

**Storytelling Across Time:  
Building a Community Around Provenance (B-CAP)**

Rutgers University's School of Communication and Information requests a 24-month, **\$142,848 Planning grant** to convene experts in library and information science to define, debate, and ultimately develop plans of action to resolve current issues in documenting provenance, addressing NLG program priority **Goal 5, Objective 5.1**. In collaboration with Simmons University, Boston, and the University of Connecticut, PIs Drs. Yi-Yun Cheng, Rhiannon Bettivia, and Michael Gryk will address the need to create more integrated approaches to provenance documentation. This will enable stakeholders from many disciplines to avoid duplication of effort, create shared vocabularies and practices, and tackle the institutional, reputational, and financial challenges that arise when sharing the stories of objects in an era of information overload and misinformation.

**Project Justification:**

Provenance is the story of how something has come to be. This can be physical, digital, or even an abstract concept or idea. Provenance is not innate to objects: telling stories plays a crucial role in whether objects can establish authority in the world. Well-documented historical metadata might convince one expert that a painting is real, while another will remain unconvinced [1]. Concerns abound about the origins of the training data used in AI technologies for research and creative products [2]. Vaccine hesitancy during the COVID-19 pandemic brought to the fore suspicions about vaccine origins that influenced some people's decisions not to get vaccinated [3]. Local newspapers are closing in record numbers, with back issues and institutional data often winding up in the local library, which has to construct provenance to tell the story of local papers of record [4].

The challenges with provenance need to be addressed now. Addressing the systemic issues will take time, and the current social and technical conditions are exacerbating these provenance issues. The PIs have a long-term partnership exploring provenance documentation from different LIS perspectives: information organization, digital preservation, and bioinformatics. We have collaboratively conducted workshops about provenance at [IDCC](#) and [iConference](#), and we wrote a [book](#) on modeling provenance with PROV and PREMIS. Participants in our workshops ranged from video game researchers, archivists, and data curators to reproducibility scholars; all expressed that current models for documenting provenance fall short. They shared distinct challenges and missed opportunities that arise from siloed provenance work: some worried about lack of communication about metadata between domain experts and IT; some, about challenges documenting scientific processes occurring at computational speeds too fast to record manually; others, that "good" provenance is not convincing in an era of mass disinformation.

As a result, the PIs identified three imminent areas of concern: **disciplinary silos**, **temporality**, and **persuasiveness**. While provenance is a **pan-disciplinary** concern and practice, it lacks collective conversation and scholarship. In LIS, many associate provenance with archives and long-term preservation [5]. In other fields like forestry, provenance means determining the sources of seeds [6]. While provenance is often tied to history, it invokes other **temporal** dimensions, bridging understandings from the past into the future. Current models and tools address prospective and retrospective provenance [7], but how these temporal dimensions can be used in documentation practices warrants further discussion. **Persuasive** provenance stories are a mechanism to validate the credibility of objects. During scientific collaborations where multiple experimental processes and analyses occur, provenance must capture all decisions to support improvements or correct errors. The lack of effective communication across disciplines obscures true underlying problems and sustainable solutions, and the direct impact of this project is to provide opportunities for **challenge resolution** and **shared decision-making**.

**Project Plan: Planning for Better Provenance Solutions**

The PIs conducted pilot panels at [ASIS&T 2022](#) and [iPRES23](#) to investigate a range of LIS-specific provenance perspectives. With grant funds, we aim to **support innovative approaches to information management** and **leverage institutional expertise** by convening experts from multiple fields to share perspectives on provenance to plan for future foundations of more user-centric models and tools. This project will facilitate three strategic planning meetings to share expertise on each of the following subtopics: **disciplinary concerns**, **temporal concerns**, and **persuasiveness concerns**. Additionally, we will work to create a community of practice by bringing together these experts with other practitioners and researchers working with provenance. We will utilize Educopia's [Community Cultivation Guide](#) to support this burgeoning community of practice via bi-annual online meetings that will complement the in-person strategic meetings. The grant will support remuneration for featured speakers to present at webinars, to help foster the formation and validation of the community of practice.

Each strategic planning meeting will host five to ten experts from LIS and other domains, with up to 30 participating across three events. Two to three months before each meeting, the PIs will recruit meeting participants via targeted emails. We will seek out potential participants in higher education, GLAM, and other sectors based on whether their work is relevant to the three themes. Conversations have already begun with potential participants from LIS, media history, and storytelling. They all expressed excitement to participate in our events and to recommend additional participants.

Before each meeting, participants will share perspectives, provocations, readings, and tools via the [project website](#). Each two-day strategic meeting will focus on **presentation, conversation, and design fiction** to support planning for future solutions. During the **presentations**, experts will situate their work within the larger concerns of their discipline to help other participants understand the provenance challenges of different fields and pose questions about the theme of the meetings. **Conversation** will create ties and build trust between participants, which facilitate the aim of engendering a community of practice. The PIs will create **design fiction** groups, where participants will propose changes to provenance models and tools or suggest new ones. The PIs will draw on their workshop experience to provide scaffolding. Each event will include shared reflection time leading to interest-related breakout sessions to answer thematic questions and propose new research avenues.

2023 Pre-Grant	2024 Summer	2024 Fall	2025 Spring	2025 Summer	2025 Fall	2026 Spring	2026 Post- Grant
Panel at iPRES Sept. 2023  Initial recruiting of experts, with focus on Event 1	Event Planning (arrange travel; select shared materials)  Conference: SAA	<b>Strategic Meeting 1</b> (Disciplinary, Nov @Boston)  <b>Community of Practice Meeting Online 1</b>  Conference: ASIS&T	<b>Community of Practice Meeting Online 2</b>  Conference: iConference	<b>Strategic Meeting 2</b> (Temporality, June @New Brunswick)  Conferences: ICA, SAA	<b>Strategic Meeting 3</b> (Persuasion, Nov @Connecticut)  <b>Community of Practice Meeting Online 3</b>  Conferences: CSCW, 4S	<b>Community of Practice Meeting Online 4</b>  Dissemination of Project Book  Conferences: ALA, IFLA	Application for Research Grant  Conference: ACHS

### Three-fold Diversity Plan:

(1) When **recruiting participants**, the PIs will solicit broad representation of cultural identity and geographic areas. (2) We will **support participation** in online and in-person events, to enable different forms of participation. (3) We explicitly invite non-dominant **ways of knowing** and persuasive, historical, and future-oriented storytelling.

### Project Results: With this Plan, We Can!

The deliverables of this planning grant are structured to support future grant work, which will result in the creation of better provenance tools and models. The collaboration of experts in this grant is a necessary first step to address urgent provenance challenges. The PIs will aggregate and curate the findings of the meetings, resulting in: (1) Infrastructure for a pan-disciplinary community of practice; (2) a short graphic book that will be used to disseminate findings and recruit future participants; (3) conference presentations to share work; and (4) the foundations of a research grant proposal to deliver provenance solutions.

The creation of infrastructure to support a **(1) community of practice** around provenance is a key result: many researchers are doing excellent provenance work and bringing these experts together will maximize the impact of their efforts while minimizing duplication. We will host a series of online talks between each strategic meeting where scholars can share work on provenance research: talks will feature a paid presenter and an opportunity for community members to gather to strengthen ties. We have created a [website](#) to house findings and deliverables from workshops and the pilot. The website will be a clearinghouse to share events and resources from the grant project with domain experts and workshop participants.

The **(2) book and (3) conference presentations** will consolidate research on provenance often siloed by discipline and disseminate it broadly. We have chosen conferences that represent the broadest disciplinary edges of the LIS field (see table above). Inspired by [LG-74-17-0134-17](#), *Reimagining the User Experience in Archives & Special Collections*, we will create a succinct and highly approachable book to share results in a way that is widely accessible across professional and disciplinary boundaries such that our findings reach the widest audience possible. This reach will also aid in the recruitment of participants for **(4) a follow-up research grant proposal** to create and refine a provenance documentation toolkit that explicitly addresses some of the key concerns raised in this planning project. The toolkit will allow researchers and practitioners to document provenance in real settings in ways that are both more efficient and satisfactory.

### Budget:

We request \$142,848 (\$121,943 direct, \$20,905 indirect) with no cost-sharing: (1) \$30,027 for travel, conference participation, and summer salary for Dr. Cheng; (2) \$4,123 for an hourly administrative assistant to coordinate participation; (3) \$1,663, fringe; (4) \$41,537 support travel, participation, and venues for pan-disciplinary experts at three events and the online events; (5) \$1,000 covers professional service such as IRB fees; (5) Subawards for Drs. Bettivia (\$20,129) and Gryk (\$23,464) cover travel, labor, and conference support.