GISP: The Road to and Through an Exam

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GISCI began providing GIS professional certification in 2003 and launched the GISCI Core Technical Knowledge Exam® as an addition to the GISP certification in 2015. This session will focus on the value and growth of GIS professional certification and where GISCI and the GISP certification will go from here.
GISP – An Updated Perspective

Certification
GISP Certification History
GISP Current Process
Exam Creation
Future Direction
WHY CERTIFY?
Professional certification is a process by which a person shows that she has acquired the knowledge, experience, and skills to perform a specific profession.
HOW DO WE MOVE FROM THE BIRTH OF AN INDUSTRY TO CERTIFICATION?

ALL INDUSTRIES FOLLOW THE SAME PATHWAY, REGARDLESS OF TIMEFRAME.
One certification generally leads to another

- Managerial Certification
- Higher Level Certification
- Entry Level Certification
- General Certification
- Provisional Certification
GISP – An Updated Perspective

CERTIFICATION vs LICENSURE
Over 1,600 types of Certifications exist across a myriad of industries

In 2016, approx. 17% of civilian, noninstitutional workers held a certification or license.

(data: Bureau of Labor Statistics 2016)
Board Members

One of the strengths of GISCI has been the strong and diversified Board representation over the years!

Our current Board makeup reflects that same passion, experience, and service.

GISCI is composed of a group of Member Organizations & Strategic Partners representing the full range of the geospatial community.
Member Organizations

- NSGIC
- URISA
- GITA
- UCGIS
- AAG
Strategic Partners 2015
GISP – An Updated Perspective

Certification

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Future Direction
Since its inception, the number of GISP\(s\) has expanded from 29 in 2003 to over 8,000 GISP\(s\) around the world.

2004 - 2017 - 8,000 + Active GISP\(s\)
2015 - 2018 - 12,000+ Potential GISP\(s\) have registered on the GISCI site to start/explore the process

2018 & beyond – 20,000 GISP\(s\) + by 2024 ?
ACTIVE GISPs: CERTIFICATION HISTORY

2018 – 8,000 +
2015 – 7,000+  Exam Added
2014 –  5,900
2012 –  5,159
2011 -  4,946
2010 -  4,729
2009 -  4,526
2008 –  3,224
2007 -  1,920
2006 -  1,375
2005 -  974
2004 -  552
2003 - PILOT  29
GISP – An Updated Perspective

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GISP Current Process

Initial GISP: Portfolio Requirement + Exam

• Ethics Statement
• 4 Years Min Geospatial Experience
• Portfolio Application
  • Education, Experience, Contributions
  • Minimum Points Req in Each Category
• GISCI Geospatial Core Technical Knowledge Exam Now Required
GISP Current Process

Recertification: Portfolio Requirement

- Education & Contributions Required
- Experience Optional
- Exam Not Required for Recertification

- Online Application
- 3 Year Recertification Period
GISP Current Cost

Initial GISP Cost:

- Application Fee - $ 100
- Portfolio Review Fee - $ 100
- Exam Fee - $ 250
- Exam Fee - $ 300 International
- 3 Year Certification Period
- Annual Maintenance Fee of $ 95/yr starts in the 2\textsuperscript{nd} year of initial certification period
GISP Current Cost

Recertification Cost:

- Annual Maintenance Fee continues- $95/year or $285 as one payment
- No Exam Required
- 3 Year Certification Period
- Recertification Application Online
GISCI – An Updated Perspective

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Exam Creation History

Aug 2012  -  GISCI Board Selects Exam Development Project Mgr & Psychometric Consultant – Starts Job Ananysis

Nov 2015  -  Inaugural Exam Deployment

Summer 2016 -  Exam Testing Window

Fall 2016   -  Exam Testing Window
Exam Creation

- Written by GISP for GISP Certification
- Composed at a 4 Year Experience Level
- Centered on Applied Knowledge
Exam Creation Considerations

MAJOR CONSIDERATIONS

• The Exam is now required in addition to the Portfolio Process
• Two Exam offerings each year in early June & Dec
• Exam can be taken at any time in a person’s career
• Students can test at the time they graduate or before
• There is a 6 year window to complete all parts of Certification process once you either pass the exam or get a Portfolio approved
Exam Creation Considerations

Selection of Knowledge Areas for Exam

- Started with the GISP community
- Used combination of job analysis, DACUMs, focus groups to examine major tasks used in the GISP community
- The total number of GIS Knowledge areas exceeds 400+, as defined by the GIS&T Body of Knowledge

- GISCI found approx. 10% relevant to a GISP professional across the range of GIS certified professionals
- 44 KSAs (knowledge, skills, abilities) were selected for the exam
Exam Creation

Exam Component Selection – Started with GIS&T Body of Knowledge

GIS&T Body of Knowledge: 400+ topics included

<table>
<thead>
<tr>
<th>Knowledge Area</th>
<th>Units</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Methods</td>
<td>12</td>
<td>59</td>
</tr>
<tr>
<td>Conceptual Foundations</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Cartography &amp; Visualization</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Design Aspects</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>Data Modeling</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Data Manipulation</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Geocomputation</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>Geospatial Data</td>
<td>12</td>
<td>47</td>
</tr>
<tr>
<td>GIS&amp;T Society</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Organizational &amp; Institutional Aspects</td>
<td>6</td>
<td>32</td>
</tr>
</tbody>
</table>
Exam Creation

EXAM BLUEPRINT: Exam Components selected for testing

Knowledge Category – 44 KSAs Included

Conceptual Foundations 12% (12 scored questions)
Cartography & Visualization 14%
GIS Design Aspects & Data Modeling 29%
GIS Analytical Methods 17%
Data Manipulation 15%
Geospatial Data 13%

100% (100 scored questions)

Exam to be offered every 6 months – Summer & Fall Windows
Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

Conceptual Foundations 12%
• Knowledge of spatial concepts
• Knowledge of standard spatial data models (vector, raster, object-related models)
• Knowledge of Earth geometry
• Knowledge of georeferencing systems

Cartography & Visualization 14%
• Knowledge of contour mapping
• Knowledge of basic physical geography
• Knowledge of how data collection methods influence map design
• Knowledge of principles of map design
• Knowledge of graphic representation techniques
• Understanding of how data classification techniques affects the thematic map
Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

GIS Design Aspects & Data Modeling  29%
• Knowledge of data exchange procedures
• Knowledge of security restrictions on data
• Knowledge of systems architecture & design
• Knowledge of database design
• Knowledge of geospatial data structure

GIS Analytical Methods  17%
• Knowledge of overlay aspects
• Knowledge of statistics
• Knowledge of basic programming
• Knowledge of raster/vector principles
• Knowledge of units of measurement
Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

Data Manipulation  15%
• Knowledge of selection queries
• Knowledge of different data types
• Knowledge of data relationships
• Knowledge of data collection

Geospatial Data  13%
• Knowledge of metadata and standards
• Knowledge of date archiving and retrieval
• Knowledge of differences among join, merge, union, clip, intersect
• Knowledge of basic field data
ADVANTAGES OF AN EXAM

• Provides for a Measurable Competency Level
• GISP now valued by industry as a preferred credential in job descriptions
• Provides Increased Visibility for GISP Professional Certification
• Builds Upon The Established, Successful, Recognized GISP Portfolio
• Provides for Increased Student Participation
• Provides An Entry For Students Early In Their Careers
• Provides A Basis For A Move To More Specialized Certifications
• It Continues To Advance And Consolidate The Profession
Exam Creation

ADVICE TO A STUDENTS & YOUNG PROFESSIONALS

• Start a profile on LinkedIn and start making connections
• Start a Portfolio on the GISCI site and work towards a GISP
• Plan to take the GISCI Exam as a means to differentiate yourself
• Join an association/s while in school – participation counts
• Attend a local GIS User Group

• Show an employer you are looking to the future
Exam Creation

PREPARE FOR AN EXAM

- Download and study the Exam Candidate Manual from GISCI’s site
  - Concentrate on the 44 KSAs identified
- Examine the GIS&T Body of Knowledge for reference material
- Examine URISA’s site for Exam Preparation Workshop Info
- Search the web for individual KSA materials
- Refer to your own textbooks and class materials
- Visit GISCI’s link on our site to Exam Preparation Information
Exam Creation

PREPARE FOR AN EXAM

• Visit the GeoTech Center website
  – www.geotechcenter.org
• Take the Personal Assessment Tool Online Survey
• A geospatial practice exam is posted on the GISCI site
• Exam preparation materials will follow

The key is to focus on the 44 KSAs covered – NOT the entire geospatial world!
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Future Direction
Future Direction

• Exam Maintenance & Updating
• GISP Certification Specializations ?
• Increased International Growth
• New Member Organizations ?
• Increased participation - 20,000 GISP by 2024?
Member Organizations

NSGIC

URISA

GITA

GIS Certification Institute

GLIS

UCGIS

AAG
THANK YOU!

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www.gisci.org