

GISCI Position on the GIS Profession in Relation to Other Geospatial Professions

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The Geographic Information Systems (GIS) profession is the largest of several professions that make up the U.S. geospatial workforce. Because they specialize in transforming geospatial data into useful information and knowledge, GIS professionals perform the geospatial industry's core work functions.

"The geospatial industry acquires, integrates, manages, analyzes, maps, distributes, and uses geographic, temporal, and spatial information and knowledge. The industry includes basic and applied research, technology development, education, and applications to address the planning, decision-making, and operational needs of people and organizations of all types" (GITA and AAG, 2006).

As of December 2009, the U.S. Department of Labor Employment and Training Administration (DOLETA) has identified ten geospatial occupations. These include Geospatial Information Scientists and Technologists, Geographic Information Systems Technicians, Remote-sensing Scientists and Technologists, Remote-sensing Technicians, Precision Agriculture Technicians, Surveyors, Geodetic Surveyors, Surveying Technicians, Mapping Technicians, and Cartographers and Photogrammetrists. DOLETA estimates that GIS professionals—including Geographic Information Scientists and GIS Technicians (and individuals with other similar job titles)—account for the largest share of geospatial workers in the U.S. (DOLETA, n.d.).

Some specialized tasks performed by relatively few geospatial workers are regulated through licensure by state governments in the U.S. In most U.S. states, regulated geospatial activities are limited to "the practice of surveying," which is commonly understood to include measurements of positions on the Earth's surface as required for the legal delineation of real property and the design and construction of the built environment. Geospatial professions subject to state licensure in the U.S. include professional surveyors and, in some states, photogrammetrists.

The tasks performed by geospatial workers as a whole are numerous and diverse. The *Geographic Information Science and Technology Body of Knowledge* (UCGIS 2006) identifies 1,660 distinct competencies that characterize the geospatial field. Yet, the number of work functions subject to state licensure, are relatively few by comparison; for example, of the 106 Industry-Wide and Industry-Sector Technical Competencies identified in DOLETA's Geospatial Technology Competency Model (DOLETA 2010), only two are restricted to licensed professionals. Despite this reality, state licensure laws too often define the "practice of surveying" in vague or overly broad terms, which are occasionally interpreted in ways that inaccurately and unfairly call into question the qualifications of GIS professionals. This is

particularly unfair for professionals who have earned GIS Professional (GISP) or Certified Mapping Scientist (CMS) certifications voluntarily.

The GIS Certification Institute contends that state regulation of the many and varied tasks performed by GIS Professionals would be counterproductive. Instead of state regulation, we believe that voluntary certification of GIS professionals—with encouragement and support from employers—is the best means to promote high education standards, continuing professional development, and ethical practice in our rapidly growing and evolving field. GISCI contends that the practice of surveying should be defined narrowly, and that associated state regulations should be narrow in scope, reflecting the limited footprint of survey practice within the geospatial field. The projected growth in employment of GIS professionals should not be stifled by unnecessary government regulation. Instead, helpful efforts by government agencies such as the Department of Labor to define the geospatial field, and to identify the full range of competencies required for worker success, help foster the growth and professionalism of the GIS Profession.

Note: This statement originally appeared as: DiBiase, D. (2011) Reflections of a GISCI Past President. *The GIS Professional* 243, May/June, pp. 8-9.

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