CONNECTING THE DOTS:
VISUALIZING INTERNATIONAL LAW

This panel was convened at 1:45 pm, Wednesday, April 9, by its moderator, Marylin Johnson Raisch of the John Wolff International & Comparative Law Library, GeorgetownUniversity Law Center, who introduced the panelists: Ana S. Ayala of the O'Neill Institute for National and Global Health Law, Georgetown University Law Center; Alejandro Ponce of the World Justice Project; and Jeffrey B. Ritter of Georgetown University Law Center.[*]

INTRODUCTORY REMARKS BY MARYLIN JOHNSON RAISCH

Data visualization may be defined as ''the implementation of more contemporary visualization techniques to illustrate the relationships within data. Visualization tactics include applications that can display real-time changes and more illustrative graphics, thus going beyond pie, bar, and other charts.''[1] Data visualization, along with database technologies, has transformed the presentation of data in many fields, including the social sciences and law.[2] In researching U.S. law, including U.S. practice in international law, the ability to locate cases, statutes, and journal articles with high relevance to particular issues came into being with the advent of Lexis-Nexis and, shortly thereafter, Westlaw.[3] However, to this day these particular services do not provide graphics within texts (other than those supplied by editorial enhancements or PDF versions of a document). Yet the Internet provides a rich visual experience for data of increasing complexity in all disciplines that can be called forth on many devices by voice commands.[4]

Three projects illustrating visualization of data in international law were presented as examples of two kinds of uses for graphical interface: interactive (as in teaching or collaborative law practice), and persuasive (as in the fields of global health and legal system reform).

MAPPING THE LAW: BUILDING AND USING VISUAL MIND MAPS FOR INTERNATIONAL LAW—SUMMARY OF JEFFREY B. RITTER'S REMARKS

In transnational and cross-jurisdictional settings, legal and regulatory regimes become ever more complex. Elements of those structures may best be shown, jurisdiction by jurisdiction,

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[*] The panel was sponsored by the ASIL International Legal Research Interest Group and co-sponsored by the International Law and Technology Interest Group. The presentations were accompanied by projections capturing the appearance of the visualized data from the Web or the software shown. A summary of the panel was provided by Ms. Raisch, Associate Law Librarian for International and Comparative Law at Georgetown Law.

[1] TECHNOPEDIA (Aug. 12, 2014, 5:15 pm), http://www.techopedia.com/definition/28988/big-data-visualization.

[2] Examples abound beyond this panel, ranging from the UNITED NATIONS OFFICE OF THE HIGH COMMISSIONER FOR HUMAN RIGHTS, *Status of Ratification Dashboard* (Aug. 11, 2014, 4:30 PM), http://indicators.ohchr.org/ (visualizing the ratification of human rights treaties, by map or color, either of a single treaty or all 18 treaties worldwide) to RAVEL LAW INC., *Ravel: Unravel the Law* (Aug. 11, 2014, 4:35 PM), https://www.ravellaw.com/ (using color, shape, and highlighted terms in text for word-searching across U.S. jurisdictions to show citation concentration and context).

[3] Lexis-Nexis, under Mead Data Central, opened an era of full-text searching in its original pre-Internet database in the fall of 1973 in New York, where subscriptions were sold after pilot-testing in Mead Central's home state of Ohio. West Publishing started building its future Westlaw database in 1976 to include its texts and editorial enhancements, such as headnotes. William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 LAW. LIBR. J. 543, 553–54 (1984–1985).

[4] The voice assistant ''Siri'' on Apple's iPhones, versions 4s and up, can respond to ''Show me a graph of legal citations.'' This result links to L. Karl Branting, *A Reduction-Graph Model of Precedent in Legal Analysis*, 150 ARTIFICIAL INTELLIGENCE 59–95 (2003), complete with graphs and charts in digital format, as well as images of graphs.