

Part 3: “Informal Education”

“Free Choice Education”

- OSU/Oregon Sea Grant have started a program to train educators in techniques of Informal Education.
- Research by professors and grad students in this program involves design and evaluation of technological methods of delivering scientific information and products to the non-scientific public, resource managers, etc.
- The public wing of the Hatfield Marine Science Center serves as a “laboratory” for this research, using evaluations of visitor interactions with display technology as the experimental data.
- A proposal has been submitted to the NOAA “Environmental Literacy” RFP to fund this research, with statements of support from CIOSS, CoastWatch (Monterey), NOAA/OAR/PFEL, and GLOBEC.

“Informal Education”

“Free Choice Education”

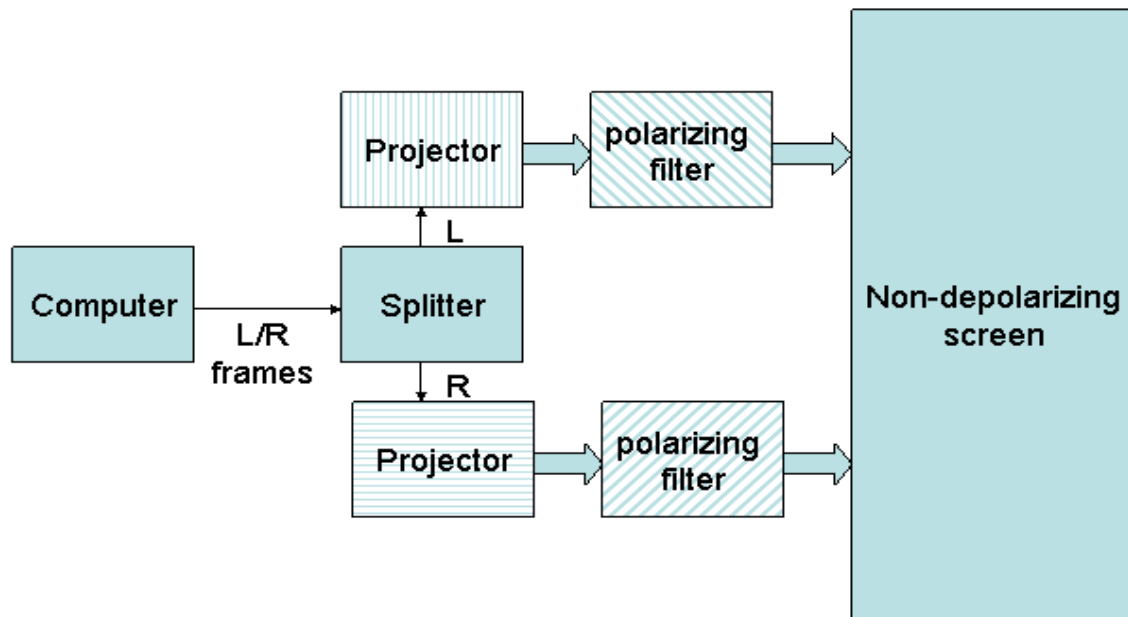
- One type of technology under consideration are 3-D projection systems, such as the “Geowall” technology, using VIS5-D and other software.
- An initial demonstration of this technology will occur during this year’s “Sea Fest”, an annual event at HMSC in June.
- Chris Moore and Al Hermann (PMEL) will take their system to HMSC, spend a day with HMSC staff discussing different possibilities for public and interactive displays, set up and demo the system during the event on Saturday.

4th Annual SeaFest



3-D Projection to external screens or to special monitors for PC's

Figure 1. Schematic of passive, dual-projector stereo display system. Components include host computer (commodity PC or workstation), splitter/converter, DLP projectors, polarizing filters, and polarization-preserving projection screen. Passive polarized glasses are worn by the viewer, to deliver the proper image to each eye. Thick arrows denote light path.



External Screen – Office Setup (Al Hermann, PMEL)

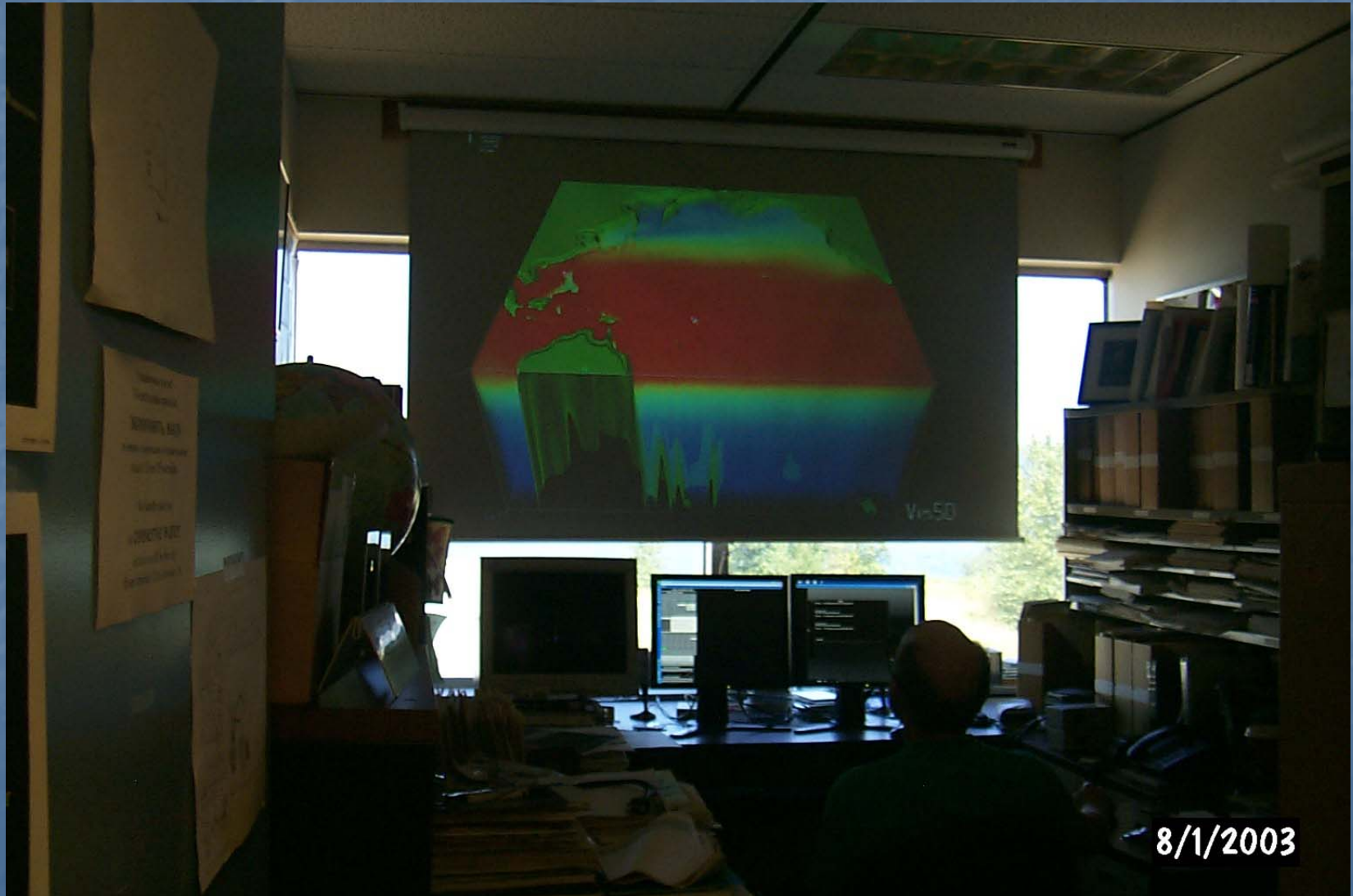


Install the projectors and Linux host at the rear of the office:



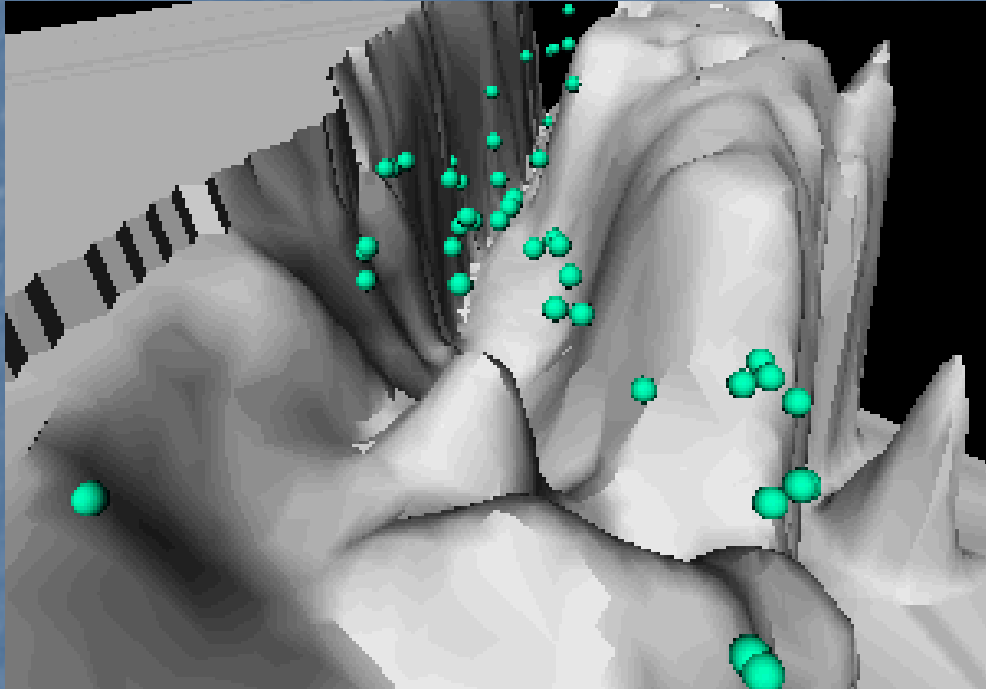
External Screen – Office Setup (Al Hermann, PMEL)

Install a pull-down screen (the polarization-preserving type) in front of the window. Turn off the lights, fire up the projectors, and viola! The office is now a virtual theater.....



Applications

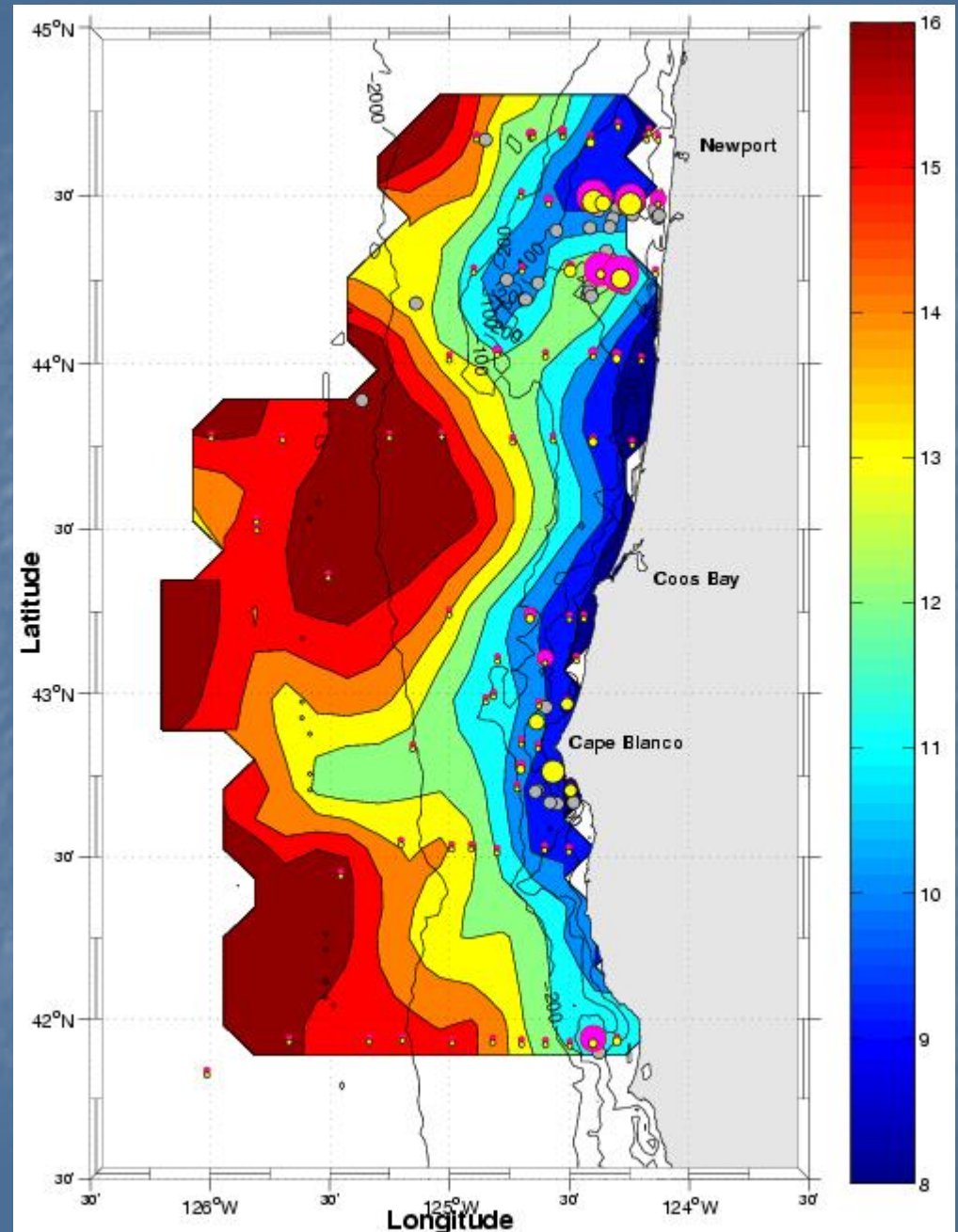
Watch the movement of Lagrangian model particles from different fixed viewpoints.



Fly through or simply view 3-D “snap-shots” of actual mesoscale survey data.

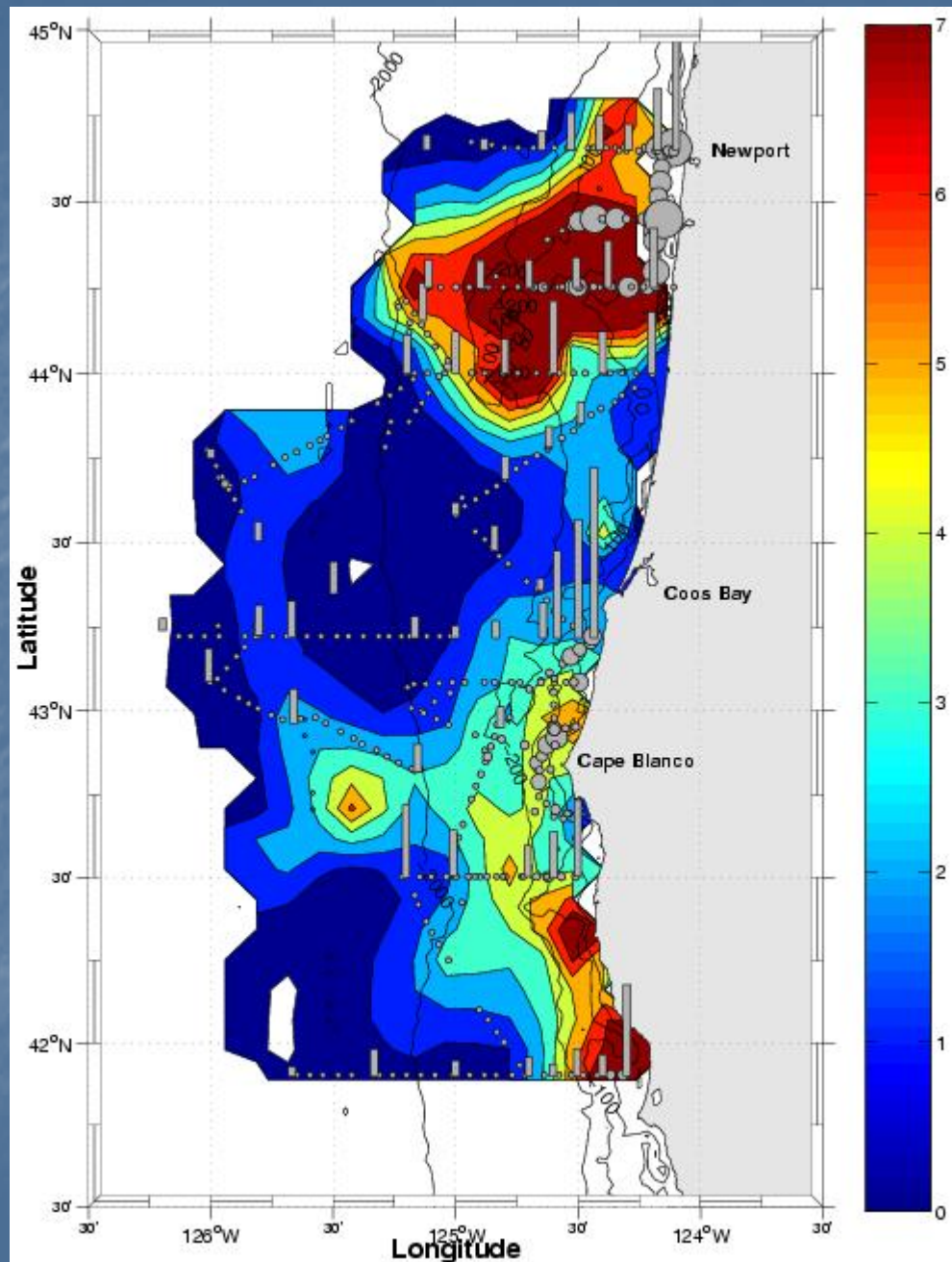
Several programs (GLOBEC, COAST, NOPP) have produced 3-D surveys off Oregon’s coast. GLOBEC fields include T, Sal, phytoplankton, zooplankton, fish, marine mammals and birds, all collocated, i.e., snapshots of the entire ecosystem at all trophic levels. We hope to be able to demonstrate to the public the richness of the ocean underneath the surface they see, including “hot-spots” created by topographic features (Heceta Bank, Cape Blanco).

August 2000: SST (color contours), juvenile chinook (Yellow circles), juvenile coho (magenta circles), humpback whale sightings (grey dots); largest circles for chinook and coho represent ca. 10 fish per standard trawl; smallest circles represent trawls (offshore) in which juvenile salmon were not caught



From Batchelder et al. (2002)

August 2000: Chlorophyll concentration at 5-m depth (color contours, mg/m³), biomass of pelagic birds (grey circles; largest circles ca. 170 kg/km²); and biomass of copepods (vertical bars; mg/m³)



From Batchelder et al. (2002)