*** Important Dates and Announcements:
1. The next UCIME group meeting will be **March 9, 2001 at 10:00 am** in Keith's office.
2. Tracy Arthur, Toby Carlson's student from Penn State, will be here from March 3rd to the 10th to work on their application of the model. They are linking SLEUTH with hydrologic and evaporation models in Chester County, Pa..
3. Our thanks to Susan Baumgart for the DreamWeaver Workshop last Friday. The idea was well received by the Department as there were 12 people in attendance.

A. **Update Reports from each team member:**

1. **Melissa:**
   ▪ She has just finished the first year of Anderson Level 3 (1998) Landuse layer and brought a beautiful poster to show us. The data layer was created through air photo interpretation at a resolution of approximately 6 feet and is the most detailed landuse map to date for the area. This will be an exceptional input to the model. Brian Curnell, architect and ECP Board member, wants to work on the color scheme. The immediate consequence of this effort is that 1) we can do a better job with the exclusion layer and 2) when we have the next year (1986) of landuse data we will have the two different years of coverage that will allow us to truly run the model. Anderson Level 3 consists of approximately 120 classes but in the model we will use only Level 2 with approximately 17 classes. She is now working on the second layer and will have it within a few weeks.
   ▪ She also has been working on a dissertation topic and hopes to have it well defined by the end of this term. Xiaohang recommended talking with Billy Lee Turner and his team from Clark University as they are working on image analysis and field sampling (verification) in regards to landuse change, an environmental Geography approach. There are various possibilities for a topic with this unique data set of 5 sequences of 8 landuse coverages. Helen recommended aggregating categories and looking at the scaling issues, possibly raising the resolution and seeing what disappear (ex roads).

2. **Noah**:
   ▪ Unfortunately, he is home sick with the flu but has sent in an update of his activities and hopes to be back at school next week.
   ▪ He is getting his computer back on line.
   ▪ At the AAG meeting in New York, he is giving a poster and has been working on that creation. The topic is urban wildfire modeling and is the result of his summer internship work.
   ▪ Also he has been working on a NASA proposal, which is a study of the mapping component of the fire modeling work, and will be something similar to what Becky did. With that his funding will be secure through the remainder of his PhD work.
   ▪ In addition, he has been continuing his work on the urban road density module, hence digitizing roads for different time periods here on the South Coast and attaching the Tiger attribute data. At the same time he is pruning so that there is consistency of descriptive data between data layers (ex Hwy 101 and its historic evolution). This work is part of another modeling effort that will look at the built form and landuse and how one can extract the population density. He and Keith have come up with a relatively simple model that uses distance from center, date of urbanization, distance from roads of different categories and through overlaying all of them one can get population density that can be validated with the parcel data. This could be a way to predict the 2000 Census data. Keith has a meeting with the News Press this afternoon to discuss mapping issues for the results of the census.

3. **Jeannette**:
   ▪ She has been recompiling the content of the Gigalopolis web page after an error with

DreamWeaver that required revamping the entire page. It now looks better than ever. The old one is still up at the moment but you can review the new at Default_XREF_styleREF www.geog.ucsb.edu/~nette/v2/Home/home.html. Version 3 information can be obtained (documentation, downloads, discussion page, etc.) at that url.

- She has gotten involved with a new USGS research effort called the "Great Valley Project", which is a coop of government people who are interested in the Central Valley region. They want to put up a web-based interactive modeling interface that would be useful to the general public as well as local planners. It will be done in phases starting with Fresno because of its location, configuration and the stakeholders involved. They will be working with both SLEUTH and CUF, which will be a great medium for comparison. This could be an excellent dissertation topic for her, comparing the two models. Unfortunately there is no historical data available for calibration as of yet. So lots of groundwork to do. Landis has done all of California at 100 meter resolution and will have that online by June. Data layers will be coming within a couple of weeks at which point she will begin the work.
- The USGS Urban Dynamics meeting in Santa Fe at the end of January was very productive. About 40 managers (mostly from the USGS, DOI) and some academics were in attendance. The purpose was to develop a 5-year science plan on Urban Dynamics (~$5million budget allocation). They were able to outline working goals both short and long term and they were offered a special issue in Urban Ecology to publish the results of the meeting (a section from each working group), which would frame the science plan. There were lots of interesting new applications (example - mapping cut-and-fill areas and relating them to potential landslide areas).
- Tracy Arthur from Penn State will be here from March 3-10 to work on their efforts to link SLEUTH with a hydrologic/evapotranspiration model. Again she has a background in meteorology and is Toby Carlson's PhD student. We need to ask her if she would be willing to do a Brown Bag presentation during her stay.
- The status of the code is that it works but hasn't been tested yet, hence we need to be careful with the results. The link will be posted by the end of the day on the pseudo web page for downloading.

4. **Keith**:
   - He had an entire day with Steen Rasmussen while in Santa Fe where they worked up a different topic for a paper. Steen and Claes have put together a general formulation/framework to compare model run results from their urban growth model, Roger White's model and the SLEUTH model. It's highly technical (spin glasses, etc) and data intensive, e.g. crashing the system regularly and they have had to drop down to only 81x81pixels. The paper on presenting the Deltatron model in a more formal way will be something he and Jeannette will do at a later date.
   - The work with Santa Barbara County continues at a fast pace and will accelerate in April when they hire a manager for the project. The County Planning and Development department is interested and is hosting an open house (2/26/01) where Keith will have 15 minutes to present SLEUTH.
   - ECP work is moving along. Jeff has the model well developed and has an interesting new user interface for policy people, which has switches and icons to produce graphs at a click. Hence, scenarios can be created and you can then look at the curves representing the results. We are now in a sequence of interactions that will get broader and broader in scope, culminating with briefings for the town supervisors on the South Coast in May and a series of public hearings in June. They are working on the idea of scenario development and a report card. Keith presented a prototype, an image of the urban growth with pull outs of the statistical results from different scenarios (business as usual, no holds barred, etc), both from "See the Future" and SLEUTH runs. We look forward to seeing the evolution of this creative approach.
   - He has been thinking about a new approach to Monte Carlo. Instead of running Monte Carlo and then working with a probability map, generate a large number of single instant scenarios and then order them some how by similarity and produce an animation of the change. Instead of a choppy presentation it would be a morphing image (ordering the instances and similarities for more visual continuity that should increase the believability of the forecasts). Jeannette is playing around with the code and thinking about how to do this.

5. **Xiaohang:**

- She has been helping Keith with editing the Banff documentation as he is swamped and up against deadlines (2-3 weeks). Chapter 12 is almost complete and will have the Banff statement at the end. Chapter 4 on data sources has been problematic. They are hoping to be done with this soon.
- She is hoping to have the second draft of her dissertation proposal done today, pending a meeting with Keith this afternoon.
- She tried to contact Landis who hasn't gotten back to her yet. She will be taking the data requirements from his model and investigating all other sources of data for the model inputs (planning departments etc.). Keith recommended contacting Mike Batty's former student who is working with Landis on a Windows user interface for the model. He gave a presentation at Banff and Keith will distribute his PowerPoint presentation.
- She worked with Claes when he was here for the Leavesley seminar and she now knows their model well and was able to implement it. Unfortunately there is no CULAR funding through LANL for this year to assist with this effort.

6. **Tim:**
   - He has been reading a lot of background papers for his dissertation topic, which is culminating at the end of this month when he will submit a proposal and application for funding with the UC Marine Council's funding competition on Coastal Environmental Quality Initiative. He has a rough draft for Keith to look at today. The project will link up a watershed model (water and sediment flow) with a nutrient model (export coefficient model) and the UCIME urban growth modeling effort (SLEUTH, See the Future and the density model). The urban surface to a large degree determines the runoff (water, sediment and contaminants) to the sea, which will be a direct data feed to the LTER project and their interests in the littoral zones and kelp forests. He is going to initially work in the Carpinteria Creek catchment and once operating/calibrated/etc will implement and test it on Arroyo Burro Creek drainage. Both of these creeks are getting lots of attention and he has been busy getting to know and gaining support from all the players and stakeholders. This is human system modeling. Carpinteria Creek was chosen for its unique characteristics and stakeholder interest in restoring the creek for steelhead runs, an effort spear-headed by the Carpinteria Creek Council. The area is also dead center for predicted urban growth on the South Coast. Keith mentioned that in May ECP is going to do a town meeting in their office that will bring together all the city representatives on the South Coast. This could be an excellent opportunity to pitch Tim's research efforts and this type of approach.
   - He has been creating a data inventory of all possible data sources for the LTER project. In conjunction with this effort, he has been sampling three creeks in the Carpinteria Valley and has been giving him good background experience on flow regimes with all the creeks.
   - He also attended the RiverTools workshop last week and he hopes that this software will be very useful in watershed and drainage network analysis.

7. **Helen:**
   - She has been working on her AAG paper, which is related to the UCIME efforts.
   - She is concerned about the 2nd year annual report to NSF, which is months over due. This is a priority that needs to be done ASAP. Tim will help Keith finish that up and get it off on the Fast Lane.

f:\trobinson\ucime\UCIMEminutes\minutes2-16-01a.doc