

LICENSING AND CERTIFICATION OF GIS PROFESSIONALS

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LICENSURE

- Stems from police power
- Designed to protect public health, safety and welfare
- Many professions regulated by state
 - Surveyors, engineers, planners, barbers, etc.
- State government activity to control profession/industry

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CERTIFICATION

- Like licensure, but generally voluntary
- Generally undertaken by profession and/or industry
- Criteria not codified in law but set by certification board
- Purpose similar to licensure

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WHY CERTIFICATION IS ISSUE

- Time for GIS professionals to define activities and skills required for profession
 - Otherwise, others will do it for us
- Anyone can teach a course and call it GIS
 - What skills are necessary?
 - Who possesses these skills?
 - No skills institutionally acknowledged

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CERTIFICATION ISSUE

- Issue stems from miscommunication between GIS and surveying professionals
- GIS
 - Surveyors attempting to block them from doing their job
 - Surveyors too demanding on data
- Surveyors
 - Mistrust use of data
 - Don't understand all facets of GIS industry

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MODEL LAW

- NCEES (National Council of Examiners for Engineering and Surveying)
- Organization of state licensing boards and other professions
- Responsible for developing and testing engineering and surveying candidates
- Establish Model Law for adoption by jurisdictions to establish consistency

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MODEL LAW

- Added wording to include photogrammetry and GIS/LIS under the surveying umbrella
- Some interpretations have been widely misconstrued over the last couple years
- Purpose is to license activity that fall clearly under the surveying profession

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DETERMINATION OF SKILL SET

- Two methods of evaluating skills
 - Identify skill needs and then evaluate each person's proficiency – certification
 - Identify what skills should be taught and evaluate how well each educational program teaches those skills – accreditation
- Some professions use both

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BENEFITS OF ACCREDITATION

- More efficient than certification
- By ensuring standard set of skill presented to students, assures competency of individuals
- Student mastery assessed through testing and grading evaluates the competency
- Skill set becomes discipline specific
- Establishing strict requirements for matriculation/graduation assures quality of graduates

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IS GIS A PROFESSION?

- Does GIS have specialized body of knowledge?
- Does GIS have a mission?
- Is there a formal organization?
- Does GIS have a common language?
- Is there specialized training for GIS?
- Does GIS have a special culture and lore?
- Is there a GIS Code of Ethics?

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CERTIFICATION PROGRAMS

- ASPRS
 - Professional and technician certification programs
 - Applications submitted, references submitted, application peer-reviewed
 - Upon approval, applicant administered exam
 - Certification for 5 years

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CERTIFICATION PROGRAMS

- GISCI – GIS Certification Institute
 - Outgrowth from URISA's certification initiative
 - Only programs offered are certification
 - Point-based in 3 categories: education, experience, contributions
 - Minimum number in each category (30 education, 60 experience, 8 contribution)
 - Grandfathering clause
 - 5 year certification

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CERTIFICATION PROGRAMS

- ISO/TC211
- To establish a structured set of standards for information concerning objects of phenomena that are directly or indirectly associated with a location relative to the Earth. These standards may specify, for GI, methods, tools and services for data management (including definition and description), acquiring, processing, analyzing, accessing, presenting and transferring such data in digital/electronic form between different users, systems, and locations

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ISO/TC211

- Outgrowth of Canadian request to assess qualifications of consultants seeking funds from foreign aid agencies
- Opposition
 - Inappropriate for technical standards organization to determine professional credentials
 - Excellent performance of educational institutions
 - Restrictive standards may slow broad GIS adoption
 - Problems defining bounds of relatively immature profession

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REASONS FOR CERTIFICATION

- Protect public and consumer
- Practitioner recognition
- Knowledge advancement
- Promoting skills to public
- Helps define profession
- One measure of competence
- Can find employment easier
- Better pay
- Increase chance for advancement

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REASONS FOR CERTIFICATION

- Help human resource managers evaluate applicants
- Increased customer/client satisfaction
- Ability of stay current through renewal program
- Ascribe to a code of professional ethics/conduct
- Regulation of the profession

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REASONS AGAINST CERTIFICATION

- Unnecessary bureaucracy
- Cost hurts individuals who have to pay for certification
- Affects nature of competition
 - Competition drives up salaries
 - Competition made US globally dominant in GIS
- Assigns control to single body – they can set
 - Standards
 - Content
 - Curriculum
 - Testing
 - Direction of activities

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REASONS AGAINST CERTIFICATION

- Can incite workplace resentment and other feelings of ill will
- Innovation requires zero control
 - Could hurt GIS market leadership of nation
 - Most inspired new innovation and use of GIS will not come from GIS-certified technicians
- Heart of GIS is integration
 - Fusion pressures come from applications
- Applications should be controlled but leave disciplines alone & great things through multidisciplinary integration will occur.

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