LOG Santé

les logisticiens dépositaires pharmaceutiques

Implementation Guideline:

Applying EPCIS traceability message for the FMD

Release 1.1, Dec 2018

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1   Preface

1.1   Purpose

This document identifies the standards used and provides details about how they can be applied to support lot-level and item-level traceability. By so doing, this document serves as a voluntary implementation guideline that provides guidance to industry members distributors and hospitals about how to apply the standards to their own business processes. It provides a secured, standardized, simple, affordable transferred information message to comply with Q&A 6.6 FMD document.

1.2   Scope

This guideline defines the EPCIS events (XML data format) to support FMD requirements for lot-level information and item-level information. It does not provide any guidance or advice regarding regulatory compliance.

This guideline reflects current industry understanding of the FMD traceability requirements. Those requirements, and the statutes and regulations affecting them, are subject to change and may evolve in a manner this guideline cannot anticipate.

This implementation guideline was prepared by LOGSanté, public hospitals representatives and standards experts to assist the distributors in implementing standard traceability message for the purpose of compliance with the FMD requirements. This guideline does not address other considerations or factors, apart from FMD compliance, that might impact or inform the adoption of optimal traceability processes or procedures for any particular company or product.

Important: Each company is individually responsible for meeting all statutory and/or regulatory requirements for their company and their products. Consult with your company's legal counsel or compliance team (regulatory or quality) for more specific information about current statutory and regulatory requirements applicable to your company and products.

1.3   Contributors

This guideline was developed through the commitment and dedication of the following participants.

Name	Company
Bernard Dieu	CHU de Rouen, SYNPREFH
Jean François Fusco	LOGSanté

1.4   Normative References

This implementation guideline is based on the *EPC Tag Data Standard*, the *Tag Data Translation Standard*, the *EPCIS Standard*, and the *Core Business Vocabulary Standard*. The specific standards referenced in this guideline are listed below, and the relevant provisions of these standards/specifications are to be considered provisions of this guideline:

- *EPC Tag Data Standard (TDS) 1.12*
- *EPCIS 1.2 Standard*
- *Core Business Vocabulary (CBV) 1.2 Standard*
- *GTIN Management Standard* (formerly known as the GTIN Allocation Rules)
- *Healthcare GTIN Allocation Rules*

1.5   References

This implementation guideline refers to European Commission and FDA/DSCSA documentation

- *Safety features for medicinal products for human use - European Commission – Q&A*
- *DSCSA Implementation: Product Tracing Requirements — Compliance Policy*
- *WG IV: Implementation of the Falsified Medicines Directive in the hospital setting.*
- *DSCSA Standards for the Interoperable Exchange of Information for Tracing of Certain Human, Finished, Prescription Drugs: How to Exchange Product Tracing Information*

2 EPCIS standard principles for this guideline

Electronic Product Code Information Services (EPCIS) is a Standard for capturing and communicating data about the movement and status of objects in the supply chain (e.g., products, logistics units, returnable assets, etc.). It enables supply chain partners to capture event information about objects as they move through the supply chain (e.g., shipped, received, etc.), and to share that information with their trading partners securely and in near real-time. EPCIS defines technical standards for a data-sharing <u>interface</u> between applications that capture EPC-related data and those that need access to it. EPCIS also provides data standards for how to express what business process was operating on the object and the status of the object upon exiting the process. For the data standards, EPCIS makes use of a second standard named the Core Business Vocabulary (CBV), which offers a pre-defined vocabulary for a large set of business events and scenarios.

The data elements captured and recorded for each EPCIS event are grouped into four dimensions: *what*, *when*, *where*, and *why*. The *GS1 General Specifications* and the GS1 EPC Tag Data Standard define identifiers for physical objects used in the "*what*" dimension, and identifiers for locations used in the "*where*" dimension. The GS1 EPC Core Business Vocabulary provides lists of acceptable values for *Business Step, Disposition*, and *Business Transaction Type* used in the *why* dimension, as well as the format for the business transaction identifiers used in the *why* dimension.

This document specifies how the EPCIS standard is applied to support lot-level management and item-level traceability for FMD.

Beyond the four dimensions of *what*, *where*, *when*, and *why* defined in the EPCIS standard, this guideline defines extension fields used to provide additional business data for lot-level management and serialized item-level traceability in certain EPCIS events. The data elements captured and recorded for each EPCIS events are presented in the section 3.2.

3 Application of the EPCIS standard for traceability message

An overview of EPCIS events to be captured and shared by the intermediates parties for item traceability is provided below. Detailed definitions of each EPCIS event are specified in subsequent subsections in this section.

3.1 Events captured and shared by intermediate parties (e.g., distributor) supplying the end of the supply chain (e.g., hospital, pharmacy, etc.)

There are three types of EPCIS events utilized for the traceability message:

3.1.1 **Commissioning Event (Section** 4.1**)** declaring that specified serial numbers or lot numbers have been introduced into the supply chain and providing information about the corresponding products.

3.1.2 **Packing Event (Section** 4.2**)** providing the hierarchical relationships (e.g., item-to-case, case- to-pallet) between objects as they exist at the point of shipping. The beginning-of-supply-chain party does not need to reflect any internal unpacking and packing activity that may have taken place, as long as the events that are shared fully account for the hierarchy as shipped.

3.1.3 **Shipping Event (Section** 4.3**)** indicating that objects have been shipped to a downstream trading partner and providing item-level or lot-level traceability information governing the shipment. The *Shipping* events only reference the outermost (i.e., top-level) products in the packaging hierarchy. The full hierarchy is specified by inference from the prior *Packing* events.

3.2 Data elements

Data elements are derived from both the data in the EPCIS events themselves, as well as certain product and location master data that is referenced by product and location identifiers found in the EPCIS message. For example, traceability information includes both the unique identifier for a pharmaceutical product (i.e., the GTIN), as well as its expiration date information. When using EPCIS events to provide those data, the GTIN is present in the EPCIS event data itself, while the expiration date information is obtained from the master data associated with the GTIN.

A list of the data elements is provided in the table below.

Type of Information	Data Attribute	EPCIS SEGMENT
Manufacturer Information	the business name, address and contacts of the manufacturer of the products	Party master data accompanying the EPCIS message
Supplier Information	the business name, address and contacts of the supplier of the products	Party master data accompanying the EPCIS message
Recipient Information	the business name, address and contacts of the recipient of the products	Party master data accompanying the EPCIS message
Transaction Information	The identifier of the purchase order	EPCIS *Shipping* Event (bizTransactionList)
	The identifier of the invoice	EPCIS *Shipping* Event (bizTransactionList)
Shipment Information	The date of the shipment	EPCIS *Shipping* Event (eventTime)
	the GTIN/NTIN number of the products	EPCIS *Commissioning* Event (epcClass and epcList)
	the lot number of the products	Instance-level product master data in the Instance/Lot Master Data (ILMD) section of an EPCIS *Commissioning* Event
	The expiration date of the products	Instance-level product master data in the Instance/Lot Master Data (ILMD) section of an EPCIS *Commissioning* Event for serialized item-level and Production master data master accompanying the EPCIS message for lot-level
	If applicable, the serial number of the products	EPCIS *Commissioning* Event (epcList)
	The number of the products	Calculated from EPCIS *Shipping* Event and associated *Aggregation* Event (childEPCs and childQuantityList)
	The identifier of the containers (most likely, SSCCs of Cases or Pallets)	EPCIS *Shipping* Event (epcList)

3.3   EPCIS Event Fields

The EPCIS standard defines many fields of EPCIS events to be optional. In the context of a specific event defined in this guideline, a field that is optional in the EPCIS standard may be required to be present (or required to be omitted) for lot-level management or serialized item traceability purposes. For clarity, the EPCIS event details tables throughout this section use the following notations to indicate what is required for lot-level management or serialized item traceability purposes:

Required   The field is required in the context of this specific event. (This is always the case if the field is specified as required in the EPCIS standard.)

Optional   The field may or may not be included in the context of this specific event.

| Conditional | In the context of this specific event, the field may be required, optional, or omitted depending on circumstances. The circumstances are specified in the description. |

3.4   EPCIS Header Master Data

Master data is included in the EPCIS Header of an EPCIS document. The content of this extension is a `VocabularyList` element that conforms to the EPCIS Master Data Schema. Within that element, there are two types of master data:

- company master data
- production lot master data for lot-level management.

4   FMD message description

This message enables the trade partner to record lot-level (Product ID + Lot Number) as well as serialized item-level (Product ID + Serial Number) for each sale/transfer of ownership.

This message includes commissioning event data, aggregation event data and shipping event data.

4.1   Commissioning

Commissioning is the process of associating an object (e.g., bottle, case, tote, pallet, etc.) with an EPC (i.e., an identifier representing a GTIN / Serial Number, SSCC, etc.).

4.1.1   Populating a Commissioning Event

A *Commissioning* event should be an EPCIS Object Event populated as follows:

Element	Usage	Type	Value	Reason
eventTime	Required	Timestamp	Date and time of event.	EPCIS standard definition
eventTimeZoneOffset	Required	String	Time zone offset in effect at the time and place where the event occurred.	EPCIS standard definition
recordTime	Optional	Timestamp	Date and time the event was recorded in an EPCIS repository.	EPCIS standard definition
epcList	Required	List of URI	EPC(s) of the commissioned item in EPC Pure Identity URI format. ◻ If more than one EPC is included, they should all have the same value for ILMD attributes defined below, or should all require these attributes to be omitted. ◻ EPCs having different values for these attributes should be shared in different *Commissioning* events.	Because the ILMD attributes below are at the *event-level*, they should be the same for all EPCs in the event.
quantityList	Required	Complex Type	quantityElement *(see elements at the bottom of this table)*	List of LGTINS for the lowest saleable unit.
action	Required	String	ADD	EPCIS standard definition
bizStep	Required	URI	urn:epcglobal:cbv:bizstep:commissioning	CBV standard definition
disposition	Required	URI	urn:epcglobal:cbv:disp:active	CBV standard definition: the disposition value "active" is always used with the bizStep "commissioning."
readPoint	Optional	URI	EPC Pure Identity URI for the GLN of the location at which the event took place.	EPCIS standard definition
bizLocation	Required	URI	EPC Pure Identity URI for the GLN of the location where the objects are presumed to be following the event.	EPCIS standard definition

quantityElement elements			
epcClass	Optional	String	LGTIN epcClass URI containing the GTIN and the lot of the individual saleable unit
quantity	Optional	Integer	The number of instances of GTIN/lot (specified by epcClass) that are shipped.

4.1.2 Commissioning Event Instance/Lot Master Data (ILMD) Attributes

In addition to the EPCIS standard fields shown above, the following Instance/Lot Master Data (ILMD) attributes are also included in a *Commissioning* event. All of these ILMD attributes are defined in the EPCIS Core Business Vocabulary (CBV), and are in namespace `urn:epcglobal:cbv:mda`.

Element	Usage	Type	Value
lotNumber	Conditional *(see rules in the next sections)*	String	The lot or batch number for all of the EPCs in the epcList of the ObjectEvent.
itemExpirationDate	Conditional *(see rules in the next sections)*	Date	The expiration date for all of the EPCs in the epcList of the ObjectEvent, formatted as an xsd:date.

4.1.3 Production Lot Master Data

Production Lot master data is included in the `VocabularyList` element using a `Vocabulary` element whose type is `urn:epcglobal:epcis:vtype:EPCClass`. Each vocabulary element has an ID that is the EPC Class URI corresponding to the LGTIN of the GTIN+lot. The attributes are defined below:

Element	Usage	Type	Value
itemExpirationDate	Required	Date	The expiration date for all of the EPCs in the epcClass of the ObjectEvent, formatted as an xsd:date.

4.1.4 Commissioning Object Event Rules

- `ObjectEvents` for commissioning <u>item serial numbers</u> SHOULD include the ILMD elements to define the lot number and expiration date, and the containing EPCIS Document SHOULD include the GTIN-level product master data.

- `ObjectEvents` for commissioning <u>homogeneous containers</u> (e.g., cases and pallets of the same object) MAY include the ILMD elements to define the lot number and expiration date, and the containing EPCIS Document MAY include the GTIN-level product master data.

- `ObjectEvents` for commissioning <u>non-homogeneous containers</u> (e.g., cases and pallets of different items, lots, etc.) SHOULD NOT include the ILMD elements to define the lot number and expiration date, and the containing EPCIS Document SHOULD NOT include GTIN-level product master data (except to the extent that the same document contains other *Commissioning* events that do indicate the inclusion of product master data for the same GTINs).

- <u>All</u> of the EPCs within a single *Commissioning* event SHALL either be item serial numbers and/or homogeneous containers having the same lot number and expiration date or be non-homogeneous containers. Multiple *Commissioning* events SHALL be used for EPCs that differ in lot number or expiration date, or for non-homogeneous containers vs. items and homogeneous containers. (This is because the lot number and expiration date given in a single *Commissioning* event applies to *all* of the EPCs in that event.).

4.2 Packing

Packing denotes a specific activity within a business process that includes putting an object (e.g., individuals, inners, cases, pallets, etc.) into a larger container (e.g., cases, totes, pallets, etc.) usually for the purposes of storing or shipping. Aggregation of one unit to another occurs at this point.

4.2.1 Populating a Packing Event

A *Packing* event should be an EPCIS Aggregation Event populated as follows:

Element	Usage	Type	Value	Reason
eventTime	Required	Timestamp	Date and time of event.	EPCIS standard definition
eventTimeZoneOffset	Required	String	Time zone offset in effect at the time and place where the event occurred.	EPCIS standard definition
recordTime	Optional	Timestamp	Date and time the event was recorded in an EPCIS repository.	EPCIS standard definition
parentID	Required	URI	EPC of the outer container in EPC Pure Identity URI format.	EPCIS standard definition
childEPCs	Required	List of URI	EPC(s) of the item(s) being packed into the parent presented in EPC Pure Identity URI format.	EPCIS standard definition
childquantityList	Optional	Complex Type	quantityElement *(see elements at the bottom of this table)*	List of LGTINS for the lowest saleable unit.
action	Required	String	ADD	EPCIS standard definition
bizStep	Required	URI	urn:epcglobal:cbv:bizstep:packing	CBV standard definition
disposition	Required	URI	urn:epcglobal:cbv:disp:in_progress	CBV standard definition
readPoint	Optional	URI	EPC Pure Identity URI for the GLN of the location at which the event took place.	EPCIS standard definition
bizLocation	Required	URI	EPC Pure Identity URI for the GLN of the location where the objects are presumed to be following the event.	EPCIS standard definition

quantityElement elements			
epcClass	Optional	String	LGTIN epcClass URI containing the GTIN and the lot of the individual saleable unit
quantity	Optional	Integer	The number of instances of GTIN/lot (specified by epcClass) that are shipped.

4.3 Shipping

Shipping is the process of initiating the transfer an object from one trading partner to another. Only the outermost containers in the packaging hierarchy are included.

4.3.1 Populating a Shipping Event

A *Shipping* event should be an EPCIS Object Event populated as follows:

Element	Usage	Type	Value	Reason
eventTime	Required	Timestamp	Date and time of event.	EPCIS standard definition.
eventTimeZone Offset	Required	String	Time zone offset in effect at the time and place where the event occurred.	EPCIS standard definition
recordTime	Optional	Timestamp	Date/ time event was recorded in an EPCIS repository.	EPCIS standard definition
epcList	Required	List of URI	The EPC(s) of the outermost containers in the packaging hierarchy. Most likely, SSCCs of Cases or Pallets.	EPCIS standard definition
Action	Required	String	OBSERVE	EPCIS standard definition
bizStep	Required	URI	urn:epcglobal:cbv:bizstep:shipping	CBV standard definition
Disposition	Required	URI	urn:epcglobal:cbv:disp:in_transit	CBV standard definition. **disposition** value "in_transit" is always paired with **bizStep** "shipping" for forward logistics
readPoint	Required	URI	EPC Pure Identity URI for the GLN of the location at which the event took place.	EPCIS standard definition
bizTransaction List	Required	List of biz transactions	Business transactions governing this *Shipping* event, which may include a purchase order or an invoice. Each transaction is represented as a pair of URIs: one URI for the type and one URI for the value. If more than one business transaction of the same type is included, then this event does <u>not</u> specify which objects in the epcList are associated with which business transaction. Optionally, the shipper may include one or more *Shipping* events to associate specific objects with each business transaction.	CBV standard definition

Element	Usage	Type	Value	Reason
sourceList	Required	List of sources	Each source in the sourceList is a pair of URIs: one URI for the type and one URI for the value. The sourceList shall include one source of type urn:epcglobal:cbv:sdt:owning_party whose value is the EPC Pure Identity URI for the GLN of the transferring party. If the ship-from GLN is different from the transferring party's GLN, sourceList shall also include a second source of type urn:epcglobal:cbv:sdt:location whose value is the EPC Pure Identity URI of the ship-from GLN. Each GLN URI must match one of the companies in the company master data list.	CBV standard definition
destinationList	Required	List of destinations	Each destination in the destinationList is a pair of URIs: one URI for the type and one URI for the value. The destinationList shall include one destination of type urn:epcglobal:cbv:sdt:owning_party whose value is the EPC Pure Identity URI for the GLN of transfer-to party. If ship-to GLN is different from the transfer-to party's GLN, destinationList shall also include a second destination of type urn:epcglobal:cbv:sdt:location whose value is EPC Pure Identity URI of ship-to GLN. Each GLN URI must match one of the companies in the company master data list.	CBV standard definition

4.3.2 Shipping Event Master Data

When an EPCIS document includes one or more *Shipping* events, the EPCIS header should contain master data including the following attributes for each distinct party or location referenced in the source list or destination list of any *Shipping* event. Note that if several *Shipping* events in the same EPCIS document reference the same party or location, the master data attributes for that party or location need only be included *once* in the header.

party or location master data elements *(include one set of attributes for each trading partner found in any Shipping event within scope of the header.*			
Name	Required	String	The name of the location or party expressed in text
streetAddressOne	Required	String	The first line of the street address.
streetAddressTwo	Optional	String	The second line of the street address.
streetAddressThree	Optional	String	The third line of the street address.
City	Required	String	The city.
State	Conditional	String	The state, province, or region using the standard two-letter abbreviation specified in ISO 3166-2:1998 country subdivision code.
postalCode	Conditional	String	The ZIP or other postal code.
countryCode	Required	String	The country using the standard two-letter abbreviation specified in ISO 3166-1alpha-2:1997 country code.
emailAddress	Optional	String	The email address.
TelephoneNumber	Optional	String	The telephone number using the E.164 ITU-T recommendation.
FaxNumber	Optional	String	The fax number using the E.164 ITU-T recommendation.
additionalIdentificationTypeCode	Conditional	String	The additional party identification type (required if the party is not identified by a GLN).
additionalIdentification	Conditional	String	The additional party identification code (required if the party is not identified by a GLN).

4.4　XML Example of an EPCIS traceability message

This example shows a single XML document containing all required information to support lot-level and item-level traceability. It includes a *Commissioning* event, a *Packing* event and a *Shipping* event, as well as an EPCIS Header that includes party master data for the source and destination.

Those events may be collected into a single EPCIS Document in order to create a single XML document containing all required information for traceability. To avoid repetition of product master data (e.g., trade item expiration date, etc.) and party/location master data (e.g., postal address), such attributes are also carried in the header of the EPCIS document rather than repeated within each EPCIS event.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<epcis:EPCISDocument xmlns:cbvmda="urn:epcglobal:cbv:mda"
xmlns:epcis="urn:epcglobal:epcis:xsd:1"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:wg4="http://epcis.wg4.fr/ns"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
schemaVersion="1.2" creationDate="2016-09-20T17:45:20.0Z">
<EPCISHeader>
<sbdh:StandardBusinessDocumentHeader>
<sbdh:HeaderVersion>1.0</sbdh:HeaderVersion>
<sbdh:DocumentIdentification>
<sbdh:Standard>EPCglobal</sbdh:Standard>
<sbdh:TypeVersion>1.0</sbdh:TypeVersion>
<sbdh:InstanceIdentifier>20181244444400001</sbdh:InstanceIdentifier>
<sbdh:Type>Events</sbdh:Type>
<sbdh:CreationDateAndTime>2018-12-06T12:45:20.0Z</sbdh:CreationDateAndTime>
</sbdh:DocumentIdentification>
</sbdh:StandardBusinessDocumentHeader>
<extension>
<EPCISMasterData>
<VocabularyList>
<Vocabulary type="urn:epcglobal:epcis:vtype:EPCClass">
<VocabularyElementList>
<VocabularyElement id="urn:epc:class:lgtin:409876.0000001.L1">
<attribute id="urn:epcglobal:cbv:mda#itemExpirationDate">2022-12-31</attribute>
</VocabularyElement>
<VocabularyElement id="urn:epc:class:lgtin:409876.0000002.L4">
<attribute id="urn:epcglobal:cbv:mda#itemExpirationDate">2024-05-31</attribute>
</VocabularyElement>
</VocabularyElementList>
</Vocabulary>
<Vocabulary type="urn:epcglobal:epcis:vtype:Location">
<VocabularyElementList>
<!-- SourceList owning_party (sold from business party) -->
<VocabularyElement id="urn:epc:id:pgln:409876.500001">
<attribute id="urn:epcglobal:cbv:mda#name">GoodSource Pharmaceuticals</attribute>
<attribute id="urn:epcglobal:cbv:mda#streetAddressOne">125 rue du médoc</attribute>
<attribute id="urn:epcglobal:cbv:mda#city">Agen</attribute>
<attribute id="urn:epcglobal:cbv:mda#postalCode">47000</attribute>
<attribute id="urn:epcglobal:cbv:mda#countryCode">FR</attribute>
<attribute id="http://epcis.wg4.fr/mda/EmailAddress">sales@goodsource.com</attribute>
<attribute id="http://epcis.wg4.fr/mda/TelephoneNumber">+33 5 48 22 11 00</attribute>
<attribute id="http://epcis.wg4.fr/mda/FaxNumber">+33 5 48 22 11 01</attribute>
</VocabularyElement>
<!-- SourceList location (ship from location) -->
```

```xml
<VocabularyElement id="urn:epc:id:sgln:333666.999033.0">
<attribute id="urn:epcglobal:cbv:mda#name">Hippocrate Logistics</attribute>
<attribute id="urn:epcglobal:cbv:mda#streetAddressOne">57 chemin de la
palette</attribute>
<attribute id="urn:epcglobal:cbv:mda#city">Laon</attribute>
<attribute id="urn:epcglobal:cbv:mda#postalCode">02000</attribute>
<attribute id="urn:epcglobal:cbv:mda#countryCode">FR</attribute>
<attribute
id="http://epcis.wg4.fr/mda/additionalIdentificationTypeCode">VAT</attribute>
<attribute id="http://epcis.wg4.fr/mda/additionalIdentification">FR 40
123456824</attribute>
</VocabularyElement>
<!-- DestinationList owning_party (sold to business party) -->
<VocabularyElement id="urn:epc:id:pgln:541234.123777">
<attribute id="urn:epcglobal:cbv:mda#name">Healthy Hospital</attribute>
<attribute
id="http://epcis.wg4.fr/mda/EmailAddress">Mehdi_Kamant@HealthyHospital.com</attribu
te>
<attribute id="http://epcis.wg4.fr/mda/TelephoneNumber">+33 1 55 55 67
34</attribute>
<attribute id="urn:epcglobal:cbv:mda#streetAddressOne">21 boulevard de la
santé</attribute>
<attribute id="urn:epcglobal:cbv:mda#city">Houilles</attribute>
<attribute id="urn:epcglobal:cbv:mda#postalCode">78880</attribute>
<attribute id="urn:epcglobal:cbv:mda#countryCode">FR</attribute>
<attribute
id="http://epcis.wg4.fr/mda/additionalIdentificationTypeCode">FUI</attribute>
<attribute
id="http://epcis.wg4.fr/mda/additionalIdentification">8646362</attribute>
</VocabularyElement>
</VocabularyElementList>
</Vocabulary>
</VocabularyList>
</EPCISMasterData>
</extension>
</EPCISHeader>
<EPCISBody>
<EventList>
<ObjectEvent>
<eventTime>2012-04-05T11:35:00.000Z</eventTime>
<eventTimeZoneOffset>-02:00</eventTimeZoneOffset>
<epcList>
<epc>urn:epc:id:sscc:098765.40670000101</epc>
</epcList>
<action>ADD</action>
<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
<disposition>urn:epcglobal:cbv:disp:active</disposition>
<bizLocation>
<id>urn:epc:id:sgln:409876.500001.0</id>
</bizLocation>
</ObjectEvent>
<ObjectEvent>
<eventTime>2012-04-05T11:35:00.000Z</eventTime>
<eventTimeZoneOffset>-02:00</eventTimeZoneOffset>
<epcList>
<epc>urn:epc:id:sgtin:409876.0789012.s012346671</epc>
<epc>urn:epc:id:sgtin:409876.0789012.s012346672</epc>
<epc>urn:epc:id:sgtin:409876.0789012.s012346770</epc>
</epcList>
<action>ADD</action>
<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
<disposition>urn:epcglobal:cbv:disp:active</disposition>
<bizLocation>
```

```xml
<id>urn:epc:id:sgln:409876.500001.0</id>
</bizLocation>
<extension>
<ilmd>
<cbvmda:lotNumber>00123</cbvmda:lotNumber>
<cbvmda:itemExpirationDate>2020-12-12T11</cbvmda:itemExpirationDate>
</ilmd>
</extension>
<extension>
<quantityList>
<quantityElement>
<epcClass>urn:epc:class:lgtin:409876.0000001.L1</epcClass>
<quantity>3500</quantity>
</quantityElement>
<quantityElement>
<epcClass>urn:epc:class:lgtin:409876.0000002.L4</epcClass>
<quantity>200</quantity>
</quantityElement>
</quantityList>
</extension>
</ObjectEvent>
<AggregationEvent>
<eventTime>2012-04-10T10:15:00.000Z</eventTime>
<eventTimeZoneOffset>-02:00</eventTimeZoneOffset>
<parentID>urn:epc:id:sscc:098765.40670000101</parentID>
<childEPCs>
<epc>urn:epc:id:sgtin:123456.0789012.s012346671</epc>
<epc>urn:epc:id:sgtin:123456.0789012.s012346672</epc>
<epc>urn:epc:id:sgtin:123456.0789012.s012346770</epc>
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 <quantity>3500</quantity>
 </quantityElement>
 <quantityElement>
 <epcClass>urn:epc:class:lgtin:409876.0000002.L4</epcClass>
 <quantity>200</quantity>
 </quantityElement>
 </childQuantityList>
 </extension>
<action>ADD</action>
<bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
<disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
<bizLocation>
<id>urn:epc:id:sgln:409876.500001.0</id>
</bizLocation>
</AggregationEvent>
<ObjectEvent>
<eventTime>2011-04-10T18:30:00.000Z</eventTime>
<eventTimeZoneOffset>-02:00</eventTimeZoneOffset>
<epcList>
<epc>urn:epc:id:sscc:098765.40670000101</epc>
</epcList>
<action>OBSERVE</action>
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<bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
<disposition>urn:epcglobal:cbv:disp:in_transit</disposition>
<readPoint>
<id>urn:epc:id:sgln:333666.999033.0</id>
</readPoint>
<bizTransactionList>
<bizTransaction
type="urn:epcglobal:cbv:btt:po">urn:epcglobal:cbv:bt:5412341237772:PO3352</bizTransaction>
<bizTransaction
type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:4098765000010:FA1283746</bizTransaction>
</bizTransactionList>
<extension>
<sourceList>
<!-- owning_party = from business party -->
<source
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:pgln:409876.500001</source>
<!-- location = Ship from location -->
<source
type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:333666.999033.0</source>
</sourceList>
<destinationList>
<!-- owning_paty = to business party -->
<destination
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:pgln:541234.123777</destination>
</destinationList>
</extension>
</ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>
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