



UNNExT Task Force on Cross-border Electronic Data Exchange: Northeast Asia – Lessons learnt and demonstration of electronic data exchange

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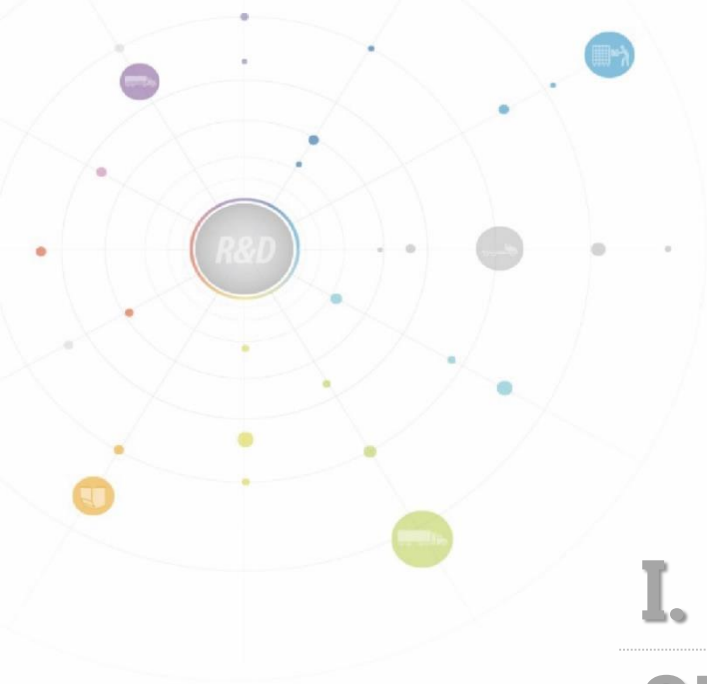
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I. UNNExT Task Force on Cross-border Electronic Data Exchange: Northeast Asia – Lessons leant

Objectives

- To work towards improving readiness for exchanging trade related data electronically across borders for better regulatory compliance and improved trade facilitation

Main Activities

- Analyze processes that can be streamlined through electronic data exchange,
- Identify and prioritize data elements that can be exchanged electronically,
- Design practical mechanism for electronic data exchange, and
- Verify feasibility of electronic data exchange through proof of concept/pilot-based approach.

Activities Carried Out

- Business Process Reengineering (BPR)
 - Analyze current business processes and describe their details, including drawing UML diagrams and specifying challenges
- Data Harmonization
 - Define data elements of three documents (Customs Declaration, Cargo Manifest, and Certificate of Origin)
 - Map the defined data elements into a reference data model (WCO Data Model)
 - Develop XML Schema (to be done)
- Data Exchange between the participating countries
 - Pilot based exchange of Certificate of Origin between Mongolia and the Republic of Korea



Lessons Learnt

- **It should be understood that conceptual level understanding on cross-border electronic data exchange is different from actual implementation.**
- **Stepwise capacity building through training and exercise helps implementation.**
- **Need for data harmonization and business process modeling should be shared by all participants.**
- **Strong leadership of and support from management should be obtained.**
- **Close cooperation among the participating entities, including relevant international organizations, such as ESCAP and WCO, helps sustainability of an initiative.**



Requirements

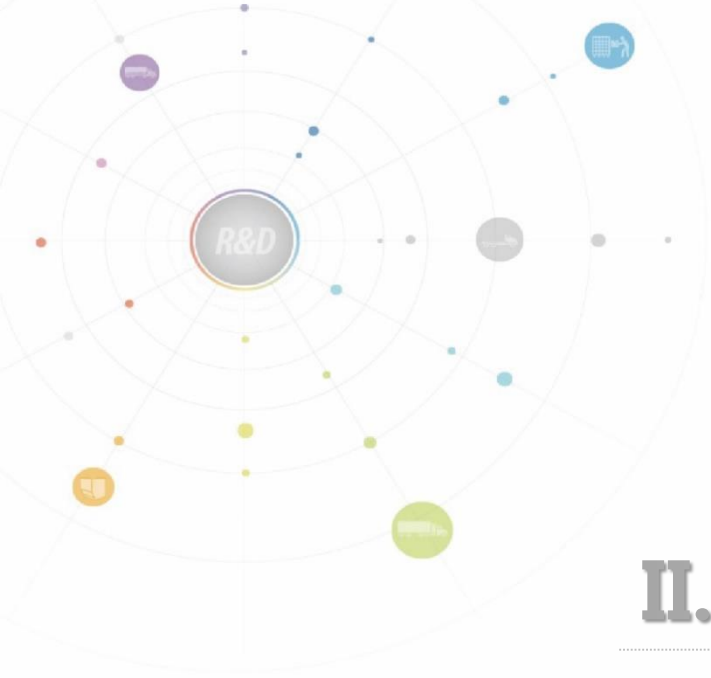
Correct definition of data element

Detailed process description, work flow

Team work among technical and domain experts in data harmonization

Capturing user requirements in advance

Interoperability consideration: use of international standard



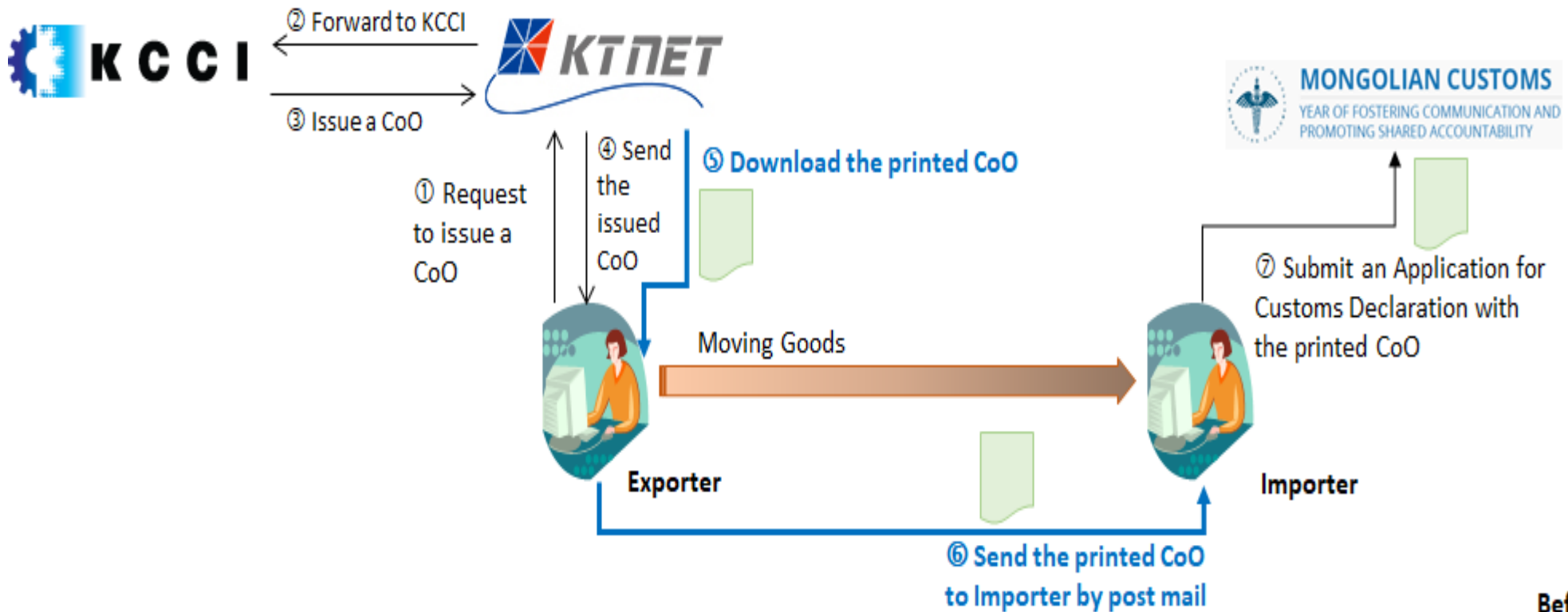
II. Demonstration

Purpose

- To facilitate Trade
- To secure the trade (minimizing illegal trade)
- To better manage risks
- To enhance effective Customs controls
- To promote paperless trade
- To improve their operations and mutual cooperation



Work Flow



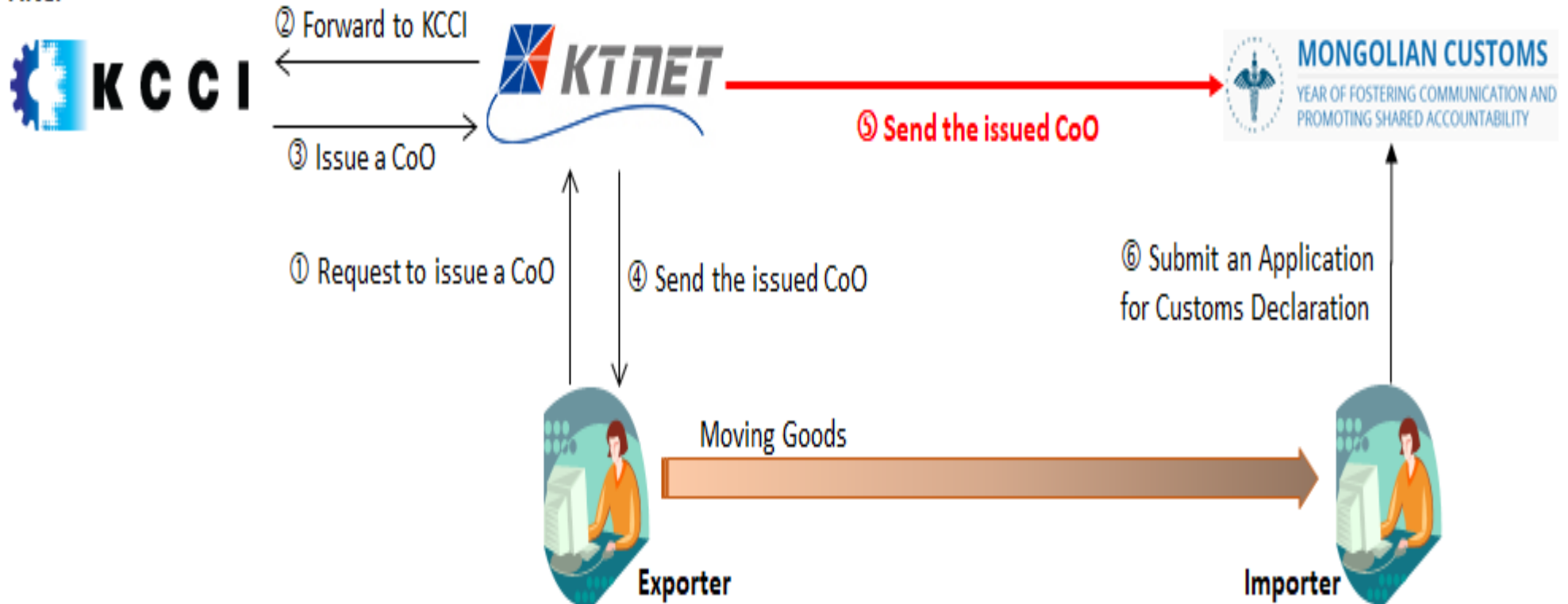
Before

Change from Work Flow

Before e-CO	After e-Co
<ul style="list-style-type: none">• Damage on paper document• Duplicate data input• Waste of resource for keeping paper documents	<ul style="list-style-type: none">• Do need to exchange paper document• Reduction of processing time and cost• Easier risk management• Potentially more business opportunity

Work Flow

After



Change from Work Flow

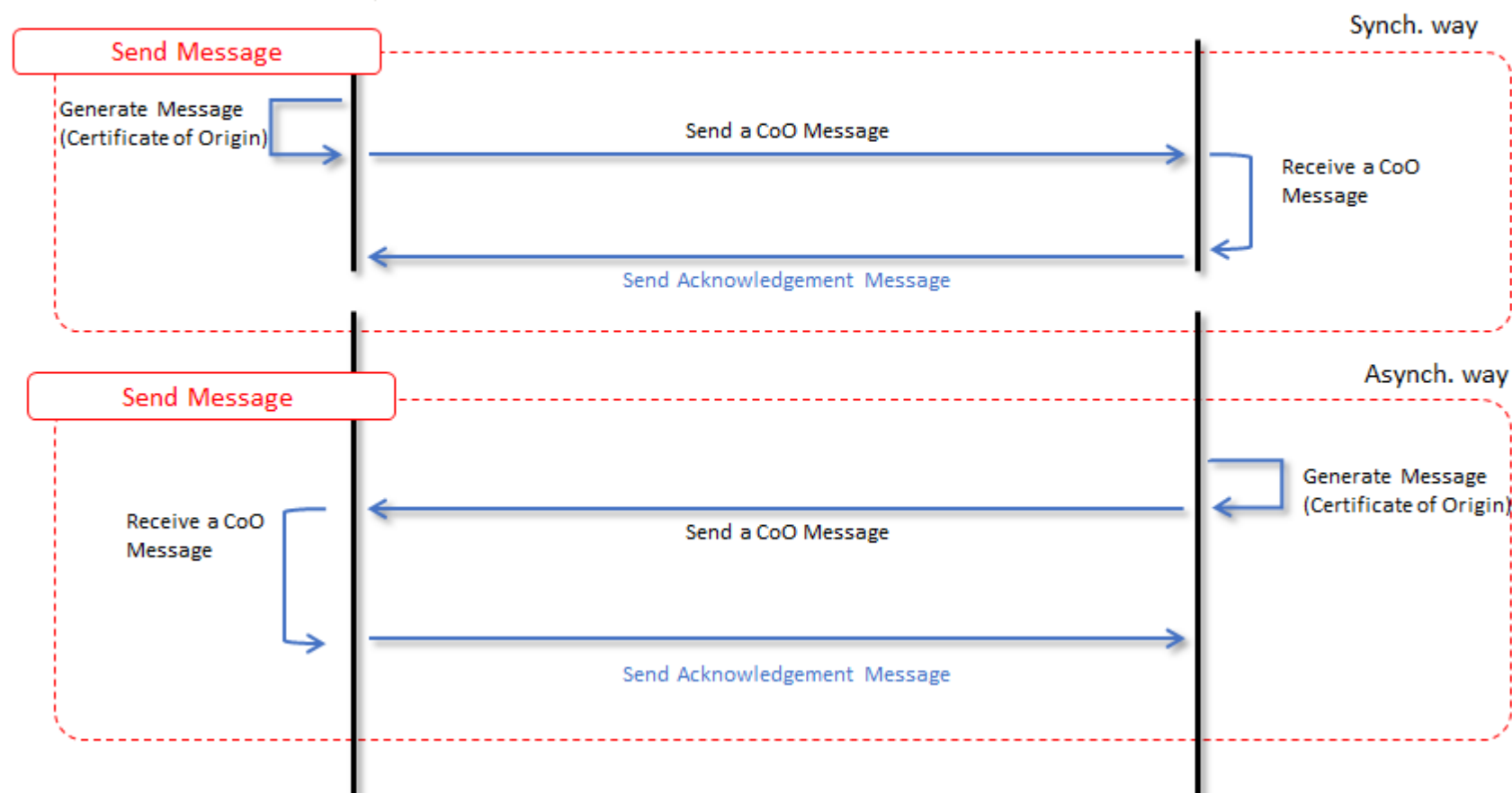
Before e-CO	After e-Co
<ul style="list-style-type: none">• Damage on paper document• Duplicate data input• Waste of resource for keeping paper documents	<ul style="list-style-type: none">• Do need to exchange paper document• Reduction of processing time and cost• Easier risk management• Potentially more business opportunity

Technical specification and standards used

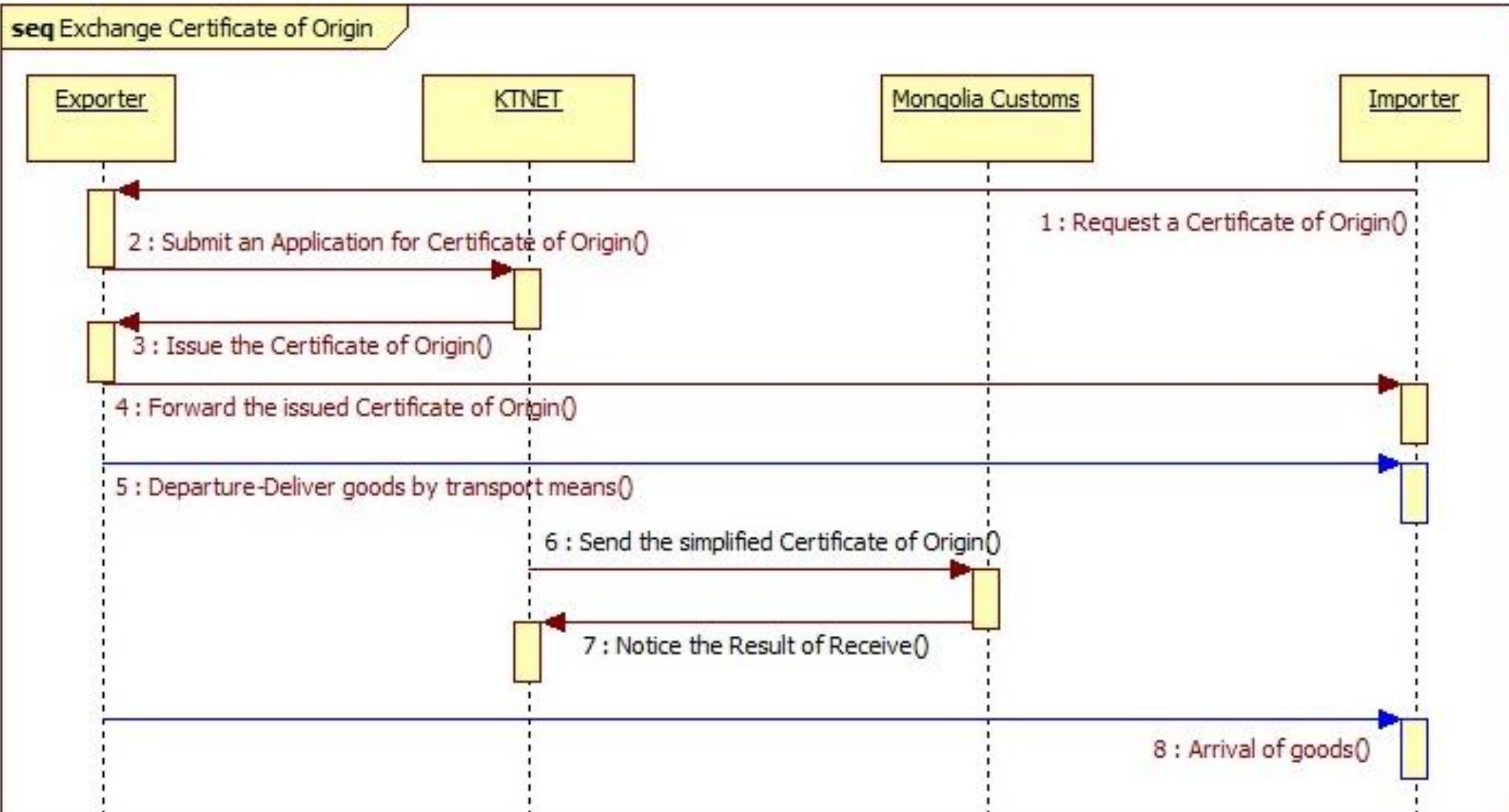
- Message
 - Name : Certificate of Origin (Non-preferential)
 - XML Schema based on OASIS UBL 2.0 (ISO 19845 V2.0)
- Communication Protocol
 - ebMS V2.0
 - Message Exchange Pattern (MEP) : REQUEST-RESPONSE



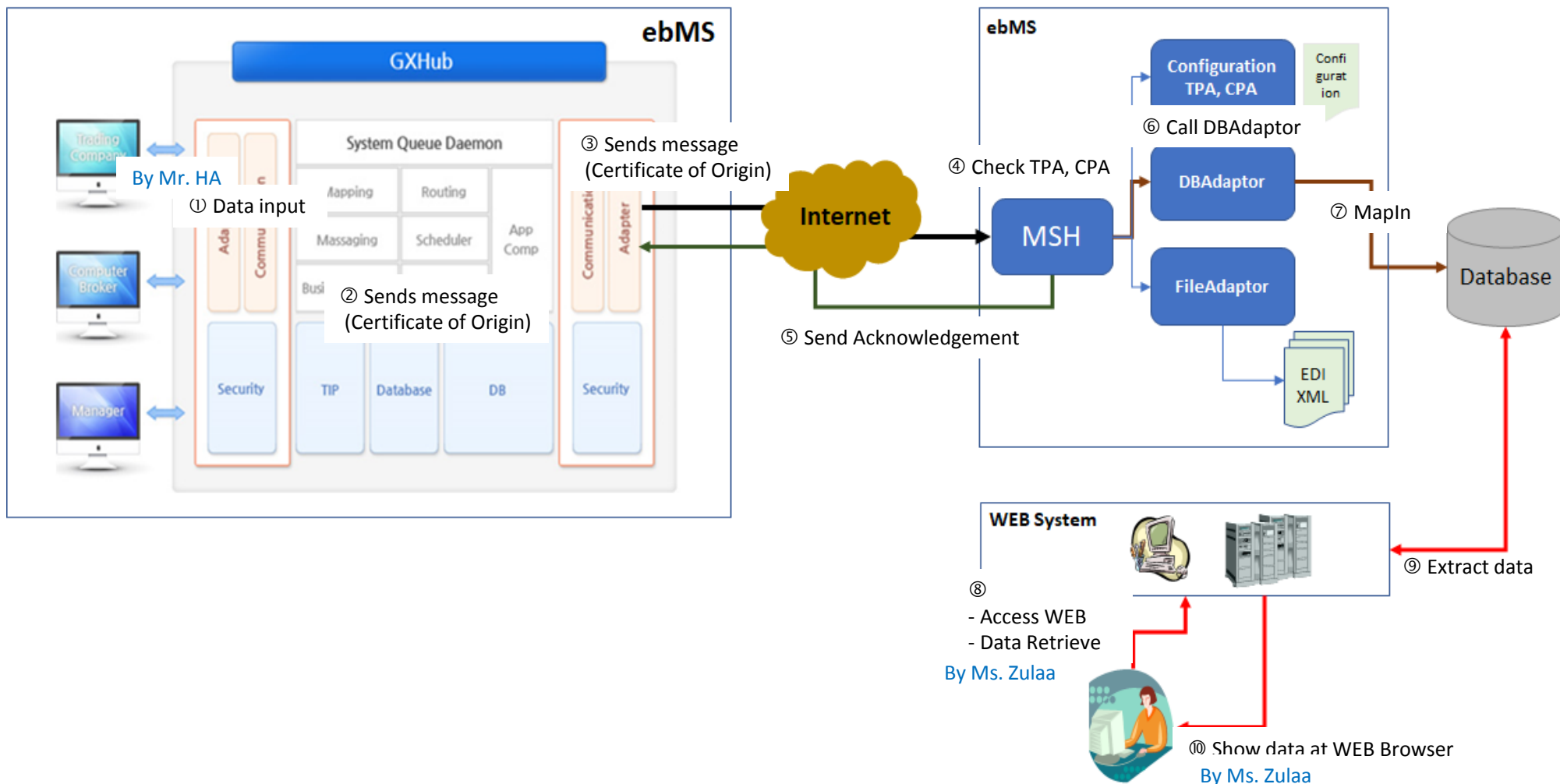
MEP



Exchange a Certificate of Origin



Demonstration Scenario



Demonstration Scenario

https://global.utradehub.or.kr:447/ - Korea E-Trade Portal - Internet Explorer

GLOBALECO1 Logout uTradeHub KTNET Quick Link

Service Intro e-C/O Board My Page

Steps Recorder - Recording Now
Pause Record Stop Record Add Comment

e-C/O

원산지 증명 발급 신청
증명 발급 신청 조회
증명 발급 확인 및 전송
신청 오류 내역
e-C/O 전송 내역

HOME > e-C/O > 증명 발급 확인 및 전송

e-C/O 생성 목록 인쇄 도움말 ?

증명 발급 확인 및 전송

기본정보

문서명	Certification of Origin	문서기능	Original
문서번호	CERTIF-20190311000010	발행일자	2019-03-11
송신자 ID	KCCIEDI	수신자 ID	UTH000137920

전자서명

발행기관 & 전자서명	기관명	KCCI	
	대표자명	Tester	
	주소	Test splace Test-Gu, Seoul	
	전자서명	7778889990	
발행번호	010-19-20190311	인증코드	TEST123312
신청번호	APPROG20190311800000010		

추가정보

e-C/O 생성 목록 인쇄

원산지 찾기

국가코드 KR

국가명 The Republic of Korea

거래처 찾기

운송정보

비고

선택지

송장번호

D Global e-CO



http

Recipient ID * Select

전송

목록

General Information

도움말 ?

Document Name	e-CO	Message Function *	Original
Document No. *	ECO201903140002	Document Date *	20190314
Sender ID *	UTH0001379202		

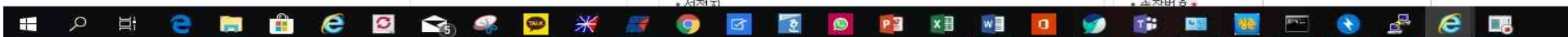
Certification Information

도움말 ?

Endorser	Endorser	TEST123312 KCCI	Signatory Name	7778889990
	Address	Test splace Test-Gu, Seoul	City Name	
	Country	- Select -		
Contact	Contact Name		Dept. Name	
Certification No.		010-19-20190311		
Certification Date		20190311		
Country of Origin	Country Code *	KR	Country name *	The Republic of Korea

문송정보

비고



Demonstration Scenario

https://global.utradehub.or.kr:447/ - Korea E-Trade Portal - Internet Explorer

GLOBAL ECO1 Logout uTradeHub KTNET Quick Link

e-C/O 전송내역

HELP ?

발행일자 ~

문서번호 In / Out


문서번호	발행일자	수신자 ID	원산지증명서 발급번호	In/Out	전송상태	수신상태
ECO201903140001	2019-03-14	CUSTOMS.GOV.MN	010-19-20190311	OUT	WAITING	WAITING
ECO201903120001	2019-03-12	CUSTOMS.GOV.MN	004-19-20190311	OUT	WAITING	WAITING
ECO201903110002	2019-03-11	CUSTOMS.GOV.MN	000-19-20190311	OUT	WAITING	WAITING
ECO201903110001	2019-03-11	ECO.CUSTOMS.GOV.MN	000-19-20190311	OUT	WAITING	WAITING

문송정보 비교

Demonstration Scenario

```
altankhuyag x +
ceps.ecustoms.mn - SecureCRT
Home Actions View Communicate Files & Extras
[2019-03-14 15:49:21,834] [Thread-4] [INFO] com.ktnet.gmate.msh.ms_v20.server.RetryHandler (RetryHandler.java 97) - Polling the uncompleted messages : 0
[2019-03-14 15:51:23,374] [http-8080-5] [INFO] com.ktnet.gmate.msh.EbEnabler (EbEnabler.java 66) - Receiving ebXML message from 203.242.162.41
[2019-03-14 15:51:23,469] [http-8080-5] [INFO] com.ktnet.gmate.msh.EbEnabler (EbEnabler.java 89) - Process Start : &lt;9079fccc-8a51-4d9e-8e1f-374eb9296119&gt;
[2019-03-14 15:51:28,068] [Thread-5] [INFO] com.ktnet.gmate.msh.ms_v20.server.InboundServer (InboundServer.java 87) - Starting the inbound processing
InboundBuf Id : 2440407919381585
Message Id : null
[2019-03-14 15:51:28,070] [Thread-5] [INFO] com.ktnet.gmate.msh.ms_v20.server.InboundServer (InboundServer.java 99) - Finishing the inbound processing
InboundBuf Id : 2440407919381585
Message Id : null
[2019-03-14 15:51:28,070] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.routing.AsyncInboundProcessor (AsyncInboundProcessor.java 92) - ebXML Business Message has been received. MessageId = 9079fccc-8a51-4d9e-8e1f-374eb9296119
[2019-03-14 15:51:28,097] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.routing.CommonMessageProcessor (CommonMessageProcessor.java 135) - Storing the message : 9079fccc-8a51-4d9e-8e1f-374eb9296119
[2019-03-14 15:51:28,105] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.router.listener.MSHReceiver (MSHReceiver.java 50) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Message received from MSH
[2019-03-14 15:51:28,105] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.router.listener.MSHReceiver (MSHReceiver.java 51) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Document count : 1
[2019-03-14 15:51:28,105] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.router.util.RoutingUtil (RoutingUtil.java 115) - DELIVER Message To Gmate Router.
[2019-03-14 15:51:28,105] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.InboundRouter (InboundRouter.java 63) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Inbound processing start.
[2019-03-14 15:51:28,105] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.routing.AsyncInboundMessageProcessor (AsyncInboundMessageProcessor.java 89) - Sending the Acknowledgment Message. Message Id : 9079fccc-8a51-4d9e-8e1f-374eb9296119
[2019-03-14 15:51:28,108] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.InboundRouter (InboundRouter.java 81) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : 1'th Payload processing start.
[2019-03-14 15:51:28,108] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 57) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Document is now being parsed
[2019-03-14 15:51:28,109] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.routing.SignalSenderThread (SignalSenderThread.java 79) - Sending ACK tohttp://203.242.255.42:9090/ebxml20/servlet/EbEnabler
[2019-03-14 15:51:28,112] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 64) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Sender ID : UTH0001379202
[2019-03-14 15:51:28,112] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 65) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Receiver ID : CUSTOMS.GOV.MN
[2019-03-14 15:51:28,112] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 66) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Document Name : ECO
[2019-03-14 15:51:28,112] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 67) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Document Version : ECO V1.0
[2019-03-14 15:51:28,112] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 68) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Document Number : ECO201903140002
[2019-03-14 15:51:28,127] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.transport.MessageTransport (MessageTransport.java 89) - Sending message to http://203.242.255.42:9090/ebxml20/servlet/EbEnabler
[2019-03-14 15:51:28,128] [pool-2-thread-55] [WARN] org.apache.commons.httpclient.HttpMethodDirector (HttpMethodDirector.java 288) - Required credentials not available for BASIC <any realm>@203.242.255.42:9090
[2019-03-14 15:51:28,128] [pool-2-thread-55] [WARN] org.apache.commons.httpclient.HttpMethodDirector (HttpMethodDirector.java 290) - Preemptive authentication requested but no default credentials available
[2019-03-14 15:51:28,167] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.InboundRouter (InboundRouter.java 139) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Service [XSL Transform] start.
[2019-03-14 15:51:28,169] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.service.xml.XSLT (XSLT.java 156) - Skip DTD loading
[2019-03-14 15:51:28,206] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.InboundRouter (InboundRouter.java 161) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Sent to db_adapter
[2019-03-14 15:51:28,206] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 118) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : backup file to /u01/getmate/gmate/data/documents/success/inbound/201903/14/UTH0001379202/E
cod18b690f5a76236f6bec782fe3e0e5eb_0.doc
[2019-03-14 15:51:28,207] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.Router (Router.java 118) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : backup file to /u01/getmate/gmate/data/documents/success/inbound/201903/14/UTH0001379202/E
cod18b690f5a76236f6bec782fe3e0e5eb_1.doc
[2019-03-14 15:51:28,219] [pool-3-thread-19] [INFO] com.ktnet.gmate.msh.router.InboundRouter (InboundRouter.java 171) - 9079fccc-8a51-4d9e-8e1f-374eb9296119 : Inbound processing end.
[2019-03-14 15:51:28,351] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.transport.HTTPTransport (HTTPTransport.java 89) - Succeeded in sending the message to http://203.242.255.42:9090/ebxml20/servlet/EbEnabler
[2019-03-14 15:51:28,353] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.transport.MessageTransport (MessageTransport.java 141) - Response Code : 200
Response Message : OK
[2019-03-14 15:51:28,355] [pool-2-thread-55] [INFO] com.ktnet.gmate.msh.ms_v20.routing.AsyncInboundProcessor (AsyncInboundProcessor.java 95) - Process end : 9079fccc-8a51-4d9e-8e1f-374eb9296119
Default
Ready
ssh2: AES-256-CTR | 68, 1 | 68 Rows, 236 Cols | VT100 | CAP | NUM
3:53 PM
3/14/2019
```

Demonstration Scenario


Mongolian Customs General Administration

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 |
 |

HOME (Clearance) > Company & License > License Management > **CO Certification**

License List

Certification number		Consignee					
<input type="text"/>		<input type="text"/>		<input type="button" value="Хайх"/>			
No	Certification number	Document Name	Seller Party	Consignee	Total Quantity	Tot Amount	Certification Date
1	ECO200905200001	ECO	MEANSUN INTERNATIONAL LIMITED.	SHINE FOOD CORPORATION	1050 CT	11550 USD	2019-03-11
2	ECO200905200002	ECO	SAMSUNG LIMITED.	SAMSUNG CORPORATION	2000 CT	15000 USD	2019-03-11
3	ECO200905200033	ECO	TEST LIMITED.	DAEWOO	1200 CT	12000 USD	2019-03-11
4	ECO200905200005	ECO	MEANSUN INTERNATIONAL LIMITED.	HANIL	1500 CT	5000 USD	2019-03-11
5	ECO200905200004	ECO	MEANSUN INTERNATIONAL LIMITED.	NATURE FOOD CORPORATION	500 CT	2500 USD	2019-03-11
6	ECO200905200006	ECO	MEANSUN INTERNATIONAL LIMITED.	SHINE FOOD CORPORATION	1050 CT	2000 USD	2019-03-11
7	ECO200905200007	ECO	MEANSUN INTERNATIONAL LIMITED.	SHINE FOOD CORPORATION	1050 CT	11550 USD	2019-03-11
8	ECO200905200008	ECO	MEANSUN INTERNATIONAL LIMITED.	SHINE FOOD CORPORATION	1050 CT	11550 USD	2019-03-11

Бүгд 20 бичлэг 1 / 2 хуудас

01 | 02

Welcome!
Мөнхзул
111241 / 01800

ГАРАХ

User Infor Modification

Company & License

Trader List

Ирээдүйн өв сан ААН бүртгэл

Customs Broker List

Quota List

null

Certification for Procedure
Code 507

O.G.A List

Bank List

Procedure List

Account of Bank Management
List

Customs Broker Education

Дансны жагсаалт(төлбөрийн
хэлбэрээр)

Discount Code List

Standart

MFN Management

License Management

- CO Certification
- License Management

Demonstration Scenario



НҮҮР | Тарал үүсгэвэр | Хувилбар | НҮСД



Mongolian Customs
General Administration

Clearance ▾

Clearance | null | Tariff Rate | Company & License

Welcome!
Мөнхзүл
111241 / 01800

ТАРАХ

[User Infor Modification](#)

Company & License

Trader List

Ирээдүйн өв сан ААН бүртгэл

Customs Broker List

Quota List

null

Certification for Procedure
Code 507

O.G.A List

Bank List

Procedure List

Account of Bank Management
List

Customs Broker Education

Дансны жагсаалт(төлбөрийн
хэлбэрээр)

Discount Code List

Standart

MFN Management

License Management

- CO Certification
- License Management

HOME (Clearance) > Company & License > License Management > CO Certification

CO Certification Detail

[Go List](#)

Document Name	ECO		
Document No	ECO200905200001	Document Date	
Sender ID	KTNET	Invoice No	MSI-090312
Certification number	001-09-0238501	Certification Date	2019-03-11
Country of Origin	KR	Country of Origin	KOREA, REPUBLIC OF / R.KOREA KRW
Seller Party	Company Name	MEANSUN INTERNATIONAL LIMITED.	
	Address 1	1F,227-2,YANNAM-DONG, MAPO-GU,	
	Address 2	SEOUL, KOREA	
Consignee	Company Name	SHINE FOOD CORPORATION	
	Address 1	6FL, NO.86 SEC.2 CHIEN KUO N.RD.	
	Address 2	TAIPEI TAIWAN R.O.C.	
Load Place	BUSAN	Unload Place	KAHHSIUNG
Item Information	Total Quantity	1050 CT	
	Total Net Weight	15750 KGM	
	Tot Weight		
	Tot Amount	11550 USD	

Items

No	Sequence	Item Quantity	Gross Weight	Net Weight	Invoice Amount	Goods Name
1	1	1050 CT	17850 KGM	15750 KGM	11550 USD	CHINESE CABBAGE

Expected Benefits and Future Direction

- Expected Benefits
 - Enabling advance sharing of information with user(s)
 - Better risk management
 - Facilitation of new business model development
- Future Direction
 - Define work flow and scope of business processes
 - Agree on business processes among the participating entities
 - Initiate a real service
 - Expand the scope of business





감사합니다.

Thank you