

Standard for

SUTI kommunikasjon ved Pasienttransport

Dato	Beskrivelse av endring	Versjon	Ansvarlig
12.februar 2016	Sammenstilling av to dokumenter, for hvert	0.7	SA
	scenarier. Attributtliste for definisjon av spesielle		
	behov.		
14.februar 2016	Innledende tekst for hvert hovedområde.	0.8	SA
16.02 2016	Formattering, oppdatert attributtliste for	0.9	KOC
	spesielle behov tatt ut i vedlegg.		
15.04 2016	Oppdatert etter høringsrunde	1.0	SA
15.12.2016	Multinode: MSG2005, MSG2006 og MSG2007	1.1	SA
	(re)introduseres.		

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1 Innledning

Dette dokumentet beskriver standarden for digital kommunikasjon av nødvendige data mellom transportører og Pasientreiser for avvikling av transport til og fra medisinsk behandling.

Standarden som defineres her bygger på SUTI-standarden. Iht. SUTI sin terminologi så beskriver dette dokumentet Pasientreisers selvdeklarasjon av SUTI-standarden for den delen som omhandler pasienttransport.

SUTI er en skandinavisk, ideell organisasjon som jobber for å utvikle og opprettholde en standard for utbytte av trafikkinformasjon mellom datasystemer.

Standarden er definert i samarbeid med Trapeze Group.

Dette dokumentet beskriver prosess, meldingsflyt og innhold for kommunikasjon av data mellom transportør og Pasientreiser.

Dokumentet beskriver to ulike scenarier for utsendelse og meldingsflyt ved en ordre, henholdsvis node-by-node og multi-node.

De to gjengis i dette dokumentet som selvstendige og fullstendige alternativer i hvert sitt delkapitel. Det er ønskelig at systemleverandørene kan understøtte begge type meldingsflyt. Det understrekes dog at "node-bynode" er foretrukket som den **fremtidige** standarden for meldingsflyt mellom pasientreisekontorene og transportørene. På kort sikt vil det være Multinode som vil bli benyttet.

Dokumentet beskriver ikke faktisk integrasjon mot Pasientreiser datasystemer. Dokument med beskrivelse av kommunikasjonsprotokoll og prosess oppkobling, test og godkjenning er under utarbeidelse. Valgt teknologi for integrasjon vil bygge på et kø/JMS-konsept - som i dag.

Ved spørsmål eller innspill til dette dokumentet, vennligst kontakt: Sigurd Aanesen; sigurd.aanesen@pasientreiser.no, +47 479 00 712.

2 Referanser

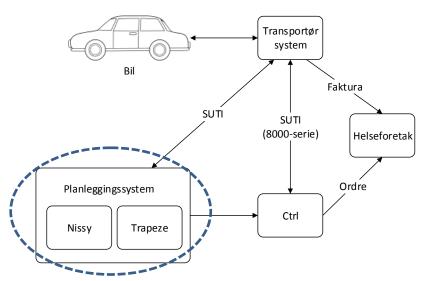
2.1 SUTI-Standard

Pasientreiser selvdeklarasjon er basert på flyt som er beskrevet i Block 20, Block 30, Block 40, Block 50 og Block 70, definert i henhold til SUTI-standarden.

2.2 Kommunikasjonsprotokoll for kommunikasjon

Et eget dokument beskriver detaljer om hvordan oppkobling skjer mellom transportørsystemene og Pasientreisers datasystemer.

3 Overordnet kommunikasjon mellom systemer



Figur 1: Overordnet kommunikasjon mellom relevante systemer

Figuren over viser en overordnet beskrivelse av systemene innenfor pasientreisedomenet og deres kommunikasjon med ulike transportørsystemer (sentraler, taksameter, etterbehandlingssystemer med mere.) Selvdeklarasjonen beskrevet i dette dokumentet omfatter kommunikasjonen mellom planleggingssystemet og respektive transportørsystemer.

4 Meldingsflyt

Kapitlet beskriver to ulike scenarier for utsendelse og meldingsflyt ved en ordre, henholdsvis *node-by-node og multi-node*.

De to beskrives som selvstendige og fullstendige alternativer i hvert sitt delkapitel.

4.1 Meldingsflyt "Node-by-node"

Pasientreisekontoret vil oversende transportøren turoppdraget stykkevis gjennom turforløpet:

- Informasjon om første tidspunkt og adresse for avhenting (inkl. kommentar om avleveringssted), samt estimert tidspunkt for endelig avslutning av hele turoppdraget
- Informasjon om neste avlevering/avhenting etc. gis når første deloppdrag er fullført og transportøren er klar for neste.
- Oversikt over de fremtidige planlagte turer fremvises på forespørsel til transportør

4.1.1 Støttede meldinger

Alle telegrammer er XML filer som følger SUTI formatet beskrevet i SUTI verison 2015

MSG 2000	Order
MSG 2001	Order Confirmation
MSG 2010	Order Cancellation
MSG 2011	Order Cancellation Accepted
MSG 3003	Dispatch Confirmation
MSG 4000	Request for Traffic information
MSG 4001	Requested Traffic information
MSG 4010	Pickup Confirmation (Event confirmation)
MSG 4020	End of Order
MSG 4031	No Contact with Vehicle
MSG 5000	Message to Vehicle
MSG 5001	Message to Vehicle Confirmation
MSG 5010	Message to Client from Vehicle
MSG 5011	Message to Client from Vehicle Confirmation
MSG 5020	Request for location
MSG 5021	Requested location
MSG 7000	Keep Alive
MSG 7001	Keep Alive Confirmation
MSG 7030	Syntax Error
MSG 7031	Not Operational

Tabell 1: Støttede meldinger - "node-by-node"

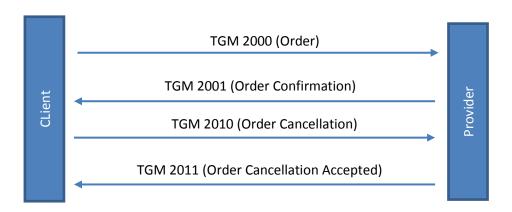
4.1.2 Meldingsflyt

4.1.2.1 Start of new circulation

Client = Pasientreiser Provider = Transportør

Client sender en 2000 (order) melding som kun inkluderer den første oppsamling, samt SchemaVehicleEndTime som destinasjonsnode . Dette er informasjon om når bilen 'slippes' av Client. Denne meldingen starter en ny tur. På denne 2000 meldingen svarer Provider med en 2001 (Order Accept) melding.

Fra 2000-blokken anvendes også medlingene 2010 og 2011. 2010 anvendes for Order Cancellation som initieres av Client. Meldingen besvares med en 2011, en Order-Cancellation accept.



Figur 2: Start of new circulation

4.1.2.2 Provider choose vehicle

For 3000-blokken anvendes kun 3003 - Dispatch Confirmation. Provider sender denne meldingen når en bil er allokeret til en tur, når bilen har takket ja og akseptert turen.



Figur 3: Provider choose vehicle

4.1.2.3 Provider wants next node

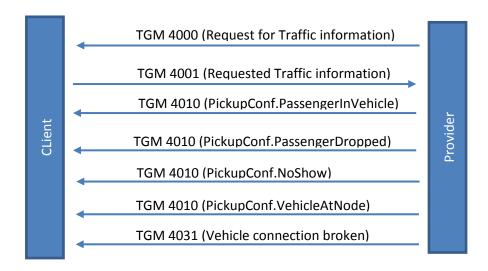
Når en provider ønsker neste node i en tur (Pick-up, Drop-off, Ordered wait eller en annen type node) sender provider en 4000 melding (Request for Traffic information). Svaret fra Client er da enten 4001 (Requested traffic information) eller en 4020 melding (Order end). 4020 melding sendes i det tilfellet hvor turen avsluttes.

Øvrige meldinger som trigger en 4001 melding er 4010 som sendes av Provider i takt med at hendelsene på turen blir utført - PassengerInVehicle (1701), PassengerDropped (1702), NoShow (1703), VehicleAtNode (1709).

PassengerInVehicle (1701) - når passasjeren er i bilen
PassengerDropped (1702) - når passasjeren forlater bilen

NoShow (1703) VehicleAtNode (1709)

- når passasjeren ikke finns på avtalt sted
- når bilen ankommer til avtalt sted

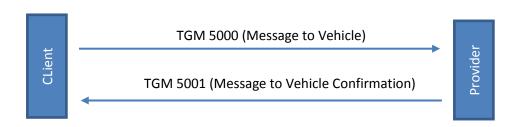


Figur 4: Provider wants next node

I de tilfellene, hvor en vogn er utenfor dekning kan det sendes en 4031 melding fra Provider til Client.

4.1.2.4 Client sends text message to vehicle

Hvis Client ønsker å kommunisere med bilen anvendes følgende flyt:

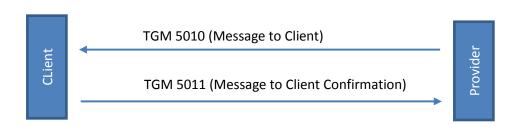


Figur 5: Client send text message to vehicle

4.1.2.5 Vehicle wants to communicate with client

To get information from client we for instance use this message "How does the preliminary plan look likes". Where the attribute "manualText" can be prefixed either with "TEXT:" or "STATUS:" depending on what kind of data it is.

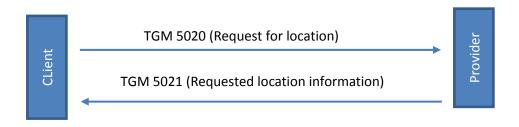
<manualDescriptionMsg sendtoInvoice="false" sendtoVehicle="false" sendtoOperator="true"
manualText="STATUS:111" vehicleConfirmation="false"/>



Figur 6: Vehicle wants to communicate with client

4.1.2.6 Vehicle location

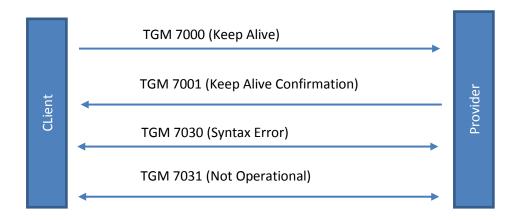
Hvis klienten ønsker å få vite bilens posisjon sendes en 5020 melding til Provider. Provider svarer med et 5021 melding med bilens posisjon.



Figur 7: Vehicle location

4.1.2.7 Block 7000 - Tekniske meldinger

I tillegg til de operasjonelle meldingene understøttes et antall tekniske meldingstyper. Disse har til formål å monitorere 'connectivity' mellem Pasientreiser's servere og Transportørernes servere.



Figur 8: Tekniske meldinger

4.1.3 Meldinger

Alle meldingene er XML filer som følger SUTI formatet beskrevet I SUTI versjon 2015.

4.1.3.1 OrgSender and orgReceiver nodes

These nodes are found in all communications. It is important to remember that orgSender is always the sender of the message and orgReceiver is always the receiver of the message.

```
<orgSender name="PASS">
    <idOrg src="SUTI:idlink" id="trapeze_pass_0001" unique="true"/>
</orgSender>
<orgReceiver name="HDCOM">
    <idOrg src="SUTI:idlink" id="holmedal_hdcom_0001" unique="true"/>
</orgReceiver>
```

4.1.3.2 MSG 2000 Order

MSG 2000 is sent from the Client to the Provider. It indicates the start of a run of the circulation. After receiving telegram 2000 the Provider sends a 2001 order confirmation to the Client.

Note that MSG 2000 only includes the first pickup node and the schema vehicles end time as the destination node.

```
<idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
     <capacity>
      <seats noOfSeats="4"/>
     </capacity>
     <attributesVehicle>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
      </attribute>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
      </attribute>
     </attributesVehicle>
    </vehicle>
    <driver>
     <attributesDriver>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
      </attribute>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
      </attribute>
     </attributesDriver>
    </driver>
   </resourceOrder>
   <route>
    <node nodeSeqno="1" nodeType="pickup">
     <addressNode addressName="" street="Baravägen" streetNo="1" streetNoLetter="" community="Lund"
postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.718095" long="13.190738" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="estimatedtime" time="2015-08-10T08:00:18"/>
      <time timeType="scheduledtime" time="2015-08-10T08:00:00"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, John">
       <attributeContent>
        <attribute>
         <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
        <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <subOrderContent>
        <!-- Used in telegram 4010-->
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183743" unique="true"/>
       </subOrderContent>
```

```
</content>
</contents>
</node>
<node nodeSeqno="2" nodeType="destination">
<addressNode/>
<timesNode>
<time timeType="scheduledtime" time="2015-08-10T16:32:26"/>
</timesNode>
</node>
</route>
</order>
</msg>
```

4.1.3.3 MSG 2001 Order confirmation

MSG 2001 is sent from the Provider to the Client as a response to a received MSG 2000. It indicates that the order is received, comply with the referred agreement and will be carried out.

4.1.3.4 MSG 3003 Dispatch confirmation

The Provider use MSG 3003 to inform the Client that the suggested and accepted vehicle has accepted the order and will perform it.

```
<msg msgType="3003" msgName="Dispatch confirmation">
  <idMsg src="holmedal_hdcom_0001:idMsg" id="2015122213393416" unique="true"/>
  <referencesTo>
  <idOrder src="trapeze_pass_0001:idOrder" id="11183742"/>
  <idVehicle src="holmedal hdcom 0001:idRegistrationNumber" id="ABC123" unique="true"/>
  </referencesTo>
  <resourceDispatch>
   <vehicle>
   <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
    <idVehicle src="holmedal_hdcom_0001:idVehicle" id="3110" unique="true"/>
    <capacity>
    <seats noOfSeats="4"/>
    </capacity>
    <attributesVehicle>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
     </attribute>
     <attribute>
```

```
<idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
     </attribute>
    </attributesVehicle>
   </vehicle>
   <manualDescriptionResource sendtoInvoice="false" vehicleConfirmation="false" sendtoOperator="true"</p>
sendtoVehicle="false" manualText="">
    <idActionText src="holmedal hdcom 0001:driverEndTime" id="2015-12-23T00:36:29"/>
   </manualDescriptionResource>
   <driver>
    <attributesDriver>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
     </attribute>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
     </attribute>
    </attributesDriver>
    <idDriver src="holmedal hdcom 0001:idDriver" id="123456" unique="true"/>
    <contactInfoDriver>
     <contactInfo contactType="phone" contactInfo="043174700"/>
    </contactInfoDriver>
   </driver>
   <vehiclestartLocation typeOfCoordinate="WGS-84" precision="6" lat="56.047010" long="12.703940"/>
  </resourceDispatch>
 </msg>
```

4.1.3.5 MSG 4000 Request for traffic information

MSG 4000 is sent from the Provider/vehicle to the Client as a request for information about an ongoing order. For example a vehicle requests the next pickup point or requests traffic information.

```
<msg msgType="4000" msgName="Request for Traffic Information">
 <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121409309255" unique="true"/>
  <infoTimeStamp>
  <time timeType="actual" time="2015-12-14T09:27:53"/>
  </infoTimeStamp>
  <referencesTo>
  <idOrder src="holmedal_hdcom_0001:idOrder" id="3640266-0" unique="true"/>
   <idOrder src="trapeze pass 0001:idOrder" id="11183742" unique="true"/>
  </referencesTo>
  <resourceDispatch>
   <vehicle>
    <idVehicle src="trapeze pass 0001:idVehicle" id="51006P" unique="true"/>
    <idVehicle src="holmedal_hdcom_0001:idVehicle" id="3110" unique="true"/>
    <capacity>
    <seats noOfSeats="4"/>
   </capacity>
    <attributesVehicle>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
```

```
</attribute>
    <attribute>
     <idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
    </attribute>
   </attributesVehicle>
   <vehicleCurrentLocation typeOfCoordinate="WGS-84" lat="57.925737" long="12.524865" precision="6"/>
  </vehicle>
  <driver>
   <attributesDriver>
    <attribute>
     <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
    </attribute>
    <attribute>
     <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
    </attribute>
   </attributesDriver>
  </driver>
 </resourceDispatch>
</msg>
```

4.1.3.6 MSG 4001 Requested traffic information

MSG 4001 is sent from the Client to the Provider in response of a MSG 4000. MSG 4001 contains the requested information, alternative information or informing that no information is available at the moment.

```
<msg msgType="4001" msgName="Requested Traffic Information">
 <idMsg src="trapeze_pass_0001:idMsg" id="2015121409016233"/>
  <referencesTo>
   <idMsg src="holmedal hdcom 0001:idMsg" id="2015121409309255"/>
  </referencesTo>
  <order>
   <idOrder src="trapeze_pass_0001:idOrder" id="15121403501" unique="true"/>
   <resourceOrder>
    <vehicle>
     <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
     <capacity>
      <seats noOfSeats="4"/>
     </capacity>
     <attributesVehicle>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
      </attribute>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
      </attribute>
     </attributesVehicle>
    </vehicle>
    <driver>
     <attributesDriver>
```

```
<attribute>
       <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
      </attribute>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
      </attribute>
     </attributesDriver>
    </driver>
   </resourceOrder>
   <route>
    <node nodeSegno="1" nodeType="destination">
     <addressNode addressName="ICA Maxi" street="Baravägen" streetNo="1" streetNoLetter=""
community="Lund" postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.718095" long="13.190738" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="scheduledtime" dwellTime="3" time="2015-08-10T08:00:18"/>
      <time timeType="estimatedtime" dwellTime="3" time="2015-08-10T08:00:18"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, John">
       <attributeContent>
        <attribute>
         <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
        <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <contactInfosContent>
        <contactInfo contactInfo="0431-74700" contactType="phone"/>
       </contactInfosContent>
       <subOrderContent>
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183752" unique="true"/>
       </subOrderContent>
      </content>
     </contents>
    </node>
   </route>
  </order>
 </msg>
```

4.1.3.7 MSG 4010 Event confirmation

MSG 4010 is sent from the Provider to the Client to indicate a vehicle has performed a pickup or other action in an ongoing order. This can indicate that a passenger is in the vehicle (passengerinvehicle), that no passenger showed (noshow) or that the passenger has left the vehicle (passengerdropped). The Client is not expected to answer this message.

```
<msg msgType="4010" msgName="Event Confirmation">
 <idMsg src="holmedal hdcom 0001:idMsg" id="2015121409312773" unique="true"/>
  <referencesTo>
   <idOrder src="trapeze_pass_0001:idOrder" id="11183742" unique="true"/>
   <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
   <idVehicle src="holmedal hdcom 0001:idVehicle" id="3110" unique="true"/>
  </referencesTo>
  <pickupConfirmation eventType="passengerinvehicle">
   <!-- eventTypes: passengerinvehicle, passengerdropped, noshow -->
   <nodeConfirmed nodeType="pickup" nodeSegno="1">
   <addressNode>
     <geographicLocation typeOfCoordinate = "WGS-84" lat="57.789470" lon="14.125500" precision= "6"/>
    <addressNode/>
    <timesNode>
     <time timeType="actual" time="2015-08-23T14:37:20"></time>
    </timesNode>
    <contents>
     <content contentType="traveller" name="Doe, John">
      <subOrderContent>
       <!-- From subOrderContent in pickupnode in telegram 2000, if eventype is passengerinvehicle or
noshow.
       If passengerdropped fetch it from destination node in telegram 2000 -->
       <idOrder src="trapeze_pass_0001:idSubOrder" id="11183743" unique="true"/>
      </subOrderContent>
     </content>
    </contents>
   </nodeConfirmed>
  </pickupConfirmation>
 </msg>
```

4.1.3.8 MSG 4020 End of order

MSG 4020 is sent from the Client to the Provider in response of a MSG 4000. MSG 4020 shows that the order has ended.

```
</formOfPayment>
<manualDescriptionEconomy sendtoVehicle="true" sendtoOperator="false" sendtoInvoice="false" vehicleConfirmation="false" manualText="Info"/>
</economyOrder>
</order>
</msg>
```

4.1.3.9 MSG 4031 No contact with vehicle

MSG 4031 is sent from the Provider to the Client to indicate that the Provider don't have any contact with the performing vehicle for the moment.

4.1.3.10 MSG 5000 Message to vehicle

MSG 5000 is sent from the Client to the Provider to inform the Provider that the Client wishes to send a message to a vehicle connected to the Provider.

4.1.3.11 MSG 5001 Confirmation message to vehicle

MSG 5001 is sent from the Provider to the Client to inform that MSG 5000 has been received and has been sent to the vehicle.

```
<msg msgType="5001" msgName="Confirmation Message to vehicle">
    <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121409311887" unique="true"/>
    <referencesTo>
        <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795232" unique="true"/>
        <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
        <idVehicle src="holmedal_hdcom_0001:idVehicle" id="3110" unique="true"/>
```

```
</referencesTo> </msg>
```

4.1.3.12 MSG 5010 Message to client from vehicle

MSG 5010 is sent from the Provider to the Client to forward a message from a vehicle to the Client. The Client shall respond by sending MSG 5011.

To get information on how the preliminary plan looks like for a vehicle the manualText is prefixed with "Status:" and the code 111. If the provider wants to send a text the manualText should be prefixed with "Text:" following with the text message. If the manualText is prefixed with "STATUS:" the client response with MSG 5000.

4.1.3.13 MSG 5011 Messages to client from vehicle confirmation

MSG 5011 is sent from the Client to the Provider to inform that the Client received and the appropriate Receiver read the message.

4.1.3.14 MSG 5020 Request for location

MSG 5011 is sent from the Client to the Provider to request the location of a vehicle performing an order. The Client may request the Provider to provide location for the vehicle during a certain time or a certain distance (Tracking).

```
<msg msgType="5020" msgName="Request location">
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121414794435" unique="true"/>
  <referencesTo>
    <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P" unique="true"/>
    <idVehicle src="holmedal_hdcomze_pass_0001:idVehicle" id="51006P" unique="false"/>
    </referencesTo>
```

```
<locationRequest>
  <timeFrom time="2015-12-14T 5:24:36"/>
  <timeTo time="2015-12-14T23:59:59"/>
  <interval seconds="60" meter="1000"/>
  </locationRequest>
  </msg>
```

4.1.3.15 MSG 5021 Requested location

MSG 5021 is sent from the Provider to the Client as response on MSG 5020. The message contains requested information, for example lat/long, type of coordinate and precision.

```
<msg msgType="5021" msgName="Requested Location">
 <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121409308650" unique="true"/>
 <msgTimeStamp>
  <time timeType="actual" time="2015-12-14T09:22:01"/>
 </msgTimeStamp>
 <infoTimeStamp>
  <time timeType="actual" time="2015-12-14T09:21:51"/>
 </infoTimeStamp>
 <referencesTo>
  <idOrder src="trapeze_pass_0001:idOrder" id="11183742" unique="true"/>
  <idOrder src=" trapeze_pass_0001:idSubOrder" id="11183743" unique="true"/>
  <idVehicle src="trapeze_pass_0001:idVehicle" id="41021" unique="true"/>
  <idVehicle src="holmedal hdcom 0001:idVehicle" id="41021" unique="true"/>
 </referencesTo>
 <addressLocation>
  <geographicLocation typeOfCoordinate="WGS-84" lat="55.482333" long="13.602417" precision="6"/>
 </addressLocation>
</msg>
```

4.1.3.16 MSG 7000 Keep alive

MSG 7000 is sent either by the client or by the provider as a check that the other system is alive.

```
<msg msgType="7000" msgName="Keep alive">
<idMsg src="trapeze_pass_0001:idMsg" id="2015121414795234" unique="true"/>
</msg>
```

4.1.3.17 MSG 7001 Keep alive confirmation

MSG 7001 is sent as a response of a MSG 7000 received from the other side.

```
<msg msgType="7001" msgName="Keep alive confirmation">
  <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795235" unique="true"/>
  <referencesTo>
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795234" unique="true"/>
  </referencesTo>
```



4.1.3.18 MSG 7030 Syntax Error

MSG 7030 is sent by the system that has recived a message that don't exists, don't have a message id or has fault XML syntax or are in opposition to the logic shown in SUTI messageflow.

```
<msg msgType="7030" msgName="Syntax error">
    <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795235" unique="true"/>
    <referencesTo>
        <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795234" unique="true"/>
        </referencesTo>
        <!—The error found during the processing of message, can be sent by Client or the Provider -->
        <manualDescriptionMsg manualText="Error message text" sendtoInvoice="false" sendtoOperator="false" sendtoVehicle="false" vehicleConfirmation="false"/>
        </msg>
```

4.1.3.19 MSG 7031 Not operation

MSG 7031 is sent as a response of a message that can't be responded to.

```
<msg msgType="7031" msgName="Not operational">
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795235" unique="true"/>
  <referencesTo>
      <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795234" unique="true"/>
      </referencesTo>
      <manualDescriptionMsg manualText="Error message text" sendtoInvoice="false" sendtoOperator="false" sendtoVehicle="false" vehicleConfirmation="false"/>
  </msg>
```

4.2 Meldingsflyt "multi-node"

Med dette alternativet mottas hele turoppdraget samtidig. Dette er på tilsvarende måte som i gjeldende deklarasjon for transport, som anvendes per februar 2016, dog med noe endret meldingsinnhold.

4.2.1 Støttede meldinger

Alle telegrammer er XML filer som følger SUTI formatet beskrevet i SUTI verison 2015

Message	Description
MSG 2000	Order
MSG 2001	Order Confirmation
MSG 2005	Order Reject Request
MSG 2006	Order Reject Request Accepted
MSG 2007	Order Reject Request Reject
MSG 2010	Order Cancellation
MSG 2011	Order Cancellation Confirmation
MSG 3003	Dispatch Confirmation
MSG 4010	Pickup Confirmation (Event confirmation)
MSG 4031	No Contact with Vehicle
MSG 5000	Message to Vehicle
MSG 5001	Message to Vehicle Confirmation
MSG 5010	Message to Client from Vehicle
MSG 5011	Message to Client from Vehicle Confirmation
MSG 5020	Request for location
MSG 5021	Requested location
MSG 7000	Keep Alive

MSG 7001	Keep Alive Confirmation
MSG 7030	Syntax Error
MSG 7031	Not Operational

Tabell 2: Støttede meldinger - "multi node"

4.2.2 Meldingsflyt

4.2.2.1 Start of circulation

Client = Pasientreiser Provider = Transportør

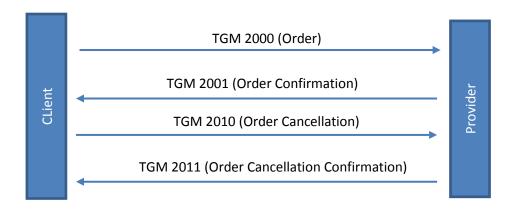
Client sender et 2000 (order) telegram. Telegrammet indeholder alle noder i en samlet tur. 2000-telegrammet kan således indeholde flere Pickups og drop offs. På dette 2000-telegram svarer Provider med et 2001 (Order Accept) telegram.

2000-telegrammet anvendes også i det tilfeller, hvor en tur endres. Ved en turendring (utdvidelse med flere noder eller kansellering av noder) resendes et 2000-telegram, som indeholder et nytt sett noder.

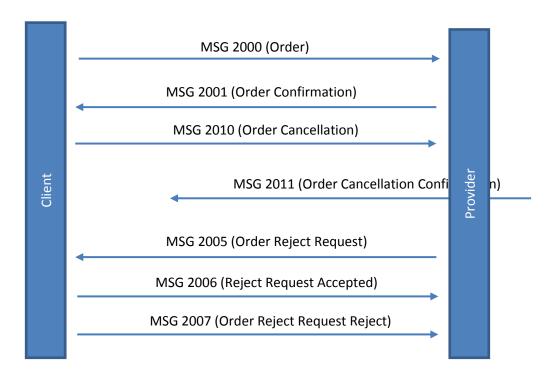
Fra 2000-blokken anvendes også 2010-telegram og 2011-telegram. 2010-telegram anvendes for Order Cancellation og det initieres av Client. På dette telegram svares med et 2011-telegram, en Order-Cancellation accept. Et 2010-telegram anvendes kun når alle ikke utførte elementer av det oprinnelige 2000-telegram ønskes kansellert.

Ved forandringer på en ordre så sendes først en TGM 2010 (Order Cancellation) som skall besvaras med MSG 2011 (Order Cancellation Confirmation), efter detta sendes en ny komplett MSG 2000 (Order).

Om provider har akseptert orderen med MSG 2001 og senere ikke kan utføre orderen så håndtere det manuelt ved at provider kontakter Pasientreiser. Om Pasientreiser aksepterer at orderen tas tilbake så sendes det en MSG 2010, hvis ikke skal orderen utføres.



Figur 9: Start of circulation



4.2.2.2 Provider choose vehicle

For 3000-blokken anvendes kun 3003 - Dispatch Confirmation. Provider sender denne meldingen når en bil er allokeret til en tur, når bilen har takket ja og akseptert turen.



Figur 10: Provider choose vehicle

4.2.2.3 Provider pickup/drop off

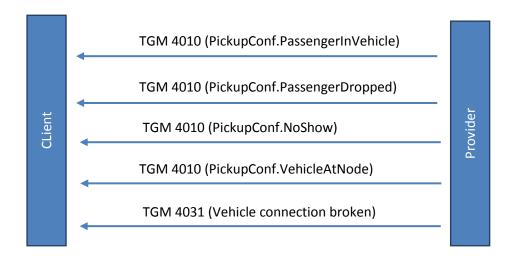
I takt med at en tur avvikles, sender Provider 4010 meldinger (Event Confirmation) til Client. De events som understøttes i 4010-telegrammet er PassengerInVehicle (1701), PassengerDropped (1702), NoShow (1703), VehicleAtNode (1709).

PassengerInVehicle (1701) - når passasjeren er i bilen
PassengerDropped (1702) - når passasjeren forlater bilen

NoShow (1703) - når passasjeren ikke finns på avtalt sted VehicleAtNode (1709) - når bilen ankommer til avtalt sted

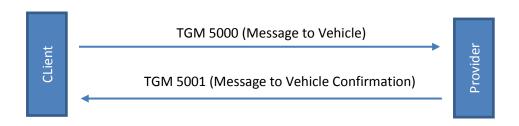
I de tilfellene hvor en bil er utenfor dekning kan det sendes en 4031 melding fra Provider til Client.

Det er den seneste eventstatus i MSG 4010 som til enhver tid gjelder.



Figur 11: Provider pick up/drop off

4.2.2.4 Client sends text message to vehicle:



Figur 12: Client sends text message to vehicle

4.2.2.5 Client wants to communicate with vehicle

Hvis Client ønsker å kommunisere med bilen anvendes følgende flyt:



Figur 13: Client wants to communicate with vehicle

4.2.2.6 Vehicle wants to communicate with client

For å få informasjon fra klienten vi for eksempel bruke denne meldingen "Hvordan er den foreløpige plan". Hvor attributten "manualText" kan være prefiks enten med "TEKST:" eller "STATUS:" avhengig av hva slags data det er.

Eksempel: Føreren meddeler at bil er 30 minutter forsinket.

<manualDescriptionMsg sendtoInvoice="false" sendtoVehicle="false" sendtoOperator="true" manualText="STATUS:030"
vehicleConfirmation="false"/>

Eksempel: Føreren meddeler att han bilen vil ha pause 12:30 till 13:00

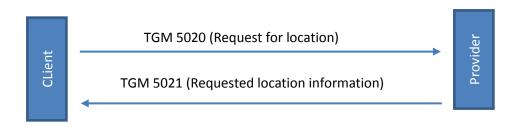
<manualDescriptionMsg sendtoInvoice="false" sendtoVehicle="false" sendtoOperator="true"
manualText="TEXT:PA12301300" vehicleConfirmation="false"/>



Figur 14: Vehicle wants to communicate with client

4.2.2.7 Vehicle location

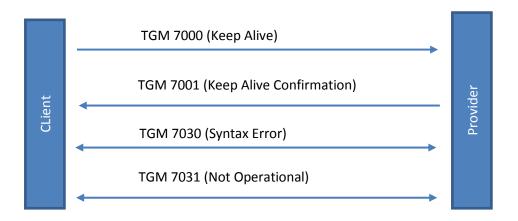
Hvis klienten ønsker å få vite bilens posisjon sendes en 5020 melding til Provider. Provider svarer med et 5021 melding med bilens posisjon.



Figur 15: Vehicle location

4.2.2.8 Block 7000 - Tekniske meldinger

I tillegg til de operasjonelle meldingene understøttes et antall tekniske meldingstyper. Disse har til formål å monitorere 'connectivity' mellem Pasientreiser's servere og Transportørernes servere.



Figur 16: Tekniske meldinger

4.2.3 Meldinger

Alle meldinger er XML filer som følger SUTI formatet beskrevet I SUTI versjon 2015.

4.2.3.1 orgSender and orgReceiver nodes

These nodes are found in all communications. It is important to remember that orgSender is always the sender of the message and orgReceiver is always the receiver of the message.

```
<orgSender name="PASS">
    <idOrg src="SUTI:idlink" id="trapeze_pass_0001" unique="true"/>
</orgSender>
<orgReceiver name="HDCOM">
    <idOrg src="SUTI:idlink" id="holmedal_hdcom_0001" unique="true"/>
</orgReceiver>
```

4.2.3.2 MSG 2000 Order

MSG 2000 is sent from the Client to the Provider. It indicates the start of a run of the circulation. After receiving telegram 2000 the Provider sends a 2001 order confirmation to the Client.

Note that each node has an identifier ("trapeze_pass_0001:idSubOrder") to be returned as a reference to the node in the telegram 4010.

```
<msg msgType="2000" msgName="Order">
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121809865469" unique="true"/>
  <order>
  <idOrder src="trapeze_pass_0001:idOrder" id="11183742" unique="true"/>
   dispatchResponsible="provider" report="false" preorderedVehicle="false" dispatch="true"
manualDispatch="false"/>
  <resourceOrder>
   <vehicle>
    <idVehicle src="trapeze_pass_0001:idVehicle" id="51006P"/>
    <capacity>
     <seats noOfSeats="4"/>
    </capacity>
    <attributesVehicle>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
     </attribute>
     <attribute>
      <idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
     </attribute>
    </attributesVehicle>
   </vehicle>
```

```
<driver>
     <attributesDriver>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
      </attribute>
      <attribute>
       <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
      </attribute>
     </attributesDriver>
    </driver>
   </resourceOrder>
   <route>
    <node nodeSeqno="1" nodeType="pickup">
     <addressNode addressName="" street="Baravägen" streetNo="1" streetNoLetter="" community="Lund"
postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.718095" long="13.190738" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="estimatedtime" time="2015-08-10T08:00:18"/>
      <time timeType="scheduledtime" time="2015-08-10T08:00:00"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, John">
       <attributeContent>
        <attribute>
         <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
        <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <subOrderContent>
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183750" unique="true"/>
       </subOrderContent>
      </content>
     </contents>
    </node>
    <node nodeSeqno="2" nodeType="destination">
     <addressNode addressName="" street="Kalkstensvägen" streetNo="14" streetNoLetter=""
community="Lund" postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.690147" long="13.215330" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="estimatedtime" time="2015-08-10T08:07:18"/>
      <time timeType="scheduledtime" time="2015-08-10T08:07:00"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, John">
```

```
<attributeContent>
        <attribute>
         <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
        <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <subOrderContent>
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183751" unique="true"/>
       </subOrderContent>
      </content>
     </contents>
    </node>
    <node nodeSegno="3" nodeType="pickup">
     <addressNode addressName="" street="Vikingavägen" streetNo="17" streetNoLetter=""
community="Lund" postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.695565" long="13.242720" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="estimatedtime" time="2015-08-10T08:12:18"/>
      <time timeType="scheduledtime" time="2015-08-10T08:12:00"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, Jane">
       <attributeContent>
        <attribute>
         <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
        <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <subOrderContent>
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183752" unique="true"/>
       </subOrderContent>
      </content>
     </contents>
    </node>
    <node nodeSeqno="4" nodeType="destination">
     <addressNode addressName="" street="Latinlinjen" streetNo="11" streetNoLetter="" community="Lund"
postalNo="22240">
      <geographicLocation typeOfCoordinate="WGS-84" lat="55.708449" long="13.244673" precision="6"/>
     </addressNode>
     <timesNode>
      <time timeType="estimatedtime" time="2015-08-10T08:20:18"/>
```

```
<time timeType="scheduledtime" time="2015-08-10T08:20:00"/>
     </timesNode>
     <contents>
      <content contentType="traveller" name="Doe, Jane">
      <attributeContent>
        <attribute>
        <idAttribute src="SUTI:idAttribute" id="1001" unique="true"/>
        </attribute>
       </attributeContent>
       <economyContent>
       <formOfPayment>
         <payment amount="0" paymentType="prepaidsocialfee"/>
        </formOfPayment>
       </economyContent>
       <subOrderContent>
        <idOrder src="trapeze_pass_0001:idSubOrder" id="11183753" unique="true"/>
      </subOrderContent>
      </content>
     </contents>
    </node>
   </route>
  </order>
</msg>
```

4.2.3.3 MSG 2001 Order confirmation

MSG 2001 is sent from the Provider to the Client as a response to a received MSG 2000. It indicates that the order is received, comply with the referred agreement and will be carried out.

4.2.3.4 MSG 3003 Dispatch confirmation

The Provider use MSG 3003 to inform the Client that the suggested and accepted vehicle has accepted the order and will perform it.

```
<msg msgType="3003" msgName="Dispatch confirmation"> <idMsg src="holmedal_hdcom_0001:idMsg" id="2015122213393416" unique="true"/>
```

```
<referencesTo>
    <idOrder src="trapeze_pass_0001:idOrder" id="11183742" unique="true />
    <idVehicle src="holmedal hdcom 0001:idRegistrationNumber" id="ABC123" unique="true"/>
  </referencesTo>
  <resourceDispatch>
    <vehicle>
      <idVehicle src="trapeze pass 0001:idVehicle" id="51006P" unique="true"/>
      <idVehicle src="holmedal_hdcom_0001:idVehicle" id="3110" unique="true"/>
      <capacity>
        <seats noOfSeats="4"/>
      </capacity>
      <attributesVehicle>
        <attribute>
          <idAttribute src="SUTI:idAttribute" id="1628" unique="true"/>
        </attribute>
        <attribute>
          <idAttribute src="SUTI:idAttribute" id="1611" unique="true"/>
        </attribute>
      </attributesVehicle>
    </vehicle>
    <manualDescriptionResource sendtoInvoice="false" vehicleConfirmation="false" sendtoOperator="true"</p>
sendtoVehicle="false" manualText="">
      <idActionText src="holmedal_hdcom_0001:driverEndTime" id="2015-12-23T00:36:29"/>
    </manualDescriptionResource>
    <driver>
      <attributesDriver>
        <attribute>
          <idAttribute src="SUTI:idAttribute" id="1510" unique="true"/>
        </attribute>
        <attribute>
          <idAttribute src="SUTI:idAttribute" id="2313" unique="true"/>
        </attribute>
      </attributesDriver>
      <idDriver src="holmedal_hdcom_0001:idDriver" id="123456" unique="true"/>
      <contactInfoDriver>
        <contactInfo contactType="phone" contactInfo="043174700"/>
      </contactInfoDriver>
    </driver>
    <vehiclestartLocation typeOfCoordinate="WGS-84" precision="0" lat="56.047010" long="12.703940"/>
  </resourceDispatch>
</msg>
```

4.2.3.5 MSG 4010 Event confirmation

MSG 4010 is sent from the Provider to the Client to indicate a vehicle has performed a pickup or other action in an ongoing order. This can indicate that a passenger is in the vehicle (passengerinvehicle), that no passenger showed (noshow) or that the passenger has left the vehicle (passengerdropped). The Client is not expected to answer this message.

```
<msg msgType="4010" msgName="Event Confirmation">
```

```
<idMsg src="holmedal_hdcom_0001:idMsg" id="2015121409312773" unique="true"/>
  <referencesTo>
   <idOrder src="trapeze pass 0001:idOrder" id="11183742" unique="true />
   <idVehicle src="trapeze pass 0001:idVehicle" id="51006P" unique="true"/>
   <idVehicle src="holmedal_hdcom_0001:idVehicle" id="3110" unique="true"/>
  </referencesTo>
  <pickupConfirmation eventType="passengerinvehicle">
  <!-- eventTypes: passengerinvehicle, passengerdropped, noshow -->
   <nodeConfirmed nodeType="pickup" nodeSeqno="1">
   <addressNode/>
   <geographicLocation typeOfCoordinate = "WGS-84" lat="57.789470" lon="14.125500" precision= "6"/>
   <addressNode/>
   <timesNode>
    <time timeType="actual" time="2015-08-23T14:37:20"></time>
   </timesNode>
   <contents>
    <content contentType="traveller" name="Doe, John">
     <subOrderContent>
      <!-- From subOrderContent in pickupnode in telegram 2000, if eventype is passengerinvehicle or
noshow.
      If passengerdropped fetch it from destination node in telegram 2000 -->
      <idOrder src="trapeze_pass_0001:idSubOrder" id="11183743" unique="true />
     </subOrderContent>
    </content>
   </contents>
  </nodeConfirmed>
 </pickupConfirmation>
</msg>
```

4.2.3.6 MSG 4031 No contact with vehicle

MSG 4031 is sent from the Provider to the Client to indicate that the Provider don't have any contact with the performing vehicle for the moment.

4.2.3.7 MSG 5000 Message to vehicle

MSG 5000 is sent from the Client to the Provider to inform the Provider that the Client wishes to send a message to a vehicle connected to the Provider.

4.2.3.8 MSG 5001 Confirmation message to vehicle

MSG 5001 is sent from the Provider to the Client to inform that MSG 5000 has been received and has been sent to the vehicle.

4.2.3.9 MSG 5010 Message to client from vehicle

MSG 5010 is sent from the Provider to the Client to forward a message from a vehicle to the Client. The Client shall respond by sending MSG 5011.

To get information on how the preliminary plan looks like for a vehicle the manualText is prefixed with "Status:" and the code 111. If the provider wants to send a text the manualText should be prefixed with "Text:" following with the text message. If the manualText is prefixed with "STATUS:" the client response with MSG 5000.

4.2.3.10 MSG 5011 Messages to client from vehicle confirmation

MSG 5011 is sent from the Client to the Provider to inform that the Client received and the appropriate Receiver read the message.

4.2.3.11 MSG 5020 Request for location

MSG 5011 is sent from the Client to the Provider to request the location of a vehicle performing an order. The Client may request the Provider to provide location for the vehicle during a certain time or a certain distance (Tracking).

4.2.3.12 MSG 5021 Requested location

MSG 5021 is sent from the Provider to the Client as response on MSG 5020. The message contains requested information, for example lat/long, type of coordinate and precision.

```
<msg msgType="5021" msgName="Requested Location">
  <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121409308650" unique="true"/>
  <msgTimeStamp>
    <time time="2015-12-14T09:22:01"/>
  </msgTimeStamp>
  <infoTimeStamp>
    <time time="2015-12-14T09:21:51"/>
  </infoTimeStamp>
  <referencesTo>
    <idMsg src="trapeze_pass_0001:idMsg" id="2015121414794435" unique="true"/>
    <idVehicle src="trapeze_pass_0001:idVehicle" id="41021" unique="true"/>
    <idVehicle src="holmedal_hdcom_0001:idVehicle" id="41021" unique="true"/>
  </referencesTo>
  <addressLocation>
    <geographicLocation typeOfCoordinate="WGS-84" lat="55.482333" long="13.602417" precision="6"/>
  </addressLocation>
</msg>
```

4.2.3.13 MSG 7000 Keep alive

MSG 7000 is sent either by the client or by the provider as a check that the other system is alive.

```
<msg msgType="7000" msgName="Keep alive">
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795234" unique="true"/>
  </msg>
```

4.2.3.14 MSG 7001 Keep alive confirmation

MSG 7001 is sent as a response of a MSG 7000 received from the other side.

```
<msg msgType="7001" msgName="Keep alive confirmation">
  <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795235" unique="true"/>
  <referencesTo>
      <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795234" unique="true"/>
      </referencesTo>
  </msg>
```

4.2.3.15 MSG 7030 Syntax Error

MSG 7030 is sent by the system that has recived a message that don't exists, don't have a message id or has fault XML syntax or are in opposition to the logic shown in SUTI messageflow.

```
<msg msgType="7030" msgName="Syntax error">
    <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795235" unique="true"/>
    <referencesTo>
        <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795234" unique="true"/>
        </referencesTo>
        <!—The error found during the processing of message, can be sent by Client or the Provider -->
        <manualDescriptionMsg manualText="Error message text" sendtoInvoice="false" sendtoOperator="false" sendtoVehicle="false" vehicleConfirmation="false"/>
        </msg>
```

4.2.3.16 MSG 7031 Not operation

MSG 7031 is sent as a response of a message that can't be responded to or when the system is down for maintenance.

```
<msg msgType="7031" msgName="Not operational">
  <idMsg src="trapeze_pass_0001:idMsg" id="2015121414795235" unique="true"/>
  <referencesTo>
    <idMsg src="holmedal_hdcom_0001:idMsg" id="2015121414795234" unique="true"/>
    </referencesTo>
    <manualDescriptionMsg manualText="Error message text" sendtoInvoice="false" sendtoOperator="false" sendtoVehicle="false" vehicleConfirmation="false"/>
  </msg>
```

4.3 Spesielle behov – SUTI attributtliste

Se vedlegg for de ulike attributtene og deres betydning. Disse er felles for begge typer meldingsflyt.