

[The Biogeographic Information System: experimentation in a new way of organizing and publishing scientific findings](#) [1]

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Event: [2016 ESIP Summer Meeting](#) [2]

Session Type: [Plenary](#) [3]

Expertise Level: [Beginner](#) [4]

Abstract/Agenda:

The communication of scientific ideas and discoveries has not kept pace with the overall flow of information across the planet that we seek to better understand, and it is not moving fast enough to address the full breadth of the challenges facing our societies and our environment. On the other hand, we have entered an age where nearly all scientific thought and the execution of our experiments and trials can be encoded in software, opened for broad scrutiny, and accelerate our ability to make new discoveries. In the USGS, we are experimenting with a new method of organizing data, information, and knowledge toward a real time, iterative National Biodiversity Assessment. We borrowed heavily on the ideas and methods for traceability and transparency from the Global Change Information System developed by the US Global Change Research Program but are taking our Biogeographic Information System a few steps further to incorporate live data services and working scientific software. We are building on the idea of flexible Synthesis Compositions that assemble Analysis Packages to communicate scientific findings in multimodal ways from traditional GIS maps and reports to story maps and dynamic web presentations. We are testing ideas for how peer review and agency approvals work in an environment where data and software are the primary products of the scientific process and prose descriptions of scientific findings are parsed down to their simplest essence to explain to humans what is evident in the execution of software algorithms.

Session Leads:

Name: [Sky Bristol](#) [5]

Organization(s): [U.S. Geological Survey](#) [6]

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