Portable Solution for Secure Encryption of Removable Storage Media

Problem Definition

Although there is cryptography solutions already developed for data encryption purposes, there are situations where the removable devices cannot be encrypted or decrypted as the required sources are not available such as when the user is travelling. This is a one of major reason to data leakage in outside the organization. Proposed solution is portable device which can be use to secure removable data storage devices. Main rationales for this research chance to work on some area I have study during the course and technologies Im going use are keep my interest to research and also its relevant my career goals.

Aim and Objectives

The aim of the research is secure Removable Storage Media to avoid data leakages.

In this research I will achieve the following four main goals:

- Develop secure mechanism to encrypt removable data storage devices which can be install on a portable device.

- Reduce the time taken for cryptography processes.

- Increase the use time of the device.

- Design and developed a user friendly crypto device.

Proposed Solution

- Proposed solution takes plain data or encrypted data as input and return encrypted data and decrypted data as outputs.

- Technology:

    Cryptography for Data secure mechanism

    Raspberry-pi for Single-board computer

    Linux kernel-based OS for OS

    C , C++ , Java , bash scripts for Programming language and scripts

    QT, eclipse for Frontend development tools

    Electronics for Create the device