Applicant's Name:
Eric Griffis

Long Term Degree Objective:
My primary research interests are in the area of decentralized programming languages and environments. My work focuses on linguistic mechanisms for producing and analyzing emergent behaviors in the interactions of loosely-coupled distributed systems. I am most interested in establishing principles and methods for growing arbitrarily complex decentralized process overlay networks.

Research Experience:
I was an OSDC PIRE Research Fellow for two summers at the University of Edinburgh's School of Informatics, where I contributed a formal syntax and operational semantics to a workshop paper on data-intensive distributed programming languages. As a Masters student at UCLA, under Professor Todd Millstein's group, I co-authored a technical report on secure data flow programming in the presence of untrusted peers and gave a workshop talk on the underlying programming language and custom run-time environment.

Publications:
Eric Griffis, Paul Martin, and James Cheney. "Semantics and provenance for processing element composition in dispel workflows." In *Proceedings of the 8th Workshop on Workflows in Support of Large-Scale Science*, pp. 38-47. ACM, 2013.

Future Research Interests:
After the PhD, I plan to remain in academia as I drill deeper into the field of decentralized programming while expanding into adjacent fields with a strong visual component, such as shared virtual experiences, decentralized physical simulations, or voxel-based computer graphics. Obtaining the guidance of world-class Computer Science researchers like Professor Rompf and his colleagues at PurPL would go a long way toward fulfilling my dream of creating a real-life Metaverse.

Other Comments:
I have extensive relevant professional experience in language-based software process automation and high level networked application architectures. I am also the author of half a dozen open source meta-programming libraries and domain-specific languages to assist in the creation of principled, process-oriented, flow-based, commodifiable software overlay infrastructures. As of December 2019, I am also a founding board member of a non-profit organization named MetaCoders that provides grassroots coding education in an effort to reframe programming as a literacy.