Enabling New Forms of Scholarly Publishing

• Scholars continue to expand the role of data in their research

• Professionals in data curation, publishing, and preservation must develop expertise to support this work as it moves from research to formal publication

• The goal of this project is to enable innovation in scholarly communication and digital publishing
Changing Role of Data in Publications

• Increasing expectations for connections between publications and underlying data

• Importance of collaboration among publishers, data centers, and preservation services to build tools to serve this need

• Goal is to preserve not just publications and data, but the relationships among them
Changing Definition of “Article”

• Primary unit of scholarly communication is becoming a multi-part, distributed object

• Need to maintain the connections among the various components and locations

• Increasingly elaborate relationship information will be necessary going forward
Matchmaker Tool Prototype

- Graph-based view of connections among publications and their data
- Many-to-many relationships rather than one-to-one view of current systems
- Tracking and preservation of these connections through the scholarly communications cycle
Research Partnership

- Data Conservancy: Expertise in management of large data archives from multiple disciplines

- IEEE: Expertise in management of data-intensive scholarly journal publications

- Portico: Expertise in digital preservation, publisher workflow requirements, and existing relationships with 244 publishers
Work Plan

• Year One—Planning Phase: Gather requirements, create use cases, hold workshop with stakeholders, refine use scenarios based on community feedback

• Year Two—Prototype Development: Create system to identify, store, update, and retrieve relationships among publications and their data
Example Use Case: Publisher

• Publisher wants to know if there are reference links to an article, its author, or a funding agency that it can include in its publication

• Publisher submits article metadata and identifiers to the Matchmaker tool

• Matchmaker consults its database and returns any relationship maps it finds
Working with the Community

• Project PIs will consult with and share project plans and findings with the publishing, research, and data curation communities

• Project workshop in Year One will test prototype plans with stakeholders and use feedback to refine Year Two work plan for prototype development
Outcomes and Deliverables

• Matchmaker tool working prototype

• Plan for long-term sustainability of the service

• Collaborative partnership with the community

• System that supports emerging forms of digital scholarship and publishing
Team Members and Acknowledgements

- Sayeed Choudhury, Data Conservancy, Johns Hopkins
- Gerry Grenier, IEEE
- Kate Wittenberg, Portico

This research project is made possible through support from the Alfred P. Sloan Foundation