Geography Awareness Week: What It’s All About

Have you consulted an orrery lately? Fifth graders at La Patera School recently had a chance to do just that, thanks to Professor Dan Montello’s Geography Awareness Week presentation on telling time, seasons, and latitude by the sun. Dan and a handful of other faculty, staff, and students recently ventured out into local schools to share their geo-enthusiasm and represent UCSB Geography.

Geography Awareness Week is an annual celebration in November to promote geographic literacy and education, organized by National Geographic Education Programs. Established by Presidential proclamation almost 25 years ago, GAWeek is centered around events, policy advocacy, communication, volunteerism, and activities for students, families, and community members. This year’s theme, “Declare your interdependence,” encouraged participants to consider how their daily decisions connect them to the rest of the world.

This year UCSB saw a record turnout of volunteers, much to the delight of the department’s Visibility and Outreach Committee, which spearheads the recruiting effort each year. A total of 23 faculty, staff, undergraduates, and graduate students gave presentations to classes from kindergarten through high school. Eleven schools in Goleta and Santa Barbara participated, many for the second or third year in a row.

“This reason the Department of Geography at UC Santa Barbara is able to deliver on its promise to students is because of the support of alumni and friends like you, which is why I encourage you to consider making an investment in the Department. These gifts enable us to recognize our best students and support their educational and research expenses. You, as alumni and friends of the Department, have a lot to be proud of. We, in turn, are grateful for your continued involvement with our educational mission.”

Dar Roberts, Chair

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This is the UCSB Department of Geography's electronic Newsletter. To subscribe (or unsubscribe) or to offer comments, corrections, or catcalls, please contact the editor, Bill Norrington, at billn@geog.ucsb.edu. For more Geography News, visit our web site at http://www.geog.ucsb.edu/events/department-news/

GAWeek continued on p. 2
“I am so impressed each year with your outreach program. The presenters have been very knowledgeable, friendly and great with kids.” wrote Laura Buratto, a fifth grade teacher at La Patera School. Other gratifying feedback arrived via creatively illustrated thank-you cards to the presenters. “Now I love geography,” wrote one Mountain View Elementary third grader.

Presentations discussed a range of topics with examples including world population migrations, transportation and development in the US, reading maps, touring the US through satellite images, and mapping coral reefs with kite aerial photography. The variety of classes receiving presentations was just as broad, ranging from fourth grade classes studying California geography to high school special education classes in world studies. A few presenters pulled double (or even triple) duty, including the intrepid Professor Stuart Sweeney. His presentation, titled “Why did surfing originate in Hawaii? The settlement of Polynesia and cultural adaptation to the Pacific,” reached three world history classes at Dos Pueblos High School.

Ann Tan, a grad student who visited second graders at Washington Elementary, had this to say about presenting: “GAW[ek] is an amazing opportunity to share something I’m really excited about, soils, with kids who otherwise wouldn’t learn about it until much later on. This is the second year I’ve volunteered, and it has been a really rewarding experience.”

Adam Araza, an undergrad, said that his favorite part of volunteering was dealing with the wide array of questions that the kids had about how geography is involved in everyday life. He remarked that “to see such enthusiasm and general interest in the topic was refreshing.” Matt Conway, an undergrad who presented jointly with grad student Bonnie Bounds, offered this insight: “I enjoyed sharing geography with a group of enthusiastic students, and I enjoyed meeting and working with other students in the Department of Geography.”

“Not only did we talk about geography, we also talked about college,” said grad student Heather Frazier. “A lot of the fourth grade students I spoke to were really excited to find out that you get to choose your own classes in college. It sparked a big discussion about college, grad school, and lifelong learning. That was my favorite part of my presentation this year.”

Grad student Song Gao presented to Mountain View School first graders about local geography. “It was really awesome having the opportunity to introduce Santa Barbara geography and share the value of geography with the students and teach them spatial thinking with a maze game,” wrote Song about his experience (see accompanying photo). “What gave me a big surprise is that the kids in the first grade even know GPS and how to use a compass to recognize the directions. I would like to contribute again to the great Geography Awareness Week.”

When grad student Helen Chen asked seventh graders to draw maps of their routes to school, she was impressed by their creativity. “It was a great experience to teach the seventh grade students in La Cumbre Junior High School. Students are smart and eager to learn how to read different types of maps,” she recalled.

Professor Jennifer King and grad student Kevin Mwenda presented to separate classes at Washington Elementary. “I think we were both left speechless by the energy and enthusiasm of fourth graders” reported Jennifer. “It was more challenging than I expected to keep the attention of 33 fourth-grade students, but it worked out pretty well in the end.”

Jennifer’s presentation provoked one especially memorable reaction. “Decomposition is cool!” pronounced one student, speaking about organic material. Chalk one up to another successful Geography Awareness Week.

Article contributed by members of the Visibility and Outreach Committee.
In Memoriam: Einar Hovind, The Viking

In 1985, Professor Rick Church, the UCSB Chair of the Department of Geography, hired Einar Hovind (07/17/1926 - 12/09/2012) to teach Climatology (Geography 166). Professor Church attended Einar’s memorial service on December 29, 2012, and it is fitting that Einar be remembered in our departmental archives.

Who was Einar (the Viking) Hovind? Here are a few extracts from a touching biosketch provided by his son, Tor Hovind, an Art Department Professor and head of the Graphic Art Design Program at California State University, Long Beach:

“My dad was a hero, the ‘real deal’… Here is a man who lived through WWII in Norway under the German occupation… German officers lived downstairs and family lived upstairs at his grandfather’s farm in Elverum, Norway. After the war, dad served in the Norwegian Air Force (under the meteorology wing)… His meteorology interest led him to the United States to study… So, he crossed the Atlantic on the S.S. Stavangerfjord ocean liner from Oslo to New York to pursue the American Dream… in which he flourished… My dad truly understood the meaning freedom and what it meant… With little money...he made his way by train and bus through New York, Chicago, small towns in Minnesota, and to Los Angeles…

Einar received his graduate degree from UCLA in meteorology and skied on their ski team… Ski jumping, downhill, giant slalom, slalom… the events that take ‘big brass ones’ to participate in… No ‘posers’ in this club… He skied Mammoth when it was only a rope tow and a snow cat…would cross country ski to the top of Cornice via the backside and ski down…wooden skies and bear trap bindings and knew Dave McCoy personally. Very different than the bump skis I have… He even went downhill skiing with his grand kids a couple of years ago and went on a 10-mile cross-country ski run at 7000-foot elevation this last spring. In his mid 80’s, he still was a strong Viking.

Upon graduation, he moved to Santa Barbara with my mom and eventually became the Vice President of North American Weather Consultants (NAWC)... The firm studied the Sierra Wave, forecasted for the Transpac Race, conducted EPA weather studies, and ran cloud seeding projects in Greece and throughout the United States. They even had a station on Ronald Reagan’s ranch in Santa Barbara… Einar loved the sciences (weather especially) and was also certified by the American Meteorological Society... If you asked him about how the weather…he would pontificate about cutoff lows, inversion layers, cumulonimbus clouds, and other meteorological principles… I would just go outside and look up to make my own forecast…

There are men on this earth and then there are heroes on this earth. My dad (the Viking) was one of them…”

“Einar Lauritz Hovind - loving husband; generous father, grandfather, and great-grandfather; venerable weatherman; amiable Norwegian; man of faith; and awesome skier - died peacefully on December 9, 2012 surrounded by his family at Serenity House” (source: Obituary, Santa Barbara Independent, January 2, 2013).
Dar Roberts Awarded Outstanding Contributions Award in Remote Sensing

Professor Dar Roberts has just been awarded the Outstanding Contributions Award in Remote Sensing for 2013. “Sponsored by the Remote Sensing Specialty Group (RSSG) of the Association of American Geographers (AAG) since 1992, the award seeks to recognize individuals who have made outstanding contributions to the field of remote sensing and to the geographic community through their remote sensing research, teaching, and/or outreach” (award notification letter to Dar from Jane M. Read, Chair, RSSG Awards Committee, 15 February, 2013).

The RSSG is a diverse, international blend of professionals from academia, industry, and government, as well as students, whose mission is “to foster an understanding of remote sensing science. Emphasis is placed on developing a meaningful dialogue among geographers interested in understanding and applying remote sensing technology in research, instruction, public service, and private enterprise.”

Past UCSB Geography winners of this prestigious award include David Simonett (1992) and Jack Estes (1994). The award will be presented during the RSSG Business meeting at the upcoming AAG Annual Meeting in Los Angeles (April 9-13). Professor Keith Clarke will accept the award on Dr. Roberts’ behalf because Dar had previously committed to teaching a two day short course for the Brazilian Remote Sensing Conference in Foz do Iguassu in April, something he does every two years.

Clarke Chairs NRC Committee Responsible for NGA Report on Geospatial Intelligence

Professor Keith Clarke chaired the National Research Council’s “Committee on the Future U.S. Workforce for Geospatial Intelligence” which produced a report for the NGA, titled “Future U.S. Workforce for Geospatial Intelligence” and published by The National Academies Press on January 31, 2013. The committee was charged with the task of examining “the need for geospatial intelligence expertise in the United States compared with the production of experts in the relevant disciplines, and discuss possible ways to ensure adequate availability of the needed expertise.

The bottom line is that, despite its need for highly specialized knowledge and skills, NGA has the comparative luxury of being a small employer in the burgeoning geospatial enterprise. NGA is probably finding sufficient experts in all core areas, with the possible exception of GIS and remote sensing. However, shortages in photogrammetry, cartography, and geodesy are likely in the short term, followed by possible shortages in emerging areas in the longer term. While these shortages are of concern to NGA, many mechanisms are available to build the knowledge and skills that NGA will require, such as strengthening existing training programs, building core and emerging areas, and enhancing recruiting. With attention to these areas, NGA has the ability both to meet its workforce needs and to be adaptive to a changing mission during the next 20 years, and potentially well beyond.

Faculty Kudos continued on p. 5
The following is a Press Release from the U.S. Department of the Interior, dated 02/04/2013:

Secretary of the Interior Ken Salazar has appointed 13 professionals to serve as members of the National Geospatial Advisory Committee (NGAC), which provides recommendations on federal geospatial policy and management issues and advice on development of the National Spatial Data Infrastructure (NSDI). The NSDI promotes sharing of geospatial data throughout all levels of government, the private and non-profit sectors, and the academic community.

“We are pleased to welcome this distinguished set of new members to the National Geospatial Advisory Committee,” said Anne Castle, Assistant Secretary of the Interior for Water and Science, who serves as Chair of the FGDC. “The NGAC’s inclusion of a broad range of perspectives, governmental, tribal, private sector, and academic, enables it to provide valuable advice to federal agencies on the most pressing geospatial issues, and helps us make better progress toward our goal of seamless integration and accessibility of geospatial data.”

Secretary Salazar also appointed Dr. Robert Austin, Enterprise Applications Integration Manager for the City of Tampa, Florida, to serve as the Chair of the NGAC. The NGAC includes up to 30 members, selected to generally achieve a balanced representation of the varied interests associated with geospatial programs and technology. NGAC members are appointed to serve staggered terms on the committee. The new appointees to three-year terms on the NGAC are:

- Dr. Robert F. Austin, City of Tampa, FL, Chair (reappointed to a second term)
- Mr. Talbot J. Brooks, Delta State University, MS
- Dr. Keith Clarke, University of California, Santa Barbara
- Mr. Steve Coast, Microsoft Corporation
- Mr. David DiSera, EMA, Inc. (reappointed to a second term)
- Mr. Matthew Gentile, Deloitte Financial Advisory Services, LLP
- Mr. Frank Harjo, Muscogee (Creek) Nation
- Mr. Michael Jones, Google, Inc.
- Mr. Jack H. Maguire, County of Lexington, SC
- Dr. Carolyn J. Merry, The Ohio State University
- Mr. Roger Mitchell, MDA Information Systems, Inc.
- Dr. Michele Motsko, U.S. National Geospatial-Intelligence Agency
- Dr. Douglas Richardson, Association of American Geographers

The members of the NGAC report to the chair of the Federal Geographic Data Committee (FGDC), which is the Federal interagency executive group responsible for providing leadership and direction in Federal geospatial programs. The NGAC meets three to four times per year. The public is invited to comment and make suggestions at all committee meetings, which will be announced by publication in the Federal Register at least 15 days before the meeting date. The U.S. Geological Survey, a bureau of the Department of the Interior, provides support services for the NGAC. The NGAC functions solely as an advisory body.

The NGAC was created under the Federal Advisory Committee Act, enacted by Congress in 1972 to ensure that advice rendered to the executive branch by advisory committees, task forces, boards, and commissions formed by Congress and the President, be both objective and accessible to the public. The Act formalized a process for establishing, operating, overseeing, and terminating these advisory bodies.
The Interactive Campus Map, which has been in the works since 2008, has multiple layers users can select to browse various food establishments, different levels of wireless signal strength across campus, metered parking spots, and parking lot locations, in addition to other campus features. On the day of its debut, the site received 1,200 visits.

Development of the map began in February 2008 under the leadership of Dylan Parenti – the current information technology manager for the Geography Dept. – but the project has seen input and leadership from various faculty members, graduate students, and undergraduate students. According to Parenti, the team that developed the map is currently working on a feature that will allow students to type in a professor’s name or course number to display the exact location of the classroom for a particular course.

Additionally, the map has a number of eco-friendly aspects to it, including a feature that illustrates the locations of all recycling bins, techno-trash cans, and hydration station locations. The map also highlights trails for self-guided tours, such as tours of the campus flora that were constructed by using data provided by the Cheadle Center for Biological and Ecological Restoration. In addition, the map also has historical features, according to Bryan Karaffa, who is project manager for the map.

“The made these tours out of it so you can go around campus and take an ethno-botanical tour. They have a little description about the plants,” Karaffa said. “There are also aerial images of Isla Vista dating back to 1925, so users can see how exactly the area has developed over the years.”

Geography Dept. Sustainability Coordinator Katie Maynard said the interactive map allows the sustainability program to help reduce the campus’s overall environmental impact. “Through the interactive campus map, we have the opportunity to highlight buildings that were designed to save energy and water, and we have an opportunity to talk about energy efficiency efforts on campus,” Maynard said. “Now you can even click on a building to see the energy that building is using.”

Maynard also said the sustainability office is launching a green building layer that will give more detailed information about eco-friendly innovations on campus. “We have 29 green buildings on the campus and 43 certifications,” Maynard said. “With each of these buildings, you’ll be able to click on one of the buildings and you’ll be able to see a photograph of the building and information that will talk about what that building did to become more sustainable.”

Executive Vice Chancellor Gene Lucas, has given the department permission to place links to the Interactive Campus Map next to the main campus map on the official UCSB website, making it one of the primary portrayals of the campus. The map will soon have a cell phone-accessible application that will allow for better digital quality and greater accessibility to users, Maynard said.

One feature that makes the map stand out from similar sites at other universities is the fact that it is not privately owned and was completely developed by members of the university, Karaffa said. “Ours is completely a product of the Gauchos, and I’m really proud of that,” said Karaffa. “It’s a showcase of the students’ work.”
The UCSB Department of Geography held its graduate student recruitment open house on March 1-2, 2013 and had a record turnout. Fourteen of the 24 new grads recommended for admission were able to attend, including two international students. The Graduate Division helped by allotting us $2,500, used primarily to offset attendee’s travel expenses, and Geography faculty chipped in to finance a barbecue for prospective students.

Friday, March 1 was devoted to a departmental tour, Geography grad student presentations (by Lumari Pardo, Grant McKenzie, and Forest Cannon), a campus tour (led by grad students Yingjie Hu and Song Gao), lunch at the UCen, open door meetings with faculty, and happy hour at the Mercury Lounge in Goleta. On Saturday, prospective grads had the option of a morning hike to Inspiration Point in the Rattlesnake Canyon Wilderness Area (led by grads Ann Tan and Forest Cannon) or a tour of downtown Santa Barbara, led by grads Marcia Zilli and Bonnie Bounds, and the afternoon was devoted to a barbecue held at West Campus Faculty Housing.

In terms of demographics, 5 of the 24 applicants offered admission are international (1 from South Korea and 4 from P.R. China), 12 are male and 12 female, and 2 have been admitted to the MA program, 15 to the MA/PhD program, and 7 to the PhD program. The acceptance rate by Geography recruits is normally about 65%, which is considered relatively high compared to other departments.

Our high rate of acceptance reflects the academic quality of our Geography program in general, but recruitment open house serves to give prospective grads a glimpse of the social side of our close-knit Department as well. Saturday’s barbecue was a major hit. It took place at Faculty Housing (West Campus), and was hosted by Professor David Lopez-Carr; Professor Dan Montello was the master chef, and he also collected donations from the faculty to buy the tri-tip, charcoal, and other supplies, as well as to pay for prospective student lunches on Friday. The prospective students were hosted by current grad students during their stay here. Acting as hosts were: Danqing Xiao, Marcia Zilli, Grant McKenzie (he took 2 guests), Ann Tan, Yang Lin, Olaf Menzer, Tim and Matt Niblett, Heather Frazier, Antonio Medrano, Shane Grigsby, and Sara Baguskas.
THANK YOU, DONORS!

The UCSB Department of Geography would like to thank the following people and institutions for their generous support during the past 12 months:

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“You, as alumni and friends of the Department, have a lot to be proud of. We, in turn, are grateful for your continued involvement with our educational mission.”

Dar Roberts, Chair, UCSB Department of Geography
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☐ The Nicholas Bourdakis Memorial Fund: The Bourdakis Fund was established after the tragic death of Nicholas, who died in February 2001 when struck by a car in Isla Vista. He had just declared Geography his major.

☐ Jack and Laura Dangermond Fund: Jack Dangermond is the founder of ESRI (1969), a GIS and mapping software company. He is considered one of the most influential people in GIS worldwide.

☐ The Jack Estes Memorial Fund: Jack Estes was a Geography faculty member for over thirty years. He built a thriving remote sensing research unit and mentored many students.

☐ The Reginald G. and Allison L. Golledge Distinguished Lecture Fund: Twenty years ago, the Golledge Distinguished Lecture was instituted to bring highly respected speakers to campus to share their research.

☐ The David Simonett Memorial Fund: David Simonett was the first Chair of the Geography Department. He built what has become one of the nation’s finest Geography Departments.

☐ Leal Anne Kerry Mertes Scholarship Fund: The Scholarship will support undergraduate and graduate UCSB students who are planning or are engaged in scientific field research.

☐ The Samantha C. Ying Gamma Theta Upsilon Scholarship: Named in honor of one of our distinguished alumna, this award supports undergraduate student(s), based on the criteria of academic achievement, compelling family/personal circumstances, and membership in the UCSB Geography Club.

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The National Aeronautics and Space Administration (NASA) has a web page called “Astronomy Picture of the Day” (APOD) which features a different image or photograph each day, along with a brief explanation by a professional astronomer. The following APOD was dated March 6, 2013:

"Is this an alien? Probably not, but of all the animals on Earth, the tardigrade might be the best candidate. That's because tardigrades are known to be able to go for decades without food or water, to survive temperatures from near absolute zero to well above the boiling point of water, to survive pressures from near zero to well above that on ocean floors, and to survive direct exposure to dangerous radiations. The far-ranging survivability of these extremophiles was tested in 2011 outside an orbiting space shuttle. Tardigrades are so durable partly because they can repair their own DNA and reduce their body water content to a few percent. Some of these miniature water-bears almost became extraterrestrials recently when they were launched toward the Martian moon Phobos on board the Russian mission Fo-bos-Grunt, but stayed terrestrial when a rocket failed and the capsule remained in Earth orbit. Tardigrades are more common than humans across most of the Earth. Pictured [above] in a color-enhanced electron micrograph, a millimeter-long tardigrade crawls on moss."

Source: APOD; image credit & copyright: Nicole Ot-tawa & Oliver Meckes / Eye of Science / Science Source Images

The First Animal to Survive in Space

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Source: APOD; image credit & copyright: Nicole Ot-tawa & Oliver Meckes / Eye of Science / Science Source Images

Toxic Zombie Mice versus Brown Tree Snakes

"In what is likely to be remembered as one of the strangest pest control policies ever pursued, the U.S. territory of Guam has decided to combat the island’s ongoing snake infestation by parachuting painkiller-laced dead baby mice into the jungle canopy. For over 60 years, officials have been waging war against the brown tree snake, an invasive species that has killed off much of Guam’s native bird population, and which some experts fear may spread to Hawaii.

If all goes according to plan, infant mice corpses, wearing small parachutes and laced with the pain reliever acetaminophen, will be flung from helicopters flying over the jungle. Acetaminophen is deadly to the snakes. Officials hope that the rodent paratroopers will then become entangled in the foliage where the overpopulated reptiles will find and devour them. The success of the strategy hinges on two key facts about the brown tree snake: that it will eat prey that is already dead and that the species is lethally sensitive to acetaminophen.

Aside from decimating numerous native bird species, the brown tree snake has also proven to be a nuisance to the humans living on Guam. The reptiles, which can grow up to 10 feet in length, commonly slither up utility poles, causing occasional power outages. Snakebites are also not uncommon, though the bites are rarely fatal to people.

Reports of the Department of Agriculture policy have been met with howls of protest from the animal rights group, People for the Ethical Treatment of Animals (PETA), which calls the campaign a ‘clumsy, dangerous massacre.’ ‘For reptiles, death could take days or even weeks,’ says Martin Mersereau, a spokesperson for the group. ‘No animal should be forced to endure cruel death.’ The airdrop is slated to begin in April or May” (www.earthweek: March 1, 2013).
Many thanks to Karl Grossner for contributing this fascinating material:

One of my careers before arriving at UCSB to get a geography PhD involved designing web software and building web sites. Since completing the degree in December 2010, I’ve built three web sites. Hmm...so what has changed? Well, the sites are much more interesting, I think, but I’ll let others be the judge. They are certainly more scholarly; in fact, my colleague Elijah Meeks and I have taken to calling them interactive scholarly works, even using the ISW acronym at times. I’m sending this communique in part to pass along a story of an “alt-ac” career in the making and partly to publicize the sites because they are decidedly geographic and/or spatial. Alt-ac stands for “alternate academic” and refers to pretty much everything someone with a doctorate might do in academia that doesn’t involve a tenure-track position. That said, many ‘alt-acs’ are ABD.

After completing a one year post-doc in the Spatial Center – resulting in a web site, of course (teachspatial.org) – I took a job with Stanford University Libraries as a Digital Humanities Research Developer. I’ll explain what that means momentarily, but first a few words about the two web sites that have resulted so far. Most recently, City Nature launched in mid-March (http://citynature.stanford.edu). My work for the project has involved developing two datasets and some digital tools for exploring them, all aimed at explaining the considerable variation in the quantity and quality of city nature between and within cities. Dataset one combines new “distance to park-level green” and “distance to park-level un-pavedness” surfaces derived from the 2006 satellite data (NLCD) with several 2010 census variables, all at the scale of neighborhoods for 38 large U.S. cities. Dataset two is the complete text of the Comprehensive Plans from 37 of those cities, as well as a topic model generated from it. We learned there is no significant correlation between levels of greenness, park acreage, and park access, and social variables, including affluence, diversity, and race. This means explanations must be found in historical investigations of planning processes, which is under way but not reported on the site. The site explains it all – hopefully, well enough—with lots of interactive maps, other visualizations, and a short essay or two.

The first site I built upon arriving at Stanford was ORBIS: The Stanford Geospatial Network Model of the Roman World (http://orbis.stanford.edu), released last May. ORBIS has received a fair bit of attention (half a million visitors), from several scholarly communities and Rome enthusiasts world-wide. In this case, I was responsible only for the web site—the novel multimodal network transport model and some nice dynamic distance cartograms were developed by Elijah Meeks, and the historical scholarship informing edge weights was that of Dr. Walter Scheidel. Since it launched, I’ve developed a simple API and published some of the data to the Linked Data cloud.

What’s up for 2013 is archaeology—more specifically, archaeological data modeling. In time-honored geographic tradition, the model will be spatial, temporal, and thematic (that is, semantic). The data is everything from the amazing Çatalhöyük project in Turkey, directed for the last 20 years by Stanford’s Ian Hodder. Hodder wants the data to be made more useful to the many teams involved and more accessible globally. The modeling vision—reorganizing the data such that it may be readily re-interpreted—is simply stated but presents many challenges. Really, it’s a question of representing not only the scientific evidence, but also the circumstances of its discovery, as well as current interpretations. A fantastic opportunity for this ontology engineer, really.

The answer, then, to what a “Digital Humanities Research Developer” is? In this case, it’s someone who spends a year or so each on fascinating projects, two at a time. I forgot to mention Kindred Britain, launching in a month or two. That one is a network of around 28,000 Britons (mostly) over a thousand year period, all related by birth or marriage. In case you were wondering, yes, Sir Francis Bacon is related to Kevin Bacon. A story for another day.
App “Monitors Anything, Anywhere”

Edward Pultar (PhD 2011) is the Founder, President, and Geographic Information Scientist for a company that markets a powerful software platform for collecting geo-located sensor data. But, let Ed speak for himself:

“I’ve recently been working with my brother Lorenzo on Valarm, the “Versatile Asset Locator And Remote Monitor.” Valarm was born when Lorenzo woke up one morning to discover his motorcycle had been stolen by professional thieves. Originally, Valarm was conceived as an affordable and accessible theft-prevention and vehicle tracking device which Lorenzo would use himself to protect his replacement bike. Today, Valarm has evolved into a general purpose platform for asset tracking, data acquisition, and remote monitoring.

You can use it to track almost anything via GPS and to monitor almost any environment via sensors. Commercial fleet managers use Valarm as a vehicle or container-tracking device with additional sensor information. Scientists and hobbyists use it as a remote environmental monitor or Data Acquisition platform. Consumer applications include use as a motion-sensing or sound-sensing, GPS-tracking, anti-theft alarm and tracking device, or a powerful property monitor.

Valarm also integrates with externally connected sensor hardware (via USB or Bluetooth) to record environmental and/or mechanical factors including, but not limited to, temperature, lumens, voltage, barometric pressure, humidity, presence of volatile organic compounds or other gases, and the status of vehicle OBDII or OBD2 sensors (on-board diagnostics), including engine efficiency/workload, throttle position, coolant temperature, fuel consumption, and more. The Valarm-equipped Android device can immediately distribute configurable alerts via SMS/text, email, or the web.

The Android platform and the flood of powerful, inexpensive Android devices offer an opportunity for extremely useful, connected monitoring applications. Whether running on phones or tablets, a small, mobile, energy-efficient, and highly compute-capable platform such as Android is a very compelling vehicle for data acquisition and remote monitoring. Connected via 3G/4G or WiFi, Valarm-equipped Android tablets and phones easily create the powerful “sensor-web” long dreamed of by academia and research organizations; manufacturing, food, and chemical storage facilities; farms; and even hobbyists.”

Why I Went With Geography

The following is from Michael Neal Arnold (BA, 1974): “My first academic exposure to Geography was in an undergraduate history class. The professor was a newly minted PhD in Geography. He had been roped into teaching a lower division U.S. History survey class. He presented the material from the perspective of a Geographer. He taught history as the unfolding story of the relationship between humans and their environment. Politics, wars, population movement, expansion of cities – much of history can be seen as directly related to Geography. I found the approach fascinating.

As a result of the above experience (and an innate interest in maps), when the time came to declare a major, I went with Geography. This was in the early 70’s before there was even a Geography Department at UCSB. We were simply a small sub-section in Letters and Science. There were four or five professors – none of whom were tenured. My interest was in urban and regional studies. In addition to Geography classes, I took related offerings in History, Economics, and even Biology. Somehow, they all more-or-less fit together; I was actually acquiring a useful body of knowledge. I wasn’t alone; most of the students on paths similar to mine were headed into urban planning.

My senior year, I had a work-study job helping an Assistant Professor with research projects. We were not all that far apart in age. I was married with a small child and really anxious to get on with my life. The young professor was unsure if academia was really for him. He thought my interests and academic background might be a good fit for appraisal. As a result of his referral, I interviewed with a Santa Barbara appraisal firm and was offered a part-time internship. By the time I was graduating, I had decided to pursue professional certification in appraisal. (The assistant professor went on to a career in environmental assessment.)

I am now a partner in the firm where I started. I hold certification with the State of California, the Appraisal Institute, and the Royal Institution of Chartered Surveyors. My practice involves evaluations used for tax planning, assessment appeals, litigation support, damage assessments, mortgage underwriting, expert witness testimony, easement and lot line disputes, owner decision making, and other applications. My clients include non-profits, corporations, lending institutions, legal and accounting firms, investors, and others. I have valued lavish residential estates, iconic historic properties, major commercial properties, cattle ranches, vineyards, schools, churches, a broccoli processing plant, a “gentlemen’s club,” a hot springs spa, and other one-of-a-kind holdings. Not only did my majoring in Geography lead me into the appraisal profession, it also provided an invaluable foundation for an interesting and rewarding career.
Remember **Paul Sutton**? Currently a Professor of Geography at the University of Denver, Paul was a graduate student at UCSB from 1992 to 1999. He received an MA in Geography in 1995, an MA in Statistics in 1997, and a PhD in Geography in 1999, and his dissertation, “Census from Heaven: Estimation of Human Population Parameters using Nighttime Satellite Imagery,” reflects his continued interest in the dynamics of human-environment relations.

“I took a position in the Geography Department at the University of Denver in the Fall of 1999 and have been here since then. I have many interests spanning much of geography but ranging into ecology, economics, and philosophy. Most of my research focuses on applied issues associated with the Human-Environment-Sustainability problematic. I do a great deal of work with nighttime satellite imagery derived from the Defense Meteorological Satellite Program’s Operational Linescan System (DMSP OLS). Data products derived from DMSP OLS imagery are being used to map and estimate human population distribution, energy consumption, economic activity, urban extent, CO2 emissions, Ecological Footprints, and more. The tools needed to engage in this research are remote sensing, geographic information analysis, and statistics. I also am interested in the development of the discipline of ecological economics. I use my expertise in GIS and spatial data analysis in collaborations with economists and ecologists to make spatially explicit valuations of ecosystem services.”

Paul recently collaborated with a colleague, Seth Masket (Associate Professor of Political Science, University of Denver), on mapping and assessing voter suppression in the state of Colorado. In a blog dated February 18, titled “Mischief of Faction: Reflections on Parties and their Place in Politics,” Dr. Masket describes his efforts as an expert witness to help determine the probable results of the Colorado Secretary of State’s announcement in late 2011 that the state’s mail-in ballots would henceforth only be sent out automatically to those who were “active” voters, meaning they had voted in the last general election.

“With the help of University of Denver geographer Paul Sutton, I compared voting precincts in Denver, Pueblo, and throughout the state based on their racial breakdowns and on the percent of voters listed as IFTV (“Inactive - failed to vote,” meaning they did not vote in the last general election) [...] the trend is quite consistent: the higher concentration of a racial minority group within a precinct, the more people in that precinct who did not vote in the previous general election, and the more people who would be deprived of an automatic mail-in ballot [...] Based partially on this analysis, the judge in the case ruled against the Secretary of State, and the change in mail-in voter policy is not being implemented. But given partisan voting patterns among different racial groups, it’s not hard to imagine how this would have played out electorally had it been enforced.”

**Editor’s Note:** The articles included in this edition of the Geography Newsletter are only a small sampling of about 50 postings made for the News & Events page of the UCSB Geography web site (http://www.geog.ucsb.edu/events/department-news/) since the Fall Newsletter was sent out last December.