## Highly Capable Geospatial Workforce to Meet Current and Future Demands

In late 2009, the U.S. Department of Labor Employment and Training Administration (DOLETA) established six new geospatial occupations, bringing the total to ten.  With the exception of geospatial software programmers and application developers, the current array of recognized occupations now represents the scope of professional activities in the geospatial field with reasonable accuracy.

Estimates of workers employed, and projections of expected changes in workforce demand are included in each DOLETA occupation description.  These estimates suggest that the total U.S. geospatial workforce currently numbers approximately 450,000, and that about 180,000 new workers will be needed by 2018.

Preparing new workers for success, and supporting the continuing professional development of existing workers, will be a major challenge for the field and for the nation's education infrastructure.  Fortunately, resources now exist that enable geospatial educators to identify educational objectives, to design curricula, and to evaluate student learning more reliably than ever before.

DOLETA has sponsored and published industry competency models for most U.S. industries. In particular, DOLETA's Geospatial Technology Competency Model (GTCM), and related job analyses conducted by the national Geospatial Technology Center of Excellence (GeoTech Center), has brought workforce needs into unprecedented focus and provided the means to effectively and accurately develop training curricula for specific geospatial occupations

Furthermore, the detailed understanding of required competencies enabled by the GTCM for the recognized geospatial occupations provides human resource specialists and hiring managers with new tools to develop geospatial classifications and specific hiring criteria.

The GTCM's uptake among education and training organizations proceeds slowly, however, due to the DOLETA's modest promotional effort and the long lag times associated with scholarly publication.

To accelerate this process, URISA will to:

a)  Support implementation of the Geospatial Technology Competency Model by endorsing it formally (as GISCI has done), by encouraging education and training programs to use the GTCM to assess their alignment with industry needs, and by applauding those who publicize results of such assessments.

b)  Promote understanding of the GIS&T Body of Knowledge (BoK). The BoK was a key reference for the GTCM. Whereas the BoK *describes* the nature and scope of the expertise that comprises the geospatial field, the GTCM *prescribes* requisite expertise.

c)  Support implementation and use of the Geospatial Management Competency Model. In Fall 2011, in cooperation with DOLETA, URISA conducted a day-long workshop to codify the competencies required for effective GIS management. This "Geospatial Management Competency Model" (GMCM) is the first such specification adopted by DOLETA for any industry. In combination with URISA's pioneering work related to Capability Maturity Modeling, the GMCM helps to solidify URISA's distinctive organizational expertise in GIS management.



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