ONE Record Data Model V1.1

Legend

Mandatory elements
Reference to logistic or common object
(n) multiple elements / arrays

- Air core ontology
- Common objects
- CO2 Emissions
- Dangerous Goods
- Distribution
- Connected Devices
- ACI
- Live Animals

Supertype ⊸ Subtype

Naming convention
- Avoid usage of underscore "_"
- An object name begins with an upper case
- An attribute name begins with a lower case

MovementTimes
MovementTimesURI
timeType: string

TransportMovement
TransportMovementURI
movementType: string (Actual / Planned)
segmentLevel: string (Contractual, flight leg, ...)
modeCode: string
departureLocation: Location
arrivalDate: dateTime
arrivalLocation: Location
departureDate: dateTime
transportIdentifier: string
seal: string
distanceMeasured: Value
distanceCalculated: Value
transportMeans: TransportMeans
movementTimes (n): MovementTimes
transportMeansOperator (n): Person
fuelType: string
fuelAmountMeasured: Value
fuelAmountCalculated: Value
payload: Value
CO2Emissions: CO2Emissions
transportedUlds (n): ULD
transportedPieces (n): Piece
externalReferences (n): ExternalReference
events (n): Event
modeQualifier: string

TransportSegment
TransportSegmentURI
timeType: string
direction: string (Inbound, Outbound)
movementTimestamp: dateTime
movementMilestone: string

TransportMeans
TransportMeansURI
transportCompany: Company
vehicleType: string
vehicleModel: string
vehicleRegistration: string
vehicleSize: string
typicalFuelConsumption: Value
transportSegment: TransportSegment
typicalCO2Coefficient: Value

CO2Emissions
CO2EmissionsURI
calculatedEmissions: Value
methodName: string
methodVersion: string

ULD
ULDURI
uldTypeCode: string
serialNumber: string
ownerCode: string
ataDesignator: string
loadingIndicator: string
tareWeight: Value
uldSealNumber: string
damageFlag: string
demurrageCode: string
ServiceabilityCode: string
odlnCode: string
nbNets: integer
nbDoors: integer
nbFittings: integer
nbStraps: integer
uldRemarks: string

Insurance
InsuranceURI
coveringParty: Company
insuranceAmount: Value
insuredShipment: Shipment

Shipment
ShipmentURI
containedPieces (n): Piece
goodsDescription: string
totalPieceCount: integer
totalSLAC: integer
totalGrossWeight *: Value
volumetricWeight *(n): VolumetricWeight
dimensions (n): Dimensions
incoterms: string
deliveryLocation: Location
deliveryDate: dateTime
weightValuationIndicator: string
otherChargesIndicator: string
insurance: Insurance
externalReference (n): ExternalReference
quoteRequest (n): BookingOptionRequest
events (n): Event
parties (n): Party
shipper: Company
forwarder: Company

Waybill
WaybillURI
waybillNumber *: string
waybillPrefix: string
containedWaybill (n): Waybill
waybillType: string (Direct, House or Master)
destinationCharges: double
destinationCurrencyCode: string
destinationCurrencyRate: double
optionalShippingRefNo: string
optionalShippingInfo: string
booking: BookingOption
accountingInformation: string

CarrierProduct
CarrierProductURI
productCode: string
productDescription: string

BookingOption
BookingOptionURI
bookingStatus: string (offered, confirmed, ...)
parties (n): Party
*carrier *: Company*
bookingSegment: BookingSegment
carrierProductInfo (n): CarrierProduct
price: Price
routing: Routing
bookingTimes: BookingTimes
units (n): string
requestMatchInd: boolean
requestRef: BookingOptionRequest
offerValidFrom: dateTime
offerValidTo: dateTime
event (n): Event

BookingSegment
BookingSegmentURI
departureLocation: Location
arrivalLocation: Location
preferredTransportId: string
bookingOptions (n): BookingOption
requests (n): BookingOptionRequest

Price
PriceURI
grandTotal: Value
rating: Ratings
carrierChargeCode: string
bookingOption: BookingOption

Ratings
RatingsURI
priceSpecification: e.g. Street/Group/Spot etc
priceSpecificationRef: string
chargeType: string e.g. Freight / Surcharges
chargePaymentType: string e.g. P / C
chargeCode: enum e.g. MY / SC
chargeDescription: enum e.g. Airfreight / Fuel
subTotal: Value
rcp: string
ranges (n): Ranges

Routing
RoutingURI
maxConnections: integer
aircraftPossibilityCode: string
rfsInd: boolean
onlineInd: boolean

BookingTimes
ScheduleURI
earliestAcceptanceTime: dateTime
latestAcceptanceTime: dateTime
timeOfAvailability: dateTime
totalTransitTime: dateTime

Ranges
RangesURI
rateClassCode: string e.g. Q
ratingType: enum uldRatingType
ratingType: enum uldRatingType
unitBasis: string e.g. Chargeable Weight
scr: SpecificCommodityCode/ Commodity
minimumQuantity: int
maximumQuantity: int
amount: double

BookingOptionRequest
requestURI
requestType: string (Quote, Booking, etc.)
bookingSegment: BookingSegment
bookingOptions (n): BookingOption
parties (n): Party
unitsPreference (n): string
routingPreferences: Routing
timePreferences: BookingTimes
ratingsPreferences: Ratings
shipmentDetails: Shipment
allotment: string
expectedCommodity: string
requestedHandling: string

VolumetricWeight
Vweight_URI
conversionFactor: Value
chargeableWeight: Value

Dimensions
DimsURI
width: Value
length: Value
height: Value
volume: Value

Geolocation
GeolocURI
latitude: double
longitude: double
elevation: Value
geolocationUnit: string

Address
AddressURI
street (n): string
poBox: string
postalCode: string
cityCode: string
cityName: string
regionCode: string
regionName: string
addressCodeType: string
addressCode (n): string
country: Country

Party
PartyURI
partyRole: string
partyDetails: Company

Value
ValueURI
value: string
unit: string

OtherIdentifier
OtherIDURI
otherIdentifierType: string
identifier: string

Person
PersonURI
contactType: string
salutation: string
firstName: string
middleName: string
lastName: string
jobTitle: string
department: string
employeeID: string
contactDetails (n): Contact
documents (n): ExternalReference

Contact
ContactURI
contactType: string
contactValue: string

Country
CountryURI
countryCode: string
countryName: string

Location
LocURI
locationType: string
code: string
name: string
geolocation: Geolocation
address: Address

ExternalReference
External_refURI
documentType: string
documentName: string
documentOriginator: Company
documentID: string
documentVersion: string
documentLink: string
documentChecksum: string
documentLocation: Location
validFrom: dateTime
expiryDate: dateTime

ItemDg
ItemURI
supplementaryInfoPrefix: string
supplementaryInfoSuffix: string
netWeightMeasure: Value
reportableQuantity: string
emergencyContact: Person

Item
ItemURI
*product *: Product*
quantity: VALUE
otherIdentifier (n): OtherIdentifier
unitPrice: Value
quantityForUnitPrice: double
weight: Value
dimensions: Dimensions
batchNumber: string
lotNumber: string
productExpiryDate: dateTime
productionDate: dateTime
productionCountry: Country
targetCountry: Country
isInPiece: Piece
events (n): Event

Characteristics
CharacteristicsURI
characteristicsType: string
value: string

product *
ProductURI
manufacturer: Company
productDescription: string
productIdentifier: string
otherIdentifier (n): OtherIdentifier
characteristics (n): Characteristics
commodityName: string
hsCode: string
hsType *: string
hsCommodityName *: string
hsCommodityDescription *: string
commodityItemNumber: string

ProductDg
ProductURI
unNumber: string
technicalName: string
properShippingName: string
explosiveCompatibilityGroupCode: string
packagingDangerLevelCode: string
packingInstructionNumber: string
hazardClassificationId: string
additionalHazardClassificationId: string
specialProvisionId: string
authorizationInformation: string
dgRadioactiveMaterial (n): DgProductRadio

Piece
PieceURI
containedPiece (n): Piece
uldReference: ULD
transportMovement (n): TransportMovement
containedItems (n): Item
shipment: Shipment
uPID: string
loadType: string (Bulk or ULD)
goodsDescription *: string
product: Product
slac: integer
volumetricWeight *:VolumetricWeight
grossWeight *: Value
dimensions: Dimensions
coload: boolean
stackable: boolean
turnable: boolean
productionCountry (n): Country
parties (n): Party
specialHandling (n): SpecialHandling
serviceRequest (n): ServiceRequest
externalReference (n): ExternalReference
otherIdentifier (n): OtherIdentifier
packagingType: PackagingType
securityDeclaration: SecurityDeclaration
shippingMarks: string
packageMarkCoded: string
packageIdentifier: string
customsInfo: CustomsInfo
declaredValueForCustoms: Value
declaredValueForCarriage: Value
events (n): Event

PieceDg
PieceURI
allPackedInIndicator: boolean
qValueNumeric: double
overpackIndicator: boolean
overpackTypeCode: string
overpackCriticalitySafetyIndexNumeric: string
overpackT1: string
dgDeclaration: DgDeclaration

DgDeclaration
DgDeclarationURI
shipperDeclarationText: string
handlingInformation: string
exclusiveUseIndicator: boolean
aircraftLimitationInformation: string
complianceDeclarationText: string

PieceLiveAnimals
PieceURI
specificContainerNb: integer
speciesScientificName: string
speciesCommonName: string
specimenDescription: string
specimenTypeCode: string
quantityAnimals: integer
exportTradeCountry: Country
originTradeCountry: Country
acquisitionDatetime: dateTime
annualQuotaQuantity: integer
categoryCode: string
goodsTypeCode: string
goodsTypeExtensionCode: integer
associatedEpermit: EPermitConsignment
originReferencePermitDatetime: dateTime
originReferencePermitId: string
originReferencePermitTypeCode: string

EpermitConsignment
EpermitConsignmentURI
consignmentItems: PieceLiveAnimals
examiningQuantity: Value
usedToDateQuantity: integer

LiveAnimalsEpermit
LiveAnimalsEpermitURI
consignments (n): EpermitConsignment
permitNumber: string
permitTypeCode: string
permitTypeOther: boolean
permitValidFrom: dateTime
permitValidUntil: dateTime
permitCopyIndicator: boolean
transactionPurposeCode: string
transactionPurposeText: string
specialConditions: string
consignee: Company
signatures (n): EpermitSignature
transportContractId: string
transportContractTypeCode: string

EpermitSignature
EpermitConsignmentURI
signatoryRole: string
signatoryCompany: Company
signatureDate: dateTime
signatureTypeCode: string
signatureStatement: string
securityStampId: string

PackagingType
PackagingTypeURI
typeCode: string
packagingTypeDescription: string

SpecialHandling
SpecialHandlingURI
code: string
handlingText: string

ServiceRequest
ServiceRequestURI
code: string
description: string
statementType (n): string
statementText: string
requestedBy: Person

CustomsInfo
CustomsInfoURI
customsInfoCountryCode: string
customsInfoNote: string
customsInfoContentCode: string
customsInformation: string
customsInfoSubjectCode: string

SecurityDeclaration
SecurityDeclarationURI
regulatedEntityIssuer: RegulatedEntity
securityStatus: string
receivedFrom: RegulatedEntity
screeningMethod (n): string
groundsForExemption (n): string
otherScreeningMethods (n): string
issuedBy: Person
issuedOn: dateTime
otherRegulatedEntity (n): RegulatedEntity
additionalSecurityInformation: string
piece: Piece

RegulatedEntity
REURI
entity: Branch
regulatedEntityCategory: string (RA, KC, AO)
regulatedEntityIdentifier: string
expiryDate: dateTime

Event
EventURI
eventTypeIndicator *: string
dateTime *: dateTime
eventCode: string
eventName: string
performedBy: Company
location: Location
linkedObject: LogisticObject
performedByPerson: Person

EventUld
EventURI
loadingPosition: string

Company
CompanyURI
iATACargoAgentCode: string
branch: CompanyBranch
companyName: string

Carrier
CompanyURI
carrierName: string
carrierShortName: string
airlineCode: string
airlinePrefix: string

CompanyBranch
CompanyBranchURI
branchName: string
iATACargoAgentLocationIdentifier: string
otherIdentifiers (n): OtherIdentifier
location: Location
contactPersons (n): Person

DgRadioactiveIsotope
DgRatIsotopeURI
isotopeId: string
isotopeName: string
activityLevelMeasure: string
physicalChemicalForm: string
specialFormIndicator: boolean
criticalitySafetyIndexNumeric: double
lowDispersibleIndicator: boolean

DgProductRadioactive
DgProductRadioactiveURI
dgRaTypeCode: string
transportIndexNumeric: integer
fissileExceptionIndicator: boolean
fissileExceptionReference: string
isotopes (n): DgRadioactiveIsotope

Logistic Object referring to physical entity (e.g. Piece, ULD, Location)

IotDevice
IotDeviceURI
sensors (n): Sensor
deviceDescription: string
deviceManufacturer: Company
deviceModel: string
deviceName: string
deviceSerialNumber: string
associatedObject: string

Sensor
sensorURI
iotDevice: IotDevice
sensorDescription: string
sensorName: string
sensorType: string
sensorSerialNumber: string

SensorGeoloc
sensorURI
sensorType = "Geoloc"
val (n): MeasurementsGeoloc

SensorOther
sensorURI
sensorType != "Geoloc"
val (n): MeasurementsOther

Measurements
MeasurementsURI
measurementTimestamp: dateTime

MeasurementsGeoloc
MeasurementsURI
geolocation: Geolocation

MeasurementsOther
MeasurementsURI
genericMeasurement: Value