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**UN/EDIFACT AND OTHER DEVELOPMENTS IN
ELECTRONIC DATA INTERCHANGE (EDI)**

**Use of EDI: A CSV standard for transmission of data on goods road transport
to Statistics Denmark**

Transmitted by the Government of Denmark

Note: In view of the interest of the Working Party in following developments regarding UN/EDIFACT electronic data interchange related to the transport sector, the Chairman of the Working Party has prepared a document regarding the Danish experience on EDI in transport statistics, which is reproduced below.

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1. Background

Co-operation with software producers

In co-operation with the software producers EHJ, ESC, TransSoft ApS, EDB Gruppen A/S and Logodan A/S, Statistics Denmark has prepared a standard for transmission to Statistics Denmark of data requested in the regular surveys on transport of goods by lorries registered in Denmark. The developed standard covers transport of goods in both national and international traffic.

GE.02-24022

The main purpose of the standard is to lighten the workload of haulage companies etc. in relation to the regular reports to Statistics Denmark on transport of goods by road.

During the preparation process the use of an EDIFACT standard based on RDRMES (the Raw Data Reporting Message) and the use of XML has been examined. The transport sector however has found the use of CSV files (Comma Separated Files) more suitable for the transmission of data to Statistics Denmark.

2. The statistics

Data on the transport of goods by road are collected according to Act on Statistics Denmark. The statistics meet the requirements of the Council Regulation (EC) No 1172/98 on statistical returns in respect of the carriage of goods by road.

Survey on national transport

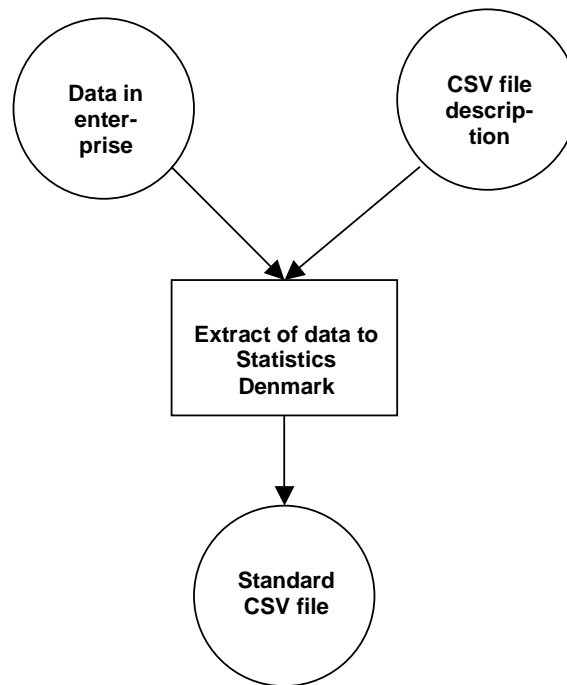
Since July 1979 Statistics Denmark quarterly has collected data on national transport of goods by road vehicles registered in Denmark. The national transport covers goods loaded and unloaded in Denmark. The statistics are based on a sample survey covering 3,500 vehicles a year out of in total about 40,000 vehicles with a maximum permissible weight above 6 tonnes. For each selected vehicle information on the journeys in a week is requested.

Survey on international transport

As from 1993 Statistics Denmark quarterly has collected data on international transport of goods by road vehicles registered in Denmark. The international transport covers goods in traffic between Denmark and another country, in traffic between 2 other countries (cross trade) or in traffic within another country (cabotage). The statistics are based on a sample survey covering about 700 enterprises quarterly out of in total 1,600 enterprises involved in international goods road transport for own account or for hire or reward. The selected enterprises are requested to report information on international journeys by vehicles leaving the country in a selected period of 3-7 days depending on the size of the enterprise. Small enterprises on average report once a year, medium size enterprises twice a year and bigger enterprises with at least 10 vehicles every quarter of a year.

3. System architecture

The architecture of the data system is shown below. The data relevant for the statistics are extracted from the database of the haulage company and put on a standardised CSV file. The CSV file is encrypted and submitted to Statistics Denmark attached to an e-mail.



4. Reporting period etc.

It is expected that the enterprise submit information concerning all national and/or international journeys in the selected survey period. The data transmission shall comprise all journeys started in the period. Submission of data using the CSV file should be in agreement with Statistics Denmark.

5. File name

The file name is standardized as: *Pyymmmnnnnnnnnnn*, where

- *nnnnnnnnnn* is the unique number of the local establishment (SE-nr)
- *Pyymm* is the period covered by the report
- *P* is the time unit: U for week; M for month
- *yy* is indicating the year, e.g. "02" for 2002
- *mm* is indicating the month or the unique week number according to Danish standard, e.g. "04" for April or 14 for first week in April 2002.

6. Description of the CSV file

The CSV file is made up as a set of lines for each journey. The single journey is described using 3 different line types containing information on the vehicle, the goods transported and the route. The file may cover national and/or international journeys. The fields in the line are separated using semicolon as field separator. Each single journey is reported using:

- 1 line (Line type = 1) containing data about the respondent and the vehicle
- 1 or more lines (Line type = 2) each holding information of a shipment. A shipment is delimited as goods having the same place of loading and place of unloading. Goods on journeys with many unloading of goods from a central place of loading or on journeys with many loadings of goods to a central place of unloading may be regarded as belonging to a single shipment
- 1 or more lines (Line type = 3) each holding information for a stop on the journey for loading, unloading etc.

The lines for a journey are reported jointly in ascending order according to line type.

The CSV file is described in detail in Annex 1.

Code lists are presented in Annex 2- Annex 4.

Annex 5 presents examples of CSV files.

7. Encryption

Data are encrypted using "Digital Signature". In a transition period until "Digital Signature" is released data may be submitted to Statistics Denmark in unencrypted format on the enterprise's own responsibility.

Annex 1. CSV files for goods road transport by Danish vehicles

Line type 1. Data about the enterprise and the vehicle etc.

Field	Format	Max. pos.	Description of field
Line type	N	1	= "1" .
Version	N	2	The version number of the standard, e.g. "01".
Type of traffic	AN	3	= "IVG" for international traffic, e.g. traffic with loading or/and unloading abroad, inclusive linked empty journeys. = "NVG" for national traffic, e.g. traffic with loading and unloading in Denmark, inclusive linked empty journeys.
Sender's CVR No	N	8	Sender's unique enterprise number. Sender can be another than the respondent if the respondent is a subcontractor.
Respondent's SE No	N	8	Respondent's unique establishment number (VAT number). Is used to identify the establishment. An enterprise may use more SE numbers. The number to be used is agreed with Statistics Denmark.
Number on licence plate	AN	7	License plate number of motor vehicle. Only owned or leased vehicles registered in Denmark.
Lorry/tractor			
- Axles	N	1	The 3 fields are filled-in according to the Vehicle Register certificate. Total weight and load capacity should be reported in kg. Load capacity=total permissible weight – own weight of vehicle
- Total permissible weight	N	5	
- Load capacity	N	5	
Trailer or semi trailer			
- Axles	N	1	If more than one trailer or semi trailer has been used the most frequently used is reported. The 3 fields are filled-in according to the Vehicle Register certificate. Total weight and load capacity should be reported in kg. Load capacity=total permissible weight – own weight of vehicle.
- Total permissible weight	N	5	
- Load capacity	N	5	
Day of start of the journey	N	8	For international traffic: The day reported is the day of departure from the first place of loading in Denmark (in case of an empty journey: Last place of unloading in Denmark or home place). Note that the day of departure may be different from the day of loading. For national traffic: Day of the beginning of the reporting week. Date format: ccyyymmdd
Day of end of journey	N	8	For international traffic: The day reported is the day of arrival to the last place of unloading in Denmark (in case of an empty journey:

			First place of loading in Denmark or home place). For national traffic: Day of the closing of the reporting week. A journey in national traffic will normally last only one day. Datoformat: ccyyymmdd
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AN = alphanumeric field, N = numeric field

Line type 2. Data about the goods

Field	For- mat	Max. pos.	Description of field
Line type	N	1	= "2"
Shipment number	N	8	An identification number is reported, e.g. booking number. Goods on journeys with many unloading of goods from a central place of loading or on journeys with many loadings of goods to a central place of unloading may be regarded as belonging to a single shipment. The same shipment number is then used for all consignments loaded/unloaded.
Type of goods	A	30	Textual description of the goods transported. <i>The field is optional.</i>
Class of goods	N	2	Class of goods is reported according to the classification presented in Annex 2. If the shipment consist of more than one class of goods and the major class is responsible for more than 66 % of the weight of the shipment the code of this class is reported. Else code "27" is used. Unidentifiable goods is coded "35"
Dangerous	N	2	If a shipment contains dangerous goods the class of dangerous goods according to Annex 3 is reported. Decimal point is omitted. ADR class 4.1 is reported as "41" .
Weight of goods	N	5	The weight of the shipment is reported in kg. The weight includes the total weight of goods inclusive packing and the tare weight of containers, swap bodies, pallets etc.
Cargo type	N	1	Is reported as: "1" for container/swap body; "0" for other types of cargo.
Voluminous goods	N	1	Goods of such a nature that the load capacity (weight) of the vehicle cannot be fully used even if the vehicle is fully loaded. Is reported as: "1" for voluminous goods; "0" for other goods.

Line type 3. Route data

Field	For- mat	Max. pos.	Description of field
Line type	N	1	= "3"
Country code	AN	2	ISO 3166 codes are used. Codes for selected European countries are presented in Annex 4.
Postal code	AN	15	Postal code
Town	AN	30	The place of loading, place of unloading, place of start and place of end of journey are reported as the place name linked to the postal code or as the nearest town.
Kilometre reading	N	7	Kilometre reading (e.g. on mileage recorder) at arrival to the place of stop on the route; Reported in km without decimal.
Activity code	A	2	The relevant activity at the stop on the route is reported. If both unloading and loading have taken place on the same place (Town) 1 line is filled-in for each separate activity. The following codes of activity should be used: A = Unloading AD = Unloading of part of a shipment P = Loading PD = Loading of part of a shipment S = Start of journey before loading (e.g. at home place) Z = End of journey without unloading (e.g. at home place). The codes "S" or "Z" can only be used one time per travel backwards and forwards.
Shipment number	AN	16	An identification number is reported, e.g. booking number. Goods on journeys with many unloading of goods from a central place of loading or on journeys with many loadings of goods to a central place of unloading may be regarded as belonging to a single shipment. The same shipment number is then used for all consignments loaded/unloaded. The field is empty if the activity code is = "S" or "Z".
Weight of part of shipment	N	5	The weight reported in kg of a loaded or unloaded part of a shipment. Does only relates to goods on journeys with many unloading of goods from a central place of loading or on journeys with many loadings of goods to a central place of unloading, if the goods is regarded as belonging to a single shipment. Empty for other activities.

Annex 2 – Annex 4: Omitted**Annex 5. Examples of CSV-files****Example 1. International traffic**

A road tractor coupled to a semi trailer starts from the enterprise in Ebeltoft, goes to Århus, Kolding og Padborg for loading of 3 parts of a shipment that are unloaded in Hamburg (Part 2) and Bremen (part 1 and part 3). In Bremen goods are loaded for Nijmegen. From Nijmegen the vehicle goes empty to Enschede where goods is loaded for Vejle. From Vejle the vehicle runs empty back to Ebeltoft.

It gives the CSV file:

```
1;01;IVG;88888888;12345678;AB12345;2;17000;10500;3;34000;25300;20010708;20010710;
2;PQ12345;Stykgods;27;;10000;0;0;
2;PQ12346; Stykgods;27;;5000;0;0;
2;PQ12347; Stykgods;27;;5000;0;0;
2;PQ12348;Kemikalier;20;41;15000;0;0;
2;PQ12349;Maskindele;32;;8000;0;0;
3;IVG;DK;;8400;Ebeltoft;300000;S;;;
3; DK;8000;Århus C;300042;P;PQ12345;;
3; DK;6000;Kolding;300140;P;PQ12346;;
3; DE;6330;Padborg;300180;P;PQ12347;;
3; DE;21129;Hamburg;300370;A;PQ12346;;
3; DE;28195;Bremen;300455;A;PQ12345;;
3; DE;28195;Bremen;300455;A;PQ12347;;
3; DE;28195;Bremen;300455;P;PQ12348;;
3; NL;6522;Nijmegen;300765;A;PQ12348;;
3; NL;7511;Enschede;300870;P;PQ12349;;
3; DK;7100;Vejle;301440;A;PQ12349;;
3; DK;8400;Ebeltoft;301555;Z;;;

```

Example 2. National traffic. Collection of milk from agricultural holdings

The vehicles runs from Roskilde via Hillerød and back to Roskilde with loading en route. The total weight of the shipment is not known from the start of the journey but can be derived from the partial loadings.

It gives the CSV file:

```
1;01;NVG;99999999;13456789;BC12345;2;17000;10500;3;34000;25300;20010708;20010708;
2;M123;Mælk;30;;11500;0;0;
3;DK;4000;Roskilde;120001;S;;;
3;DK;4040;Jyllinge;120015;PD;M123;3500;

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3;DK;3550;Slangerup;120031;PD;M123;1500;
3;DK;3400;Hillerød;120045;PD;M123;1200;
3;DK;3400;Hillerød;120048;PD;M123;1800;
3;DK;3400;Hillerød;120055;PD;M123;800;
3;DK;4000;Roskilde;120085;PD;M123;1400;
3;DK;4000;Roskilde;120090;PD;M123;1300;
3;DK;4000;Roskilde;120111;A;M123;;

Example 3. National traffic. Distribution journey with heating oil

Heating oil is loaded in Helsingør og unloaded at several residential houses in Fredensborg. Then the vehicle return to Helsingør. Transported, unloaded oil is regarded as unloaded at the end of the journey.

It gives the CSV file:

1;01;NVG;99999999;13456789;BC12345;2;17000;10500;3;34000;25300;20010708;20010708;
2;M123;Fyringsolie;12;;25000;30;0;
3;DK;3000;Helsingør;120000;P;BP345;;
3;DK;3440;Fredensborg;120015;AD;BP345;1900;
3;DK;3440;Fredensborg;120016;AD;BP345;2000;
3;DK;3440;Fredensborg;120017;AD;BP345;1800;
3;DK;3440;Fredensborg;120018;AD;BP345;2200;
3;DK;3440;Fredensborg;120019;AD;BP345;2100;
3;DK;3440;Fredensborg;120020;AD;BP345;2000;
3;DK;3440;Fredensborg;120021;AD;BP345;2200;
3;DK;3440;Fredensborg;120022;AD;BP345;2000;
3;DK;3440;Fredensborg;120023;AD;BP345;1800;
3;DK;3440;Fredensborg;120034;AD;BP345;1700;
3;DK;4000;Helsingør;120046;AD;BP345;5300;
