The Lidar Radar Open Software Environment (LROSE) is being developed to meet the challenges of complex lidar and radar processing needs and help address the 'big data' problem faced by users in the research and education communities. Through support from the National Science Foundation, Colorado State University and the National Center for Atmospheric Research are developing the LROSE 'Virtual Toolbox' stocked with core algorithm modules for those typical processing steps that are well understood and documented in the peer-reviewed literature. LROSE focuses on key software building blocks for a data processing and analysis workflow: Convert, Display, Quality Control, Grid, Echo, and Wind. The 'stable' release is called "Blaze" (a climbing rose) and the 'development' release is called "Cyclone", which consist of a suite of well-documented software modules for performing radar and lidar analysis with tutorials and starter kits aimed at facilitating community development and enhancement. By combining the open source approach with recent developments in virtual machines and cloud computing, we are developing a system that is both highly capable and easy to run on virtually any hardware. The current status of LROSE will be presented, along with a roadmap for future software releases.

Keywords: radar software, open source, LROSE