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An Efficient Framework for the Stochastic Verification of Computation and Communication Systems Using Emerging Technologies

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Data Management Plan

1. **Roles and responsibilities:** The PI is responsible for implementing the data management plan at each reporting period and that the PIs and Co-PI at other collaborative institutions are fulfilling their responsibilities. The PI is the public contact for providing access to data upon request via email.
2. **Expected data:** The expected data from the proposed research will include:
 - Source files (C/C++, Python, Java) and executables for software tool implementation of the proposed framework;
 - Electronic descriptions of all models for case studies; and
 - Journal and conference publications containing analysis results and tool performance measures.
3. **Period of data retention:** Data will be released to the public continuously throughout the duration of the project. Data will be retained indefinitely through the deposition in shared repositories, such as the GitHub development platform.
4. **Data format and dissemination:** All data will be encoded using accepted standards of representation. For example, all models for case studies will be encoded using the PRISM modeling language.

Results from this project will be presented at appropriate scientific and educational meetings. As appropriate, the results and supplementary information will be submitted for publication in journal articles.
5. **Data storage and preservation of access:** Source code for the proposed analysis tool will be stored on GitHub to ease code development, review, maintenance, and sharing. Models for case studies will be stored on GitHub or similar platforms. In addition, archive copies of data will be stored on servers and/or external hard drives in all three participating institutions.
6. **Methods for providing access and enabling sharing:** As appropriate, all data created by this project will be shared before publication on public repositories. We also plan to distribute pre-built binaries for our analysis tool for MacOS, Linux, and Windows platforms. They will be available to all users at no cost at each PI's group research websites. Links to download source code for our analysis tool will be available upon request on a case-by-case basis. Source code will continue to be freely available on GitHub after this project ends. Finally, we will provide and maintain documentation, tutorials, and sample models to improve user experiences.
7. **Commercial Sensitivity** Any research that produces data that may produce security or privacy concerns will be reviewed by the University of Utah research office to ensure proper safety. With regard to intellectual property issues, The University of Utah will follow the guidance of Technology and Venture Commercialization office which is the exclusive intellectual and property management and technology transfer organization for the University of Utah.