

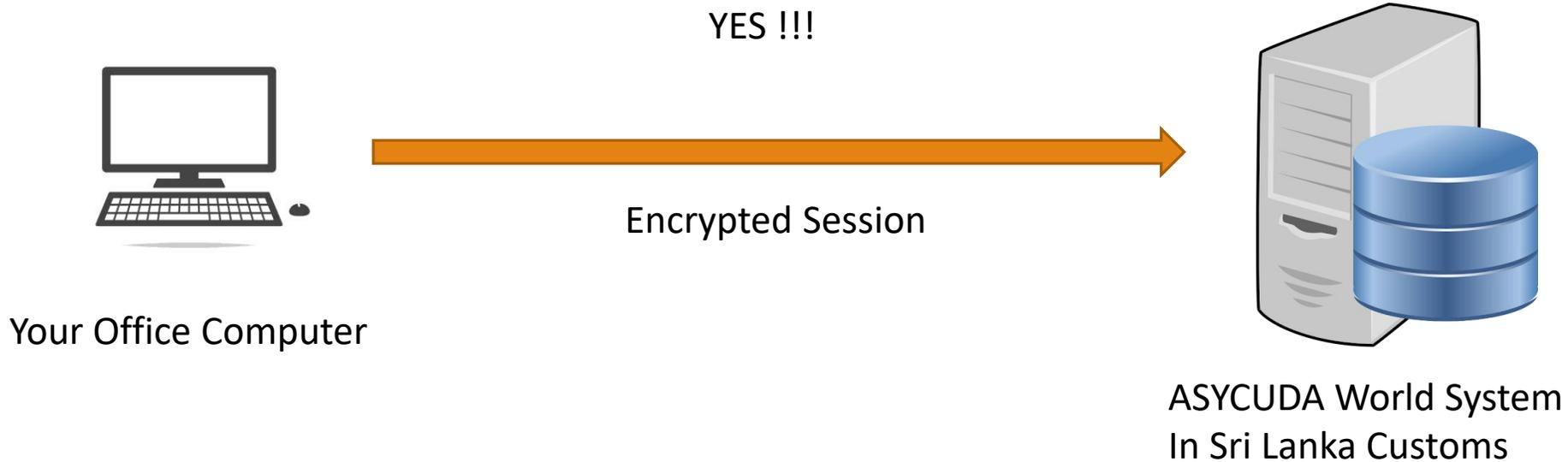
Using Digital Signature with ASYCUDA SYSTEM

-ICT DIRECTORATE, SRI LANKA CUSTOMS-



The CUSDEC submission without Digital Signature

Is CUSDEC submission confidential and protected ?



Then, Why do we need a digital signature ?

Digital Signature assures

1. The document is authentic and comes from a verified source. (Authenticity)
2. The document has not been manipulated since it was digitally signed. (Integrity)
3. Its identity has been verified by a trusted organization (the CA – LankaSign). (Sender cannot deny - Non – repudiation)

[What is a digital signature? \(signaturit.com\)](http://signaturit.com)

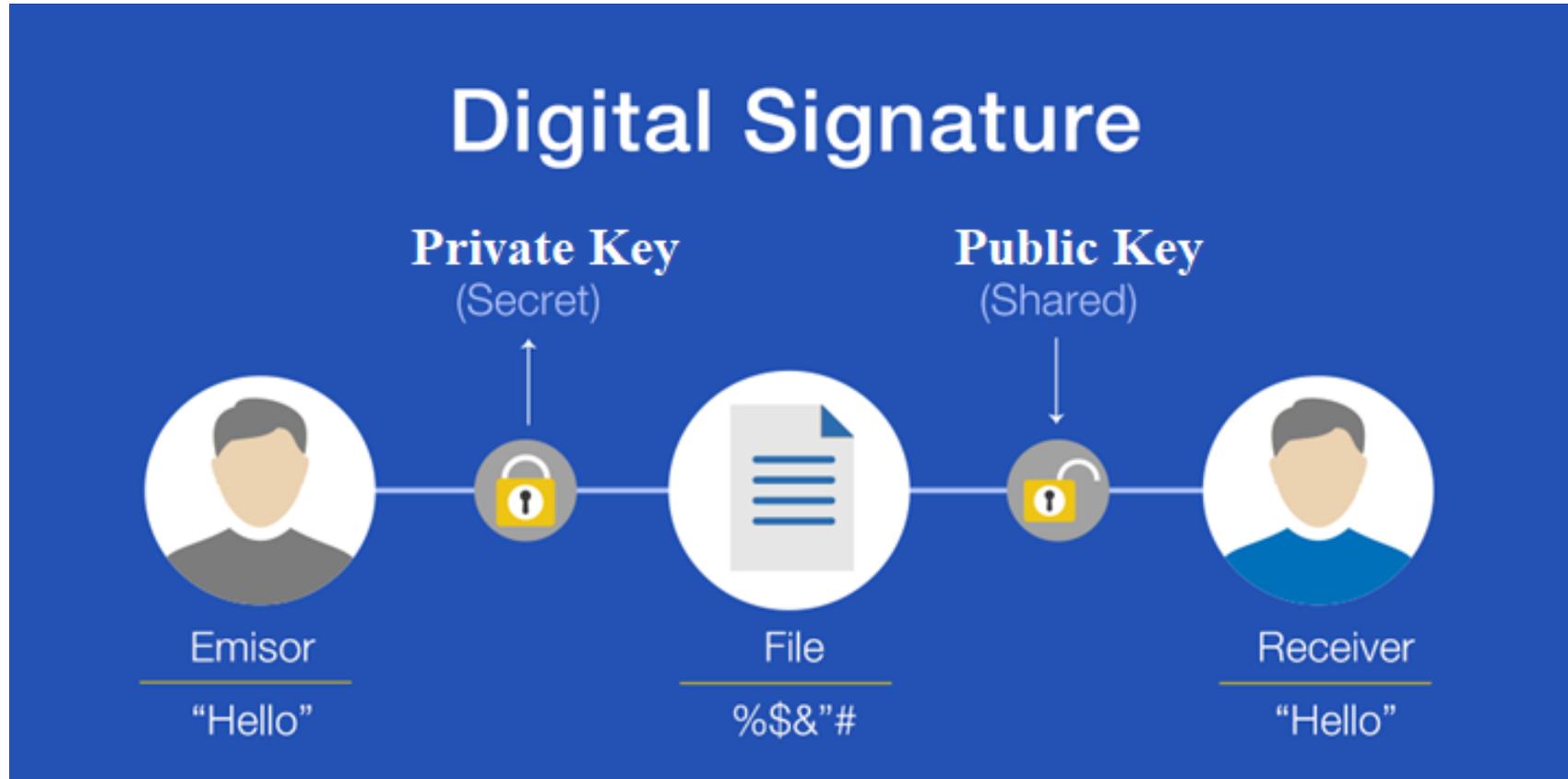
Your Digital Signature Token



This token contains a pair of keys.

1. Private Key (password protected)
This key is for signing operation
2. Public Key (Shared)
You share this key with Sri Lanka Customs.
This key is used by the receiver(Sri Lanka Customs) to verify the sender.

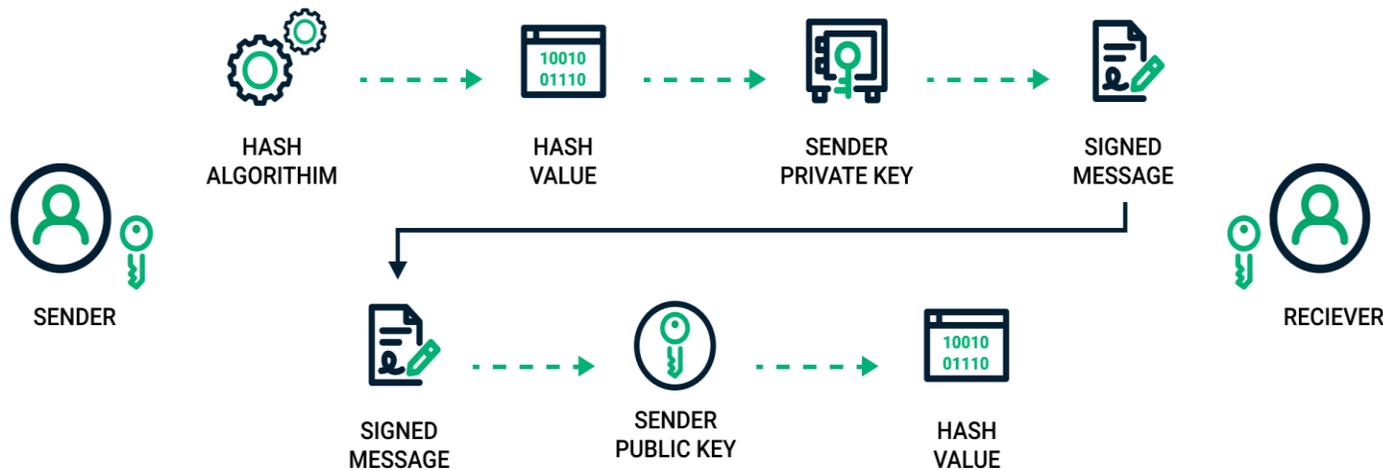
How Does Encryption Work?



Ref : <https://blog.signaturit.com/en/what-is-a-digital-signature#1>

How Does Digital Signature Work?

How Does a Digital Signature Work?

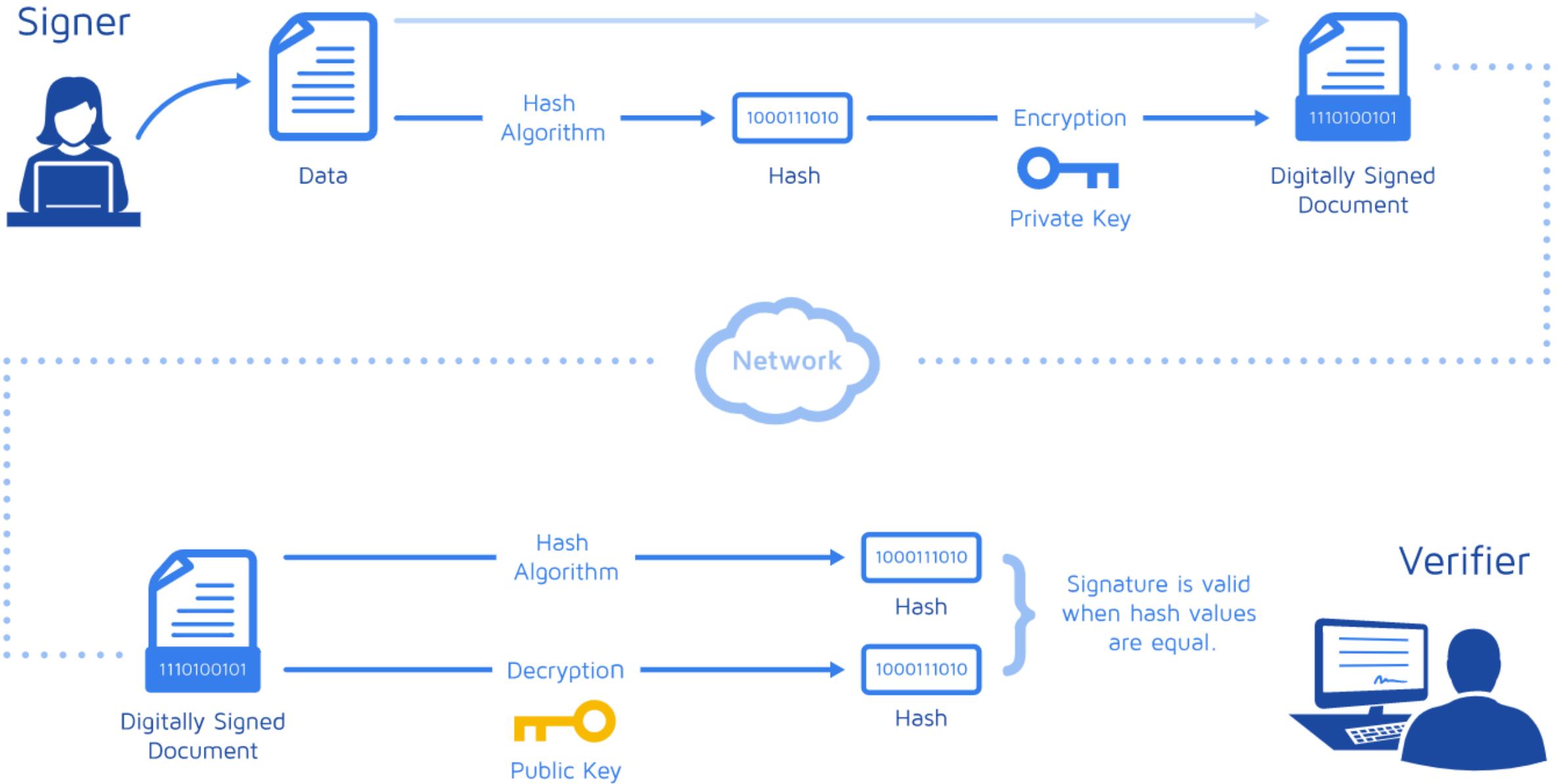


Ref : <https://sectigo.com/resource-library/how-digital-signatures-work>

What is Hash of a file ?

A message digest, or hash, is a **signature that identifies some amount of data**, usually a file or message. Cryptographic hashing algorithms are one-directional mathematical formulae designed to generate a unique value for every possible input-in this case, the data.

Ref : <https://us-cert.cisa.gov/>



How does this work?

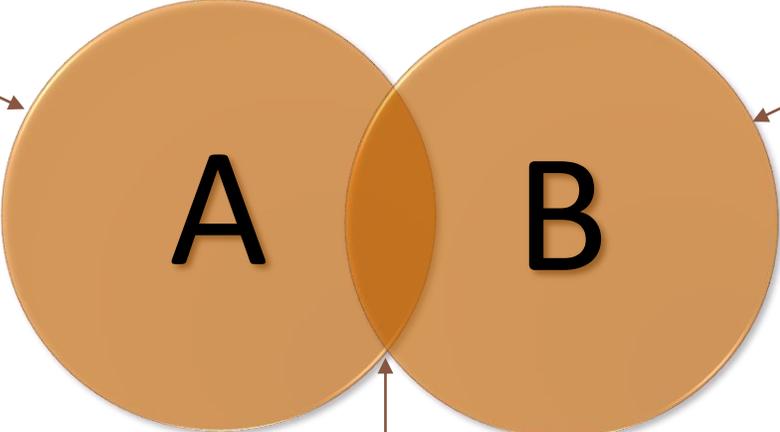
- A. Generate HASH value of the CUSDEC(Data Set) or scanned document (invoice pdf file)
- B. Encrypt the HASH value using your private key (Not shared)
- C. Attach this encrypted hash value (signature) to the CUSDEC or the document (pdf file)
- D. Submit the CUSDEC to Customs.
- E. Decrypt the encrypted hash value using your public key (Shared key) – Authenticate the signature.
- F. Generate a hash value for the CUSDEC or the document (pdf file) again.
- G. Compare the decrypted hash value with the new has value.

Stake Holders

- Clearing Agents.
- Importers / Exporters (Traders)
- Banks
- Other government regulatory agencies

A – Clearing Agents

- Direct ASYCUDA users
- Submitting Documents to ASYCUDA on behalf of Traders



B – Traders (Importers / Exporters)

- Indirect ASYCUDA users
- Submitting Documents to ASYCUDA through Clearing Agents

Traders and Clearing agents

Applying Digital Signature to Customs Clearing Process

1. Sharing the public key of the digital signature with customs (ASYCUDA World System).
 - a. Exporting the public key from the USB dongle
 - b. Attaching the public key to ASyCuDa World user profile.
2. Digitally signing Customs declarations.
3. Digitally signing other attached documents.

Save the DLL file

- During the process of installing Digital Signature USB Dongle to your computer the DLL file will be generated in your computer.
- It is the Connection Driver between your computer and the Digital Signature USB Dongle
- Save the DLL file in an easily accessible location in your computer

Exporting the public key from the USB dongle.

a) Log in into your USB dongle as a token user or as administrator (Fig. 1)

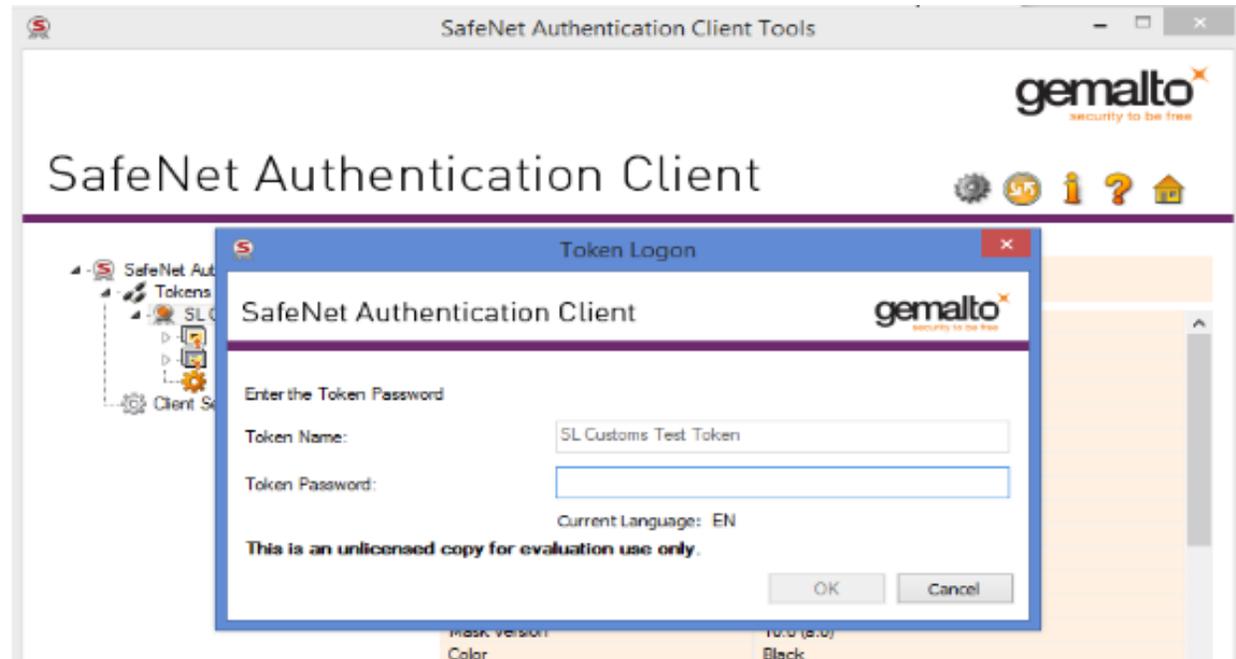


Figure 1: Usb dongle login

Exporting the public key from the USB dongle.

b) Start from command line the Windows certificate manager using certmgr.msc (Fig. 2)

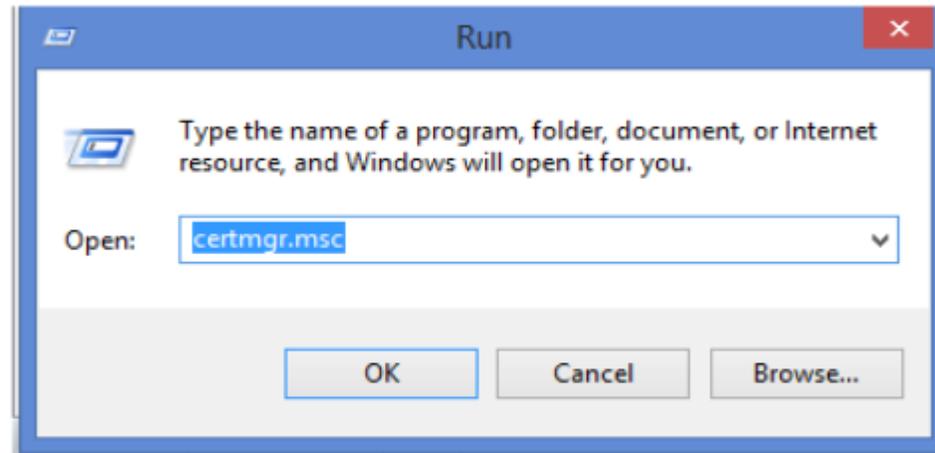


Figure 2: Starting certificate manager from windows

Exporting the public key from the USB dongle.

c) Expand the Personal folder and select the user certificate to export the public key (Fig 3)

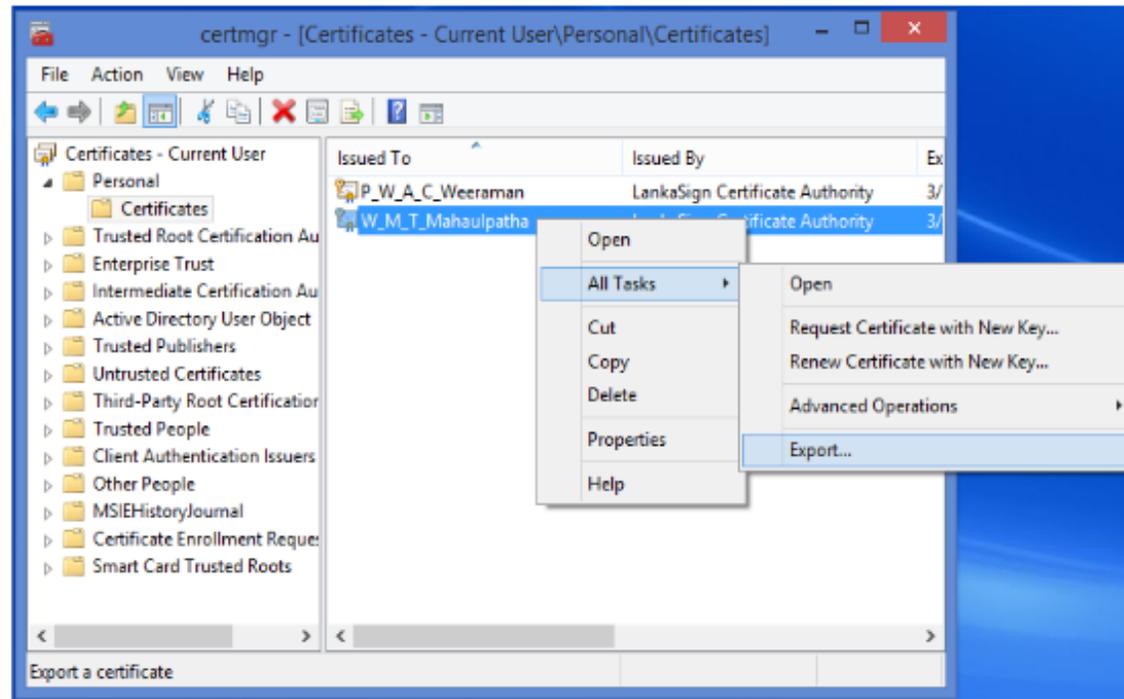


Figure 3: Listing the user certificates

Exporting the public key from the USB dongle.

d) Follow the wizard to export the public key of the selected user certificate. Make sure that the format of the export file is .p7b (Fig. 4). Make sure that you include all certificates in the certification path.

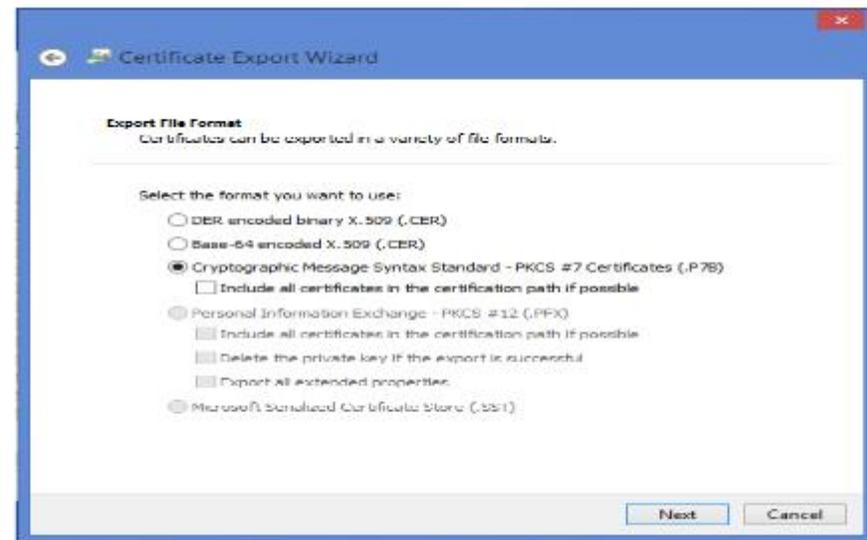
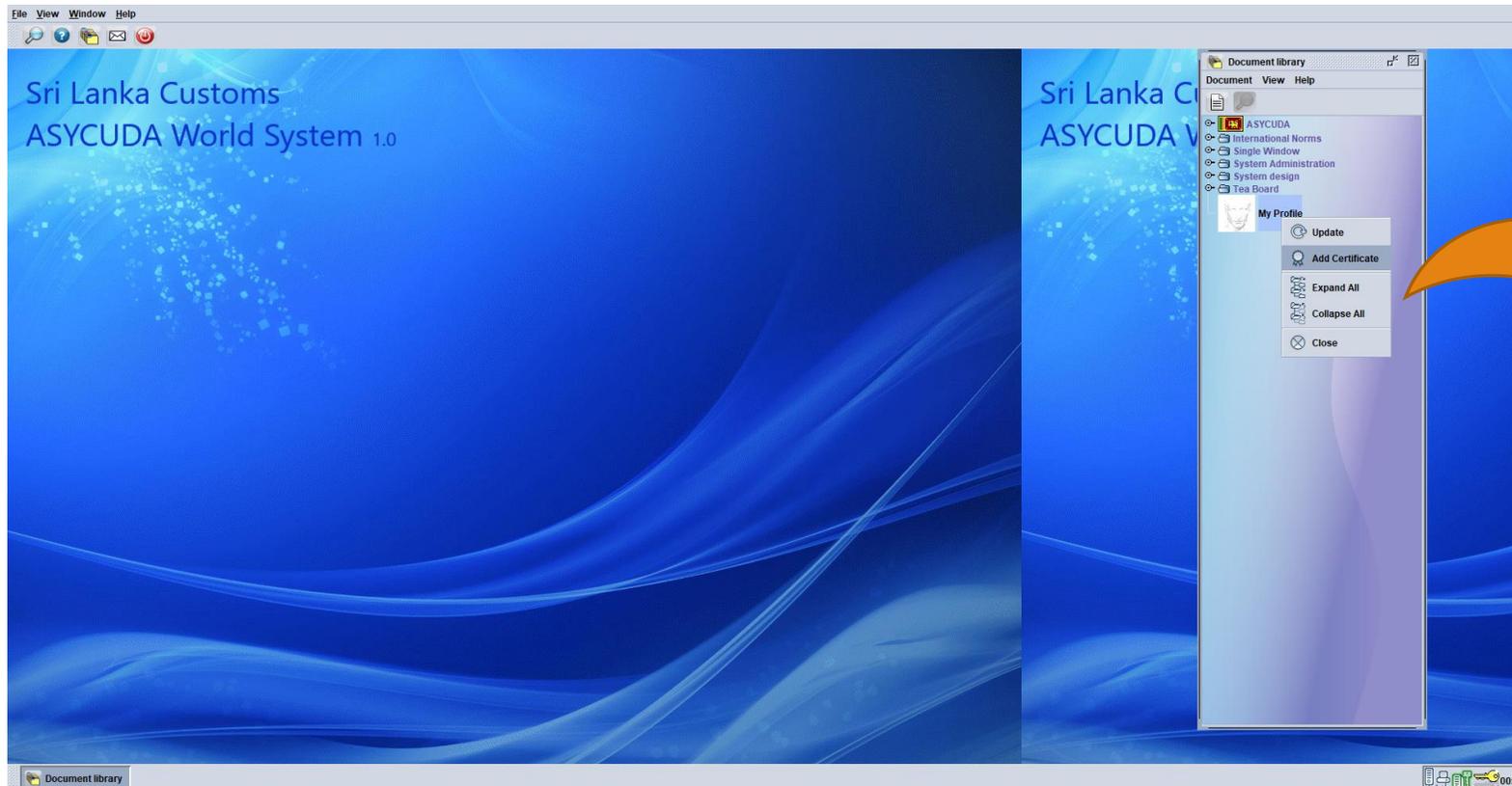


Figure 4: Selecting the p7b format for the exported file

Attaching the public key to ASyCuDa World user profile.

a) Go to the “Document Library” of ASyCuDa World application and write click the “My Profile”, then select “Add Certificate” option



Attaching the public key to ASyCuDa World user profile.

b) Import the public key and attach to user profile.

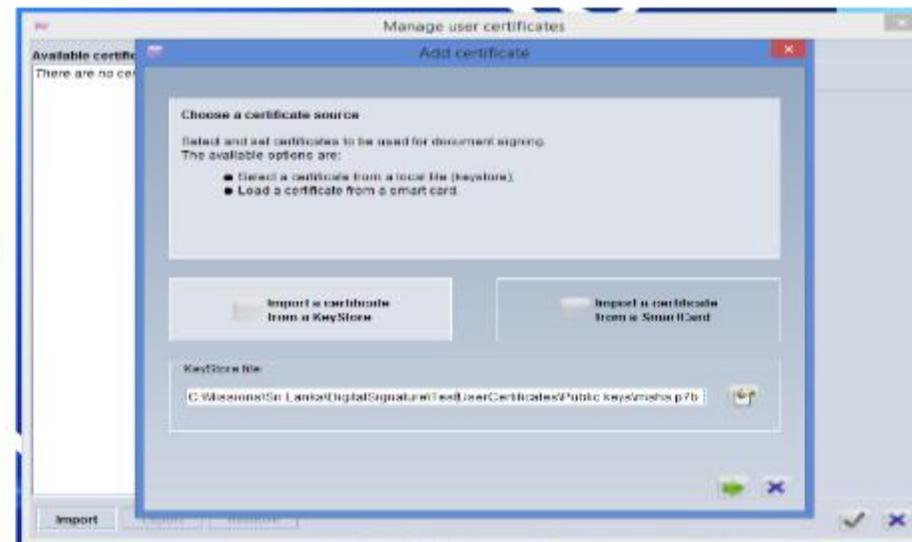


Figure 6: Selecting the public key file from your computer

Attaching the public key to ASyCuDa World user profile.

c) Verify the data of your public key certificate and click on the button finish (Fig. 7). Click on the button OK to finalize the operation.



Figure 7: Verifying the public key before attachment

Attaching the public key to ASyCuDa World user profile.

c) Verify the data of your public key certificate and click on the button finish (Fig. 7). Then click on the button OK to finalize the operation.



Figure 7: Verifying the public key before attachment

Activating Public Key of the Digital Signature

After you attach the Digital Signature to your ASyCuDa profile, it will be activated within twenty four hours

Digitally signing Customs declarations

As soon as you attach your certificate (containing your public key) to your user profile in Asycuda World, you have to wait until ICT Division approves your certificate. An approved certificate looks like the one in figure 8.

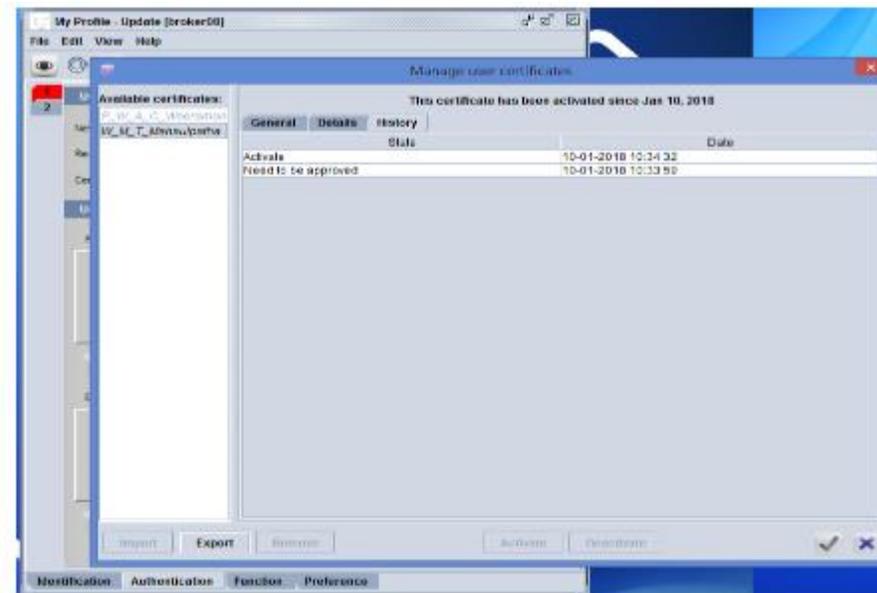
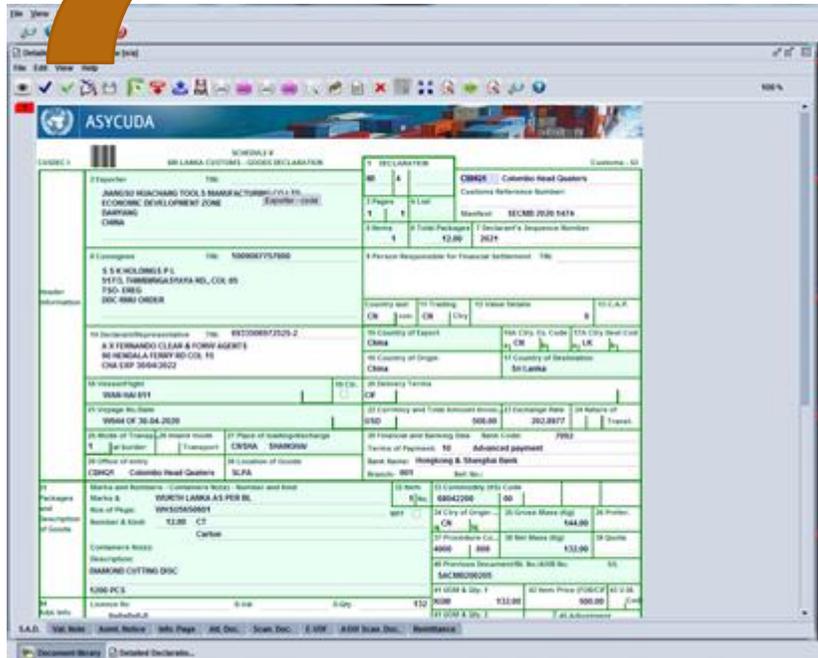


Figure 8: Approved digital certificate by ICT

Digitally Signing a CusDec



The screenshot shows the ASYCUDA software interface. The main window displays a detailed declaration form with various fields for data entry. The form includes sections for 'DECLARATION', 'EXPORTER', 'IMPORTER', 'COUNTRY OF ORIGIN', 'COUNTRY OF DESTINATION', 'CURRENCY AND VALUE', 'MODE OF TRANSPORT', 'MARKS AND NUMBERS', and 'PACKAGES AND DESCRIPTION'. The ASYCUDA logo is visible at the top left of the window.



The screenshot shows the ASYCUDA software interface with a digital signature symbol. The window title is 'Detailed Declaration - New [n/a]'. The menu bar includes 'File', 'Edit', 'View', and 'Help'. The toolbar contains icons for 'View', 'Check', 'Checkmark', 'Hand', 'Save', 'XML', and 'Print'. The main area displays the ASYCUDA logo, a barcode, and the text 'CUSDEC I' and 'SR'. A red box with the number '1' is visible on the left side of the window.

To submit the Digitally Signed CusDec you have to click this Symbol

Digitally signing Customs declarations

a) Before assessing a CusDec, you have to provide the USB dongle library file. For that, select the option “Import a certificate from a SmartCard”. If you are using gemalto USB dongle and have installed SafeNet software, so you have to provide the eTPKCS11.dll library (fig. 9)

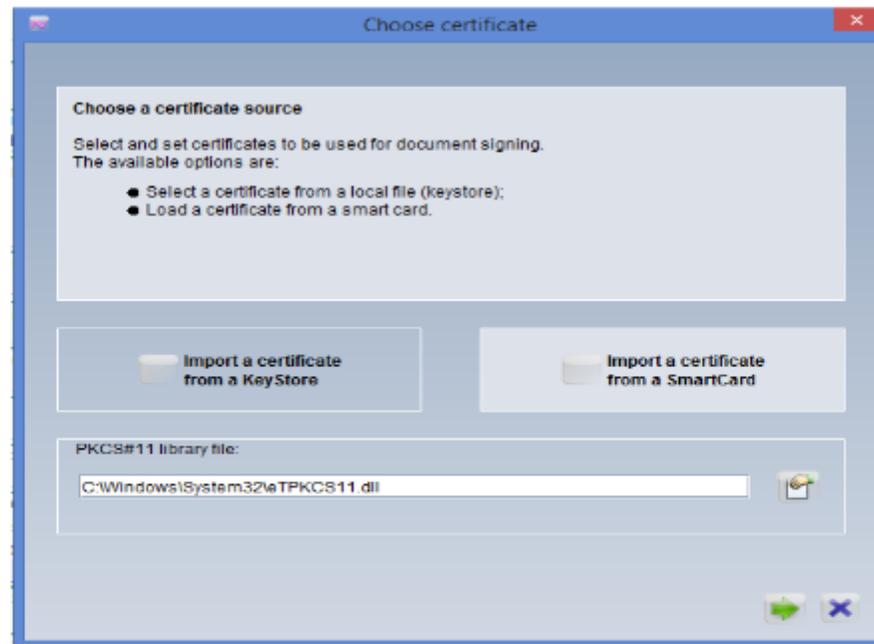


Figure 9: Providing the dll library to access certificates in usb dongle

Digitally signing Customs declarations

b) Select the user certificate from your USB dongle and provide the password of your private key to sign the CusDec (Fig. 10)

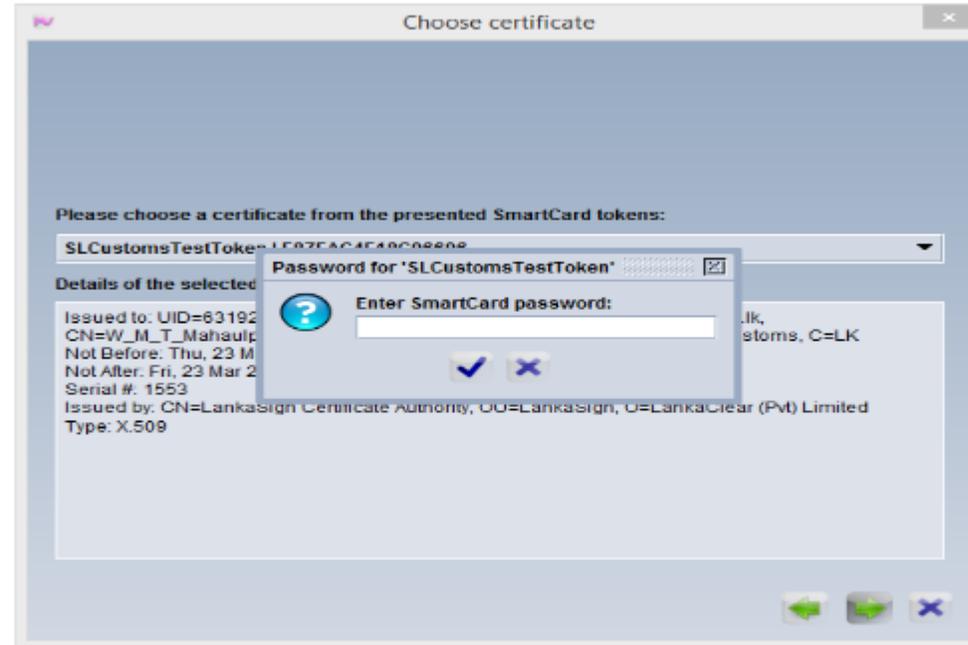


Figure 10: Providing your private key details to sign the cusdec

Digitally signing Customs declarations

c) Once a CusDec is Digitally signed, you can verify it using one of these two ways:

c.1) Select the declaration using the finder, right-click and display the history (fig. 11).

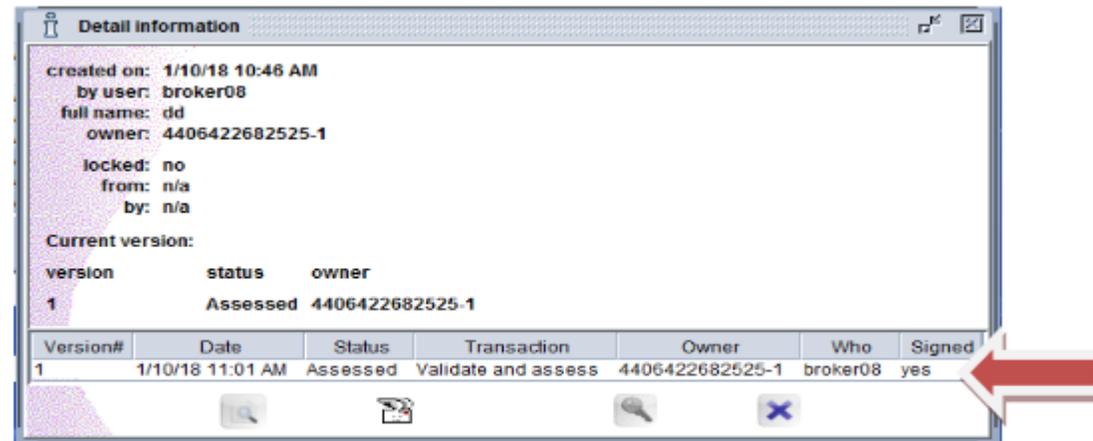


Figure 11: Verifying a signed cusdec from the finder

Digitally signing Customs declarations

c.2) Open the CusDec in View mode, click on the button to show up the digital signature details (Fig. 12).

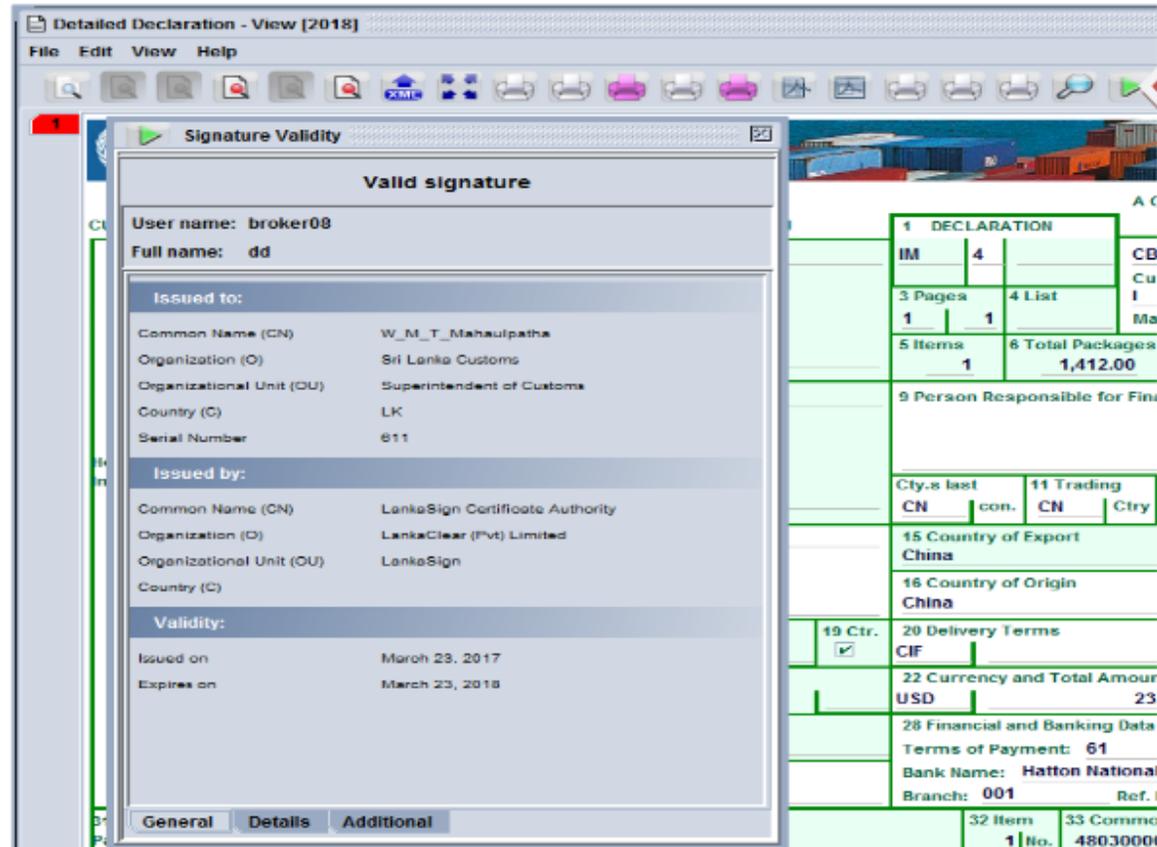
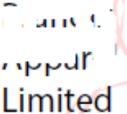


Figure 12: Verifying a digitally signed cusdec in View mode

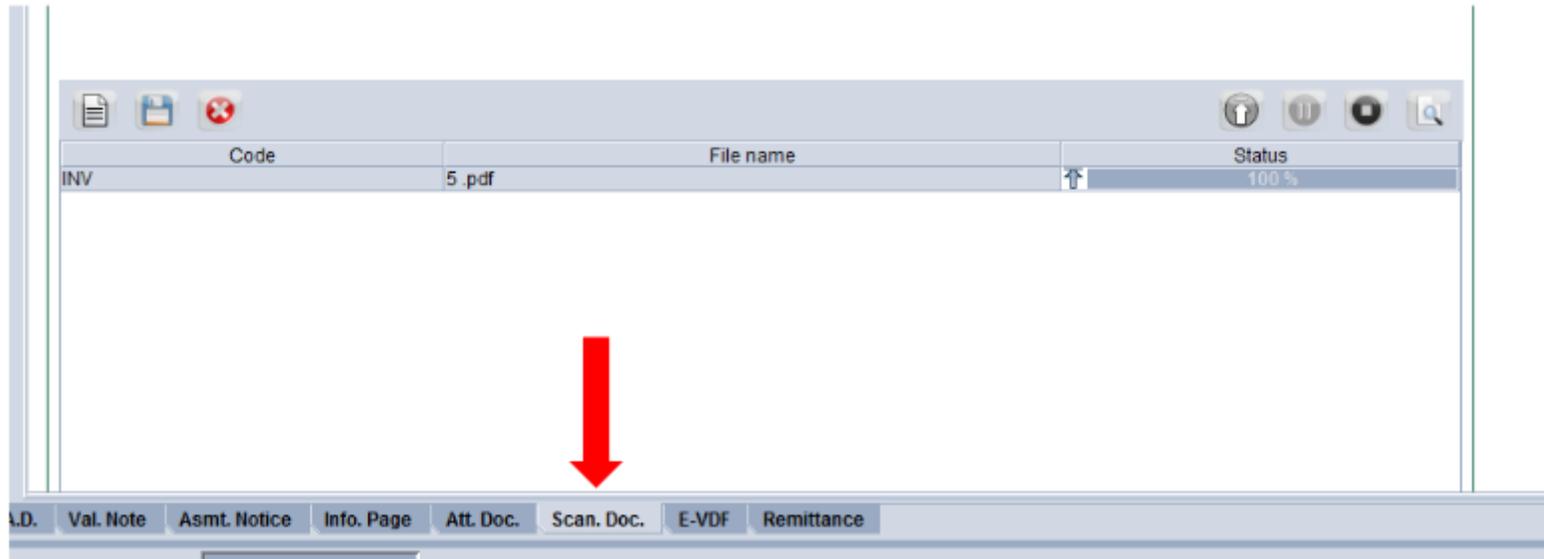
Digitally Signed Scanned Document by Trader

REMARKS TW/2020/B NO 110, TW/2021/B NO 1137					
MARKS AND NUMBERS ON SHIPPING PACKAGES	FULL DESCRIPTION OF GOODS	QTY/	UNIT PRICE/	TOTAL AMOUNT USD	
WOMENS 100% COTTON WOVEN PANT		1796 PCS 149.67 DOZ	USD	FOB SRI LANKA	
<u>ORDER NO</u>	<u>STYLE NO</u>	<u>QTY</u>	<u>CAT NO</u>	<u>P/PCS</u>	<u>TOT AMOUNT</u>
20102014-004-02	1427013290	1796 PCS	nq	5.3000	
TOTAL VALUE					---
TOTAL PACKAGES		83 CTNS			
TOTAL NET WEIGHT		443.02 KG			
TOTAL GROSS WEIGHT		542.85 KG CBM = 3.45			

 Digitally signed
 by [Signature]
 [Signature] Limited
 Date: 2021.02.18
 15:15:26 +05'30'

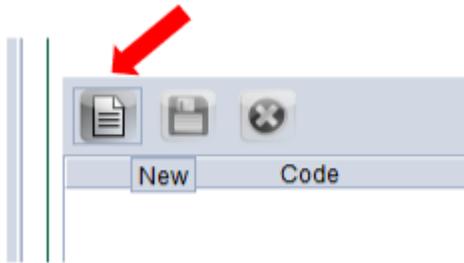
HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

Open a new declaration in ASYCUDA World.
Go to Scan.Doc at the bottom of the declaration



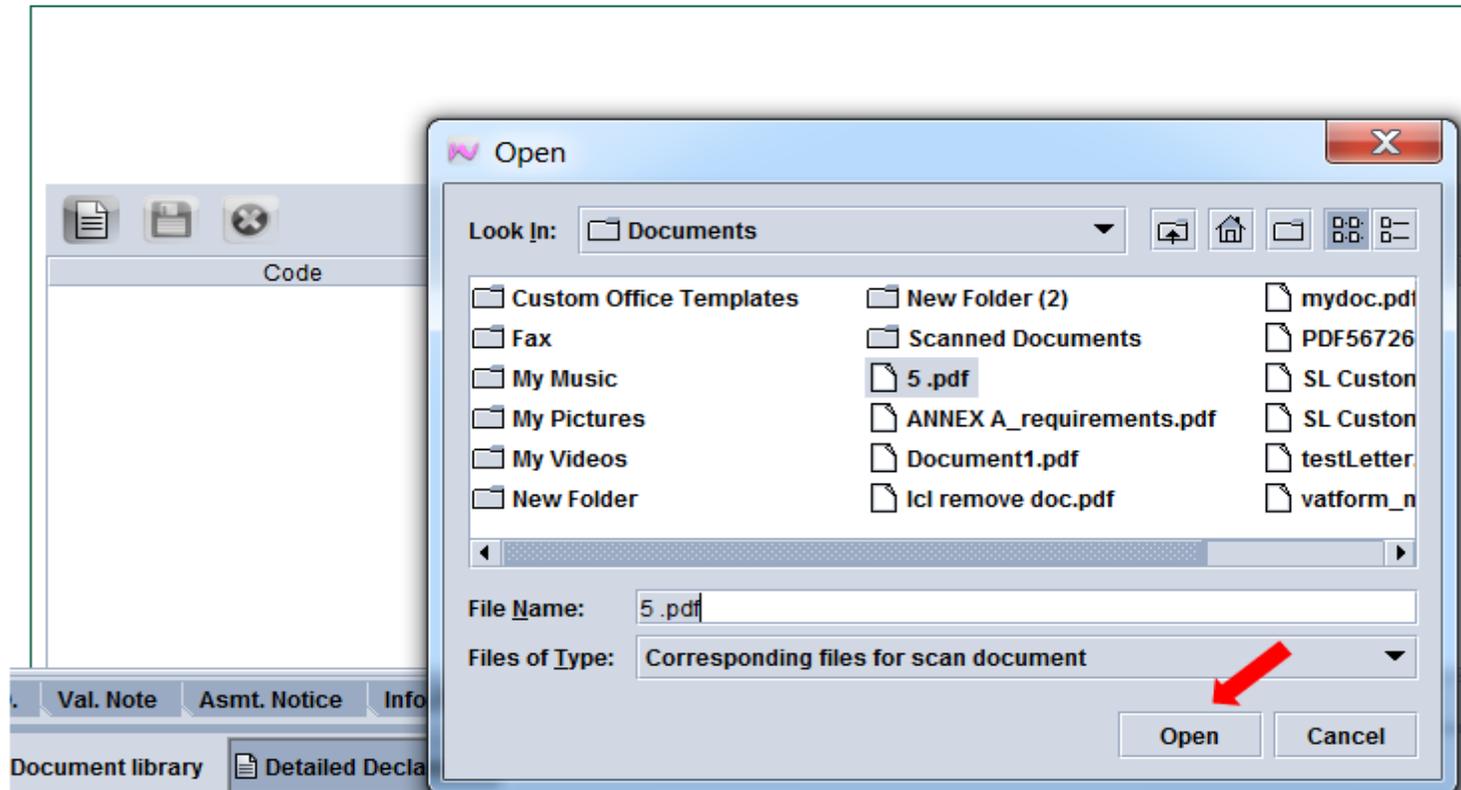
HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

Click on the new button.



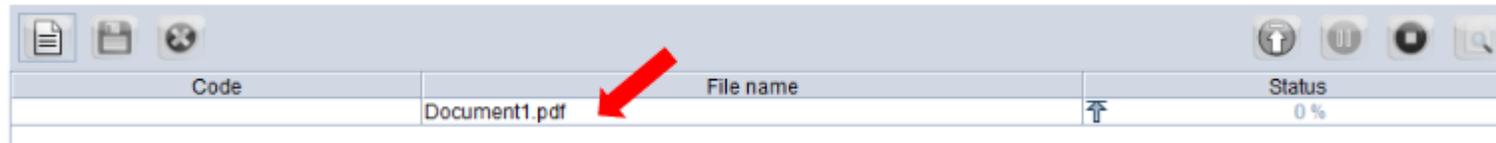
HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

Select the Scan Doc (pdf less than 140kb) you want to upload and click on Open

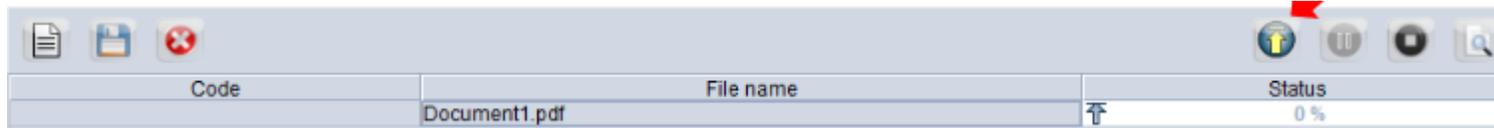


HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

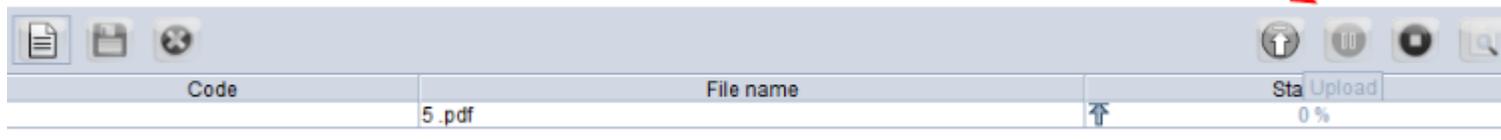
Left click on the mouse while the mouse pointer is on the Document1.pdf. The colour of the bar will change.



When you take the mouse to the upload button the colour will change to yellow.

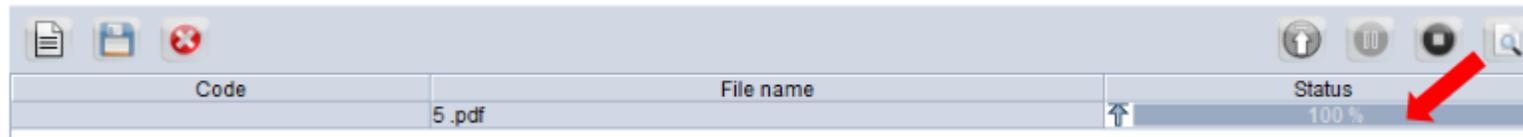


Next click on the Upload button

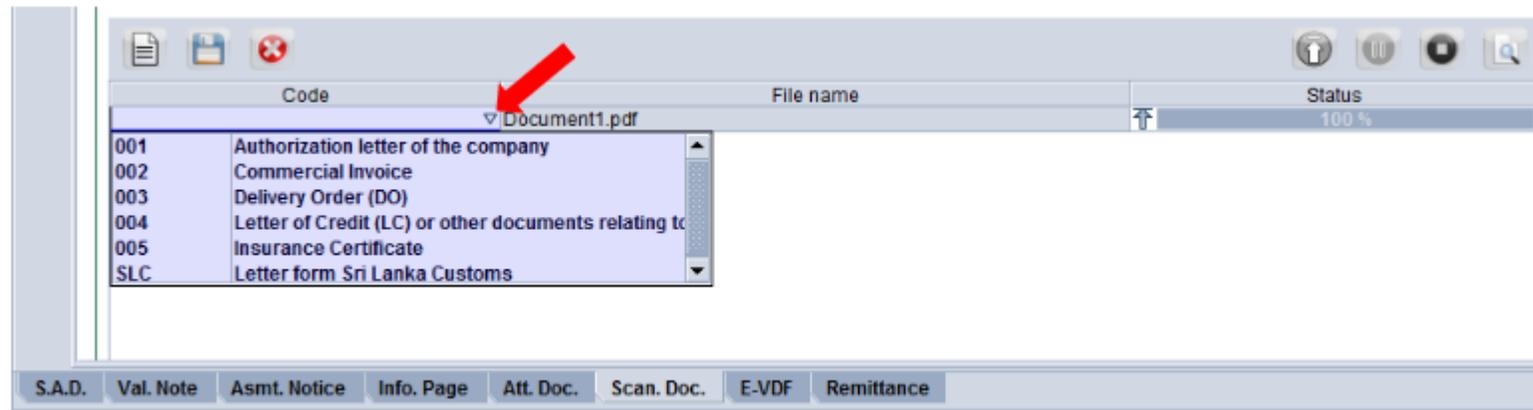


HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

When the upload is completed the status button will indicate 100% has been uploaded.



Next click on the Code and select the relevant document.



HOW TO UPLOAD SCAN DOCUMENTS TO THE CUSTOMS ASYCUDA SYSTEM

Next click on the verify button at the top of the menu bar. You will get a message stating “Document verified”.

Detailed Declaration - New [2018]

File Edit View Help

ASYCUDA

SAD - Attached Scanned Documents Page

Customs Office
CBHQ1 Colombo Head Quarters

Identification of the declaration

Model Customs reference Declarant reference As:
IM 4 2018

Declarant
1146397612525

EMIRATES CARGO LOGISTICS PVT LTD
8/3/13 BRISTOL ST COL 01
TL 22.05.2018 VAT EXPIRES

Message

Document verified!

THANK YOU

