**Team Cursor**

**Encryption**

**Software Project Plan**

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# Introduction

This document is designed to provide software identification, scope, primary objectives and test plan schedule to be adopted during the development of the Team Cursor Data Encryption Software. The goal of this document is to provide a framework that can be used by managers and developers to successfully test, plan, and implement the necessary software development processes in a timely and cost-effective manner.

This document applies to the development of a File Encryption Program - Version [1.0], which allows a user to select a file, and encrypt it, via a user-generated key. They key and text file will be stored for future retrieval.

Software Requirements for this program are as follows: Operating System : Windows 2000/xp and Jdk 1.5.0. Hardware requirements for this program are as follows: Processor : Pentium III/AMD Athlone XP, RAM : 128 MB, Hard disk : 20 GB, FDD : 1.44MB, Monitor : 14 inch, Mouse : 3 Button scroll, CD Drive : 52 X, and Keyboard : 108 keys .

The Team Cursor software development team will design and implement a data encryption software that is capable of encrypting a file for secure transmission. The schedule timeline for software planning is 3 weeks. Software development, testing and deployment for this project is scheduled for 5 weeks.

## Identification

This document applies to the software development effort in support of the development of TeamCursor\_DataEncryption Version 1.0. A detailed development timeline in support of this effort is provided in the supporting project Master Schedule.

## Scope

File Encryption Program was developed by Team Cursor, TC, for all users who wish to protect their data. Such data is protected by using a program that protects information using mathematical algorithms. The resulting data is unintelligible, and therefore, unable to be read. This intermediate form of data, cipher text, will then be able to be transported over insecure networks. Anyone that intercepts such will be unable to read the data in its current state. Once the information reaches its destination, the intended reader can decrypt the data back to its original state.

File encryption deals largely with Key Management. The success of this program relies heavily on the safe management of keys used to encrypt and decrypt data. Key management concerns keys at the user level, either between users or systems. It is also important to note that Key Management includes the exchange, storage, use, and replacement of keys.

To access the program, it must be downloaded via the WebTycho portal. In order to access this site, you will need both log-in credentials and the serial number associated with your purchase of our software. Once downloaded, the software will need to be activated. The activation code can be found in a zip file given at the time of purchase. Customers with valid maintenance contracts may access the FEP site to download the latest versions of software. To use the site, you will need the serial number of your product.

The project sponsor, acquirer, and developer fall under the Cursor Team. Members of this team include the following: Ricky Bifford, Kurt Carico, Andrew Castillo, and Jordan Kovacs. The planned operating site can be found within the WebTycho portal at http://www.UMUC.edu/myumuc.

In conjunction with this program, other forms of software, such as our stenography tool, can be used as well. All of our products can be found through the WebTycho portal.

This overview shall not be construed as an official statement of product requirements. It will only provide a brief description of the system/software and will reference detailed product requirements outlined in the File Encryption Program SRS.

This overview shall not be construed as an official statement of product requirements. It will only provide a brief description of the system/software and will reference detailed product requirements outlined in the Team Cursor SRS.

Additionally, testing will be performed at several points in the life cycle as the product is constructed. Testing is a very dependent activity and will continue throughout the software development life cycle.

## Document Overview

The purpose of the File Encryption Program - Software Development Plan (SDP) is to guide Team Cursor project management during the development of File Encryption Program. Software Quality Assurance (SQA) procedures are captured in Appendix A of the SDP. Appendix B is used to document Software Configuration Management (SCM) activities where these activities deviate from Team Cursor SCM Plan. Project management and oversight activities are documented in Appendix C of the SDP where these activities deviate from the Team Cursor Risk Management Plan. Requirements for the project will be captured in the Team Cursor Software Requirements Specification (SRS). This plan will be placed under configuration management controls according to the Team Cursor Software Configuration Management Plan. Updates to this plan will be handled according to relevant SCM procedures and reviews as described in the Team Cursor Software Quality Assurance Plan.

## Relationship to Other Plans

There are several other Team Cursor documents which support the information contained within this plan. These documents include: Team Cursor Software Configuration Management Plan, Team Cursor Software Quality Assurance Plan, and Team Cursor Metrics and Measurement Plan. Team Cursor project specific documentation relating to this plan include: Team Cursor Software Requirements Specifications and Team Cursor Master Schedule. This plan has been developed in accordance with Team Cursor software development processes, policies, and procedures.

# Acronyms and Definitions

## Definitions

|  |  |
| --- | --- |
| Algorithm  Cipher Text  Decrypt  Encrypt  Key Management  Stenography  WebTycho  Zip File | A process to be followed in problem-solving operations.  The result of encryption performed on plaintext.  To make a coded message intelligible.  To convert data into a cipher or code.  The management of keys used in encryption and decryption.  The action or process of writing in shorthand or taking dictation.  A portal within the UMUC website.  A computer file whose contents of one or more files are compressed for storage or transmission, often carrying the extension |

## Acronyms and Abbreviations

|  |  |
| --- | --- |
| FEP  KM  SCM  SDP  SQA  SRS  TC | File Encryption Program  Key Management  Software Configuration Management  Software Development Plan  Software Quality Assurance  Software Requirements Specification  Team Cursor |

# References

*[This section should identify the specific references used within the SPP. Reference to all associated software project documentation, including the statement of work and any amendments should be included.]*

# Overview

*[This section of the SPP should list the items to be delivered to the customer, delivery dates, delivery locations, and quantities required to satisfy the terms of the contract. This list should not be construed as an official statement of product requirements. It will only provide an outline of the system/software requirements and will reference detailed product requirements outlined in the SRS, Appendix D. An example follows:*

*The project schedule in support of [Project Name] was initiated [Date] with a target completion date of [Date]. Incremental product deliveries may be requested, but none are identified at this time. The delivery requirements are to install [Project Name] on the current [Project Name] external website. [Project Name] will be delivered once deployment has occurred, and [Customer Name] acceptance of the product. [Customer Name] may request the installation of [Product Name] at one additional location. A [Project Name] users manual shall also be considered to be required as part of this delivery. Detailed schedule guidance is provided by [document name], located [document location]. Detailed requirements information is provided by [document name], located [document location].]*

## Relationships

*[This subsection should identify interface requirements and concurrent or critical development efforts which may directly or indirectly affect product development efforts.]*

## Source Code

*[This subsection should identify source code deliverables. An example follows:*

*There are no requirements for source code deliverables. If [customer name] requests the source code, it will be delivered on CD-ROM.]*

## Documentation

[*This subsection should itemize documentation deliverables and their required format. It should also contain, either directly or by reference, the documentation plan for the software project. This documentation plan may either be a separate document, stating how documentation is going to be developed and delivered, or may be included in this plan as references to existing standards with documentation deliverables and schedule detailed herein. An example is provided:*

*[Project Name] will have on-line help, a user’s manual will be created from this online help system. The user’s manual will be posted on the [Project Name] website and will be available for download by requesting customers. Please refer to the [Project Name] master schedule for a development timeline of associated users on line help and manual.]*

## Project Resources

*[This section should describe the project’s approach by describing the tasks (e.g., req. -> design -> implementation -> test) and efforts (update documentation, etc.) required to successfully complete the project. It should state the nature of each major project function or activity and identify the individuals who are responsible for those functions or activities.*

*This section should also describe the make-up of the team, project roles, and internal management structure of the project. Diagrams may be used to depict the lines of authority, responsibility, and communication within the project. Figure 1 is an example of an organizational chart.*

**

*Figure 1. Example Project Organization*

*The relationship and interfaces between the project team and all non-project organizations should also be defined by the SPP. Minimum interfaces include those with the customer, elements (management, SQA, SCM, etc.), and other support teams. Relationships with other contracting agencies or organizations outside the scope of the project that will impact the project require special attention within this section.]*

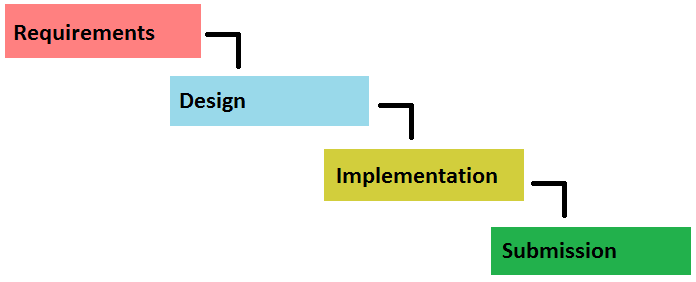
## Project Constraints

*[This section should describe the limits of the project including interfaces with other projects, the application of the program’s SCM and SQA (including any divergence from those plans), and the relationship with the project’s customer. This section should also describe the administrative and managerial boundaries between the project and each of the following entities: parent organization, customer organization, subcontracted organizations, or any organizational entities that interact with the project.*

*This section should capture the anticipated volume of the project through quantifiable measurements such as lines of code, function points, number of units modified, number of pages of documentation generated or changed, etc. It may be useful, if the project is well defined in advance, to breakdown project activities and perform size estimates on each individual activity. This information can then be tied to the project schedule as defined in Section 5.]*

# Software Process

## Software Development Process

**

### Life Cycle Model

During the Requirements phase, all group members will be responsible for providing input to help establish well defined software requirements.

During the Design phase, all group members will be responsible for providing input to develop a reliable product.

During the Implementation phase, each group member will have assigned specific portions of the program that they will be responsible for completing within the allotted time. Please refer to *WebTycho > CMSC495 Section 7981 Semester 1402 > Study Groups > Collaborative Docs > Software Code Assignments* for an up-to-date list of assigned responsibilities.

The Submission phase will require all group members to ensure they have all of the required documentation and that it is properly submitted by the project due date of 5/11/2014.

## Software Engineering Activities

### Handling of Critical Requirements

Please refer to *WebTycho > CMSC495 Section 7981 Semester 1402 > Study Groups > Collaborative Docs > Software Requirements*. As software requirements will be listed there, as they are established.

### Recording Rationale

Please refer to *WebTycho > CMSC495 Section 7981 Semester 1402 > Study Groups > Collaborative Docs > Software Design*. All software design decisions agreed on by the group will be posted there for reference.

### Computer Hardware Resource Utilization

All group members are responsible for providing their own software development environment. However, if difficulties arise assistance can be requested from other group members.

### Reusable Software

Please refer to *WebTycho > CMSC495 Section 7981 Semester 1402 > Study Groups > Collaborative Docs > Reusable Software*. Group members will post any code they believe is reusable to that space.

### Software Testing

Please refer to *WebTycho > CMSC495 Section 7981 Semester 1402 > Study Groups > Collaborative Docs > Software Testing.* Methods for testing this project will be developed and posted in that location.

# Schedule

Appendix A Software Quality Assurance

The Software Quality Assurance (SQA) process is divided up into several interdependent processes. Roles and responsibilities for SQA are detailed below

Software Quality Assurance Evaluation

|  |  |  |
| --- | --- | --- |
| Project | Members | Roles |
| SQA Evaluations | Team Cursor – UI Team | Stress Testing, User Acceptance |
| SQA Records | Team Cursor – Certifications and Testing | Working Documents, Software Documentation |
| Independence in SQA | Team Cursor – Certifications and Testing |  |
| Corrective Actions | Team Cursor – Software Development Team | Error Checking |
|  | All | Scheduled Meetings, software research |

Refer to the TC Software Quality Assurance Plan for all applicable processes and procedures.

Appendix B Software Configuration Management

Software Configuration Management (SCM):

|  |  |  |
| --- | --- | --- |
| Project | Members | Roles |
| Configuration Identification | Team Cursor – Software Deployment Team | Software releases, updates |
| Configuration Control | Team Cursor – Software Deployment Team | Hardware acquisition, installation, software implementation |
| Configuration Status Accounting | Team Cursor – Software Deployment Team | Local configuration records |
| Configuration Audits | Team Cursor – Software Deployment Team | Software log checks, error reporting |
| Packaging, storage, handling, and delivery | Team Cursor – Software Deployment Team | Software/Hardware set-up, installation, and delivery |

Refer to the TC Software Configuration Management Plan for all applicable processes and procedures.