

SDC Use Case for papiNet

Delivery of roundwood with a truck going from three Delivery Origins to two Places of Measuring

*Carrier and SDC exchange data about an inbound
delivery with three delivery origins to two places of
measuring.*

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2. Document Version History

A change to the version history requires an update of date and version in the page header.

The numbering format is Revision.Version, where Revision is an official document release and Version exceeding 0 is an internal work document. Please note that only if the document version has suffix 0 it is an official SDC version, e.g. 1.0, 2.0, 3.0, but NEITHER 0.1, 1.2 nor 1.10. The version suffix is initialized for each new revision level.

| Version | Date | Description | Signature |
|---------|----------|------------------------|-----------|
| 1.0 | 14-06-10 | Initial public version | JoBj |

3. SDC Use Case “Delivery of roundwood with one Truck going from three Delivery Origins to two Places of Measuring”

3.1 Overview

This use case describes the following scenario.

An empty truck loads a delivery at a Delivery Origin and continues partially loaded to the second Delivery Origin where it is loaded with a second delivery. The truck goes to the first Place of Measuring where the second delivery is measured. After unloading the second delivery, the truck continues partially loaded to a third Delivery Origin where it is loaded with a third delivery. Finally the truck drives to the second Place of Measuring where the both remaining deliveries are measured.

SDC acts as a Service Provider and transfers relevant data to and from the Places of Measuring.

The figure below shows Use Case B:

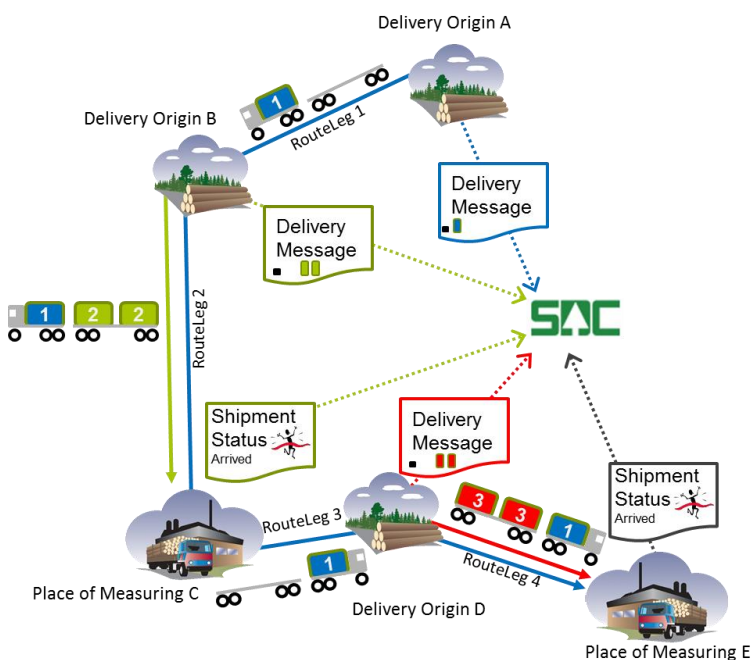


Figure 1: Logical diagram of Use Case B

Delivery Origin A. After the truck has loaded one delivery with one roundwood product (blue in figure 1) at Delivery Origin A the Carrier issues and sends a **DeliveryMessage (DeliveryMessage)** to SDC. The Place of Measuring is included in the DeliveryMessage.

Delivery Origin B. After the truck has loaded a second delivery with one roundwood product (green in the figure) at Delivery Origin B the Carrier issues and sends another original **DeliveryMessage (DeliveryMessage)** including Place of Measuring to SDC. It contains information that it is Coloaded with the delivery from Delivery Origin A (blue in the figure).

Place of Measuring C. As the truck arrives at this Place of Measuring the Carrier sends a **ShipmentStatus** to SDC to inform that the delivery (green in figure) is available for measuring. The document refers to the DeliveryMessage with the load for to be measured at this place. It

also provides transport information that can be used for billing of the transport . The Carrier reports distance with load, carrier specific data, RouteLeg information, CoLoading, etc.

Delivery Origin D. After the truck has loaded a third delivery with one roundwood product (red in the figure) at Delivery Origin D the Carrier sends a **DeliveryMessage (DeliveryMessage)** including Place of Measuring to SDC. It contains information that it is Coloaded with the delivery from Delivery Origin A (blue in the figure) and has a different CoLoadingNumber than earlier DeliveryMessages.

Place of Measuring E. As the truck arrives at this Place of Measuring the Carrier sends one **ShipmentStatus** to SDC to inform that the two deliveries (red and blue in figure) are available for measuring at this Place of Measuring. The document also contains transport information that can be used for billing of the transport.

The Delivery Message and the Shipment Status documents are sent to SDC that distributes them to the receivers.

This sequence diagram below shows the communication for case B described in this example.

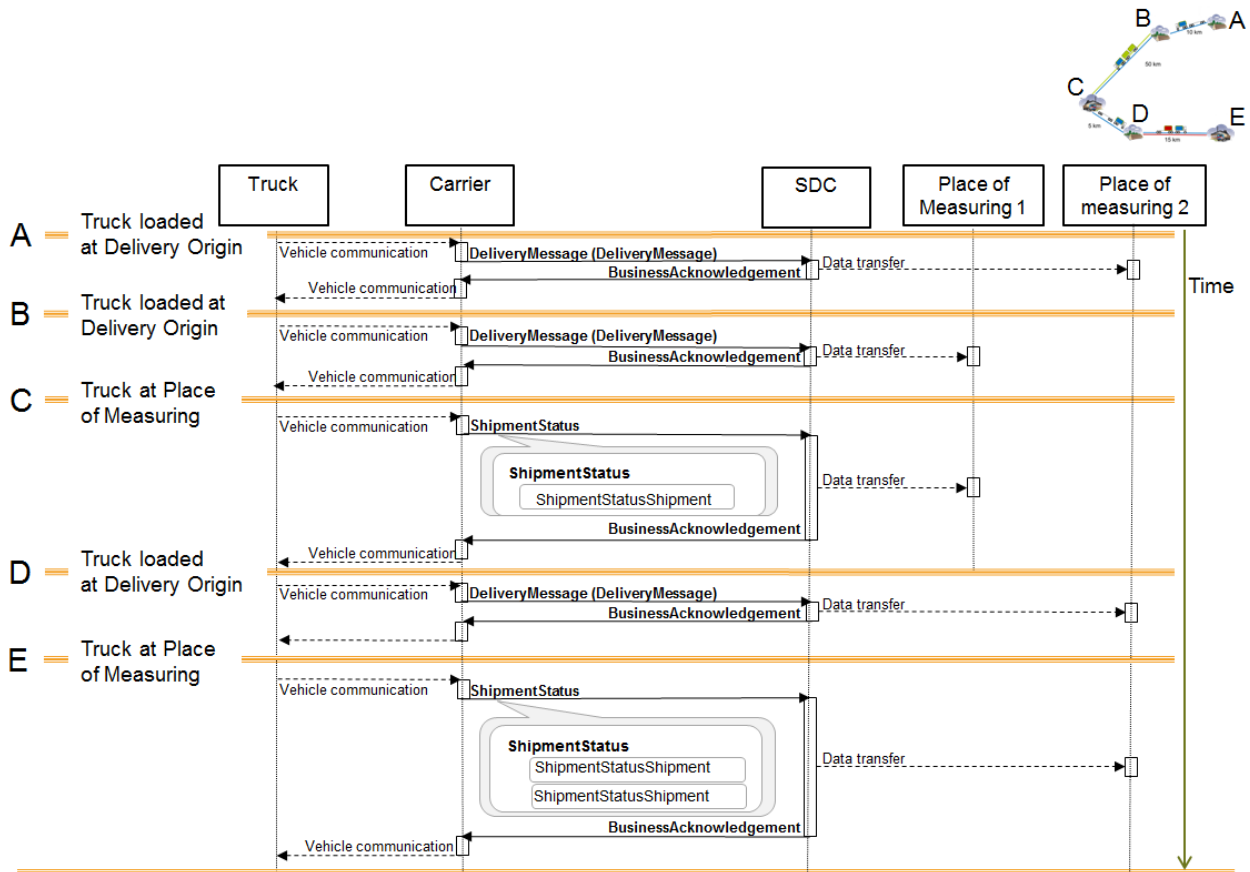


Figure 2: Sequence diagram of Use Case A

papiNet e-documents must be wrapped into the **papiNet Envelope** before they are sent to SDC. The xml-file that is sent to the receiving partner consists of the papiNet Envelope and the e-document. Routing and processing of e-documents are much easier to implement in a consistent way by using the papiNet Envelope. Attachments to the e-document can also be wrapped and sent in the papiNet Envelope. Additional transmission envelopes can be used by the message service when transmitting the message.

3.2 SDC Use Case B: DeliveryMessage(DeliveryMessage) 1

When the truck has been loaded at Delivery Origin A, the truck driver communicates with the Carrier. This communication is not included in this use case. The Carrier then issues a **DeliveryMessage(DeliveryMessage)** and sends it to SDC who forwards it to the system of the Measuring Party.

The most important information in the **DeliveryMessage(DeliveryMessage)** are:

- The business parts involved in the delivery
- Reference to order number and order line number (Swedish: Virkesordernummer och virkesorderrad)
- A DeliveryMessageNumber which is unique for the sender party
- The destination of the shipment
- The place of measuring to which the truck is heading
- Information about the transport unit
- The characteristics of the vehicle, how many loading positions it has, vertically and horizontally
- The product or products that are delivered, the volumes of these products.
- How the load is placed on the vehicle
- The Vehicle tour number
- Estimated time of arrival

At this point of the shipping no CoLoadingNumber is needed.

3.3 SDC Use Case B: BusinessAcknowledgement of DeliveryMessage 1

SDC responds to the sender of the **DeliveryMessage** with a **BusinessAcknowledgement** as a system acknowledgement for the received papiNet e-document **DeliveryMessage(DeliveryMessage)**. The Business Acknowledgement confirms if the e-document has been received, validated OK and stored into the receiving system database or if there are any errors in the e-document causing processing errors.

SDC validates the **DeliveryMessage** and in particular verifies that the provided business content is sufficient for measuring the delivery at the Place of Measuring.

The sender of the original e-document should have in place an error resolution process that routes the errors to the correct organisation for resolution.

3.4 SDC Use Case B: DeliveryMessage(DeliveryMessage) 2

When the truck has been loaded at Delivery Origin B, the truck driver communicates with the Carrier. This communication is not included in this use case. The Carrier then issues a **DeliveryMessage(DeliveryMessage)** and sends it to SDC who forwards it to the system of the Measuring Party.

The most important information in the **DeliveryMessage(DeliveryMessage)** are:

- The business parts involved in the delivery
- Reference to order number and order line number (Swedish: Virkesordernummer och virkesorderrad)
- A DeliveryMessageNumber which is unique for the sender party
- The destination of the shipment
- Coloadingnumber and reference to the DeliveryMessageNumber that the shipment is coloaded with. In this case the **DeliveryMessages** sent contains coloading number with a reference to DeliveryMessageNumber sent from Delivery Origin A (Figure 1)
- The place of measuring to which the truck is heading
- Information about the transport unit
- The characteristics of the vehicle, how many loading positions it has, vertically and horizontally
- The product or products that are delivered, the volumes of these products.
- How the load is placed on the vehicle
- The Vehicle tour number
- Estimated time of arrival

3.5 SDC Use Case B: BusinessAcknowledgement of DeliveryMessage 2

SDC party responds to the sender of the **DeliveryMessage** with a **BusinessAcknowledgement** as a system acknowledgement for the received papiNet e-document **DeliveryMessage(DeliveryMessage)**. Business Acknowledgement confirms if the e-document has been received, validated OK and stored into the receiving system database or if there are any errors in the e-document causing processing errors.

SDC validates the **DeliveryMessage** and in particular verifies that the provided business content is sufficient for measuring the delivery at the Place of Measuring.

The sender of the original e-document should have in place an error resolution process that routes the errors to the correct organisation for resolution.

3.6 SDC Use Case B: ShipmentStatus 1

As the truck arrives at a Place of Measuring C the truck driver communicates with the Carrier. This communication is not included in this use case. The Carrier then issues **ShipmentStatus** and sends it without delay to SDC who forwards it to the Measuring party before measuring can be done. The document must refer to all deliveries that are going to be measured at this place of measuring.

In the **ShipmentStatus** there must be one single ShipmentStatusShipment (SSS) per Delivery Message Number. At this Place of measuring (C in figure 1) there is only one delivery and hence only one ShipmentStatusShipment.

The **ShipmentStatus** contains the following information:

- The business parts involved in the delivery
- Reference to DeliveryMessageNumbers
- The destination of the shipment
- Reference to VehicleTourNumber
- ShipmentEventType is Unloading
- ShipmentEventQualifier is Arrived
- Total distance with load
- Transport information related data
- Other parties involved in the shipment, for example loading party.
- Time of arrival
- The Route must include each RouteLeg after the VehicleTourNumber was created.
- Each RouteLeg must include:
 - RouteLegNumber in sequence after the VehicleTourNumber was created
 - RouteLegLength
 - RouteLegReference with DeliveryMessageNumber of carried delivery
 - CoLoadingNumber with reference to DeliveryMessageNumber that the shipment is coloaded with. In this case the DeliveryMessageNumber from Delivery Origin A (figure 1)

3.7 SDC Use Case B: BusinessAcknowledgement of ShipmentStatus 1

SDC responds to the sender of the **ShipmentStatus** with a **BusinessAcknowledgement** as a system acknowledgement for the received papiNet e-document **ShipmentStatus** Business Acknowledgement confirms if the e-document has been received, validated OK and stored into the receiving system database or if there are any errors in the e-document causing processing errors.

SDC validates the **ShipmentStatus** and in particular verifies that the provided business content is sufficient for measuring the delivery at the Place of Measuring.

The sender of the original e-document should have in place an error resolution process that routes the errors to the correct organisation for resolution.

3.8 SDC Use Case B: DeliveryMessage(DeliveryMessage) 3

When the truck has been loaded at Delivery Origin D, the truck driver communicates with the Carrier. This communication is not included in this use case. The Carrier then issues a **DeliveryMessage(DeliveryMessage)** and sends it to SDC who forwards it to the system of the Measuring Party.

The most important information in the **DeliveryMessage(DeliveryMessage)** are:

- The business parts involved in the delivery
- Reference to order number and order line number (Swedish: Virkesordernummer och virkesorderrad)
- A DeliveryMessageNumber which is unique for the sender party
- The destination of the shipment
- Coloadnumber and reference to the DeliveryMessageNumber that the shipment is coloaded with. In this case the **DeliveryMessages** sent contains coload number with a reference to DeliveryMessageNumber sent from Delivery Origin A (Figure 1)
- The place of measuring to which the truck is heading
- Information about the transport unit
- The characteristics of the vehicle, how many loading positions it has, vertically and horizontally
- The product or products that are delivered, the volumes of these products.
- How the load is placed on the vehicle
- The Vehicle tour number
- Estimated time of arrival

3.9 SDC Use Case B: BusinessAcknowledgement of DeliveryMessage 3

The measuring party responds to the sender of the **DeliveryMessage** with a **BusinessAcknowledgement** as a system acknowledgement for the received papiNet e-document **DeliveryMessage(DeliveryMessage)**. Business Acknowledgement confirms if the e-document has been received, validated OK and stored into the receiving system database or if there are any errors in the e-document causing processing errors.

The Measuring Party validates the **DeliveryMessage** and in particular verifies that the provided business content is sufficient for measuring the delivery at the Place of Measuring.

The sender of the original e-document should have in place an error resolution process that routes the errors to the correct organisation for resolution.

3.10 SDC Use Case B: ShipmentStatus 2

As the truck arrives at a Place of Measuring E the truck driver communicates with the Carrier. This communication is not included in this use case. The Carrier then issues **ShipmentStatus** and sends it without delay to SDC who forwards it to the Measuring party before measuring can be done. The document must refer to all deliveries that are going to be measured at this place of measuring.

In the **ShipmentStatus** there must be one single ShipmentStatusShipment (SSS) per delivery message number. At this Place of measuring (E in figure 1) there are two deliveries and hence two one ShipmentStatusShipments.

The **ShipmentStatus** contains the following information for each ShipmentStatusShipment (SSS)

- The business parts involved in the delivery
- Reference to DeliveryMessageNumbers
- The destination of the shipment
- Reference to VehicleTourNumber
- ShipmentEventType is Unloading
- ShipmentEventQualifier is Arrived
- Total distance with load
- Transport information related data
- Other parties involved in the shipment, for example loading party.
- Time of arrival
- The Route must include each RouteLeg after the VehicleTourNumber was created.
- Each RouteLeg must include:
 - For ShipmentStatusShipment of the delivery loaded at Delivery origin A (blue in figure 1)
 - RouteLegNumber in sequence after the VehicleTourNumber was created
 - RouteLegLength
 - RouteLegReference with DeliveryMessageNumber of carried delivery if the truck was loaded on the RouteLeg
 - CoLoadingNumber with reference to DeliveryMessageNumber(s) that the shipment is coloaded with. In this case during RouteLeg 2 the truck was CoLoaded with DeliveryMessageNumber of the delivery loaded at Delivery Origin B and during RouteLeg 4 the truck was CoLoaded with DeliveryMessageNumber of the delivery loaded at Delivery Origin D.
 - For ShipmentStatusShipment of the delivery loaded at Delivery origin D (red in figure 1)
 - RouteLegNumber in sequence after the VehicleTourNumber was created
 - RouteLegLength
 - RouteLegReference with DeliveryMessageNumber of carried delivery if the truck was loaded on the RouteLeg
 - CoLoadingNumber with reference to DeliveryMessageNumber(s) that the shipment is coloaded with. In this case during RouteLeg 4 the truck was CoLoaded with DeliveryMessageNumber of the delivery loaded at Delivery Origin A.

3.11 SDC Use Case B: BusinessAcknowledgement of ShipmentStatus 2

SDC responds to the sender of the **ShipmentStatus** with a **BusinessAcknowledgement** as a system acknowledgement for the received papiNet e-document **ShipmentStatus** Business Acknowledgement confirms if the e-document has been received, validated OK and stored into the receiving system database or if there are any errors in the e-document causing processing errors.

SDC validates the **ShipmentStatus** and in particular verifies that the provided business content is sufficient for measuring the delivery at the Place of Measuring.

The sender of the original e-document should have in place an error resolution process that routes the errors to the correct organisation for resolution.

4. Out of scope

All transport modes except road are out of scope.

All products are out of scope except roundwood and its subproducts.

Wood chip trucks are out of scope.

papiNet e-document MeasuringTicket is not part of the scenario.
