Statistics Canada
www.statcan.gc.ca

Dataset Builder Tool

Canadian Research Data Centre Network

Statistics Canada

NADDI 2014

Outline

- Background of project
- Converted metadata
- Process of project
- Tools developed
- Licensing agreement
- Future metadata plans
- Benefits of Dataset Builder Tool
- Demonstration of tool

Background

- In 2008 CRDCN received CFI funding
- Project completed April, 2013

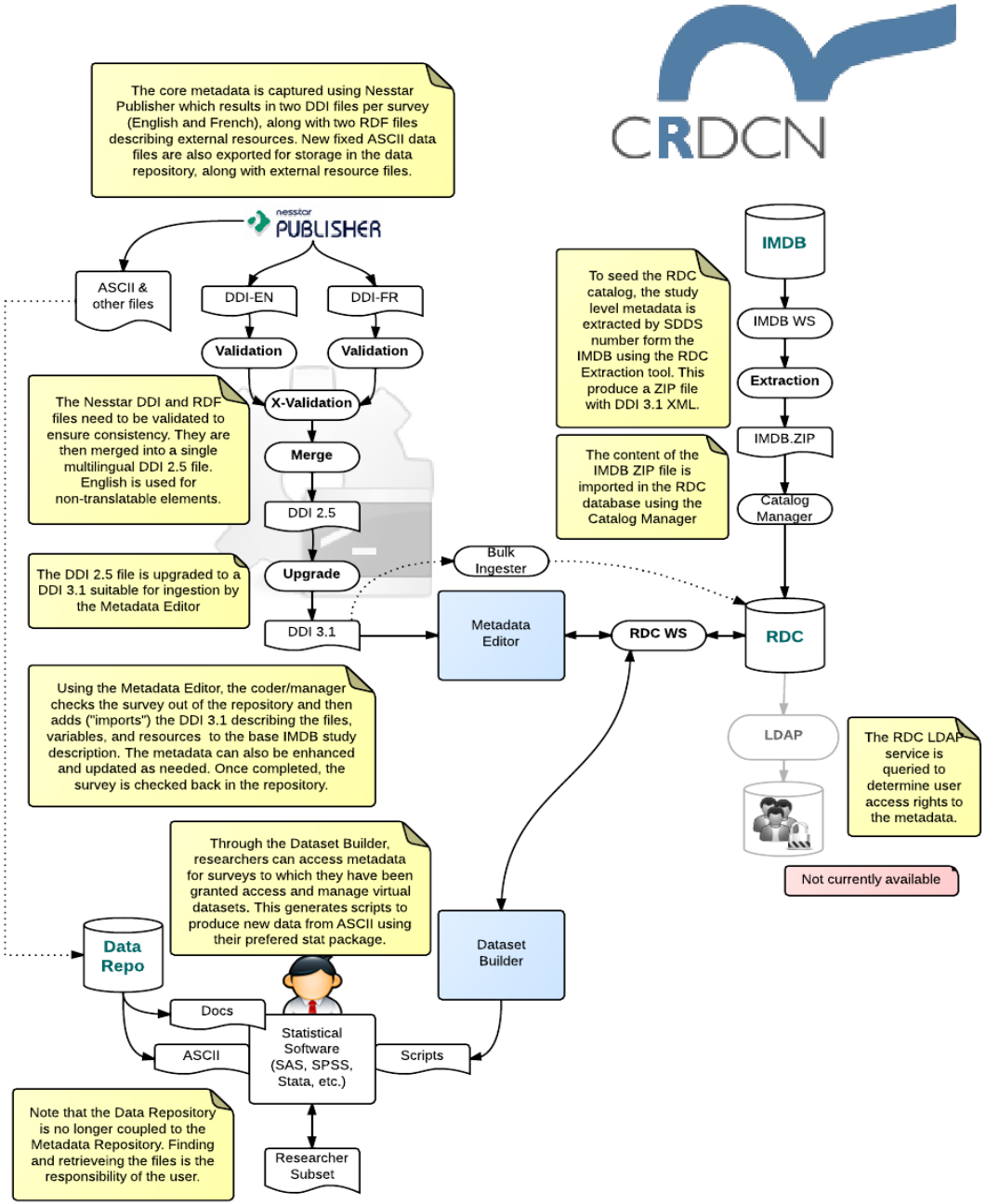
- Objectives
  - Retrospective conversion of the metadata for the StatCan surveys in the RDC's to the DDI-Lifecycle standard
  - Develop an editor tool to produce DDI-Lifecycle metadata
  - Develop a search, discover and build tool for researchers

Converted Metadata

- Coded 100,000+ variables
- 200,000+ variables in both English and French

- Coded into DDI-Codebook:
  - 243 cycles of data
  - 39 surveys

- Upgraded into DDI-Lifecycle:
  - 223 cycles of data
  - 38 surveys


CRDCN
The core metadata is captured using Nesstar Publisher which results in two DDI files per survey (English and French), along with two RDF files describing external resources. New fixed ASCII data files are also exported for storage in the data repository, along with external resource files.
nesstar PUBLISHER
ASCII & other files
DDI-EN
DDI-FR
Validation
Validation
X-Validation
Merge
DDI 2.5
Upgrade
DDI 3.1
The Nesstar DDI and RDF files need to be validated to ensure consistency. They are then merged into a single multilingual DDI 2.5 file. English is used for non-translatable elements.
The DDI 2.5 file is upgraded to a DDI 3.1 suitable for ingestion by the Metadata Editor
Bulk Ingester
Metadata Editor
RDC WS
RDC
IMDB
IMDB WS
Extraction
IMDB.ZIP
Catalog Manager
To seed the RDC catalog, the study level metadata is extracted by SDDS number form the IMDB using the RDC Extraction tool. This produce a ZIP file with DDI 3.1 XML.
The content of the IMDB ZIP file is imported in the RDC database using the Catalog Manager
LDAP
The RDC LDAP service is queried to determine user access rights to the metadata.
Not currently available
Using the Metadata Editor, the coder/manager checks the survey out of the repository and then adds ("imports") the DDI 3.1 describing the files, variables, and resources to the base IMDB study description. The metadata can also be enhanced and updated as needed. Once completed, the survey is checked back in the repository.
Through the Dataset Builder, researchers can access metadata for surveys to which they have been granted access and manage virtual datasets. This generates scripts to produce new data from ASCII using their prefered stat package.
Dataset Builder
Data Repo
Docs
ASCII
Statistical Software (SAS, SPSS, Stata, etc.)
Scripts
Researcher Subset
Note that the Data Repository is no longer coupled to the Metadata Repository. Finding and retrieveing the files is the responsibility of the user.

Tools Developed

- Tools used in coding/editing process
  - DDI registry/catalog
  - DDI base Editing suite and enhanced editor
  - Import/export tools
  - Quality assurance utility
  - IMDB – DDI-L conversion tool

- Dataset Builder Tool

Licensing Agreement

- Copyright © 2013 Metadata Technology North America Inc.

  http://www.mtna.us | info@mtna.us

- Open source license: GNU Lesser General Public License

Future Metadata Plans

- Statistics Canada is:
  - Short term
    - Coding 60 new cycles of data
    - Placing the DDI – Codebook metadata in Nesstar on DLI site in a separate collection
  - Longer term
    - Developing a metadata strategy in which DDI may be named as one of the standards
    - Developing a common tool which exports metadata (codebook) into xml
- CRDCN plans to:
    - Eventually host the dataset builder on the CRDCN website

Benefits of Dataset Builder Tool

- Provides a single tool for researchers to search and discover survey metadata
- Survey metadata can be used to create better research proposals
- Ability to subset data and create the associated codebook/data dictionary documentation
- Makes research process more efficient by saving time and effort

Contact Information

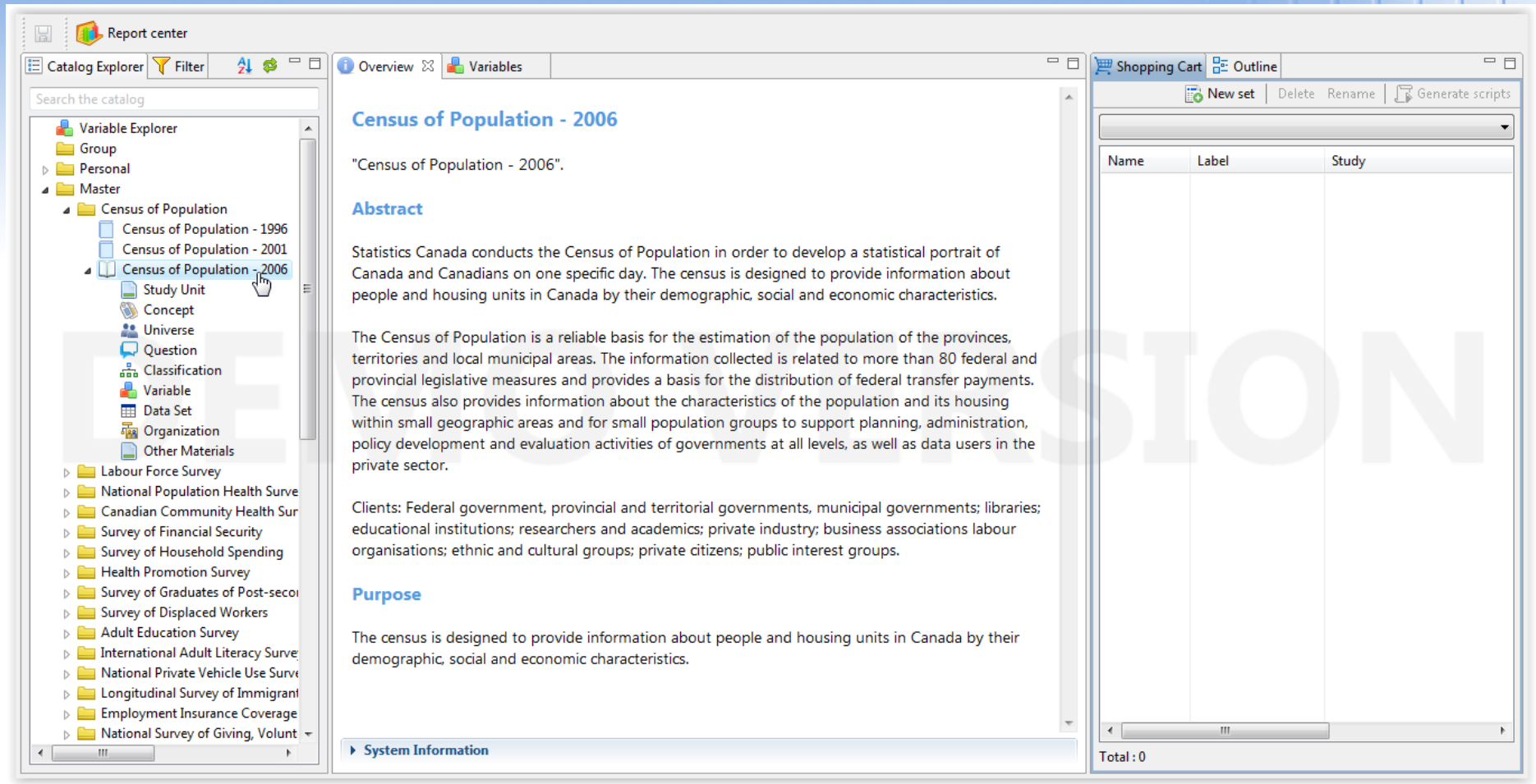
- Metadata Technology North America
  http://www.mtna.us | info@mtna.us

- Pamela Moren, Statistics Canada
  pamela.moren@statcan.gc.ca

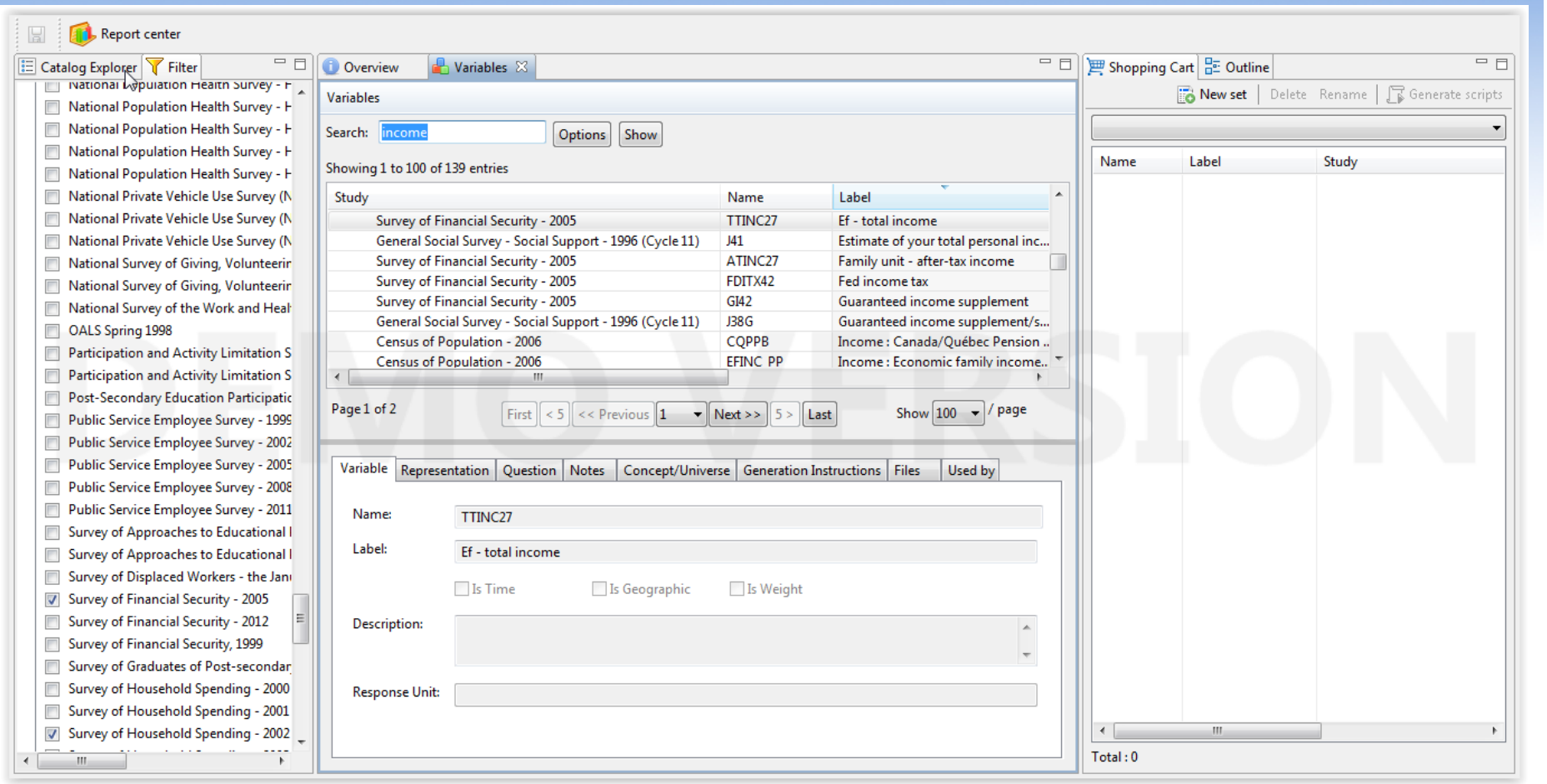
- Donna Dosman, Statistics Canada
  donna.dosman@statcan.gc.ca

Demo of Dataset Builder

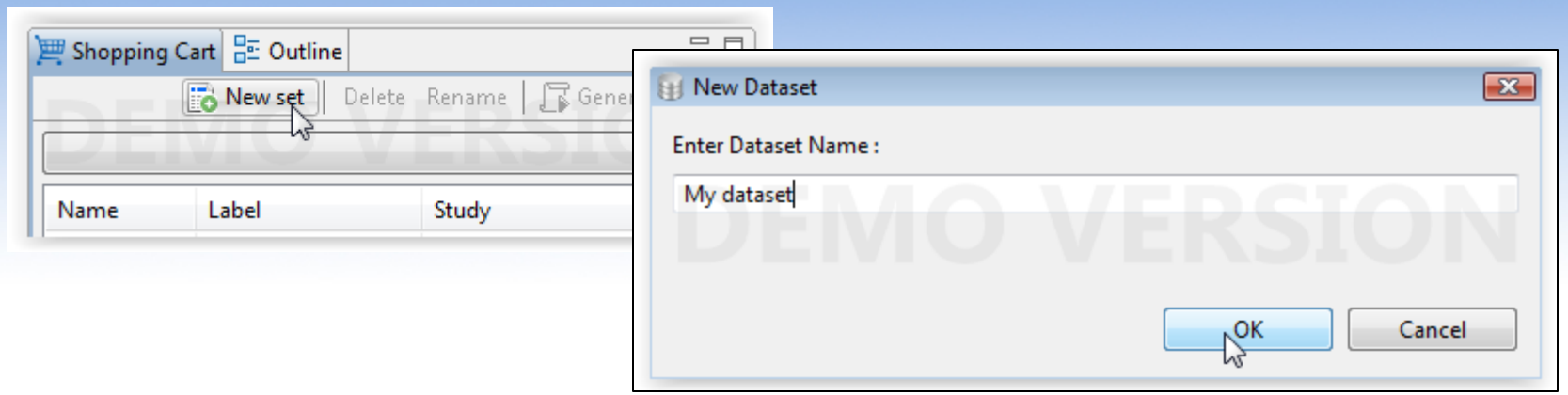
Dataset Builder: Homepage

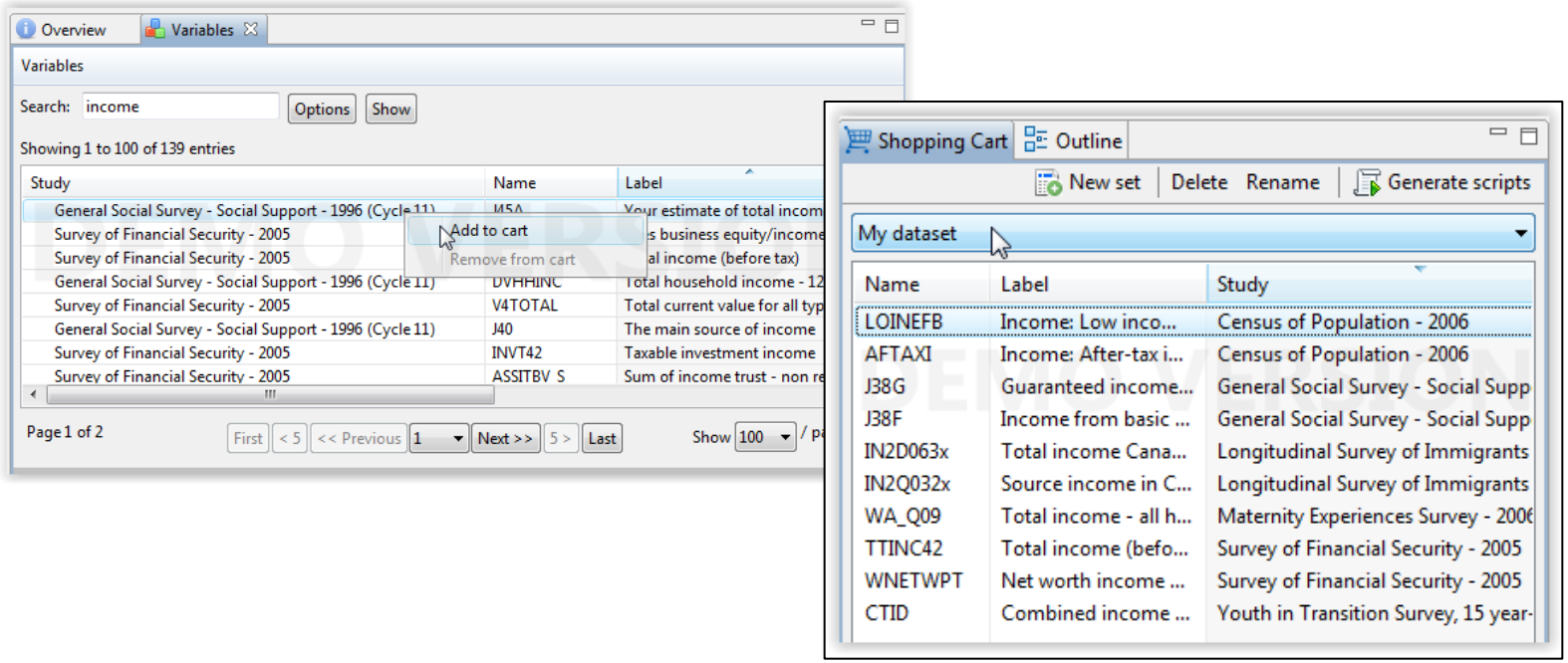


Dataset Builder: Variable Basket

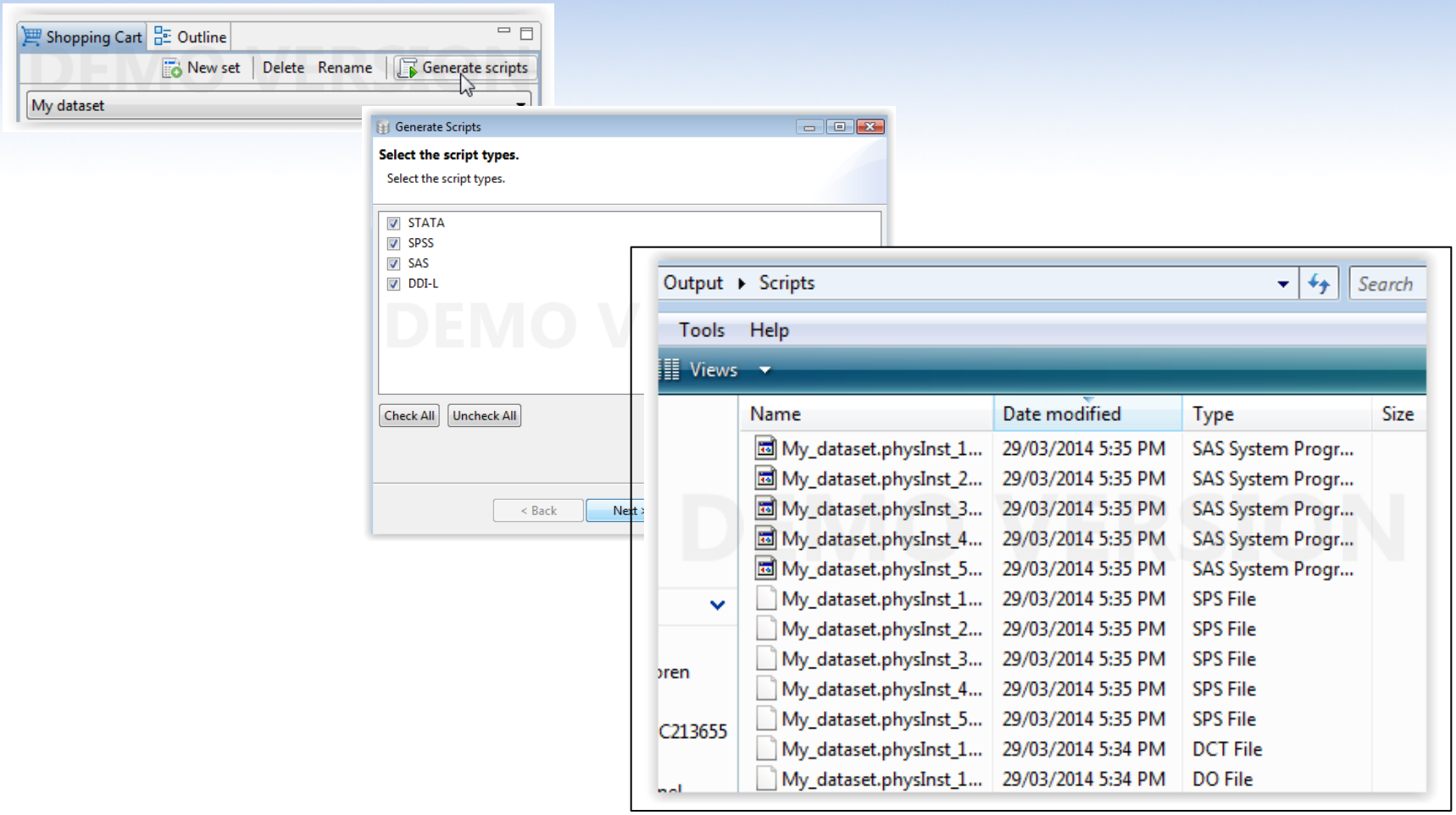
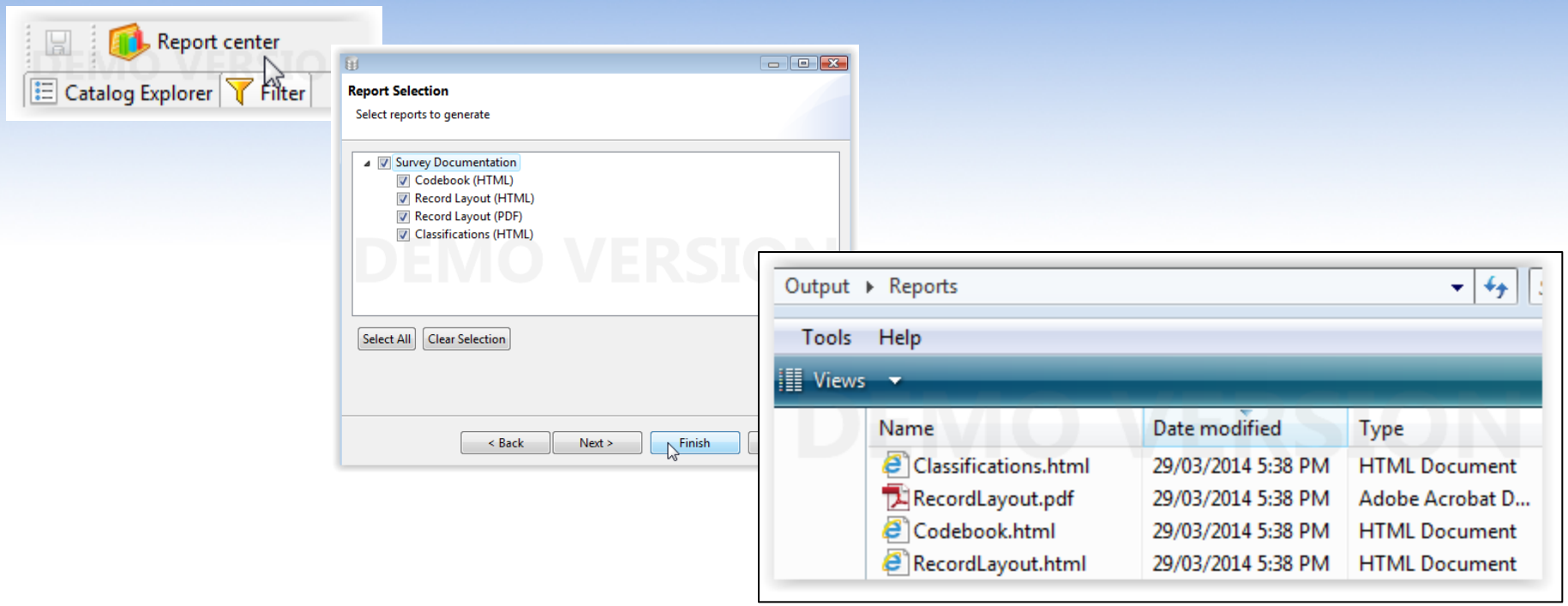


Dataset Builder: Creating New Dataset





Dataset Builder: Generating Scripts



Dataset Builder: Generating Codebooks