

## WS-Agreement Negotiation Perspective

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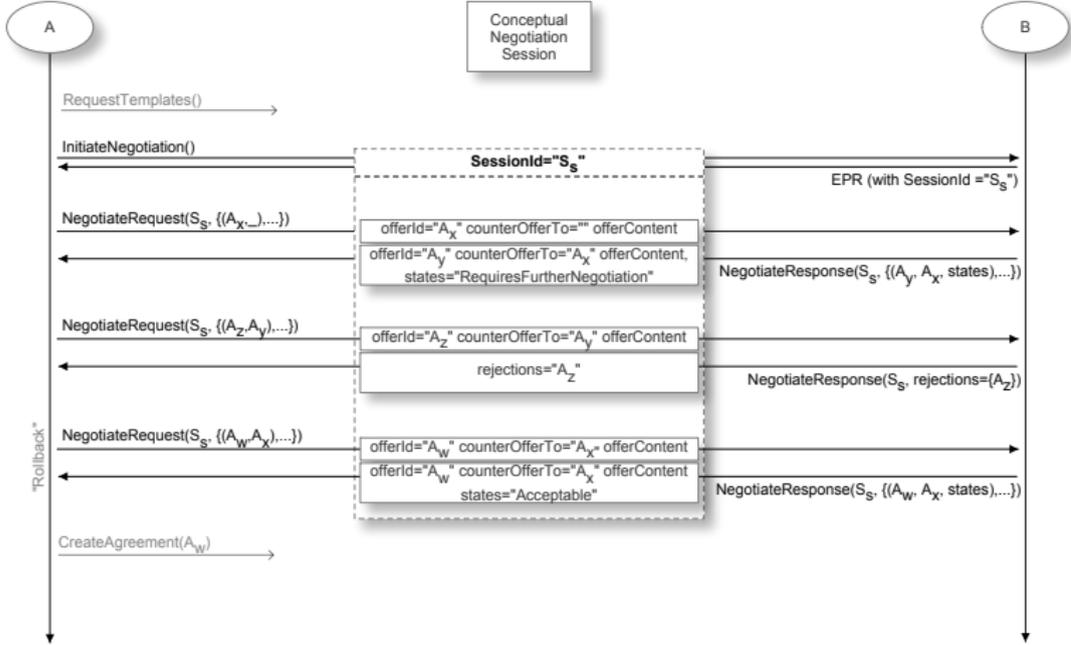
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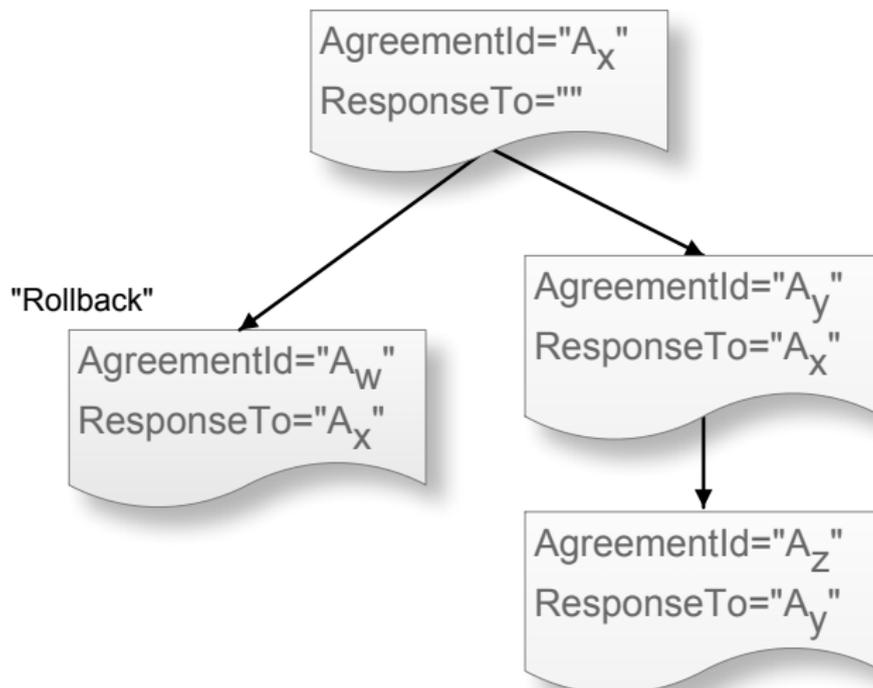


A multi-round negotiation protocol that supports:

- ▶ state information in protocol (messages)
- ▶ equal access for all parties to all negotiation documents
- ▶ discovery during negotiation using extended Agreement
- ▶ optional ability to rollback to a previous step

# Negotiation Session Concept





## NegotiationSession

sessionId  
terminate()  
sessionExpiration

NegotiateRequest()  
NegotiateResponse()  
Rejection()  
Offer()

## NegotiateRequest()

- SessionId
- set of Offer
  - offerId
  - counterOfferTo
  - offerContent
- state
- offerExpiration

## NegotiateResponse()

- SessionId
- set of Rejections
  - offerId
  - explanation
- set of Offer
  - offerId
  - counterOfferTo
  - offerContent (Agreement +X)
- state
- offerExpiration

## Template (+X)

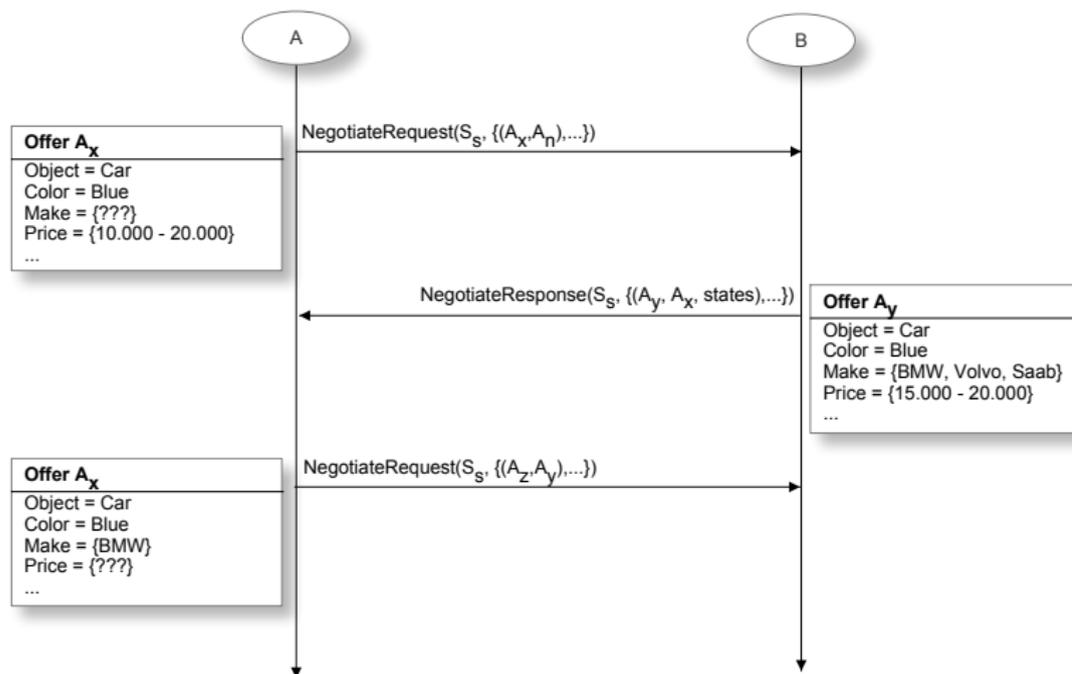
- partially completed template/agreement
- use of CreationConstraints created by each party to "guide" responses
- special syntax to indicate:
  - focus of request
  - priorities
  - negotiability
  - etc.

Objective

Proposal

Appendix

# Agreement (+X)



# Terminology

Objective

Proposal

Appendix

- sessionId** Unique number used to group documents (offers, counter-offers) pertaining to a certain negotiation session. Created by agreement responder and included in End Point Reference (EPR).
- offerId** Equivalent to the AgreementId as defined by WS-Agreement. Unique number used to identify each offer or counter-offer made. Can be used to identify different versions of offers pertaining to the same negotiation session. Each unique offer must have a unique OfferId.
- counterOfferTo** This takes the value of the ID of the offer that was the basis for the next offer. For instance, if offer  $A_y$  is a counter-offer to offer  $A_x$  then ResponseTo equals  $A_x$ . This is used to create a linked list of the sequence of offers and counter-offers.
- state** State of an offer. (e.g. Acceptable, RequiresFurtherNegotiation, etc.)

**NegotiationRequest()** This operation performed by the agreement initiator when submitting an offer. The message contents include the sessionId and a set of offers with their meta-data. This includes (1) the ID of the new offer, (2) the ID of the offer being responded to, (3) the state of the offer and (4) the offer itself.

**NegotiationResponse()** In response to a negotiation request, the agreement responder returns a set of counter-offers and a list of rejected offers with optional explanations.

**Terminate()** Sent by either party to explicitly terminate the negotiation session.

... other control messages?