Federal Geographic Data Committee

Consolidated Position on Geographic Information Systems (GIS) Education for the UCGIS Educational summit being held at the GIS/LIS meeting November 5-9, 1998

The first level involves development of existing employees. In many cases, these are people who have worked in a particular application field, such as public works, transportation, Facility management, resource management, environmental protection, or public health and safety, for many years who now find that they now want to incorporate GIS tools into their work. This is usually the result of attending a symposium or society meeting and sitting in on a session that deals with GIS in a particular thematic area. Training is required in metadata requirements, data clearinghouse, data formats, data standards, data dissemination procedures and policies.

They require software application specific training, which is usually provided by vendors. However, in order to use the technology effectively, they also need a basic grounding in the concepts of cartography, spatial data, and relational data base design. This involves the integration of GIS with other technology especially GPS and the Internet.

They do not need to become cartographers themselves, but need to understand the basics of projections, map accuracy standards, etc. These are items that can be taught in one or two courses and are well suited for distance learning programs, such as the one offered by Penn State at:

http://www.worldcampus.psu.edu/pub/adm/facts/gis_facts.shtml

The second level involves continuing education of existing GIS professional staff. In order to advance in their profession, these staff require ongoing updates in technology, and advanced courses in computer science or information systems disciplines. With many people the keeping-up needs are met by conferences, publications and user groups. However, the others require university level courses. These courses could be offered to agencies within a certain geographic radius as “after hours” opportunity for career advancement or other mandatory educational requirements.

The third level involves new hires, interns and temporary employees brought on board for short-term tasks such as data development. Many agencies look for people with at least SOME GIS experience, since it is rare that an individuals with just the skills we need is available. This is often hard to define from a resume. Therefore, we spend a tremendous amount of time training people with a wide range of “generic” GIS experience. It would be useful to have some sort of certification and/or standardization language defined which would ensure that an individual actually has the basic skills. Leading up to a GIS “license” or certification.
FGDC Statement

Some specific areas to consider

1. Education on the integration of CAD and GIS Data Sets

2. Training dealing with data Interoperability, enterprise data sharing, data modeling, and spatial data quality

3. The analytical power of GIS as a decision support aid, and the possibility of using GIS in conjunction with real-time data, i.e. weather, crime, automobile traffic patterns, environmental management, HAZMAT situations, and fire/rescue.

4. GIS expertise in specialize fields, surveying engineers, photo interpreters, landscape design, etc.

5. GIS and "Policy Making". Expand to other departments, i.e. public policy, legal, international affairs, marketing, communications/broadcasting, etc. areas that have not traditionally dealt with the geographic aspects of their field.