ALASKA NSF EPSCoR
DATA to DECISIONS
VISUALIZATION WORKSHOP

Day One • November 16, 2015
(all events in GI Globe Room unless otherwise noted)

8:00 Registration and poster setup
Poster session chair: Peter Webley, UAF Geophysical Institute Associate Research Professor

8:15 Shuttle to UAF from Pike's Waterfront Lodge

9:00 Welcome session • Elvey Auditorium
Anupma Prakash, EPSCoR Principal Investigator
Nettie La Belle-Hamer, UAF Associate Vice Chancellor for Research

9:15 Introduction of keynote speaker • Elvey Auditorium
Pips Veazey, Alaska EPSCoR Associate Project Director

9:20 Keynote presentation: *Beyond Modeling and Visualization: Towards Policy Design and Implementation*
Description: *At Scientific American, we focus on data visualization as a communication tool, with graphics that engage, inform, and inspire science-savvy but non-specialist readers. This presentation focuses on how graphics are developed at the magazine, emphasizing the importance of serving the intended audience.*
Jen Christiansen, Senior Graphics Editor for Scientific American

10:00 Discussions with neighbors

10:10 Q & A with Jen Christiansen

10:30 Networking break and visits to Decision Theater North

11:00 Session One: Visualizing and Integrating Data for Decision Making
Visualizing Geographic Data in a Planetarium Dome
Frank Witmer, UAA Assistant Professor of Computer Science and Engineering (session chair)
Understanding 4,000 articles in 10 Minutes through Interactive Visualization
Martin Cenek, UAA Assistant Professor of Computer Science and Engineering
Visualizing Stakeholder Futures
Jamie Trammell, UAA Assistant Professor of Geography and Environmental Studies
Immersive Virtual Landscapes
John Anderson, University of Idaho Associate Professor of Virtual Technology and Design, and Roger Lew, University of Idaho research faculty
Integrating Data and Uncertainty in North Slope Development Scenarios
Olivia Lee, UAF Geophysical Institute Research Associate

12:30 Lunch and Poster Session

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1:30   Session Two: Visualization Technology
        Interactive and Web-based Visualization using Graphics Hardware
                Orion Lawlor, UAF Associate Professor of Computer Science (session chair)
        The UAA Planetarium and Visualization Theater: Current and Future Capabilities
                Presenters: Erin Hicks, UAA Assistant Professor of Astronomy and Physics, and Omega
                Smith, UAA Planetarium Manager
        Decision Theater North: Virtualizing a Display Wall
                Dayne Broderson, Geographic Information Network of Alaska Technical Services Manager
        Computational Challenges in Creating Scientific Visualizations for High-resolution Displays
                Jon Genetti, UAF Associate Professor of Computer Science
        *Plug and Play?: Strengths and Limitations of Out-of-the-box Web-based Tools for Text Analysis
        and Visualization*
                Vanessa Raymond, UAF Graduate Student

3:00   Networking break and visits to Decision Theater North

3:30   Session Three: Small Group Workshops
        Building Infographics: Developing visuals with specific audiences in mind (GI Globe Room)
                Jen Christiansen, Senior Graphics Editor for Scientific American
        *Geographic Information Systems: Strategies for using GIS to build maps and other data
        visualizations* (Room 004 WRRB)
                Pete Hickman, Geographic Information Network of Alaska GIS Instructor
        *Web-based Data Visualization: An introduction to D3, three.js, and other web-based data
        visualization libraries* (Room 401 IARC)
                Orion Lawlor, UAF Associate Professor of Computer Science, and Will Fisher, Geographic
                Information Network of Alaska Web Developer

5:00   Adjourn

5:30   Shuttle to Pike's Waterfront Lodge

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8:15   Shuttle to UAF from Pike's Waterfront Lodge

9:00   Welcome session
Anupma Prakash, EPSCoR Principal Investigator
Bob McCoy, Director, UAF Geophysical Institute

9:15   Introduction of guest speaker
Pips Veazey, Alaska EPSCoR Associate Project Director

9:20   Guest presentation: *Beyond Modeling and Visualization: Towards Policy Design and Implementation*
Description: *Technology enables us to visualize policy options and simulate scenarios, but is no panacea in this field: deliberate decisions must be made on how to structure technology-enabled policy simulations to arrive at evidence-driven design, implementation, and evaluation.*
Kevin Desouza, Associate Dean for Research, Arizona State University College of Public Service and Community Solutions

10:00 Discussions with neighbors

10:10 Q & A with Ken Desouza

10:30 Networking break and visits to Decision Theater North

11:00 Session Four: Artistic Principles for Data Visualization
Lena Krutikov, Climate Science Analyst, Scenarios Network for Alaska and Arctic Planning (chair)
Ten Design Considerations for Compelling Visualizations
Jennifer Moss, Instructional Designer, UAF eLearning
Tools for Observation: Art and the Scientific Process
Erin Pettit, UAF Assistant Professor of Geophysics (Glaciology)
The Process of Integrating Art, Science and Design
Kristin Timm, Science Communication Lead, Scenarios Network for Alaska and Arctic Planning
Truth, Beauty, and Technology: An Artist's Perspective
Bill Brody, UAF Professor of Art (Emeritus)

12:30 Lunch

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1:30 Guest Speaker: *Data-Driven Decision Making at the National Science Foundation*
Paul Morris, Officer, National Science Foundation Atmospheric and Geospace Sciences Division

2:00 Session Five: Facilitated Discussion on User Needs and Institutional Capacity Building
Pips Veazey, Alaska EPSCoR Associate Project Director (convenor)
Dayne Broderson, Geographic Information Network of Alaska Technical Services Manager (convenor)

2:40 Concluding remarks
Anupma Prakash, Alaska EPSCoR Principal Investigator

3:00 Adjourn

3:15 Working session for Data to Decisions mini-grant recipients (held at Decision Theater North)

5:00 Adjourn working session