1 Project Summary

1.1 Intellectual Merit

This Small Business Innovation Research Phase I project proposes Libre Texting: a new incarnation of the Mobile Email/Wireless Texting (henceforth "Texting") medium, based on the Free Software ideology. Today the Texting industry is dominated by the proprietary, walled garden model. Libre Texting aims to provide equivalent functionality to existing proprietary Texting solutions such as BlackBerry, but (a) based entirely on patent-free protocols and free software, (b) using any mobile Internet device, (c) wherever any type of wireless Internet connectivity is available. The proposed approach comprises five elements: (1) the inherent propagative power of the Free Software and end-to-end models, (2) an overlay network architecture, (3) a new set of messaging protocols, (4) a novel software architecture for Message Transfer Agent integration, and (5) a new software architecture for multiform device integration, based on Device-Resident End-MTA middleware. The proposed technology is highly synergistic with current industry dynamics, including: burgeoning recognition of the power of FOSS, ready availability of Linux-based mobile devices, and widespread Wi-Fi availability. Existing email protocols lack push-mode delivery, and bandwidth and power efficiency; the proposed new protocol profile corrects these shortcomings. The proposed research is to determine feasibility of all critical elements of this approach at large scale.

1.2 Broader Impacts

The proposed Libre Texting technology is transformative, allowing the current walled-garden hegemony to be broken, and creating a new point of convergence as the standard. This has major engineering, business and societal consequences, with tangible benefits to the end-user. For example, greatly expanded range of choice—the user can now make independent selection of each component of her Texting setup, including the user interface, the Mail User Agent, the device, and other desired components (forwarders, synchronizers, filters). The Libre Texting technology unbundles the Texting application, opening every point of the Texting technology chain to competition and best-in-class component selection. Furthermore, the Libre model opens the Texting industry to the powerful free software generative dynamics. Businesswise, this Libre Texting initiative represents a radical shift of the Texting industry to the non-proprietary, for-profit quadrant, causing a major industry reconfiguration, with significant winners and losers. The losers are the existing vested proprietary interests, whose economic hegemony vanishes. But the winners are the many more companies who can now enter the Texting market—and the end-user who benefits from the resulting competition. Regarding broader societal consequences, the Libre model provides assurances of transparency, privacy and freedom of speech—assurances absent under the proprietary model.