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Senior Design Project

Statement of ABET concerns

Economic constraints on the Skullduggery project are numerous. Since we are modifying the

operating system in a smart phone, we need to consider costs between two phones. Each phone is

expensive, between $200 and $750. Each phone requires a data plan with at minimum a $20/month

contract, frequently with a set-length lock-in. The software and development environment is the

cheapest part of the project, each are free. We have no grants or sponsors for the project.

Ethical concerns of the Skullduggery project are common with any encryption-based project.

The project may be used to conceal illegal activities. Testing the efficacy of the phone encryption may

be difficult and illegal, and would require "tapping" into the phone conversation. Depending on the

contract with the cell-phone provider, modification of the phone may cause a breach of contract. The

goal of the project is to protect the user of the phone from the ethical failures of others. A successful

project will be ethically sound.

Sustainability past the project scope is relatively bleak. The Skullduggery project is currently

open source, which will assist in the long-term maintainability. It may be that the initial implementation

of the project is not compatible between phones, or between different versions of the same phone. We

do not plan on maintaining the project beyond the end-of-year deadline. However, the project will

ideally be written in a manner that allows for fast maintenance and extensibility later. A successful

project will be able to be extended to several different smart-phones with minimal changes to the code.

From a manufacturing standpoint, the Skullduggery project aims to be an implementation of an

encryption system. A successful project will not necessarily be a stand-alone product that can be

installed on any phone, but we should have a demonstrable encrypted conversation between two

phones. There should be no barriers to turning the project into a product, but it will require additional work. As the project is not targeted to become a marketable product, there is no requirement to be portable across different phone systems. As a demonstrable project, there are requirements for an installation process and configuration.