UCGIS RECEIVES GRANTS FROM INTERGRAPH CORPORATION AND GE SMALLWORLD

Intergraph and GE Smallworld, UCGIS affiliate members, are sponsoring two UCGIS workshops on the development of a model GIScience undergraduate curriculum. The goals of the workshops are to identify the components required for a comprehensive core curriculum covering GIScience and GIS technology and to explore funding opportunities for development of the curriculum.

This year's first workshop, sponsored by Intergraph, was held September 29th and 30th at The Ohio State University. The group spent most of the two days preparing a first draft of portions of the Model Curriculum patterned after the Computing Curricula 2001 developed by the Joint Task Force on Computing Curricula of ACM and the IEEE Computer Society. Six pedagogy and ten knowledge areas were characterized.

The six pedagogy themes are:

1. Introductory topics and courses
2. Supporting topics and courses in computer science, mathematics and statistics
3. The GIScience core
4. Professional practices
5. Advanced study and undergraduate research
6. GIScience across curricula.

The ten knowledge areas are:

1. Spatio-temporal cognition
2. Abstracting spatio-temporal reality
3. Representing spatio-temporal reality
4. GISystem design
5. Data sources, acquisition, and manipulation
6. Management of spatio-temporal data
7. Spatio-temporal analysis and synthesis
8. Communication spatio-temporal data and results
9. Organizational aspects
10. Social, ethical, and professional issues.

Within each of the knowledge areas the group will work to:

- Review and firm up the scope of the knowledge area
- Refine the list of individual topics associated with the knowledge area
- Incorporate relevant perspectives on common themes
- Identify the topics from mathematics, computer science, statistics and other disciplines relevant to the knowledge area

- Separate the topics into two levels, corresponding to core topics required of all students and more advanced topics
- Suggest model courses and corresponding lecture/lab hours, with specific course objectives and expected learning outcomes, by indicating which topics are included in each course.

The group identified several themes that appear common to nearly all the knowledge areas. Common themes crossing knowledge areas are: error, uncertainly, metadata, interoperability, language, visualization, generalization, quality control and quality assurance. These threads will be addressed within each knowledge area.

This workshop was a continuation of two previous workshops sponsored by ESRI. The next workshop, to be sponsored by GE Smallworld, will be held in Tempe, Arizona, on February 10-11, 2001. It will be devoted to further development of the draft Model Curriculum and to preparing a UCGIS proposal to fund the curriculum development. UCGIS will be working with our private affiliates and members to identify cooperative efforts to ensure the successful development of the curriculum.

Model curriculum development is a major focus of the UCGIS Education Committee chaired by Dr. Richard Wright at San Diego State University. The Model Curriculum Committee, a sub-committee of the UCGIS Education committee, is chaired by Dr. Duane Marble. For more information, or to comment on any of the topics addressed above, contact Dr. Marble at marble.1@osu.edu.