Facilities, Equipment, and Other Resources

Facilities and Equipment

Penn's departmental computing facilities include a standard collection of networking services, printers, fileservers, and compute servers.

We will purchase a compute server, to be set up in the department's machine room, for running larger empirical studies (e.g., the benchmarking study in Y1-Y2 and the generator automation task in Y4-Y5), as described in the Budget Justification.

No other specialized facilities or equipment will be needed to carry out the proposed work.

Unfunded Collaborations

John Hughes is the co-creator of the QuickCheck framework in Haskell, which popularized PBT. He is the CEO of QuviQ, a startup that implements PBT in industry, and a professor of computer science at Chalmers University. Prof. Hughes is a longtime collaborator of PI Pierce, and has specific expertise in the kinds of generator-focused projects appearing in §4 of the Project Description.

Hila Peleg is an assistant professor at the Technion with expertise in both PL and HCI. She is an external thesis committee member for one of PI Pierce's current students, and has expressed interest many of the proposal projects. Prof. Peleg focuses on program synthesis, so she will be an invaluable ally for the work in §4.4.

Leonidas Lampropoulos is an assistant professor at the University of Maryland and a former student of PI Pierce. He is an expert on PBT in the context of proof assistants like Coq, and has collaborated successfully with PI Pierce and his students for many years. Prof. Lampropoulos is currently involved in the beginnings of the project in §4.5.

Zac Hatfield-Dodds is the main maintainer of Hypothesis, the most popular PBT library in Python (and possibly the most popular one overall). He has expressed interest in many of the expected outcomes of the tasks in the Project Description, including especially §7.3.

Letters of collaboration from all four can be found in the supplemental documents.