Proposal to Inform GIS Students about GIS Certification

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Executive Summary

The Geospatial Technology Program at Central Piedmont Community College focuses on the applied uses of the Geographic Information System. The program properly educates students in order to place then into GIS positions. Outside of GIS degrees and certificates, the GIS Certification Institute offers a professional certification in GIS. Standards and requirements are outlined by the GISCI to give adequate recognition to those who comply with the requirements.

Although CPCC provides quality degree and certificate programs, there is a need to inform student about the GIS professional certification. Many GIS students at CPCC have never heard of a certified GIS professional. They are being taught the fundamentals of the industry but not how to develop a GIS career. Through developing a career, students will learn the importance of continuing education and networking beyond just acquiring a job.

Informing students about the certified GIS professional is essential when they begin college. With the aspects of career planning, the introduction of this certification will inspire student to think long-term. In addition, goals are instilled in the thought process of the students. Students will be able to see past graduation and build objectives that they will desire to fulfill. Furthermore, the ethics of the GIS industry will be presented to the student. Preparing students for a job is one thing, but preparing students who will do what is right with a job is another.

The plan to inform students about the certified GIS professional is quickly needed. Each semester that passes by will result in unprepared students leaving college. Even though some preparation needs to be conducted, the 2007 Fall Semester would be an excellent time to implement this idea.

As the GIS industry grows, students must be informed about the areas important to a GIS career. Students must have set goals, networking abilities, and ethical training. Telling student early about the certified GIS professional will produce quality GIS graduates.

Introduction

The Geospatial Technology Program is fairly new at Central Piedmont Community College (CPCC). Its focus mainly revolves around the Geographic Information System (GIS) with its quickly developing technology. In 1988, the president of the Association of American Geographers (AAG) said that GIS was just a "nonintellectual expertise", and that it only involved pushing buttons with no actual geographic knowledge. He has been proven wrong because GIS has become a technology that inspires a new way of thinking with the tools that are growing within this system (Goodchild, 2007). As stated on the CPCC Geospatial Technology Program website, the objective of the program is to introduce students to GIS, present real life GIS situations, and place students into a GIS job (*Geospatial Technology Program*, 2007). Chris Paynter, the Geospatial Technology Program Chair stated that one of his goals was to "get the typical student into a job with GIS as being their primary job responsibility (interview, April 18, 2007)." With a degree a student is able to establish a good career foundation; however, experience is the best help to shift someone into a job (*Guide to College Majors*, 2005).

Career certification can be found for a number of industries. Two careers that show the recognition of certification are teaching and architecture. Teachers can be certified by the National Board for Professional Teaching Standards. Its website defines the certification as more than just letters after someone's name. National Board Certification is the highest level of distinction for teachers. A few of its characteristics are that it strengthens teaching practices, improves teaching careers, and raises teaching salaries (*The Benefits*, 2006). In addition, The Open Group states that they created a certification program because of the strong desire for IT architects with a flourishing background. The Architect Certification Program creates a standard for architects. This standard provides a basis for trust linking the suppliers with the customers

(*IT Architect Certification Program*, 2006). Even though these careers are on opposite spectrums, there is a need for appropriate standards in ever type of industry.

It is critical to introduce GIS professional certification to students at the time they begin college. The Urban and Regional Information Systems Association (URISA), founded in 1963, is defined as a "professional association for those involved in improving urban and regional environments through the effective use if information technology (as cited in Barnes, 2002)." Although students may not focus on organizations in their field of study until near graduation or thereafter, the URISA believes that GIS will not be recognized as a real profession without certification (ibid). At the end of 2003, the URISA launched the Certified GIS Professional program. It went public in January of 2004. This certification now provides the standards and requirements for the GIS profession (Somers, 2004). Figure one reveals that the interest in the Certified GIS Professional program has seen a steady growth since conception and now has 1480

GIS Professionals as of March 25, 2007 (Registry of Certified GIS Professions, 2007).

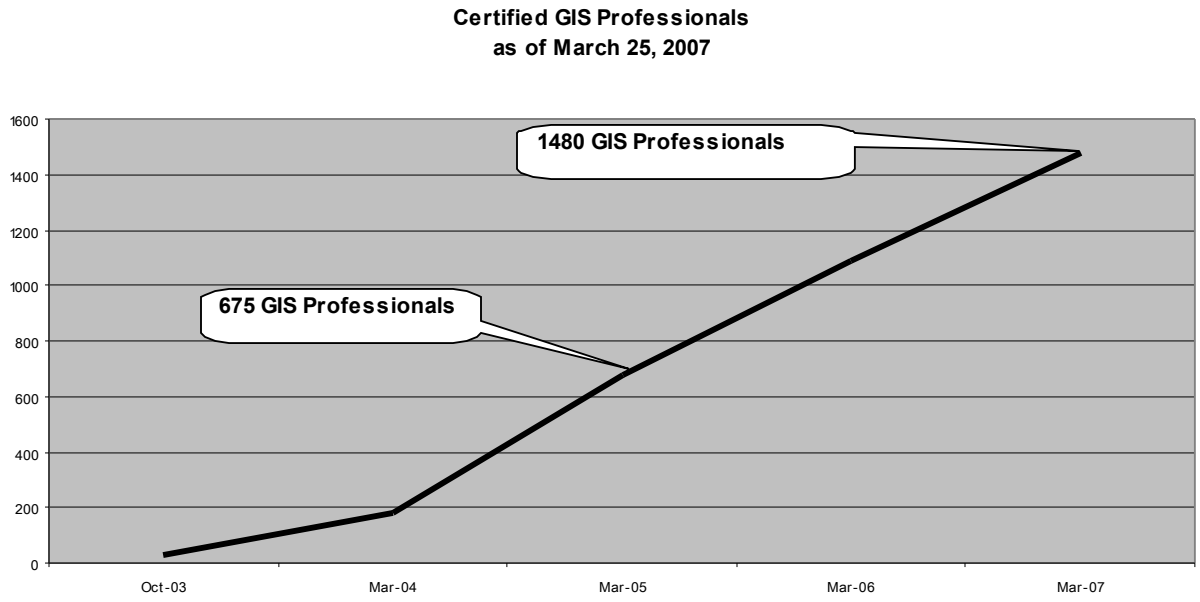

Figure 1
Source: Registry of Certified GIS Professionals

Needs Assessment

As of right now, the GISP program in hardly mentioned to students taking GIS classes at CPCC. The school's website has no reference of it, and there are no seminars on the subject. Although, Paynter did say that he does briefly mention the program in his own classes (interview, April 18, 2007). The lack of GISP familiarity was shown in a recent survey of some GIS students at CPCC. As figure two illustrates, six of ten GIS students said that they had never heard of a certified GISP. The remaining four students said that they had heard of the program; and that they learned about it either from a previous employer, local conference, or trade magazine. Although these statistics only give a glimpse of reality, there must be more importance put on the GISP and how there is more to GIS than just a job.

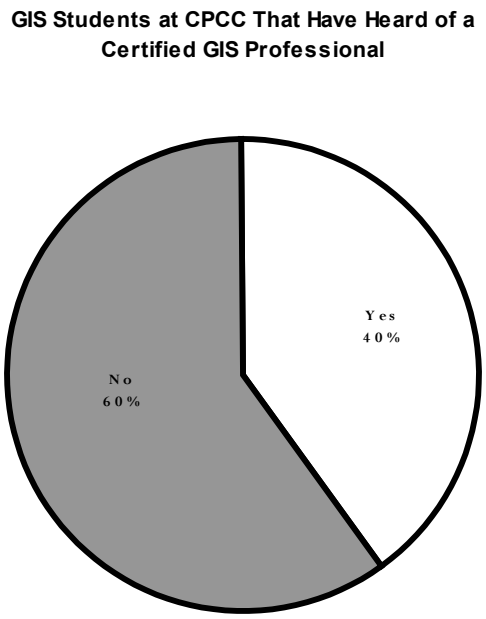

Figure 2

Source: CPCC GIS Survey

It is important to show that GIS is more than just a job. Although it has barely been recognized as a job in the past, it is coming more alive in our everyday way of life. "Science has discovered geography," says Doug Richardson, executive director of the AAG (Gewin, 2004). The U.S. Department of Labor a recognized that geotechnology is becoming one of the most up-and-coming industries (ibid.). GIS professionals use their skills to evaluate real life problems and determine a solution. In the September 11, 2001 attacks on America, GIS was used to help in the rescue and recovery efforts. Today, GIS is used to plan and protect against other terrorist attacks

(*Guide to College Majors*, 2007). Although this does not begin to go into all of the areas that GIS is used in, it does prove that GIS is a vital asset to holding our county together. Therefore, GIS is more than a job, it is what our county depends upon.

Every GIS student must be well informed on the options for their career path. Although some students have a good idea of their career path, many students need proper direction for faculty. An outlook of where a person is at in their career and where they want their career to be in the future is a significant part that student need to be taught. Role models and mentor can be beneficial to a student while in college and at the beginning of their career (Richardson 1995). These mentors can also provide a helpful network for developing your career. In a *Money Magazine* article some executives and job counselors responded to an interview with this statement:

> Finely tuned skills like networking and strategic planning are as important as ever, but the workplace of tomorrow demands even deeper, more elusive talents. Key job skills for the future include fast decision-making and the ability to manage and motive yourself (as cited in Grappo, 1997, p. 44).

By stetting up a proper outlook and support group, students are setting their self up for success in a career in GIS.

Proposal

Introducing GIS professional certification to students at the time they begin their college education should be considered for the Geospatial Technology Department's program. One benefit of introducing the certification during college is long-term thinking. Grams states,

> The primary benefit is encouraging students to think long term. Most students are concerned with getting a job. That's it. They fail to become part of the greater

> industry… It is vital for students to realize that getting a degree is only the start (Interview, April 16, 2007).

Through long-term thinking, a student will be able to adequately map out his or her career plan. Kleiman (1994) emphasizes, "It's important to know where you want to go so that hopefully, you can get there. But don't let your list of career goals and timetables get in the way of your success (p. 142)." Continuing to work on education after a degree is obtained is an essential task that must be remembered. Additional training and development is a significant factor to larger companies such as Motorola, Inc. and Arthur Anderson & Company. Each one of these companies has created their own education facilities because their profits rely upon their employees (ibid.). Furthermore, a dynamic part that students do not think about is networking with other GIS professionals. With their main focus on getting a degree, there is no thought outside of that degree. Non-profit associations and user groups are a good way to network. Some GIS professionals take a long time to realize the value of creating a personal network (Grams, Interview, April 16, 2007). By thinking long-term, students will be able to jump-start their career.

Goal setting is another attributing factor with the GIS professional certification. Many years ago, Yale University conducted a survey of their graduating class and found that less than five percent had some sort of set goals. The university conducted an additional survey thirty years later and found that the small group that had some type of goals contributed to ninety percent of the entire graduation class's wealth. Although wealth does not necessarily come with goal setting, it is an important factor to a career (Richardson, 1995). The GIS professional certification process enables students to see the requirements and establish a set of goals.

Introducing the GIS professional certification to college students will help them learn about ethics. Ethics are evident in every aspect of life. Maxwell (2003) describes ethics with this statement, "How would I like to be treated in this situation (p. 21)." On the GIS Certification Institute website's *A GIS Code of Ethics* it is descried with this description:

> This Code of Ethics is intended to provide guidelines for GIS professionals. It should help professionals make appropriate and ethical choices. It should provide a basis for evaluating their work from an ethical point of view. By heeding this code, GIS professionals will help preserve and enhance public trust in the discipline (2007, para. 1).

The GIS professional has a duty to society to give their very best effort, add to the community, and stand up for what is right. The GIS professional has a duty to their employer to do superior work, have a good-quality rapport, and be truthful in the way they present themselves. Moreover, the GIS professional has a commitment to both their co-workers and the general public to respect each one and help out whenever possible (*A GIS Code of Ethics*, 2007).

By providing the GIS certification application process to students at the beginning of the education process, the student will be able to know what needs to be done to excel in the GIS industry. The requirement areas include education, contributions, and experience. Each one of these areas is a result of a lot of time and effort and would be beneficial to know during the early stages of college. Grams mentions the importance of this with this statement,

> If students are interested in a career in GIS, GISCI is the best method for determining how to get there. It would be a shame for students to work for 4 years and then realize they weren't amassing CON [contribution] points or additional

EDU [education] points and would have to wait even longer to get certified (interview, April 16, 2007).

Documentation must also be given for each requirement area. The education area must be documented with degrees, certificates, or transcripts. The contributions area must be documented with acknowledgement letters or copies of contributing papers. The experience area must be documented with verification forms and letters from their employer. With the students knowing what is required, they will be able to properly document each required area. This will save a lot of time and hassle if they decided to apply for certification. Other than meeting the requirements, the applicant must agree to the GIS Code of Ethics and have his or her application reviewed by the GIS Certification Institute (*The GISCI Application*, 2007).

The outcome of presenting the GIS professional certification to college students includes not only the letters "GISP" after a person's name, but also personal credibility. Companies want to provide their management and clients with employees who offer a high quality service. GIS certification can add to the assurance factor for those who deal with GIS professionals (Somers, 2004). Another result is that the certified GIS professional makes on average $11,000 more than others in the GIS industry (Grams, interview, April 16, 2007). The desire to obtain a GIS certification also shows a person's desire to be fully devoted to the GIS profession (Kleiman, 1994). This is beginning to be a crucial decision factor for employers who want a committed employee with the added benefit of GIS certification (Somers, 2004).

Implementation

The process of introducing the GISP to students during college must be implemented fairly quickly. Each bit of time that passes by allows more students to miss vital information for their GIS career. Therefore this plan must be implemented by the beginning of the 2007 Fall

Semester. The first step to making this happen is to bring the whole Geospatial Technologies Department together to brainstorm ideas. Every professor must be on board to make this successful. Two brainstorming work seasons must be completed during the months of June and July. Each person's experience will provide a different prospective. These ideas will help create a proper approach. An additional planning meeting must be scheduled by the end of July to finalize the plan. Once a plan is worked out, each student must be informed during the first few weeks of the semester. The website can be updated to provide general information for both on campus and off campus students. Students who are able to come to the campus can participate in seminars presented by professors and GIS industry professionals. Also, each professor can introduce the concepts behind the GIS certified professional during each of their classes. With the teamwork of each person, this will impact the careers of many for the better.

Proposal Evaluation

This program enhancement must be monitored for quality assurance. A survey is an excellent tool for gathering data to make informed decisions. Accordingly, each GIS student must complete a survey during the enrollment process. The information gathered will create a baseline for evaluating the impact of the program. To measure the contribution of the program, graduates must complete additional surveys when they exit their degree or certificate program and five years into their career. It will also be helpful to survey professors to gather feedback on how to improve the GIS professional informative program. Aside from surveys, it will be very important to stay up on the GIS job market to provide the best up-to-date information to the students.

Conclusion

The GIS industry is continuing to grow at a rapid rate. Students must be informed about each area that is important to a GIS career. Setting career goals, creating personal networks, and learning ethical practices will go further than any GIS degree. The youth of today will be the leaders of tomorrow. How will CPCC's Geospatial Technology Program prepare them for the task ahead?

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