

**Minutes**  
**UCIME Group Meeting**  
May 25, 2001

**\*\*\*\* Important dates and announcements:**

- Summer travel conflicts are such that the next UCIME group meeting will be in July. The date and time will be announced.

**Update Reports from each team member:**

**1. Noah:**

- He has been working with Melissa on cleaning up and revising all the data layers for 1986 and 1998. This means new roads, improved landuse layers (urban extent) for two years and an exclusion layer that has been slightly improved. That means by the middle of next week we will be ready to do some calibrations at UCSB.
- He is still going to Complex System Summer School at the Santa Fe Institute for a month this summer, starting on June 10<sup>th</sup>. He will be meeting with Steen afterwards as well as in September when he hopes to return to LANL for a week or so.
- Summer plans: Be at the Santa Fe Institute until mid July, be at UCSB for the rest of the summer, taking a few weeks off in August and then returning to LANL in September for a short visit. He will be working on UCIME 50% time during the months of July, August and September.

**2. Jeannette:**

- She ran some prediction scenarios for the Central Valley Region in preparation for a conference in Sacramento a few weeks ago. She was given some strong feedback on not having enough growth included in the scenarios, which she has since been improving. This was done just for a visualization exercise but she has subsequently been working with William on putting together the historical data set that will be used for calibration.
- She also has been working with Mark Probert on getting the SGI cluster working for parallel processing. Progress has been made and hopefully it will be ready soon.
- In Menlo she has been investigating ways to run the model on a quad-processor. It is not quite there yet but coming.
- In the meantime, she has been trying to do model runs on "Hammer" but the NCGIA server has been very unstable because of router problems and after a run of numerous hours (61% done) it crashed.
- The Gigalopolis web page is online and working well. People seem to be using it and no complaints have been received so far. Some of the documentation has yet to be added but will be coming soon. Version 2 was left out by mistake and will be put back online.
- She and Keith have done a few code fixes, specifically changing the way that road weighting works to improve the effects of increased growth adjacent to major roadway arteries (the value of the road will affect the probability of growth). Functionally it works better and can be seen in the various scenarios run (particularly when edge growth was set to zero). The results of the scenarios will be put on the web page. Thanks to Naoh for helping out with the simulation runs.

**3. Helen:**

- She has been swamped with various endeavors and will continue under the gun for another month. So she has little to report at the moment.

**4. Jeff:**

- He has been working on getting the webification in place. Both the hardware and software are here and he is waiting on the systems people to install the new NT server dedicated to the UCIME project. The last piece of software needed can be downloaded from the web. The idea is for "See the Future" to be linked with SLEUTH and to be available across the web.
- He continues to work on the "See the Future" model to improve small details. He hopes to include elements to simulate the recession of the early 1990's.
- There was a meeting last Wednesday with Pat Sailey (a landuse planner), the new program manager for Santa Barbara ECP. She will be our "go to" person and should be a marked improvement over

having to report to the ECP Board. They are in their Public Phase now and this last meeting was the first of a couple of different meetings.

- Summer plans: He will be here working through June until the ECP funding runs out. There is an ECP board meeting soon and Keith will ask for some additional funds to keep Jeff employed.
- It was pointed out that the Sanborn Maps have population data. They might be a good benchmark for Jeff's model runs. It goes just beyond the Santa Barbara City boundary. For one's interest, census data works: tract, block group, block and individual.

**5. Melissa:**

- She has finished 1986 south coast land use and has revised with Noah 1998 to fix holes in the data. Both are in pretty good shape. She is constructing a series of lookup tables to assist in querying the database, i.e. building out the attributes.
- She has been looking into getting more aerial photographs to fill out 1986, as the coverage is not complete (missing about 4 frames). MIL has 1985 but only 2 frames. She will continue to search, being efficient with her time and the available money.
- Her next task will be to work on the 1976 landuse layer.
- Summer plans: She will be here all summer working on the project.

**6. Tim:**

- He has been working with Jeannette on the Gigalopolis web page; specifically the publication list, posting of Power Point presentations, a project press release and general trouble shooting.
- He has been working on two grant proposals this past month. The first was with the Carpinteria Creek Coalition to California Department of Fish and Game to do steelhead trout habitat restoration. This has been very fruitful in establishing contacts with local stakeholders and getting to know local landowners that might grant access to their property for his dissertation fieldwork. The second proposal was to the Department of Agriculture, Integrated Research, Education and Extension Competitive Grants Program (Water Quality program) that will help fund the second half of his dissertation work, which will focus on modeling the local watersheds. This will dovetail nicely with the proposal written in April to UCMC for doing the fieldwork.
- He has been building a hydrologic exclusion layer that includes setbacks for all creeks throughout the South Coast. Complications come, as there setback variations for each jurisdiction with different zoning plans (Coastal Zone, Goleta, Summerland, Montecito and Torro Canyon Community Planning Areas, Cities of Carpinteria and Santa Barbara, SB County, agricultural lands, etc.). It will not be a 100% accurate but will be a positive contribution to improve the accuracy of the model runs. It was suggested to work initially in the Carpinteria Creek watershed to get the highest resolution data, i.e. using the 3 meter DEM.
- Second part of this would be to establish groundwater recharge areas where urban growth would be restricted. The idea is to use the Dibblee Geology maps for this designation. The person doing the digitizing is Sean Mullin and Keith recommended contacting him immediately.
- Summer Plans: He will be here most of the summer and will be working on the project 50% for the summer, with a potential trip to LANL in the Fall. He needs to coordinate with Keith on summer tasks.

**7. Xiaohang:**

- She has just returned from LANL where she was working with Claes Anderson on their urban growth model. They got some good results. They were testing the impact of temporal resolution on model outputs that seem to influence spatial patterns. The results of their work are being put into a paper for a conference in Buffalo.
- Steen's group at LANL has moved into a new building. Again Steen has money for students this summer so please consider spending some time out there.
- Steen and Claes would like to extend their model from 2D to 3D, which is exciting, and a potential future research direction. This is something that the UCIME team should get involved with its development. . The Santa Barbara data set is excellent and could be a good test database.
- Summer Plans: She will be at UCSB most of the summer but hopes to go back to LANL for a few weeks, maybe to work on the 3D urban growth project

**8. Keith:**

- Keith will be at UCSB until June 23<sup>rd</sup> and then will be gone until the end of the summer except for a short few weeks in July.
- There is a new book out in the GIS Data Series Volume 9 called "Remote Sensing and Urban Analysis". Martin Harold, from the Remote Sensing Unit, is interested in urban remote sensing and multi-source urban landuse mapping for his dissertation topic. He is going to Germany to give a paper at a conference on this subject matter. Interestingly enough, someone on the program is giving a paper on the use of SLEUTH applied to Yaoundé in Cameroon.
- Elizabeth de Silva has done a second paper on the application of SLEUTH in Oporto and Lisbon. The first paper published was on the prediction process, using Version 2.1, and the second paper is on the results of the model run. Keith has been invited to present the results to the city council in Lisbon this October.
- He has purchased a new workstation for his office (the new Miller) that will have more than one processor and hopefully will be online soon. Secondly, to take advantage of a "two for one" sale the Geography Department has purchased two new Suns, one to replace Pollux as the department mail server and the other will be a backup.
- Keith had an interesting meeting with Bruce Karon from Planet Earth Science. They do multi-media educational materials. They also have integrated Macromedia Director with IDL and it may be the solution to our integrated web problem. The idea would be to hire someone new (Geography graduate student) to work down there to learn how it works. Any ideas of a good candidate?
- Tracy Arthur has finished her dissertation that includes two new utilities for the model (a routine to sample data and a piece of software to read/write GIFF/ASCII images).
- The IGERT pre-proposals are due on June 28. Keith will be proposing to create a center entitled "The Institute for Research on Smart Growth" that will consist of hardware request, support for a dozen PhD students for 5 years, space in Ellison and holding an international conference here in Santa Barbara. It will be a multi-departmental institute (Economics, Bren, etc). Jack Dangermond is interested in the idea and Keith will be meeting with him in the middle of June.
- He gave a workshop on the model at a conference on GIS in Transportation. Keith rekindled an interest in road growth and would like to author a proposal to CalTrans and/or NSF. This is fertile research ground.
- Metadata: there was a recent meeting with the Alexandria people to discuss metadata. Scott Crosier will be working on this as he is coming in the Fall to work with Mike Goodchild. Keith requested someone to work with them to get SLEUTH in the database and Noah would like to work with them.
- CULAR program at LANL and UC: The funding source was announced to be over but it appears that it has been revived under a different name. Keith sent off a proposal, which included Helen, Steen and possibly bringing substitute professors from LANL for next year.