

Minutes
UCIME Group Meeting
March 9, 2001

***** Important Dates and Announcements:**

1. The next UCIME group meeting will be **April 13, 2001 at 10:00 am** in Keith's office.
- 2.

A. Update Reports from each team member:

1. Jeff:

- In January Jeff met with the ECP Tool Committee and showed them the "See the Future" model. All were pleased and he has been improving the model since, more robust and elegant. He presented the model in Helen's seminar and got good feedback from the group. Although "See the Future" is not coupled with SLEUTH, they are being run in parallel and are doing similar things with similar assumptions. This has enabled he and Keith to finalized the "report card" which has three images (1960, 2000 and 2040) of projected urban growth from Keith's model with graphs from the "See the Future" model surrounding them (population, jobs, housing units, housing cost, etc). This will be presented at four different public events: the first at the end of March at UCSB, the second on April 11th in the evening where Keith will give a briefing on the coupled modeling system to a joint meeting of the Cities of Carpinteria, Montecito and Santa Barbara (7:00pm, a public meeting at Carpinteria City Hall) and finally for two different groups of citizens (example Micky's Living Room Group). The latter was funded by the Santa Barbara Foundation to reach out to the general public (non-planners, housewives, etc). The final products of this effort are the "report cards" that will be used at public meetings and the model on the web where it can be played with by anyone, hence to inform the general public. This is what Jeff will be working on next as well as coupling "See the Future" in Stella with SLEUTH. We are looking forward to the reaction of the public after the 4/11 meeting as the News Press will be there, particularly on data reflecting population and housing price.

2. Helen:

- She has been working on 7 papers simultaneously of which one of them is her AAG presentation regarding this project that will soon be a paper.

3. Tim:

- He just finished and turned in a proposal to the UC Marine Council for 2 years of funding, which is a similar research initiative to the LTER project. This will be the base work for his dissertation. The idea is to build an export coefficient model that will be linked with SLEUTH to look at Landuse Change and their effects on water quality, specifically nutrient loading on streams and to the ocean. The study area will be the Carpinteria Creek watershed but the results can later be applied throughout the South Coast. The project will require intensive sampling (surface, ground water and creek water) of five different landuse classes to analyze their discharge to the stream and eventually to the ocean. We will be looking specifically at nutrients and discharge and sediment. He has gotten 6 letters of support from agents and stakeholders from the area. Once the export coefficients are determined a basin wide calculation can be done and calibrated with catchment discharge data. These can then be applied to other basins along the South Coast. It might be possible to have projected water quality data drive limitations on urban growth. Tim has already been developing the GIS database, stream water sampling on 4 different creeks in the Carpinteria area, and getting involved with local stakeholders to understand their issues and set up collaborative relationships. Specifically, he has gotten involved with the Carpinteria Creek Restoration Team that is drafting a proposal for the US Fish and Game to restore the creek for a Steelhead population (due in May).
- He also has been working with Keith on the 2nd year annual report for NSF. This will be ready to go by the end of the day.

4. Traci Arthur:

- Traci is a Phd student at Penn State who is here to work with Jeannette to link SLEUTH with a

hydrologic/evapotranspiration model.

- Landuse is an important layer in the modeling she is working on and coupling with Keith's model will assist with future predictions. She is defending her dissertation at the end of May, so she is busy wrapping up her work. The idea is to develop a version 3.0A of the SLEUTH model that will hard-couple into the model code all of the environmental factors (climatalogical and hydrological data) and have the code spit out needed climate data (mean values, ranges, etc) for that time period.
- Part of what she is doing here is interacting with our research group, which has been beneficial for all.

5. Jeannette :

- She has been working with Traci this week understanding the inter workings of her code and programming the requested changes.
- The Urban Dynamics group continues to move forward. They are working on how to calibrate, what parameters to include, how and what to weight, what should be prioritized. Mark Fuller from the USGS in Denver is working on this in a very systematic way. Some of this has been written into the code through prior efforts.
- She has made good progress on the Gigalopolis web page and it is almost ready to be posted. She will be working with Tim on a supporting publication list and a summary of the model.
- She has just returned from a meeting with the Great Valley project team. They are focusing at the moment on a model interface for the Central Valley and they want to get something working soon. They want to include Keith's model as well as Landis' CUF model. What she wants to do is get Landis' data for comparison with Keith's model outputs. This will more than likely be her dissertation project. There is a Great Valley Project conference in May that they will need product for. It will be something similar to what William did. She hopes to get the code up and running in Menlo at the Survey soon.
- She gave a poster at the AAG in New York on Visualizing Uncertainty in Landuse Modeling.

6. Melissa:

- She is half way through the photo interpretation of the second year (1986) of Anderson Level II landuse data. She is working with two interns and is trying to maintain accuracy amongst the project team. There could be a paper in the procedures to safeguard the accuracy of the digitized data. Keith wants to model the probability in the transition matrix and how they have changed historically and how they evolve into the future.
- She gave a presentation on SLEUTH in Helen's Landuse Change Modeling class that went well and was informative for all. She still has a series of questions that Naoh is going to help her with. She described how the model works and she used the two evaluation criteria presented in class for evaluation landuse change models. Her printed up materials are posted on the 2001 Seminar web page.

7. Noah:

- He has been doing battle with his new computer, to the point of contemplating exchanging it for a completely different machine. In the interim he is using his old 386 machine.
- He has been working on his NASA proposal and will have a draft to Keith by next week for review. He will need a recommendation from Keith for that application process by next week.
- He gave a poster at AAG regarding a framework for a model to integrate urban growth and fire modeling. People were receptive to the idea with interesting feedback, even though he was grilled on fire modeling (humor in the minutes).
- Noah continues to put energy into the "Model Shoot Out" idea. Keith suggested that we write a proposal to NSF to secure funds for the event.
- He was asked to review a paper for the AAG Annals, which has been an interesting experience.
- The historic Road Density coverages are done. Keith suggested sending them to Jeannette so that she can finish her master's thesis.

8. Xiaohang:

- Xiaohang gave a presentation yesterday as part of the Geography Department Colloquium lecture series. The topics was related to her proposed disseration work.

- She continues to help Keith with edits of the book from the Banff meeting. The revisions are very close to being done, within a few weeks.
- She continues to do more reading for her dissertation topic and revising her proposal.
- She hopes to return to LANL this summer to continue her work with Steen and Claes. Some of this depends on how much progress Claes makes between now and the summer.

9. Keith:

- The 2nd annual NSF report is just about done and will be turned in via Fastlane within a day. He has been working with Tim on this and they have been doing simultaneously a draft of the 3rd year report which is due in March. So good progress on that note.
- He has been working on a proposal to the California Department of Health to look at the housing market (supply and demand). The “See the Future” modeling effort dovetails nicely with this research agenda.
- The priority now is to have the model running with the most recent data so that we can do transportation into the future scenarios. For the second week in April, he needs to show some results.
- He just got a dissertation from Australia where someone used his model for part of their work.
- Keith may have a new student coming in the Fall who wants to work with the model, Lynn Thorp (she decided not to come). And Ryan Aubry is coming into the Geography program in the Fall.

f:\trobinson\ucime\UCIMEminutes\minutes3-9-01.doc