

Ben Burrows

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Royal School of Military Survey

**Celebrating
60 Years of the
Army Survey Course**

21 January 2008

Sponsored by ESRI and ESRI (UK)

Image of Denison Barracks
courtesy of Getmapping PLC, UK.
www.getmapping.com



Dear Army Survey Course Alumni:

Congratulations on a remarkable anniversary: 60 years of world-class geographic education.

I had the good fortune to visit the Royal School of Military Survey in 2006. I was struck both by the scope of the training and education provided by this establishment and, above all, the quality.

I met with the Army Survey Course (ASC) students that were nearing the end of their exhaustive (and exhausting!) course. From that all-too-brief encounter, I better understand why I meet with ASC alumni in senior geospatial leadership roles all around the world. ASC produces well-rounded geographic professionals.

Here at ESRI, we are pleased and honored to continue to support the ongoing work of the Army Survey Course. The growing importance of geographic information systems to the defense and intelligence communities is accurately reflected in the modern ASC syllabus.

I am delighted that ESRI has the opportunity to sponsor this event to recognize your heritage but regret that I am unable to join the celebrations at the Army and Navy Club. Enjoy the evening and have confidence that your work as geographic professionals continues to make a difference.

Warm regards,

ESRI has been the world leader in the geographic information system (GIS) software industry for more than 30 years. As the leader in GIS technology, ESRI offers innovative solutions that will help you create, visualise, analyse, and share information. ESRI's ArcGIS® platform provides a horizontal, spatial information and application infrastructure for defence organizations and can be used as a toolkit by system integrators and developers to deliver capability to defence users. Defence and intelligence organisations around the world are using ESRI® GIS software to make better decisions.



Welcome from the Principal

On behalf of the Royal School of Military Survey I would like to welcome you to this unique event celebrating 60 years of the Army Survey Course which commenced in April 1948 as the Long Survey Course at Hermitage. We also celebrate the occasion with a visit to the Joint Aeronautical and Geospatial Organisation, 42 Engineer Regiment (Geo) and the Royal School of Military Survey on Thursday the 24th of January. The course has adapted over the years to satisfy the needs of Defence and today provides students with the opportunity to achieve a widely respected MSc in Defence Geographic Information through Cranfield University. More than a thousand students have attended the course from over 50 countries worldwide and the RSMS continues the early traditions of attracting a very high international attendance on this course.

The course has gained a high reputation both in the domestic and international field. This is reflected in the wider participation from North America, Europe and the Far East. Many past students of the Army Survey Course have gone on to head up their own country's national mapping agencies or achieve senior positions in industry. It is good to see that a number of our former international students are able to attend and old acquaintances renewed.

Thanks are due to our gracious sponsors, ESRI and ESRI (UK), in enabling this celebratory reception and dinner to take place at this time and I wish you all a most enjoyable evening.

J A Knight
Principal Royal School of Military Survey



60th Anniversary of the Army Survey Course

Reception and Dinner at the
Army and Navy Club
21 January 2008

Programme of Events

6.30 – 7.20 pm
Reception in the Marlborough Room

7.30 pm
Assemble in the Pall Mall Room for Dinner

Grace, John Elder

Presentation of Silver Centrepiece, Patrick Fagan

Dinner

Loyal Toast

Coffee

Speeches

Address from the Principal, John Knight

ESRI Welcome, David Swann

General Sir John Stibbon

Afterwards Cash Bar in the St James Room

Army Survey Course 60th Anniversary Reception and Dinner at the Army and Navy Club 21st January 2008

Guests

General Sir John Stibbon, KCB, OBE

Mr Stuart Haynes

Director Defence Geographic Centre

Ms Susan Truesdale

Academic Registrar and University Secretary, Cranfield University

Colonel David A Caulfield

Regimental Colonel Royal Engineers

Hosts

Mr John Knight

Principal Royal School of Military Survey

Mr John Day

Director Defence Business Development ESRI

Mr David Swann

Director Defence Marketing ESRI

Mr Nick Rigby

Defence and Intelligence Advisor ESRI

Mr Chris Dorman

European Defence Business Coordinator ESRI

Mr Krzysztof Kierzkowski

European Defence Team ESRI

Dr Richard Waite

Managing Director ESRI (UK)

Mr Lee Butler

Defence & National Security Business Manager ESRI (UK)

Mr Howard Wilding

Managing Director Helyx (an ESRI Holdings Company)

Mr Jim Sibbald

Business Development Manager Defence & National Security ESRI (UK)



The Courses from No 4 Long Survey Course to No 64 Army Survey Course

No 4 Sydney Clark	No 10 Harry Brinkworth
No 11 Jay Coulson	David Donnison
Alan Marles	Joe Oliver
Dick Scott	No 13 Alastair MacDonald
No 14 Peter Gardner	No 16 Paul Miller
No 17 Eric Barton	No 20 Mike Cooper
Ted Johnson	No 23 Peter Whitestone
No 24 Mr Richards	No 25 Sam Sowton
No 26 John Leonard	No 28 Alex Mathews
No 29 Roger Clowes	Henry Rogers
John Price	No 30 Patrick Fagan
No 32 Mike Curtis	Frank Preston
Mike Wright	Peter Preston
No 34 Miles Henry	MK Stephenson
No 36 John Croft	No 38 Roy Wood
Jon Eady	No 39 Paul Newby
No 41 Robert Dobbie	No 42 Robin Waters
No 43 John Elder	No 44 Mike Wilson
Mike Stanbridge	Charlie Payne
No 45 Richard Johnston	No 46 Duncan Shiel
No 48 Neil Smith	No 49 Phil Wildman
No 50 Robin Lewin	No 51 Chris Nash
No 52 Nick Harcourt	Iain Whittington
Steve Mason	No 53 John Collins
No 55 Alan Milne	No 56 Tony Black
Robert Owen	Mike Napier
No 58 Graham Kennedy-Smith	No 59 Ian Ross
No 60 Andrew Hoon	No 62 Peter Walker
Phil Grinton	No 64 Steve Anderson
Tony Keeley	Simon Farley

The Courses from No 65 Army Survey Course to No 93 Army Survey Course

No 65 David Attwater	No 66 Gus Cross
Tony Vickers	Clare Hadley
Yap Ing Fun	David Harris
No 67 James Prain	No 68 Stephen Walker
No 69 Chris Dorman	No 70 Richard Nicklin
Nick Rigby	No 71 John Day
No 72 Mark Foden	Glyn Hughes
Ashley Richardson	Mike O'Boyle
No 73 Mark Burrows	No 74 Jim Mitchell
Alan Honey	No 75 Vince Grealy
Jonathan Shears	Susie Pool
No 76 Sandra Grealy	Eric Putter
No 77 Andy Brookes	David Swann
John Kedar	No 78 Craig Cowan
Kevin Porter	Mike Skehel
Ross Thurlow	John Taylor
No 79 Hugh Vivian	No 80 Rupert Dash
Pat Fryer	Alan Othen
No 81 Nick Sutherland	Andy Page
No 82 Piers Noble	Rob Pullman
No 83 Tish Gauci	No 84 Graham Livesey
No 85 Hamish MacMillan	Neil Marks
Tony Wilby	Dave Rowlands
No 86 Steve Massetti	Lief Sudgren
Hamish McCarthy	John Tate
Jay Ware	No 87 Richard Blunt
Andy Swain	No 89 Corinne Foad
No 93 Mike Wood	

60 Years of the Army Survey Course

The course was born at the Commonwealth Surveyors' Cambridge Conference of 1947 initially as the Long Survey Course later to become the Army Survey Course in 1957. There was a recognised need to provide professional and technical skills for Military surveyors, Government surveyors of the Joint Survey Service who would work for the MOD, the Ordnance Survey, the Directorate of Overseas Surveys (DOS) and Commonwealth surveyors sponsored by their respective governments. Certainly the first course reflected this spread, students representing RE, DOS, Nigeria and Malaya. The course was designed to turn out professional surveyors for geodetic survey, topographic mapping and cadastral surveys, this role continuing for many years. The course turned out very competent observers though not quite up to that of Tech 1 Field Surveyors!



No 10 Army Survey Course

The Army Survey Course was linked to the creation of the Land Surveyors Division of the Royal Institution of Chartered Surveyors (RICS). Trial Survey formed an essential element of the course, somewhat mirroring the then Test of Professional Competence for the RICS. For many years membership of RICS was mandatory for the many Royal Engineer officers who would have early postings to DOS and careers in the Ordnance Survey.



No 38 Army Survey Course



**No 52 Army Survey Course
"The Hippy Course"**



A significant change in the course occurred between No 72 and 73 ASC when, in 1986, Trial Survey was replaced by the Survey Project with an increased emphasis on professional management and less on technical prowess. Attendance by Military or Civilian students destined for service with DOS had ceased by 1981 hence the likelihood of ASC students actually undertaking hands-on technical work was slight unless they had the opportunity to have a tour with 512 STRE. RE Officer careers were now firmly within Military Survey; the last serving officer departing from the Ordnance Survey in the early eighties. It is interesting to note that a certain RE Officer considered that he was not necessarily destined for the highest ranks as he did not receive a posting to the Ordnance Survey however he did retire as a Major General! 1982 also saw the last ASC, No 67, who routinely attended the course in civilian clothes, another indication of the shift in emphasis to the Military, though knowing some of the students it may have been their standard of dress!

The composition of the Army Survey Course has always been a great indicator of the interests of the United Kingdom both on a National and Defence level. The early courses firmly reflected the Commonwealth connection and this legacy continued for many years. Some 150 students attended from Nigeria alone. Though there was early attendance by students from Saudi Arabia from 37 ASC, (Capt al Sharani rising to be head of the National Survey agency of Saudi Arabia), it is quite significant that increased attendance occurred in the 80s and 90s mirroring significant UK defence sales with their associated geo elements. The end of the Cold War saw students from the former Soviet Bloc attending with UK Defence funding. The use of the ASC in Defence Diplomacy continues to today with the ASC being a relevant and unclassified course to offer to those countries with which UK Defence is seeking to form stronger links.

Of vital significance is the part the ASC plays in the Defence Geographic Centre (DGC) acquisition process. Places on the ASC can form part of a formal MOU as is the case with the USA or it can be a means of balancing the exchange agreements. Also former international ASC students now occupy many senior positions in their own survey organisations, both military and civilian enabling valuable working relationships to be developed with the UK.

Maj Asif Ali, No 71 ASC, is now the Surveyor General of Pakistan and Lt Col Khan, No 89 ASC, is the Surveyor General of Bangladesh. The Director of the Cameroon Survey Department, Mr Nchamukong, a graduate of No 28 ASC greatly eased the 1984 foray by 512 STRE into that country. Similarly with the increased emphasis on operations, links forged through the ASC enable much easier cooperation in operational theatres. Maj Feroze from Pakistan, No 75 ASC, is now the Defence Attaché in Afghanistan, a useful contact in an important arena of operations.



No 60 Army Survey Course

There have been various structural changes in the course and inevitable changes in content with recent developments in technology. The accreditation of the Army Survey Course as an MSc in Defence Geographic Information through Cranfield University saw significant changes in the structure of the course. The course had been of 16 months duration. It was shortened to a standard one year MSc with an introductory 5 week module and followed by a 3 week module, the duration of the complete ASC now being 14 months.



No Army Survey Course

The structure is now that of a standard MSc with a taught phase of 10 modules, a group project and the 4 month individual research project. The first course awarded the MSc was no 80 ASC who graduated in July 1996 at Shrivenham. The partnership with Cranfield University has been a strong and enduring one, the MSc passing its rigorous three yearly periodic reviews with flying colours, so much so that the interval has now been increased to five years.

The course is now unique in offering the complete range of geospatial topics in the military context and the advent of the MSc has reinforced the international reputation of the ASC and we still see very strong overseas attendance. It is of interest to note that the USA attendance which lapsed between 60 and 82 ASC is now going strong with the current course having 4 American students. The MSc is also recognised as being academically demanding as are all Cranfield University MScs.

But nothing stands still. After an initiative from the Joint Air Reconnaissance Intelligence Centre (JARIC) to gain MSc accreditation for training delivered on site it was decided that, because of the extensive experience the RSMS has with Cranfield University, the existing MSc in Defence Geographic Information should be the vehicle

for exploring the possibilities. There has been an initial meeting with interested parties to discuss the possibility, at which the scope was broadened to cover training within CDI's bailiwick. In essence the idea would be to use the model of the existing course but with parallel modules to suit other customer requirements, alternative modules not necessarily delivered by RSMS on site. It should be noted that the content of the current course designed for professional geographic officers, both UK and overseas would not necessarily change and in fact was validated by the recent RE (Geo) Review. With the next MSc Periodic Review due in 2009 the intention is to have the broad structure in place including module descriptors even though delivery arrangements would not be mature enough for the parallel modules to be offered at that stage. In spite of changes to the syllabus and advances in technology the enduring ethos and spirit of the Army Survey Course remains. Students achievement on the course is recognised by the long established Hamilton Prize, the Simpson-Leica Prize in memory of Jack Simpson, the Worshipful Company of Scientific Instrument Makers Prize and the Cranfield University Prize.



Army Survey Course Silver Centrepiece

Celebrating 60 years of the Army Survey Course

The Army Survey Course is involved with exciting new technologies across the wide range of disciplines that today make up GEOINT. All that Geo provides is fundamentally related to astronomical and geographical coordinate systems.

Armillary spheres have been associated with astronomy and used for observing celestial bodies or for the transformation between different celestial co-ordinate systems since the days of Ptolemy and later those of Tycho Brahe. They were designed to permit direct reading of the position of a celestial body in a convenient co-ordinate system. This close tie with co-ordinate systems is a key aspect of our work today; geo-referencing spatial and imagery information and intelligence that is used in defence in an increasingly complex domain.

A significant feature of the Army Survey Course has been its international representation from the start, with a significant number of Commonwealth and overseas students coming to Hermitage to be trained.

The Armillary Sphere represents that solid framework on which everything is based; a representation of the sphere has dominated the entrance to RSMS since the rebuild in 1980. The map of the World engraved on the disc represents the international nature of the ASC and its importance to many nations around the World. The centrepiece brings together these two themes into a modern piece of silverware that will be a lasting memento to the ASC and the School's time at Hermitage.

References:

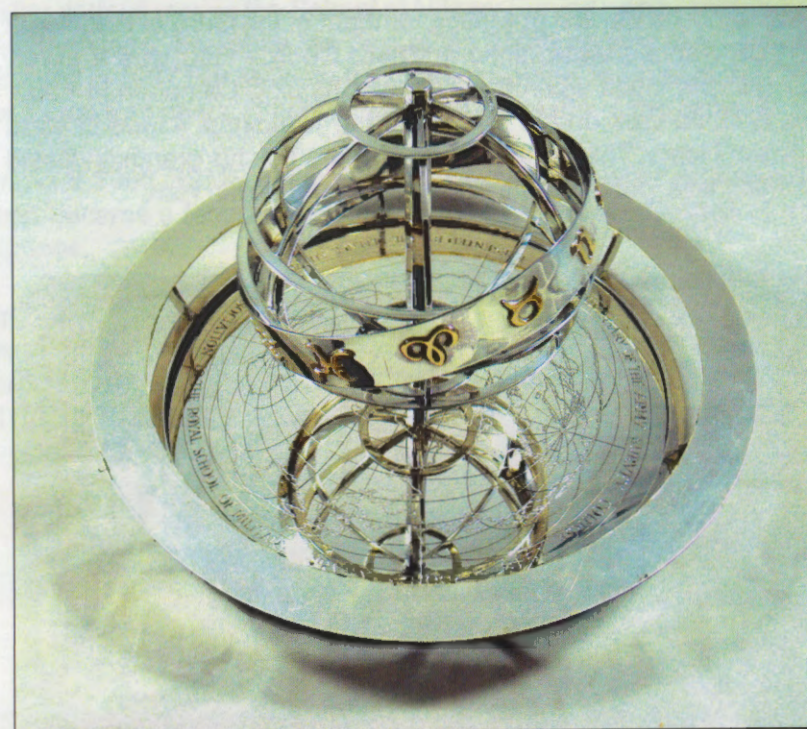
Ptolemy, *Almagest*, especially Book V, Chapter I.
Translated by G. Toomer, Ptolemy's *Almagest*, London 1984

S. Schechner Genuth, 'Armillary Sphere', in R. Bud & D. Warner (eds.), *Instruments of Science: An Historical Encyclopedia*, New York & London



Army Survey Course Silver Centrepiece

Celebrating 60 years of the Army Survey Course



Army Survey Course Silver Centrepiece

The Principal would like to acknowledge the generosity of the Defence Surveyors' Association and the Corps of Royal Engineers in funding this splendid silver centrepiece to mark this occasion.



Hart Gold & Silversmiths

(www.hartsilversmiths.co.uk)

The centrepiece has been designed and manufactured by a traditional gold and silversmith, Mr Julian Hart of Hart Silversmiths. The company specialises in a wide range of domestic silverware from the smallest piece of cutlery to bowls, jugs, condiment sets, tea and coffee services and the largest of salvers. There is also great knowledge in the designing and manufacture of Ecclesiastical and Civic silver.

The workshop is the last operating remnant of the Guild of Handicraft which CR Ashbee established in 1888. George Hart was a silversmith with the Guild when it moved to Chipping Campden in 1902. From 1912 he took on the running of the workshop, joined in 1930 by his son Henry. This high tradition is carried by his grandson David Hart along with Derek Elliott, and William and Julian Hart.



The Workshop

Copyright David Morris

The Royal School Of Military Survey

The Royal School of Military Survey (RSMS) is responsible for delivering of Geographic Training to Defence. It can trace its heritage back to 1833 when survey training was transferred from the Ordnance Survey to the Royal Engineer Establishment at Chatham under the control of the first Superintendent of Survey, then Lt W J Denison RE, later to become Lt Gen Sir William Denison.

After various moves the School of Military Survey was formed in 1949 at Hermitage, Berkshire. As part of the 250th anniversary of Military Survey in 1997 Her Majesty the Queen, Colonel in Chief of the Corps of Royal Engineers, granted the Royal Accolade to the School.

In April 2006 RSMS ceased to be a Royal Engineer establishment and became a federated school within the Defence College of Intelligence.

In its early days the major effort of the School was to train Royal Engineer Officers and Soldiers for Military Survey. The trend now is for increased Defence training across the range of geospatial disciplines. Training is delivered to satisfy three main requirements.

- Royal Engineer (Geographic) Officer, SNCO and Soldier employment training.
- Defence training including GIS, Terrain Analysis and Navigation Training including GPS, and Map Reading Instruction.
- Single customer requirements for the Royal Navy, Defence Geographic Centre (DGC) and the Royal Air Force.

There is also a long tradition of offering training to the international Defence community; this today is as strong as ever. From its inception the School recognised the need to form links with the international community and graduates of the Army Survey Course can be found in senior appointments of many national mapping agencies, professional bodies and industry.

The academic staff of the School consists of a mix of military and civilian staff; the former bringing recent operational experience and the latter both academic excellence and continuity.

New military members of staff at a senior level undergo appropriate post-graduate education at a UK university before taken up their appointments. All staff are encouraged to continue their academic development, many being sponsored through MSc programmes.

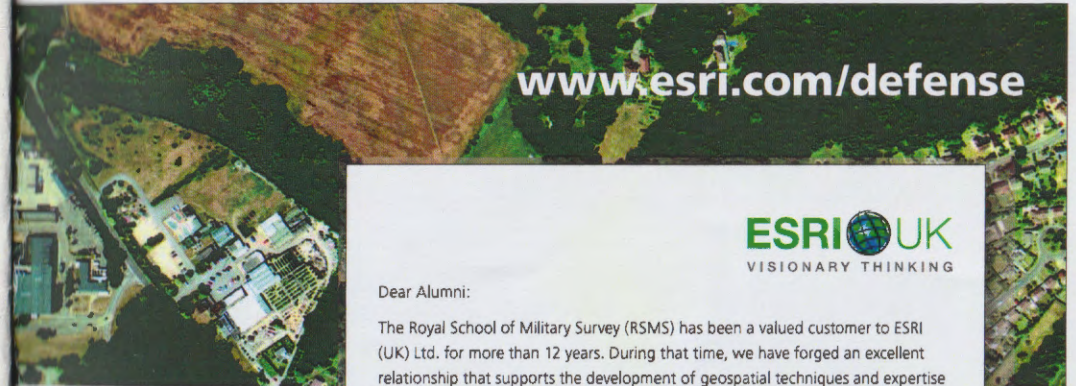
There are strong partnerships with academic and professional institutions including:

- **Cranfield University.** The Army Survey Course has been accredited as an MSc in Defence Geographic Information since 1994.
- **Sheffield Hallam University.** Royal Engineer (Geographic) soldier trade training has been accredited as a Foundation Science Degree in Applied Computing (Defence Geographic Information) since 2003
- **Royal Institution of Chartered Surveyors (RICS).** Successful completion of the Army Survey Course gives exemption from the written examinations of the Geomatics Faculty.

Following a restructuring of the Defence College of Intelligence in November 2007, Imagery Intelligence Training delivered by the IMINT Wing (formerly GSPI), came under the command and control of the Royal School of Military Survey.



No 89 Army Survey Course Cranfield Msc Graduation



www.esri.com/defense



Dear Alumni:

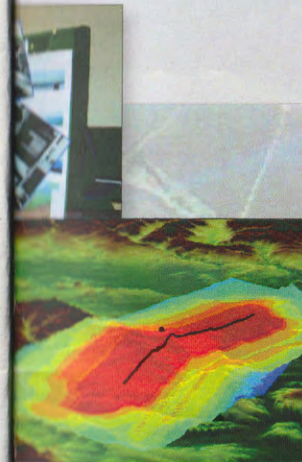
The Royal School of Military Survey (RSMS) has been a valued customer to ESRI (UK) Ltd. for more than 12 years. During that time, we have forged an excellent relationship that supports the development of geospatial techniques and expertise within the defence community and recognizes RSMS's vital role in delivering these skills to defence users.

ESRI (UK) supports education in all its business areas and has been a long-standing supporter of the CHEST scheme, which provides educational establishments with industry's latest software at the lowest cost. RSMS has been a CHEST site for more than 8 years, providing them with wide-scale, affordable access to the latest ESRI GIS software and support.

ESRI (UK) hosts the Army Survey Course (ASC) every year at our offices and recognizes its value in joining officers' education with the latest industry thinking on GIS, in the process better preparing them to exploit these capabilities in their careers. We congratulate ASC on reaching its 60-year milestone and look forward to further collaboration and support in the future.

Warm regards,

Richard Wake



For more information, visit www.esri.com/defense.
In the UK, visit www.esriuk.com/defence.