ClassifyIT v.5.7

USER MANUAL

ClassifyIt, an Add-In for Outlook,
Word, PowerPoint and Excel

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Article I. Introduction

ClassifyIt is an information security support tool which enables applying policy compliant security classification markings to emails and documents, add data leak prevention information, and to encrypt documents when distributing them over unprotected networks (like the Internet). You will be impressed on the ease of use and the great benefit of using security classification markings with ClassifyIt.

ClassifyIt improved over time ensuring compliance with Office updates and evolves to a complete data protection tool. Version 5 is the most recent version taking user, administrator and security specialist input into account ensuring that ClassifyIt stays intuitive and easy to use, and strong on its security features. ClassifyIt evolved from a functional product as it was in its first versions, to a professional, reliable and fully functional tool.

Section 1.01   *ClassifyIt Features*

ClassifyIt is a data loss prevention plugin, which visually integrates in Microsoft Office applications. It provides textual and technical security classification markings to Outlook emails, Word documents, PowerPoint slides and Excel sheets. Email attachments can be encrypted with efficient and effective features.
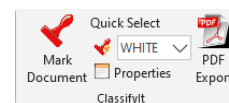
Enforce **visual security classification markings** on emails and documents. The respective markings impose users in knowing the sensitivity of the information that they have received and treat it in respect to the appropriate procedures detailed in the companies' respective information/data management policies. Data leakage will be minimised through this feature.

Enforce **technical**, invisible **security markings** to emails and documents to provide application firewalls the ability to verify the classification of emails and documents prior to their transmission. The technical security markings are corresponding to the visual security markings. Unintentional data leakage will be removed through this feature.

Export Word, PowerPoint and Excel documents **to PDF** formatted

documents by ensuring the visual and technical security markings.

Add **meta-data** to documents to greatly improve search engines results. Document availability will be highly improved with this feature.

Encrypt email attachments with high grade encryption standards. Full data protection is provided with this feature.

Section 1.02   *ClassifyIt Key Capabilities*

ClassifyIt is a **Plug-In** for Microsoft Outlook, Word, PowerPoint and Excel applications, of the Microsoft Office Suite (2010 and higher).

ClassifyIt supports **Data Loss Prevention** (DLP) by enforcing or supporting the insertion of security classification markings. DLP is supported by readable security **markings** and non-readable information to emails (X-Header) and documents (properties). Both can support network security DLP measures through mailguards, web firewalls or other proxy mechanisms.

ClassifyIt supports the **enforcement** of **classification** markings on emails, word, slides and excel documents. The markings can be configured to be compliant with the company's or organisation's security policy and can be made interoperable with other companies markings.

ClassifyIt supports the enforcement of email attachments not having a higher classification than the email itself.

ClassifyIt supports the selection of **release** markings to ensure company's and organisation's security policy compliant markings.

ClassifyIt supports the export of the Office documents to PDF formatted documents by enforcing and keeping the readable and non-readable security marking information.

ClassifyIt supports **classification as a service** through central web control of configuration parameters.

ClassifyIt supports the **encryption** of email attachments, through built-in keys, user-passphrases or public/private keys.

Article II. High Level Introduction

This section introduces the five main functions of ClassifyIt.

> Note: Shown markings are purely for illustration purposes, the actual classification markings and behaviour of the ClassifyIt plug-in are configured by your administrator, or could be purchased as a service from ugarbe.de.

ClassifyIt is initialised automatically whenever Outlook, Word, PowerPoint or Excel is started. During this ClassifyIt tests and loads the configuration file. If loading fails, a warning will be shown. In this case contact your administrator to correct the configuration file.
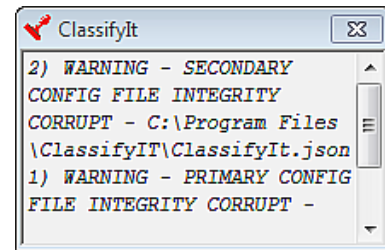
The information is shown in a 'balloon' window which slowly fades out. *Moving the mouse on-top of the window will stop the fading out*.
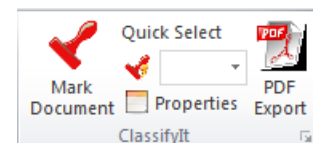
Section 2.01   Overview - ClassifyIt Integration in the Microsoft Office Applications

The **Outlook menu** of ClassifyIt (e.g. when creating a new email, when opening a received email, or when replying or forwarding an email) offers two user functions:
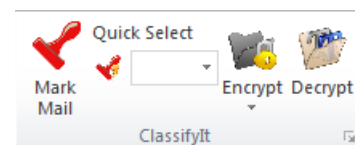
1) add and control security classification markings,
2) manage encryption and decryption of attachments.

The **Word, PowerPoint and Excel menus** of ClassifyIt offer three user functions:

1) add and control security classification markings,
2) manage properties (meta-data) of the document (Word and Excel),
3) export the document to a classified pdf document.

Section 2.02 *Overview – ClassifyIt Functions*

The following functions will be added to the word, excel and outlook's standard menu.
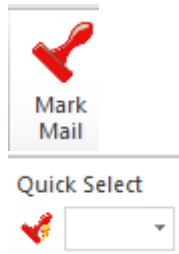
The **Mark** function opens the Release Form to select, enter and manage classification markings.

The **Quick-Select** function provides the user a quick way to apply often used classification markings.

The **Encrypt** function provides features to encrypt email attachments and to manage public keys.
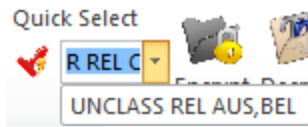
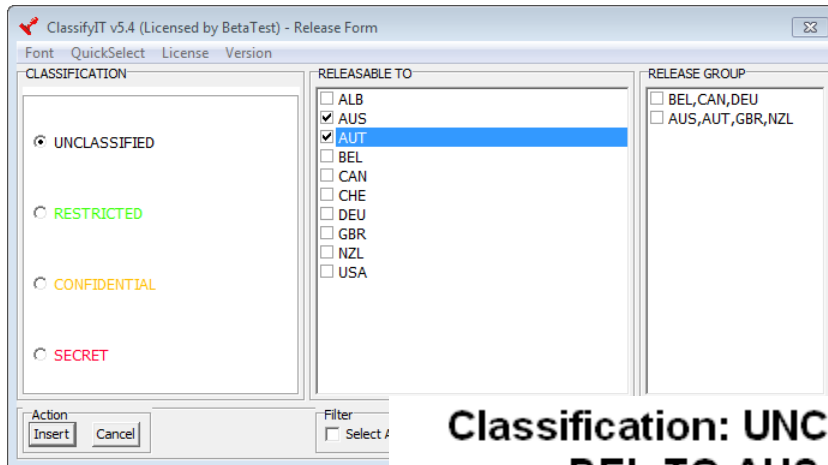The **Decrypt** function decrypts encrypted attachments.

The **Properties** function provides a form to enter and manage document meta-data.

The PDF Export function generates a pdf document ensuring that the document is classified including the visible and technical markings.

Section 2.03   Function - Mark

The **Mark** function is used to add a classification marking to a document (email, word document, powerpoint slides, excel sheet).

By selecting **Mark** the *Release Form* is opened – one can select the classification, the release (if any) and press *Insert* – the selected classification marking gets added to the document.

Section 2.04   Function - Quick-Select

The **Quick-Select** function like the Mark function adds classification markings to documents. Often used markings can be added to the document by just one click of a Quick Selection item. The Quick Select Items are defined by the user (adding classification markings to the **Quick-Select** is described in the functions of the

Release Form).

Section 2.05   *Function - Encrypt*

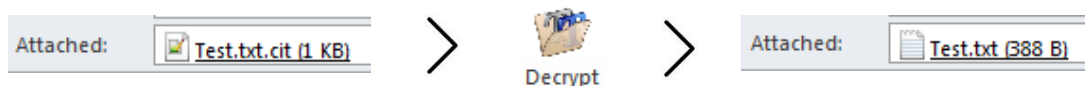The **Encrypt** function encrypts all attachments of an email.

There are **3 encryption options** provided by ClassifyIt. These three options are strong high grade encryption mechanisms. Each of the Encrypt options (*Built In*, *Session Key*, *Public Key*) encrypts the attachments and adds the "**cit**" file-name-exension (cit stands for <u>C</u>lassify<u>It</u>).

The *Built In Encryption* is the easiest for the user, but also the least specific, since any other user of ClassifyIt can decrypt the attachment.

The *Session Key* encryption requires the user to add a passphrase, which is later needed to decrypt the file. This is a high trustful option, provided that the passphrase is securely provided to the recipient.

The *Public Key* encryption is the most trustful option, which can only be decrypted by the intended recipients. It requires that the recipients have provided the sender with their public certificate.
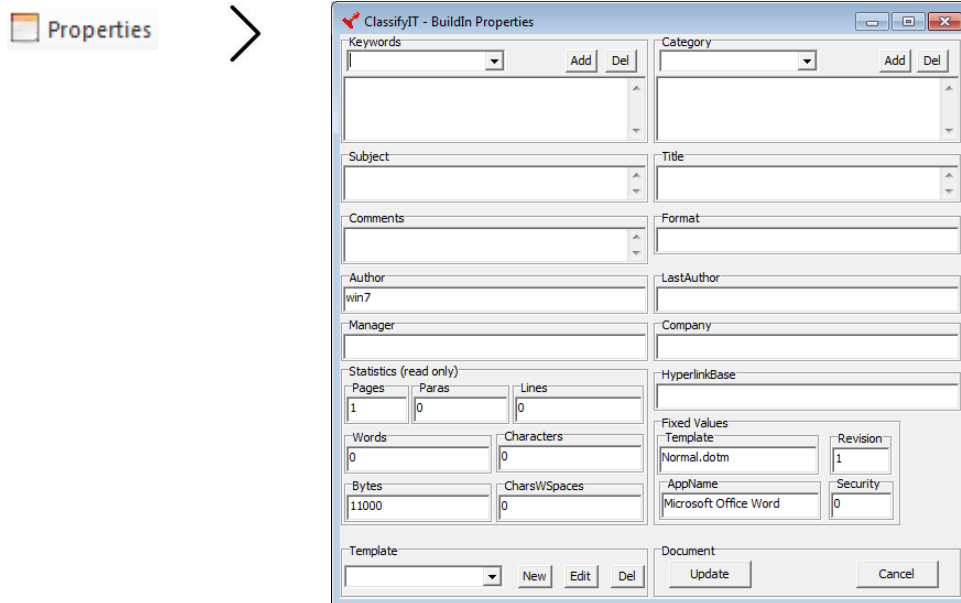
Section 2.06   *Function – Decrypt*

The **Decrypt** function decrypts all attachments of an email and removes the "**cit**" file-name extension afterwards. **Decrypt** automatically identifies how the file was

encrypted and decrypts it accordingly – the user might be asked to provide a passphrase or to enable the Private Key.

Section 2.07   Function - Properties

The **Properties** function opens a form to manage the standard properties of a document (word, excel). Providing properties to documents helps organising and finding them back through search engines. Therefore ClassifyIt provides schema for Keywords and Category which can be saved and reused.

Section 2.08   S u m m a r y

This section provided a functional overview of the ClassifyIt features. You could already start using ClassifyIt and could experience the easy to use features:

- ensure that ClassifyIt properly start (the ClassifyIt menu is visible in the main menu of the Office application and there is no warning message);

- classify emails and documents;

- add meta-data to documents;

- export documents to pdf documents;

- encrypt email attachments (but for the Public Key encryption you need the details of the below section).

Article III. Release Form

Section 3.01 Main Interface

The main user interface of the ClassifyIt tool is the **Release Form.** This interface is the same for all Office applications (Outlook, Word, PowerPoint and Excel).

It is opened, whenever the *"Stamp", the Mark* function, is selected.
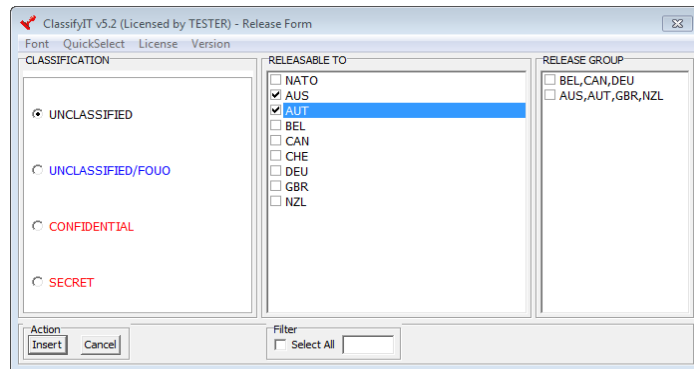
The release form is grouped in **3 sections**, namely:

A. *CLASSIFICATION*

B. *RELEASE TO* **and,**

C. *RELEASE GROUP*.

In addition there are management functions to change the form's *Font*, mange the *Quick-Select* entries, and see *License* and *Version* information.

A. The **CLASSIFICATION** section lists the possible classifications, where the user needs to select exactly one. Each entry provides a hint which will be shown when the mouse is 'hovering' above the entry (e.g. the meaning/definition of SECRET).
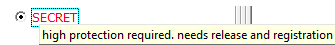
B. The **RELEASE TO** section lists the possible release markings, where none, one or multiple release entries can be selected. For each entry a hint can be configured which will be shown when the mouse is 'hovering' above the entry (similar to classifications).

At the bottom, there is a filter option which can be used to find entries in the list of release markings (which is useful if there is a long list of release markings). When text is entered in the filter the first entry which starts with that text will be shown.

Pressing <**return**> will highlight the second entry of that release
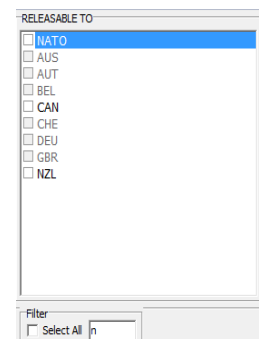
list, and so on. The example beside shows the filter set to 'n' which highlights NATO and NZL (in addition CAN is also active as n is part of CAN).

C. The **RELEASE GROUP** section is a list of configured groups to activate multiple release markings with one click. Selecting a release group is 'additative' to the already selected release markings, so already selected release markings will not be removed.
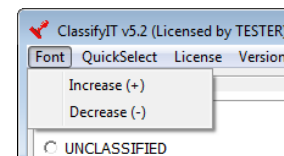
Example – Release Group:

The following shows an example where GBR is already selected, the release group named BEL,CAN,DEU is added, and afterwards BEL, CAN, DEU and GBR are selected in the RELEASABEL TO section.
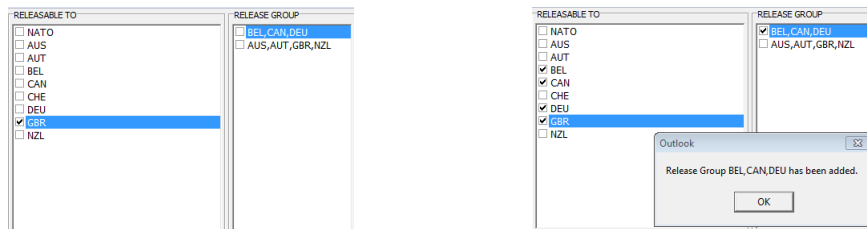
Section 3.02   Menu - Font

The **Font** menu provides the option for the user to adjust the font size of the text within the Release Form, by increasing or decreasing it.

Section 3.03   Menu - Quick-Select

The **Quick-Select** menu provides the option for the user to define Quick-Select function. When ClassifyIt is initialized for the first time, there is no Quick-Select item in the Quick-Select function.
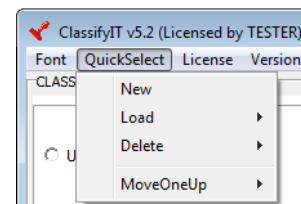
Often used classification and release marking can be defined here, which can then be added to the document with one click through the Quick-Select function. Through this menu the Quick-Select entries are managed. New entries can be produced, an item can be Loaded, or Deleted or moved in their order.

(a) Example Quick-Select Management:

Defining a New Quick-Select Item

1. Mark a classification and release in the Release Form (here UNCLASSIFIED for the CLASSIFICATION and AUT, CHE, BEL for the RELEASABLE TO).

2. Select **Quick-Select** → **New** to create a new Quick-Select item, which can be used later as a predefined Quick-Select item.

3. In the following dialogue *'Create New QuickSelect'* enter a display name for the Quick-Select item. (for the purpose of this example is use the letter U which stands for UNCLASSIFIED. Users can define another name relevant to their needs.)

4. ClassifyIt confirms the creation of a new Quick-Select item.
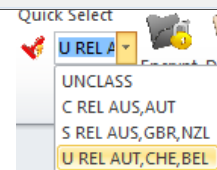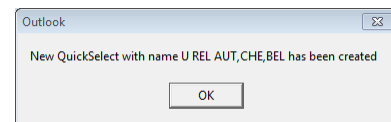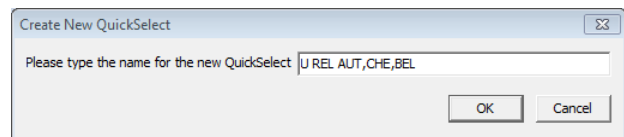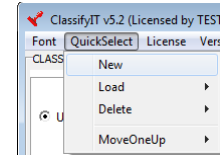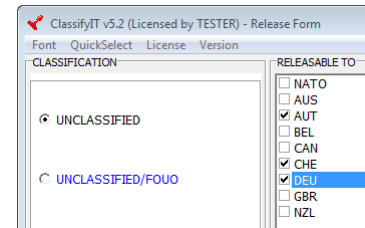
Now the respective item is created and is ready to be used. Users can create and utilise as many items as they need. The pic shows the possibility to crate these items and the flexibility and convenient to use the during document preparation.

Section 3.04   *Closing Release Form*

The Release Form is closed either confirming the classification and release marking by pressing the *Insert* button, or cancelled by pressing the *Cancel* button. When inserted, the appropriate text with its formatting is added to the email, or word document or excel spreadsheet.
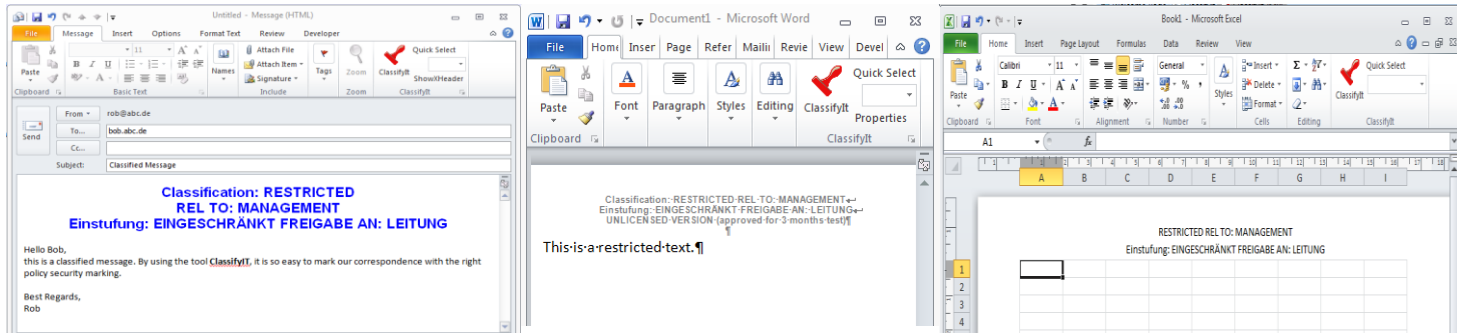

The classifications added by ClassifyIt to the email, word or excel, show the marking being in English and a 'translated' classification in German. Both markings are at a RESTRICTED level and released to a MANAGEMENT entity (please note that the markings are not added with the same ClassifyIt configuration, therefore the formatting is different).

# Article IV. Encrypt / Decrypt Email Attachments

Email Attachments can be encrypted in the ClassifyIt encryption format (cli), which is based on high level encryption standards (AES-256). The current version provides three optional encryption schema.

The easiest to use is the *Built In Encryption*. There is no further user interaction required. All the attachments which are attached to the email get encrypted with built in keys. If attachments get added later those get not automatically encrypted, unless through the encryption menu an encryption is selected. Already encrypted attachments will stay encrypted as they are (there is no double-encryption). Encrypted attachments are renamed with an added file-extension .cli (**Cl**assify**I**t).
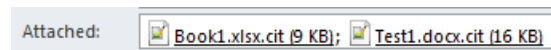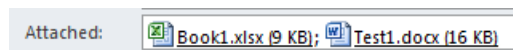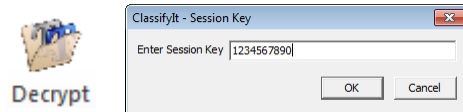
Section 4.01 *Session Key Encryption / Decryption*

The *Session Key* encryption relies on a key entered for the encryption. When selecting *Session Key* ClassifyIt asks for the session key to be entered. The key should be 8 or more characters, however ClassifyIt does not enforce any minimum length or complexity of the key. If the key is less then 8 characters the user receives a warning message. The recipients of the encrypted attachment, who should be able to decrypt it would need to receive the key through other means (don't write it in the email).
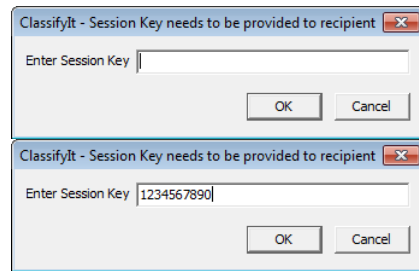
To Decrypt a *Session Key* encrypted attachment the session key needs to be provided. If it is correct the attachment will be decrypted, if the key is wrong one is asked to re-enter the key.

Section 4.02 *Public Key Administration / Encryption / Decryption*

Public Key en- / de-cryption is a very good and flexible way to provide attachments only to those who are specified in the address lists. For proper understanding we describe the concept of Public Keys. Then it is explained how ClassifyIt integrates the Public Key en- / de-cryption.

(a) Public Key Concept

A Public Key has a correspondent Private Key. As the name indicates a Public Key can be published and shared with everyone, whereas a Private Key needs to be protected and must only be available for the owner.
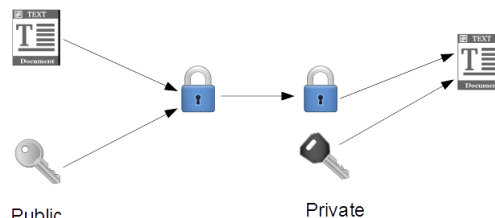
With a Public-Private Key-Pair the following is possible. A text (file) can be encrypted with the Public Key, the encrypted text can be transferred everywhere and can only be decrypted with the Private Key.

ClassifyIt's Public Key encryption uses this concept for an easy and very secure encryption of attachments providing the necessary Public-Private Keypairs and the necessary administration of those keys. The following shows an example where Bob and Alice use Public-Private Keypairs to exchange safely data between each other.

First Bob and Alice need to produce each their Public-Private Keypair. Each key is unique and receives a unique name. In this example Bob generates the Private Bob and Public Bob keys. Alice generates the Private Alice and Public Alice keys. ClassifyIt does this during the first start and generates those keys with the name of the email address of the user.
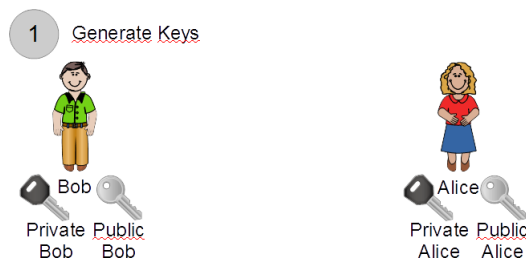
Then Bob and Alice can share their Public Keys. This can be done in any way and does not require a special protection of the key. In this example Alice sends her Public key to Bob as an email attachment. ClassifyIt provides this function to attach the Private Key to an email and when receiving a Private Key to store it appropriately.
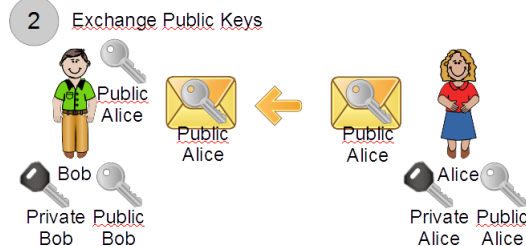
Now everything is in place so that Bob and Alice can exchange in a secure way secret messages. In this example Bob can send Alice a secret message, since he has Alice's Public Key. Bob encrypts the secret message with Alice's Public Key and sends the message by email to Alice. Alice has her Private Key and decrypt the message. ClassifyIt integrates the encryption and decryption for email attachments with one click on the Private Key Encryption function and on the Decryption function.
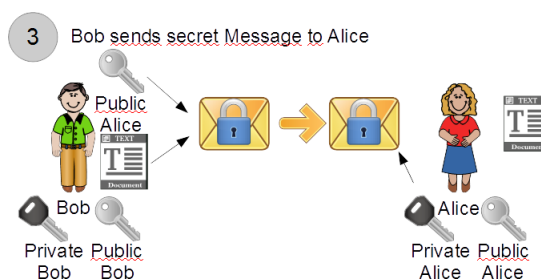
To finalise this example. Consider that Darth had access to the Public Key of Alice and to the encrypted message from Bob to Alice. Darth can't do anything to get access to the secret message. Darth would need the Private Key of Alice, which Alice protects properly.
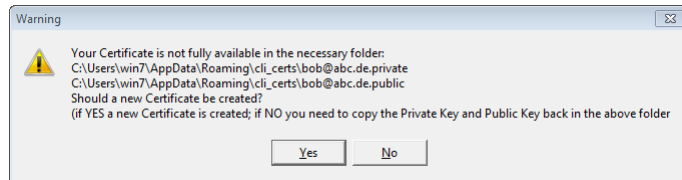
(b) Generate Public-Private Key-Pair

The first time ClassifyIt is started it will create a Public-Private Key-Pair and store it on the user's private folder. The user is guided through two steps to create their Public-Private Key-Pair. First the email address (SMTP address) which is used for the identity of the key-pair. Second a good password for the Private Key protection. This password must not be forgotten, and is needed when decrypting Public Key encrypted attachments.
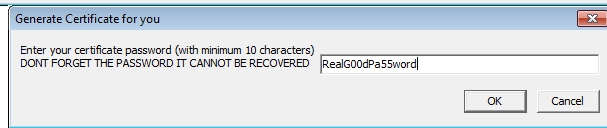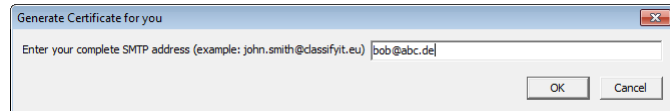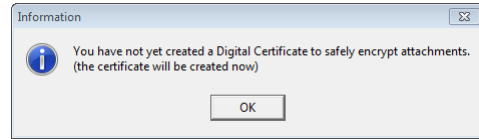
The Public-Private Key-Pair are saved at the user folders name \AppData\Roaming\cli_certs\ there is the Public Key with the file-extension .public and the Private Key with the file-extension .private.

If the Public-Private Key-Pair is not available in the folder, ClassifyIt asks if a new Key-Pair (Certificate) should be created.

(c) Send Public Key and Receive Public Keys

To provide the Public Key to others by email, use from the the Encrypt menu the *Attach my Public Key* item. The Public Key is added to the email as an attachment. Click *Attach my Public Key* and ClassifyIt will confirm that the file is added.
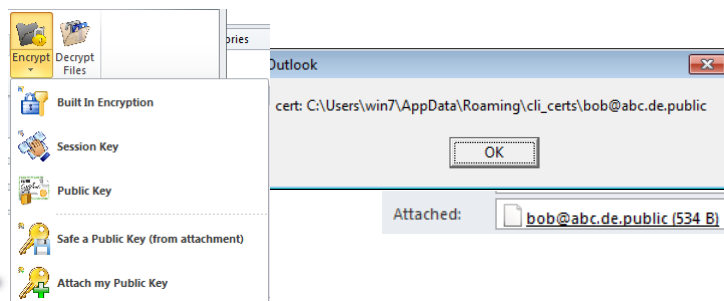
When receiving an email with Public Keys from other users, the Public Keys can be automatically saved by selecting *Safe a Public Key (from attachment)*. This function also works for multiple keys. If a Public Key is already in the key store, then ClassifyIt will warn and ask if the previous key(s) should be overwritten. At the end ClassifyIt informs how many Public Keys (Certificates) have been saved.
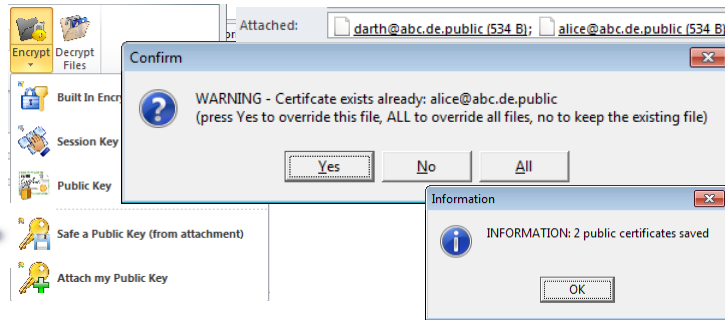
Section 4.03   *Public Key Encryption / Decryption*

To encrypt attachments with the Public Key method, one needs to make sure that all recipients are in the To, Cc or BCC field, before the encryption is conducted (otherwise the attachment will not be encrypted for the later recipients. Selecting Encrypt, Public Key will encrypt the attachment so that all recipients can decrypt the file. In this example you have not received the Public Key from david@abc.de (CC field). ClassifyIt will warn you that for this recipient the encrypted attachment will not be readable.
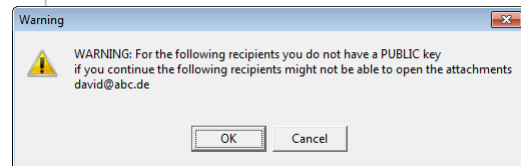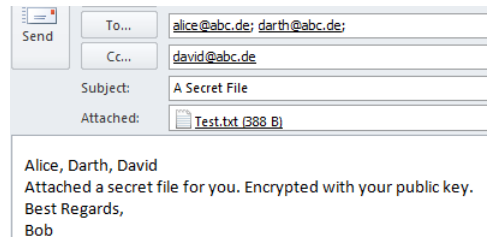
To decrypt the attachment the user is asked to provide the password of the Private Key. If correct the attachment will be decrpted.
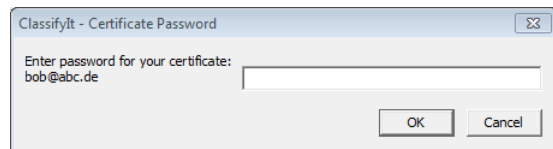
Article V.Properties

The **Properties** function is available for word and excel documents and provides a form to view and edit 'custom' or 'Built In' standard properties of word and excel documents. The form shows those properties, it also shows *Statistical* information about the document and the *Fixed Values*. The *Statistics* and *Fixed Values* cannot be changed. All other values can be edited and when pressing *Update*, the values are stored in the properties of the document. *Cancel* will not store any changes.

Helping the user on adding property information (meta-data) efficiently to the document ClassifyIt provides 3 additional functions.

Section 5.01   Template

Users can define **Templates** which define entries for each of the editable properties. When a Template is selected (in this example there is only one defined, *Temp1*, the user can select either *YES* to overwrite all properties with those defined in that Template (all current values will be deleted!), or *NO* to add the values of the Template to the property (all current values will remain and those defined in the Template will be added), or *CANCEL* to not change any property value.

The Template menu provides 3 more functions to manage templates. *New* creates a new Template with the values as currently in the property fields displayed. The user is asked to enter a template name under which the template can be selected the next time (*Temp2* in this example). *Edit* changes the values of the currently selected Template. *Del* deletes the currently selected Template.

## *Section 5.02   Keyword & Category*

In support of the *Keywords* and *Category* properties, ClassifyIt provides functions to add predefined values to the property. Selected values are added with a comma and space at the end of the current value. The *Add* function allows to predefine an additional term and *Del* removes the currently selected value from the list of predefined terms.
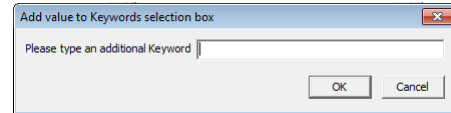
Article VI.   Outlook Behaviour

Section 6.01   *Email Without a Classification*

Emails which have not entered a classification through ClassifyIt cannot be sent by users. If the user tries to send an unclassified email the user is informed and the classification menu opens.
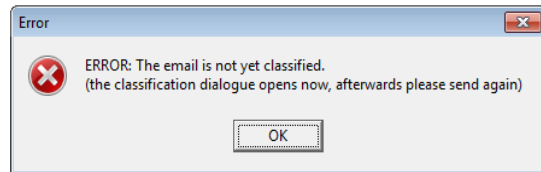
Section 6.02   *Email With Unapproved Attachment Type*

When users want to send Emails with attachment types which are not authorised an error message is generated listing the attachment(s) which are not authorised.
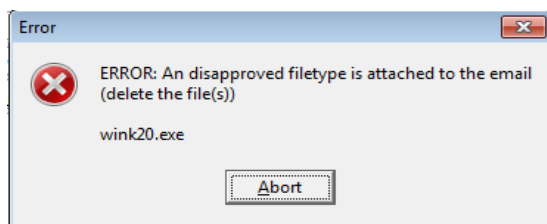
Section 6.03   *Reply or Forward with Lower Classification*

Replying or Forwarding emails with a lower classification result either in a warning which the user can ignore or an error.
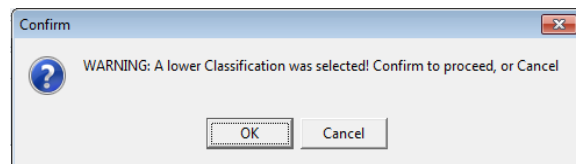
The behaviour is set in the ClassifyIt configuration file.