

'1000101 10110001  
 '011 01001110  
 '0110001 00010011 11000101 10110001 00010011  
 '0101011 01101011 01001110 10101011  
 '010101 00111001 10001110

# Seminole Software

## Electronic Stamp Project

### Shall List

**Version: 1.0**

**Date Created: 2003.09.26**

---

## Signatures

Date	Revision	Approved By

## List of Contributors

Name	Initials	Organization	E-Mail
Nikhil Bandodkar	NB	Seminole Software	<a href="mailto:bandodka@cs.fsu.edu">bandodka@cs.fsu.edu</a>
Jidong Long	JL	Seminole Software	<a href="mailto:jidolong@cs.fsu.edu">jidolong@cs.fsu.edu</a>
Chuck Weddle	CW	Seminole Software	<a href="mailto:weddle@cs.fsu.edu">weddle@cs.fsu.edu</a>

## Change History

Revision	Date	Description
1.0	2003.09.26	Initial Revision

## **Preface**

This document represents the list of "Shall" Requirements. This initial list of requirements will be used to help define the requirements found in the Software Requirement Specification.

## Table of Contents

1	Introduction .....	1
1.1	Purpose .....	1
	Appendix A – “Shall” Requirements .....	2

## List of Tables

Table of Constraints.....	3
Table of Requirements.....	5

# 1 Introduction

## 1.1 *Purpose*

This document contains the “Shall” Requirements for the Electronic Stamp project by Seminole Software. The list of shall requirements was developed collaboratively by the Software Seminole team. The initial project description was extensively to help define the “Shall” list requirements. The intention is that this list of requirements will help define other project deliverable especially the Software Requirements Specification.

## **Appendix A – “Shall” Requirements**

## Constraints

Table of Constraints

<b>ID</b>	<b>Origin</b>	<b>Shall Requirement</b>
1	<i>Project Description Document</i>	<i>A sender not know to the recipient SHALL be able to send a "first class" email message to the recipient with the assurance that it will not be filtered out as spam.</i>
2	<i>Project Description Document</i>	<i>The cost of an electronic stamp SHALL be competitive to the cost of a hard mail stamp from the USPS.</i>
3	<i>Project Description Document</i>	<i>The cost of an electronic stamp SHALL be significant enough to make bulk first-class email more expensive then sending regular bulk hard mail via USPS.</i>
4	<i>Project Description Document</i>	<i>The Email Client Software SHALL be able to be used by recipients who must publish their email addresses. The system does not rely on hiding one's email address.</i>
5	<i>Project Description Document</i>	<i>The Email Client Software SHALL not require a key distribution infrastructure. It does not require the sender or recipient to have a public or private key.</i>
6	<i>Project Description Document</i>	<i>The system SHALL use the existing Internet SMTP mail transport protocol.</i>
7	<i>Project Description Document</i>	<i>The system SHALL be backward compatible with previous email systems. It should not inhibit someone from getting an email if their email system does not support the use of electronic stamps.</i>
8	<i>Project Description Document</i>	<i>The email messages SHALL not be encrypted.</i>
9	<i>Project Description Document</i>	<i>The system SHALL not rely on the honesty of the origin address in the email header.</i>



<b>ID</b>	<b>Origin</b>	<b>Shall Requirement</b>
10	<i>Project Description Document</i>	<i>The system SHALL not restrict the content of the email message.</i>
11	<i>Project Description Document</i>	<i>The system SHALL allow a user to discard all unstamped mail -or- Reply to unstamped mail with a “challenge” message on how to obtain a stamp and send a stamped message. -or- Selectively filter unstamped mail.</i>
12	<i>Project Description Document</i>	<i>The system SHALL allow the recipient to receive email from “blacklisted” domains if the email has a stamp.</i>
13	<i>Project Description Document</i>	<i>The system SHALL allow the recipient to respond to the sender using the same stamp the sender purchased.</i>
14	<i>Project Description Document</i>	<i>The system SHALL allow the sender and recipient to have a indeterminate exchange of emails related to an email originally sent from the sender using the original stamp.</i>
15	<i>Project Description Document</i>	<i>The system SHALL not allow the reuse of stolen or intercepted stamps.</i>
16	<i>Project Description Document</i>	<i>The system SHALL automate the purchasing and affixing of an electronic stamp to an email.</i>
17	<i>Project Description Document</i>	<i>The system SHALL protect against stamp forgery using public-key encryption.</i>
18	<i>Project Description Document</i>	<i>The system SHALL not provide email security. This means that the system will not hide the content of the message or certify that a message has not been forged.</i>

## Requirements

Table of Requirements

<b>ID</b>	<b>Origin</b>	<b>“Shall” Requirement</b>
19	<i>Project Description Document</i>	The Sender SHALL be able to purchase an electronic stamp from a vendor.
20	<i>Project Description Document</i>	The Vendor SHALL be able to create an electronic stamp using a public-private key pair with the information sent in the request.
21	<i>Project Description Document</i>	The Electronic Stamp SHALL contain a unique ID.
22	<i>Project Description Document</i>	A Sender SHALL be able to purchase an electronic stamp from a intermediary between the Sender and the Vendor.
23	<i>Project Description Document</i>	The Sender SHALL be able to send an email with an electronic stamp to a Recipient.
24	<i>Project Description Document</i>	The Sender SHALL be able to “log” the stamp as valid for return use if the Sender would like to allow the Recipient to respond using the same electronic stamp.
25	<i>Project Description Document</i>	The Sender SHALL be able to “log” the stamp as revoked for further use if the stamp was found to be used inappropriately.
26	<i>Project Description Document</i>	The Recipients email client software SHALL be able to identify email that have an electronic stamp and SHALL be able to decrypt the electronic stamp using the public key of the vendor from whom the stamp was purchased.

ID	Origin	"Shall" Requirement
27	<i>Project Description Document</i>	<p>The Recipients email client software SHALL reject electronic stamps that do not have a valid Recipient email address with the following exceptions;</p> <ul style="list-style-type: none"> <li>• The stamp has been "logged" as valid for return or multiple use and the email client software recognizes the stamp.</li> <li>• The stamp has been "logged" as valid for return or multiple use but has been revoked because it appeared on spam. The software can send a reply message stating that a valid electronic stamp is required.</li> <li>• The stamp ID is checked against the email client software's list of used stamp ID's and rejects the email if the stamp is found to have been used without being logged for further use.</li> <li>• The time window of validity of the stamp has expired.</li> </ul>
28	<i>Project Description Document</i>	<p>The Recipient SHALL be able to "log" an electronic stamp as valid for multiple use. This would be to allow the Sender to respond to the Recipient's responses.</p>
29	<i>Project Description Document</i>	<p>The system SHALL allow a user to discard all unstamped mail  -or-  Reply to unstamped mail with a "challenge" message on how to obtain a stamp and send a stamped message.  -or-  Selectively filter unstamped mail.</p>