) established the International Oceanographic Data and Information Exchange (IODE) of the IOC as the host of Aquatic Commons, IAMSLIC’s thematic digital repository (http://aquaticcommons.org/). A further proposal to create a joint IAMSLIC/IODE Group of Experts on Marine Information Management (IAMSLIC/IODE GE-MIM) was ratified in 2013 and committee members have been appointed (http://www.iamslic.org/wp-content/uploads/2010/07/proposal-joint-iamslic-iode-gemim.pdf) and (http://www.iamslic.org/wp-content/uploads/2012/11/IODE_proposal__recommendations_Final-Version12.doc).

How does this impact the average IAMSLIC member? You might assume that calls to participate in the joint IAMSLIC/IODE GE-MIM and OceanTeacher are geared towards individuals from larger libraries specializing in some facet of librarianship, not one-person librarians at remote branch libraries like me.
Not so! Read this recommendation from the proposal mentioned above and you will see how each of us has the background to contribute to the OceanTeacher education resource:

*Develop activities and information products to improve the capability of the marine information management community, particularly within developing countries, to benefit from and participate in marine information systems and keep the marine information management community informed on how they might best have access to such systems through the application of new technology.*

**Visualizing Data – The Background**

My student assistant and I created a geo-referenced bibliography of the Coos Bay area (Oregon, USA). We used Google Earth to geo-reference citations and GeoCommons to display layers of information (Figure 1) (Butler & Schmitt 2012). I shared this project at the 2012 Cyamus meeting, and we also published our detailed process in *Issues in Science and Technology Librarianship* (ISTL) (Schmitt & Butler 2012).

![Figure 1.](image)

GE-MIM member Pauline Simpson read our ISTL article and emailed the following suggestion (P. Simpson, personal communication, February 17, 2012):

*I made a recommendation to the recent GE-MIM Meeting that the methodology outlined in your paper should be the basis of a small online training module (perhaps the first joint IODE-IAMSLIC Training Module). The work might then also be the basis of a presentation for the IAMSLIC Florida meeting 'Visualizing our Bright Future' .... Visualization is one of the primary methods of presenting data and information - I do hope you will demonstrate and share this knowledge with the IAMSLIC and IODE community. Within IODE/MIM we see it as an important way of contributing to coastal marine atlases.*

I needed some convincing. As a solo-librarian I am a jack-of-all trades but not an expert at anything. I was simply looking for a way to geo-reference a bibliography without needing to host a GIS (Geographic
Information System) software. It turns out that was exactly what Pauline wanted, so I agreed to create an instructional video for the OceanTeacher collection with the following goals:

- Touch on geo-referencing in general, not just bibliographies
- Create an IODE-IAMSLIC training module
- Produce step-by-step instructions
- Show viewers a way to contribute to coastal atlases
- Empower others to geo-reference without having to host a GIS system

The idea of demonstrating such detailed processes via WebEx was daunting. There are a lot of steps, so I felt the audience would need to see the file manipulation in real time. The information on the computer screen would be more meaningful than an image of the speaker. After some discussion, IODE agreed I could create the video using screencast software.

Using a screencast software like Screencast-O-Matic, Camtasia, or Captivate provides a more professional-looking video, as well as an editing suite, than free software programs such as Jing. If you need advice on creating a screencast video there are a myriad of resource on the web. Ho, 2013 is particularly helpful and most offer the following advice:

- Create videos that are 2-minutes or less so they are quick to load and snappy
- Create an “itinerary” or storyboard
- Write a script
- Record the script and don’t try to do “live”
- Record the video and edit
- Include the ability to navigate (skip forward)
- Use a quality microphone (I purchased the Blue Yeti USB microphone--$100)
- Use a “producer” model rather than a “live demo”

We settled on Screencast-O-Matic (http://www.screencast-o-matic.com/), which is compatible with the Vimeo hosting system used by IODE. There is a free version of this software, but I opted to purchase the professional version because I knew I would need to be able to edit the video. This is a very affordable subscription of $15.00 USD per year, and while I didn’t use all of these options the advantages of the professional version (listed on the website) are:

- No watermark when publishing
- Recording time limited only by local disk space
- Hosted in High Definition and supports playback on most mobile devices
- Publish to Google Drive, Vimeo, Box, and Dropbox
- Publish Screen Shots
- Editing tools
- Scripts tool
- Screen Shot tool
- Record system audio on Win Vista/7/8
- Webcam Only Recording
- Draw & Zoom while recording

There are a number of steps involved in creating a geo-referenced bibliography: create a folder in Google Earth, export a KML file, convert to a CSV (comma separated value) spreadsheet, upload into GeoCommons, and geo-locate the data. The instructional video provides details on the overall process
and documents each step, but I felt that a written document should be created to supplement the video. I documented all of the steps and posted this document to my institutional repository (http://hdl.handle.net/1794/12859). I also included all of the captions, URLs and citations used in the instructional video so viewers would need not take notes while watching.

I estimated the final video would end up being 35-40 minutes long. Personally, my interest in an instructional video can wane quite quickly. I opted to give viewers some tips for navigating through the video so they could jump to a section of interest, particularly if they chose to view a section of the video a second time. Some of the more expensive screen-cast software (e.g. FlixMaster) may allow you to hyperlink to anchors within the video, but this was not available with Screencast-O-Matic. The workaround in this case was to include a navigation screen (timeline) in the video and instructional document (Figure 2).

- **Navigating through this video:**
  - The presentation is divided into several sections so you can skip forward or repeat sections of interest. You could even pause and work along with the screen cast to create your own geo-referenced bibliography.
  - Overview of what we will cover (approximate time into the video):
    - Background: why geo-referenced bibliographies (1:52)
    - Software required (3:50)
    - Geo-locating citations with Google Earth (4:44)
    - Exporting data from Google Earth (18:58)
    - Importing data into GeoCommons (22:38)
    - Keeping your bibliography current—replacing an existing dataset layer (29:37)
    - Additional information and resources (32:48)

![Figure 2.](image)

Unfortunately, many of the best-practices recommendations didn’t work for me. The 2-minute or less video was not an option for this video because of the complexity of the operations involved. I initially created scripts (Figure 3). However, it was very hard to estimate how long each step in the process would take, so it was hard to match the script to the actions on the screen. Ultimately, I practiced the moves on the screen, practiced reading my script and then recorded the two simultaneously.

![Figure 3.](image)

I work in a one-person library so am interrupted quite frequently. I finally resorted to recording small sub-sets of the video and then piecing them all together. Anyone attempting to do this should plan on doing all the recordings at in the same room and ideally at the same time. Sound can be very different
from one computer to the next. Also decide on a frame size and use that for recording all of your segments. File size was not an issue for this 35-minute video which ended up being less than 10 megabytes in size (files sizes of 300 to 400 mb per hour are allowable on Vimeo). I recorded at a slightly lower resolution and it looked fine on the screen during editing, but the resolution was not ideal in the final product. Based on that I would advise you to record in high definition if you are doing a similar project. Don’t underestimate the amount of time it takes to edit the video—post production takes as much time as recording the video. If you decide to contribute to the OceanTeacher collection you may want to review the guidelines from Vimeo, the site used to host this collection:

- Video compression basics (http://vimeo.com/videoschool/lesson/259/video-compression-basics)
- Video compression guidelines (http://vimeo.com/help/compression)
- Vimeo Video School (http://vimeo.com/videoschool)
- Help Center (http://vimeo.com/help)
- Vimeo FAQ (http://vimeo.com/help/faq)

Help From GE-MIM:
Pauline reviewed my video, read my instructional handout and created her own geo-referenced resource in GeoCommons, the “Lionfish in Cayman Bibliography” (http://geocommons.com/maps/290926). She asked me questions along the way and suggested where the instructional handout needed more step-by-step detail. As a result, I have a much more thorough and usable handout. If you opt to add to the OceanTeacher collection know that the folks from the Joint GE-MIM will be there to help you with the process.

The Final Product:
I made use of still shots and in some cases used PowerPoint to craft slides for the video. Those were interspersed with live action to create the final product. I kept things simple and used the same fade-to-color background transition between segments. There were many more editing options available to me, but I found I was able to craft the video with just some very basic edits. The opening screen (Figure 4) is branded with the IODE and IAMSLIC logos. It also contains my picture so, hopefully, I don’t appear as a disembodied voice (http://vimeo.com/74282844).
**You Too Can Be an Ocean Teacher**

Think of the presentations or lectures you have already polished for your own patrons. Maybe one of those could be added to OceanTeacher? In my case a screencast video was the right answer, but your contribution could be in the form of a WebEx or other recording. My institution expects that I contribute to the profession and this project allowed me to do that. It took me some time to learn the details of the screencast software, but that was time well spent. I will be using screencast videos to demonstrate a number of library processes to supplement my library instruction sessions. This was definitely a win-win situation and I’m proud to say that Pauline has already used my video as a training tool in the ODINAFRICA Marine Information Management Workshop, 7-11 October 2013 in Mombasa, Kenya. If I can do it, so can you—please consider how you too can be an OceanTeacher.

**References**

