Welcome to the summer edition of Maplines, and what a summer it has been. I hope you have all survived the heat. And talking of heat, this is the first edition of our magazine without Louisa Keyworth and Alice Gadney on our editorial team. They have moved on to brighter and better things. I would like to thank them both for their hard work and dedication to Maplines over the last 3-4 years. If anyone out there would like to fill their shoes, please contact me.

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Thank you to all our contributors for keeping the articles flowing in and making Maplines the true voice of our membership. Our cover features images from Louisa Keyworth’s article ‘A Highland Cycling Adventure’ and Tim Newman’s excellent article on improvements to the OS mapping app. We also have a full update on the UK Mapping Festival. Happy reading!

Martin Lubikowski

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Advertise in Maplines
Consider the Society’s magazine a shop window to promote your company, event, course or publication to the mapping community.
To submit editorial, contact the Editors: maplines.editors@gmail.com
For display advertising, contact Sharon Robson: sharon.robson@geomares.co.uk or +44 (0)1438 352617
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If you would like to sponsor a Maplines Quiz please contact the Editors for more information.

Advertising in Maplines

As I look at the timetable of events for the Mapping Festival see page 11 for details – I’m struck by the breadth of content – not just in the BCS/SoC conference day, but across the event as a whole. At times like this, it’s only right that we celebrate the broad-church basis and nature of our Society.

It led me to reflect on just a few of the strands which together make up cartography – with apologies to anyone whose niche, specialism or interest I’ve missed:

• Archivists and librarians – without them, what would we know of our predecessors? Also here may I point you to towards the appreciation on page 18 of the life and work of Ann Sutherland, the convener of our Map Curators’ group for over 25 years who died recently.

• (Map) artists – using maps to tell stories – about the world, about us, about their creators...

• Collectors – and such a range just here - from the giveaways of today to Renaissance high-art: they’re all maps.

• Data scientists – you can’t have a map without data, nor a good map if you don’t understand your data.

• Designers – we can never forget that maps are primarily a means of communication and that in constructing them we have to firstly consider the receiver of that communication. As users change, design necessities need to change too.

• Educators – again an area itself multi-faceted: we can think of both the programmes we run such as Restless Earth and the contacts we have with academia.

A Message from the President
This page – and here I must mention something I saw just the other day: Volume 6 of ‘The Timess Atlas of the World’ – covering the twentieth century - is now available for a free download. Originally published in hard copy in 2015, it joins the already available first three volumes. Volume 4 – covering Cartography in the European Enlightenment – is due out next year in book form with the fifth (19th century cartography) joining them later.

Arranged in encyclopaedic form, it is both eye-opening and humbling to simply look through the breadth and depth of its content: from Academic paradigms in Cartography to Zhongguo kesuyuan (Chinese Academy of Sciences) by way of articles on people and concepts such as Holme, Inhoff and Robinson; alpine cartography, choropleths and oceanography; GIS, typography and map pins, it portrays the sheer breadth and depth of cartography – with apologies to anyone whose niche, specialism or interest I’ve missed.

And thinking of matters this way is just one dimension: we also bring together those in the private, public, and third sectors; we are involved with those working in fields such as topography, hydrography or geology. For some, maps and cartography is a profession, for others an obsession; but a strength of the society has always been that we equally value those who are simply interested in maps.

Also, looking back through the winners of our awards in recent years, I was struck by the way these too emphasised and illustrated the various aspects of the society as in the example shown here.

From the Editors

The Timess Atlas

For those of you receiving this as part of your existing membership, I really look forward to seeing you at next month’s UK Mapping Festival and, especially, at our conference on Wednesday. If you’ve dropped into the Festival and have picked up this copy, can I ask you to take further interest in cartography – whatever aspect – and consider joining us? Full details can be found on our stand at the Festival or online at https://bit.ly/2w7hnKv

Richard Carpenter, BCS President

Visiting the Past
Abdullah Al-Sayari continues his voyage through Saudi Arabia.

The Times Atlas
16
The Times Atlas of the World has been updated. What goes into this undertaking?

UK Mapping Festival
11
Everything you need to know about the UK Mapping Festival (2-7 September).

Contents
The Magazine of the British Cartographic Society (Registered Charity No. 24003A)
Volume 33, 2nd Issue – Summer 2018

Maplines
p.10 Admin Report
p.18 UKCC Report
Also in this issue... p.06 Highland Cycle Adventure p.18 Ann Sutherland Obituary p.23 Carto Design to GeoDataViz p.26 Meaningful Maps

Beyond Digital Paper Maps
A look at OS’s digital and paper maps, and how they complement each other.

4 XYZ Maps of China
XYZ Maps has produced a map for China. But where are the boundaries?

8 The Timess Atlas
The Times Atlas of the World has been updated. What goes into this undertaking?

11 UK Mapping Festival
Everything you need to know about the UK Mapping Festival (2-7 September).

16 The Times Atlas
The Times Atlas of the World has been updated. What goes into this undertaking?
A small Scottish cartography firm is to shape China’s view of the world after signing a lucrative deal to supply maps to Beijing authorities. Charts supplied by Midlothian company XYZ Maps will be used to help the Chinese government in planning and service delivery.

The deal was finalised following months of work which reveals a fundamental truth about the geographical documents – the world is how you make it.

What Does that Mean?
As Dr Tim Rideout of XYZ Maps told The National, maps are “political documents”, with the meaning in the eye of the beholder.

To have the deal with the National Geomatics Centre of China (NGCC) signed off, Rideout and his team had to review and overhaul existing charts for accuracy – not because of errors, but because the information they contained did not accord with the country’s policy.

That included the labelling of Tibet, as well as other issues. “If you’re going to sell maps in China,” he said, “then you have to get a certificate from the Chinese government to say they comply with the Chinese view of the world. Any disputed territories have to be shown as Chinese.”

Is that Censorship?
According to Rideout, the changes are simply part of the business of cartography. While world maps are often presented (NGCC) signed off, Rideout and his team had to review and overhaul existing charts for accuracy – not because of errors, but because the information they contained did not accord with the country’s policy.

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XYZ Maps Shape China's View of the World

OK, Explain More
To gain Beijing’s approval, XYZ had to ensure the disputed South China Sea – which is the subject of claims by Vietnam, Malaysia, the Philippines and China – was marked as Chinese.

There was also no question of presenting 23.3 million-strong island nation Taiwan as anything other than the People’s Republic of China, despite its near 90 years of practical independence, while President Xi Jinping’s administration continues to regard it as a rebel region.

Likewise, while XYZ would ordinarily show Tibet as disputed territory, this had to be altered, along with changes to various sections of China’s borders with India and Pakistan in respect of territorial claims.

Any Other Examples?
Plenty of them. The Falkland Islands are not always so named, given the ongoing claim to the British overseas territory by Argentina. Islas Malvinas, the name used by Argentina, is included on documents for that audience, and on those used to promote its agenda. Japanese charts also show the archipelago as Argentinian.

The very live conflict on sovereignty over Crimea is also an issue, with XYZ currently presenting the region as Ukrainian under Russian occupation. The long-running dispute over Kashmir is another. “Every map in India shows Kashmir as part of India,” says Rideout, “and every map in Pakistan shows it as part of Pakistan.”

He told The National how one producer saw its guides taken off shelves in both countries as they highlighted the ceasefire line instead of official boundaries, adding that: “The only thing India and Pakistan can agree on is that the ceasefire line is not the border.”

Any Word from China on the XYZ Deal?
Yes. The $50,000 agreement covers world, continental and country artwork, plus data on rivers, towns and more. Chunhua Chen, managing director of agent Beijing E-Carto Technologies, said the NGCC had chosen the Scottish seller because of its “flexible licence terms, world coverage and because the map artwork was so beautiful”.

By Dr Tim Rideout
XYZ Maps
www.xyzmaps.com
sales@xyzmaps.com

Zoomed in part of the map showing some of the borders.

Zoomed in part of the map showing some of the borders.
There are, of course, different levels of comfort depending on where you are in the world and the budget of the holiday, but in this case, the trip consisted of carrying your own luggage and staying in a mixture of hotels, B&Bs and hostels.

A great part of any of these trips is using maps to plan the routes and to look at the sights and places to visit on the tour. A large and to look at the sights and landscapes littered with standing stones and cairns, to the imposing castle at Dunnottar. Our final destination was Stonehaven and a night in a small hotel and a large meal!

The second day involved a trip north to Huntley. This day was peppered with castles and open landscapes. This area is relatively flat, so spirits were high as we pedal along. The occasional stop for cake always cheers the troops!

For day three, we awoke in our bunkhouse to the gentle sound of rain. The only drawback of a cycling holiday is the need to travel from point A to B, no matter what the conditions. So, with our waterproofs on, and handlebars pointing north-west, we headed towards Findhorn and the sea. The day took us through Elgin, which is a historic town with a large ruined cathedral. The Sustrans route takes the cyclist around much of the centre of the town, so I cannot comment on the town itself, but the surrounding area made for a pleasant ride. After a long straight route out towards the sea, Findhorn loomed into sight, where again, refreshment of the culinary and whisky varieties was enjoyed by all.

The next day was a day off, during which the group visited the Findhorn Foundation, a spiritual eco community. We were given a guided tour of the village by a former resident who explained the ethos of the community and how they all came together in common belief.

Back on the bikes the next day, we headed inland towards the distant Cairngorms and our stop at Grantown on Spey. Our mapping skills were tested when news came through of a bridge over the Spey being closed for repairs. A convoluted route was plotted using off road tracks of unknown surface. Most of the group decided to plough on and were pleased to see that access across the bridge was available for bikes (but not cars) and we were rewarded with a paddle in the river on a warm day, which was most welcome.

After a lovely night in a very comfortable hotel, all too soon the mountains were not so distant and as we climbed the 20% gradient up to The Lecht, I began to dream of a holiday sitting on a beach... The previous evening’s study of the map was useful at this point as forewarned is forearmed. The road to Braemar is spectacular and passes through ski resorts, which really should have been an indication of the terrain.

Our final day involved more ski resorts, passing through Glenshee and then down onto the flat lands as we returned to the bright lights of Dundee.

By the end of the week, Scotland was experiencing some of the warmest weather anyone there could remember – there is always something very satisfying about coming home from a cycling trip in the Cairngorms with a tan, which has already faded, but I will have many happy memories for years to come.

By Louisa Keyworth, Publishing Manager at Lovell Johns and a keen recreational cyclist.
Beyond Digital Paper Maps

For many, the words ‘OS Maps’ will immediately conjure images of the iconic 1:25,000 and 1:50,000 mapping that has been at the heart of Ordnance Survey’s leisure portfolio for decades - and for good reason. Their rich detail coupled with clear design – the very definition of good cartography – has enabled millions to get outside and discover Great Britain’s treasures. Three years’ steady growth in OS paper maps sales testify to the public’s affection for the pink and orange maps.

The same data that is printed as OS Explorer and OS Landranger maps forms the backbone of the OS Maps app and web service. Add the convenience of 50,000 professionally authored routes, minus the inconvenience of fiddling about with a piece of string to find out how far you’re about to walk, and you’ve got a winning product already. The app is more than just a digital paper map.

Digital ways of consuming mapping present unique opportunities and challenges of their own, and chief among them is the problem of situational context.

Look at 1:25,000 on a mobile phone screen and you’ll get an excellent idea of your immediate surroundings – but, without a lot of finger swiping, you lose that wider context which an unfurled paper map presents so well. This problem forced us to rethink how people use OS Maps when out and about and embrace the emerging technology of Augmented Reality (AR).

The OS Maps AR feature was developed so that, now, when you’re sat on top of a tall hill on a clear day, you can hold up your phone and see the lakes, mountains and woodland before you labelled. Interested in something in particular? Just tap the label, and providing you have internet, you’ll get to a page with local info, suggested walks and more. No more guesswork about what that peak across the valley is called.

Another consequence of digital mapping is the new audience it reaches. While exciting, increasingly this means users who, unlike the Maplines readership, can’t simply glance at a map and instantly visualise the terrain it’s depicting.

Cartographers have long wrestled with how to convey the landscape, with its opportunities and dangers, and that is made all the more challenging when new users don’t necessarily understand the convention we typically use to represent the third dimension - contours. We needed a new approach that could help develop new users’ map reading skills, while offering a fresh perspective to more advanced users.

This led us to the world of gaming technology where we found the tools to create an ultra-realistic depiction of the landscape - our 3D mode. Combining height points every five metres with OS’s high-resolution aerial imagery, the 3D mode allows users to soar over the British landscape – without the cost of an expensive drone. In March, we enhanced it further with the 3D ‘fly-through’ – making it possible to enjoy a stunning aerial tour of any route in OS Maps you might be about to travel.

To some, this shouldn’t be seen as a ‘map layer’ – by showing a facsimile of the world as it is we apparently avoid the cartographer’s dilemma of what to show and, crucially, what to leave out. But the creation of the fly-through forced us to consider analogous questions. How high should the virtual camera fly? Should the camera point down – to show the detail of the ground – or out – to show the horizon and the views a walker could expect to experience? Should the camera track the location point closely, or prioritise a smooth journey?

The result of weeks of experimentation and tweaking is well worth a look – https://getoutside.ordnancesurvey.co.uk/3d-flythrough-route-mapping. It’s prompted suggestions that you no longer need to actually slog up a mountain ever again - I disagree. A map, to quote Rosita Forbes, has “the magic of anticipation without the toil and sweat of realisation” – I hope that the 3D mode will fuel users’ eager anticipation for the outdoors and result in many more enjoyable and safe outdoor adventures, taking us one step closer to our vision of getting more people outside more often. Find out more at www.osmaps.uk.

By Tim Newman, Ordnance Survey, tim.newman@os.uk
The BCS are looking for a convener to support their popular GIS Special Interest Group (SIG).

This SIG is a research-based group providing a point of contact and discussion for those engaged in any aspect of Geographical Information Systems and associated sciences.

The aim of the SIG is to:

- Promote activities and events such as seminars, workshops, visits and open meetings during the Annual Symposium
- Encourage participants in its meetings to publish their ideas and findings in the outlets provided by the Society
- Seek to publish an occasional newsletter, distributed free to members of the BCS and on subscription to others.

This is a great opportunity to become part of the wider BCS community and actively help with the Society’s goals and programme.

If you are interested, please email Paul Naylor (BCS Programme Chair) at paul.naylor@os.uk

Members
Thank you to all our members who have renewed their membership for 2018. And of course, a big welcome to our new members.

New Members
Affiliate Members:
Frances Francis, Anupam Bansal, Mohammad Usman, Ragnar Heidar Thrastarson

Full Members:
Roberto Bondone, Douglas Bell, Morris Charlton, Lauren Denness, Lucy Morris, Paul Adams, Mathew Hay, Shannon Bell, Mark Wolstenholme, Kit Roberts, Heather Bell, Chris Balmebra, Alice Butt, George Breckenridge, El-Moustafa Eweda, Heather Miles, Drew Hardy, Chantal Jackson, Declan Valters, Michelle Marie Watson, Craig Wing, Paul Cureton

Student Members:
Rebecca Shulga, Ruksan De Mel

Small Corporate Members:
The Little Map Company Ltd

Please Note: Subscription year is from 1 January to 31 December.

Renewal / Joining Methods
- Through the website: www.cartography.org.uk
- Personal Cheque made payable to The British Cartographic Society – please write your membership number on the back.
- Debit/Credit card details sent with your renewal form.

We are reachable by telephone and email Monday to Thursday 9:00am - 5:00pm and Friday 9:00am - 4:30pm.

We are happy to help any members with any issues or queries they may have related to the Society.

Email: admin@cartography.org.uk
Phone: 01223 894 870
Deimante Janaviciute, BCS Administration

The UK Mapping Festival will soon be upon us! A six day series of events and activities for everyone from the GIS and mapping professional to the enthusiast and map lover!

The whole event runs from 2-7 September, but the main event is held at the ILEC Conference Centre near West Brompton Tube Station in London from the 4-6 September.

This is the most ambitious conference that the BCS Programme Committee has ever attempted. It will offer the usual opportunity for BCS members to attend interesting and stimulating talks, take part in workshops, network with each other and attend the annual Awards Dinner.

As the first event in London, the committee has also planned it to be an outreach opportunity to ensure the cartographic message is spread throughout the geospatial community and beyond. The Association for Geographic Information (AGI) and the British Association of Remote Sensing Companies (BARSC) have partnered with us in putting together the programme to make it as inclusive of the world of mapping as we can.

We have persuaded some very notable individuals to take part, including the Minister for Digital, Culture, Media and Sport (subject to recent government changes), the GeoSpatial Commission and a ‘celebrity’ speaker.

But more importantly it should also be a lot of fun, and to that end we have been running competitions prior to the event, will host a comedy night on the theme of mapping and will provide a range of activities for adults and young people to learn more about mapping.

Please give it all the support you can. Many of the events are free to attend and we want to make sure the BCS comes across as the sort of society which anyone interested in maps should be a member of. Encourage colleagues, friends, and neighbours to come along, even if only for a few hours.

BCS/Soc Awards Dinner
This will take place on Wednesday 5 September at a restaurant in Central London. Price is £45 + VAT including drinks. Places are strictly limited.

Entrants for all the awards will be displayed in the ILEC Conference Centre Exhibition area and Workshop room. There will be free viewing and open access, except when the workshop room is in use.

Conference Character
We have created our own character to support UKMF, which was named through a Twitter pole as Charlie Maplin by Ben @funkin79.

Animation
We have animated the character and added him to some of the best entries from the ‘Maps are Everywhere’ competition. The animation will be on the Londonist website, and on the UKMF YouTube channel and, we will be showing it at the event. See the video at youtube.com/ watch?v=EX7HdsIz08

Partners, Exhibitors and Sponsors
The UK Mapping Festival includes not only the AGI and BARSC as partners but several companies who will be involved in the exhibition. Their support is incredibly important. There is always room for more exhibitors or sponsors. If you are interested, contact us through the web page.

www.cartography.org.uk
UK Mapping Festival

Programme
There is a full and extensive programme of talks and workshops on the three days of the conference. Here is the programme as of 31 July, although this may be subject to change. For more details see the website www.ukmf18.org

TUESDAY 4 SEPTEMBER
Geo: Underpinning your Organisation’s Value Today (Organised by AGI)
Keynote Talk - Why Use Geographic Information?
09:30am - 09:50am Earth Observation and Geospatial
09:50am - 10:10am Geospatial Information is Critical to Unlocking Value Within the UK’s Economy - Jamie Clark
10:10am - 10:30am Why Are Auditors Interested in Mapping Anyway? - Dr Marc Adams
10:30am - 10:50am A Corporate GIS Strategy for Wigan - Karen Nickel

Efficiency in Asset Management
11:30am - 11:50am The Road to Intelligent Highway - Owain Hale-Heighway
11:50am - 12:10pm Talk 6 - TBC
12:10pm - 12:30pm Heat Mapping for an Integrated Localised Energy System - Dr Behnam Firoozi Nejad

Geo within Business Processes
2:00pm - 2:20pm Unlocking value from opening UPRNs and USRNs - Nick Chapallaz
2:20pm - 2:40pm Felling Licences Online – David Pegg
2:40pm - 3:00pm Optimising Ordnance Survey’s Field Workforce - James Quick
3:00pm - 3:20pm Connecting The Unconnected Communities - John Powell

Trialling New Ideas
4:00pm - 4:20pm Automated Derived Map Production - The Journey So Far - Derek Howland
4:20pm - 4:40pm How Data Changes Are Driving The Evolution Of GIS into Location Intelligence - Tim Marston
4:40pm - 5:00pm Create A New Language For Conversing With Maps - Dave Barter
5:00pm - 5:20pm Talk 16 - TBC

Evening Event
7:30pm - 10:00pm Comedy Night - Mappsolutely Hilarious

WEDNESDAY 5 SEPTEMBER
Mapping Tomorrow organised by British Cartographic Society/Society of Cartographers
Mapping History
09:30am - 10:00am The First World War and Cartography: 100 Years On - John Peaty
10:00am - 10:30am Capturing a Cold War Capital: The Secret Soviet Mapping of London - John Davies & Alex Kent
10:30am - 11:00am Mapping Israel From Biblical Times to the Present Day - Steven Feldman

Mapping Tomorrow Workshop 1
09:30am - 11:00am Special Effects and Animation - Richard Treves & Kiron Chakraborty

Engagement
11:30am - 12:00pm Using Web Maps for Better Community Engagement - Olivia Powell & Layla Lee
12:00pm - 12:30pm A Personal Journey: openstreetmapping – Steve Chilton
12:30pm - 1:00pm Mapping the London National Park – Charlie Peel

Mapping Tomorrow Workshop 2
11:30am - 1:00pm Mapping in the Cloud - Michael P. Peterson

Visualisation
2:00pm - 2:30pm Geo & Simulation a Tale of Two Worlds – Christopher Budas
2:30pm - 3:00pm Geo Immersive Reality - Layla Gordon
3:00pm - 3:30pm Mapping in the Age of Big Data - James Cheshire

Mapping Tomorrow Workshop 3
2:00pm - 3:30pm Making Beautiful Maps With ArcGIS

Love of Maps
4:00pm - 4:30pm Doug Specht -The Art of Data and Value of Nothingness - Doug Specht

THURSDAY 6 SEPTEMBER
Geo Futures Organised by BARSC and the UKMF Team
Keynote Talks
9:30am - 10:15am The Importance of Mapping to the UK - The Rt Hon Matt Hancock MP
10:15am - 11:00am Global Perspective on the Importance of Big Data - Mark Anquillare

Imagery - The Revolution in Multi Sensor Solutions
11:30am - 12:00pm Aerial Photography for Great Britain - Rachel Tidmarsh
12:00pm - 12:30pm The Disruptive Power of Wide-Area Commercial Datasets - Simon Musa
12:30pm - 1:00pm Aerial Oblique Capture in the US - Magnus Olson

Geo Futures Workshop 1
11:30am - 1:00pm National Land Use data - Phillip Dellar

Survey & 3D – Geospatial Models for Future Cities
2:00pm - 2:20pm Mapping Cities in 3D - Michal Konicek
2:20pm - 2:40pm The Changing World of Land Survey - Andy Terry
2:40pm - 3:05pm The Challenges Of Mapping a Global City for Modern Policing - Trevor Adams

Geo Futures Workshop 2
2:00pm - 3:30pm Urban characterisation: Test your PI skills - Chris Going

The Importance of Earth Observation
4:00pm - 4:30pm TL’s Cycle Infrastructure Database (CID) - Theresa Alberts & Jordan Di Trapani
4:30pm - 5:00pm TBC
5:00pm - 5:20pm Advances in Satellite Imagery, and its Implications - Richard Burren

Geo Futures Workshop 3
4:00pm - 5:30pm AccuCities - Interactive 3D City Models in UE4

Evening Events
6:30pm - 8:00pm #Geomob

Book Now
Many events are free or very low cost, but it would help us if you can book in advance so we can plan catering. The conference days cost £75 +VAT and include a sit down buffet lunch and coffee during the breaks. It is a big venue and we expect to have plenty of room, but you never know. There is a limit, so book up now to ensure your place.

Comedy Evening
Even if you are not planning to come to the conference, why not join us for the comedy evening on 4 September. A group of very talented entertainers, led by Hannah Cameron, come with a growing reputation that will make you see the funny side of maps! For more details about their events, search ‘Mappsolutely Hilarious’.

Guest Speaker
If you are coming to the conference on the 5 Sep, stay for our free to attend guest celebrity speaker Ken Hames - an adventurer, explorer and TV presenter with a lifelong interest in maps. If you are just planning on dropping into the exhibition, stay for the talk, it only costs £10. For more on Ken, go to www.kenhames.co.uk

Visit the BCS website at www.cartography.org.uk

2018 / Maplines
Summer 2018 / Maplines • 13
Activities
For those moments when you need a break from the talks or want to just do something different, there are several activities planned. The army are bringing their ever popular Batak game, and there are serious prizes to be won.

There will be a colouring wall – ever wanted to create your own version of OS MasterMap. This will be your chance to colour in an extract from the popular Ordnance Survey Colouring Book.

We will also have a Graffiti wall. Come and draw/annotate/scribble on an outline map of London. Highlight your favourite locations or most secret places.

Out of School Club
We will also be running five activity centres aimed at kids to help them get a better understanding of maps. Although there are activities for both junior and senior school levels, there is a bit of a kid in all of us, so we are not stopping adults from joining in. The Out of School Club is being run by Mini Makers with the support of Barclays Eagles, who are providing a 3D printer.

Augmented Reality App
Never heard of AR? The UKMF team have been running a series of competitions, encouraging people to submit images of maps in public places – interesting or unusual maps or ones that just caught their eye. The competition, which ended in June, had over 60 entries and the winner of an iPad was Lynne Strutt for a map in Manchester Victoria Station. Well done!

The winner of the next competition receives a Comprehensive Times Atlas, donated by Harper Collins. Keep looking, there are so many out there and we’d love to hear from you!

History of the UK in Maps
Are you following UKMF on Twitter? No? You should. In a nod to the brilliant BBC series about the history of the world in a number of objects, we have put together a selected history of the UK in 20 maps. With thanks to the support of Cambridge University Map Library and to Chris Going for writing the history, we have put together a fascinating series of maps. We are sending out thumbnails of some of the maps together with shortened versions of the history through Twitter.

No 4. The English Civil War (1642-51), between forces loyal to Charles I and Parliament, was about curbing the Kings power. A Royalist uprising in June 1648 was pursued to Colchester where it was besieged, ending in its surrender after 75 days. © Syndics of Cul UKMappingFestival

Maplines is Urgently Looking for New Editors, can you Help?
Maplines are looking for new people to join our editorial team. This is a voluntary position and involves looking for interesting content, arranging supply of reports from regular contributors, editing and reading of articles.

Interested? Contact Martin Lubikowski at maplines.editors@gmail.com
The Times Comprehensive Atlas of the World
 Keeping a Benchmark of Cartographic Excellence up to date

In its slipcase, the atlas tips the scales at 5.80kg. It includes 528 large-format (450 x 310mm) pages and 132 individual map plates. Over 206,000 place names are listed in its index. The flagship world atlas in the Times range truly deserves its ‘Comprehensive’ label.

Ensuring that successive editions maintain the accuracy and authority for which it is renowned is a significant challenge, but one that we relish! With the 15th edition publishing in September 2018, it now seems an appropriate time to reflect on how we do this.

Revising the atlas’s geographical content is a three-stage process. Firstly, information is gathered on all potential revisions and our core cartographic databases are updated. Secondly, decisions are made on which of those revisions should be applied to the atlas.

Thirdly, the atlas pages are edited to reflect the selected revisions.

Assimilating Revision Information and Updating Core Databases

Researching geographical change - whether geo-political, environmental, or infrastructure related - is a constant activity for our Geo Information Editors. ArcGIS and Oracle are used to manage our suite of multi-scaled global cartographic databases, which underpin print and digital product creation across our range. These databases are constantly revised to ensure that all products created from them are bang up to date.

As soon as we are aware of a potential change it is noted in our ‘Revisions Database’. Each change is then fully investigated, and, if required, a detailed revision instruction is created. This will normally include marking up the edits on a database plot, being mindful of the selection and generalisation required to ensure a scale-appropriate depiction of the features concerned. A key requirement is to always corroborate any change using more than one source, and to ensure that we do not use any copyrighted material. Finally, our ArcGIS databases are updated, and the revision noted as complete in the Revisions Database.

This whole process is informed by a comprehensive set of editorial guidelines, as well as advice from our Geopolitical Policy Committee. Including external experts, this committee meets each quarter and establishes robust policies on how we depict areas of conflict around the world.

Selecting Revisions for the Atlas

The first task is to decide which database revisions should also be made to the atlas. From the Revisions Database, we know which updates have been made to our core GIS data since the last edition. Some of these may not be relevant to the atlas due to issues of scale and/or selection, and it is an editorial task to identify those and remove them from the list.

Changes to place names, spot heights, and town stamp symbols are handled semi-automatically. In our databases, each named feature has a unique ID. The index file for the atlas is stored in Oracle, where that ID is preserved. An SQL query comparing current database place names with those in the index for the previous edition produces a list of all names that have changed. Similar queries produce lists of spot heights and settlement feature codes that have changed. The settlement feature code encapuslates both population band and administrative significance, and changes to this indicate a different town stamp symbol may be needed on the map.

Some revisions included in these lists are so subtle that they would be unnoticeable to the user. An editor therefore edits the lists to leave only those that are deemed relevant. For the Times Comprehensive Atlas, this still left 3,750 unique place names, 800 spot heights and 1,400 town stamps to modify (6,350, 1,350 and 2,300 edits respectively when map overlays are considered).

Applying Revisions to the Atlas

The maps in the atlas were originally created from our ArcGIS databases, using Maplex for type placement, and ‘fiddled up’ in DTP. The finished versions of the atlas pages therefore exist as Adobe Illustrator files. Where there has been significant revisions in particular areas, we do sometimes take individual layers through from ArcGIS to Illustrator again. Experience tells us, however, that applying revisions directly to the map pages in Adobe Illustrator is less than desirable.

Round-up

We have been fine-tuning this method since the first digitally produced Times Comprehensive Atlas was created in 1999. It works well for us, and I expect it to continue to do so for many more editions in the future. Work on the 15th Edition was completed in four months, and it went to press on time, and within budget, in June.

However, as we know, change is the only constant, and significant events impacting on how we map the world can happen at any time. In late April, when we were deep into the revision process, and with print deadlines looming, King Mswatii of Swaziland (long form ‘The Kingdom of Swaziland’) announced that it would now be known in English as Eswatini (long form ‘The Kingdom of Eswatini’). Did we have time to verify this change and reflect it in the atlas? Get your hands on the 15th Edition when it is published in September to find out!

By Jim Irvine, Head of Digital Resources, Collins Bartholomew
Jim.Irvine@harpercollins.co.uk
Ann Sutherland Obituary

It is with sorrow that we have to announce the death of Ann Sutherland, convener of the Map Curators’ Group of the British Cartographic Society. Ann passed away peacefully at home on Monday 25 June 2018 at the age of 83.

After a flirtation with dentistry and teaching, Ann found a career in various libraries at the University of Edinburgh, becoming map librarian there in the early 1980s. With a facility for European languages and a love of travel, she found the work stimulating and rewarding, becoming increasingly involved in professional events, including Edinburgh’s “3-day events” started by her predecessor of the Library, David Ferro and Margaret Wilkes of the National Library of Scotland. In 1993, Ann became the 7th convener of the Map Curators Group of the British Cartographic Society, a role she filled for 25 years.

Under Ann’s leadership, the Group have held workshops and trainings all over the UK, from Edinburgh to Plymouth with many stops in between. These events invariably ran smoothly due to Ann’s organisational skills and ability to persuade people to contribute. The workshops were often accompanied with a visit to a map collection and Ann drew on her many connections to arrange privileged access for the MCG to the Royal Collection at Windsor, to Boughton House, one of the homes of the Duke of Buccleuch, as well as many local archives and libraries, including York Minister, the Cadbury Archive, and the National Railway Museum.

Ann was elected to the council of the British Cartographic Society, providing information and perspective from her own experience as a map librarian and from the wider group, helping make decisions and lead the Society forward. In 2013, Ann was also elected an Honorary Fellow of the Society in recognition of her work and commitment.

In her first column, or ‘Convener’s Corner’ of the Group’s newsletter, Cartographii, Ann said “In these stringent times, map collections are under pressure to justify their existence. It is becoming increasingly important that we promote our wares and make our users and potential users aware of the resources in our collections and the best use that can be made of them. Communication is the key to this aim. The MCG is the means by which this can be achieved.”

Ann never stopped believing that or striving towards it.

By Paula Williams, Map curator, National Library of Scotland P Williams@nls.uk

It doesn’t happen very often, but occasionally there are proposals from more than one member country for a particular commission. The UK has always been very active in commission, regularly proposing commissions and their chairs. If you are already involved in a commission and are seeking to become chair, or if you have an idea for a new commission, please get in touch.

The theme of ICC2019 is ‘Mapping Everything for Everyone’. This certainly reflects the pervasiveness of geospatial data these days. While each nation might not be a cartographer, the products of cartography are everywhere in increasing numbers, in print and increasingly online. Many people depend on maps and geospatial data, even if they are not aware of it. The relatively recent formation of the UN Group of Experts on Geographic Information Management (UNGGM), which the ICA is involved in, and the recognition by the World Bank of the importance of Geospatial Data Infrastructures for effective national management, shows that top levels of government increasingly acknowledge the significance of maps.

For more information about ICC2019, see the website at www.ica2019.org. The call for papers is not open yet, but I would expect details of the process to be available soon, with a likely deadline for submissions being early November. The UK’s participation in Washington was probably at our lowest level for many years, so it would be good to see more UK papers and attendees in Tokyo.

David Forrest, Chair UKCC

Nominations for ICA Executive and ICA Commission Proposals

The UKCC are seeking expressions of interest from those involved in the UK Cartography and GI community to be nominated by the UK for the position of President, Vice President or Secretary General of the International Cartographic Association at the next General Assembly in 2019, for the period 2019-2023.

Further details of the Association can be found at http://ica.org and the statutes at http://ica.org/ica-statutes/

Interested candidates should contact the Secretary of the UKCC, no later than 2 November 2018 indicating the role you wish to be nominated for and supply:

1. A personal statement of no more than 500 words describing your interest and commitment in UK cartography and the ICA, and what you would bring to the role;
2. A brief CV (Maximum two pages);
3. One of the following:
   • For a new Commission - A rationale for the commission and how it would contribute to the ICA Research Agenda (no more than 500 words)
   • For an existing Commission - A statement of the achievements of the Commission during the current period and the nominee’s involvement (no more than 500 words)
   • Intended Vice-chair(s) of the Commission and their nationality;
   • Detailed Terms of Reference for the next four year period as required by the ICA Statutes and B-Laws.

For further information about Commissions, their organisation and the role of the Chair, please contact David Forrest, ICA Vice-President and Chair of the UKCC at david.forrest@glasgow.ac.uk.

Ken Atherton, Secretary, UK Committee for Cartography jkatherton@btinternet.com

Red Atlas

A 20% discount is offered to BCS Members on reprints of Cold War era large-scale Soviet military maps of British and American cities.

An example of what is included is the extract to the right, (showing Edinburgh Castle and Princes Street) and smaller-scale topographic maps of many parts of UK and USA.

For full details, go to http://redatlasbook.com, follow the link to View and Buy and enter the code BCS-20 at the checkout.

Although July 2019 seems a long way off, it is time to start thinking about the International Cartographic Conference that will be hosted by the Japanese National Committee for Cartography in Tokyo next year. As part of the normal four year ICA cycle, there will be a General Assembly where a new executive committee will be elected. Each member country can nominate one candidate for the executive, as President, Secretary General or Vice-President (of which there can be up to seven). As nominations have to be made at least five months in advance of the GA, we are currently seeking expressions of interest from the UK community.

Commission roles are the life blood of the ICA. This is where most of the active research, organisation of workshops and work on publications takes place. Currently there are 27 commissions, covering a very wide range of topics. Most commissions are research focused; some are quite broad in their interests and remit, others are much more focused. The number and interests of the commissions changes every four years. Some commissions have been around for several terms, but each needs to provide new terms of reference every four years. Commission chairs are limited to two terms, so even if a commission continues, it may have a new chair and vice-chairs.

The theme of ICC2019 is ‘Mapping Everything for Everyone’. This certainly reflects the pervasiveness of geospatial data these days. While each nation might not be a cartographer, the products of cartography are everywhere in increasing numbers, in print and increasingly online. Many people depend on maps and geospatial

Visit the BCS website at www.cartography.org.uk

Visit the BCS website at www.cartography.org.uk

18 • Summer 2018 / Maplines

19 • Summer 2018 / Maplines
water which made the markings more distinct.

We continued our journey southwards on an unpaved desert track passing along many beautiful rocks standing like columns or obelisks, and after driving for about 10km we came upon a flat area where two large rocks stand side by side. These are known as Hamad and Hamada and have obviously attracted many curious visitors over many centuries. They are covered with old Thamudic inscriptions and again, we stopped to take pictures of the assorted inscriptions.

We continued driving for a distance of approximately 8km to the south, where we passed a narrow passageway between two mountains called Rei Salamah, and as it was getting close to sundown we decided to stay overnight in this area, where impressive granite mountains border the sand of the desert in beautiful harmony and form.
Strange rock formations form ed by erosion.

mountain range that stretches from way tow ards the south of the caution here while driving as the north to the south of the morning, we set off to complete our driver. We saw many strange rock and sand can catch out the unw arty

After a leisurely breakfast the next morning, we set off to complete our way towards the south of the mountain range that stretches from the north to the south of the Kingdom, known as Jibal Al-Kharam. We had to exercise caution here while driving as the terrain is rugged and a mix of rock and sand can catch out the unwary driver. We saw many strange rock formations mostly of flat rocky tables caused by erosion. The faces of these are filled with Thamudic inscriptions and while we were walking around the rocks we saw footprints of an Arabian wolf. This was good news for me as the last evidence of wolves in the area I saw was almost 15 years ago.

On the edge of the Jibal Al-

Kharan mountains, we found a large rock with the inscription of a beautiful horse drawn in the rock with great care and artistry. We took photos of the inscription before continuing our journey towards the south for about 25km until we reached the road linking Hail with the city of Taima.

We continued on the road towards Taima for a distance of approximately 40km westwards and then exited to the right towards the north on unpaved rough roads. We continued on for 30km until we reached a formation of rocks which again had very strange shapes caused by the wind and erosion. These are known in the area as Al-Mahajjah and it is said that they got the name from the old Arab tribes of the region.

The formation consists of two hollow domes overlapping in a beautiful formation, which is breathtaking. The walls of the rock formation are covered with Thamudic inscriptions with the styles indicating they were made many thousands of years apart.

As it was both a lovely spot and there was a lot to see, we decided to spend the day in this beautiful place and spend time checking the inscriptions on the walls. We identified many inscriptions and beautiful writings from people who passed this way many thousands of years before. The old caravan route attracted many traders, but we also found more markings from explorer Charles Huber as well as from German explorer Julius Euting. We spent a pleasant day in this beautiful place filled with the carvings and memories of those who passed this way before us.

By Abdullah Al-Sayari, who is proprietor of Desert Maps in Riyadh’s Industrial City. After nearly a decade of mapping, he has an extensive catalogue of maps and GPS data covering the Kingdom of Saudi Arabia.

Contact Desert Maps: Tel: (+966) 01 417 6666; Web: www.desertmaps.com

Carto Design to GeoDataViz – An Evolution

The Cartographic Design team at Ordnance Survey was created in 2006 and performs a key role in the organisation, as the authority for cartographic design and development. Our workload is varied and includes creating one-off maps, designing new products and services as well as engaging with internal and external audiences to promote the value of good cartography. In 2016, we created the visualisation below and it was the trigger for us to review our team and implement some changes in how we operate and approach our work.

Around the same time, there was lots of talk about data visualisation as a discipline and possibly as an industry in its own right. Over recent years there has been a huge increase in the amount of people creating data visualisations and there is a very apparent convergence of many disciplines. These include design, cartography, user experience, data science, game development, software development, data journalism and many more. We fit firmly in this space and have experienced this trend first hand.

Changing Requirements

It has also become clear to us that our customers’ requirements are changing, often in-line with technology developments and current trends. What our customers require nowadays is often more than a map containing buildings, roads and woodland. We are seeing an increase in the demand for thematic and statistical mapping, as well as other forms of chart, graph, or table and sometimes the best answer is simply textual or numerical.

Increasingly we need to be able to present data (usually geographic) to our users in many different ways and methods that are sometimes new to Ordnance Survey. As Cartographic Designers, we feel we are perfectly placed to do this and a few changes to our team will allow us to deliver this more effectively.

The Underlying Design Principles

More than ever before, our job involves telling stories and identifying patterns and trends in data; our work has become more journalistic in its nature. However, the objective of our work hasn’t changed, our aim is still to communicate geographic data in the most effective way. The underlying design principles are still the same. We are simply evolving our craftsmanship as the role of a modern day cartographer continues to change. When talking about our move to GeoDataViz, we often cite the fact that we have the same skillsets, are using largely the same software, but have a different mindset and different approach.
What are we Working on?

In 2017 we had the pleasure of working with the rest of the business and which help us stay focussed and team. We now work in sprints changed the way we work as a discussed above, we have also create consistency throughout our difference in our work output and are also starting to see a betw between all three of our team s.

Many similarities there are and it was interesting to note how exciting tim e for anybody field that is starting to m ature and many form s and guises. This is a from the rather unique position of V isualising spatio-tem poral • Supporting start-ups • V isualising the ‘Internet of Things’ and smart cities encouraging smart city use cases. We are also starting to see a difference in our work output and one of our key challenges is to create consistency throughout our portfolio of visualisations.

Our recent work has included:

- Visualising spatio-temporal data – We have been exploring different methods for animating geographic data over time.
- Supporting start-ups – We offer visualisation support to all members of the GeoVation Hub. As an example, we helped Flock with the map design for their new app which includes visualising the inherent risk of topographic features.
- Annotation design – We have been looking at the design of annotations on maps as well as creating charts and graphs.
- Designing Augmented Reality (AR) experiences – Technological advances are creating many new ways to interact with data. We have recently helped design a consumer AR experience that enables people to discover what’s around them and improve their sense of place.
- Offline mapping with vector tile data – We have worked with customers to develop methods to get OS map data onto a mobile device. We have also evaluated various online tools for styling vector tile data.
- Visualising the ‘Internet of Things’ and smart cities encouraging smart city use cases. This has included temporal chart and dashboard design.
- Developing a GeoDataViz Toolkit – Our team has always played a key role in supporting customers in visualising OS data more effectively and we have now released the GeoDataViz Toolkit. The toolkit is a set of assets and resources that can help you communicate your data effectively through the design of compelling visuals.
- What is in the Toolkit?
  - Basemaps – Often referred to as a contextual or backdrop map, a basemap contains reference information used to both orient the map and add context to any data that is overlaid. We are providing information about the OS range of basemap styles, the colour values for each and some best practice guidelines.
  - Colours – The use of colour is very fundamental to the success of a data visualisation. Careful use of colour enhances clarity, aids storytelling and draws a viewer into your dataset. Poor use of colour can obscure data or make it not readable. In the toolkit, we’re making available a recommended set of colour palettes, information on how to apply colour to your visualisations, and links to other useful colour resources.
- Symbols – Symbols help us to include large amounts of detail on maps. Maps often contain symbols instead of words to write everything down in words. Symbols can be small pictures, letters, a small table or other useful information. In the toolkit you will find a set of OS map symbols (in SVG format), information on how to use symbols effectively, and links to other useful map symbol resources.
- Visual deconstructions – A visual deconstruction is a method of visualising the inherent risk of datasets. It is made up of a title, a description, a URL (where relevant), an image, plus the drawing order and styling information for each layer of data from which it is composed. It is a fantastic documentation that allows you to quickly reference and recreate styling rules, as well as better understand and clearly with others. It is also a great way to learn how something is made and is a useful tool for someone designing their own visualisation. We’re sharing our visual deconstructions and supplying templates so that you can create your own. We introduced this new concept in May 2017 and would love to see it being used to share the design details of maps and data visualisations more widely. Our Cartographic Design Principles and Cartographie also form part of our toolkit and we will be adding more content over time.

How it is used at OS

We have been using the GeoDataViz Toolkit within our team for a while now. It has helped us work more efficiently and enabled us to bring greater consistency to our portfolio of work. Having a toolkit of approved and curated areas to show features like campsites, pubs or bus stations. If you look closely at a map, you will see that it is covered in symbols. There will often be a legend (or key) next to the map to tell you what the symbols mean. In the toolkit you will find a set of OS map symbols (in SVG format), information on how to use them, and a selection of colour palettes.

One of a range of OS basemap styles, Road (there is also Outdoor, Light and Night).

A selection of symbols with customised colours.

Flocks mobile application in action.

A colleague in Consultancy and Technical Services used the colour palettes to great effect when delivering a project for the Greater Manchester Combined Authority (GMCAs).

It’s promising to note that the changes we are witnessing and making here in the GeoDataViz team are being made more broadly in the cartographic communities. The job of a modern cartographer is varied and requires many skills.

Get in Touch with the Team

The resources in the toolkit are augmented by the cartographers and data visualisers who share articles, tutorials and helpful resources and we are indebted to many of them as we all benefit from their work and ideas.

If your work involves cartography or data visualisation we would love to know if this article has resonated with you and your recent experiences. Please do contact us using either of these methods:

Email: cartodesign@os.uk
Twitter: @cartocraftsm an
Charley, Glynn

By Paul Naylor, who is a cartographic design consultant at Ordnance Survey, Great Britain’s National Mapping Agency. Working as part of the GeoDataViz team, Paul performs a key role in the organisation, as the authority for cartographic design and development, and engaging with internal and external audiences to promote and demonstrate the value of cartography and geo data visualisation.
The Meaningful Maps (MM) project, working with primary schools, involves children from diverse backgrounds and geographical settings in mapping their locality. The children (Key Stage 2; aged 7-11) are asked to draw a map of their local area, and explain which places have special meanings that children attribute to the spaces they inhabit. The children's learning of formal cartographic conventions is a secondary but important element of the information derived from the project.

MM is led by a team of geographic educators supported by the Geographical Association and Canterbury Christ Church University and endorsed by the British Cartographic Society. The project, now in its second phase, has collected over 250 maps from across the UK, from Kent and Devon, to Wales and the Shetlands.

Young children are remarkably adept at using and making maps and appear to develop spatial awareness at an early age. There is considerable discussion about the stages which children go through as they develop their map work skills. What seems certain is that children find maps a valuable way to communicate their ideas about the world. Children find it natural to communicate in images and they frequently draw maps to represent stories, routes and significant places as well as giving expression to their hopes and fears.

Meantiful Maps was launched in the summer of 2017 with a pilot study based in a single school. The maps drawn by 6-9 year olds was used to finesse the project but also provided a rich resource in its own right and yielded some intriguing results. Perhaps the most interesting, although unexpected, was the children's focus on either their home or even their bedroom, despite encouragement to map their 'local area'. There were several possible reasons for this, the first pedagogic - children are often taught 'mapping' by first creating a plan of their schoolroom - the desk on which they draw becomes the centre of the mapping process and mapped entity. Second, it could represent restrictions in 'free-range', due, for example, to concerns over 'stranger danger'. More intriguing, perhaps, is a more nuanced socio-cultural explanation. The pilot school was in the private sector and children in such schools are often drawn from a far wider catchment than state schools, with a dispersed community of peers, so the immediate location of the home may be less important. Some children did indeed live in dispersed homesteads within non-Amish communities, tended to draw their house or farm, but literally nothing beyond the picket fence. This contrasted with the non-Amish children who drew detailed maps of their immediate neighbourhood. While speculative, it appears that children living more dispersed lives tend to focus their maps on the home, perhaps lacking significant meaning and relationships in their immediate locality.

Initial examination of the wide range of maps generated in phase two suggests that children are starting to engage with formal cartography and the geography of children (10 and over), and no pictorial embellishments. Surprisingly, many children's maps are devoid of people and other creatures (some contain livestock to 'symbolise' farmland, or stick people to suggest use, e.g. playground). One group of younger children (6-7 year olds) did provide an extremely lively set of maps where convention had not stilted imagination. Individual houses were drawn in detail and often represented homes of close friends and family (generally grandparents). While not ubiquitous, a number of these maps contained 'real' people - possibly autobiographical in nature - cycling, walking dogs, and playing. Nature does have its place in some maps, with trees the most prominent element (as might be expected, as they feature symbolically on formal maps), but also some wonderful quirky additions; tadpoles in a garden pond, and a spider in the attic!

The occasional anomalies occur, and are fascinating in themselves, for example the child who drew his family's villa and surrounds in Cyprus rather than his UK locality, and added an excellent map of the whole island to give the specific location of the villa (male, aged 9). Another (from the same school) drew a map of Britain, with the home town located, and then used the map of Britain as the 'frame' for a map of key local sites.

We are busy analysing the second phase maps so watch this space and the MM website for future developments. And if you are a parent or a teacher, why not get your children involved and contribute to this increasingly extensive archive.

By Peter Vujakovic, Paula Owens and Stephen Scoffham

References
http://meaningfulmaps.org/
FREE event for children (4-16yo)

Maps & Cartography for ‘STEAM’

‘After School Club’ @ ILEC Conference Centre,
47 Lillie Rd, Fulham, London SW6 1UD

Talk to a Cartographer! Print a map poster
‘Symbol Spot’ Trail 3D Mapping
‘cARTography’ Colour in
Geology Maps The world is a CUBE?

Find out all about how Maps appear in:

Science
Geoscience, Astronomy, Biology, Physics, Chemistry, Sociology, Archeology, Geography, Politics and Psychology.

Technology
Computing hardware/software, large format printers, 3D and 4D visuals and printing and Cutting Technology.

Engineering
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