

Web Service Interface between GV and Innosys Version 1.0

Meaning of Terms

MC – Message code. It is a unique number identifying the type of message to be sent or received by GV. Each MC allows HM or GV to parse the message content in a prescribed format that will be addressed in this document.

MDT – Mobile Data Terminal, the display and data communication equipment mounted in vehicle's cabin.

PM – Prime mover number. It is a unique number to each prime mover.

JN – Job number. It is a unique number from HM identifying a job. A job can consist of several trips.

SN – Sequence number (Trip number). It is a unique number from HM identifying a trip.

Web Service Message Format

The web service structure shall be based on VS2013 Web API 2, Restful service.

In the proposed Web Service interface, the format shall consists of the following 5 fields:

Field	Field Type	Size	Remarks
MC	String	4 Char	Mandatory
PM	String	8 Char	Mandatory
JN	String	26 Char	Optional
SN	String	7 Char	Optional
Message	String	250 Char	Optional. Message content will consists of different fields, of which the combination is identified by the unique MC. The size of message includes spaces and identifiers.

Message Codes

- The following table summarizes the message codes used in this interface.

Field Description	Flow	Message Code	Sub-Fields
Trip Instructions	HM → GV	TI01	"Free Text Instructions"
Trip Update	HM ← GV	TU01	Start Trip Container number Seal number Trailer number DO number Remarks End Trip

Messages from HM to GV

Message Code: TI01 – Trip instructions



- Messages received by GV shall be delivered to the MDT of the prime mover identified by "PM" number.
- The MDT shall display only the content in "Message" field.

- “JN” and “SN” numbers shall be stored in the MDT. When a driver replies to a message through the MDT, the “JN” and “SN” numbers will be attached in the reply message to HM, allowing HM the reference to update correctly.

Sea-Export 1st Leg

Field	Field Type	Size	Remarks
MC	String	4 Char	TI01
PM	String	8 Char	XD9075U
JN	String	26 Char	
SN	String	7 Char	
Message	String	250 Char	
1	ScheduleDate	10 Char	2015-01-27
2	TripStartTime	4 Char	0830
3	TripEndTime	4 Char	1020
4	MsgType	3 Char	COL
5	Vessel	30 Char	APL TEXAS
6	Voyage	30 Char	037E
7	BookRefNo	20 Char	APLU057555660
8	ShippingLine	20 Char	FUJITRANS
9	PortOfDestination	15 Char	SGSIN
10	ContainerQty	2 Char	1
11	ContainerSize	2 Char	20
12	ContainerType	4 Char	20FC
13	FromLocation	12 Char	EEKY11
14	ToLocation	12 Char	4 PENJURU ROAD
15	Remark	30 Char	

Illustration of Message on MDT Display

Page 1 of Sea-Export 1 st leg message to be displayed.	
Page 2 of Sea-Export 1 st leg message continued.	

Sea-Export 2nd Leg

Field	Field Type	Size	Remarks
MC	String	4 Char	TI01
PM	String	8 Char	XD9075U
JN	String	26 Char	
SN	String	7 Char	
Message	String	250 Char	
1	ScheduleDate	10 Char	2015-01-27
2	TripStartTime	4 Char	1830
3	TripEndTime	4 Char	2320
4	MsgType	3 Char	EXP
5	ContainerQty	2 Char	1
6	ContainerSize	2 Char	20
7	ContainerType	4 Char	20FC
8	FromLocation	12 Char	4 PENJURU ROAD
9	ToLocation	12 Char	PSA
10	Remark	30 Char	

Illustration of Message on MDT Display

Page 1 of Sea-Export 2nd leg message to be displayed.

Sea-Import 1st Leg

Field	Field Type	Size	Remarks
MC	String	4 Char	TI01
PM	String	8 Char	XD9075U
JN	String	26 Char	
SN	String	7 Char	
Message	String	250 Char	
1	ScheduleDate	10 Char	
2	TripStartTime	4 Char	
3	TripEndTime	4 Char	
4	MsgType	3 Char	
5	Vessel	30 Char	
6	Voyage	30 Char	
7	BookRefNo	20 Char	
8	ShippingLine	20 Char	
9	PortOfDestination	15 Char	
10	ContainerQty	2 Char	
11	ContainerSize	2 Char	
12	ContainerType	4 Char	
13	FromLocation	12 Char	
14	ToLocation	12 Char	

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15	Remark		30 Char	
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Sea-Import 2nd Leg

Field		Field Type	Size	Remarks
MC		String	4 Char	TI01
PM		String	8 Char	XD9075U
JN		String	26 Char	
SN		String	7 Char	
Message		String	250 Char	
1	ScheduleDate		10 Char	
2	TripStartTime		4 Char	
3	TripEndTime		4 Char	
4	MsgType		3 Char	
5	ContainerQty		2 Char	
6	ContainerSize		2 Char	
7	ContainerType		4 Char	
8	FromLocation		12 Char	
9	ToLocation		12 Char	
10	Remark		30 Char	

Reply from GV to HM

Message Code: TU01 – Trip update (Container/Seal/Trailer/DO Number)

- MDT reply are fix-formatted and contained within the “Reply” field. Each field is delimited by “~”.
- In the reply to HM, the “MC” will determine the type of reply and how to process the “Reply” field.
- “PM”, “JN” and “SN” numbers allows HM to refer to the correct trip instruction.

Field		Field Type	Size	Remarks
MC		String	24Char	TU01
PM		String	8 Char	XD2103T
JN		String	26 Char	Optional
SN		String	7 Char	Optional
Reply		String	250 Char	
Code	Reply Field			
01	StartTrip	NIL	-	-
02	ContainerNo	String	11 Char	PCIU9985660
03	SealNo	String	11 Char	9957
04	TrailerNo	String	8 Char	TRC448Y
05	DO	String	20 Char	20150202817
06	Remark	String	30 Char	
07	EndTrip	NIL	-	-

- In Trip Updates, the driver may send information separately at different time. E.g Trailer number is first sent to HM before embarking on the trip to collect a container. Container and seal number may be sent together upon collection, etc.
- For the same JN/SN reference, the messages will be sent at different time for HM to update accordingly.

Reply Field Example 01: Start trip

- 01 (Only reply code without value)

Reply Field Example 02: Container, seal and trailer number

- 02=PCIU9985660~03=9957~04=TRC448Y

Reply Field Example 03: DO number

- 05=20150202817

Reply Field Example 04: End trip

- 07 (Only reply code without value)