Appendix to Viz Class 1

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Software

With all of the following software packages, I recommend taking the online tutorials and reading the help documentation.

3D Scene and Movie Creation

- **Fledermaus**
  Great software for creating and exploring surface, profile and point data in 3D. Easy to import any standard topography grids, plain xyz data, slices, lines, imagery, etc... Also has capabilities for time-varying surfaces. 3D scenes can be output as movie files or can be shared with others using the freeware viewer iView3D, available at `ivs3d.com`. Available on IGPP Viz computers and OS X Macs.

- **Matlab**
  Not so good for large data sets but it does includes tools for volume visualization (slices, isosurfaces, etc...). Capable of creating movie files (.avi format) when using Windows or Unix computers.

Static Image Editing

- **Adobe Illustrator, Macromedia Freehand**
  Useful for cerating and editing vector based graphics (ie. lines, shapes, text) that don't lose resolution when resizing a figure. Allows for embedded bitmap graphics (jps, tiffs) in figures. Allows for export to either vector file formats (pdf, eps, ps) or bitmap formats (jpg,tiff, etc).

- **Adobe Photoshop, GIMP**
  Useful for photo and bitmap graphics editing and for adding compression to images to reduce their file size. All graphics are in bitmap format, so resizing images can result in a loss of resolution.

Animations

- **Macromedia Flash**
  Vector graphics based program for creating animations, web pages and dynamic presentations.

Movie Editing

These movie editing programs are useful for splicing movie clips together and adding titles and soundtracks.

- **Apple iMovie**
  Simple movie editing program included with OS X.

- **Adobe Premiere**

Presentation

- **Powerpoint**

- **Keynote**
  Available for Mac OS X. Similar to Powerpoint, yet much better in my opinion. Uses vector based graphics so pdf and ps graphics look cleaner than in powerpoint. Flash animations can also be imbedded into Keynote.

Web Site

- **Macromedia Dreamweaver, Adobe GoLive**
  These are good for easily creating web sites with lots of graphics, buttons, tables, etc... Do the tutorials, then use their templates to make your own content.

Online Topography Data Bases

- **Smith and Sandwell**
  Global 2 arc-minute topography, except for N and S poles.
  `http://topex.ucsd.edu/marine_topo/mar_topo.html`
  Global measured and estimated seafloor topography with land topography from GTOPO30.

- **ETOPO2**
  Global raw 2 arc-minute grids. Topography goes all the way to poles.
  `http://www.ngdc.noaa.gov/mgg/global/relief/ETOPO2/`
  The seafloor data between latitudes 64 North and 72 South are from the work of Smith and Sandwell (1997). Land topography is from the GLOBE Project.

- **NGDC Coastal Relief Model**
  3 arc-second grids of coast US!
  `http://www.ngdc.noaa.gov/mgg/coastal/coastal.html`
  This Coastal Relief Gridded database provides the first comprehensive view of the US Coastal Zone.

- **NGDC General data**
  `http://www.ngdc.noaa.gov/mgg/bathymetry/relief.html`
  World coastline vector data sets, Great Lakes bathymetry, topography by state, multibeam, etc...