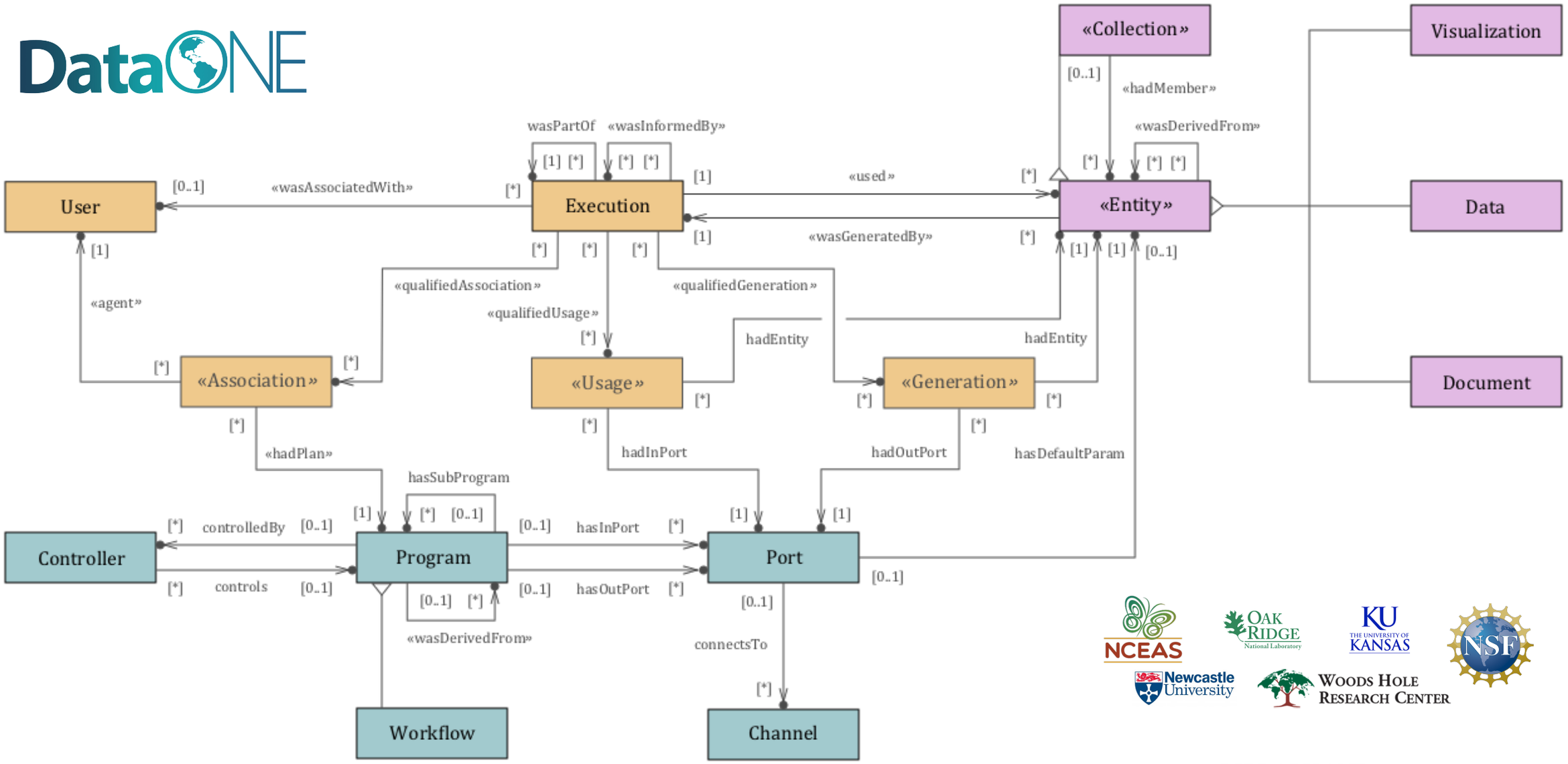
ProvONE: extending PROV to support the DataONE community

Yang Cao[1], Christopher Jones[2], Víctor Cuevas-Vicenttín[3], Matthew B. Jones[2], Bertram Ludäscher[1], Timothy McPhillips[1], Paolo Missier[4], Christopher Schwalm[5], Peter Slaughter[2], Dave Vieglais[6], Lauren Walker[2], Yaxing Wei[7]

1. The model: (a) Process structure, (b) Data dependencies, (c) Common data structures

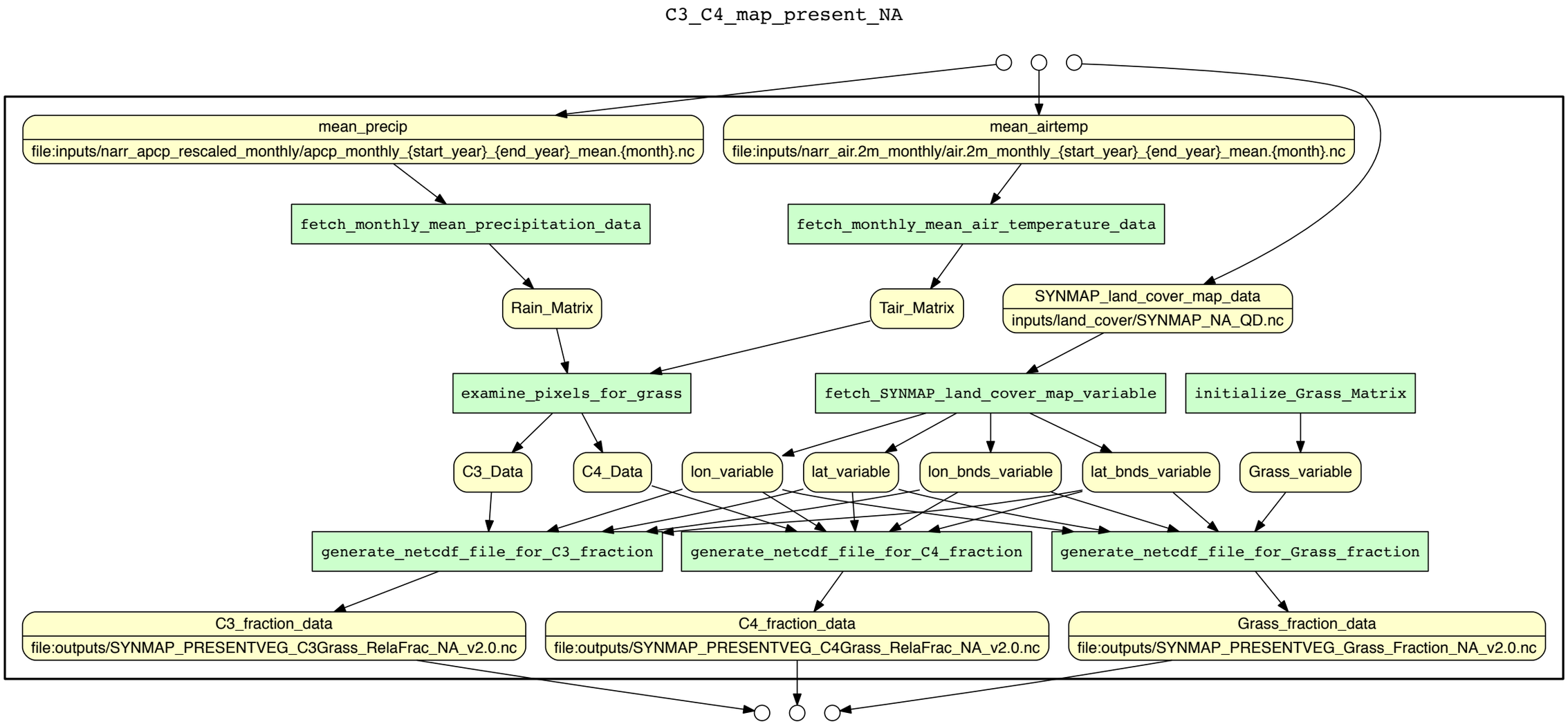


Also: A. Marinho, L. Murta, C.Werner, V.Braganholo, S. Serra da Cruz, E.Ogasawara, M. Mattoso. "ProvManager: A Provenance Management System for Scientific Workflows." Concurrency and Computation: Practice and Experience 24, no. 13 (2012): 1513–1530

[1]University of Illinois, Urbana-Champaign, [2]National Center for Ecological Analysis and Synthesis, UCSB, [3]Universidad Popular Autónoma del Estado de Puebla, Mexico, [4]School of Computing Science,
Newcastle University, UK, [5]Woods Hole Research Center, Falmouth, MA, [6]University of Kansas, Lawrence, [7]Environmental Sciences Division, Oak Ridge National Lab, TN

2. **R and MatLab user libraries** to enable provenance recording during program execution

3. ***YesWorkflow* script annotation tool**
- language-agnostic
- Produces a dataflow rendering of process structure



4. **Visualisation of the data derivations** through the script
Step-by-step user navigation of potentially complex provenance graphs.