



DCSA Event Structure Definitions 2.2

Customer-facing Track & Trace

October 2021

Purpose

This document provides additional depth and content to the Event Naming Convention, introducing definitions for elements within the structure. All definitions should be read in the context of customer-facing Track & Trace events. Some terms defined in this document could have a different meaning in another context, such as operational or financial purposes.

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Change history

Rev	Issue	Contributors	Description
1.0	27 January 2020	DCSA, SME	
2.1	02 August 2021	DCSA, SME	Updated elements matching DCSA Interface Standard for Track and Trace 2.1 -Addition of Ramp in Facility type -Addition of Inspected, Resealed, Removed, Pickup and Drop Off in Equipment events
2.2	October 2021	DCSA, SME	Updated elements matching DCSA Interface Standard for Track and Trace 2.2 -Addition of On Hold and Released in Equipment Event Type -Addition of VGM, Dangerous Goods Declaration, Out-of-Gauge Declaration, Customs Inspection and Cargo Survey in Shipment Document Type Code. -Addition of Requested and Completed in Shipment Event Type.

Table 1: Change history

Terms, acronyms, and abbreviations

Term	Definition
IMO	International Maritime Association
AIS	Automatic Identification System
MMSI	Maritime Mobile Service Identity
UN/LOCODE	United Nations Code for Trade and Transport Locations
FCL	Full Container Load
LCL	Less Than Container Load

Table 2: Terms, acronyms, and abbreviations

1 Introduction

This document provides additional depth and content to the Event Naming Convention. In the following sections definitions for each element (Journey, Parameter and Value) within the structure will be introduced.

All definitions should be read in the context of customer-facing Track & Trace events. Some terms defined in this document could have a different meaning in another context, such as for operational or financial purposes.

An extensive glossary of definitions can be found in DCSA web glossary of terms:
<https://knowledge.dcsa.org/s/glossary>

2 Structure

The naming convention consists of the element types, i.e., Journey, Parameter and Value.

2.1 Journey

Journey defines the entity being tracked as well as the syntax used for specific events within the journey.

2.2 Parameter

Parameter defines every type of information included in an event. Most parameters enable a clear understanding of the context. Each journey includes one parameter identifying the occurrence, which is the driving action within each event. This parameter is called Event Type.

2.2.1 Value

Each parameter within the structure can have a number of values. Value is what is being inserted into the syntax specified for each journey to create a unique event.

2.3 Syntax

For each journey, a Syntax is specified. Syntax governs the way values can be combined to create unique events.

3 Equipment Journey

The structure of the Equipment Journey governs the naming and understanding of events, which are driven by physical occurrences related to the equipment in question.

The structure of events within the Equipment Journey follows the syntax below:

(EventClassifier)_(EventType)_of_(EmptyIndicator)_equipment_onto/from/by_(TransportMode)_at_(FacilityType)

Transport mode is optional for Stuffing and Stripping.

3.1 Event Classifier

The Event Classifier parameter is the notation for different time stamps that may be associated with a single event.

3.1.1 Planned

“Planned” is the point in time, where completion is planned to be completed in accordance with the original route – or transportation plan. The time of the planned event will not change after the confirmation has been sent to the customer regardless of operational execution. The transportation plan is generated when the carrier sends the booking confirmation to the customer and will not change afterwards unless a revised plan is agreed by stakeholders.

3.1.2 Estimated

“Estimated” is a carrier’s forecasted completion time of an Event that is covered by a confirmed booking but has not yet been completed. The estimated event is a dynamic value, which can change based on the running forecast of the completion time. .

3.1.3 Actual

“Actual” is a time stamp that indicates the point at which an event was actually completed in accordance with the definition of the relevant Event Type.

3.2 Event type

“Event Type” in the Equipment Journey is the active occurrence which is being reported on. For the Equipment Journey, the event is identifying what physical activity is executed to cause a change in the state or status of the equipment.

3.2.1 Load

“Load” is the action of lifting cargo or a container on board of the mode of transportation. Load is complete once the cargo or container has been lifted on board the mode of transport and secured.

3.2.2 Discharge

“Discharge” is the action of lifting cargo or containers off a mode of transport. Discharge is the opposite of load.

3.2.3 Gate-in

“Gate in” is the action when a container is introduced into a controlled area like a port - or inland terminal. Gate in has been completed once the operator of the area is legally in possession of the container.

3.2.4 Gate-out

“Gate out” is the action when a container is removed from a controlled area like a port – or inland terminal. Gate-out has been completed once the possession of the container has been transferred from the operator of the terminal to the entity, who is picking up the container.

3.2.5 Stuffing

“Stuffing” is the process of loading the cargo in a container or in/onto another piece of equipment.

3.2.6 Stripping

“Stripping” is the act of unloading cargo from containers or equipment.

3.2.7 Pick-up

“Pick up” is an Event Type that identifies a plan or request has been made to collect a container or shipment at a Customer Location. This Event Type may be accompanied by an Estimated, Planned or Actual time to indicate when the moment when the collection from Customer Location is estimated or planned to take place, or has already taken place.

3.2.8 Drop-off

“Drop off” is an Event Type that identifies a plan or request has been made to deliver a container or shipment to a Customer Location. This Event Type may be accompanied by an Estimated, Planned or Actual time to indicate when the delivery to Customer Location is estimated or planned to take place, or has already taken place.

3.2.9 Inspected

“Inspected” is an indicator that the Seal on the equipment has been inspected.

3.2.10 Resealed

“Resealed” is an indicator that the equipment has been re-sealed after inspection.

3.2.11 Removed

“Removed” is an indicator that a Seal has been removed from the equipment for inspection

3.3 Empty indicator

“Empty indicator” is the parameter that indicates whether the container has cargo inside at any given time. In the context of the DCSA event structure, Empty Indicator is a binary parameter.

3.3.1 Laden

“Laden” is an indicator that stuffing of container is complete, and a valid seal has been applied to the container doors. Containers are considered Laden regardless of whether the equipment has room for additional cargo. This means the container is considered Laden even if it is only stuffed with partial load. *Synonym with Full (container)*

3.3.2 Empty

Containers are considered empty once all cargo have been removed and cleaning has been performed according to carrier standards, this includes the period before stuffing occurs.

3.4 Transport Mode

This parameter is the identifier for the mode of transportation.

3.4.1 Vessel

“Vessel” is a floating, sea going structure (mother vessels and feeder vessels) with either an internal or external mode of propulsion designed for the transport of cargo and/or passengers. Ocean vessels are uniquely identified by an IMO number consisting of 7 digits, or alternatively by their AIS signal with an MMSI number.

3.4.2 Barge

“Barge” is a flat-bottomed floating structure built mainly for transport of cargo/equipment at coastal areas, rivers, canals or on open sea. A barge may or may not be self-propelled.

3.4.3 Truck

“Truck” is a road going vehicle designed for the movement of goods or people. In the context of the event naming structure this is limited to trucks designed for containerized cargo and delimited from trucks and vans carrying parcels or other cargo.

3.4.4 Rail

“Rail” is a transport designed for the movement of goods or people. In the context of the event naming structure, this is limited to rail transport designed for containerized cargo.

3.5 Facility Type

“Facility Type” provides the locational context of the event being reported on. Facility Types are defined as unique types of areas where equipment can be located for a specified period of time. The location identifier will be based on UN-LOCODES at country, city, and subarea levels.

3.5.1 Depot

“Depot” is a designated area where empty equipment is stored between use.

3.5.2 Customer location

The premises of the customer. This can be the premises of either the shipper or the consignee.

3.5.3 Port terminal

"Port terminal" is a facility located adjacent to a waterway where containers are loaded, moved, or discharged onto/from sea-going vessels and barges.

3.5.4 Inland terminal

"Inland terminal" is a facility where containers are loaded, moved, or discharged. The inland terminal can be serviced by trucks, rail, and barges (at river terminals).

3.5.5 Container yard

"Container yard" is a place where containers are stored on the terminal or dry port (rail ramp) before they are loaded or offloaded from a ship. Containers are either stored for loading to be transported elsewhere or offloaded as they arrive into the port, terminal or rail ramp.

3.5.6 Container freight station

"Container freight" station is a facility where LCL (Less Than Container Load) shipments are consolidated or dispersed, cargo is stuffed into containers prior to shipment, or cargo is stripped from containers prior to release to the consignee.

3.5.7 Border crossing

"Border crossing" is the point at a border between two countries where people, transports or goods can cross. This may or may not include a customs checkpoint.

3.5.8 Ramp

"Ramp" is an inland container terminal location (storing both full and empty containers) that is connected directly to a rail ramp where containers are loaded/discharged to/from a train. In cases where the inland container terminal does not have a rail-ramp, the alternative location term "Inland Terminal" should be used.

4 Transport Journey

The structure of the Transport Journey governs the naming and understanding of events which are driven by occurrences in the general transport of a shipment. A Transport Journey includes all customer-relevant events carried out by one or more modes of transport.

The structure of events within the Transport Journey follows the syntax below:

`(EventClassifier)_(TransportMode)_(EventType)_at/from_(FacilityType)`

For Event Classifier, Transport Mode and Facility Type please reference the previous chapter.

4.1 Event Type

Event Type in the Transport Journey is the active occurrence being reported on. For the Transport Journey this is a binary parameter which can have the value of “Arrival” or “Departure”.

4.1.1 Arrival

“Arrival” is the event which occurs, when a mode of transport reaches its final or intermediate destination, and the mode of transport is ready for load/discharge operations to begin at the specified location. Depending on the mode of transport arrival will have different definitions:

- Vessel/Barge: A vessel/barge has arrived once the vessel is berthed at the port terminal.
- Rail: A rail transport has arrived once the transport is stationary at the intended platform or rail head.
- Truck: A truck has arrived once the truck is stationary in front of the loading dock or other loading facility.

4.1.2 Departure

“Departure” is the event which occurs when a mode of transport leaves a place of operations. Depending on the mode of transport departure will have different definitions:

- Vessel/barge: Departure has been completed once the last mooring has been released.
- Rail: Departure has been completed once the rail transport is no longer stationary in front of the platform or rail head.
- Truck: Departure has been completed once the truck is no longer stationary in front of the loading dock or loading facility.

5 Shipment Journey

The structure of the Shipment Journey governs the naming and understanding of events which are driven by occurrences in the customer-facing information flow tied to a shipment. A shipment can consist of FCL/LCL (plus carrier/merchant haulage).

The structure of events within the Shipment Journey follows the syntax below:

(EventClassifier)_(DocumentTypeCode)_(EventType)

5.1 Document Type Code

This parameter is an identifier for a specific information type in an event. Information Types in the structure follow the shipment and/or the equipment associated with a shipment, and they all have dependencies on the shipper or consignee.

5.1.1 Booking

“Booking” is a reservation of space and/or equipment for a vessel/voyage and possibly inland transport with a specific origin/destination/equipment type and commodity.

5.1.2 Shipping instruction

“Shipping Instruction” is an enrichment to the original booking shared by the shipper to the carrier. The shipping instruction includes volume/weight, shipping dates, origin, destination, and other special instructions. The information given by the shipper through the shipping instructions is the information which is required to create the Bill of Lading.

5.1.3 Shipment release message

“Shipment Release Message” is document sent to the consignee informing, that the shipment can now be released from its current location and transferred to the consignee on gate-out.

5.1.4 Transport document

“Transportation Document” is a document that governs the terms of carriage between shipper and carrier for maritime transportation. 2 distinct types of transport documents exist:

- Original Bill of Lading
- Sea Waybill

5.1.5 Arrival notice

“Arrival Notice” is a notification to the notifying party (often the consignee and/or notify party) on the estimated arrival time of the shipment.

5.1.6 VGM (Verified Gross Mass)

“VGM” is a notification of reception of the declaration informing the carrier of the weight of the container, verified by an authorized person from the shipper or on behalf of said shipper. This includes cargo weight, bracing, dunnage and container tare weight.

5.1.7 Dangerous Goods Declaration

“Dangerous Good Declaration” is a notification of reception of the Document issued by a shipper (consignor) in accordance with applicable conventions or regulations, describing hazardous goods or materials for transport purposes, and stating that the latter have been packed and labelled in accordance with the provisions of the relevant conventions or regulations.

5.1.8 Out-of-Gauge Declaration

“Out-of-Gauge” is a notification of reception of the declaration for Cargo that has been loaded into special equipment, that exceed the dimensions of a standard 20', 40', or high cube container e.g., Out-of-gauge cargo is over length, over width, over height, or combinations thereof.

5.1.9 Customs Inspection

"Customs Inspection" is an activity identifier that is used to denote the status of a shipment and/or container regarding inspection by the respective customs authorities. It can have a status of "On Hold" or "Released".

5.1.10 Cargo Survey

"Cargo Survey" is an activity identifier of the act of documenting details on the cargo on behalf of the carrier, customer, or authorities. This could be the measurement of an out of gauge shipment, packing of dangerous goods or any element which requires specific documentation of the physical condition of the cargo. It can have Requested or Completed status.

5.2 Event Type

Event Type in the Shipment Journey is the active occurrence being reported on. For a Shipment Journey, several event types exist. Some have a similar meaning but different ties to the associated document.

5.2.1 Received

"Received" is the event associated with receiving a document or a set of information constituting a document type. A document is deemed received when it is registered by the receiving party.

5.2.2 Confirmed

"Confirmed" is an indicator that a document or request issued to a third party has been registered by the third party and that an affirmative message has been sent by the third party (the confirming party).

5.2.3 Issued

A document is issued once it has been released or made available to the receiving party by the issuing party.

5.2.4 Approved

A document is approved once the approving party has sent an affirmative message to the party requesting the approval.

5.2.5 Submitted

A document is submitted once the document is sent from the submitting party to the receiving party.

5.2.6 Surrendered

A transportation document is surrendered once the possession/ownership of the document has been transferred from the customer to the carrier (normally in return for cargo release).

5.2.7 Rejected

“Rejected” is an indicator that a document, request or other information type sent or submitted to a carrier has been rejected/not admitted by the carrier. This is often due to commercial limitations, or because the document or request contained missing or incorrect information.

5.2.8 Pending approval

“Pending approval” is an indicator that a document issued to a third party is awaiting the approval from the approving party. This status remains constant until the Event Type becomes “Approved” or “Rejected”.

5.2.9 Requested

“Requested” is a status indicator that can be used with a number of identifiers to denote that a certain activity, service or document has been requested by the carrier, customer, or authorities. This status remains constant until the requested activity is “Completed”.

5.2.10 Completed

“Completed” is a status indicator that can be used with a number of activity identifiers to denote that a certain activity, service or document has been completed.

5.2.11 On Hold

“On Hold” is a status indicator that can be used with a number of activity identifiers to denote that a container or shipment has been placed on hold i.e. can not progress in the process.

5.2.12 Released

“Released” is a status indicator that can be used with a number of activity identifiers to denote that a container or shipment has been released i.e. allowed to move from depot or terminal (by authorities or service provider).