



iSurf eDoCreator: e-Business Document Design and Customization Environment

SRDC Ltd.

<http://www.srdc.com.tr/>

iSurf eDoCreator

- The main challenge in using UN/CEFACT CCTS based approaches is that the document artifacts are stored in spreadsheets and this makes it very difficult to discover the previously defined components and to check their consistency.
- Furthermore, Universal Business Language (UBL) provides detailed text-based descriptions of customization mechanisms. However without automated tool support, it is difficult to apply the customization and to maintain the consistency of the customizations.

iSURF eDoCreator tool addresses these problems by providing an online common UN/CEFACT CCTS based document component modeling repository which integrates the machine processable version of paper-based UBL customization guidelines. In this way, iSURF eDoCreator environment aims to maximize re-use of available document building blocks and minimize the tedious document design and customization efforts.

Overview of iSurf eDoCreator

- Online and 24/7 accessible graphical modeling environment :
Web based
- Integrates modeling approach of UN/CEFACT CCTS and UBL
 - Modeling: UN/CEFACT CCTS
 - Customization: UBL
- It is designed to aid the user in following these guidelines during the generation of standard-based and customized e-business documents.
- Common, standard based, and evolving repository architecture
 - all of the BIEs in the common library of UBL 2.0
 - all the BIEs of the UN/CEFACT Cross Industry Electronic Invoice (CII)
 - all the BIEs of NES and UBL-TR

Features

- Graphical modeling of standard-based document artifacts
 - Modification of components
 - Compatible Customization
 - Conformant Customization
 - A warning mechanisms : In case an action invalidating the Conformance Design Rules is taken by the user, the tool pops a warning
 - Creation of components from scratch by assembling available document building blocks
 - Message Assemblies
 - Aggregate Business Information Entities
 - Basic Business Information Entities
 - Creating Qualified Data Types
 - Customizing an existing one
 - Qualifying a Unqualified Data Type

Features

- Presentation of document building blocks' structure and information content
- Discovery of document building blocks through graphical queries
- Accessibility and sharing of components via the repository
- Delete a document building block that you created
- Generation of XSD files of the document model accompanied with some informative supporting materials such as genericcode files and spreadsheets
- Uploading document models from either .ods or .xls spreadsheets.
- Specifying groups and users to which the document models are visible.
- Comparing two customizations of UBL document schemas to create Gap Analysis report.



Create Document Artifact Import Manage Groups Tools

Welcome srdc !..

Logout

Message Assembly

Aggregate Business Information Entities

Basic Business Information Entities

Qualified Data Types

Unqualified Data Types

Dictionary Entry Name	Status	Version	Owner	Creation Date	Customization ID	Profile ID
Application Response. Details	Committed	2.0	NES	2006-12-12	UBL-NES	8
Application Response. Details	InPreparation	2.0	srdc	2009-04-15	TR- SRDC	null
Attached Document. Details	Committed	2.0	OASIS	2006-12-12		
Bill Of Lading. Details	Committed	2.0	OASIS	2006-12-12		
Bill Of Lading. Details	Committed	2.1	srdc	2009-04-15	wert	null
Catalogue Deletion. Details	Committed	2.0	OASIS	2006-12-12		
Catalogue Item Specification Update. Details	Committed	2.0	NES	2006-12-12	UBL-NES	2
Catalogue Item Specification Update. Details	Committed	2.0	OASIS	2006-12-12		
Catalogue Pricing Update. Details	Committed	2.0	NES	2006-12-12	UBL-NES	2
Catalogue Pricing Update. Details	Committed	2.0	OASIS	2006-12-12		
Catalogue Pricing Update. Details	InPreparation	2.0	srdc	2009-04-15	tyu	
Catalogue Request. Details	Committed	2.0	OASIS	2006-12-12		
Catalogue. Details	Committed	2.0	NES	2006-12-12	UBL-NES	1
Catalogue. Details	Committed	2.0	NES	2006-12-12	UBL-NES	2
Catalogue. Details	Committed	2.0	OASIS	2006-12-12		
Certificate Of Origin. Details	Committed	2.0	OASIS	2006-12-12		
Credit Note. Details	Committed	2.0	NES	2006-12-12	UBL-NES	5
Credit Note. Details	Committed	2.0	OASIS	2006-12-12		
Credit Note. Details	Committed	2.0	NES	2006-12-12	UBL-NES	6

Filter:

Search Repository

Graphical Model

Conventional Model



spreadsheet assembly model

Document Model file



UBL Common Library file

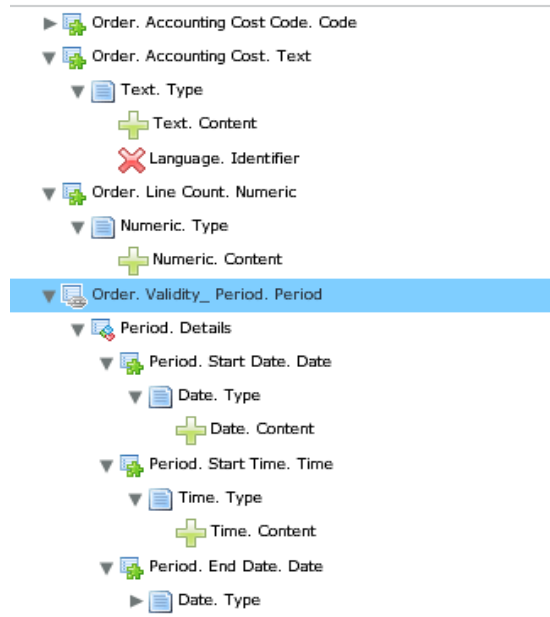


Qualified Data Type file



Unqualified Data Type

Document Designer



Dictionary Entry Name:	Order. Validity_Period. Period
UBL Name:	ValidityPeriod
Version:	2.0
Owner:	OASIS
Status:	Committed
Standart:	UBL
Minimum Cardinality:	0
Maximum Cardinality:	unbounded
Namespace:	urn:oasis:names:specification:ubl:schema:xsd:Order-2
Definiton:	The period for which the Order is valid.

With the properties of selected component such as definition, cardinality etc.

- Presents document artifacts in a single Russian Doll model as the tree expands

eDoCreator provides graphical modeling without dealing with spreadsheets or XSDs

Visualization of Document Artifacts

Aggregate Business Information

ABIE's | My Documents | My BBIE's

Tree View of the ABIE

- Invoice, Details
 - Invoice, UBL Version Identifier, Identifier
 - Invoice, Customization Identifier, Identifier
 - Invoice, Profile Identifier, Identifier
 - Invoice, Identifier
 - Invoice, Copy_Indicator, Indicator
 - Invoice, UUID, Identifier

Properties of the Selected Item

Dictionary Entry Name: Invoice, Details

UBL Name: Invoice

Version: 2.0

Owner: OASIS

Status: Committed

Standart: UBL

Aggregate Business Information View

Basic Business Information Panel

BBIEs | my BBIEs | QDTs | UDTs

Tree View of the selected BBIE

- Invoice, Accounting Cost, Text
 - Text, Type
 - Text, Content
 - Language, Identifier

Properties of the selected BBIE

Dictionary Entry Name: Invoice, Accounting Cost, Text

Object Class Term: Invoice

Property Term Qualifier:

Property Term: Accounting Cost

Version: 1.0

Definition: The Buyer's accounting cost centre applied to the Invoice as a whole, expressed as text.

Basic Business Information View

Data Type Panel

Qualified DTs | Unqualified DTs | my Data Types

Tree View of the Data Type

- Sound, Type
 - Sound, Content
 - Sound, Format, Text
 - Sound, Mime, Code
 - Sound, Encoding, Code
 - Sound, Uniform Resource, Identifier
 - Sound, Filename,Text

Properties of the Selected Data Type

Dictionary Entry Name: Sound, Type

UBL Name: SoundType

Qualifier Term:

Version: 1.0

Status: Committed

Standart: UBL

Owner: OASIS

Definition: A diagram, graph, mathematical curves, or similar representation.

Data Type View

Discovery of Document Artifacts

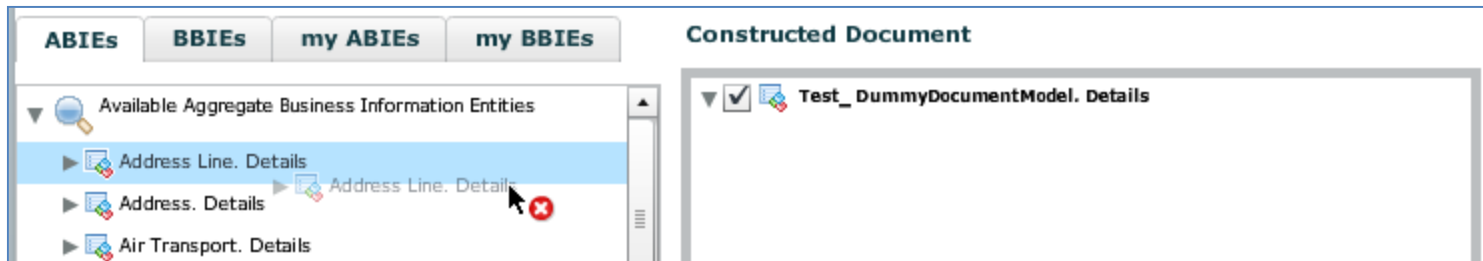
- Text based search : Increase sharing and reusability
- Allow specification of keywords on
 - Context values
 - Definition
 - Qualifiers
 - Dictionary entry names
 - Business Terms etc. based on document artifact type
- Logical connectors in query : “OR” vs “AND”
- Search result includes both standard document artifacts provided by UBL and standard-based document artifacts created by users
- Get results within few seconds in contrast to searching in spreadsheets

Dictio	Status	Owner	Creation Date
Trans	Committed	OASIS	2006-12-12
v0.1_Test. Text	Committed	fulya	
Waybill. UUID. Identifier	InPreparation	q	2009-02-18

Creation of Document Artifacts

- Assembling available document building blocks to a new document artifact in graphical model:

(1) Drag



(2) Set properties of conceptual model

Please fill in Association Business Information Entity properties.

Definition :

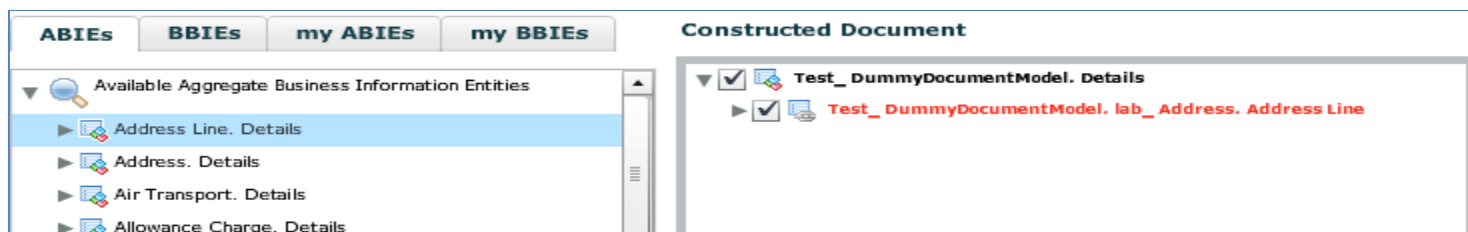
Property Term Qualifier :

Property Term :

Cardinality : -

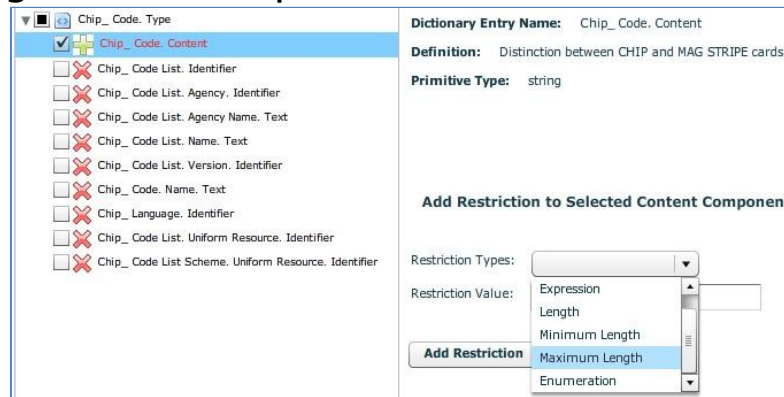
Set maximum cardinality "unbounded".

(3) Drop

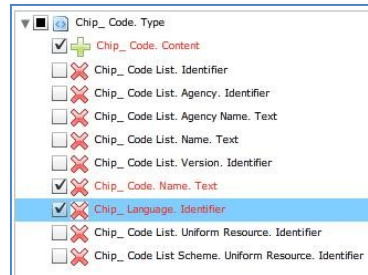


Creation of new QDT

- New QDTs can be created by
 - Qualification of UDTs
 - Further qualification of QDTs
- (1) Restricting content component : Add or Delete restrictions



(2) Subsetting supplementary components



- No new UDTs, it inherits UBL 2.0 UDTs

Conformant Customization

“A UBL conformant instance is an instance validating against customized document constraints while simultaneously validating against a UBL standard schema.”

UBL Customization Guidelines v1.0

Conformant Customization : 1

- Subsetting original document artifacts
 - Removing optional building blocks
 - Through check tree feature
 - Automatic removal of inner document artifacts from document schema

The image displays two side-by-side screenshots of a 'Customized Document' check tree interface. The left screenshot shows the 'Order. Quotation_ Document Reference. Document Reference' node expanded, with its sub-nodes checked. A blue arrow points from this node to the right screenshot. In the right screenshot, the 'Order. Quotation_ Document Reference. Document Reference' node is unchecked, and its sub-nodes are also unchecked, demonstrating the automatic removal of inner document artifacts.

Left Screenshot (Expanded):

- Order. Details
 - Order. UBL Version Identifier. Identifier
 - Order. Identifier
 - Identifier. Type
 - Order. Sales Order Identifier. Identifier
 - Identifier. Type
 - Order. Issue Date. Date
 - Order. Quotation_ Document Reference. Document Reference
 - Document Reference. Details
 - Document Reference. Identifier
 - Identifier. Type
 - Identifier. Content
 - Identification Scheme Data. Uniform Resource. Identifier
 - Identification Scheme. Uniform Resource. Identifier
 - Identification Scheme. Identifier
 - Identification Scheme. Name. Text
 - Identification Scheme Agency. Identifier
 - Identification Scheme Agency. Name. Text
 - Identification Scheme. Version. Identifier
 - Document Reference. Copy_ Indicator. Indicator
 - Document Reference. UUID. Identifier

Conformant Customization : 2

- Subsetting through cardinality restriction
 - Changing cardinality
 - Minimums can be increased to their maximum
 - Maximums can be decreased to their minimum

<input checked="" type="checkbox"/> Order Line ▶ <input checked="" type="checkbox"/> Order Line Details	Cardinality : 1 - 1 <input checked="" type="checkbox"/> Set maximum cardinality "unbounded".
<input checked="" type="checkbox"/> Order Line ▶ <input checked="" type="checkbox"/> Order Line Details	Cardinality : 3 - 5 <input type="checkbox"/> Set maximum cardinality "unbounded".

- Constraining Context of Business Information Entities
 - Add Context Value
 - Delete Context Value

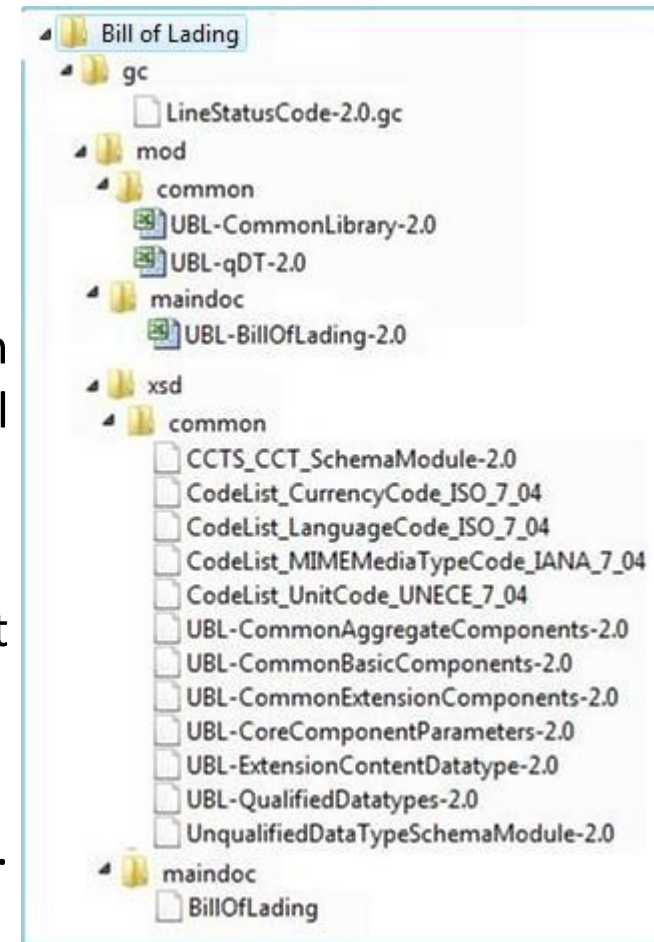
Compatible Customization

- Extending document schema module by
 - Adding new components—other than using extension element
 - Discarding mandatory components
 - minimum cardinality ≥ 1 , Mandatory element is in RED
 - Changing cardinality values to a range which violates conformance design rules
 - Decreasing minimum cardinality
 - Increasing maximum cardinality
- Changing property term qualifiers
- Building a component from scratch

When an action results in UBL compliant document by violating conformance document design rules, the tool warns the user that the design will be conformant if the action is realized.

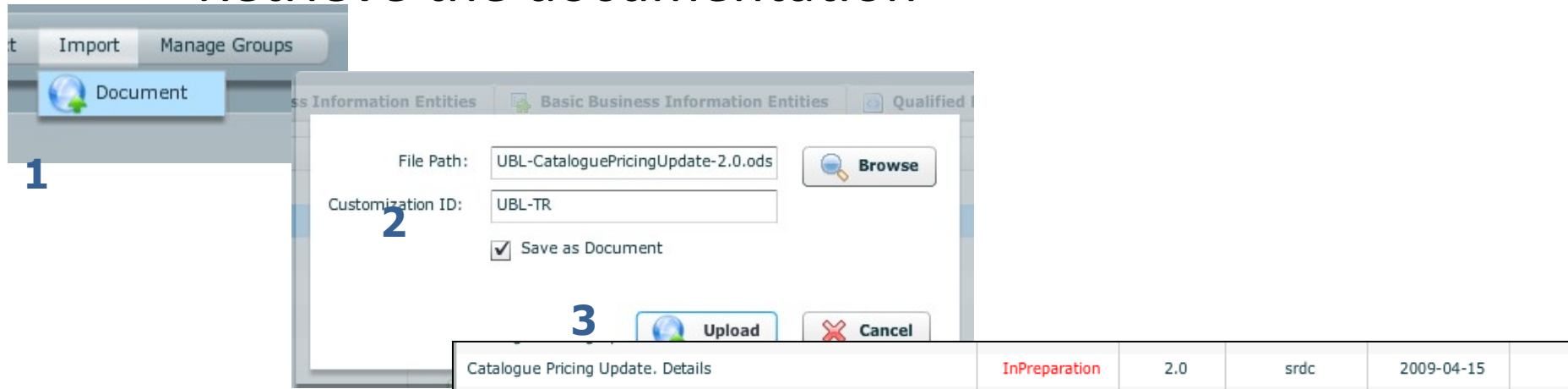
Exporting Documents

- Export UBL Document schema accompanied with some informative supporting materials in UBL directory format:
 - XML Schema of Document Assembly with automatic translation from graphical model by UBL Naming and Design Rules
 - Spreadsheet models defining the document assembly
 - Genericcode files for defining code lists (aka. enumerations or controlled vocabularies)



Importing Spreadsheets

- It support uploading of a new document model either from .ods or .xls spreadsheet
 - share it with the other users.
 - Customize it
 - Retrieve the documentation



Group Menu

- The owner or customizer of the document can select the groups or users to which the document model that he created is visible.
 - You can only share the model with the groups that you are subscribed.
 - To subscribe send a request to group owner from menu panel.
 - You can also create a new group from menu panel.

1

Select "PUBLIC" to make it available to all users

2

3

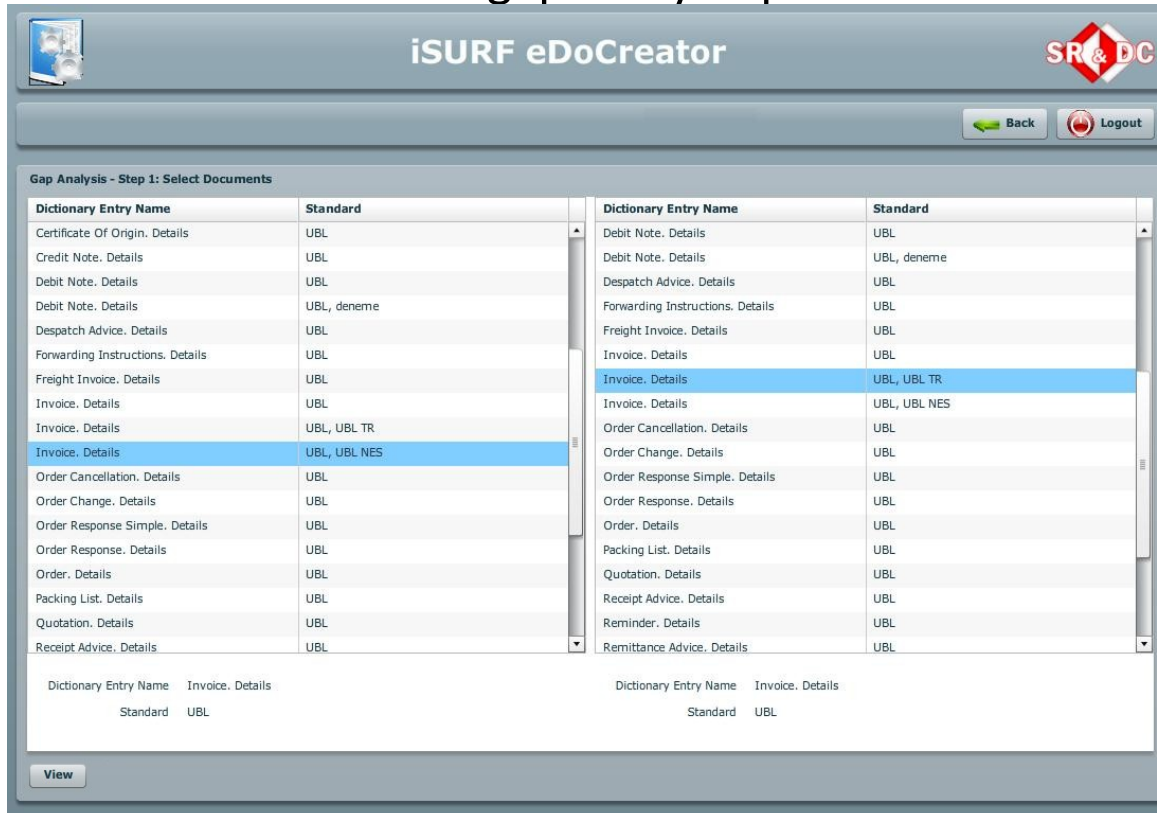
User's Groups	Object Properties	Object's Groups
srdc	Object Type: Document Message	srdc
PUBLIC	Dictionary Entry Name: Catalogue Pricing Update. Details	
NES		
	Group Properties	
	Group Name: PUBLIC	
	Group Owner: PUBLIC	
	Number of Members: 22	
	Number of Objects: 2067	

Gap Analysis Tool

- The Gap Analysis Tool compares two customized e-business documents from document content perspective.
- Gap Analysis Tool is available under “Tools” menu.

Gap Analysis - 1

- The tool list all available e-business document schemas in two separate lists.
- Users are requested to select a document schema from each list and click to “Compare” Button to initiate gap analysis process.



iSURF eDoCreator

Back Logout

Gap Analysis - Step 1: Select Documents

Dictionary Entry Name	Standard	Dictionary Entry Name	Standard
Certificate Of Origin. Details	UBL	Debit Note. Details	UBL
Credit Note. Details	UBL	Debit Note. Details	UBL, deneme
Debit Note. Details	UBL	Despatch Advice. Details	UBL
Debit Note. Details	UBL, deneme	Forwarding Instructions. Details	UBL
Despatch Advice. Details	UBL	Freight Invoice. Details	UBL
Forwarding Instructions. Details	UBL	Invoice. Details	UBL
Freight Invoice. Details	UBL	Invoice. Details	UBL, UBL TR
Invoice. Details	UBL	Invoice. Details	UBL, UBL NES
Invoice. Details	UBL, UBL TR	Order Cancellation. Details	UBL
Invoice. Details	UBL, UBL NES	Order Change. Details	UBL
Order Cancellation. Details	UBL	Order Response Simple. Details	UBL
Order Change. Details	UBL	Order Response. Details	UBL
Order Response Simple. Details	UBL	Order. Details	UBL
Order Response. Details	UBL	Packing List. Details	UBL
Order. Details	UBL	Quotation. Details	UBL
Packing List. Details	UBL	Receipt Advice. Details	UBL
Quotation. Details	UBL	Reminder. Details	UBL
Receipt Advice. Details	UBL	Remittance Advice. Details	UBL

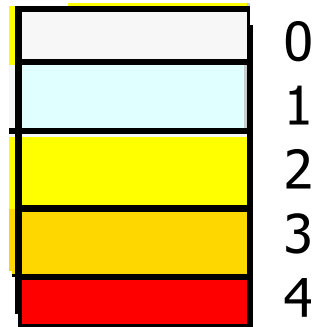
Dictionary Entry Name Invoice. Details
Standard UBL

Dictionary Entry Name Invoice. Details
Standard UBL



View

Gap Analysis – 4 level of issues

- Multiple Cardinality versus Optional Cardinality - Issue 1:
 - There are elements with incompatible cardinalities. For example, a “0..1” cardinality in the “/Invoice/Note” element in UBLTR is set as “0..n” in NES.
- Optional Cardinality versus Excluded Element – Issue 2:
 - An element is set as optional in one of them, whereas the same element is excluded from the other.
- Optional Cardinality versus Mandatory Cardinality - Issue 3:
 - An element is set as mandatory in one of them, whereas the same element is set as optional in another.
- Mandatory Cardinality versus Excluded Element - Issue 4:
 - An element is set as mandatory in one of them, whereas the same element is excluded from the other.



Gap Analysis Report


iSURF eDoCreator


← Back
⏻ Logout

Gap Analysis - Document Level Issues

Dictionary Entry Name	First Document Usage	First Document Cardinality	Second Document Usage	Second Document Cardinality
Attached Document. Issue Date. Date	Mandatory	1:1	Mandatory	1:1
Attached Document. UBL Version Identifier. Identifier	Excluded	--	Optional - up to 1	0:1
Attached Document. Document Type. Text	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Customization Identifier. Identifier	Excluded	--	Optional - up to 1	0:1
Attached Document. Document Type Code. Code	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Profile Identifier. Identifier	Excluded	--	Optional - up to 1	0:1
Attached Document. Issue Time. Time	Mandatory	1:1	Optional - up to 1	0:1
Attached Document. Identifier	Mandatory	1:1	Mandatory	1:1
Attached Document. Parent_ Document Identifier. Identifier	Mandatory	1:1	Mandatory	1:1
Attached Document. UUID. Identifier	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Note. Text	Optional - up to 1	0:1	Optional- unbounded	0:unbounded
Attached Document. Parent_ Document Type Code. Code	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Signature	Optional- unbounded	0:unbounded	Optional- unbounded	0:unbounded
Attached Document. Sender_ Party. Party	Optional- unbounded	0:unbounded	Mandatory	1:1
Attached Document. Receiver_ Party. Party	Mandatory	1:1	Mandatory	1:1
Attached Document. Attachment	Mandatory	1:1	Mandatory	1:1
Attached Document. Issue Date. Date	Mandatory	1:1	Excluded	--
Attached Document. Document Type. Text	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Document Type Code. Code	Optional - up to 1	0:1	Optional - up to 1	0:1
Attached Document. Profile Identifier. Identifier	Excluded	--	Optional - up to 1	0:1
Attached Document. Issue Time. Time	Mandatory	1:1	Optional - up to 1	0:1
Attached Document. Identifier	Mandatory	1:1	Mandatory	1:1

Get Component Level Issues

Future Work

- Customizing Code list in order to impose instance value constraints by uploading genericcode files
- Constraints on document content — restricting the possible values an entity can have via Schematron Editor

Demo Links:

- Overview of the tool :

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/main.htm>

- Creating a new document artifact:

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/createMes>

- Qualifying a data type

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/datatype.h>

- Conformant Customization:

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/conforman>

- Compatible Customization:

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/compatible>

- Retrieving documentation of Document Model:

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/exportXSD>

- Gap Analysis

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/iSurfeDoCr>

- Uploading a document schema from a spreadsheet

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/importDoc>

- Setting group options

<http://www.srdc.com.tr/eDoCreator/DocumentDesignerToolViewlets/groupMan>

Thank you for
your attention

For further information:
srdc@srdc.com.tr