These are plain language definitions to accompany Bandaragoda et al., Reproducible Earth-surface modeling with Landlab on HydroShare, EarthCube All Hands Meeting, Seattle WA, Jun 6-9, 2017.

Definitions appear in alphabetic order color coded based on relationship to Landlab, HydroShare, CyberGIS, Docker, and Jupyter software.

CUAHSI – The Consortium of Universities for the Advancement of Hydrologic Science, Inc. is a 501(c) 3 research organization representing more than 100 U.S. universities and international water science-related organizations. In addition to HydroShare NSF PI and community support, CUAHSI will maintain, develop and support HydroShare infrastructure and users.

CyberGIS - a center at the University of Illinois at Urbana-Champaign for Advanced Digital and Spatial Studies. They support big geospatial data solutions in many areas of scholarship, ranging from engineering and science to the humanities.

Docker (from www.docker.com) - An image is a executable package that includes everything needed to run a piece of software, including the code, a runtime, libraries, environment variables, and configuration files. A container is a runtime instance of an image – what the image becomes in memory when actually executed. It runs completely isolated from the host environment by default, only accessing host files and ports if configured to do so.

HydroShare - an online, collaborative Hydrologic Information System for sharing hydrologic data, models, and code.

Jupyter Notebook - the software interface for python and markdown code execution

Jupyter.cuahsi.org - a URL linked to a physical computer with programs installed to make this all work.

JupyterHub Instance - your web based customized mechanism for running notebooks from your folders and data. A docker container designed to run your notebooks.

Landlab – a Python-based modeling environment that allows scientists and students to build numerical landscape models.

REST API - the endpoint for communicating between HydroShare and the JupyterHub instance.

NCSA - National Center for Supercomputing Applications at University of Illinois at Urbana-Champaign.

ROGER - Resourcing Open Geospatial Education and Research and the Father of GIS, Roger Tomlinson) is the world's first-ever CyberGIS Supercomputer designed especially for computationally intensive geospatial data processing and analysis. ROGER is managed by NCSA at the CyberGIS Center for Advanced Digital and Spatial Studies.

Cloud – remote servers accessible to a user over the internet that store data or perform computations. Storing data on HydroShare and running a model on ROGER involve operations 'in the cloud'.