ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES
BULLETIN

GIS Trends

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Esri UC2020: Reporting from the world's biggest GIS event

Abstract

In the issue of GIS Trends we review the Esri User Conference (July 13 -16, 2020) held for the first time as an all virtual event.

This year was the first opportunity for me to attend the annual Esri User Conference. I was not alone. There were 86,482 registrants from 180 countries – a sharp contrast to the 15,000 to 20,000 that normally attend this event. Did Esri or our broader GIS community see this coming? This level of participation has lessons not just about the future of conferences in a time of pandemics, but also about our global GIS community's need for engagement and learning.

This was a first opportunity for many to attend, I suspect, because many of the financial and scheduling barriers were eliminated with the move to an all-virtual, registration-free venue (for students and license holders). So, thank you, Esri, for democratizing this event. At a time when many conferences have been cancelled or scaled-down, this opportunity felt unprecedented. It was a "how-to" model to emulate for hosting large virtual conferences, giving many of us something to think about as we work to implement virtual campus engagement.

The three-part plenary introduced the conference theme "GIS - Interconnecting Our World". Led by Jack Dangermond, Esri's founder and president, the plenary talks were an opportunity to learn about the Esri vision from the top as well as hear from a wide sector of Esri staff and the broader GIS community. We got a taste of new technologies and product innovations that would be covered more deeply in conference sessions and workshops. The plenary also recognized community mapping achievements, and heard from special guests Vicki Phillips, National Geographic's Chief Education Officer and Jeffrey Sachs, the world-renowned economist, author, and President of the UN Sustainable Development Solutions Network. The plenary challenged us to consider how our work can be viewed through a lens of social responsibility, both within the immediate challenges of the pandemic and when taking a longer view regarding our roles in global efforts to achieve social, economic and environmental sustainability.

So how were the technical workshops and sessions? Hopefully, participants looked at the program in advance of the plenary, as some planning and choices were required with respect to what to take in over the course of four days. There were 118 live workshops, 114 on-demand (pre-recorded) workshops, 250 on-demand demos, 200 user videos, 39 special interest groups, 153 exhibitors, a map gallery, live polls, chat opportunities, 15 minute one-on-one networking opportunities with a wide selection of Esri staff and more. Each day we could also tune in to UC Main Stage to hear

about events of the day and engage in interesting discussions, chat and polls. UC Main Stage was co-hosted by Esri's Nick Frunzi and Dr. Rae Wynn-Grant (National Geographic Research Fellow), and featured guests. I was surprised by how effective a "Main Stage" could be for a virtual conference. It was not something I originally expected to follow, but I found myself tuning in periodically and enjoying the sense of communal engagement this forum provided.

The majority of my time was spent in technical workshops. There were many opportunities to learn about new product developments and enhancements. Here is some of what I learned:

From the "Road Ahead" workshop on ArcGIS Pro, I learned that ArcGIS Pro 2.6 is coming out at the end of July, and will be a major release. New functionalities will include "Map Graphics" which offer greater ability to create maps with custom graphics and text. Map Graphics includes a new "Add graphics layer" tool for map authoring where you can insert, update and delete map graphic elements including text. The ability to add graphics as layers has long been awaited by the mapping community. Also new to me, and significant, is the introduction of a new data type, the "Voxel" layer. Voxels enable the visualization and analysis of very large datasets of gridded, volumetric information and can include four dimensions: x, y, z, and time. Examples of visualization and exploring of 3D voxel layers were shown using atmospheric data, geological subsurface models, oceanographic data and space time cubes. Another new enhancement due to be released with ArcGIS Pro 2.6 is "Project Recovery". As most Arc users can imagine, the announcement of an auto-save functionality got a major thumbs up in an audience opinion poll. Other new highlights included: "Save Web Map", "Link Analysis", "Interactive Suitability Map", "OLEDB Connections", "Trace Networks" and more. See *Figure 1* for a slide describing development plans for Pro.

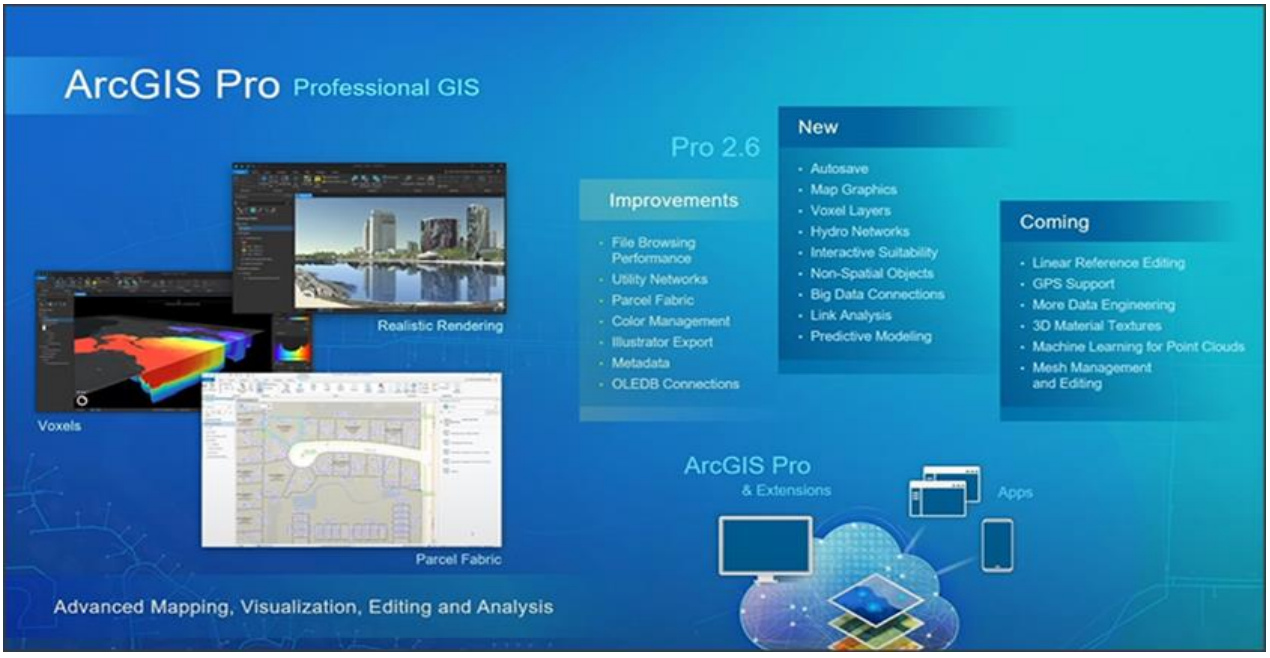
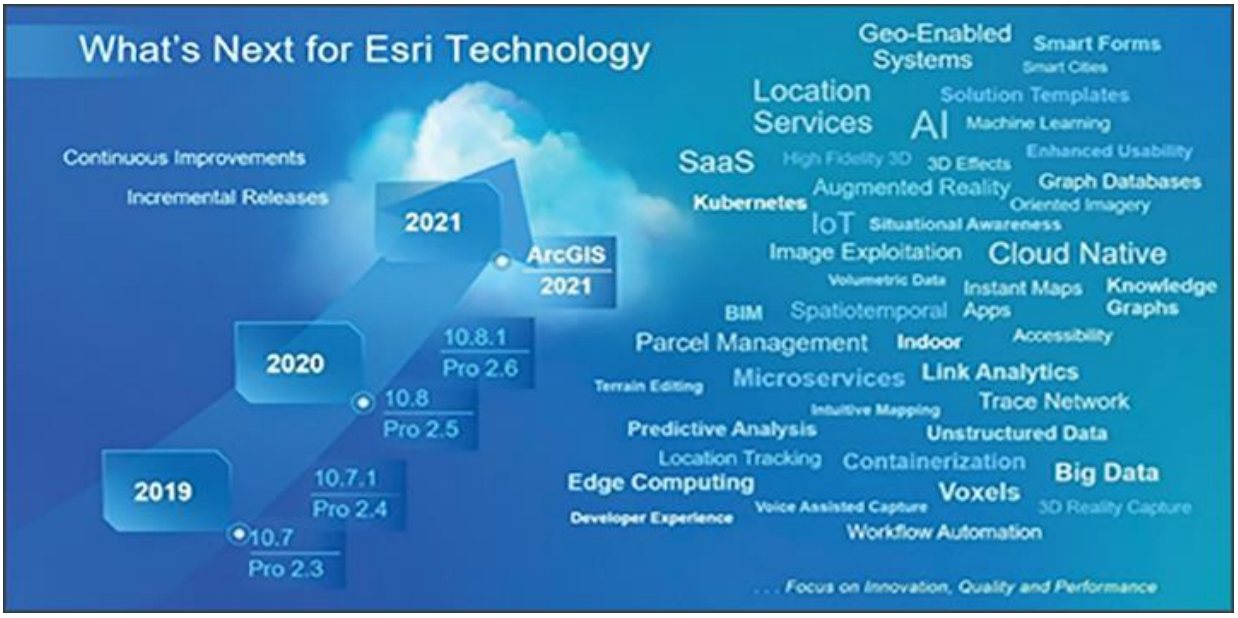


Figure 1. Source: Snapshot taken from Esri UC2020 Plenary. Available from YouTube at: Esri UC 2020 Part 3, "ArcGIS – Helping Our Users Be Successful", https://www.youtube.com/watch?v=eZV-KrA1Rjk&list=PLaPDDLTCmy4YwK56yHaEdtRgNUoPBiZTz

Figure 2 shows a schedule of release dates for Desktop software including ArcGIS Pro and ArcMap. Note that 2021 releases are due to see a systemization of version name releases for ArcGIS, bringing things under "ArcGIS 2021".



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On the server side, a number of sessions discussed ArcGIS Enterprise. A key announcement for this product was an upcoming release of a Kubernetes version of Enterprise. This term is likely familiar to many developers and IT people, but it was new to me. I learned that Kubernetes is a portable, extensible, open-source platform for managing containerized workloads and services. It leverages the advantages of cloud and distributed computing environments and offers potential advantages for scalability as well as easier maintenance and IT integration. Developers were assured that ArcGIS Enterprise (Kubernetes) will be offered in addition to continued support and development of ArcGIS Enterprise (Windows) and ArcGIS Enterprise (Linux). Other product enhancements include bulk publishing, web hooks, sites authoring and better administration capabilities.

Many new developments were also introduced for ArcGIS Online (AOL) and related products. The next generation of Map Viewer will launch this fall and is accessible now as a beta release option. I was impressed by the Smart Mapping options offered within Viewer and the overall capacity to render large amounts of data on the fly according to user selections.

Several sessions covered developments associated to 3D technologies as well as integration of Virtual Reality (VR) and Augmented Reality (AR) solutions. I was interested to learn about greater

integration with Autodesk Revit files and the potential easing of workflows for some offices using BIM and/or CAD. A good overview of new functionalities was given in "3D in ArcGIS" and "3D on the Web with ArcGIS". I also viewed "ArcGIS Indoors: Overview and Roadmap". The product supports indoor way-finding, and enables space planning, workspace reservations, location sharing, incident reporting (for facility up-keep), indoor person tracking and more. As many might imagine, this product could be especially useful for planning COVID-19 back to work protocols and for long term indoor mapping within universities. I inquired about this product before the UC, and did learn that at that time it was not included in academic Education Site License Agreements (ESL), at least not in my region. I also had the opportunity to try out the UC Expo chat, where I receive a chat response to my question, as well as an invitation for a 15 minute meeting with Esri staff if I required further information. Thanks to Tom Hahka and colleagues for the excellent follow-up and information.

Finally, I should mention that there were many interesting workshops which introduced new mapping and data analyses techniques and provided information on how to get started with or use products more effectively. For example, I enjoyed the workshop "Map Wizardry with ArcGIS" given by John Nelson and Kenneth Field. The abstract for the session invited us to sit back and enjoy an inspiring cartographic ride … and that's exactly what it was. We looked at wonderful old classic maps such as John Snow's 1854 cholera map and new maps taken from a range of sources including twitter, and discussed best practices and techniques that can be applied in ArcGIS Pro to achieve similar cartographic effects. For example, would you like to create a point symbol that looks like a firefly? Or, did you know that you can achieve the folded and curled effect of an old map by crinkling a piece of paper, doing a bit of handy work in Photoshop, and then imposing versions of your crinkled paper as a background and an overlay in Pro? Thanks John and Kenneth for sharing these tips and tricks and for being so generous with your cartographic knowledge.

These summaries cover a small fraction of the information presented in workshops. I am infinitely grateful that these sessions are available to registrants for viewing after the conference, including chat responses taken up at the end of workshops.

Finally, I would be remiss at not mentioning some of the other fun opportunities. Instead of the 5K run normally held in San Diego, we were challenged to run or walk around the world, by collectively accumulating 40,054 km. This was also an opportunity to try out the ArcGIS Quick Capture mobile app. Individual runs and our progress can be viewed on the Esri score board. *Figure 3* is an example of the route and photos I submitted for a short walk I took.

Also on the lighter side, are you missing conference swag? If you are, you can discover the UC2020 "digital swag bag" which included the 35th Esri Map Book, downloadable coloring pages, cool screensavers, backdrops and wallpapers, a free three-month subscription to the National Geographic, and an oh-so-cute "Get up and active with Globie" poster.

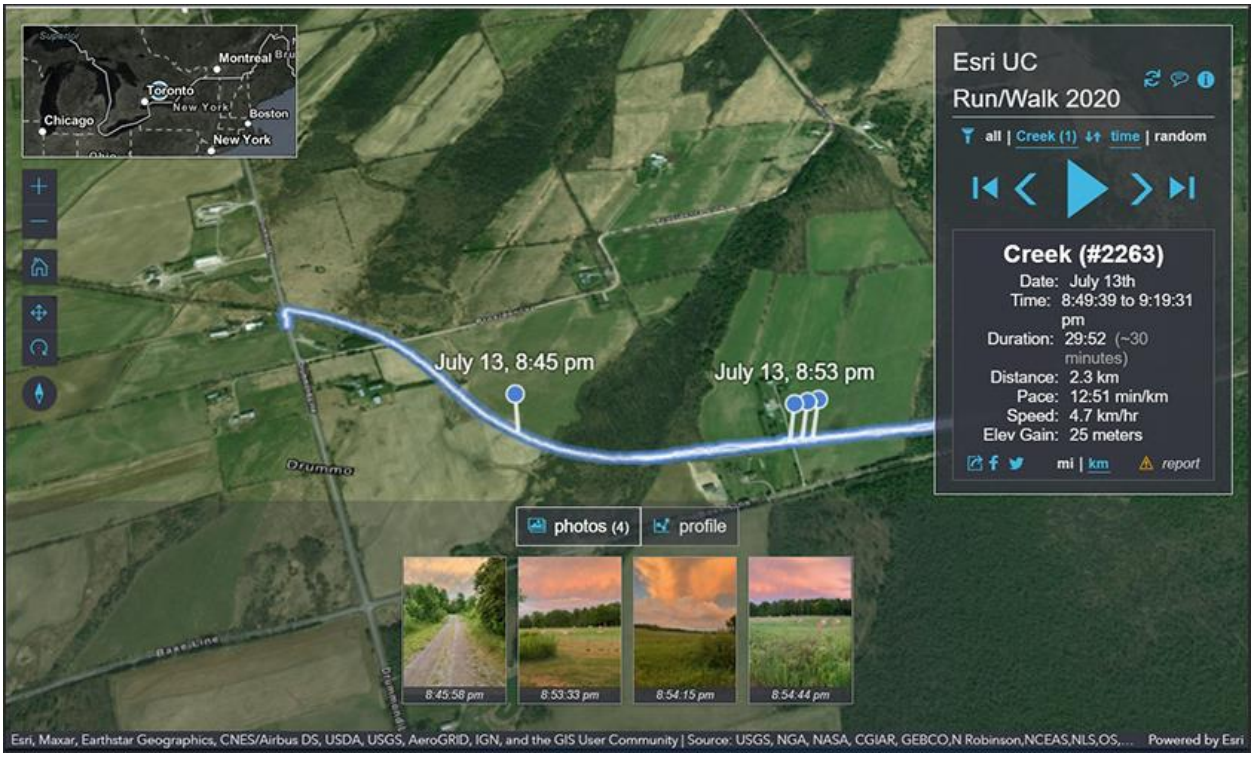

Figure 3. Source: Snapshot from Esri UC Virtual Run / Walk 2020 Results Page at: https://apl.esri.com/jg/UC2020Run/index.html?globalID=a4c3c830-c898-4214-8418-5d86f73b497a. Long term Hub site: https://uc-2020-running.hub.arcgis.com/

At the first plenary Jack Dangermond mentioned that the first UC conference was 40 years ago, and consisted of 11 people. I wondered what that was like… Thank you Jack, Esri, and all GIS and GEO community members for this great conference opportunity. You've given us a lot to think about. Stay safe and take care of each other everyone. I hope we can do this again next year and I look forward to seeing you then.

GIS Trends: Note from the Editor

Submissions and Feedback

GIS Trends is a place to share ideas, observations and discoveries in the area of GIS and other spatial technologies. If you have something you would like to share please write to me. We also welcome feedback on GIS Trends articles. Proposals for articles and feedback should be sent to: bznamirowski@trentu.ca

Thanks for reading and contributing!
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