

# 50<sup>th</sup> Anniversary of Geodesy and Geomatics Engineering (GGE) University of New Brunswick

By Peter Dare, FRICS - This article first appeared in *Geomatica*, Vol. 64, No. 2, 2010 and is reprinted with permission. Copyright 2010 by the Canadian Institute of Geomatics.

**F**all 1960. A historic period in Canada, as this marked the birth of geomatics education at the degree level in English-speaking Canada. That is when the University of New Brunswick (UNB) enrolled its first students on the brand new degree of Surveying Engineering. And now, we can celebrate 50 years of offering degree level education in surveying/geomatics at UNB.

Times in 1960 were very different to those we experience now. In 1960, John George Diefenbaker of the Progressive Conservatives was the Canadian prime Minister, and John F. Kennedy became the 35th President of the United States of America. Although the degree in Surveying Engineering started in 1960, surveying had been taught at UNB since the fall of 1840 when William Brydone Jack, Professor of Mathematics and Natural Philosophy at what was then King's College (founded in 1785), gave lectures in surveying as part of the mathematics curriculum. In the same year that UNB was created (1859), a special three-term undergraduate course in civil engineering and surveying was initiated. The first diploma in this special course was awarded to Henry George Clopper Ketchum in June 1862. Brydone Jack (UNB President 1861-1885), was appointed to the Board of Examiners in 1874 for the examination of candidates for admission to practice land surveying in New Brunswick. In 1889, a Chair of Civil Engineering and Surveying was established, and in 1901, the first engineering building was opened. Surveying continued under the wing of civil engineering until an eventful train trip to Ottawa in 1959.

That train trip was to attend a symposium in Ottawa on survey education. The idea originally came from Angus Hamilton, at that time chair of the Canadian Institute of Surveyors Editorial Committee for *The Canadian Surveyor*, who had suggested a special issue on survey education. Sam Gamble, as chair of the education committee, countered with the suggestion of a symposium.

And so, in 1959, four friends (three from UNB) travelled from Fredericton to Ottawa by train to attend that symposium. During that journey, Willis Roberts (then Director of Surveys for New Brunswick), Bill Hilborn (then professor of photogrammetry in the Faculty of Forestry), Ira Beattie (then Head, Civil Engineering Department), and Gottfried Konecny (then Assistant Professor, Civil Engineering), had a dream of a surveying engineering department at UNB. In



1960, the first students were enrolled in the new Surveying Engineering degree with the help of Jim Dineen (then Dean of Engineering), Colin B. McKay (then President of UNB), and Archie McLaughlin (then a surveyor with the New Brunswick Lands Branch). The department of Surveying Engineering was created two years later.

Since 1960, the meaning of “surveying engineering” has undergone a radical change. Technological advances and emerging knowledge-based industries have changed the profession. Geodesy, ocean mapping, geographic information systems, land management and administration, precision engineering and mining surveys, satellite positioning, hydrographic surveying, and remote sensing are just some of the activities that have broadened the scope of both teaching and research in the Department. Keeping with the times and moving into the future, the Department changed its name to Geodesy and Geomatics Engineering on January 1, 1994 to better reflect the interdisciplinary spectrum of its activities. (I thank Wendy Wells for writing the above short history that appears on our website).

This issue of *Geomatica* marks the golden anniversary of the introduction of the Surveying Engineering degree. We now offer more than that one undergraduate degree, and offer a full range of degrees at different academic levels. As well as the BScE Geomatics Engineering degree (which originates


from the original degree in Surveying Engineering) we now offer a non-engineering 3-year degree, the Bachelor of Geomatics, geared to those students wanting to become a Professional Land Surveyor. We also offer the MScE and PhD research degrees, and course based graduate degrees. In addition to our own MEng degree, we are part of a multidisciplinary MEng Environmental Engineering degree, and we offer an MBA in Engineering Management allowing students to graduate with both engineering and business knowledge.

When I look at the "Introduction" in the 40<sup>th</sup> anniversary issue of *Geomatica* (Volume 54, No. 4, 2000) written by the Chair at that time (Dr. David Coleman) it is interesting to see the different challenges he and I have had to face, but how the strength of the Department has seen us through different, but still challenging, periods. The last 10 years have not seen early retirements as experienced by Dr. Coleman, in fact we have only had three faculty changes – one was the untimely death of Professor Y.C. Lee, lately Professor Mioc who joined us from University of Calgary and now works in Denmark, and Professor Pegler who accepted a position at CFB Gagetown. We are currently looking to fill the GIS vacancy created by Professor Mioc's departure – further details are on our website! We gained the services of Dr. Dave Dodd and Dr. Don Kim both as Senior Research Associates. The big challenge over the last 10 years has been maintaining the quality of teaching, research and service with a diminishing budget. I think we have achieved this with little direct impact on the students. Certainly one of the features of the Department that has not changed over the last ten years is our research strength. Since the early 1980s we have consistently been judged by UNB as one of the top research departments at UNB, and this year we have been recognised as the top (not just one of the top, but the top) research department on the Fredericton campus. This monumental achievement, for a

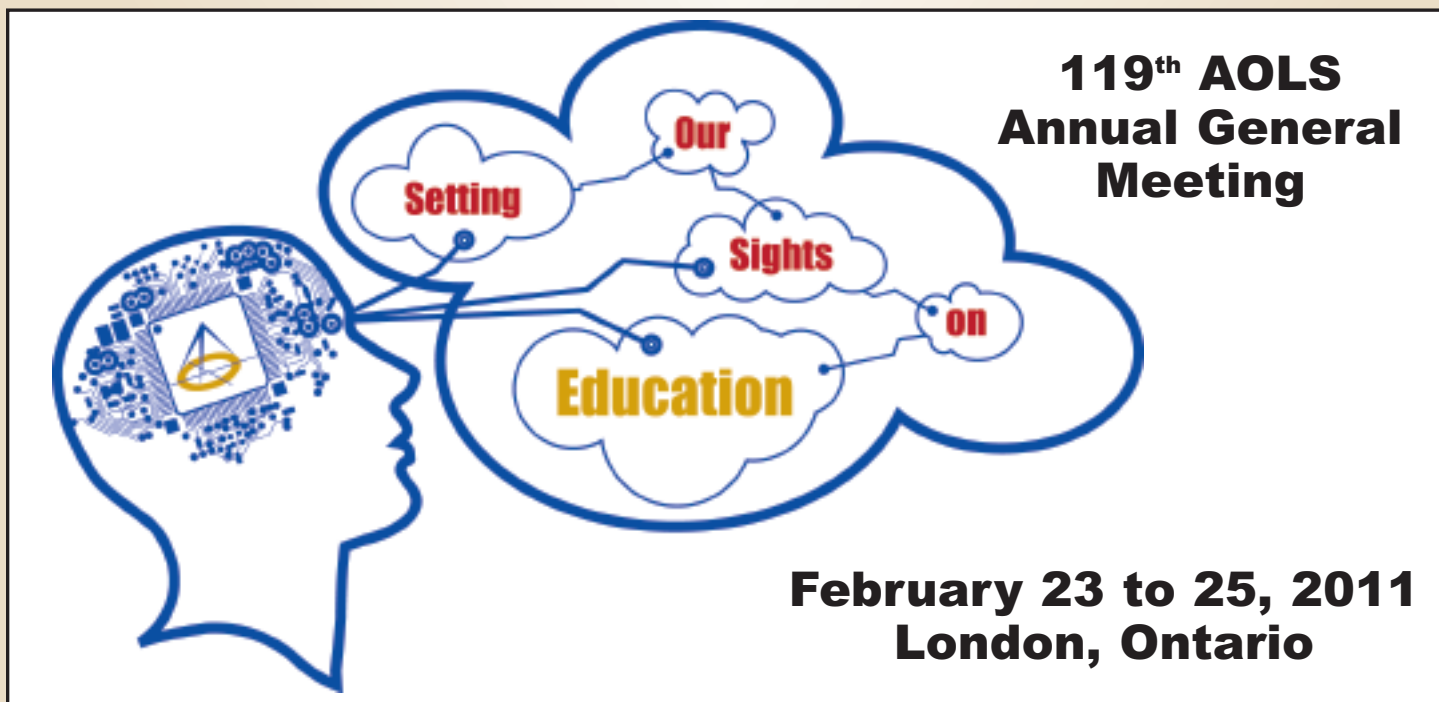
small department, would not have been possible without the efforts of current staff, students and faculty although we are continuing the trend started 50 years ago when a strong research ethos started to exist among the members of the teaching staff. I see this research achievement as a reward for 50 years of top-level research in the Department.

This special edition of *Geomatica* is one of the ways we are marking our 50 years of teaching and research. We have already unveiled a banner on a wall of our building at UNB, we have designed a special logo, and we created a calendar using photos submitted by students and staff of the department. Later this year we continue our anniversary celebrations by having our own sessions at the Geomatics Atlantic 2010 conference taking place in Fredericton, October 28 - 29 2010, and following this a gala reunion event on the Friday (October 29) at the Delta hotel in Fredericton. The following day we are planning for another reunion event at UNB. And, Wendy Wells (author of our much used Style Manual) has been busy over the year writing our complete history. This full-colour book will be available from October. Please check our website for further details of all the above events.

As Guest Editor, I would like to thank the Canadian Institute of Geomatics for allowing us to take over this issue of *Geomatica*, and in particular, I have to thank Carol Railer for her great work in turning our manuscripts into papers and her swift responses to our countless email. And I want to thank the authors of the papers who together have given an excellent report of the status of many of our research activities.

Please enjoy this special issue of *Geomatica*; I look forward to seeing many of you at our reunion events in October. 

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**119<sup>th</sup> AOLS  
Annual General  
Meeting**

**February 23 to 25, 2011  
London, Ontario**