



## The Geospatial Job Market

Notes from the panel discussion at the 2012 Annual Meeting of the Association of American Geographers

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**Panelists:** Max Baber, U.S. Geospatial Intelligence Foundation; Judy Colby-George, Spatial Alternatives; David DiBiase, Esri; Richard Serby, GeoSearch, Inc.; Ashok Wadwani, Applied Field Data Systems, Inc.

**Moderator:** David DiBiase, Esri

### What is the career outlook within the geospatial field?

- Geospatial careers are among the fastest-growing in the U.S. and world today, and geospatial jobs are currently available in every industry
  - Examples include the banking, insurance, law enforcement, business, healthcare, finance, and defense industries
  - Functional areas/titles within these industries include technician, analyst, software/hardware developer, management, sales, and marketing
  - The industry is currently in a transformative period with a need for analysts and synthesizers
- In some markets, there are not enough applicants with needed skills to fill the number of open positions
  - It is possible to make a GIS person into an IT person, but IT staff are typically less interested in learning geography than vice versa
- The outlook for geospatial careers is especially positive in the national security industry
  - Strategic partners of the U.S. Geospatial Intelligence Foundation include: GeoEye, AGI, Harris, SAIC, Esri, ATT, NJVC, TASC, SI, Oracle, Microsoft, Digital Globe, Raytheon, Boeing, BAE Systems, Lockheed Martin, GDT, Ball Aerospace, Intergraph, Booz Allen Hamilton, Northrop Grumman, IBM, L-3, CACI

### How can jobseekers find postings for openings within the geospatial sector?

- Jobs are posted via numerous outlets – check specific companies' websites as well as aggregators (e.g. Indeed.com, CareerBuilder.com)
- GeoSearch has recruiters for positions in the geospatial science field [<http://www.geosearch.com/>]
  - There are 30,000 visitors to the company's website each day
  - C++, .Net Framework skills are desirable

### What is the geography of geospatial careers?

- Careers in the geospatial industry tend to be concentrated in the most populated areas of the U.S.
- There is a "geospatial jobs landscape urban hierarchy" – Houston has the most jobs and occupies the top of the hierarchy
- "GIS Alley" is the Front Range of the Rocky Mountains but we do not understand why
- Even in places such as Maine, which was a "late adopter" of GIS, geospatial jobs are available

### **How can students and early-career jobseekers get into the geospatial sector?**

- Paid internships and contract work (as opposed to full-time positions) are ways to gain entry into the field
  - 80% of contractors are hired on a full-time basis with the companies where they are placed
  - Among firms represented by the panelists, one currently has 15 interns and another has 20
- Small companies are more likely to hire at the entry level
  - Attend state-level GIS group meetings for networking opportunities with smaller companies
- Stay active in various organizations and put yourself out there
  - Spend no more than half of your time on computers looking for jobs – people need to meet potential employers face-to-face

### **What are employers looking for? What education and experience are required?**

- It is important to develop a focus and combine your geospatial training and background with an area of high interest (e.g., healthcare or marketing)
- Employers observe that interns bring strong GIS skills, but need further development of transferable skills such as writing, communication/interpersonal skills, and professionalism
  - All kinds of communication are important; the nature of your work will determine the specific type(s) of writing skills needed
  - Employers are now reaching out to teachers, whereas it should be the other way around  
Employees should not be “buttonologists” but problem solvers -- people with spatial reasoning skills, analytical skills, and intellectual agility
- In a small company, employers need employees who are able to do the whole project
  - They need "self-starters," people who clearly articulate what they are and are not good at, and people who can take a problem from a client and figure out how to do it and translate it
- Employers tend to hire people like themselves and who will fit on the team
  - Fit might help to compensate for gaps in technical skills
- Define your own job – even inside your company – and evangelize what you do as a geographer
- There is demand for employees with both breadth and depth of experience; depth areas typically emerge/evolve as your career develops
- Certification for geospatial analysts working in the intelligence community is expected to become a government policy by October 2012
- Decide early on where to focus your career, e.g., in a public agency versus a commercial organization
  - Shifting from the public sector to the commercial sector generally does not work, but the other direction is more common
- Refer to the Geospatial Technology Competency Model (GTCM) [available at: <http://www.careeronestop.org/competencymodel/>] for more information about skills and abilities needed in this sector

**What kinds of jobs are available to PhDs in GIScience?**

- There is a bias on the commercial side against PhDs – employers may wonder why you want to work outside academia and whether you would be happy working in their industry/organization
  - Some people hide or downplay their PhDs as a result

**What has been the effect of the recession since 2008, and what is the outlook for the next 10 years?**

- There has been no impact; it is more about finding the jobs that are available in certain places
- Entry-level to mid-level personnel have been most expendable in the recent recession
- The world tends to move in cycles -- the U.S. is coming out of the worst economy in many years
  - Stay true to yourself and what you want to do