Introduction into electronic Permit Information Exchanges (EPIX)

What is EPIX?

Definition:

Electronic exchange of CITES permits, certificates (or snippets) between MAs of different countries.

Annotation:

- Electronic permit data structure as per eCITES Toolkit, Chapter 4.2 (CCL-eCERT mapping)
- Snippet: a subset of the information in a permit
- Exchange between MAs: The assumed sender and receiver is an MA. The actual sender/receiver may be a different agency (SW operator, Customs, ..) but this agency will act on behalf of the MA (Black Box).
- A country may choose to exchange EPIX messages between their own Gov. Agencies (example MA and Customs). These exchanges are not considered EPIX exchanges although the administrations may choose to use the EPIX standards.

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EPIX Architecture: How are the messages exchanged?

Architecture: Central Hub or Point 2 Point

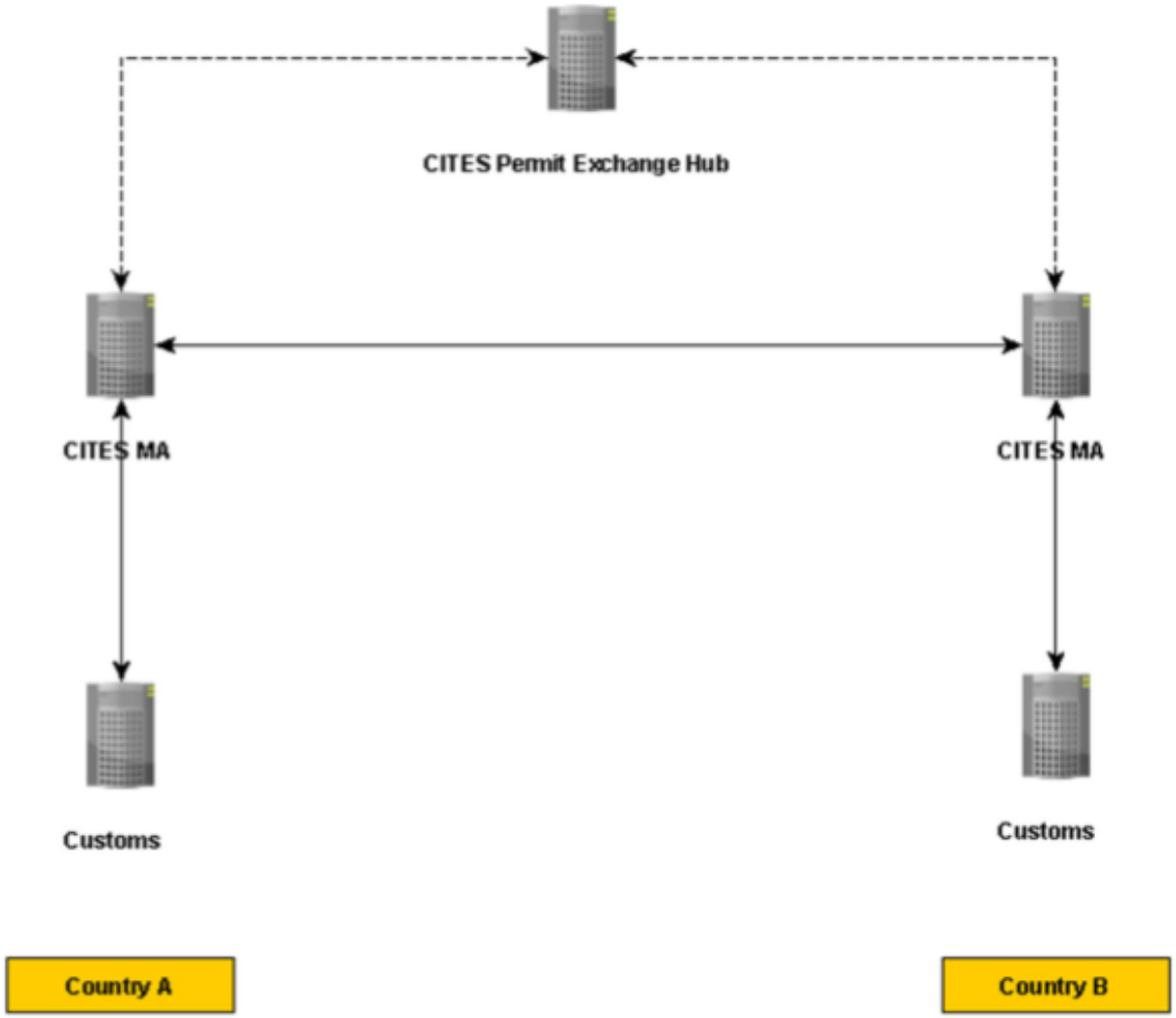


Figure 2.1: Overview of Electronic Permit Information Exchange (EPIX) between two Parties

EPIX: Central Hub or P2P?

Feasibility study on a EPIX central hub architecture: Switzerland, France and UNEP-WCMC in 2015/2016

Easy:

- ✓ Specifications for web service calls
- ✓ Initial technical platform for message exchange

Not easy:

- ❑ A Hub comes with a price: Requires development of standards and agreements for security, confidentiality, service level agreements, operation, steering, continuous funding, ..
- ❑ Parties could become dependent on the Hub service provider
- ❑ A Hub is a single point of failure
- ❑ In the future there will be multiple architectures: SW2SW, point-to-point exchanges, ePhyto Hub, ASEAN SW, EU TRACES Hub, Blockchain permit exchanges, **..**

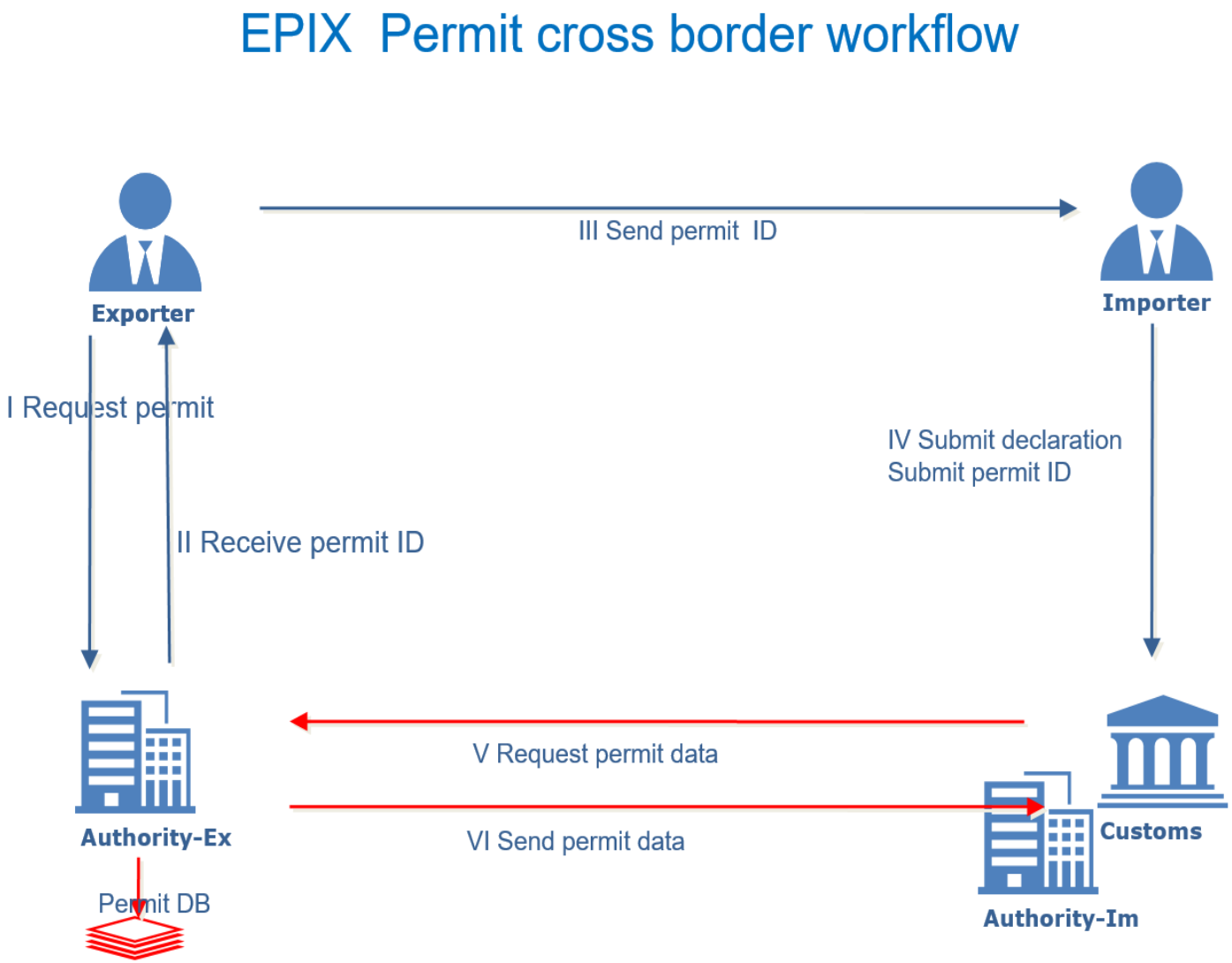
Conclusion from the feasibility study:

- ❑ In any case we need standards for EPIX exchange
- ❑ At them moment P2P is the easiest and cheapest solution, so let,s go with this

➔ Decision: For now we focus on P2P standards, Parties are free to choose their own architecture

The very basics of an EPIX message exchange

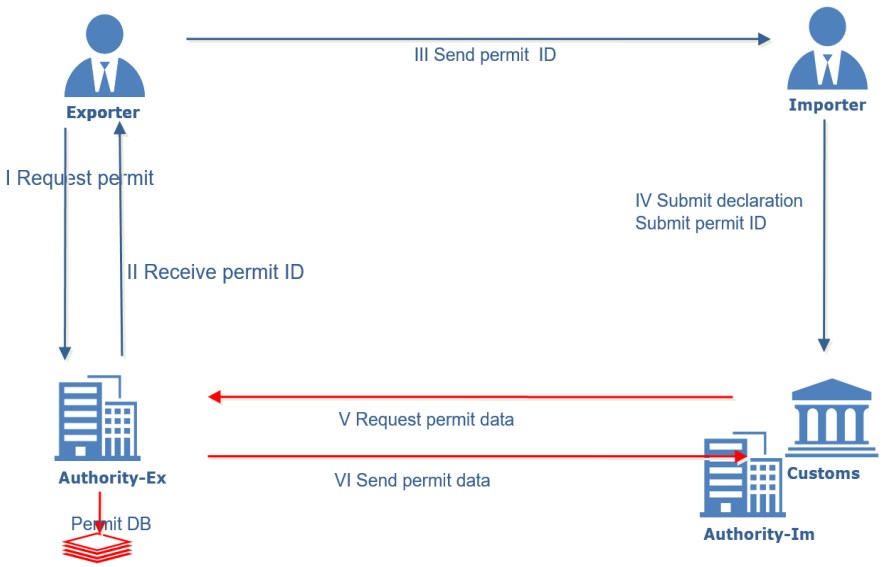
EPIX - Steps in a P2P permit exchange



Simplified Model of the Permit exchange process (cont)

- Exporter request permit
- MA-Ex issued permit and sends permit ID and optional paper/PDF copies of the permit (no signature/seal) to Exporter
- .. and sends permit ID to importer
- Importer submits permit ID in the Customs declaration
- Customs notifies MA-Im. MA-Im sends permit request to MA-Ex
- Ma-Ex sends permit to MA-Im
- MA-Im sends permit to Customs

EPIX Permit cross border workflow



* electronic workflows/exchange in red

Conclusion I: EPIX Architecture: State of play in Q1 2020

- Currently all pilots are P2P under the leadership of Switzerland
- In the near future more Parties will implement P2P exchanges
- In the more distant future Parties may choose to implement in addition other architecture/exchange mechanisms such as P2P, Hubs (EU SW Hub, WTO STDF ePhyto Hub, ASEAN SW Hub, ..) Blockchains, ..
- A likely outcome is not a single exchange platform/technology but rather a mix of different solutions. This situation will be dynamic, i.e will evolve as new technologies and experiences become available
- CITES CoP is not likely to recommend a single exchange architecture or system
- UN/CEFACT standards and guidelines support and will continue to support different architectures

➔ This workshop will focus on P2P architectures only

➔ We will monitor requirements and need for compatibility with Hub solutions

➔ Parties interested in Blockchain for EPIX should follow up on the current research and pilot projects in UN/CEFACT

➔ ESCAP countries should participate in the ESCAP framework agreement on cross border exchange of electronic trade information

Basics of the CITES ePermitting Toolkit

CITES ePermitting Toolkit

- If two MAs want to exchange an electronic permit they need to agree on the structure of the information that is exchanged
- This structure is defined in the ePermitting Toolkit
- This work was done by UN/CEFACT experts
- How did we develop the electronic data structure of the CITES permit?

➔ Three Steps

1. Use a well structured paper permit with a definition for every data element
2. For each data element describe a logic structure
3. Define how the logic structure is expresses in a computer language (the syntax)

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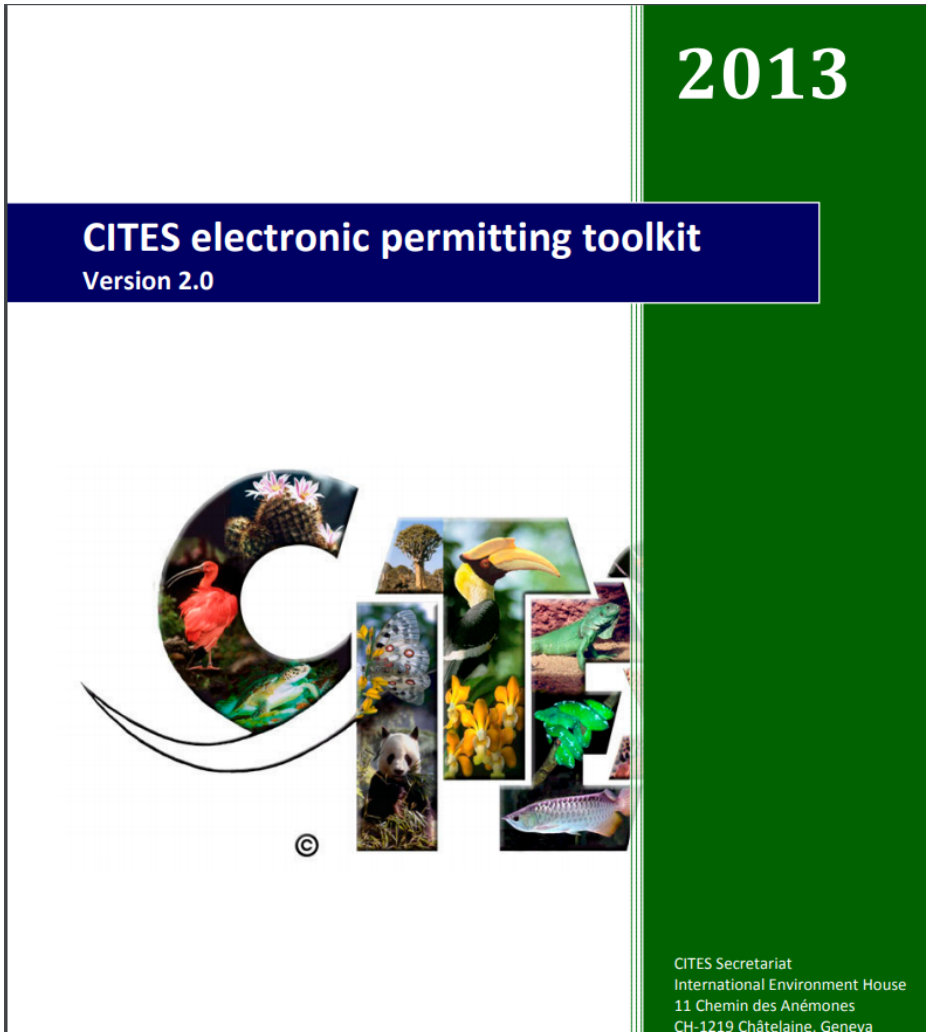
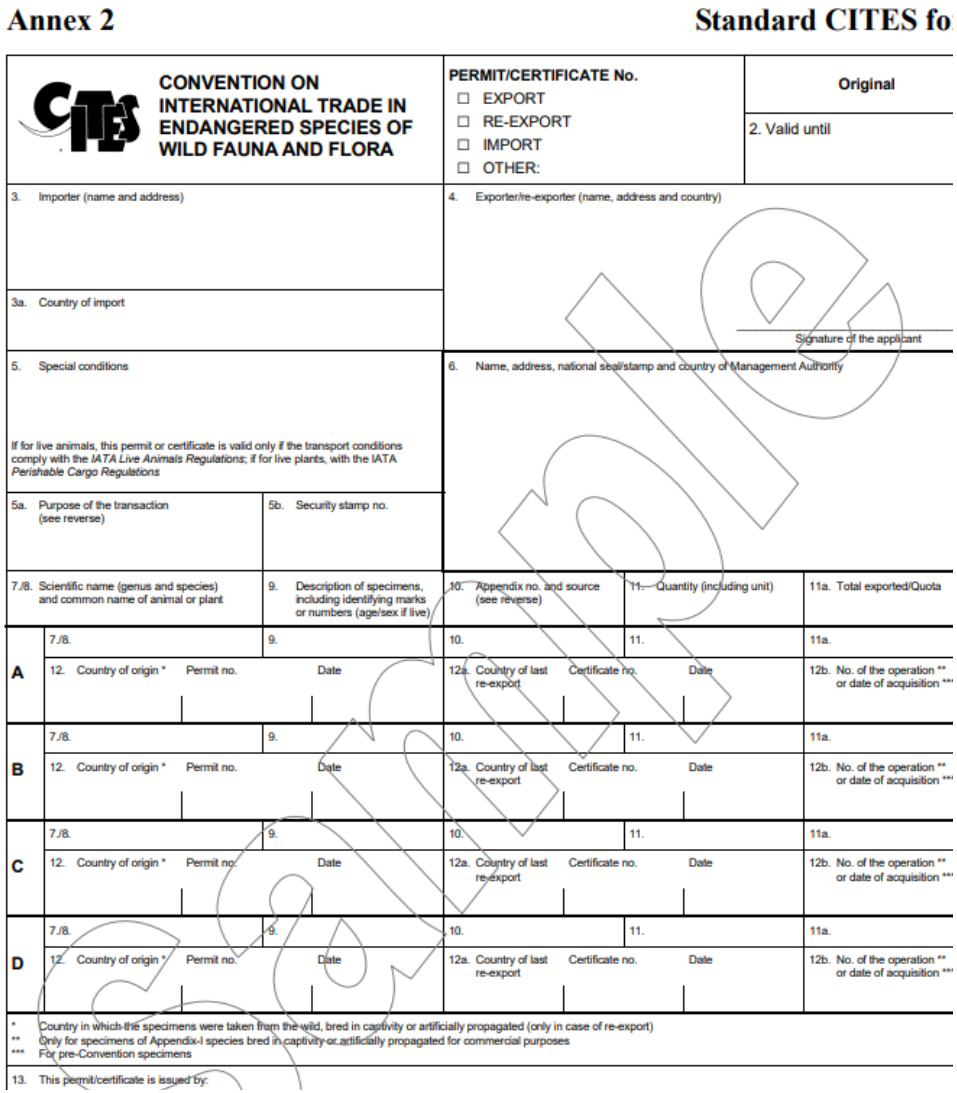
From a paper permit to an electronic permit
Step 1 A well-structured paper permit





Annex 2 **Standard CITES fo**

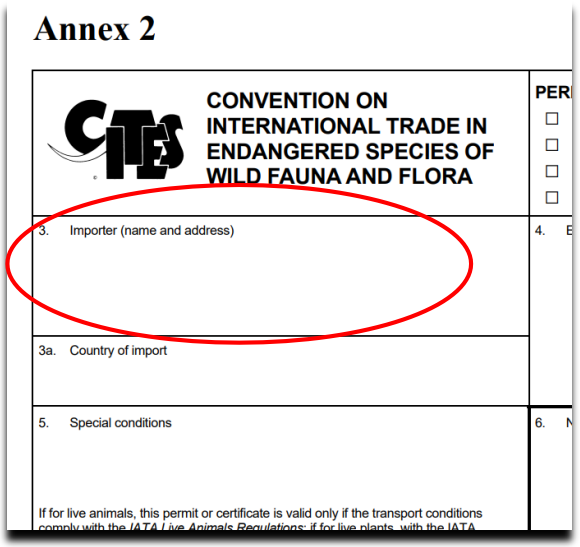
CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA			**PERMIT/CERTIFICATE No.** ☐ EXPORT ☐ RE-EXPORT ☐ IMPORT ☐ OTHER:		**Original** 2. Valid until
3. Importer (name and address) 3a. Country of import			4. Exporter/re-exporter (name, address and country) Signature of the applicant		
5. Special conditions If for live animals, this permit or certificate is valid only if the transport conditions comply with the *IATA Live Animals Regulations*; if for live plants, with the IATA *Perishable Cargo Regulations*			6. Name, address, national seal/stamp and country of Management Authority		
5a. Purpose of the transaction (see reverse)	5b. Security stamp no.				
7./8. Scientific name (genus and species) and common name of animal or plant	9. Description of specimens, including identifying marks or numbers (age/sex if live)	10. Appendix no. and source (see reverse)	11. Quantity (including unit)	11a. Total exported/Quota	
A 7./8.	9.	10.	11.	11a.	
A 12. Country of origin * Permit no. Date		12a. Country of last re-export Certificate no. Date		12b. No. of the operation ** or date of acquisition ***	
B 7./8.	9.	10.	11.	11a.	
B 12. Country of origin * Permit no. Date		12a. Country of last re-export Certificate no. Date		12b. No. of the operation ** or date of acquisition ***	
C 7./8.	9.	10.	11.	11a.	
C 12. Country of origin * Permit no. Date		12a. Country of last re-export Certificate no. Date		12b. No. of the operation ** or date of acquisition ***	
D 7./8.	9.	10.	11.	11a.	
D 12. Country of origin * Permit no. Date		12a. Country of last re-export Certificate no. Date		12b. No. of the operation ** or date of acquisition ***	

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix-I species bred in captivity or artificially propagated for commercial purposes
*** For pre-Convention specimens

13. This permit/certificate is issued by:

From a paper permit to an electronic permit

Step 2From paper to a logic structure (CEFACT CCL)



Annex 2

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

PER ☐ ☐ ☐ ☐

3. Importer (name and address)

4.

3a. Country of import

5. Special conditions

6.

If for live animals, this permit or certificate is valid only if the transport conditions comply with the *IATA Live Animals Regulations*; if for live plants, with the IATA

Element/Attribute	Annotation	
ID	Cardinality	0..1
	Type	udt:IDType
	WhiteSpace	collapse
	CITES Permit Information	
	Box/Field	Box 3 (ID)
	Cardinality	0:1
	Description	Box Heading: Importer
Name	Cardinality	0..1
	Type	udt:TextType
	CITES Permit Information	
	Box/Field	Box 3 (Name)
	Cardinality	0:1
	Description	Box Heading: Importer
PostalTradeAddress	Cardinality	0..1
	Type	ram:TradeAddressType
xsd:sequence	Cardinality	1..1
PostcodeCode	Cardinality	0..1
	Type	udt:CodeType
	WhiteSpace	collapse
	CITES Permit Information	
	Box/Field	Box 3 (Postcode)
	Cardinality	0:1
	Description	Box Heading: Importer
StreetName	Cardinality	0..1
	Type	udt:TextType
	CITES Permit Information	
	Box/Field	Box 3 (Street name)
	Cardinality	0:2
	Description	Box Heading: Importer
CityName	Cardinality	0..1
	Type	udt:TextType

From a paper permit to an electronic permit – Step 3 From logic structure (CCL) to XML

Element/Attribute	Annotation	
ID	Cardinality	0..1
	Type	udt:IDType
	WhiteSpace	collapse
	CITES Permit Information	
	Box/Field	Box 3 (ID)
	Cardinality	0:1
	Description	Box Heading: Importer
Name	Cardinality	0..1
	Type	udt:TextType
	CITES Permit Information	
	Box/Field	Box 3 (Name)
	Cardinality	0:1
	Description	Box Heading: Importer
PostalTradeAddress	Cardinality	0..1
	Type	ram:TradeAddressType
xsd:sequence	Cardinality	1..1
PostcodeCode	Cardinality	0..1
	Type	udt:CodeType
	WhiteSpace	collapse
	CITES Permit Information	
	Box/Field	Box 3 (Postcode)
	Cardinality	0:1
	Description	Box Heading: Importer
StreetName	Cardinality	0..1
	Type	udt:TextType
	CITES Permit Information	
	Box/Field	Box 3 (Street name)
	Cardinality	0:2
	Description	Box Heading: Importer
CityName	Cardinality	0..1
	Type	udt:TextType
	CITES Permit Information	
	Box/Field	Box 3 (City name)
	Cardinality	0:1
	Description	Box Heading: Importer
CountryID	Cardinality	0..1
	Type	qdt:CountryIDType
	WhiteSpace	collapse
	CITES Permit Information	
	Box/Field	Box 3 (Country Id)
	Cardinality	0:1
	Description	Box Heading: Importer
schemeID	Type	xsd:token

```
</xs:complexType>
- <xs:complexType name="TradePartyType">
  - <xs:sequence>
      <xs:element name="ID" minOccurs="0" type="udt:IDType" maxOccurs="unbounded"/>
      <xs:element name="Name" minOccurs="0" type="udt:TextType"/>
      <xs:element name="PostalTradeAddress" minOccurs="0" type="ram:TradeAddressType"/>
      <xs:element name="SpecifiedRepresentativePerson" minOccurs="0" type="ram:RepresentativePersonTy
      <xs:element name="SpecifiedAuthoritativeSignatoryPerson" minOccurs="0" type="ram:AuthoritativeSig
    </xs:sequence>
</xs:complexType>
```

CITES ePermitting Toolkit – for IT managers

- The CITES eCERT data structure is based on a more general data structure: UN/CEFACT eCERT standard
- This standard is also used for
  - electronic SPS (IPPC Recommendation)
  - electronic agriculture Quality standard certificate
  - electronic agriculture Certificate of Origin
  - can be used for other agriculture permits (Halal, ..)

➔ This means that the data structure of the “Exporter” in the eSPS and in the eCITES message are the same

➔ You can electronically validate an eSPS against an eCITES

- eCITES is compatible with CoP18 recommendations for CITES traceability

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CITES ePermitting Toolkit – for IT experts

When using the eCITESToolkit:

1. Chapter 3 is for information only, chapter 4 (CITES Toolkit Annex), page 33 ff is mandatory
2. EPIX uses the XML Schema of the ePermit Core Component Data Model V2.0 (Chapter 4.2) of UN/CEFACT
3. For information there is also a mapping to the WCO Data Model (Chapter 4.3) which is NOT used for EPIX
4. The eCERT XML Schema can be downloaded from
   https://cites.org/sites/default/files/eng/prog/e/CITESEPermit_2p0_xsd.zip

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Thank you!

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