All change at BCS
New website & rebranding
2016 Symposium: see inside
for booking details

www.cartography.org.uk
UK £3.00
Hello all, as I write this, we have just celebrated Bedford’s 850th year as a Chartered Borough, with a celebration in the form of a River Festival. Over 200,000 people came from all around the world to attend! OS has celebrated 225 years and A-Z 80 years! And the UK now has a Geographer for Prime Minister – ‘Theresa May: the highest achiever of all in the starry, Oxford University Geography class of 74′ quips The Telegraph.

As the school year has come to an end, anxious students will be awaiting GCSE, A-Level and Degree results. An increase in Geography GCSE by over 3000 students per year totalled the number of students taking the exam in 2015 to 228,075. A-Level was at just over 37,000 and there are more than 80 universities in the UK offering over 1400 Geography related degrees – at any time there are almost 300,000 students studying geography full or part-time.

So Geography is on the rise in popularity again. How can we help? As geographers and cartographers, we can help explain difficult subject areas to students, we can tell them about what we do for a living and we can answer questions they might have. The best question I was asked at a Restless Earth was “Miss, how much do you earn?” I answered truthfully and said I have earned x and now I’m earning y, but my life is more enriched with passing on my knowledge through Restless Earth.

This edition is packed full of what we love – articles from our members. Thank you to all and if you are interested in getting what you are doing out there, submit an article and some pictures!!

We have the joint BCS SOC conference in September – if you haven’t already booked a form is in the middle of this edition for you to complete and return. We look forward to seeing you all there! Happy summer!

Alice, Louisa, Jasmine, Humian, Oliver and Martin

Maplines Editors

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From the Editors

A Message from the President

Welcome to the new look of the BCS! Our new website and site designers have laboured successfully at the GEO Business exhibition in London on 24th and 25th May, amidst the throng of over 2,200 visitors from some 50 countries. The BCS had a strong presence at our stand and throughout the rest of the exhibition and I want to extend my thanks to all our members who came to support us, whether by manning our stand or by saying hello; it was good to see you there.

Our new website signifies a major step forward in how the Society presents itself to the world and it also offers new opportunities for the Society and its members to interact. If you have not yet had a chance to see the good work at www.cartography.org.uk, I heartily encourage you to do so. Remember that you can renew your BCS membership, sign up for events, purchase publications, and much more via its fresh and inviting new design.

We are also looking at being able to offer online voting for the AGM, for those who would find this more convenient. More details will follow once we establish a robust system on our website, but there will always be the option to vote by post or in person at the AGM for those who prefer.

Many have been involved in the creation and development of the new website since the project was initiated under Pete Jones’s Presidency and I should like to thank all those who have contributed in any way, in particular, Martin Lubikowski, Chair of Publications, for overseeing the project for the Society, to Lewis Cave, from Win Marketing, for his expertise and diligence, to BCS Council members and staff, everyone who has provided new content, and to Stephen Booth from PV Publications for his assistance in the run up to the launch. We must not forget that our website needs to evolve as the Society evolves – our ‘shop window’ should always be fit for purpose – so feedback is always welcome as we continue to promote the art, science and technology of mapmaking in this way.

The development of our new website brought the ideal opportunity to reconsider the overall image of the BCS and its position to coordinate its launch with a wider rebranding of the Society. The aim was to arrive at a solution that would provide a bold, contemporary and professional feel that would reflect the Society’s relevance to new generations of mapmakers and work with our full range of printed and online media. The challenge would require a truly collaborative effort and a design team comprising Mary Spence, Martin Lubikowski, Giles Darke and myself was formed at the end of 2015 with the task of drawing up some options for Council to consider.

The process began with a redesign of the cover of The Cartographic Journal, which incorporated a new front (Gotham) and a new logo for the Society. Gotham is a modern, confident and friendly typeface, chosen for its ability to epitomise the clarity of expression which lies at the heart of effective cartographic communication. The logo, which is an evolution of a design by Mary Spence, updates our traditional and recognizable form of the quadrat for use in a modern context and continues to use blue, a colour with which the Society has a strong association. Many potential new straplines were put forward and discussed by Council, with ‘promoting maps and mapmaking’ chosen as the best for summarising our aims and representing our membership while also communicating who we are and what we do to non-members most clearly. After considering all feedback the design team produced a revised set of designs and associated guidelines, which were approved by Council on 19th April.

We have worked hard to create a new look for the BCS which meets our initial aims and this would not have been possible without the expertise, time and patience of those involved. Mary, especially, has worked tirelessly to implement the new branding across our whole range of publications (including, as you will have noticed, the splendid new cover for Maplines) and other items to ensure consistency, and we all owe her our thanks. Contributions to Maplines are always welcome and present a real opportunity to get your project out there, so don’t delay – get in touch with the editorial team!
The King of Hand-made Maps

David Atkinson, Illustrator, shares his 44 years of rock 'n roll illustrative maps

I n a quiet street in London is one of the nicest illustration studios I've ever seen. Behind the blinds and the windows are shelves which are stacked, bulging with books on illustration, art and maps. There are a good few tables and lamps, a guitar and a piano. A studio of an illustrator rock star.

All of his works look completely unique style which he loves. “The way I work with mixed and unusual materials mostly results in something different and surprising. The surface of the earth is the result of chance and accident, and out of this randomness emerges a chaotic beauty. As in William Blake’s famous poem – “to see the world in a grain of sand”.

David has been fortunate enough to work with some of the biggest advertising agencies in the world making maps, as well as for Michael Palin’s ‘Round the World in 80 Days’ and ‘Pole to Pole’. He works hard to give each map a tactile, human and touchable aspect, while moving the artform towards the twenty-first century. His lettering is so well drawn by hand, that some graphic designers have asked if they can have the font!

He tries to use old techniques when he can, but using computers allows him to store images as well as piece them together, like in this beautiful map mural (above) of the world for the TransRe Insurance Company in New York.

This glorious 30ft long map shows the types of disasters that can occur around the world, which David researched before compiling the map. Pretty handy for an insurance company, however I am sure that it is slightly unnerving for any visitors.

His work sings of craft and a love of maps, and I am sure that he will have even greater works to show in the future.

You can find him in the recent show in the future.

David researched before

H aving successfully been awarded a student bursary from the British Cartographic Society in 2015, I was fortunate enough and excited to attend the annual conference that brought together the British Cartographic Society and Society of Cartographers in York that September.

I began the ‘Mapping Together’ conference with a welcome talk by the BCS and the SoC in the morning, followed by two workshops in the afternoon. Being able to select a workshop that suited my interests was extremely insightful and a fantastic opportunity to be able to work alongside fellow mappers and cartographic professionals. The variety of talks that followed the workshops were both very interesting and informative, allowing me to take notes and extend my knowledge. After each talk, there was ample opportunity to share and discuss everyone’s opinions and reflections; this time was extremely beneficial for me.

The Awards Ceremony that followed the Gala dinner was the highlight of the conference in York for me. It was a great opportunity to network with everyone at the conference in an informal, non-intimidating and relaxed environment. In addition, it was very useful to gain new contacts in the field in which I would like to pursue a career.

Day two gave me a further chance to learn more from the talks and workshops that I attended. Listening to Danny Dorling’s thought-provoking presentation on mapping the UK elections of 2015 and the talk ‘Maps on Apps’ delivered an up-to-date approach. I was fortunate and grateful to be provided with exciting case studies that I could use to support my GIS module as part of my Geography degree.

My experience at the conference was extremely rewarding. In addition, being able to include this opportunity on my CV and discuss it in interviews has helped me to secure a University College London to study for a Master’s course in Geographical Information Science. Following the conference, I joined the British Cartographic Society as an Associate Member and am very much looking forward to attending future workshops with the society, as well as making the most out of the benefits that membership has to offer. I would strongly encourage students to apply for a bursary to attend the conference in future: the invaluable experience and exciting opportunity gave me a new level of motivation to continue with my passion for cartography.
80 years of Geographers’ A-Z Maps

Although the history of A-Z spans 80 years, the story of the company began in 1900 when a young Hungarian, Alexander Gross, moved to London with the financial security and maps. These maps would provide him with the financial security and reward he came to London to find, as well as a family he loved comprising of his artistic wife Bella, and his children Anthony and Phyllis Gross. Phyllis was born in 1906, and travelled extensively as a child with her family until Alexander and Bella divorced in 1920, and possibly as a result, Alexander was removed from the board of Geographia soon after.

This left Phyllis with no place to call home on leaving boarding school, so she took a place in a college in France both as pupil and teacher before studying at the Sorbonne. After a brief and failed marriage, Phyllis returned to London in 1936, and Alexander set up Geographers’ Map Company on the 28th August, splitting the shares equally between Phyllis and Anthony. It was Phyllis, however, who took on the responsibility of creating the first A-Z. And spent hours walking the streets of London cataloguing the house numbers, junctions and streets. Alexander told her to call the first publication the ‘OK Atlas’, but she changed the name at the last moment, and sold every last copy of her first London A-Z, with her main customer being a certain W.H. Smith and Sons.

By 1938, the Company were selling 12 titles, with the maps being entirely hand drawn by skilled cartographers. It would take a fully trained cartographer around 12 weeks to create a finished publication, and these early maps are true works of art. In 1940, with the outbreak of the Second World War, the government ordered the removal of street maps from sale, but following her father’s example, the business instead produced war maps for the newspapers.

In 1946, Phyllis was involved in a tragic accident when the plane she was on crashed into a Surrey hill, leaving her with a fractured skull and spinal injuries. Undeterred, Phyllis continued with her work, and also spent time running her father’s US business on to, she took the business in 2013, but with the business user and high street demand for lost or damaged letters.

In the 1970s saw both an introduction of the now iconic A-Z to the company name as well as the move to photo typesetting, with cartographers taking turns at the typesetter to print out the letters they needed to make up the names on the map. These letters would then be added one at a time to the sheets. Although a quicker method than previously, time could be lost as cartographers tried to find replacements from their colleagues for lost or damaged letters.

In the 1980s, mapping production was further improved by the latest innovation in scribbling tools which could be used for street mapping for the first time. Phyllis was awarded the MBE in 1986, around the same time that computer typesetting replaced photo typesetting, with two dedicated operators now taking on the responsibility for the letter production.

The greatest production revolution was to occur in 1990 as the first CAD/CAM Unix computers were installed into the drawing office. Even in the early days, the advantages were obvious, and very quickly this evolved into windows-based PCs using drawing software. One of the new challenges was to use this technology to create the map whilst still retaining the style that made the A-Z so unique and easy to read from the very beginning.

In 1996 the company celebrated its 60th year with a trip to Eurodisney, with Phyllis surrounded by the people she always considered as her family. She passed away shortly after, on the 28th August, exactly 60 years to the very day since the company was founded. The next decade opened with the company using the most advanced technology available to produce publications. Computer-to-plate was the next step forward, again advancing production significantly. Using this method, the drawing office managed to send out 164 jobs in a single year in 2005, and the company had record sales over this time.

Computers were to see other significant developments in the industry with the arrival of satellite navigation and the availability of free internet mapping. The quality of both these technological advances was to steadily increase as the demand for paper production rapidly declined. This ultimately lead to a restructure of the business in 2013, but with the words and ideals of Phyllis deeply entrenched into the new structure.

So where to now? Well, Phyllis had a saying she was rather fond of, and one that summed up her business approach, and that was ‘on we go’ so we are doing precisely that. The nature of the business is evolving with the market, and we are now producing digital data, and giving both the business user and high street customer exactly what they want and need. Our digital offering grows rapidly as we are a long way along the process of creating the digital A-Z of the UK, a product we simply call A-Z Street. A-Z Street, already in use by London Air Ambulance, as well as allows for this. We are now also able to offer previously discontinued titles as print-on-demand products, which has meant the return of our London 9-sheet maps, now available from our website.

The future is there for us – we believe that mapping is more a part of life than ever before, and there will always be a demand for the supply of maps in changing formats. The continuing development of mapping tools drives the industry forward into uncharted territory, and we look forward to seeing where the journey takes us for the next 80 years. On we go indeed.

By Steve Berger, Joint Managing Director, Geographers’ A-Z Map Co Ltd

Inset: Naming roads using letters mounted on stripping film.

Government organisations, provides flexible but familiar mapping, and we will be maintaining the most up to date, detailed and easy to read UK mapping source available at street level. Add to this the range of custom products available from wallpaper to large format atlases, not forgetting a range of licensed brand products from Ben Sherman clothing to jigsaws, and we have so much to offer.

How everyone uses the map has changed, and we’ve changed with it. Every individual now expects to be the centre of their map, and digital and custom mapping

Below: A-Z Maps are increasingly being used in digital applications such as navigational systems for the emergency services.
BCS Admin Report & Corporate Report

BCS Admin Report

Membership

We would like to firstly thank all of you who have renewed your membership subscription for 2016. If you have forgotten, it’s not too late; please use one of the following methods to keep your membership active:

• Through the website: www.cartography.org.uk

• Personal Cheque made payable to The British Cartographic Society, please write your membership number on the back.

• Bank standing order.

• Debit/Credit card details sent with your returned renewal form.

If you have not renewed by the end of June your membership will be suspended and you will no longer receive BCS publications, also your access to The Cartographic Journal online will be terminated. We hope to hear from you soon!

New Members

Since the Spring 2016 edition of Maplines was published, we have pleasure in welcoming the following new members to the society.

Corporate Members
Garsdale Design

UK Members
Mr S. Jones, Mr D. Nuttall,
Mr N. Boyes, Miss A. Spriggs, Miss G. Brooks, Miss S. McSkeneane, Mr M. Oyler, Mrs S. Hobbs, Mr J. Berry, Miss E. Gillard, Mr O. Saunders, Ms A. Semproni, Dr P. Mason, Mr J. Bean, Mr P. Mallard, Mr M. Davis, Ms K. Rann, Mr T. Starnes, Mr J. Piper, Mr J. Meyjes, Ms L. Ortolja-Baird, Mr R. Adams, Miss H. Peek, Mr M. Greenfield, Ms F. Hogan, Mr D. Hope, Mr T. Greenwood, Mr A. Ryan, Ms A. Giles.

Overseas Members
Mr G. Terry

Associate Members
Mr T. Foster, Miss P. Koper, Mr R. Waters, Miss M. Garrido, Mr P. Hooger, Ms M. Luck, Miss A. Palmer.

Sadly we report the unfortunate news that a long standing Fellowship Member has passed away. Our thoughts and condolences are with the family of Mr Peter John Adams.

In other British Cartographic Society news:

The society exhibited at both the Esri UK Conference and the GeoBusiness Show. Both events had delegates showing great interest in the Society exhibition, in particular the Restless Earth Programme. It was good to see faces we recognised and to meet new faces.

At the GeoBusiness show, the new BCS webpage and logo were launched. As with all big changes such as these, there have been teething problems and technical hitches. There is a very hard-working team within the society putting their minds to these issues so they can be ironed out. We apologise for any difficulties encountered during this time. Please continue to contact us with any problems and we will report these to the web designers.

BCS at GEO Business 2016

F
ollowing a lot of hard work by several people, GEO Business 2016 was chosen as the event that BCS would launch its new website, logo and marketing material. The event was held in the Business Design Centre in Islington on 24-25 May and was attended by some 2,200 delegates from over 50 countries so clearly provided an excellent venue for BCS to show off its new wares.

Undoubtedly, the most important element was the launch of the new website which is often the first point of contact for potential new members and is used by members on a regular basis. The site has been developed by Win Marketing and Ann Goodwin from the company was on the stand for the launch. The new site does have a much fresher look and feel and work is continuing to populate the site.

A key feature of all our marketing material including the website is the new logo which is much ‘cleaner’ than its predecessor. A difficult thing to design when it has to look right when used with all the marketing material and I think it really does work well on the website and the new flyers, coasters, pens, pencils, rulers and post-it notes. They all look very smart so well done the design team (Mary Spence, Giles Darke, Martin Lubikowski and Alex our President).

Also on the stand at the launch were Alice Rickward, our Restless Earth Co-ordinator and Paul Naylor from Ordnance Survey who chairs the Programme Committee. And, I hear you say, ‘Why were you there?’ Answer: As leading publications salesman.

By Peter Jolly

Below: From left to right - Mary Spence, Alice Gadney, Paul Naylor, Martin Lubikowski, Alex Kent and Peter Jolly.

Geo Business 2016

Corporate Report

I t has been great to see so many corporate members at numerous conferences and exhibitions held over the last couple of months, I know many of you dropped in on the BCS stand at the ESRI UK Conference and at GEO Business 2016 where we launched the new website and logo.

The new website will provide the BCS with a much improved forum to keep in touch with other cartographic professionals and to inform members and all map lovers of the latest developments and products available. Your ideas on how it can best be utilised to promote members to the cartographic and geospatial world will always be welcome and I look forward to any feedback.

The combined BCS/SoC Conference is in September. A big thank you to all sponsors; your support is greatly appreciated. I look forward to seeing you in Cheltenham for what is an exciting programme of talks, workshops and much more.

Alan Grimwade,
BCS Corporate Liaison Officer,
alangrimwade@cosmographics.co.uk
L ast year’s British campaign took 38 days, the Canadian election process lasted 78 days, but the U.S. presidential campaign has been going on since November 2012 (shortly after President Obama won re-election). More than three years of election noise is taking a toll domestically and globally.

I saw that the British people were unsettled by the raucous politics internationally to the extent that Parliament debated banning Donald Trump, known affectionately (or not) as “The Donald.” British MPs were quite uncomplimentary, calling Mr. Trump “a buffoon,” “wazzock,” “ridiculous xenophobe,” and “the orange prince of American self-publicity.”

Trump Taps into Anger

Trump profited politically from the “angry voter syndrome” that has been gripping conservatives since President Obama’s election in 2008. The “angry voter” is characterized as an older white male, who feels America is in decline. He blames globalization, status quo politicians, and the expansion of women’s and minority’s rights for America’s problems.

Trump energized these angry voters with celebrity self-confidence and attacks on global trade, the Republican Party elite, women’s rights, and immigrants. Trump has fed the anger by leading the “birther” movement, accusing President Obama of not being American-born; he used it again to vanquish his two main Republican opponents (both Latino): Ted Cruz and Marco Rubio.

Trump certainly succeeded in manipulating angry voters during the primaries, and he boasts about receiving some 12 million primary votes. However, primaries have low voter turnout rates in the United States—averaging 17% of eligible voters in 2016. The November election expands to some 225 million eligible voters.

Trump’s Troubling Electoral Map

On November 8, 2016, Trump will face the country’s most diverse electorate ever. Nearly one-in-three eligible voters will be a racial or ethnic minority. Traditional Republican woes with women voters have been exacerbated by Trump.

The President of the United States is elected based on an accumulation of state electoral votes, known as the Electoral College (see map below). The trouble for Trump is that the reliably Republican states in the South and West add up to only 180 electoral votes compared to 264 votes for dependably Democratic states (see graph below). The winner needs 270 electoral votes to become president. States with large minority populations, such as California and New York, consistently vote for Democrats.

The Electoral College is not a college, but a process set up by the Constitution in 1787 as a compromise to give less populous states (including slave states) a greater role in electing the president. The framers feared that large states would dominate a direct popular presidential election. The Electoral College allocates the least populous states 3 votes. The most populous state, California, yields 55 votes.

Can Trump Triumph?

Trump could win against Democratic rival Hillary Clinton if he takes all 7 swing states (94 votes), which is a long, long shot. A few key states deserve some detail:

- Florida (29 votes) is the pivotal swing state in this election, and Trump cannot win without it. He owns the lavish $200 million Mar-a-Lago estate in Palm Beach, but minorities make up some 45% of Florida’s population. Cuban Americans, who traditionally vote Republican, are divided on Trump; younger Cuban Americans like Obama’s Cuba policy. President Obama won this state in 2012 by only 74,000 votes out of 8.4 million, and the minority vote is critical.

Continued on page 24...
Tuesday 6th September

BCS GIS Special Interest Group

Better Mapping with ArcGIS

A full-day workshop focusing on how to create high quality cartography with ArcGIS.

• tips and tricks and a deep dive into getting the best out of ArcGIS Desktop and Online
• new tools and techniques including vector tiles, 3D and animations

The presenters will debunk the very tired myth that you can’t use ArcGIS as a full pipeline for professional cartography. Don’t believe us? There’s only one way to find out...

Ken Field Esri Inc / ICA
Rob Sharpe Esri UK
Ben Flanagan Esri UK

This is an ICA Map Design Commission event in support of International Map Year.

BCS Golf Tournament

The 6th Annual President’s Golf Tournament will be held at Lilley Brook Golf Club, playing for the BCS trophy currently held by Andy Wilson of Victoria Litho.

Guest Speaker

Maps in the 20th century: Drawing the Line

Tom Harper British Library

In conjunction with the British Library’s exhibition showcasing the 20th century through cartography, Tom Harper will provide an overview through the eyes of the British Library’s map collection. He will examine the role of maps as agents of change in the 20th century: from above as a tool of state control, and from below as a form of protest and expression, with particular regard to the changing policies, practices and tastes of institutional map collecting.

Wednesday 7th September

Talks 1: Map Tools

Fashionable maps are coming to town. Beep beep.

Ken Field Esri Inc, Redlands, USA / ICA

GIIS 2M: an overview

Ross McDonald Angus Council

Gaining value through integrating OSM data in your production workflows

Paul Duré & Nico Regnault 1Spatial

Workshops 1

Adobe Clinic

Led by Stuart Gill Coventry University

A Body of Knowledge for cartography

Led by David Fairbairn Newcastle University

Talks 2: Mapping on the Edge

A Contested Geography: China’s U-shaped line, a case study of cartographic ambiguity

Peter Vujakovic Canterbury Christ Church University

How mapping has influenced the campaign to make London the world’s first National Park City

Daniel Raven-Elison National Geographic Emerging Explorer

When politics meets maps there is no right

Steven Feldman KnowWhere

Talks 3: Paper Maps

Alfred Wainwright: craftsman cartographer - often imitated, never equaled

Steve Chilton Middlesex University

Rebranding paper maps (behind the scenes)

Jim Goldsmith & Mark Wolstenholme OS

Hand-painted maps: the art of Jane Tomlinson

Mary Spence Global Mapping / BCS

Thursday 8th September

Talks 4: Visualisation

Making maps searchable by time, not distance

Charlie Davies iGeospatial

How map design can benefit from eye tracking

Michael Burch & Robin Woods

VJSUS, University of Stuttgart, Germany

Why cartographers should code

James Cheshire University College London

Workshops 2

An introduction to the Mapbox toolset with a focus on the map design studio

Led by Charley Glynn Ordnance Survey

Creating a stunning shaded relief map in QGIS

Steven Bernard Financial Times

Map Critique

Two good, two bad

Steve Chilton Middlesex University

Ken Field Esri Inc, Redlands, USA / ICA

The speakers will discuss the design of good and bad map examples with delegate participation.

Talks 5: Citizen Mapping

Community mapping at scale: mapping Dar es Salaam

Mar Iffie University of Nottingham

Towards a Citizen’s Atlas for London

Phil Cohen LivingMaps Network

BICS Restless Earth Workshops

Helping GCSE Geography come alive

Alice Gedney BICS

Workshops 3

GIS and cartography: come to the dArc side

Led by Ken Field Esri Inc, Redlands, USA / ICA

Is the art of cartography dead? Long live the map? Can an app be a map?

Fiona Cocks Sterling Geo
The OS has been celebrating on two fronts recently. The Trig Pillar is 80 years old and it’s their 225th birthday. The hashtag #TrigPillar80 has been used by members of the public to send photos of themselves standing on or near, posing with or just admiring trig pillars to try to win an OS t-shirt. There are approximately 6000 trig pillars still standing, originally placed to set up a triangulation of the whole of Great Britain. Although no longer used for surveying, they are still maintained by the OS. “Trig-bagging” describes the activity of visiting as many pillars as possible. Trig-bagger extraordinaire, Rob Woodall, has recently completed a 14-year quest to visit all 6190 pillars.

On 21 June, the OS celebrated 225 years of map production by producing two ‘new’ maps, based on historic styling but using modern data. The result can be seen on the OS website, at www.ordnancesurvey.co.uk/blog/2016/06/celebrating-225-years-with-a-map/. See the article in this edition for more information on how the maps were made.

A dress made from World War II “escape and evade” silk maps was sold in July; silk was used for maps as it did not crease, was durable and could be folded up small for concealment. Thought to have been created between 1945-50, when fabric was still rationed, returning servicemen would have bought the material home after the war. Source: BBC website

The centenary of the start of the Battle of the Somme has been commemorated recently with events in northern France and the UK to remember the 1.1 million men who lost their lives. 4dSomme is an interactive map from Esri which shows the campaign of the Irish Raised Divisions during the Battle. This uses GIS methodology, along with historic mapping, to show progress on the modern landscape. The website describes the terrain and conditions and allows the user to view the contemporary mapping overlaid on Esri satellite imagery. There is also a description of how mapping was supplied to the front line. The website is a fascinating insight into the technologies of the period, as well as the history of the most deadly battle of WW1. Source: http://www.ordnancesurvey.co.uk/blog/a-large-new-monument-has-been-discovered-at-petra-jordan-using-google-earth-and-enhanced-satellite-imagery-archaeologists-made-the-discovery-at-the-world-heritage-site-recently-it-is-thought-to-date-from-the-second-century-b-ce-the-structure-is-about-56-by-49-metres-and-will-now-be-excavated-to-investigate-further-enhanced-remotely-sensed-imagery-was-used-to-identify-different-land-uses-and-picks-out-features-not-visible-by-conventional-methods-

A large ‘new’ monument has been discovered at Petra, Jordan, using Google Earth and enhanced satellite imagery. Archaeologists made the discovery at the World Heritage Site recently; it is thought to date from the second century BCE. The structure is about 56 by 49 metres and will now be excavated to investigate further.

Enhanced remotely sensed imagery was used to identify different land uses and picks out features not visible by conventional methods. The centenary of the start of the Battle of the Somme has been commemorated recently with events in northern France and the UK to remember the 1.1 million men who lost their lives. 4dSomme is an interactive map from Esri which shows the campaign of the Irish Raised Divisions during the Battle. This uses GIS methodology, along with historic mapping, to show progress on the modern landscape. The website describes the terrain and conditions and allows the user to view the contemporary mapping overlaid on Esri satellite imagery. There is also a description of how mapping was supplied to the front line. The website is a fascinating insight into the technologies of the period, as well as the history of the most deadly battle of WW1. Source: http://www.ordnancesurvey.co.uk/blog/2016/06/celebrating-225-years-with-a-map/

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The centenary of the start of the Battle of the Somme has been commemorated recently with events in northern France and the UK to remember the 1.1 million men who lost their lives. 4dSomme is an interactive map from Esri which shows the campaign of the Irish Raised Divisions during the Battle. This uses GIS methodology, along with historic mapping, to show progress on the modern landscape. The website describes the terrain and conditions and allows the user to view the contemporary mapping overlaid on Esri satellite imagery. There is also a description of how mapping was supplied to the front line. The website is a fascinating insight into the technologies of the period, as well as the history of the most deadly battle of WW1. Source: http://www.ordnancesurvey.co.uk/blog/2016/06/celebrating-225-years-with-a-map/

The OS has been celebrating on two fronts recently. The Trig Pillar is 80 years old and it’s their 225th birthday. The hashtag #TrigPillar80 has been used by members of the public to send photos of themselves standing on or near, posing with or just admiring trig pillars to try to win an OS t-shirt. There are approximately 6000 trig pillars still standing, originally placed to set up a triangulation of the whole of Great Britain. Although no longer used for surveying, they are still maintained by the OS. “Trig-bagging” describes the activity of visiting as many pillars as possible. Trig-bagger extraordinaire, Rob Woodall, has recently completed a 14-year quest to visit all 6190 pillars.

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At the time of the French Revolutionary Wars, the threat surveys, starting with Kent and to produce countrywide maps. By the end of the war in 1815, most of England and Wales south of Birmingham had been mapped at a scale of two-inches to one mile. The maps were published at a scale of one-inch to the mile and the famous ‘Old Series’ was born.

Originally, London was only published on the corner of William Faden’s four county sheets of the South-East. His successor as Geographer to the King, James Wyld the Elder, later published his own map of London in 1833 using a similar style.

On this limited edition map of present-day London, we have revived the style of the Old Series.

Method
The map was constructed in layers. Although not unusual, it was strange to have so many layers and to have them all in Photoshop. The complex patterns required for a largely black and greyscale map exceeded the capabilities and memory of most vector-based software and the rendering engines of most GIS; this combined with the density of data involved in mapping London led to a document some 16 gigabytes large.

For each layer we researched the original representations, experimented to find the best combination of data and generalisation and sought the best method of recreating the style.

Parks and vegetation polygons – created by removing detail, such as tracks from local data, merging with land management data, then re-generalising with new detail – form the base. Creating the patterns is something of a trial and error process to find the correct structure, symbol size and level of black. Some vegetation, such as marshland, was shown using an existing font symbol and a repeating pattern set in GIS.

For point symbols, we were keen to show churches and windmills as they appeared on the original maps. Lighthouses and beacons sadly don’t exist in our geographic extent.

2016 London is a hectic urban sprawl. To allow the eye to rest, we decided not to show administrative names and to concentrate on the geographic locations. Place names refer to in everyday life. In an attempt to capture true positions and hierarchy, we used our names database combined with scouring old OS maps. Urban settlements do not grow uniformly, but the beauty of old maps is that settlements were usually a handful of properties around a road junction, so original centres are very easy to pinpoint. By evaluating these against the modern day placement and importance we manually placed and categorised all text.

The text on the map, and even the title, are a close match to the original Board of Ordnance maps. Marginalia is a further tribute to the original maps of the era. Aside from the ornate title and the ‘scale of two hands’, you’ll notice subtleties such as the irregular lines of the graticule markers. Again a nod to the hand-drawn drafting.

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We also chose to reflect on other maps from our history, of which rural and mountainous parts of Britain have always attracted people to our paper maps, often making a lasting impression.

Charley Glynn put forward his personal favourite for the replica treatment. I asked Charley why he elected this particular map: ‘I chose a 1967 quarter-inch map of the Western Highlands, sheet 4 in the Fifth series. The boldness of colours and the mountainous terrain appealed to me and it’s a particularly interesting geography. I thought it would be a challenge to recreate current data in this style, plus there was the chance to learn some new techniques.”

Whilst titled ‘Quarter Inch’ and generated from the One Inch, the Fifth Series was in fact at a scale of 1:250,000. The landscape was coloured for height, from pale-green through to dark orange, with shadows added to show the slope of the hills.

Method
We used QGIS to pull all of the data together layer-by-layer and exported them separately before recompiling in Illustrator. Doing it this way afforded us ultimate control over the appearance of each feature – ending up with 38 layers. About 95% of the text was successfully placed using automated rules, with the rest manually tweaked.

Recreating these maps has given us a real appreciation for the craftsmanship that went into the originals!

Prints are available at os.uk/maps

By Christopher Wesson, Ordnance Survey
The World From On High

A medieval map combined with a view of the Earth from space is a reminder of humankind’s ancient desire to chart the world from above.

On 11th February 2016 the British astronaut Tim Peake tweeted a picture from aboard the International Space Station (ISS). Captions ‘a copy of one of the oldest maps in Britain, now exploring the newest frontier here in space’, it showed a facsimile of the English Hereford map (c.1300), on display at the British Library. The book cover image is how alike the two views of the Earth are. Both show us circles of lands indented with darker bays and seas. Though ‘the newest frontier here in space’ has only recently become accessible to us, the longing for an orbital view of the Earth is not new.

In his Phaedo, Plato, in the fourth century BC, described the Earth from above as a patchwork of terrains and vegetations, stitched together like a leather ball. Another legend, from the sixth century AD, has Alexander the Great build a flying machine – made from a basket tethered to two griffins – with which he used to fly to such a height that the Earth looked to him like a threshing floor encircled by a serpent. Mathematical proofs of the spheroic of the Earth have been around since antiquity and medieval people were aware that they inhabited a globe. The English mystic Julian of Norwich (c.1342–c.1416) wrote that she was shown the Earth in a vision: she held it – as round as a ball and about the size of a hazelnut – in her palm of her hand.

Peake’s view of the Earth has been anticipated for millennia. Antique and medieval thinkers lacked the technological but not the imaginative means to put themselves into orbit and look down on the Earth. Looking out of the window of the ISS onto a world where, in the astronomer Carl Sagan’s words, ‘everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives on a planet so small that it curls up into the backcloth with which the ancients mapped their world.

By Dale Kedwards, Dale is a historian of medieval maps at the University of Zurich.

A n invitation from Menno-Jan Kraak, ICA President, to attend our bi-annual International Cartographic Conferences (ICC) is a reminder that cartography is in need of an orbital calendar. It is with great pleasure that I invite you to Washington, DC, on 26–30 July 2016 to participate in ICA’s 28th conference. It promises to be a fascinating and successful event. It will be unique because we will experience the developments in our discipline since the previous conference, expressed in papers, posters and in exhibitions of maps and technology, and because Washington, DC, is the centre of US cartography, and many organizations and companies will share their knowledge with us. It will be successful because you will be there too.

And from Lynn Usey, ICA Vice-President and Conference Director: The Cartography and Geographic Information Society (CAGIS) invites all cartographers, and many organizations and companies will share their knowledge with us. It will be successful because you will be there too.

The schedule is:

• 26–30 July 2016 – Submission of Abstract and Papers
• 10 January 2017 – Notification of acceptance
• 31 January 2017 – Submission of Final Manuscripts
• 16 February 2017 – Conference Registration for Presenters/Authors

Sessions on a wide range of topics are expected. The topic list has been developed from recent conferences and extensive consultation with ICA Commissions by chair of the Scientific Committee, Cynthia Brewer.

• T01: Visual analytics, geovisualization, and dynamic cartography.
• T02: Spatial analysis, geocomputation, modeling, and data mining.
• T03: Virtual reality, augmented reality, 3D mapping, and Geodesign.
• T04: Generalization, multi-resolution data, and multi-scale representation.
• T05: Thematic cartography and multivariable data mapping; semiology.
• T07: User studies; user experience and usability; user interface design.
• T08: Cognitive issues in map use and design.

Submissions will be accepted online only until 26 October 2016, using the online submission form. Authors will be notified of acceptance/rejection no later than 20 January 2017. Submissions will be accepted on the online submission form. Authors will be notified of acceptance/rejection no later than 20 January 2017. Submissions will be assessed on the originality, interest to cartographers, and likelihood of advancing the discipline. Submissions may be technical or non-technical, individual or institutional in scope and approach. Submissions and optional papers will be assessed on how well they demonstrate a clear goal of relevance to cartography, use of systematic investigation or methods, completeness of results or relevance of people, and significance of conclusions.

Presentation format options are oral paper or poster. There are two tracks for submitting your presentation. The Book Track (B) requires submission of a short abstract and full paper. The Proceedings Track (P) requires submission of a long initial abstract. Tracks B and P submission details are explained within the online instructions.

Continued on page 21 . .
Human geographies are infused with information. Information is created, processed, and used in places. It is stored in places; it moves across places; and it ultimately annotates and augments places. Until relatively recently, much of the world’s geographic information was tethered to particular parts of the world. Information was stuck to its containers (e.g., words physically printed onto the pages of a book), but it could move around the world without significantly changing. Mass media like books, television or radio allowed information to be both mobile and static (or ‘immutable’). This fundamentally altered the political economy of geographic information. Immutable, but mobile, geographic information could be employed to exert power in economic, social, and political spheres of life and governance. This meant that those in control of the means of informational production (e.g., publishers, printers, media companies, governments, and censors) could wield enormous influence over how places came to be represented. But the digital moment has brought about a fundamentally different relationship between content and its containers. Information can be separated from its containers, but still remain immutable. Because of the digital moment’s ability to detach content from its containers, and massively lower barriers to entry than early practices of media production, there are many commentators that have pointed to the possibilities for more democratised information geographies.

The digital moment therefore offers a radically different political economy of digital information: the ability for broad-based participation and Internet users from 2013 (the most recent data currently available).

The data are mapped as a cartogram in which the size of each country represents its population of Internet users (each hexagon on the map symbolizing one third of a million Internet users). Shading on the cartogram is in proportion to each country’s Internet penetration rate: darker shades symbolizing higher levels of Internet usage amongst the population.

The map paints a revealing picture about human digital activity. The world’s largest Internet population (over half a billion connected people) lives in China. Indeed 46% of the world’s Internet users now live in Asia (China, India, and Japan alone are home to more Internet users than all of Europe and North America put together). It is also notable how few countries can count a majority of their populations as Internet users (India for instance, falls into the lowest category, at <20% penetration).

Looking at these data as a starting point, therefore reminds us that despite the massive impacts that the Internet has on everyday life for many people, there remain starkly uneven geographies of access. A majority of humanity has never used the Internet.

With those imbalances in mind, it is also worth reflecting on who it is that creates content online. Whilst, in theory, any internet user can create information and participate in digital platforms. In practice, we see a much more limited set of people doing that. This is particularly evident if we look at the world’s most used encyclopaedia: Wikipedia.

Wikipedia is one of the world’s most visible components of digital information geographies. It exists in over 200 languages, it contains 32 million articles, and 15% of all Internet users access it on any given day. Content on the platform thus can play an important role in annotating parts of our world.

Wikipedia operates using a digital architecture that, in theory, allows anyone with an Internet connection to contribute content (indeed, the platform’s strapline is “the free encyclopedia that anyone can edit”). However, as figure 2 illustrates, the geography of participation is highly geographically uneven.

The map is based on Wikipedia data dumps encompassing 44 languages from November 2012. The map highlights the fact that a majority of content produced in Wikipedia is about a relatively small part of our planet. By contrast, other continents are much less represented in the world’s most prominent digital repository of human knowledge. The whole continent of Africa contains only about 2.6% of the world’s geotagged Wikipedians despite having 14% of the world’s population and 20% of the world’s land.

Some of this variation can be explained by Internet population (i.e. the total number of Internet users in a country). However, even accounting for their small internet populations, most countries in the Middle East and Africa still are represented by far fewer articles than would be expected when Internet penetration is accounted for (see Graham et. al. 2014 for detailed statistical analyses on the topic).

Said plainly, geographies of participation and representation are heavily skewed in favour of Internet users in high-income countries. These uneven geographies of participation can not simply be explained by internet access.

Interviews and focus-groups with Wikipedians also revealed that the availability of a broader ecosystem of local information, having an educated and tech literate population, having reliable infrastructure (such as power supply), and excluding half of the population (in other words, women), having the internet be trusted rather than subject to surveillance by the state, and having the critical mass for local-language tools, platforms, and communities were also all significant enabling factors.

As everyday human geographies are increasingly infused with information, we need to be asking more questions about what information geographies look like and who gets to participate in their creation. The digital moment has not yet facilitated a broad-based democratisation of digital information. Let’s therefore keep asking who, where, and what gets included and excluded.

By Mark Graham

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- **T34**: Digital Transportation Infrastructure: highly precise and continuously updated road models for autonomous vehicles.
- **T35**: Marine and aeronautical cartography, navigation charts and data, baselines, and sovereign zones.
- **T36**: Geospatial intelligence and military cartography.
- **T37**: Early warning, risk reduction, and crisis management using maps and geospatial information systems.
- **T38**: Sustainable development: adaptation and resiliency mapping.
- **T39**: Planetary, extrasolar, and celestial cartography.
- **T40**: Developments in intensively mapped domains: global change, soils, geology, agriculture, humanitarian programs, crime, facilities management, etc.

I would strongly encourage UK Cartographers to consider attending the ICC-2017 in Washington, even if you have never attended an ICC before – Washington is a fascinating city with lots of interesting museums and galleries (most are free) and I am confident that the conference will be highly interesting and extremely well organised. Even better, I would hope for a good number presentations and posters to be submitted; the UK has punched well below its weight at recent conferences in terms of number of delegates and presentations compared to many of our European neighbours - Belgium now ranks above us in these areas. We traditionally have a high profile in cartography internationally, but need greater visibility within ICA.

There is no UK national report for this conference, that comes every 4 years, but there will be an International Map Exhibition and a Petchenik Children’s Map Design competition. We will supply information about these later this year with the aim to have a bumper showcase of the best of UK Cartography.

David Forrest, Chair, UK Cartography Committee ICA Vice-President.
Volunteering

Volunteers are always needed and your expertise in the cartographic field is much appreciated.

With the purchase of an Esri ArcGIS Non-Profit Licence, we are now able to spatially analyse where the schools are that we have visited and are yet to visit. Many of these are in and around London and in a swathe up from Milton Keynes to Kendal, so this might appeal to those of you living around London, the West Midlands and North West. We’ve noted that we have not been to many schools in the North East, South West or East Anglia, but we are working on this!

During the summer, more information also will be put up on the website for volunteers to download.

I will be needing volunteers again this year, but also as a presenting role! If you have any questions about volunteering, please don’t hesitate to contact me.

Thank You

I have recently met with our sponsors – Global Mapping and Ministry of Defence – to explain what a great role they play in the workshop and to thank them for their support.

I am due to visit The Great Britain Sasakawa Foundation and Japan Society, Esri and the Royal Geographical Society in the summer to promote the workshop, present our work and thank them for their continued support.

I would like to say thank you to all our sponsors, volunteers and supporters. I have to say a special thank you to Fernando Menéndez, from EOSGIS in Spain, for creating our two fantastic 3D models, which really help the children understand the topography of Japan, something us professionals take for granted.

If you feel your company could support Restless Earth, please contact me at the email address below and I would be more than happy to discuss!

Please see the website for Restless Earth workshop dates – they are coming in thick and fast for next year!
The Three Peaks Challenge

Ben Nevis, Scafell Pike and Snowden attract around 700,000 visitors each year with 30,000 of those visiting to complete the Three Peaks Challenge. Until recently, challengers needed three Ordnance Survey (OS) maps for their planning and navigation. Then OS cartographic and product teams created the Three Peaks Challenge map.

The map provides challengers with all the mapping they need in one place and it has the added advantage of clearly marked routes, which cover the recommended climbs on all three of the peaks. Divided into four areas, three of these areas use the OS 1:25 000 mapping for the individual peak locations, with the fourth map providing an indication for the road journey between the peaks. The 1:25,000 data includes road and rail networks, height, natural features and points of interest.

OS created the map in conjunction with several organisations and charities responsible for the management of the mountains, including the Three Peaks Partnership. They helped verify the recommended walking routes for each peak, ensuring routes were accurate and enabled maximum safety.

Above: OS maps for the three peaks.

Nick Giles, Managing Director of OS Leisure, commented: “The new map has been created to ultimately make it easier, safer and more enjoyable for individuals to plan for, and take part in, the national Three Peaks Challenge by providing a single source of information, covering all three mountains.

“We're in the busiest season for people looking to take part in the Three Peaks Challenge and we would urge everyone to be fully prepared for the challenge and always carry a paper map. GPS devices and mapping apps are great, but you never know when batteries will fail. The OS Three Peaks Challenge map could be the most important item in your backpack.”

The map can be used for planning, navigation and as a memento of their adventure – challengers can even choose which peak photo to feature on the cover of their map. It’s available to purchase online by individual challengers, but also potentially by charities and event organisers to include as part of a challenge pack.

The Three Peaks Challenge map can help to support a user to complete the challenge responsibly and safely. This includes tips for preparing, mountain rescue, weather advice and the Countryside Code, as OS are keen to minimise the impact of the event on the outdoor environment.

This map is available through the OS shop, and as a BCS member, you are entitled to a 25% discount using the discount code BCS25LM

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- **Pennsylvania, Penn. on map (20 votes)** has not voted for a Republican presidential candidate since 1988, and it looks favorable for Democrats in 2016. Republican Senator Toomey, who won his seat in a low turnout 2010 election, will likely lose due to higher voter turnout this year. President Obama won by more than 300,000 votes in 2012, and the 2016 Democratic National Convention will be in Philadelphia—a city friendly to Democrats.

- **Ohio (18 votes)** is another must win state for Trump. Northern Ohio and major Ohio cities prefer Democrats, and Obama’s winning margin in 2012 was 166,000 votes out of 5.5 million. Trump’s cavalier insults against Republican Governor Kasich divide Ohioans. The July 2016, Republican National Convention will be in Cleveland—a Democratic stronghold—where tensions will be high.

- **Virginia (13 votes)** favors Democrats in 2016, partly due to high minority population growth in the Northern Virginia, the former lands of Lord Fairfax. Republicans have not won a statewide election since 2009, and Obama won Virginia in 2012 by 149,000 votes out of 3.8 million. Trump barely won the Virginia primary, getting only 34% of the vote and losing Northern Virginia, Richmond, and Charlottesville—where, incidentally, the Trump family owns the state’s largest vineyard.

Hillary Clinton should win in November, even with her perceived unpopularity and problems. Why? As shown with the electoral map, a generic Democrat holds an advantage over a generic Republican candidate. In polls, the Democratic Party and President Obama are more popular than the Republican Party. Finally, Trump staged a hostile takeover of the Republican Party, which is replete with division and Machiavellian intrigue.

As a celebrity tycoon, Trump is an unconventional candidate (imagine Simon Cowell as prime minister), but he must navigate a long, conventional political process to win. In the end, too many states and groups are aligned against Trump, and odds are against the orange prince becoming president.

By David Miller