

Geomatics

NICHOLLS STATE UNIVERSITY



Nicholls Geomatics Program is ABET accredited

L'ARPELITEUR LOUISIANE

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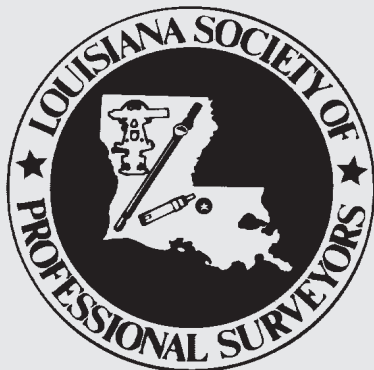
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Special Thanks to our Contributing Writers.

Articles submitted will be considered for publication and should be e-mailed to: lsps@bellsouth.net. Please contact the office with any questions.



The *L'Arpeur Louisiane* is published quarterly as a service to the members of the Louisiana Society of Professional Surveyors. As stated in the LSPS Articles of Incorporation, the LSPS is "organized for the following purposes and to carry out the same:

Enhancing the status of the Land Surveying Profession by:

- 1) Maintaining high technical and cultural standards for entrance to the Society.
- 2) Cooperating with educational institutions in the maintenance of high standards of education in Land Surveying.
- 3) Requiring a high standard of ethical practice by members of the Society.
- 4) Aiding in the adoption of high standard of attainment for the granting of the legal right to practice Professional Land Surveying.
- 5) Fostering among students of Land Surveying the study of philosophy and history, tradition and achievement, duties and social functions of the Land Surveying Profession.
- 6) Encouraging the personal and professional development of young Land Surveyors.
- 7) Supporting activities looking to the increased employment of Land Surveyors and seeking new opportunities for service in Land Surveying."

LSPS ADVERTISING RATES:

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PRESIDENTIAL PRIVILEGE

GLANCING BACK, LOOKING AHEAD



D. Kevin Burdeaux, PLS
LSPS President

The Fall season has begun. This is the time I like to take a quick glance back at where we started, evaluate how far we have come, then re-focus on what lies ahead.

LSPS has certainly made progress this year starting with an educational experience in politics as we successfully moved legislation to stagger the terms of our LAPELS board members through the legislative process. The LSPS Standards Committee presented an update to our Standards of Practice and these have been presented to LAPELS for review. The question bank for our State Specific Exam is complete and the process is in place to regularly review and maintain the bank. I want to thank all members of the LSPS Board and the committees for the hard work and dedication each of you have given to the profession.

At our August board meeting a concern was brought to the board concerning survey specifications by the Louisiana Department of Natural Resources, Division of Injection and Mining, regarding brine well locations. After contacting the division I learned they were already making revisions to the specifications and I want to thank them for giving LSPS the opportunity to review and comment on the draft revisions. These comments have been presented to Injection and Mining and we have been assured LSPS will have another opportunity to review these revisions before they become policy.

I am happy to announce the Geomatics Program at Nicholls State is now ABET accredited. Please see the article in this issue by Dr. Dantin for more information. I also want to again thank Mr. Chustz for his total donation of \$50,000. His donation, along with \$25,000 from the Contractors Educational Trust Fund and \$25,000 from LSPS form the \$100,000 beginning of the Jules Oreste Chustz Memorial Student Scholarship Endowment Fund that will be used to fund scholarships for Geomatics students. I am also pleased to announce that the Board of Supervisors of the University of Louisiana System have approved a five year pilot program for offering a Bachelor of Science degree in Geomatics program for working individuals with an existing Associate Degree in Land Surveying and five years of work experience in a surveying related field. We hope this pilot program will be successful and provide the opportunity to those working across the State to pursue a degree in Geomatics. More information on this will be forthcoming from Nicholls in the next issue of *L'Arpenteur*. However, I am sure all have heard in the news the latest budget cuts to higher education amounting to another 35 million dollars. I want to thank the leadership of Nicholls State University for their strong support

of the Geomatics Program, but we must remain diligent to make our legislatures and the Governor aware of the importance of the Geomatics Program to the State.

In the last issue of the *L'Arpenteur* I discussed a concern regarding GIS-based flood zone determinations by out-of-state companies. It is my opinion this particular issue is just a small piece of a much broader issue that faces our profession and has a direct impact on the public welfare. The technology of today has made digital maps easily accessible to the public through many GIS-based applications, and the public increasingly relies on these digital maps without question of their accuracy. An article co-authored by Mr. Taylor Gravois, PE, PLS and Mr. Tony Cavell, PLS, CFedS included in this issue offers more information on this matter. The National Council of Examiners for Engineering and Surveying recognized ten years ago the impact this technology would have on the public through a report for the Model Definition of Surveying prepared by the American Congress on Surveying and Mapping (ACSM), the American Society of Civil Engineers – Geomatics Division (ASCE), the American Society of Photogrammetry and Remote Sensing (ASPRS), the Management Association of Private Photogrammetric Surveyors (MAPPS), the National Society of Professional Surveyors (NSPS), the National States Geographic Information Council (NSGIC), and the Urban and Regional Information Systems Association (URISA). I extend an invitation to Louisiana's GIS specialist, photogrammetrist, and all others involved in the preparation of maps to join LSPS in seeking a solution that will protect the public welfare.

It is the Fall season. We have come far, but the road ahead continues to bring challenges we must face. Again I want to thank everyone for your dedication and hard work. Enjoy the Holiday Season as this year draws to a close, but please be careful so we can continue our journey into next year.





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NICHOLLS STATE UNIVERSITY GEOMATICS PROGRAM RECEIVES ASAC/ABET ACCREDITATION

The Nicholls State University Bachelor's of Science degree program in Geomatics has been accredited by the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ASAC/ABET). ABET, Inc. is the recognized accreditor of college and university programs in applied science, computing, engineering, and technology. ABET accreditation demonstrates a program's commitment to providing its students with a quality education.

Founded by Dr. Terry Dantin, professor of Geomatics, the Geomatics program is now under the leadership of Dr. Balaji Ramachandran, associate professor of Geomatics, and is entering its seventh year of prepping students for professional careers in land surveying and related geoscience fields. Assistant professor Dr. Henry Foust is the new addition to the Geomatics faculty. Designed to meet the educational requirements for registration as a Professional Land Surveyor in Louisiana, the program offers the only bachelor's degree in surveying and mapping in the state.

The Geomatics faculty is extremely pleased with the outcome of this new program successfully going through its first accreditation evaluation. Accreditation certifies that the Geomatics program meets national standards, which fortifies the Nicholls Geomatics degree in industry and academia. The value of the continuing support that the Geomatics program receives from the Louisiana Society of Professional Surveyors cannot be overstated.

Accreditation is a voluntary, peer-review process that requires programs to undergo comprehensive, periodic evaluations. The evaluations, conducted by teams of volunteer professionals

working in industry, government, academe, and private practice within the ABET disciplines, focus on program curricula, faculty, facilities, institutional support, and other important areas.

One of the key elements of ABET accreditation is the requirement that programs continuously improve the quality of education provided. As part of this continuous improvement requirement, programs set specific, measurable goals for their students and graduates, assess their success at reaching those goals, and improve their programs based on the results of their assessment.

In addition to providing colleges and universities a structured mechanism to assess, evaluate, and improve their programs, accreditation also helps students and their parents choose quality college programs, enables employers and graduate schools to recruit graduates they know are well-prepared, and is used by registration, licensure, and certification boards to screen applicants.

ABET is a not-for-profit organization, owned and operated by its more than 25 professional and technical member societies. An internationally respected organization with some 1,500 volunteers, ABET has set the higher-educational standards in its fields for nearly 75 years. More information about ABET, its member societies, and the evaluation criteria used to accredit programs can be found at www.abet.org.

For more information about the Nicholls State University Bachelor's of Science degree program in Geomatics visit: <http://www.nicholls.edu/doas/degree-programs/geomatics/>

Clifford J. Mugnier & Roy K. Dokka



VERTICAL CONTROL: WHO IS RESPONSIBLE?

Since the charter was passed by Congress in 1806, the U.S. Coast & Geodetic Survey, now the National Geodetic Survey (NGS) has been responsible for establishing and maintaining the geodetic control for the nation. However, such things are changing since the advent of the Global Positioning System, the military declassification of the geoid, and the Height Modernization Program of the NGS. Performing First-Order, double run geodetic leveling has reached the point of being too expensive to maintain on a national basis with the cost being in the neighborhood of \$1,500 per mile nowadays. That is the primary reason Congress directed the NGS to study and eventually recommend the Height Modernization Program. The Continuously Operating Reference Station (CORS) network of the nation is soon to become the latest realization of the North American Datum of 1983. With the continued progress of the GRAV-D program to better observe the gravity field of the US and territories, all surveys for horizontal and vertical control in the United States will be exclusively referenced to the CORS network.

The North American Vertical Datum of 1988 (NAVD88) is not changing. However, the surface of Louisiana is indeed changing, and the era of the physical benchmark is over. Benchmarks are passé, kaput, useless, and obsolete because they constantly subside from their original reference elevations! There are about

90+ benchmarks that are going to be updated one more time by the NGS in South Louisiana. Don't expect this sort of thing to continue because there is not going to be funding eternally available from the Federal Government. Professionals that rely on such benchmarks are facing obsolescence in the near future, if not already! The military is expected to maintain the GPS constellation indefinitely, and with better and improved modeling of the gravity field of the nation for new editions of the geoid; GPS will be the only source of reference in the U.S. for horizontal and vertical control.

The geoid is particularly good already for Louisiana. The current use of GPS observations with dual-frequency receivers to properly model the atmospheric distortions and the use of the current geoid allows the Professional Land Surveyor to determine elevations with respect to NAVD88 today. That use requires that the responsible professional use the proper tools for the proper reference – CORS networks must be relied on that have a provenance to a responsible government agency, whether it is State or National. Attempting differential GPS observations for elevation determination with the use of a radio connection to a static receiver sitting on an obsolete BM is no longer an acceptable standard of practice. The current state-of-the-art is to use a Virtual Reference System, such as that maintained by LSU.

ORAL EXAMS

On Thursday morning, August 12, 2010, an informal exam committee meeting was held at the LAPELS office in Baton Rouge. LSPS President Kevin Burdeaux was joined by Vice President Stephen Flynn and District 3 Chairman Steve Langlinais. Representing LAPELS were Donna Sentell, Executive Secretary, LAPELS Board Member Tim Allen, and our newest surveyor of LAPELS, Board Member Ernie Gammon.

Playing on the success of our written exam review sessions, we were challenged by the LSPS Board to learn more about the oral exam process. As with the written exam, the applicant is challenged to explain the steps of the work he presents, but the candidate must also be prepared to answer general questions of survey knowledge. For this meeting, we divided our review into two parts. First, an analysis of the work presented by the applicant, and secondly, the candidate's ability to discuss general survey topics.

Our LAPELS board members serve to protect the public by ensuring that those that are licensed as Professional Land Surveyors are competent to provide those services in accordance with the laws, rules, and principles of the profession. The oral exam is an important step in fulfilling this role. I am sure few of us hire employees based solely on a submitted resume, but conduct interviews of potential hires to ensure the individual selected is able to perform the task.

As any licensee remembers, the oral exam is a high anxiety exercise. Similar to your first expert witness testimony, you are nervous at putting your work on the table for review. But the purpose of this exercise is for the candidate to demonstrate their knowledge of surveying principles and the rules by reviewing work they have prepared under the supervision of a Licensed

Professional. When finding potential violations of minimum standards on submitted plats, the candidate can be questioned by the oral exam committee as to what he thinks could be wrong and potential solutions. This exercise allows the candidate to express his familiarity with minimum standards to the exam committee. At the end of the oral exam, the applicant retains all documents including the plats. The standard violations are not taken down the hall to the enforcement division.

The second phase of the oral exam is general survey knowledge. Possible topics include minimum standards, riparian rights, public lands and adverse possession. Once again the intent of the process is to see if the applicant can talk the talk or as Tony Cavell once said, "Profess the profession". This discussion is not about right or wrong, but to offer guidance to the contestant on areas of improvement. As an example, I have very little experience with "traditional" sectionalized land surveys. When I try to find the center of a section, I go to the forty arpent line and back up twenty. Personally, I would love to ask all comity applicants this item, but I would then fall into the misconception many of us have about the exam process. The committee is not trying to "stump" the applicant or turn the test into a trivia contest.

In conclusion, our meeting resulted in a better understanding of the oral exam process. Within one week of the issue being raised, Mr. Burdeaux had a meeting scheduled, held and concluded. The LSPS exam committee is available to answer any request or question about the oral exam. The relationship between LAPELS and LSPS at this juncture could not be more positive.

Feel free to contact your District Chairman with comments on this subject.

LSPS ANNUAL AWARDS NOMINATION

We are seeking nominations for the LSPS Surveyor Excellence Award and the Life Member Award. Please review these specific considerations:

Life Member:

1. Must be LSPS Member of long standing, i.e. 25 years or more.
2. Must have actively contributed to the growth of LSPS during his career (e.g., may served as officer or director of LSPS), but need not be active at the time of nomination.
3. Should enjoy an outstanding reputation for his knowledge, integrity and professional competence, especially among the members of his District.

Surveyor Excellence Award:

1. Must be registered member of LSPS.
2. Must have taken an active and continuous role in contributing to the growth and advancement of both LSPS and the surveying profession (e.g., may have served as an officer or director of LSPS, may have served as a member of the State Registration Board or as an office or director of national surveying organizations).
3. Nominees should presently be actively involved in the operation of LSPS, as evidenced by attendance at chapter meetings and annual meetings, by serving on LSPS committees, etc.
4. Nominee should enjoy an outstanding reputation for his knowledge, integrity and professional competency, especially among the members of his district.

The Board of Directors of LSPS may choose to honor one or more members of the Society at the LSPS annual meeting. Presentation on an annual award is not mandatory. Any of the awards discussed herein may be presented to a single individual, may be awarded to more than one individual or, in some years, may not be awarded at all. A list of past recipients of these awards can be viewed at www.lsp.net.

Nominations may be submitted by any member of LSPS, **but should not be submitted by relatives or business associates.**
PLEASE SUBMIT YOUR NOMINATION TO LSPS NO LATER THAN DECEMBER 20, 2010.



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CORRECTING THE DEFINITION OF SURVEYING

Surveying in Louisiana is at a crossroads. In 1908, Louisiana led the nation in the regulation of Land Surveyors and Civil Engineers after a campaign begun in the 1890's. Louisiana again has the opportunity to take the lead 102 years later. In the "Gay 90's" the world was confident in its successes. Even the Nobel Prize winning Physicist Albert Michelson was quoted saying in 1894: *"The more important fundamental laws and facts of physical science have all been discovered..."* This was just a few years before a young patent clerk published a series of papers that turned the world of Physics and Philosophy on its head!

Regulation of various aspects of professional practice grew in the first years of the new century. The practices of law and medicine were being regulated. In 1920, with the leadership of Louisiana's Marcel Garsaud, the National Council of State Boards of Engineering Examiners (NCSBEE) was founded and shortly thereafter its members drafted a "Model Registration Law" adopted widely throughout the United States.

The Industrial Revolution played a cruel trick on the practice of Land Surveying. While the broad natures of the practice of medicine and the law were recognized, allowing for specialization as niche practices developed, public understanding wasn't so wise when it came to surveying. The industrial developments were larger than life and elevated the new practice of engineering to a heroic stature, much like the "rocket scientist" of the 1960's and the "computer guru" of the 1990's. The public perception of surveying was misconstrued as one of merely taking measurements and marking things where prescribed. The complexities of analysis of evidence, riparian rights, senior/junior rights, cartography, spherical geometry and projections were invisible to all but surveying's practitioners, resulting in an inversion of the wisdom applied to the sister professions of medicine and law. When the regulations were drawn for surveying they were drawn for a niche of the profession (boundaries) instead of the whole, having the eventual effect of fixing the narrow definition of surveying in the public perception. This logic is inverted.

The most important responsibility of the professional, the ethical one, is to communicate, to "profess" or teach his client about that for which he was consulted. To alter a popular cliché, *it's the communication, stupid!* Since the most ancient times mankind has described his environment in terms of distance, direction, form and character. From times almost as old he has used symbols and drawings to illustrate his descriptions. As civilization grew more sophisticated so did the demands on the geometers, astronomers and *l'arpenteurs*; ... the surveyors.

The word "survey" derives in the 1400's from the Middle Latin *supervidere*, meaning "to oversee." He theoretically has

access to all the information and relates it in a meaningful way employing astronomy, geometry, history, the law and its philosophy, composition and graphical arts. The function critical to public welfare is a combination of these that may be described as determining the relationship between the physical to the abstract and describing that succinctly to the layman.

Presently the law ONLY recognizes the Professional Land Surveyor as one qualified for "the measuring of areas, land surfaces, streams, bodies of water, and swamps" for various purposes [RS:682. (7) & (13)(a)]¹. The LAPELS rules address standards in the rules only three times and they are "acceptable" or "accepted" standards. This works for most engineering practice since codes and tables have been formulated with acceptable safety factors built in and the expectation that any engineering element will perform similarly in any similar situation; a certain gage wire, or strength of concrete or standard I-beam or pipe schedule will work as well in Bossier as it will in Gretna.

That Land Surveying doesn't work that way is evidenced by the inclusion of more than FIVE pages attempting to; standardize all boundary surveys. Impossible! Every survey is unique. There is no safety factor built into a boundary location. There are no two places that have the same characteristics. The so-called minimum standards have begged and undergone correction and change since their inception. Almost everyone assumes the only part of surveying that counts is the making of measurements, that the depiction is easy. The part that makes the practice professional is accurate communication with the client. This has two requirements proper measurement and proper depiction. Either, absent the other, results in an incomplete and unprofessional product. In fact, the surveyor in Louisiana plays critical roles in boundary determination and topographical representation, mineral extraction, coastline preservation, and on and on.

The last half of the 20th century saw greatly increased sophistication in the technology available to the professional that was made available in the last three decades to the general public. Artificial satellites made global geodesy practical, e.g. GRS80. Radio-ranging gave RaDAR, LoRaN, Total Stations and 3-D Scanners. Electronics brought the mini-computer, personal computer, lap-top and even powerful hand-held devices. Their popularity and extensive distribution enabled the unbelievable development of the World Wide Web from ideas of an Internet based on packet coding. The development of peripherals

¹ Some argue that proper interpretation of the commas in the passage makes the meaning inclusive rather than exclusive. In that case, the LAPELS is not authorized to assume there is a close relationship between surveying and engineering; something engineers are not tested for to become licensed.

paralleled that of computers and had enabled the building of huge collections of complex data and the ability to manipulate it and present results graphically with amazing sophistication. Why so much history? It is the course of these developments that inevitably brings the present situation. Since time immemorial the layman sought the services of the surveyor when he had questions about features on or near the earth. The universal availability of sophisticated analysis and presentation tools had removed that decision from the obvious. "Why," one may ask, "should I engage the services of a real surveyor when I can get this info from my neighbor's son who has some GIS software?" or "can't I see it on Google?" These tools are indeed powerful and like a race car or a surgeon's scalpel, in the wrong hands lead to disastrous results.

The stated purposes for LAPELS are "to safeguard life, health, and property and to promote the public welfare" [RS 37:681]. With that as the purpose a correct definition of a surveyor is, *one who makes measurements, determines property boundaries and provides data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features on or near the earth's surface for engineering, mapmaking, mining, land evaluation, construction, and other purposes.*

Much of Louisiana lies in the coastal zone. A great deal more is included in FEMA flood zones. Almost everything south of the Lake Charles, Slidell line is subject to subsidence. Levees built to hold out floods accelerate subsidence. Mortgage holders are used by FEMA as their enforcement arm who are charged to ensure that applicable elevations & requirements are met. The banker is not expert and with the cost of a service as the only criterion he has, so elevation mills with discount rates are used that almost always will make a worst-case determination resulting in damages to the public because it is then incumbent upon the individual to disprove the el-cheapo determination. There is more potential for harm to the Louisiana public from relatively small errors in flood elevation determinations than from similar errors in a boundary determination. The amounts involved are not trivial. In fact, following hurricanes Katrina and Rita, FEMA estimated savings to homeowners seeking elevation certificates, had a dense GPS CORS network been in place, at over \$50,000,000!

The ramifications are also about safety and welfare. Many public agencies employ geographic information systems (GIS) to manage their assets. The sources of data integrated have too often been less-than-adequate. The software employed is sophisticated enough that data that is added may be stretched or shrunk to match that already included (rubber sheeting). Coupled with that is the common assumption that an image speaks with authority ("a picture is worth a thousand words"). Imagine a suburban semi-rural location as the source of a 911 emergency call. The accuracy of the GIS and vehicle GPS combine to be ambiguous about which of two very long driveways connects to the calling house. In another example

the zoning map maintained in an agency GIS incorrectly identifies a subject property as disallowed for some intended purpose. The property owner must then bear the expense of proving "City Hall" is wrong or drop his enterprise; at what cost to the public weal?

In today's world one needs a college level education to have the same advantages of a high school graduate a few decades ago or even a grammar school student, years earlier. It is counterproductive to have a licensure law that requires a meaningful college degree yet in its execution allows a loophole to circumvent its intent. Nicholls State University has built a Bachelor of Science program in Surveying called "Geomatics" that provides for the requirements of the law in spirit and in fact and includes a broad curriculum including surveying, mapping, GIS, photogrammetry and more.

The LAPELS board has been finding ANY 4-yr degree acceptable counter to the intent of the law directly, adversely affecting the future survival of Nicholls Surveying/Geomatics program because students who seek a surveying license are taking the minimal 30 hours explicit in the law and then change majors to General Studies, with much easier core content, confident in the knowledge that the LAPELS board will find this "end run" acceptable. It is critical to the future of the dignity of the profession of Surveyors in Louisiana that the LAPELS board establish by rule that the Bachelor of Science or equivalent (demonstrated to their satisfaction) is specifically required to meet the minimum requirements for application.

In conclusion,

- Immediate action is called for
- Correct the definition of surveying to include all the functions that properly fall under its umbrella, understanding that some may practice as specialists.
- Fix the silly loophole in the educational requirement that threatens the surveying/geomatics program at Nicholls State University by requiring a B.S or equivalent degree.
- Firms that licensed practitioners will find candidates graduating from Nicholls' program.
- Others have cleared the path in successfully recognizing the breadth and responsibility of the surveyor.
- Florida has taken the leap, California has a broad definition.

As in 1908 let Louisiana join the lead to improving the services provided the public.



STAN IS DEFINITELY "THE MAN"

Stan Huey, P.E., P.L.S., of RCH Engineering, Monroe, recently celebrated his 79th birthday by "taking a dive" from 14,000 feet. Stan made the trip to Hattiesburg, MS for the historic event. He made the jump in honor of his late brother.

To check out his adventure, visit www.lspss.net and click on "Districts". Click on the District 5 link for a video, pics and info from Stan about the jump. Congratulations Mr. Stan. You are truly "THE MAN"!

2011 TRIG-STAR COMPETITION

Trig-Star is an annual competition sponsored by both the National Society of Professional Surveyors (NSPS) and LSPS. The program goal is to recognize and stimulate the best students of mathematics from among school districts in each state and across the United States.

Students from around Louisiana will be timed on a standardized Trigonometry Problem. The student completing the problem correctly and with the fastest time will be recognized by LSPS as the "State Trig-Star Champion". The State Champion will receive a cash award of \$250, a plaque, and an invitation to attend the LSPS Annual Awards Banquet, along with family members.

In addition, the Math Teacher of the State Champion will receive a cash award of \$250 and an invitation to attend the LSPS Annual Awards Banquet. The Math Teacher selected may be accompanied by a guest to the Banquet.

The 2011 LSPS Trig-Star Competition will be held during the months of February and March; the specific test date(s) have not been determined. If you know of a local school that would like to participate in the Trig-Star Competition, please distribute this information to them, and have the school fax this form to LSPS at 225-925-5802 by **February 1, 2011**. An LSPS Representative will contact the school to advise of testing dates and other details. **If you would like to volunteer to assist with the testing or demonstrations, please contact the LSPS office. (Volunteers needed!)**

PARTICIPATING SCHOOL PLEASE MARK APPROPRIATE BOX(s):

- YES- we would like to participate in the 2011 Trig-Star Competition.
- We are interested in having an "In-House Land Surveying Demonstration".

Please have a representative of LSPS contact us.

Contact Name: _____

High School: _____

Address: _____

City & Zipcode: _____

Phone: _____

Email: _____

Fax: _____

**FAX THIS FORM TO LSPS AT
225-925-5802
BY FEBRUARY 1, 2011.**

SCHOLARSHIP APPLICATION

A \$1000 Scholarship is awarded to a High School Senior residing in Louisiana, planning to pursue a career in surveying through the “Geomatics” program offered at Nicholls University. The scholarship is awarded in 4 equal payments over a 4-year period, as long as the recipient remains a full time student and maintains a 3.0 cumulative grade point average. The Foundation requires that the recipient submit their class schedule at the beginning of each semester and their grades at the end of each semester.

Return this application along with:

- School transcript,
- Three character recommendations (no relatives) and extracurricular activities to the address above.

DEADLINE March 1, 2011.

1. **Personal Information**

Name _____

Address _____ Parish _____

_____ Phone _____

Parent/Guardian _____

2. **High School Information**

School Name _____ Phone _____

School Address _____

Principal/Counselor _____

3. Did applicant participate in the LSPS Trig-Star Competition? Yes ___ No ___

THIS SECTION MUST BE CERTIFIED BY YOUR HIGH SCHOOL COUNSELOR

Academic Background

ACT Composite Score _____

High School Grade Point Average _____ (seven semesters)

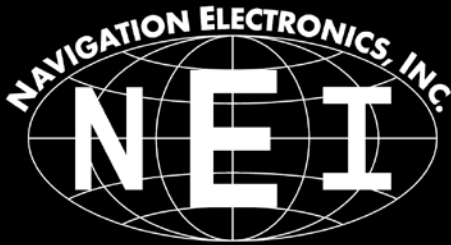
_____ **Signature of High School Counselor**

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