**Meeting Minutes**

API Framework and Standards

Hamburg Workshop

June 7th, 2018

A workshop was held in Hamburg on June 7th, 2018, to develop agreed upon standard and frameworks for offer and contract data transmission via API. Those present intended for the discussed standards and frameworks to be used on the NYSHEX Contracting System and via the industry at large.

The workshop was attended by:

1. Thore Lindemann, Hapag Lloyd
2. Kai Heinrich, Hapag Lloyd
3. Francois Quensont, CMA-CGM
4. Maxime Franchon, CMA-CGM
5. Eric Caen, CMA-CGM
6. Sven Trotno, OOCL
7. Eric Wong, CargoSmart and on-behalf of COSCO
8. Cédric Blaire, MSC
9. Tudor Blanaru, Maersk Line\*
10. Nis Jespersen, Maersk GTD
11. Peter Savitsky, Lead Engineer, NYSHEX
12. Don Chen, Asia MD, NYSHEX
13. Jewel Jennings-Wright, Compliance, NYSHEX\*
14. Gordon Downes, CEO, NYSHEX

\*Tudor and Jewel dialed in for the workshop.

The minutes of the meeting are as follows

# General Discussion

The attendees began the workshop with a round of introductions. Ms. Jennings-Wright provided a compliance statement that outlined the information the participates were allowed to discuss. All participants agreed to follow the compliance statement.

Mr. Downes then proposed an agenda for the workshop and additional items were suggested regarding the structures for APIs and future proofing of the APIs. The additional items were placed in the parking lot for further consideration. Next, Mr. Savitsky the pre-workshop process and thanked the participants for submitting their feedback and responses to the previously circulated fit and gap analysis.

# NYSHEX Overview

Mr. Downes provided an introduction to NYSHEX and explained the principles of change management, collaboration and contribution to the technology ecosystem. Specifically, Mr. Downes highlighted 8 major differences between the NYSHEX contract in comparison to spot and traditional service contracts including the date requirements (booking window, CY window, departure window), exact container quantities (a set quantity commitment), segmentation (specific offers created for specific shippers or group of shippers), fixed all in prices (mandatory charges likes airlines with no variable charges), optional value added services, contract versioning (standard format contract), deposit requirements and liquidated damages, and points of differentiation (service name, estimated transit time, reliability).

# Part 1: Codes

The attendees discussed various code standards and incoming logic for the following topics. These will serve as parsing language and instructions to process the incoming API requests.

1. Location, Time Zones and Currency Codes. The group agreed that NYSHEX would maintain a list of UN Codes, IMO Codes and SMDG Codes. Each carrier would be able to provide locations using any one of the codes at their discretion, and NYSHEX would add one attribute to the APIs to allow the carrier to specify which of the location codes should be used. In addition to location API codes, the group agreed that ISO codes should be used for currency codes and ISO 8601 for time zone codes.
2. TEU Conversion. All agreed that NYSHEX should determine the calculation of TEUs based on 1 TEU per 20’ container, 2 TEU per 40’ container, and 2.2 TEU per 45’ container. It was noted that there are no standard conversions for TEU to be applied to the codes. All agreed that carriers would not provide per TEU information to, but rather all information will be provided to NYSHEX per container size type.
3. Location Options. All agreed to include mandatory Port of Load and Port of Discharge, optional Place of Receipt and Place of Delivery (if Place of Receipt or Delivery are not specified, NYSHEX will assume Place of Receipt equals Port of Load and Place of Delivery equals Port of Discharge). Additionally, the attendees agreed that parsing language governing empty pickup location (terminal or depot), full return location, full pickup location and empty return location would be added allowing each to serve as an optional, value add service. Furthermore, a qualifier would be added to allow the carrier to specify whether location was committed and the carrier agreed to be bound by the commitment, or whether the location was indicative to assist with planning, but subject to change by the carrier without notice.

The attendees agreed to include parsing language allowing one or multiple “transit locations” to be added as an optional, value add service and “mode of transport” (e.g. road, rail, barge, ocean) to be added as an optional, value add service. Furthermore, a qualifier would be added to allow the carrier to specify whether location was committed, and the carrier agreed to be bound by the commitment, or whether the location was indicative to assist with planning, but subject to change by the carrier without notice. Finally, the attendees agreed to allow the carrier to specify whether the offer is “Door to Door”, “Door to Terminal”, “Door to Port”, “Port to Port” and so forth.

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# Part 2: Offer Capacity Data Representation

Mr. Downes explained that offers and contracts for NYSHEX require allocations to be specified, which is different to service contracts or spot bookings, and the logic used for the API request needed to reflect as such. The attendees agreed that as a minimum, the carrier will include the allocation for each offer as part of the offer data structure.

Furthermore, all agreed that the data structures should be able to represent a constraint or “clamp” based on an equipment pool at any location, or a throughput constraint at any location, or based on a capacity constraint. All agreed that it would be beneficial if the constraints could be put into effect for a specified time frame and if the constraints could be applied to multiple offers.

All agreed allocations will be provided per container size or container size and type for now, and to leave allocations by weight and other constraints for later once use cases arise.

Illustrative example of offer capacity constraint data structure:



# Part 3: Representing Charges

The goal of this section was to decide upon the data format of a “charges” field within an offer that could represent the various charges contributing to the cost of offers in a flexible and extensible way. It was determined that the data format needed enough information to accurately convey what the charge was for, how it was calculated, who was responsible for paying the charge, and whether the charge was optional or mandatory.

Mr. Downes explained the NYSHEX charge code structure and the difference between “mandatory” and “optional” charges. The attendees agreed that the API framework and structure for charge codes should be broader than for the NYSHEX applications alone. Charge structures were agreed to include a free text charge code provided by the carrier, a link to the UN FCC Harmonization Codes (optional), a short description (mandatory), a long description (optional), a Unit of Measure, with up to three attributes, a calculation method, pay party (mandatory), and whether or not the charge was optional.

Additionally, the concept of the “pay party” and codes related to the pay party were discussed at length, and NYSHEX was asked to stipulate the options for pay party, such as payable at origin, payable at destination, payable by freight payer. Mr. Jespersen agreed to provide Mr. Savitsky with some existing standards for pay party fields to add with further development of the standard APIs. Unit of Measure was also discussed at length, and NYSHEX was asked to stipulate the options for unit of measure, such as by container, by shipment, by day, by kg etc. All agreed that the charge code data format should include a field specifying whether a charge code is fixed, or subject to change and valued at time of shipment.

Concern was raised about different market practices where the detention and demurrage may have different definitions, or where detention and demurrage is combined. A method for simplifying the essence of the charge logic was proposed and included:

1. Equipment Rental
2. Equipment Storage

NYSHEX would consider how best to display charges via the System using the term Equipment Rental and Equipment Storage, as well as the charge description and code provided by the carrier. NYSHEX also agreed to display per location and per calendar/business day.

All agreed to review the NYSHEX proposed APIs on Charges with trade managers to ensure commercial support, and then will revert to NYSHEX directly with the conclusions.

Initial proposed structure for charges:

# Part 4: Dates

Mr. Downes explained that booking windows, CY windows, and departure windows are essential for NYSHEX contracts. The attendees agreed that window dates and times would be provided based on local time using ISO 8061. Additionally, it was agreed that a qualifier logic should be added to booking and CY windows so that carrier can specify whether dates are fixed and binding or provided indicatively for planning purposes and subject to change by the carrier without notice.

Service was discussed and all agreed it should be an optional value added service, with a qualifier to show whether dates are binding or indicative.

The option of listing a specific vessel and voyage in lieu of using date windows was discussed as well. All agreed the fields representing vessel and voyage should be optional on the offer object. Additionally, there should be a field indicating whether or not the specified vessel and voyage was to be considered a binding piece of the contract or if it was merely indicative, intended to represent the most likely vessel and voyage that would fulfill the resulting contract.

# Conclusions

The attendees agreed the workshop was helpful, and additional workshops should be conducted to address event APIs and Booking APIs, and all agreed to review the options internally and prepare to further formalize the collaboration at the next workshop.

The attendees agreed that APIs should be maintained in Swagger, and not in Excel or another format. Further, a discussion ensued as to how to ensure the API standards and frameworks are widely distributed and easy for the industry to utilize. Mr. Downes advised that NYSHEX will publish the APIs and decisions on an open platform called OpenShipping.org.