

# SEAN ASKAY

458 11<sup>th</sup> Avenue San Francisco, CA 94118 :: (805) 258-2940 :: kilnight@gmail.com

## Education

Candidate for Masters of Environmental Science, 3.8 GPA. University of California, Riverside.  
*expected graduation: Fall 2006*

Bachelors of Arts *with honors*, Integrative Biology, 2001, 3.76 GPA. University of California, Berkeley.

## Employment

**Graduate Student Researcher** *Center for Embedded Network Sensing / James Reserve* Sept 2003 – present

- Developed a Google Earth interface for our wireless sensor networks using KML/PHP/MySQL:
  - Provides efficient, centralized monitoring of previously disjointed systems and a unified data visualization portal for 28 webcams, and over 400 sensors at 50+ locations.
  - Access to GIS layers, interactive plant community maps, high resolution aerial photography.
  - Pioneered open-source alternatives to GE Pro's limited Movie Maker add-in: Used to create highly-acclaimed video showcases of CENS' worldwide sensor network deployments.
  - Built my own Object Oriented PHP class for efficient KML generation and validation.
  - KML 2.0 or 2.1 compatible; Sketchup models for representing sensor systems; can deliver images, overlays and data “live” or as a “complete” KMZ file for off-line and reliable demo viewing.
- Currently creating a dynamic content management systems for the James Reserve using Drupal 4.7:
  - Provides access to sensor databases, image/audio multimedia, KML layers via embedded GMaps.
  - Empowers the entire staff to create web content, without prior knowledge of HTML.
  - Builds online community for James Reserve researchers, staff and web visitors.
- Built web-based visualization interfaces for graphing climate data and viewing image time series:
  - Used JpGraph and GD libraries and the EasyCharts Java applet to create powerful data graphing tools.
  - Allows users of the KML layer to jump directly into our data and image archives.
  - Allows side-by-side comparison of multiple sensors at multiple sites with synced webcam time series; used to investigate bird nesting and roosting behavior, and seasonal plant phenology phenomena.

**Programmer Analyst II** *University and Jepson Herbaria / U.C. Berkeley* July 2001 – present  
*\*part-time since June 2003*

- Effectively organized and orchestrated all aspects of a four-day conference for over 170 plant biologists; a great success, heralded by many participants as the smoothest-running conference they had ever attended.
- Built a prototype “Tree of Life” web interface (PEGASIS) using a hyperbolic tree applet; allows the visualization of phylogenetic relationships, ecological and botanical information, geographic species distributions and access to museum specimen holdings and online photo resources.
- Designed and maintained over a dozen research project, conference and grant proposal websites.
- Designed logos, scientific posters, and published a large undergraduate research book.

**Computer Resource Specialist II** *University of California, Berkeley* January – June, 2000

- Provided Win32/OS 9.1 software and hardware technical support for the College of Letters and Science.
- Developed a specialized bootable utilities CD for the repair and command line backup of Window systems.

**Residential Staff Training Intern** *University of California, Berkeley* Summer 2000

- Planned and oversaw a three-week training program for over 100 dormitory Residential Assistants.
- Created and published numerous training materials; revised and reorganized existing staff manuals.

**Mentor & Resident Advisor**                      *University of California, Berkeley*                      Summer 2000  
• Served as a live-in mentor for twenty disadvantaged high school students participating in the *Incentive Awards Pre-collegiate Academy*, working towards high school graduation and college acceptance.

**Computing Center Supervisor**                      *University of California, Berkeley*                      Sep 1999 – Aug. 2000  
• Managed twelve Computing Assistants and computer center serving over 1200 dormitory students.  
• Trained my staff on customer service, effective 1-on-1 and group communication, and software instruction.

**Residential Assistant**                      *University of California, Berkeley*                      Jan 1998 – May 1999  
• Mentored over 180 students, serving as an academic resource and promoting community development.  
• Conducted numerous activities including two camping trips for over two dozen inexperienced students.

### Technical Skills

- **web design/programming:** HTML/CSS/PHP/JpGraph/GD/SQL, Drupal 4.7, dynamic KML generation.
- **server & client administration:** Apache/IIS/MySQL/Window Server 2003/XServe/OpenSSH server/Unix shell.
- **screen capture/video encoding/sound editing:** Hmelyoff Labs DirectShow screen capture driver, VideoLAN, AVIsynth, VirtualDub, meGUI, QT, H.264, Goldwave, Audacity – focus on open-source solutions.
- **desktop applications:** Dreamweaver, PHP Designer, Photoshop, Google Earth Pro, Sketchup, StarOffice, MS Office.

### Personal notes

- Thyroid cancer survivor; Eagle Scout, Troop 128, Ventura, CA; Two-time All-American high school swimmer.
- Enjoys low-light photography & night cycling, Czech film & literature, quirky S.F. events on laughingsquid.com.
- **Side-projects for Google Earth:** I enjoy harvesting large publicly-available datasets for visualization. The following projects are available at my website (see URL below). The first two projects were posted on the Keyhole BBS.
  - *US/Coalition Casualties in Iraq & Afghanistan* – (43,000 downloads) mined web data sources to visualize over 2,500 allied war casualties; age-based, color-coded markers display first names of those lost at hometowns across the U.S., U.K. and Europe; balloon descriptions feature portraits from CNN's memorial site, in addition to details of their death and links to other memorial sites and obituary notices.
  - *30k Iraqi War casualties* – (14,000 downloads) mined web data sources to represent the estimated 30,000 Iraqi civilian and opposition force casualties Iraq; used vertical stacks of individual placemarks to represent each life lost; in order to accommodate several thousand points at each city, I used a Euclidean spiral algorithm to represent time: earlier events appear at the city-center, more recent events whirl outwards.
  - *Missing and Exploited Children's List* - (soon to publish) – visualizes over 1,500 missing child cases across the U.S. by using face portraits as placemarkers; wrote PHP scripts to harvest and parse 250+ webpages of search results; scripts also retrieved images for each child, and built a eight icon palettes to more efficiently handle the photos in Google Earth. Balloon descriptions include case information and links back to the source webpage.
  - *Next planned:* Visualizing the WWII relocation of Japanese-Americans to internment camps using spatially rich data sources from the U.S. National Archives. Plans to map routes from internees hometowns to destination camps, and balloon description highlighting data on careers, family/marital status, place of birth, etc.
  - *Improvements to Google Earth "Featured Content" layers:* developed an improved version of the Jane Goodall Institute's "Chimp Blogs" layer: replaced the problematic website-style menu in the balloon description with imitation gif HTML checkboxes; allows users to turn on/off included layers directly from the balloon description; employs an innovative use of KML 2.1 features (Update, BalloonStyle and NetworkLinkControl) to achieve a website-like navigation.

Please visit my website for examples of KML projects, Google Earth movies, graphic & website design and more:

[http://newdms.jamesreserve.edu/sean\\_askay](http://newdms.jamesreserve.edu/sean_askay)