

- THE - SEAHORSE

A Newsletter Published by

THE HYDROGRAPHIC SOCIETY OF AMERICA

Issue 52

P.O. Box 732, Rockville, MD 20848-0732

September 2001

Shallow Survey 2001 Conference

by **Andy Armstrong**

The University of New Hampshire's Center for Coastal and Ocean Mapping (CCOM) and the NOAA/UNH Joint Hydrographic Center (JHC,) will be hosting the 2nd International Conference on High-Resolution Surveys in Shallow Water in Portsmouth, New Hampshire, September 24—27, 2001.

Conference Theme

Shallow Survey 2001 follows on the success of the 1st International Conference held in Sydney, Australia in 1999. Like the Sydney conference, the meeting will focus on issues faced when conducting and analyzing hydrographic surveys in shallow water.

The conference will kick off Monday morning with opening and welcoming remarks, followed by a presentation on the history of Portsmouth Harbor.

A keynote address by Rear Admiral Christian Andreasen, NOAA (retired), Chief Hydrographer at NIMA and past President of the Directing Committee of the International Hydrographic Organization, will highlight the opening session.

An outstanding program of technical presentations will run from Monday afternoon through noon on Thursday. Leading researchers and practitioners from a wide spectrum of ocean sur-

veying and mapping backgrounds will describe their work, present their results, and describe their techniques. Among the topics are:

1. Improved shallow water surveying and data processing using acoustic and non-acoustic techniques
2. Nautical charting/Electronic Navigational Charts
3. Geological characterization of the seafloor
4. Mine Counter Measures
5. Marine archeology
6. Database issues
7. Fisheries habitat
8. Coastal zone management
9. Data fusion and visualization
10. Water mass and water level monitoring and modeling

This wide range of topics provides THSOA members an unusual opportunity to hear about shallow survey

applications outside their normal area of practice and share their experiences with other experts from around the world. Among the speakers will be THSOA President, Rear Admiral Ken Barbor, USN (retired).

The Common Data Set

Following the tradition that began at the 1st International Conference, a common data set has been collected so that the relative merits and effectiveness of various approaches to shallow water surveying and shallow water survey products can be explored.

Many of the conference presentations are based on work with this common data set. The common data set has been collected in Portsmouth Harbor, New Hampshire, and presently includes orthophotos, multibeam sonar, high-speed, high-resolution side-scan sonar, tide, single beam echo sounder, and other ancillary data. It is available for distribution (please see the conference web site, URL below). The survey limits may be downloaded in Mapinfo and DXF formats.

The initial data set was acquired by the NOAA Remote Sensing Division (air photos) and the NOAA Ship WHITING (multibeam and side-scan sonar). Subsequent data sets have been acquired throughout the year leading up to the conference and

ANNOUNCEMENT



Nominations are being accepted for the 2001 election of the following officers: TREASURER (Karl Kieninger), TRUSTEES (2) (Ray Williams) and (Chic Ransone). Incumbents' names are in parentheses.



Nominations should be sent to:

THSOA,
P.O. Box 732,
Rockville, MD 20848

or e-mail at:

mail@thsoa.org

by October 31, 2001

many are or will be made available as they are collected.

So far, in addition to the NOAA data, sonar data has been acquired (or scheduled) by nine other groups, comprising teams from government, sonar manufacturers, and hydrographic survey companies, and representing almost every survey sonar brand in the world.

The data set is expected to continue to grow even after the conference, and will provide data for research and development for years to come.

For those that are interested, the NOAA Ship WHITING will be berthed in Portsmouth near the Sheraton throughout the conference, and will be available for tours.

Great Venue and Social Events

Portsmouth, New Hampshire is an outstanding venue for the event. Portsmouth is one of the Nation's oldest seaports, providing safe harbor for Navy and Coast Guard ships, tankers, freighters, and bulk carriers, commercial fishing vessels, and small passenger vessels.

The conference hotel, the Portsmouth Sheraton, overlooks the harbor and the Portsmouth Naval Shipyard, and is situated right downtown near a large variety of shops, restaurants, and historical sites.

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The conference social program will begin with an icebreaker reception at the Sheraton on Monday evening and will feature a fabulous New England clambake and lobster dinner across the river in York, Maine on Wednesday. A continental breakfast and lunch each day are included in the conference registration. Extra tickets for the reception and the clambake are available for accompanying persons at very reasonable prices.

Limited Registration

Registration at Shallow Survey 2001 is being held to 225 participants. This relatively small size compared to many conferences is intended to encourage discussion and interaction. The technical schedule has been designed to allow questions, answers and discussion after each presentation. Registration is filling fast as the conference approaches. If you haven't registered yet, do so now!

Registration forms are available from the conference web site: <http://www.ccom.unh.edu/shallowsurvey.htm>. ☼

ANOTHER SUCCESS

U.S. Hydro 2001 Conference

This year's U.S. Hydrographic Conference was held in Norfolk, Virginia from May 21-24 and was another very successful gathering of public and private hydrographers, academia and equipment vendors.

Attendance at this year's conference exceeded 400 with representatives from nearly 30 countries, exhibits from 50 companies and seven in-water equipment demonstrations on the river just outside the conference hotel.

The new Hydrographer of the Navy, Rear Admiral Thomas Donaldson, addressed the opening session and extended an invitation to all

attendees to tour one of the Navy's newest hydrographic survey vessels, the USNS BRUCE C. HEEZEN, at a nearby pier.

The technical program included 46 papers, 13 of which were presented by non-U.S. authors. A highlight was the keynote address by Dr. Peter Ehlers, President of the Federal Maritime and Hydrographic Agency of Germany on the Worldwide Electronic Navigational Chart Data Base. Many compliments were given regarding the high quality of the papers and the on time schedule of each session. In addition to the more formal presentations, there were three well-attended workshops on Brownwater Electronic Charting, Tidal Datum Computations and Dredging Volume Computations. →

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- CHAPTERS -

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Copies of all the papers, including several that were received too late for the CD, are now available on the THSOA web site.

The three evening social events (the Monday Icebreaker, Tuesday Beer Social and Wednesday Barbeque at the Nauticus Maritime Museum) provided a terrific atmosphere for the telling of sea stories and the renewal of old friendships.

Informal social activities afterward included a spirited competition between NOAA and NAVOCEANO hydrographers. NOAA won the post-midnight swimming event while NAVO clearly outclassed NOAA in the Karaoke sing-off.

It looks like we'll need a third activity in 2003 to break the deadlock for bragging rights! Maybe we can even entice the Corps of Engineers to participate.

The THSOA Executive Board is beginning to organize the 2003 conference and encourages your comments and suggestions as well as your active participation on one of the committees. Please contact one of the Executive Board members if you're interested. ⚙

From the President

by Ken Barbor

President, THSOA

The details will be reported elsewhere in this *Seahorse* but let me hasten to add my congratulations and thanks to those who made US HYDRO 2001 a great success. On all accounts the conference met its goals. We had a professionally stimulating and socially enjoyable conference. I hope those of you attending with the aim of cementing some business deals also found it financially rewarding.

The technical program orchestrated by Jerry Mills provided an excellent overview of our various members' accomplishments and visions. Your

papers indicate we have faced the challenges posed by the technological revolution in data collection, data processing and product generation with innovation and ingenuity.

The exhibition hall provided an easily navigable venue to see the latest advances in our craft. Chic Ransone assembled an impressive group of vendors and exhibitors into an area that ensured we all had the opportunity to see what interested us most. Intimacy may not be the best description but the exhibition hall was far more than just accessible.

The social calendar was first rate. Ray Williams may have found a new profession as he created entertaining and delicious diversions for the evenings. Whether it was next to a display of the latest processing software or under the shadow of 16-inch guns, the food was great and the company superb.

Karl Kieninger did a masterful job putting this all together and a special thanks to Jack Wallace for keeping the paper trail of bills and receipts straight.

A particularly deep debt of gratitude to Pat Sanders, whose energy and vision got THSOA to this point, and to his CoastalO folks who got us registered, our viewgraphs seen, our voices heard and our papers recorded.

But that was last year! Your board is currently discussing the options for US HYDRO 2003. There are many possibilities but we must start now if we hope to top this year's success.

We surveyed the HYDRO 2001 attendees as to their desires and Jerry will report on those results in this issue. If you have input please make it known so we can structure a conference that best meets your expectations. Of course, we also need your help in putting it all together.

The Canadian Hydrographic Conference is just around the corner and the call for papers should be on your

desk. The theme of "*Innovation and Excellence*" is one our members should be able to address with aplomb. The CHC is always a class affair and I expect to see you there in force. ⚙

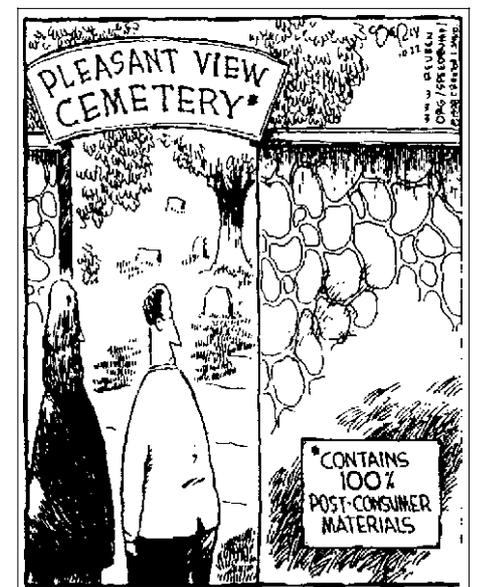
Questionnaire Results On 2003 Conference

There has been a great deal of discussion in recent years on the proliferation of professional meetings and exhibitions and the inevitable time and budget drain on everyone, especially vendors.

In addition, the effort to successfully organize a conference of any magnitude is substantial—particularly the exhibition, registration and hotel logistics.

One obvious solution would be to combine the THSOA Hydro Conference with Oceanology International which is attempting to serve as an umbrella organization for several conferences. However, such a combination would certainly dilute the "out-of-session" interaction between attendees and may even lessen participation at hydrographic technical sessions as a result of numerous concurrent sessions →

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To better understand the desires of the THSOA membership and assist in planning for 2003, a questionnaire was distributed to all attendees of the conference in Norfolk requesting input on the venue for 2003.

The number of questionnaires returned (38) was rather disappointing, but it is interesting that more than half of the respondents did attend OI Americas 2001 in Miami in April.

Although there was a three-to-one agreement that the diluted attendee interaction would seriously degrade the quality of the U.S. Hydro Conference, nearly half indicated that the decision to combine with OI in 2003 would not affect their decision to attend U.S. Hydro 2003. Of the vendor representatives 75% indicated that the much higher exhibitor fees at OI (\$2500/ \$3000) versus U.S. Hydro 2001 (\$1200) would not adversely affect their attendance at the conference.

While the results of this questionnaire do give some indication of the sentiment of the membership, it would be imprudent to draw any strong conclusions from such a small sampling.

Members having strong opinions on this topic are encouraged to contact a member of the Board.

Should the decision be made to

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organize another independent U.S. Hydro Conference, it will be imperative to attract a sufficient number of volunteers for the various committees.

Some of the greatest contributors of the past two conferences will be unable to do so in 2003. ✪

Tides Training To Be Offered

by Steve Gill

A training course entitled Tidal Survey Implementation for Hydrographers will be presented in Seattle, Washington, October 15-19, 2001 by NOAA's National Ocean Service, in cooperation with Old Dominion University's Center for Coastal Physical Oceanography.

This particular course is the second in a series of courses designed to cover all aspects of tides and water level support to meet NOAA's rigorous hydrographic survey specifications for vertical control.

The first course, held in December 2000 in Norfolk, Virginia, was an overview course that touched on all the functional areas related to tides and water levels, including background tidal theory, but did not cover the subject in sufficient detail to meet the NOAA specifications.

This new course will provide substantially more in-depth discussion and detail in the procedures for: project planning, tides and water level measurement, quality control, processing and tabulation of the tide from the raw 6-minute water level data, computation of tidal datums, and the construction and use of tidal zoning. The error budget for water level reducers will be fully discussed, as well. The upcoming course will not include a session on background tidal theory.

The cost of the course is \$1,300 which includes all course materials,

daily buffet breakfasts, one catered luncheon and an evening banquet on the Seattle waterfront. The course will be held at the NOAA Western Regional Center at Sand Point on the northwestern shore of Lake Washington. Participants will be responsible for making their own hotel arrangements.

Course information can be found at www.ccpo.edu.edu.

For additional information, or to register for the course, contact the Course Coordinator, Richard Moody at moody@ccpo.edu.edu (757-683-4685) or Anne West-Valle at anne@ccpo.edu.edu (757-683-4945). ✪

Tools for Success

by Brian Greenawalt

Most of us keep our technical skills current by attending conferences, attending briefings and short courses, and pursuing advanced technical degrees. But how many of us attend to the skills and "habits of highly successful people" that have appeared in business literature over the past few years? These are the communication and leadership skills which are common to almost all higher level positions within all organizations.

Many opportunities exist to practice and hone these skills.

Writing Skills: Not ready to submit technical papers suitable for presentation at international conferences?

Start out by submitting articles to the *Seahorse*, then move up to other hydrographic publications such as the *Hydrographic Journal*, *Sea Technology*, *Hydro International*, and the *International Hydrographic Review*.

All these publications are clamoring for articles! Think this is too ambitious? Write for your company newsletter. No newsletter? Start one!

Presentation Skills: Personally, I do not particularly care to stand up in

front of groups and deliver presentations. However, I have found that with each presentation I give, it becomes easier.

If the thought of delivering a paper at the U.S. Hydrographic Conference intimidates you, try a different venue. Local chapters are always searching for speakers. Consider speaking about careers (adventures) in hydrography at local high schools, scout meetings, or colleges. Presentations are much easier when one believes in and is passionate about the message!

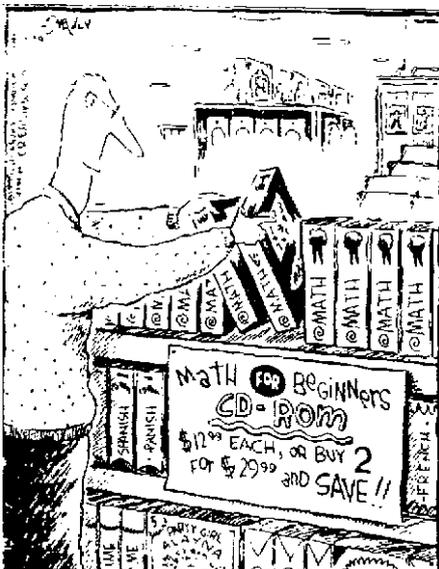
Team Building Skills: Get involved in THSOA! Volunteer to work on a committee.

The U.S. Hydrographic Conference 2001 is over but the committees for the 2003 conference will be soon formed. Look for other opportunities to gain experience working with diverse groups.

Leadership Skills: Don't just serve on a committee, chair the committee! Volunteer to serve in a leadership position in THSOA, your local chapter, conference committee, or elsewhere.

Many of these positions are often described as "thankless" but having chaired several committees and serving on numerous other, I can

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honestly say that I have gained much experience which has helped me in other aspects of my career and life.

Look for opportunities to develop these important skills. Technical skills and abilities can take you only so far. To advance further, you must have solid communication, team building, and leadership skills. Keep a positive attitude and have fun! ⚙

Gulf Coast Chapter News

by Michael Smith, President
Gulf Coast Chapter

A meeting of the Gulf Coast chapter was held at Doug's Restaurant in Slidell, Louisiana at 7 p.m. on the 26th day of July. This was a joint meeting of the Hydrographic Society and the Marine Technology Society.

John Iwachiw reminded the THSOA members that the election for the office of President, Treasurer and one Officer-at-Large position was coming up in the fall, and he encouraged members to consider standing for election.

Rebecca Smith, co-chair for OCEANS '02 MTS/IEEE, made an appeal to both organizations regarding support of the conference which will be held on the Gulf Coast in October 2002. She appealed primarily for volunteers to help with chairing technical sessions and staffing society booths.

Rob Hare, the featured speaker, provided an informative and entertaining presentation of the mission and challenges of the Canadian Hydrographic Service (CHS), touching on a bit of the history of Canada in the field of hydrography, as well as a demonstration of the software he developed to catalogue the findings of his error budget analyses.

Rob has been a hydrographer with the Pacific Region of CHS since 1982. He holds a Diploma in Survey

Technology from the British Columbia Institute of Technology, a Canada Lands Surveyor's commission and a bachelor's degree in Surveying Engineering from the University of Calgary. He is a Registered Professional Engineer in the province of British Columbia and is the manager of the Hydrographic Surveys Division of CHS.

Anyone wishing to make a presentation at a Chapter meeting should contact Michael Smith at SmithMQ@navo.navy.mil. ⚙

Univ. of So. Mississippi Graduates Second Class From Hydrographic Science Masters Program

On August 3, 2001, twelve students received their Master of Science Degree in Hydrographic Science from The University of Southern Mississippi marking the culmination of the second year of this program.

Additionally, they and one other classmate, who is pursuing a PhD in Marine Science with emphasis in Hydrography, received their Category A Certification of Academic Proficiency in Hydrography.

The thirteen students, three naval officers and ten employees of the Naval Oceanographic Office, completed the one-year curriculum option with a comprehensive field project. They planned and executed a survey of the St. Louis Bay near the Stennis Space Center where their classes were held. Owing to the shoalness of the Bay, the class selected single beam echo soundings with 100% side scan sonar coverage as their survey strategy.

They located a vessel of opportunity, built the survey instruments onto this vessel (without making any holes), established geodetic controls, fixed all navigation aids and accom-

plished the survey using GPS in the Real-Time-Kinematic mode.

Their final product included a hydrographic chart, sidescan sonar mosaic, 2D color coded depth image, 3D digital terrain model, and updated Digital Nautical Chart (DNC).

The first survey of the area since 1971, their product significantly adjusted the shoreline, repositioned navigation aids and captured on sidescan sonar the fabled "refrigerator" that plagues local sail boaters.

The course was designed as an intense one-year of instruction, field demonstrations and practical application projects but can be accomplished over a two-year period.

To date, the graduates have all been naval officers or Naval Oceanographic Office employees but the course of instruction is available to any qualified applicant.

On 20 August 2001, the third class convened with students from the Swedish Maritime Administration, the Peruvian Hydrographic Service, the Tunisian Hydrographic Service, the U.S. Army Corps of Engineers, and the National Imagery and Mapping Agency in addition to their naval classmates.

For more information check the USM Department of Marine Science

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website <http://www.marine.usm.edu> or call (228) 688-3177. ⚙

HOUSTON CHAPTER NEWS

Group Mourns Closing of Ale House Pub; Long-Term Home to Houston Chapter

The *Ale House Pub* in Houston, Texas has been the home of The Hydrographic Society Of America (THSOA), Houston Chapter for many years. However, the upstairs meeting room, scene of many fine technical and social sessions, disappeared in June when the pub closed after 20 years in business.

Built around 1903 as a farmhouse, the old pub is believed to have been used as a speakeasy during Prohibition in the 1920s and 30s. It is rumored that a new bar, *The Stag's Head* will appear around September in the Shepherd Plaza district. The new venue, *The Black Labrador*, will also have a pub theme but it will be difficult to replicate the old *Ale House* atmosphere.

Visit the THSOA web page, Chapters, then Houston Chapter, for additional information and copies of recent newsletters. ⚙

Canadian Hydrographic Service Assists USM Research Program

Since April 2001, Rob Hare, Manager of Hydrographic Surveys for the Pacific Region of the Canadian Hydrographic Service has been on secondment to The University of Southern Mississippi's Hydrographic Science Research Center.

During this six-month assignment, Rob has been focused on analyzing the error budget for survey systems employed by the Naval Oceanographic Office. Understanding the error budget is important in assessing survey system performance and essential in adopting innovative quality assurance techniques such as those

under development by Brian Calder at The University of New Hampshire. ⚙

Mr. Hare was the featured speaker at the August meeting of the Gulf Coast Chapters of THSOA and MTS. He provided an overview of the mission, equipment and challenges of the CHS as well as a demonstration of the software he developed to catalogue the findings of his error budget analyses. ⚙

- Humor from the Internet - ENGINEERS FEEL YOUR PAIN

Part One

Two engineering students were walking across campus when one said, "Where did you get such a great bike?"

The second engineer replied, "Well, I was walking along yesterday minding my own business when a beautiful woman rode up on a bike. She threw the bike to the ground, took off all her clothes and said, 'Take what you want!'"

The second engineer nodded approvingly, "Good choice, the clothes probably wouldn't have fit."

Part Two

To the optimist, the glass is half full. To the pessimist, the glass is half empty.

To the engineer, the glass is twice as big as it needs to be.

Part Three

A pastor, a doctor and an engineer were waiting one morning for a particularly slow group of golfers. The engineer fumed, "What's with these guys? We must have been waiting for 15 minutes!"

The doctor chimed in, "I don't know, but I've never seen such ineptitude!"

The pastor said, "Hey, here comes the greens keeper. Let's have a word with him." "Hi John, say, what's with that group ahead of us? They're rather slow, aren't they?"

The greens keeper replied, "Oh, yes, that's a group of blind firefighters. They lost their sight saving our clubhouse from a fire last year, so we always let them play for free anytime."

The group was silent for a moment. The pastor said, "That's so sad. I think I will say a special prayer for them tonight."

The doctor said, "Good idea. And I'm going to contact my ophthalmologist buddy

and see if there's anything he can do for them."

The engineer said, "Why can't these guys play at night?"

Part Four

Q—What is the difference between Mechanical Engineers and Civil Engineers?

A—Mechanical Engineers build weapons; Civil Engineers build targets.

Part Five

Normal people believe that if it ain't broke, don't fix it. Engineers believe that if it ain't broke, it doesn't have enough features yet.

Part Six

An architect, an artist and an engineer were discussing whether it was better to spend time with the wife or a mistress. The architect said he enjoyed time with his wife, building a solid foundation for an enduring relationship.

The artist said he enjoyed time with his mistress, because of the passion and mystery he found there. The engineer said, "I like both."

"Both?"

"Yeah. If you have a wife and a mistress, they will each assume you are spending time with the other woman, and you can go to the lab and get some work done."

Uncharted Wreck in Galveston Spoil Area

by David B. Elliott - NOAA, NRT2

The Office of Coast Survey, NOAA, Navigation Response Team-2 found a large uncharted wreck outside of the Galveston, Texas jetties. The wreck was found during a chart evaluation and ENC survey conducted in January 2001. The feature was found during sidescan sonar operations requested by the Houston Pilots.

The wreck is approximately 70 meters (230 ft) in length and has a least depth of 10 meters (33 ft) at mean lower low water. The wreck was not deemed a hazard to navigation as it lies outside of shipping lanes and is inside of an active charted spoil area.

The position of this wreck was given to the US Army Corps of Engineers, Galveston group for further investigation. The charting information was also relayed to the US Coast Guard and Houston/Galveston Pilots.

The USACE has conducted a multi-beam survey of the area but has not performed any diving investigations to determine what the wreck actually is.

It is a mystery as to how such a large feature became imbedded in this spoil area without some form of documentation. A search to find indica-

tions of how this wreck was deposited was futile; there were no state or local records.

The sidescan sonar picture [see sonar image, below] is one of the best near shore images that we have recorded in shallow water. The details show a topside view of the ship with a broken stem in close proximity.

The wreck appears to have been in the region for quite some time as the projection off the bottom is less than two meters. The currents and storm activity have the wreck predominantly buried and will likely continue to cover the feature in years to come. ⚙



The Hydrographic Society of America

MEMBERSHIP APPLICATION

(Qualifications for membership and benefits are explained on Page 7 of this Newsletter. This application may also be downloaded on-line at www.thsoa.org)

I wish to make application for membership in the Hydrographic Society of America. I agree to abide by the THSOA Articles of Association and to further THSOA's aims and objectives. I declare that the information below is accurate to the best of my knowledge and belief. I agree that the decision of THSOA Executive in regard to this application is final.

.....
Title First Name Initial Last Name

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Address

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City State ZIP Country

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Phone E-mail Address

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If student, name of Institution

.....
Signature

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