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Prototype of The SuperNova Early Warning System Using HOPSKOTCH Publish-Subscribe System YIYANG XU, Rice Univ, SNEWS COLLABORATION — The Supernova Early Warning System (SNEWS) is a public alert system consisting of neutrino detectors around the world. In the current era of multi-messenger astrophysics (MMA), there are new opportunities for SNEWS to optimize their science reach from the next Galactic supernova beyond a simple early alert. There appeared a need to upgrade the cyberinfrastructure for scalability and maintainability. The SNEWS collaboration was looking for ways to adapt foreign software tools standardized for messaging between the coincidence server and neutrino detectors. The Scalable Cyberinfrastructure for Multi-Messenger Astrophysics (SCiMMA) project has developed a publish-subscribe system called HOPSKOTCH that would significantly simplify the task for physicists to maintain the software. This presentation will introduce the design and development of SNEWS 2.0 prototype that incorporates the HOPSKOTCH software into its internal network. It will also present the SNEWS-customized software support provided by SCiMMA as well as future software maintenance and deployment details.

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