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Collaborative Research: ABI Development: Symbiota2: Enabling greater collaboration and flexibility for mobilizing biodiversity data

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Data Management Plan

Symbiota2 will use data management policies and structures that conform to the NSF Public Access Plan (<http://www.nsf.gov/pubs/2015/nsf15052/nsf15052.pdf>), requiring that data be publicly available no later than two years after collection or model production. In accordance with this policy, this plan does not include drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This plan will make certain that the data produced during the period of this project is appropriately managed to ensure its usability, access and preservation.

Data and Materials Produced

We will produce software. The software will be a fork of the open source Symbiota project (symbiota.org). We will produce PHP, Python, R, HTML5, AngularJS, SQL, RDF, and CSS code for Symbiota2. We will also create a website, symbiota2.org, to provide tutorials, an on-line forum, and other materials about the project.

No data will be collected or generated for this research.

Standards, Formats and Metadata

Symbiota2 will follow the best practices and current standards in community-driven, open-source software engineering, including: version-controlled source code and test data using GitHub; providing thorough documentation that is continuously tested; extensive unit and integration testing through a continuously maintained testing framework using PHPUnit and Jasmine; and strict adherence to coding style standards with continuous code linting. The Symbiota2 API will be extensively documented using the OpenAPI specification. PSR and the AngularJS Style Guide coding standards. These community standards detail how code should be written and our strict adherence to them will ensure that the coding style of Symbiota2 will be consistent throughout the code base, making it more understandable for a large development team and accessible to potential new contributors with minimal effort..

Roles and Responsibilities

PI Dyreson will be responsible for managing the project and ensuring that all of the people involved with the grant follow the data management plan. The key management task will be to set up and maintain a GitHub repository for the code. The owners of the GitHub site will be the co-PIs at Utah State University and Northern Arizona University. Shared ownership will continue after the grant, and the code will continue to exist in GitHub for at least two years. If GitHub is discontinued, we will move the code to a new hosting service.

Dissemination Methods

All software will be publicly available on GitHub as an open source project. The code will be released under the GNU general public license v3 (the license for Symbiota). All content at the symbiota2.org website will be freely available to the public.

Policies for Data Sharing and Public Access

All software will be made freely available in the public domain, under GNU general public license.

Archiving, Storage and Preservation

The software will be kept on GitHub, which has existed since 2008 and we anticipate will exist for the near future. If GitHub ceases to exist we will move the software to another public domain, open

source repository. GitHub stores software in the cloud ensuring backup and replication for projects. GitHub provides cloud-based backup and versioning.

The website symbiota2.org will be maintained by the PIs until at least two years after the end of the project.