GeoEd’15 Conference

• In partnership with the National Geospatial Technology Center of Excellence, Jefferson Community and Technical College - Southwest Campus hosted the eighth annual GeoEd Conference in Louisville, KY on June 10, 2015.
• Pre-conference workshops were held on the Southwest campus on June 8th and 9th.
• A post-conference Mini-Session on UAVs was held on June 11.

Pre-Conference Workshops

- ArcGIS Online – Rich Schultz
- Open Source Software – Tom Mueller
- Simple Python using ArcPy – Vince DiNoto
- Pictometry and POL for Educators – Andy Mendola
- Using Collector for Field Data – Vince DiNoto
- Learning to Leverage the Tools and Products of the GeoTech Center – Rich Schultz
- Introduction to ArcGIS Pro for the GIS Professional - Robert LeClair
- Implementation of the Geospatial Awareness Course – Ken Yanow & Nicole Ernst
- Remote Sensing and Imagery use in ArcGIS 10.3 Desktop – Ann Johnson

Open Educational Forum – all
• List of issues discussed in detail: https://drive.google.com/file/d/0B5z9N8m9L6OlTkRteC1qR2hJTE0/view?usp=sharing

The products (i.e., tools) and services of the GeoTech Center include the following:

• the Geospatial Technology Competency Model (GTCM),
• Model Courses and content,
• the National Map of Geospatial Programs in the U.S.,
• a Community of Practice (a centralized national network for geospatial workers.),
• the GeoEd Annual Conference,
• an international list serve for geospatial technologies,
• a monthly newsletter,
• Mentoring Groups,
• Geospatial Workshops,
• a massive open online course (MOOC) and open ongoing course (OOC),
• a Student Skills Competition,
• Awards for Geospatial Educators and Partners,
• Monthly Webinars, a Map and Data Library,
• resources for starting a geospatial program, resources for geospatial careers,
• a Model Program and Content Tool, and
• a Syllabus Repository for Geospatial Coursework.
Pre-Conference Workshops

Details of GeoEd’15 Workshops available here: https://drive.google.com/file/d/0B5z9N8m9L6OlUVZlb09PYWNFUjQ/view?usp=sharing

Conference Activities

Geospatial Technology Competency Model (GTCM 2014) and other work at the Department of Labor – Rodney Jackson and Rich Schultz

• USGS is currently working on BoK 2.0
• Newest version of GTCM revised in Fall 2014
• Job descriptions and modifications sent to DoD for Geospatial Industry by Rodney
• GTCM is current but may need revision in future as industry changes so rapidly

GISP Examination – Bill Hodge

• USGSI will have examination process accredited by ANSI
• Validated by job analysis
• Exam strengthens the GISP certification and helps align with job analyses
  • Knowledge Areas Breakdown:
    • Conceptual – 12%
    • Cartography/Visualization: 14%
    • GIS Design/Data Modeling: 28%
    • GIS Analytical Methodology: 17%
    • Data Manipulation: 15%
    • Geospatial Data: 13%
  • Anyone can take exam starting July of 2015.
Conference Activities Takeaways

**NSF Projects in GIST**
- GeoTED (VA) – Chris Carter, et. al.: Interdisciplinary Service Learning, Shared Services, Virtual Internships
- Weber State University (UT) – Michael Hernandez – GenEd course Intro. to Geospatial Sciences and Geospatial Technician survey tasks
- Kaskasia College (IL) – Mike Rudibaugh – Geospatial Technology Advantage – Preparing GST technicians and GST-enabled graduates to S. Illinois business and industry
- Articulated program: 2yr  4 yr.  workforce
- Conduct outreach events
- Counseling Guide for GST
- STEM Integration Modules
- Assembling a team for ATE Grant

**Conference Activities Takeaways**

**GeoINT – Keith Maes back, CEO of USGIF**

1. GPS – precision geo location
2. Remote sensing: old, new and drone
3. Processing power
4. Software/hardware
5. Broadband and fiber optic
6. Cloud-based access and enablization
7. Mobile – 685,000 apps in Apple Store have location central to their operation
8. Analytics and big data – Factual – company of authoritative data
9. Location-based intelligence and location-based services driven by marketing and healthcare
10. Augmented and virtual reality
11. Internet of things: tied to place

**ArcGIS PRO – Robert LeClair**

- Pro is for 64-bit and ArcGIS Desktop is not
- NO! NOT replace ArcMap
- Cloud-ready
- ArcMap, ArcCatalog, ArcGlobe, and ArcScene all mashed together in Pro.

**Introduction to UAV – Chris Cruz**

- Discussion around Certificate of Authorization (COA)
- 70,000 jobs in U.S. over next 3 years
- $13.6 billion economic impact
- By 2025: 10,000 jobs and $82 billion impact
- Biggest application: precision agriculture
- Most active states: Texas, California, and Virginia.
- Conservation Drones YouTube clip: https://www.youtube.com/watch?v=0VCI4V9x3XG
Conference Activities Takeaways

Model Courses – Ann Johnson and Rich Schultz

Preparing the entry-level geospatial workforce via Model Courses:

- GST 100: Geospatial Awareness
- GST 101: Intro to Geospatial Technology
- GST 102: Spatial Analysis
- GST 103: Data Acquisition
- GST 104: Cartographic Principles
- GST 105: Remote Sensing and Imagery Analysis
- GST 106: Geospatial Programming
- GST 107: Web Applications and Development
- GST 108: Geospatial Capstone
- GST 109: Internship

Conference Activities Takeaways

Integration of GIST into other courses – Tom Mueller

- Integration of Geospatial Technologies into:
  - Crime mapping
  - Hydrology
  - Fire Science
  - Geology
  - Foreign Language
  - History
  - English Literature
- Using OpenStreetMap
- 5 Themes of Geography:
  - Location
  - Place
  - Movement
  - Regions
  - Human/Environmental Interactions

Conference Activities Takeaways

Status update of the National Geospatial Technology Center of Excellence (GeoTech Center) – Vince DiNoto

- National Map of U.S. Geospatial Programs located here:

- Student Competition – Vince DiNoto
  "Deadline Extended to Friday, June 19, 2015"
  [https://sites.google.com/site/geospatialcompetition/](https://sites.google.com/site/geospatialcompetition/)

Conference Activities Takeaways

Award Winners

- Outstanding Educator – David Skiles, Getting to Remarkable: How geospatial instruction can transcend traditional knowledge
- Outstanding Company – GeoTED
- Lifelong Achievement Award – Tora Johnson
Award Winners

Conference Activities Takeaways

Geospatial Awareness Courses in the B&I Community and Microcredentials – Nicole Ernst

10-county service area with 20,000 students

2005: Intro to GIS Online

$99 and no credit Can be used as elective in program

Used Elmhurst College MOOC (partnership with GeoTech Center) as model

Post Conference Mini-Session: UAVs

Nuts and Bolts of Unmanned Aerial Vehicles (UAVs)

Applications:
- Film industry
- Law enforcement
- Real estate
- Business
- Environmental management/resources
- Agriculture

Notes available on GeoTech Center Google Drive for the workshop

Post Conference Mini-Session: UAVs

Nuts and Bolts of Unmanned Aerial Vehicles (UAVs)
Post Conference Mini-Session: UAVs

Nuts and Bolts of Unmanned Aerial Vehicles (UAVs)
Chris Cruz's UAV Resources:
https://drive.google.com/file/d/0B5z9N8m9L6OlTlBzYmJBRVlpLTA/view?usp=sharing
Schools with FAA Approved COAs:
https://drive.google.com/file/d/0B5z9N8m9L6OlOURFMFhNNnk5RUk/view?usp=sharing
UAV Curriculum/Program at West Valley College in Saratoga, CA:
https://drive.google.com/file/d/0B5z9N8m9L6OlcnBOZWlyTXQ0WHM/view?usp=sharing

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