

# Multi-Party Business Transaction Appendix

14 November, 2002

## Alternative UMM Multi-Party “Transactional Collaboration” Model

The UMM multi-party “transactional collaboration” model presented in the *Multi-Party Business Transactions* article contains two related problems – a possible violation of the rules of offer-acceptance, and an abuse of the UMM receiptAcknowledgment signal.

For example, according to UN/ECE Recommendation No.31, ELECTRONIC COMMERCE AGREEMENT [http://www.unece.org/cefact/rec/rec31/rec31\\_2000\\_00tr257.pdf](http://www.unece.org/cefact/rec/rec31/rec31_2000_00tr257.pdf)

### 3.2.2 Revocation

Any offer shall, unless otherwise agreed or expressly stated in the offer [be / not be] revocable. If revocable, an offer may only be revoked if notice of such revocation is [received by / sent to] the receiver of the offer before acceptance has been [received by / sent to] the sender.

In the article, we modeled each of the Collaborations between Distributor and Supplier, and Distributor and Carrier as a single transaction.

The Distributor made a *non-binding* or contingent offer, the Supplier or Carrier responded whether they can commit or not, and then the Distributor made a final decision with a positive or negative acknowledgment of the response.

In other words, we allowed the Distributor to revoke orders *after* acceptances were received.

The UN/ECE Electronic Commerce Agreement is their recommended Transaction Contract, and thus as close as we can get to an international standard. It carries a lot of weight. It clearly prefers binding offers.

We selected the contingent offer model in the main article because it provided the cleanest transaction completion, and the UN/ECE rules may leave enough wiggle room. Our justification was that the trading partners had to agree up front that the offerer could fail the transaction even after the responder accepted, if the contingencies failed. But the signal we used, receiptAcknowledgment, was really intended just to signal that the response was received and was valid, not that the order was canceled.

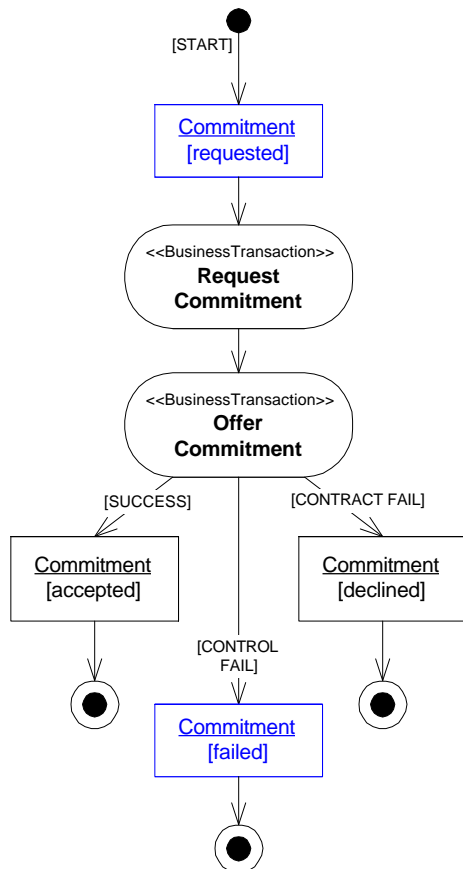
On the following pages, we present an alternative model that obeys the letter of the UN/ECE offer-acceptance rules.

However, as we shall see, while this model solves one problem (the UN/ECE rules), it raises another problem: transaction completion is not as clean - an end state requiring separate cancellation transactions could happen.

We need to get a ruling from the supreme court of ecommerce (whoever that may be) as to whether the cleaner model is legal.

Instead of one UMM Business Transaction between Distributor and subordinates, this alternative model separates the interaction into two UMM Business Transactions:

- 1.1 one where the Distributor asks the Supplier or Carrier if they can offer a commitment to fulfill their part of the Customer's order (a non-binding request);
- 1.1 another where the Supplier or Carrier makes a binding offer in an offer-acceptance transaction that fully complies with UN/ECE Recommendation 31.

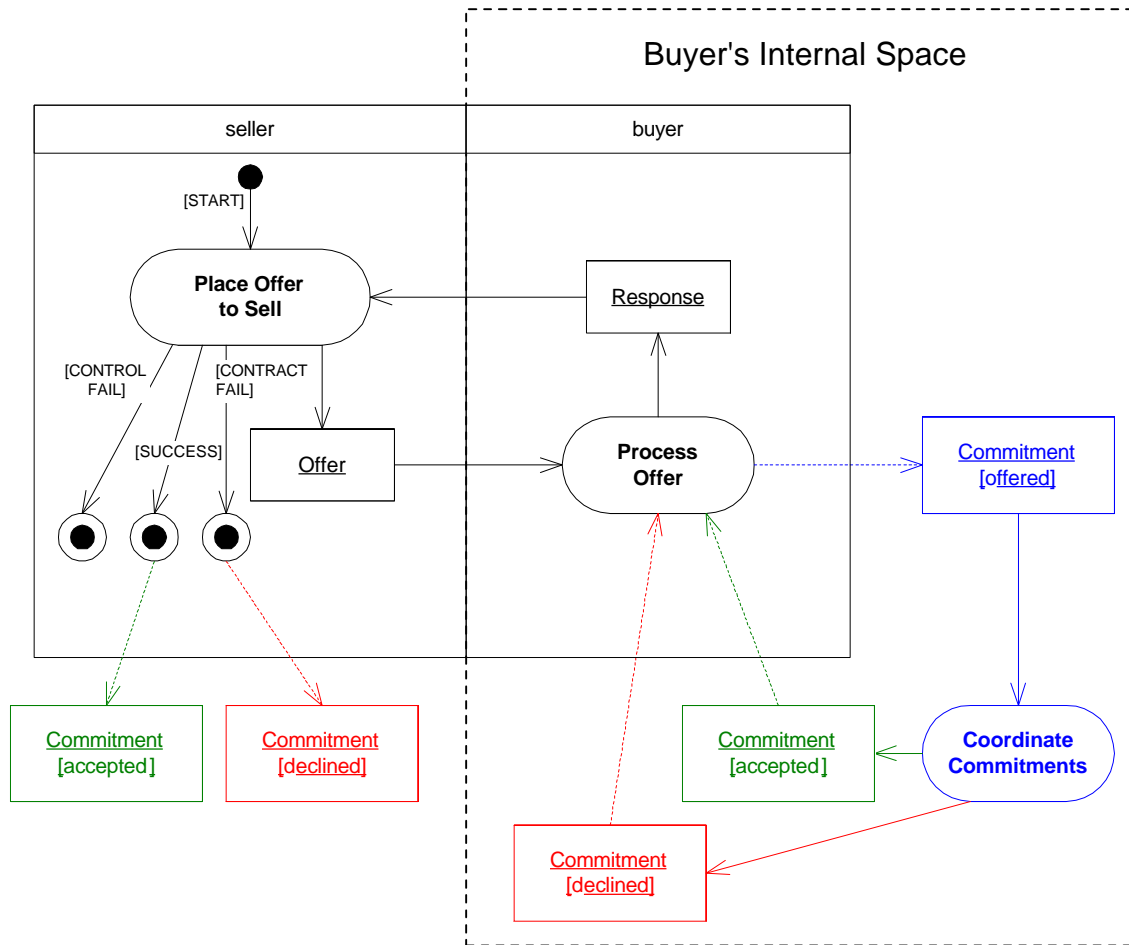


## Two-Transaction Model – Collaboration Layer

The typical UMM Business Transaction would be Create Purchase Order, where the Buyer is the initiator and makes an Offer to Buy.

In this case, we are reversing the roles: the Distributor is the Buyer, and makes a Requests for Commitment to the Supplier and Carrier. Depending on the situation, Request for Commitment might be called Request for Quotation or Proposal or Available to Promise Query.

The second transaction, Offer Commitment, is really a response from the Supplier or Carrier, and it is intended to be a binding offer, whereas the first transaction is **not** a binding offer.

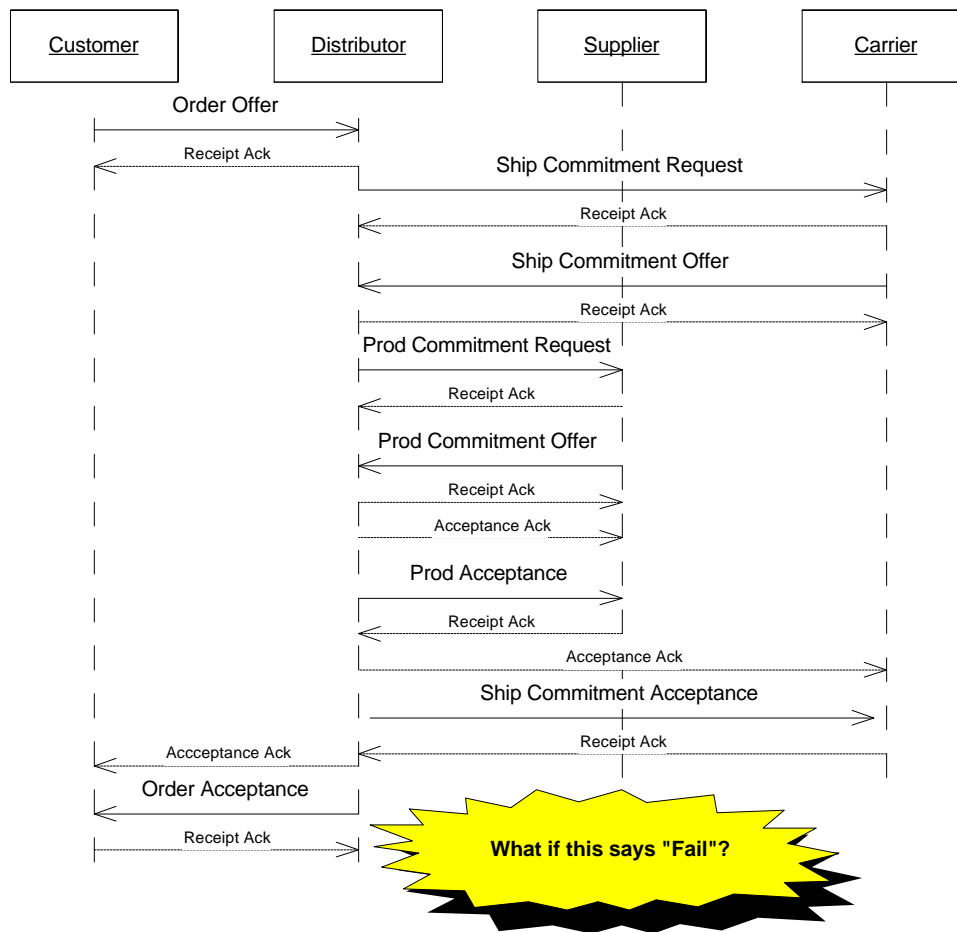


### Two-Transaction Model – Second Transaction: Offer Commitment

Note that the Seller here is either the Supplier or the Carrier, and the Buyer is the Distributor.

CoordinateCommitments works almost the same as in the one-transaction model, but here it interacts with the RespondingActivity instead of the RequestingActivity in both transactions, the one with the Carrier and the one with the Supplier.

The decision logic is similar, too. But instead of sending a positive or negative receiptAcknowledgment, the RespondingActivity sends an Accept or Decline business response.



### Two-Transaction Model – Message Sequence

As in the one-transaction model, the transaction messages are interwoven so that the Distributor is certain that both Chickens and Delivery will be available, before accepting the Customer Order.

No compensating or cancelling transactions should be required **in most cases**.

However, the Order Acceptance from Distributor to Customer could fail, for example because it is too late (past the acceptance timeout according to the transaction contract). In this case, the Distributor has already accepted the offers from Supplier and Carrier, and the Carrier and Supplier have sent receipt Acknowledgments completing those transactions. In other words, chickens and truck have been booked. But the Customer will no longer accept the chickens.

Now the Distributor will need to try Order Cancellation transactions with Supplier and Carrier, and hope they will be accepted. If the terms and conditions of the orders allow cancellations, then this should be ok. But Supplier and Carrier are independent agents and can refuse the cancellation, and the trading partners could end up in court.

Another problem with the above model is that it flips the responsibility for deciding success or failure of the offer-acceptance transactions from Distributor to Supplier and Carrier. From a BTP viewpoint, the transaction tree is no longer a tree. BTP has provisions for handling this situation, but it's more complicated than a simple tree.