

DDE Supplement / Attachment

| DDIdentifier ₍₁₀₎ | DDEName | |
|------------------------------|--|---|
| 494 | Last Event Partner ID (Byte 1-4) | Required |
| 495 | Last Event Partner ID (Byte 5-8) | Required |
| 496 | Last Event Partner ID (Byte 9-12) | Required |
| 497 | Last Event Partner ID (Byte 13-16) | Required |
| 498 | Last Event Partner ID Type | Required |
| 499 | Last Event Partner ID Manufacturer ID Code | Optional (Required, when Type is 1 or 1001) |
| 500 | Last Event Partner ID Device Class | Optional |

Introduction:

Last Event Partner ID DDIs listed above are intended to document the source of each loading, as well as the target of each unloading, and shall be used for future location based events as well.

Especially for companies, which transport the yield for different customers is this a great chance to improve their documentation of the transported mass.

The Load Source shall be established via a machine to a machine communication between the harvesting machine and the transfer vehicle. This machine to machine communication shall be a wireless connection.

One Partner of the connection will be the ISOBUS ECU. The other Partner can be another ISOBUS ECU, but will most likely be a “Tag” or “Beacon” which is just posting its Partner ID -Number.

The “Last Event Partner ID” DDI, is a 128 bit Integer Values whose meaning is a simple Identification Number. Each machine has a **permanent** Partner ID.

This Partner ID is not identical to the Load Identification Number (DDI 322) and Unload Identification Number (DDI 323).

The difference is very simple. The Load/Unload Identification Number (DDI 322/323) is a number, which changes whenever a new loading or unloading is done. The “Last Event Partner ID” DDI is a fixed and permanent number. Each machine has such a number. This is necessary by the reason that I need to identify the connection between two machines.

DDE Supplement / Attachment

Why not GPS?

GPS Receivers are quite common on tractors, so why not using GPS?

Of course, the Overloading-Wagon Tractor can and should be GPS equipped, to track the movements of it.

But: Trucks and often older Harvesters are not GPS, nor ISOBUS equipped. This concept is good to mount just a Partner ID onto an older Harvester or Truck, and identify the overloading Process.

Last Event Partner ID Number:

The Partner ID Number is intended to be “Manufacturer Unique”.
This avoids the need of a global Database.

Last Event Partner ID Manufacturer ID Code:

The Partner ID has to tell its Manufacturer, and the Manufacturer Numbers from SAE J1939 / ISO 11783 shall be used.

Remark: This is not the Manufacturer of the ISOBUS ECU sending this DDI to the Task-Controller, but the Manufacturer of the “Partner” Device.

DDE Supplement / Attachment

Last Event Partner ID Device Class:

This DDI should tell the Device Class of the “Partner” Device:

Take the ISO 11783-1 Device Class List,
(Which is similar to the Vehicle System ID from SAE J1939 / IG2)

- 0 Non-specific System
- 1 Tractor
- 2 Primary Soil Tillage
- 3 Secondary Soil Tillage
- 4 Planters /Seeders
- 5 Fertilizer
- 6 Sprayers
- 7 Harvesters (= Combine)
- 8 Root Harvester
- 9 Forage Harvester
- 10 Irrigation
- 11 Transport / Trailers (including Truck Trailers and Trucks)
- 12 Farmyard Work / Farm Yard Operations
- 13 Powered Auxiliary Units
- 14 Special Crops
- 15 Municipal Work / Earth Work
- 16 Skidder
- 17 Sensor System
- 19 Timber Harvesters
- 20 Forwarders
- 21 Timber loaders
- 22 Timber Processing Machines
- 23 Mulchers
- 24 Utility Vehicles
- 25 Slurry Applicators
- 26 Feeder / Mixer
- 127 Not Available

DDE Supplement / Attachment

Last Event Partner ID Type

- 0 Not Available
- 1 ISO 11783 Standardized Identification Device¹

- 1001 Manufacturer Proprietary Solution²
- 1002 Manually User Input
- 1003 2,4 GHz Apple iBeacon
- 1004 2,4 GHz Google Eddystone Beacon
- 1005 2,4 GHz Radius Networks AltBeacon
- 1006 2,4 GHz Google URIBeacon
- 1007 135 kHz RFID according ISO 18000-2
- 1008 13,56 MHz RFID according ISO 18000-3
- 1009 13,56 MHz NFC according ISO 22536
- 1010 433 MHz RFID according ISO 18000-7
- 1011 868 MHz RFID according ISO 18000-6
- 1012 2,45 GHz RFID according ISO 18000-4
- 1013 13,56 MHz NFC according ISO 15693

¹ Last Event Partner ID Manufacturer ID Code must be sent

² Last Event Partner ID Manufacturer ID Code must be sent

DDE Supplement / Attachment

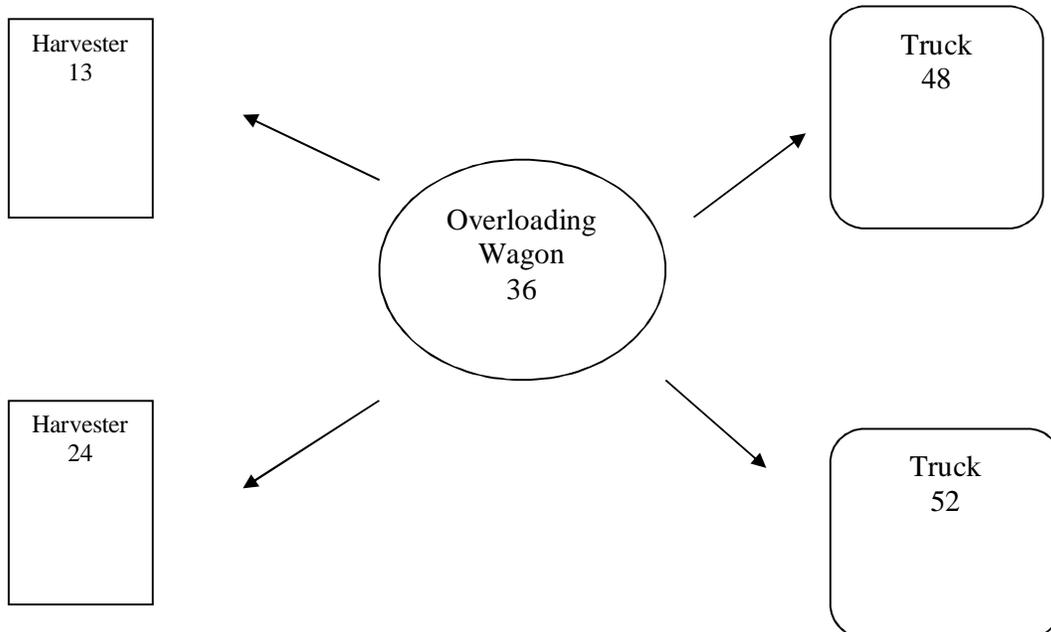
Example:

Forage harvester gives his yield to an Overloading wagon which is linked to a tractor. You have a wireless machine to machine connection between the forage harvester and the Overloading Wagon. The Overloading Wagon saves the new mass as “Last Loaded Weight” (DDI 320) with the new information “Last Event Partner ID”. After this, the Overloading wagon connects with a new forage harvester and gets new yield. This will be saved as “Last Loaded Weight” again. But because of the “Last Event Partner ID” you can differ now, from which forage harvester the yield comes from.

After the filling of the Overloading wagon, the mass will be transported to the customer or overload to another transfer vehicle, which has the task to transport the mass to the customers. Again a connection between the two transfer vehicles will be established.

During the process of overloading the yield, the Overloading wagon, which got the mass by the forage harvester, saves the information as “Last Unloaded Weight” and again “Last Event Partner ID”.

Again the case of a second truck is possible. With the new information -“Last Event Partner ID”- you have now the chance to note down, which truck got which mass.





ISO 11783-11
Mobile Data Element Dictionary
DDE Request Form



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Data Overloading Wagon:

| Gross | Net | | Last Event Partner ID Number |
|-------|-------|-------------|------------------------------|
| 0 | 0 | Zero | |
| 2000 | 2000 | Load 2000 | 13 |
| 0 | 0 | Tare | |
| 5000 | 3000 | Load 3000 | 24 |
| 0 | 0 | Tare | |
| 0 | -5000 | Unload 5000 | 48 |
| 0 | 0 | Tare | |
| 5000 | 5000 | Load 5000 | 13 |
| 0 | 0 | Tare | |
| 0 | -5000 | Unload 5000 | 52 |
| 0 | 0 | Zero | |

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Recommended DDI settings

The table provides an overview about the recommended DDI settings.

| DDI dez | Weighing System DDI | Type | | Properties | | Trigger Methods | | | | |
|---------|---|------|-----|------------|-------------|-----------------|-------------------|------------------|-----------|-------|
| | | DPD | DPT | Setable | Default set | Time interval | Distance interval | Threshold limits | On change | Total |
| | DDI ISO name | | | | | | | | | |
| | DET-Function Automatic Documentation | | | | | | | | | |
| 178 | Element Type Instance | | x | | | | | | | |
| 320 | Last loaded Weight | x | | | x | | | | x | |
| 321 | Last unloaded Weight | x | | | x | | | | x | |
| 322 | Load Identification Number | x | | | x | | | | x | |
| 323 | Unload Identification Number | x | | | x | | | | x | |
| 494 | Last Event Partner ID (Byte 1-4) | x | | | x | | | | x | |
| 495 | Last Event Partner ID (Byte 5-8) | x | | | x | | | | x | |
| 496 | Last Event Partner ID (Byte 9-12) | x | | | x | | | | x | |
| 497 | Last Event Partner ID (Byte 13-16) | x | | | x | | | | x | |
| 498 | Last Event Partner ID Type | x | | | x | | | | x | |
| 499 | Last Event Partner ID Manufacturer ID Code | x | | | x | | | | x | |
| 500 | Last Event Partner ID Device Class | x | | | x | | | | x | |

All load DDI's are supposed to be changed same time, so these DDI's work together as one "Dataset".