IMAGIN PRESENTS:

IMAGINews

SPRING 2017

SPECIAL POINTS OF INTEREST:

- **It's not too late to register! The 2017 IMAGIN Annual Conference is being held June 4-6, 2017 at the Hagerty Center and Park Place Hotel in Traverse City, MI**
- **Don't Forget to pre-register for all the great social activities happening during the conference! www.imagin.org**

INSIDE THIS ISSUE:

Feature Article	1-2
Conference Information	3-4
Conference Schedule	5-6
SPPC Update	7

Cartography Contributes to Meeting Sustainable Development Goals

The Sustainable Development Goals (SDGs)—adopted by the United Nations (UN) in September 2015—aim to end poverty, protect the planet, and ensure prosperity for everyone. To make this happen, the UN encourages everyone to do their part—not only governments, the private sector, and civil society but also us as individuals.

For us, the UN set up a website called The Lazy Person's Guide to Saving the World. It has tips on what we can do from our couches and in our neighborhoods to contribute to these solutions.

While the recommendations are really worth pursuing, I do not like being categorized as a lazy person. So it made me think: How can the International Cartographic Association (ICA) contribute to meeting the SDGs by 2030?

Let's first look at what the 17 SDGs encompass. Each goal—from ending hunger and attaining gender equality to ensuring peace and justice and building strong institutions—has several targets. If the more than 160 targets are reached, humanity and our planet will experience economic, social, and environmental improvements.

The targets are judged based on more than 300 indicators. Take Goal 4, which seeks to ensure quality education for everyone and encourage lifelong learning. This goal includes 10 targets, one of which is to ensure that all children receive free and good primary and secondary educations. The success of this target is measured by two indicators: the percentage of children who are proficient in reading and mathematics and the rate of students who complete primary and secondary schools.

So, how can we cartographers be relevant in helping society reach these targets? Mapping the indicators seems like a good first step. We all know that well-crafted maps can effectively exhibit known facts in a visual way. What's more, online mapping technology can disseminate these facts globally to increase awareness of current states of affairs. And then there are the interactive map dashboards—connected to geographic databases at multiple scales and with space-time analytical functions—that allow decision-makers at various levels to monitor and compare indicators for policy development and action at different geographic scales.

The International Cartographic Association's posters about the Sustainable Development Goals teach the principles of cartography while educating viewers about the goals.

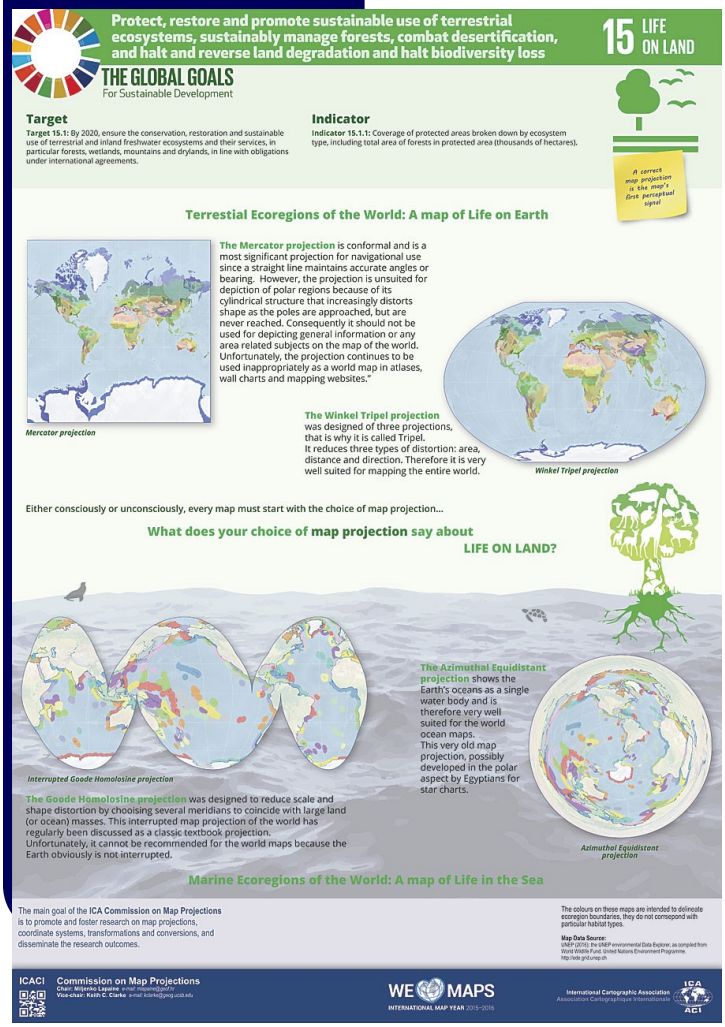
That said, at ICA, we decided to do things a little differently. ICA's aim is to promote the discipline of cartography throughout the world. Not least because 2016 is International Map Year, we decided that ICA should demonstrate how diverse maps and cartography really are and how they can convey all sorts of metrics, insight, and relationships with regard to the SDGs.

Thus, we decided to create an exhibition of cartographic posters about the SDGs. The posters are on the ICA website, where anyone can access and use them to enrich their own map displays, especially those related to International Map Year. Additionally, in the spirit of Goal 4, the ICA's exhibition allows us to educate people on the importance of the SDGs while also informing them

(Continued on page 2)

Cartography Contributes to Meeting Sustainable Development Goals

Below: The International Cartographic Association's posters about the Sustainable Development Goals teach the principles of cartography while educating viewers about the goals.



of how powerful maps can be.

ICA's commissions, which address a wide range of topics that cover nearly the entire discipline of cartography, each adopted one of the goals. As a starting point, the commissions selected a target of their chosen SDG, along with its indicators. Then each commission expressed its topic cartographically, through the lens of that commission's objectives. For example, the poster for protecting life on land, made by the Commission on Map Projections, tells the story of how certain map projections can be good or bad depending on how the mapmaker wants to display all the earth's land. The ending poverty poster, made by the Commission on Topographic Mapping, encapsulates how to use topographic maps to better understand what causes poverty. Other posters acquaint viewers with open-source technologies, the relevance of selecting the correct level of detail for administrative units, and the effects of using color in map design. Taken together, all the posters tell a story of cartographic diversity, of mapping options, and of multiple map perspectives.

Maps that matter—and are well designed—are engaging, instantly understandable, and relevant to society. They should raise interest, which is exactly what the first exhibition of these posters did when it was displayed at UN headquarters in New York during the Sixth Session of the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) in August 2016.

Does this mean that ICA has contributed enough to achieving the SDGs? Does this poster exhibition mean we can stop? No. ICA is now planning to create an atlas of good practices for mapping the SDGs.

Let's make the world a better place with maps.

Reprinted from the Fall 2016 Esri ArcNews

~ About the Author

Menno-Jan Kraak is professor of geovisual analytics and cartography at the University of Twente in the Netherlands, where he has been teaching since 1996. He has a degree in cartography from the Faculty of Geographical Sciences at Utrecht University and received his PhD in cartography from Delft University of Technology. Kraak has written extensively on cartography and GIS. His book Cartography: Visualization of Spatial Data, written with Ferjan Ormeling, has been translated into five languages. He also wrote Mapping Time: Illustrated by Minard's Map of Napoleon's Russian Campaign of 1812, published by Esri Press in 2014. Kraak is a member of the editorial boards of several cartography journals, including the International Journal of Cartography. He currently serves as president of the International Cartographic Association.

Read other Esri ArcNews articles in "The Relevance of Cartography" series.

If you are interested in submitting an article for a future issue of the IMAGINews please contact the IMAGIN Communications Team via email at communication@imagin.org.

IMAGIN's 2017 Annual Conference

Come join us at the 2017 26th IMAGIN Annual Conference at our new venue in downtown Traverse City. This new location offers opportunities for attendees to explore the heart of Traverse City and all it has to offer – entertainment, shopping, beaches, dining, nightlife and just an overall great "Up-North" experience. The Park Place Hotel is the conference hotel of choice and is where we will call home in the evenings. This historic hotel offers a great downtown location near to everything that is cool in Traverse City. It boasts the best views of the City and West Grand Traverse Bay from many of the rooms and ultimately from the "Top of the Park" where many of our social functions will reside (you really do have to see the views!). Our actual conference venue this year will be located at the stunning Hagerty Center (Great Lakes Maritime Academy). Seated on the shores of West Grand Traverse Bay, the Hagerty Center offers breath-taking views and is separate from the conference hotel and is an enjoyable-short walk from the Park Place Hotel.

This year's conference features over 36 education sessions and workshops covering a myriad of interesting and engaging topics as well as the popular Esri Hands-On Learning Lab. On Sunday before the conference begins, make sure to join our social outing for a chartered trip up the very scenic M-22 route into the Leelanau Peninsula where you have the choice of visiting the famed Ciccone Vineyard and Winery or the popular Hop Lot Brewing Company. The "3-hour tour" (yes, like Gilligan's Island) will end up at The Filling Station off of Boardman Lake where we will mingle rail-side at the old train depot and enjoy some wood-fired pizza and micro-brews. Finish the evening out downtown and/or at the Top of the Park and prepare yourself for the great conference ahead.

From Left to right: Sgt. Matt Rogers, Walter Chomentowski, & Nikkia Anderson

This year IMAGIN has lined up some great keynote speakers to kick off our daily sessions. Opening the conference on Monday morning, the Michigan State Police (MSP) and Emergency Management and Homeland Security Division (EMHS) will be presenting on the use of UAV's, aerial sensors, and cutting edge geospatial technologies in the flight against crime. Sgt. Matt Rogers leads the MSP Unmanned Aerial System (UAS) program and has logged over 200 law enforcement support missions since 2015. Walter Chomentowski supports the MSP Aviation Unit to improve situational awareness during emergencies by using the manned and unmanned systems and the data collected by the sensor

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IMAGIN and InfoGeographics, Inc. are excited to launch the IMAGIN 2017 App. The goal with this app is to bring added value to both conference planners and attendees by providing all conference information, local information and a way to communicate with all attendees before, during, and after the event. Download the app today using the QR code below

IMAGIN's 2017 Annual Conference

Chris Tretor with Coffee Farmer

systems. Nikkia Anderson oversees the spatial data and processing of the UAS imagery that is collected. Together, the presenters will share their experiences and uses of UAS and manned aerial data collection systems in the continual effort to combat crime.

Start out Tuesday morning with a cup of coffee and hear Chris Treter, co-founder of On The Ground, an organization that supports sustainable community development in farming regions across the world, and director of Higher Grounds Trading Company based out of Traverse City. Chris will be our travel guide routing us around the world sharing his stories of exploration of sustainable coffee farming based on a human-centric approach.

On Monday evening, make sure to participate in the first ever IMAGIN Poker Run! You don't have to have a poker face to be a winner at this event, simply force your hand by showing up to participate while at the same time enjoying what downtown Traverse City has to offer. On the flop, join us again at the Top of the Park to reveal your hand and enjoy the evening views while networking with your peers.

Come join us in Traverse City to network with your peers and exhibitors/sponsors, enjoy our social events, silent auction and great educational opportunities. For more details on our conference schedule see pages 5 and 6 of this Newsletter. Please see the IMAGIN web page at www.imagin.org to view all the conference details, to register for the conference, or learn how you can become more involved at the IMAGIN Conference. See you in June!

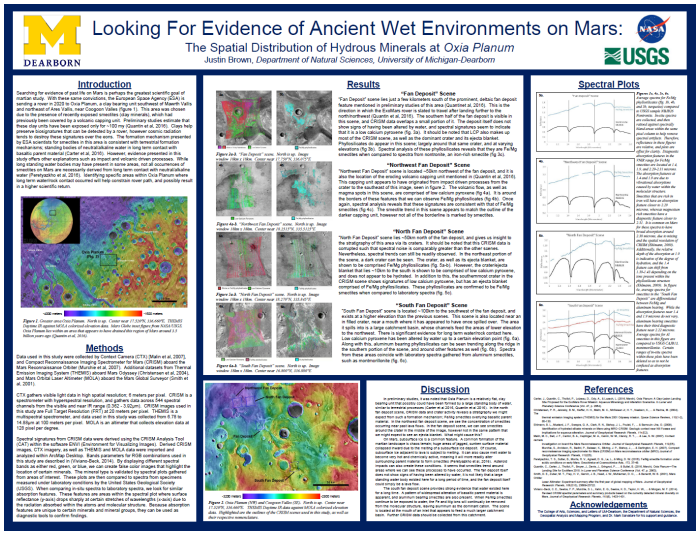
Sunday, June 4th, 2017		
2:00 to 3:30 PM	Early Attendee Conference Registration	Park Place Hotel Lobby
Afternoon/Evening	Vendor Set Up	Hagerty Center
4:00 PM	Departure for Wine/Beer Tour and dinner	Park Place Hotel
6:00 PM	Dinner Meet Up	The Filling Station Microbrewery
8:30 PM to Midnight	IMAGIN Hospitality Event	Park Place Hotel—Top of the Park
Monday, June 5th, 2017		
7:15 AM to 8:30 AM	Busses run from Park Place Hotel to Hagerty Center	
7:00 AM	Registration Opens	Hagerty Center—Rotary Hall
7:30 AM	Breakfast	Hagerty Center—Ballrooms A-C
8:30 AM	Welcome Keynote Speaker: Michigan State Police	Hagerty Center—Ballrooms A-C
9:45 AM	Break	
10:00 AM	Technical Session 1	
11:00 AM	Transition	
11:15 AM	Technical Session 2	
12:15 PM	Lunch	Hagerty Center—Ballrooms A-C
1:30 PM	Transition	
1:45 PM	Technical Session 3	
2:45 PM	Transition	
3:00 PM	Technical Session 4	
4:00 PM	Transition	
4:15 PM	Technical Session 5	
5:00 PM	Transition	
5:15 PM	Poker Run Launch/Dinner on Own	Hagerty Center—Ballrooms A-C
5:30 PM	Busses to Park Place Hotel	
8:30 PM to Midnight	Poker Run Finale/Social Networking	Park Place Hotel—Top of the Park
Tuesday, June 6th, 2017		
7:15 AM to 8:30 AM	Busses run from Park Place Hotel to Hagerty Center	
7:30 AM	Registration	Hagerty Center—Rotary Hall
7:30 AM	Breakfast	Hagerty Center—Ballrooms A-C
8:30 AM	Welcome Keynote Speaker: Chris Treter, Higher Grounds	Hagerty Center—Ballrooms A-C
9:45 AM	Break	
10:00 AM	Technical Sessions 1	
11:00 AM	Transition	
11:15 AM	Technical Sessions 2	
12:15 PM	Transition	
12:30 PM	IMAGIN Awards Luncheon IMAGIN Annual Membership Meeting	Hagerty Center—Ballrooms A-C
2:00 PM	Technical Session 3	
2:45 PM	Transition	
3:00 PM	Technical Session 4	
4:00 PM	IMAGIN UAV Giveaway	Hagerty Center—Ballrooms A-C
4:05 PM	Conference Ends	

Technical Sessions

Monday, June 5th, 2017				
10:00-11:00	John Nelson - Artsy Science of Cartography	Ben Fraser - Chicago's Urban Forest: Applying Supervised and Unsupervised Classifcation Methods	Andrew Michalowski, et al - Leveraging GIS & Cityworks for Asset Management and Intergovernmental Contract Purposes	Mark Holmes - Next Generation of the Michigan Geographic Framework
11:15-12:00	Jeff Nemecek - Integrating High Resolution Oblique Imagery into your GIS	Fadi Alhomaidat - Analyzing Grand Rapids' Pedestrian Crash Data Spatially Queen Umeana - Wetland Restoration Assessment in Michigan	Scott Menhart & Chad Collins - Leveraging GIS at Traverse City Light & Power	Charley Hickman - USGS Update on National Map, 3DEP, US Topo, etc.
1:45-2:45	Trevor Hobbs - Using UAV-derived imagery in combination with existing LiDAR to map plot-level forest characteristics in Michigan	Emily Selph - Charlevoix County Leverages Mango for Web Mapping Services	Jonathon Gartha & Keri Blough - Finding & Eliminating Cross Connections	Esri - Real-time Snow Management Support with ArcGIS
3:00-3:45	Jeremy Dancer - UAV Technology in Surveying, Mapping, and GIS Applications	Matt McCormick - Web Mapping & MSP	Kathleen Stack - Transitioning from Miss Dig Grids	Michael Boyd - Designing & Building Custom Workflows
4:15-5:00	Jason Heywood - Mapping with Drones: Key Considerations and Factors to Achieve Desired Accuracy	William Welsh, et al - GIS Applications for Analysis and Support of Local- and County-Level Tourism-Related Economic Development: Lessons from the Washtenaw County's Community Tourism Action Plan (CTAP) Program	Bryan Debus & John Nelson - Effective Cartography & Design	Andrew Brenner - What is Ele-Hydro and why you want it
Tuesday, June 6th, 2017				
10:00-11:00	Stacy Leroy Daniels, et al - The Comedy of Crystal Lake: Geomorphic Analysis & 3D Modelling of an Historical Event Using LiDAR Data	Michelle Lazar - Grand River Floodwalls - Historic Easements and Asset Management	Max George - Really? A Surveyors Plea for Help	Esri - Opening Your Data to the Public with ArcGIS
11:15-12:00	Alec Pestov & Bernie Schmidt - The Future of GIS - Holographic Technology	Ryan Miller & April Kibby - GIS Based Work Orders: A Practical & Intuitive Approach	Yassir Elrayah - Traffic Accident Locations Around Connected Vehicle Infrastructure	Tyler Bird - Leveraging Open Data & Location Intelligence for Better Governance Chade Saghir & Chad Misiuk - SEMCOG's Transporation Interactive Maps and Open Data Portal
2:00-2:45	Janice Lerg & Brian McElroy - SAW Stormwater Asset Management	Randy Raymond, et al - Transforming Education with ArcGIS Platform, GeoCollaborators & K-12 Citizen Science	Ariana Toth - ArcGIS Server Components: An Introduction to Server IT	Esri - The 10.5 things you need to know about What's New in ArcGIS Enterprise
3:00-3:45	Magdalena DiFranco - The Tale of Utility Mapping in Clinton Township	Diane O'Connell - GIS Courses and Programs in Higher Education (Panel Discussion)	Keith Rikli & Ariana Toth - GIS Action, LIVE!: Innovative Web GIS Applications using ArcGIS for Server	

2017 Student Poster & Paper Competition Winners

IMAGIN's annual Student Poster and Paper Competition (SPPC) was held on April 6th at Lansing Community College. The gathering brought together students, instructors, and GIS professionals from around the state for a day of presentations, discussion, and networking. Eleven institutions of higher learning were represented in the competition including: Aquinas College, Calvin College, Eastern Michigan University, Ferris State University, Grand Valley State University, Lansing Community College, Michigan State University, Northern Michigan University, the University of Michigan-Dearborn, and Western Michigan University. A total of eighteen undergraduate posters were presented.



Poster winners included:

- Justin Brown of UM-Dearborn, 1st place – best utilization of remote sensing data - for his poster "Looking for Evidence of Ancient Wet Environments on Mars," (*shown above*)
- Madeline Jazdzyk and Montana Kruske of LSU, 1st place (tie) – best utilization of GIS - for their poster "Applying DRASTIC Methods to the State of Michigan Assessing Groundwater Vulnerability," (*shown top right*)
  Isaac Entz of GVSU, 1st place (tie) – best utilization of GIS - for his poster "Analysis of Sinkhole Development in the Floridian Aquifer System," (*shown bottom right*)
- and Ross DiFalco of MSU, 3rd place – best utilization of GIS - for his poster "Agricultural Drainage Tile Density Compared to Natural Soil Drainage."

The first place winners received $300 each and the 3rd place winner received $100.

To see all of the submissions and view the posters online go to www.imagin.org/awards

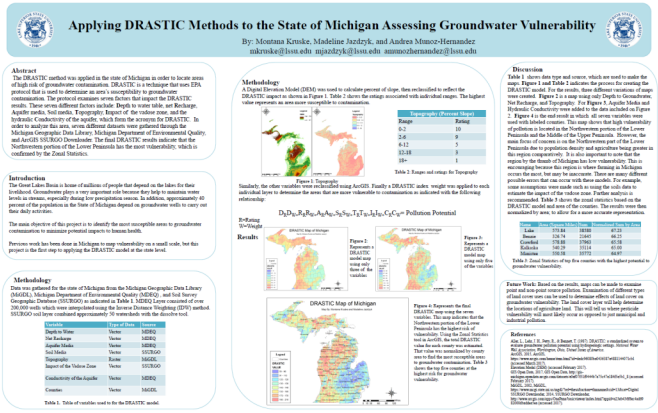
In addition, three graduate students presented their research.

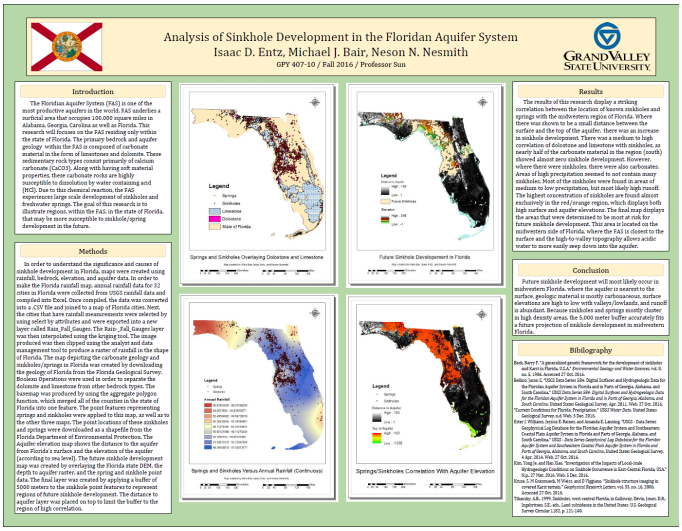
- Ben Fraser of MSU presented his paper entitled "Chicago's Urban Forest: Applying Supervised and Unsupervised Classification Methods."
- Fadi Alhomaidat of WMU presented his paper "Analyzing Grand Rapids' Pedestrian Crash Data Spatially"
- Queen Umeana of Eastern Michigan University presented her paper "Wetland Restoration in Michigan."

The first place winner, Ben Fraser, received a $1,000 scholarship. All three paper presenters will be sharing their work at the IMAGIN Conference in June in Traverse City, Michigan.

A special thank you goes out to our 2017 judging panel:

Claudia Walters – University of Michigan, Dearborn
Mary Clinthorne – Aquinas College
Ashton Shortridge – Michigan State University
Michael Battaglia – Michigan Tech Research Institute





IMAGIN, Inc.

416 S. Cedar St. Suite C
Lansing, MI 48912

Phone: 517.338.3035 x709
Fax: 866.298.2115
E-mail: info@imagin.org
Twitter: @IMAGIN_mich

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IMAGIN, Inc.

416 S. Cedar St. Suite C
Lansing, MI 48912

www.imagin.org

Phone: 517.338.3035 x709
Fax: 866.298.2115
E-mail: info@imagin.org

Improving Michigan's Access to Geographic Information Networks

IMAGIN is a non-profit professional development organization committed to providing opportunities for its members to network with professionals who are using, creating, or maintaining spatial resources within Michigan. IMAGIN serves as a crossroads for spatial information users/developers at all levels of government, business, and non-profit organizations by providing its members partnership opportunities to recognize, share, and create spatial data resources for both traditional and new applications.

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IMAGINews publishes original, timely, and innovative articles and news items that advance knowledge regarding GIS, related technologies, and their use within Michigan. IMAGINews welcomes submissions from IMAGIN members and others. Please send article submissions in Microsoft Word format to communication@imagin.org .

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