Managing and Accessing Archival Email: The TOMES Project

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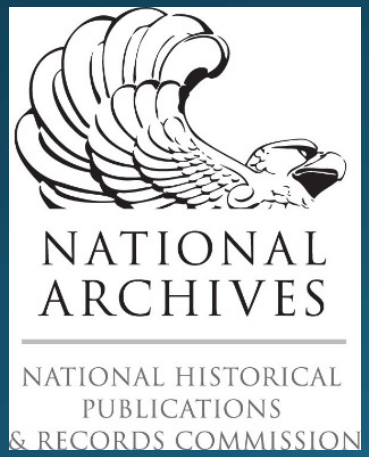


State Archives of North Carolina
NATURAL AND CULTURAL RESOURCES

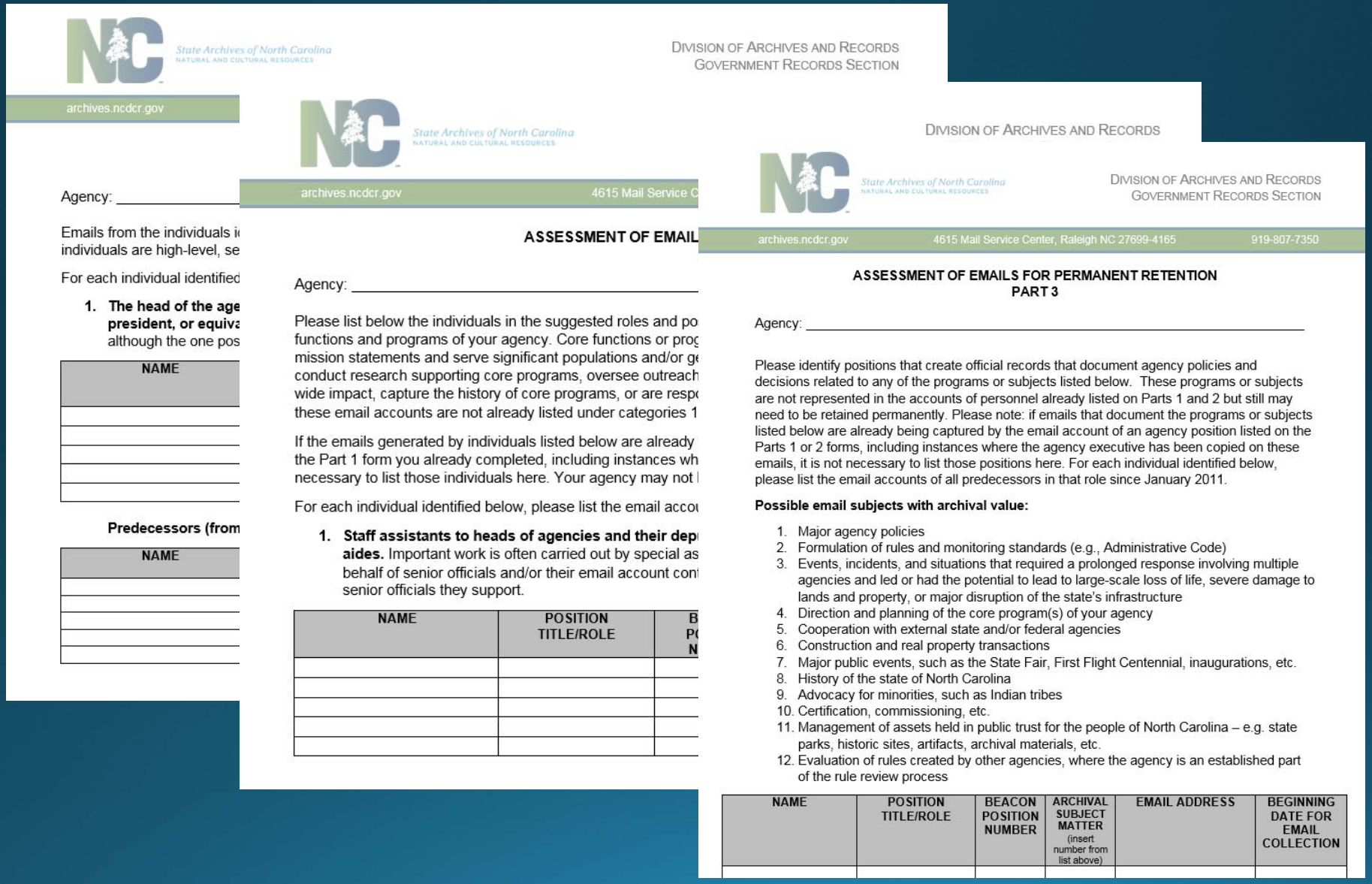
Transforming Online Mail with Embedded Semantics (TOMES)

- 3 year grant (2015-2018)
- Partnership between State Archives of NC, Utah State Archives, and Kansas State Historical Society
- Advisory group includes Cal Lee (UNC-Chapel Hill), Chris Prom (University of Illinois Urbana Champaign), and staff from the Library of VA

What should we keep?

Image: National Archives and Records Administration

Collecting Data



State Archives of North Carolina
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DIVISION OF ARCHIVES AND RECORDS
GOVERNMENT RECORDS SECTION

archives.ncdcr.gov

Agency: _____

Emails from the individuals i
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For each individual identified

1. **The head of the age**
   president, or equiva
   although the one pos

NAME

Predecessors (from

NAME

State Archives of North Carolina
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archives.ncdcr.gov 4615 Mail Service C

ASSESSMENT OF EMAIL

Agency: _____

Please list below the individuals in the suggested roles and po
functions and programs of your agency. Core functions or prog
mission statements and serve significant populations and/or ge
conduct research supporting core programs, oversee outreach
wide impact, capture the history of core programs, or are respo
these email accounts are not already listed under categories 1

If the emails generated by individuals listed below are already
the Part 1 form you already completed, including instances wh
necessary to list those individuals here. Your agency may not

For each individual identified below, please list the email accou

1. **Staff assistants to heads of agencies and their dep**
   aides. Important work is often carried out by special as
   behalf of senior officials and/or their email account cont
   senior officials they support.

NAME	POSITION TITLE/ROLE	B P N

DIVISION OF ARCHIVES AND RECORDS

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GOVERNMENT RECORDS SECTION

archives.ncdcr.gov 4615 Mail Service Center, Raleigh NC 27699-4165 919-807-7350

ASSESSMENT OF EMAILS FOR PERMANENT RETENTION
PART 3

Agency: _____

Please identify positions that create official records that document agency policies and decisions related to any of the programs or subjects listed below. These programs or subjects are not represented in the accounts of personnel already listed on Parts 1 and 2 but still may need to be retained permanently. Please note: if emails that document the programs or subjects listed below are already being captured by the email account of an agency position listed on the Parts 1 or 2 forms, including instances where the agency executive has been copied on these emails, it is not necessary to list those positions here. For each individual identified below, please list the email accounts of all predecessors in that role since January 2011.

Possible email subjects with archival value:

1. Major agency policies
2. Formulation of rules and monitoring standards (e.g., Administrative Code)
3. Events, incidents, and situations that required a prolonged response involving multiple agencies and led or had the potential to lead to large-scale loss of life, severe damage to lands and property, or major disruption of the state's infrastructure
4. Direction and planning of the core program(s) of your agency
5. Cooperation with external state and/or federal agencies
6. Construction and real property transactions
7. Major public events, such as the State Fair, First Flight Centennial, inaugurations, etc.
8. History of the state of North Carolina
9. Advocacy for minorities, such as Indian tribes
10. Certification, commissioning, etc.
11. Management of assets held in public trust for the people of North Carolina – e.g. state parks, historic sites, artifacts, archival materials, etc.
12. Evaluation of rules created by other agencies, where the agency is an established part of the rule review process

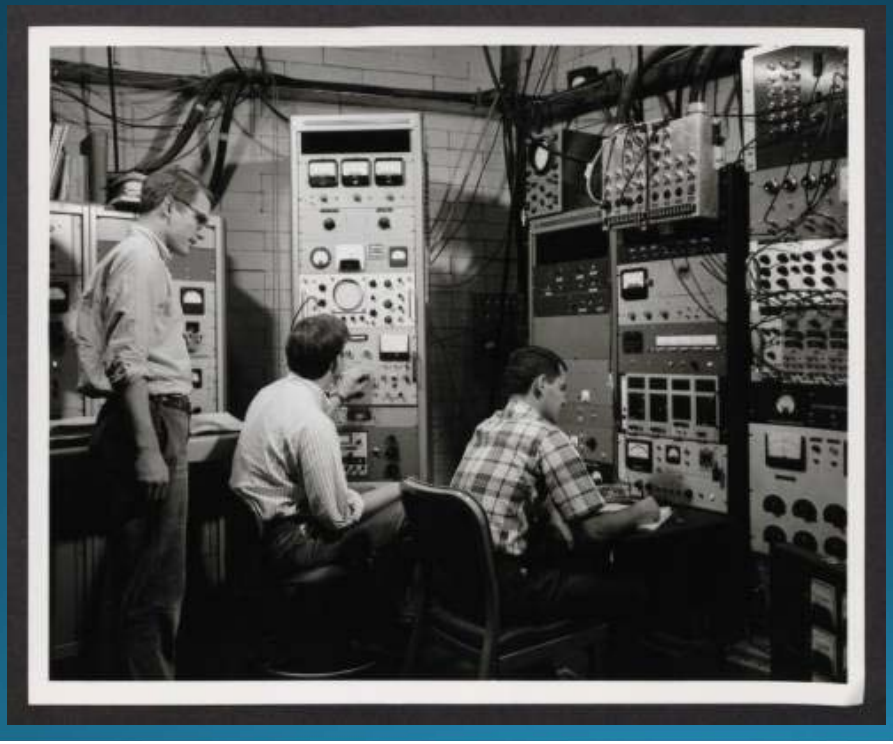
NAME	POSITION TITLE/ROLE	BEACON POSITION NUMBER	ARCHIVAL SUBJECT MATTER (insert number from list above)	EMAIL ADDRESS	BEGINNING DATE FOR EMAIL COLLECTION

Plugging In

- Department of Information Technology
  - "Tagging" accounts by function
  - Facilitating the transfer of email accounts from cloud storage
- Office of State Human Resources
  - Identifying positions by position number
  - Working with DIT to "tag" accounts

Making It Work

- Harvesting email from cloud using Office365 eDiscovery tools
- Created email processing modules written in Python as a toolbox for preserving and processing email accounts
- Developing NLP libraries for tagging



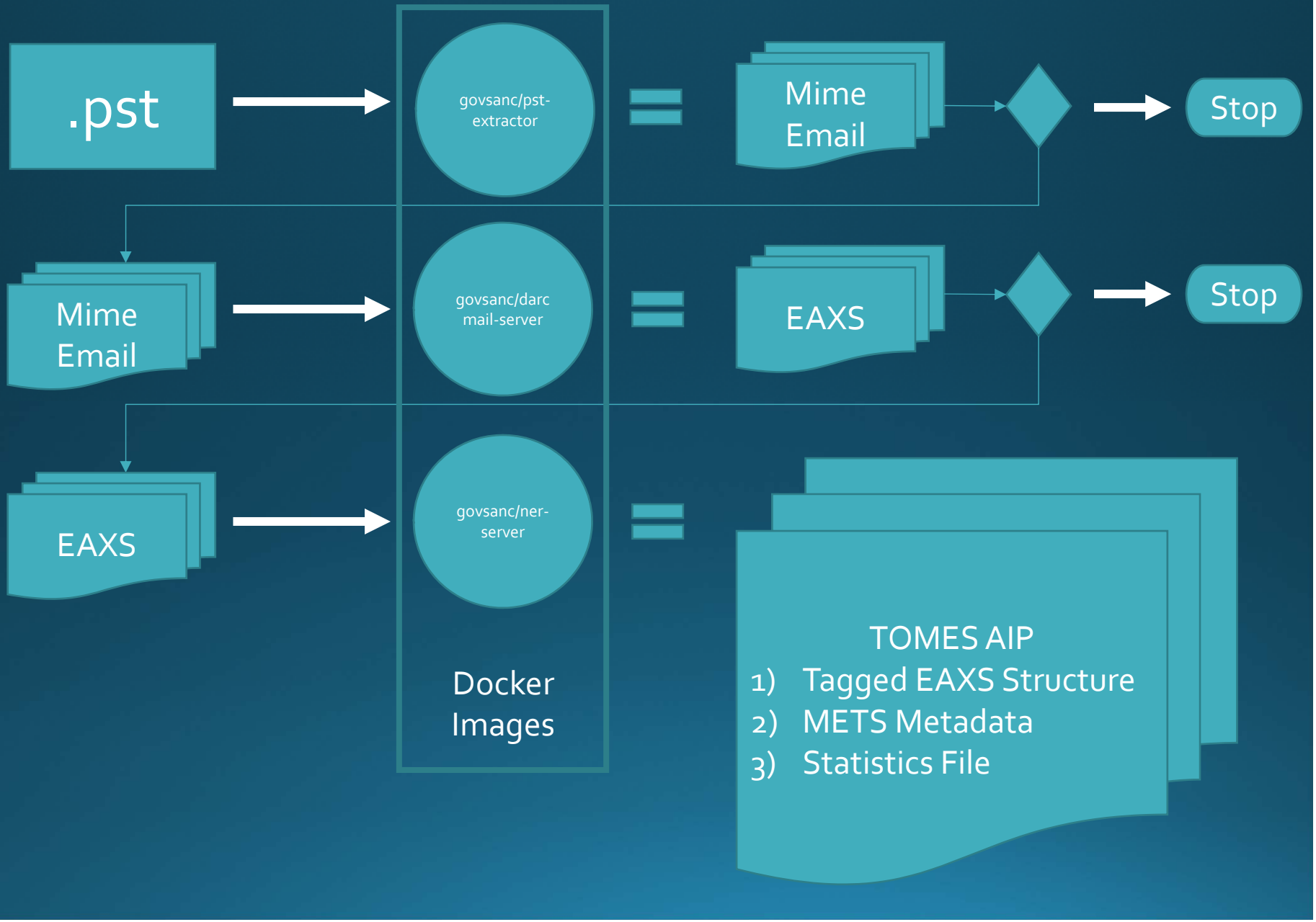
TOMES (Tool)

1) Architecture/Design
2) Original Goals
3) Modified Goals
4) v1.0

Architecture/Design

- KISS (Keep It Simple Stupid)
- Microservices

Architecture: Microservices



Original Goals

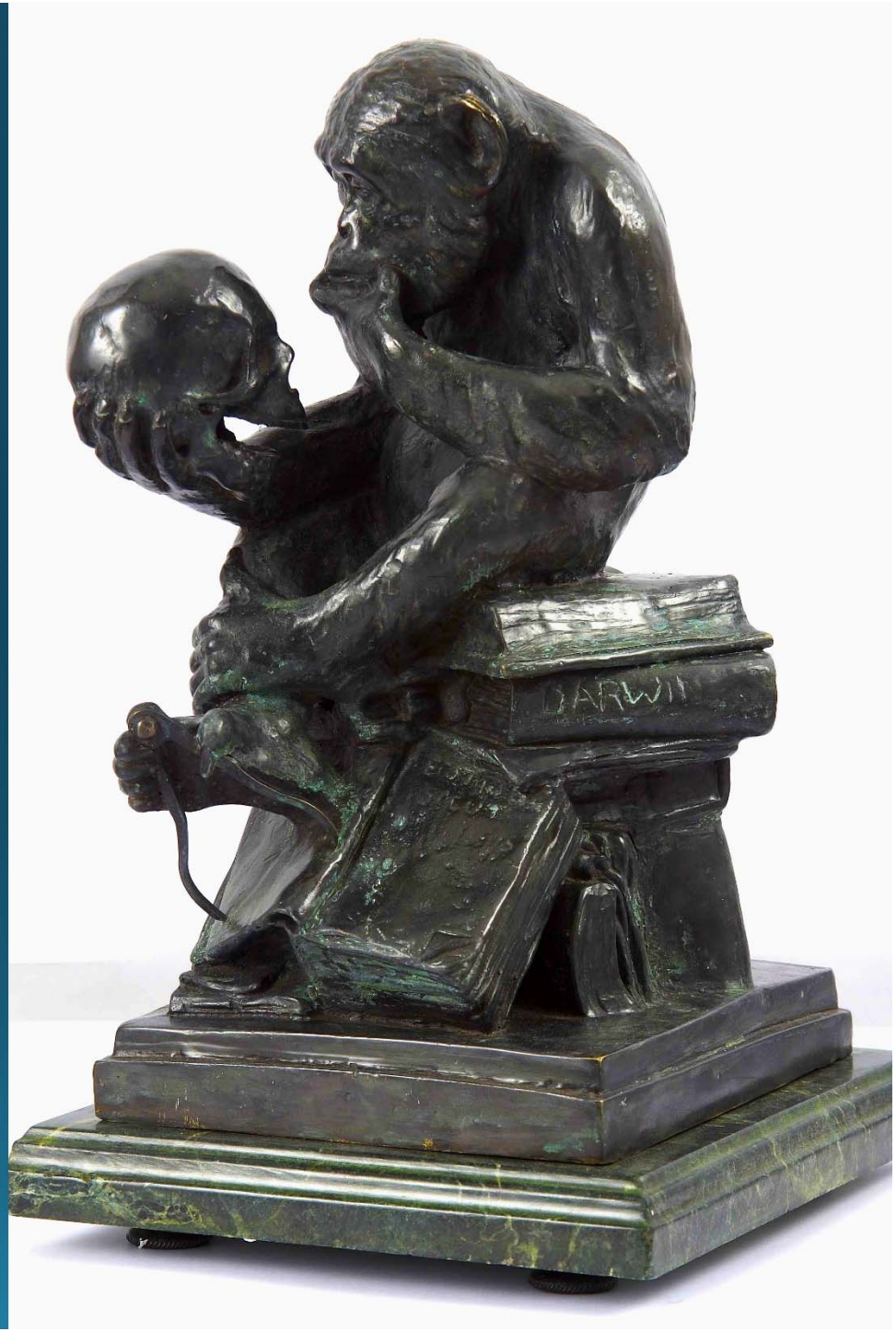
- Move PSTs from black box to preservation format
- Add semantics to the text to aid in processing/access
  - Semantics customizable by institution
- Run on hardware/software available to under resourced institutions.

Modified Goals

- Allow for iterative processing
- Greater focus on the PII part of the semantics
- Make the package self describing and atomic

v1.0: The AIP

- Original Account file (.pst, .mbox, .eml)
- Untagged EAXS XML file
- Attachment XML file(s)
- Tagged EAXS XML file
- METS file

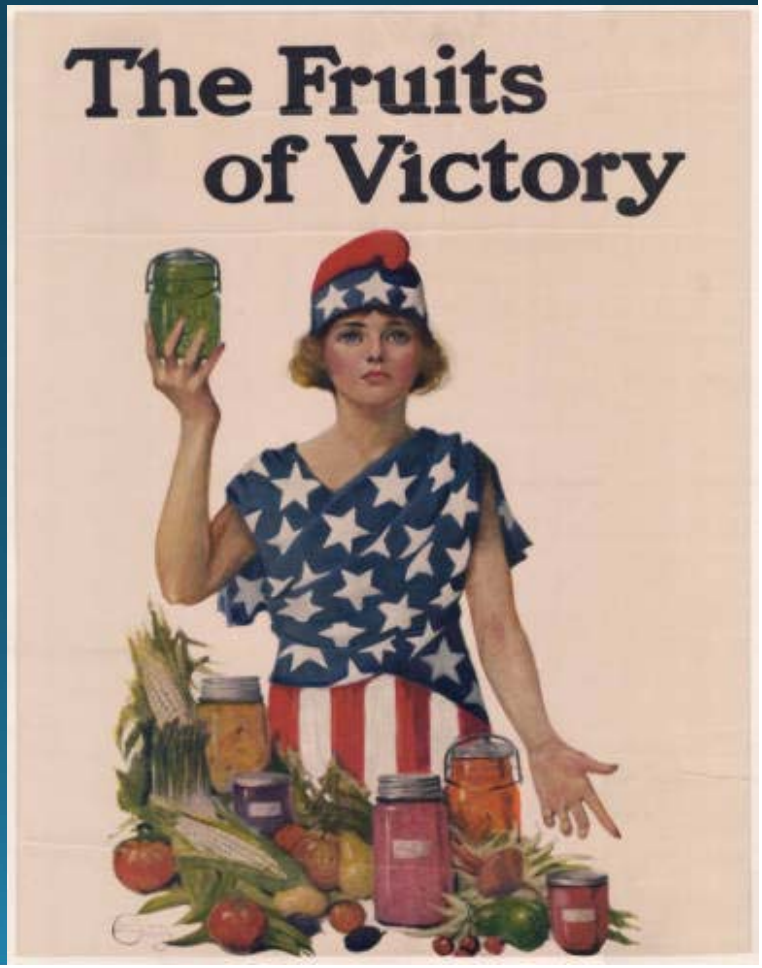


Challenges

- Making imperfect NER useful.
  - Machine Learning
  - Active discovery and processing
- Making State specific libraries easier for non-technical users to develop and incorporate into the workflow.
- Handling of emails with bad encodings
  - Email is messy and comes from everywhere.

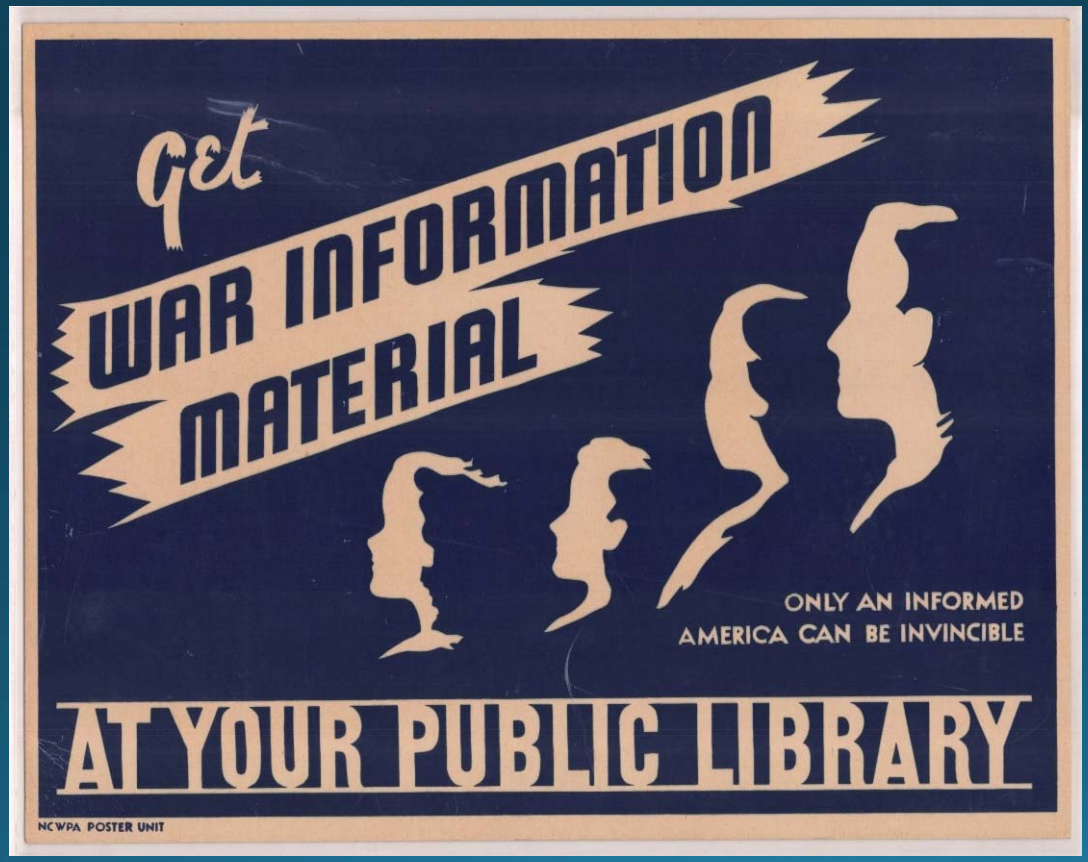
The Final Product

- Development of State Government specific NLP libraries for use in the processing of email accounts containing public records
- An MPLP approach to the arrangement and description of email
- The ability to identify materials that should be reviewed for PII before release to public
- Mediated access using iterative processing



Stay in touch!

- GitHub: https://github.com/StateArchivesOfNorthCarolina
- Website: http://www.ncdcr.gov/tomes



Questions?

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