

Project Title: Developing *Diviner*, a digital platform

Institution: North Country Public Radio

Project Directors: Ellen Rocco

Grant Program: Digital Humanities Advancement Grant, Level 2

Data Management Plan, Attachment 9

For the Diviner Digital Platform:

Part of our grant covers the development of a more robust data management plan by our Digital Director, Digital Developer, and Advisory Board. They will specifically be designing a plan for updating our WordPress plug-ins and elements as external factors, like WordPress themes, changes.

Right now we envision the Diviner digital platform being housed as a bundle of plug-ins, elements, and themes on the WordPress Plug-In Directory (<https://wordpress.org/plugins/>). The packaging of this bundle and its uploading into the directory is part of our work plan, executed in the final five months of the project, and made “live” in January of 2019.

North Country Public Radio (through the Digital Developer and Digital Director) will take responsibility for updating and tweaking the elements as needed.

For Individual Projects Utilizing Diviner:

Primary Documents Storage (for all photos, audio, and metadata collected)

We project a maximum of 100 GB of data collected per year (between photographs, audio, and metadata) for every “active start-up” year of our North Country at Work project—going forward, this would be every year we add at least ten public photo collections along with a staff person soliciting and processing private and institutional donations. We imagine this to be between three and five years. For “maintenance years,” which come after the start-up period and rely on unsolicited donations, we project a maximum of 20 GB per year.

Therefore, for at least the first decade of the project we will not need more than 1 terabyte of storage space for our primary materials. Our storage system for our collected ‘primary documents’ (full size photos, WAV audio clips, and background information in Microsoft Word documents) consists of a 1 TB hard-drive which the project computer (owned and maintained by North Country Public Radio) backs up to on a daily basis, as well as a Crashplan cloud account with a second back-up copy of all information.

It will be up to individual organizations that implement Diviner to manage primary materials in their largest forms.

Hosting

The initial test project for Diviner is North Country at Work. The NCAW website will be hosted by the same company that handles the websites North Country Public Radio, NCPR Music, and all other NCPR domains, the R1 Soft Backup Solution for NCPR's private VMware Private Cloud. It provides:

Backup (for data loss):

- SAN (SAN) array and failover disaster recovery SAN (DRSAN) in a RAID 10 configuration.
- Running backups two times per day for the entire server.
- R1Soft Server Backup Manager
- On & Offsite backup

Redundancy (for content availability):

- Fully redundant hardware designed to sustain simultaneous multiple failures at hard drive, network, power, and storage level.
- VMware Servers in secure virtual VLANs with firewalls and fully automated failover and hot migration tools for maximum uptime and resilience to hardware failures ensure near 100% availability.
- Snapshots and on demand backups ensure data integrity. Self-healing High Availability Platform means that there is no single point of failure
- In the unlikely event of a physical failure, the machine simply reboots on another node

The responsibility for choosing and maintaining hosting servers for websites is also up to each individual organization; this is our way of addressing primary document storage and the hosting of the NCAW website.