

UN/CEFACT Project Proposal

Proposed project name:	eNegotiation project		
Date submitted:		Project proposed by:	Hisanao Sugamata
Date last updated:	10/08/2020		

1. Project purpose

Required

Prior to the exchange of purchase order information during the BSP “BUY” phase, human staff in both companies negotiate the transaction conditions via email or telephone. However, this is changing with advances in digital transformation and artificial intelligence; Therefore, the semantics of negotiation process and exchanged information should be standardized.

The negotiation process is entering a digital transformation (DX) where both buyer and seller have developed electronic systems. From the buyer side, the system often allows them to develop their own electronic bidding system and bid comparison system. From the seller side, a sales system has to connect to multiple prospective buyer systems, each with different semantics. Standardized semantics would allow the seller to not only reduce cost, but also to set up a decision making system defining which item(s) should be sold to which company(ies).

In addition to this digital transformation, artificial intelligence (AI) and robot process automation (RPA) can ultimately assist in achieving better negotiating conditions. Current human-based negotiations require a human decision at each proposal; therefore, message exchange can increase exponentially in order to reach the best solution among possible conditions of the contract. With an AI negotiator, the exchange can be automated allowing to reach better condition faster. The final approval may still require human approval, but this approach achieves business efficiency and optimality.

ISO/IEC 15944-1 defines five fundamental activities (repeated in the UN/CEFACT UMM User Guide of 2003) of a business transaction: planning, identification, negotiation, actualization and post-actualization. This work corresponds to the negotiation phase.

Five fundamental activities of a business transaction (ISO/IEC 15944-1)

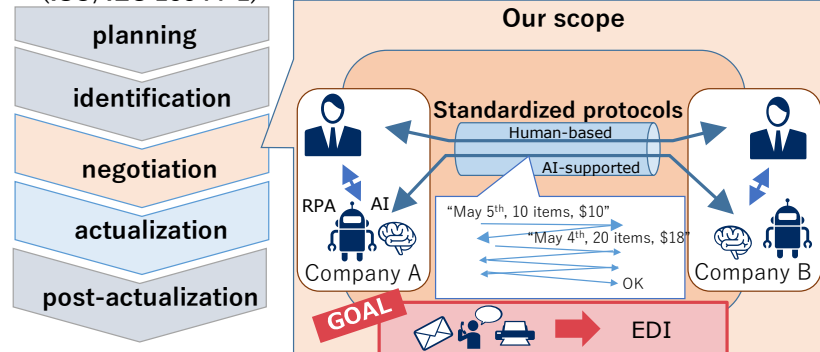


Fig. 1: Concept of EDI-based negotiation.

2. Project scope

Required

NOTE: Specify project scope in terms of in-scope and out-of-scope items within the context of the UN/CEFACT Programme of Work. Include a description indicating the relationship between this project and other UN/CEFACT projects, if known. In the case of a project whose deliverables include proposed Recommendations and Standards, include projects outside of UN/CEFACT of which this project could be considered a duplicate, if any, and explain why it is not.

This project aims to define the business processes and related data exchange requirements related to electronic contract negotiations. This will concentrate specifically on protocols and data formats rather than internal decision processes. In this way, a human negotiator, an AI negotiator, or a human negotiator assisted by an AI/robot support should use the same base semantic protocols.

Three use cases will be considered, one in manufacturing, one in marine and the other in air cargo. The focus will be on the conditions of the contract between the two parties. The existing BRS and related standards for eTendering and CI-Scheduling will be used as a point of reference.

This project will consist of three axes:

- Hierarchical contract - what aspect of business relationship is being established: yearly contract (basic contract), monthly (on-demand/capacity), daily (by a due date)
- Supply Chain – the relationship between buyer and seller for each domain
- Negotiation – The negotiation mechanism contains a variety of rules; nested negotiation, competitive negotiation, asynchronous/synchronous negotiation and so on.

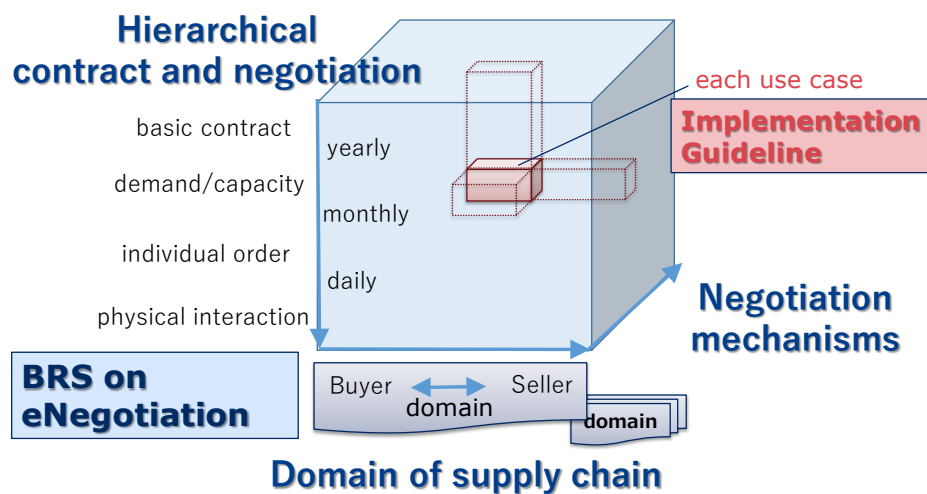


Fig. 2: Negotiation Framework

3. Project deliverables

Required

NOTE: Provide name and description of each deliverable.

Deliverable 1:	BRS on eNegotiation
Deliverable 2:	CCBDA message structures for eNegotiation
Deliverable 3:	Relevant alignment into the CCL based on SCRDM for eNegotiation
Deliverable 4:	Implementation Guideline

4. Exit Criteria

Required

NOTE: For each deliverable, list the criteria that, when met, will indicate the deliverable has been completed.

Exit Criteria for Deliv. 1:	BRS ready for publication
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	<ul style="list-style-type: none"> External Review Log showing that all comments during Public Review have been addressed 		
Exit Criteria for Deliv. 2:	CCBDA message structures ready for publication		
Exit Criteria for Deliv. 3:	CCL alignment completed and ready for release		
Exit Criteria for Deliv. 4:	Implementation Guide ready for publication		
5. Project Team membership and required functional expertise			
Membership is open to UN/CEFACT experts with broad knowledge in the area of:	Contract negotiation, artificial intelligence, computer-assisted decision-making, procurement		
In addition, Heads of Delegations may invite technical experts from their constituency to participate in the work.			
Experts are expected to contribute to the work based solely on their expertise and to comply with the UN/CEFACT Code of Conduct and Ethics and the policy on Intellectual Property Rights.			
6. HoD support			
NOTE: At least three HoD support is required for Technical Standards, Business Standards and UNECE Recommendations – and at the request of the UN/CEFACT Bureau. (See annex IV for an optional template).			
NOTE: Projects that require HoD support must obtain this within 6 months of Bureau provisional approval.			
DE, GR, IT, RU, UA, VN			
7. Geographical focus			
The geographical focus of the project is global			
8. Initial contributions			
The following contributions are submitted as part of this proposal. It is understood that these contributions are only for consideration by the Project Team and that other participants may submit additional contributions in order to ensure that as much information as possible is obtained from those with expertise and a material interest in the project. It is also understood that the Project Team may choose to adopt one or more of these contributions “as is”.			
List any initial contributions:			
<ul style="list-style-type: none"> UN/CEFACT eTendering BRS version 2.8, 2007 UN/CEFACT Cross-Industry Scheduling BRS version 2, 2017 			
9. Resource requirements			
Participants in the project shall provide resources for their own participation. The existence and functioning of the project shall not require any additional resources from the UNECE secretariat.			
NOTE: If specialized resources are required to complete the project, and such resources are not available within the Project Team, then those requirements should be clearly identified.			
Any additional request:			
10. Proposed project leadership			
Proposed:	Hisanao Sugamata	E-mail:	hsedi0111@gmail.com
Proposed:		E-mail:	
11. Milestones			
Note: repeat for each deliverable, if different.			
The following are draft milestones of the project.			
Yes/No*	ODP Stage	Expected Completion Date (Approval + XX months)	
Yes	Project Inception	Approval + 1 month	

Yes	Requirements gathering	Approval + 4 month
Yes	Draft development	Approval + 12 month
Yes	Public review	Approval + 14 month
Yes	Publication	Approval + 16 month
Yes	Project exit	Q1 Forum 2022

* NOTE: The following stages are obligatory: Project Inception, Project Exit and Publication. Public Draft Review is obligatory for recommendations, business standards and technical standards. The presence of “Yes” in the field indicates that the stage is required for the project and an expected completion date should be provided.