ASCE 139TH ANNUAL CIVIL ENGINEERING CONFERENCE
From Builders to Integrators – Civil Engineers Leading the Way
Kansas City, MO | October 29-31, 2009

Welcome to ASCE's

139th Annual Civil Engineering Conference

Want Sustainable Infrastructure – Start with Geomatics

ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS

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PERSI – Practice, Education and Research for Sustainable Infrastructure

- Initiative of the infrastructure community
- Advances and incorporates concepts and knowledge of sustainability into the standards and practices used throughout the life cycle of infrastructure systems

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Task Committee Structure

- Project level committee – 6
  - Project environmental management; land use, landscape, archeological & cultural heritage; ecology and biodiversity; water & air issues; energy; use of materials
- Infrastructure systems level committee – 8
  - Buildings; transportation; water resources & treatment; solid waste; energy; communications physical infrastructure; flood & storm surge control systems; global warming
- Relevant practice level committee – 4
  - Measurements of sustainability; planning for sustainability; ***geomatics for sustainability;*** education for sustainability

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Geomatics for Sustainability

- Objective: to determine the availability and access to spatial and geographic information that can be used in developing sustainable decisions in the planning, design, construction and maintenance of infrastructure systems

What is Geomatics?

- New technology & improved electronic instruments – measure & collect spatial data on *x,y* locations with corresponding *z* component of elevation
- High-resolution aerial photographs & images precisely located with on-board GPS & INS
- Ground-based and airborne systems of LiDAR
- GIS to integrate various data sources in the context of a reference frame
- Satellite image systems

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Initial work focus areas

- Sustainability and infrastructure and the potential uses of geomatics
- National geospatial databases available for use by the infrastructure community
- Challenges of information sharing, database compatibility, education and available technologies

Session today

- Terry Bennett – challenges for geomatics in sustainability
- Milo Robinson – spatial data infrastructure, availability of national geospatial databases
- Jeff Harrison – FGDC demo project: critical infrastructure between US & Canada