

## I ndustry Snapshots

- The market for geospatial technologies in 2002 was estimated at \$5 billion. This market is projected to have annual revenues of \$30 billion by 2005, consisting of \$20 billion in the remote sensing market and \$10 billion in the geographical information systems (GIS) market. (Gaudet, Annulis, Carr) *Building the Geospatial Workforce*, Urban and Regional Informational Systems Association Special Education Issue, 2002)
- Geospatial products and specialists are expected to play a large role in homeland security activities. Information gathering needs to protect critical infrastructure have resulted in an enormous increase in the demand for such skills and jobs. (Lorraine Castro, NIMA Human Resources Department, 2003)
- Increasing demand for readily available, consistent, accurate, complete, and current geographic information and the widespread availability and use of advanced technologies offer great job opportunities for people with many different talents and educational backgrounds. (U.S. Geological Survey and U.S. Bureau of Labor Statistics)

# High Growth INDUSTRY PROFILE

## W orkforce Issues

### Skills, Competencies, and Training

- Aligning training in Geospatial applications with industry developed competency models
- Developing competency models for new applications of Geospatial technology
- Preparing entry-level workers with basic skills to ensure career success

### Image and Outreach to the Public

- Reaching an industry-wide consensus that defines "Geospatial", its technologies and its applications
- Creating a national image campaign that raises awareness about the industry and dispels stereotypes and misperceptions

### Pipeline

- Recruiting young workers through apprenticeship and high school/college dual-enrollment, dual-credit agreements
- Tapping nontraditional labor pools to diversify the workforce

## S kill Sets

(Source: ASPRS: *The Imaging and Geospatial Information Society*)

- College preparatory courses that emphasize the sciences are suggested for individuals interested in pursuing careers in photogrammetry, remote sensing, and GIS.
- For individuals who do not wish to pursue an advanced degree, there is a substantial demand for technicians in geospatial information technology. Many 2-year academic and technical institutions offer education and training in photogrammetry, remote sensing and GIS, and related fields. Associate degree and certificate programs in geographic information systems (GIS), surveying, photogrammetry, and similar curricula provide a sound foundation for work experience or for transfer to other academic institutions for further education.
- It is highly recommended that any individual wishing to pursue a career in photogrammetry, remote sensing, and GIS participate in an internship program to obtain hands-on experience as part of their preparation for employment, in addition to formal education.

## E TA in Action

In September 2004, U.S. Secretary of Labor Elaine L. Chao announced a series of investments totaling approximately \$6 million to address the workforce needs of the geospatial technology industry. The U.S. Department of Labor (DOL) hosted forums with geospatial technology industry leaders, educators, and the public workforce system.

DOL has sought to understand and implement industry identified strategies to confront critical workforce shortages. It has listened to employers, industry association representatives, and others associated with the geospatial technology industry regarding some of their efforts to identify challenges and implement effective workforce strategies. DOL's Employment and Training Administration is supporting comprehensive business, education, and workforce development partnerships that have developed innovative approaches that address the workforce needs of business while also

effectively helping workers find good jobs with good wages and promising career pathways in the geospatial technology industry.

This set of workforce solutions is based on the geospatial technology industry's priorities that address issues such as:

- expanding the pipeline of youth;
- helping alternative labor pools gain industry-defined skills and competencies;
- developing alternative training strategies;
- developing tools and curricula for enhancing skill sets;
- enhancing the capacity of educational institutions;
- developing industry-defined career ladders and lattices;
- developing strategies to retain and retrain incumbent workers; and
- assisting transitioning individuals from declining industries to high growth industries.

## I nvestments

**Total Industry Investment is \$5,743,291**  
**Total Leveraged Resources are \$6,221,124**

**Institute for GIS Studies (IGISS) (TN, NC)**  
*Geospatial Business Hub Project*  
**Grant amount: \$2,000,000; Leveraged amount: \$4,387,327**

**Kidz Online (VA, CA)**  
*The Geo 21 Project*  
**Grant amount: \$1,000,000; Leveraged amount: \$1,002,055**

**Rancho Santiago Community College District (CA, MO)**  
*A Model for Connecting the Geospatial Technology Industry to Community College Workforce Development*  
**Grant amount: \$187,939; Leveraged amount: \$56,684**

**The University of Southern Mississippi (MS)**  
*Geospatial Technology Apprenticeship Program*  
**Grant amount: \$1,565,227; Leveraged amount: \$280,058**

**W.F. Goodling Advanced Skills Center (PA)**  
*Geospatial Imagery Analysis and Practical Applications*  
**Grant amount: \$990,125; Leveraged amount: \$495,000**

## R esources

For additional background information about the industry and details on the grants, information about employment and training opportunities, and workforce development tools for employers, educators, and workforce professionals please refer to the following: [www.doleta.gov/BRG](http://www.doleta.gov/BRG), [www.careervoyages.gov](http://www.careervoyages.gov), [www.careeronestop.org](http://www.careeronestop.org), and [www.workforce3one.org](http://www.workforce3one.org).