LogiCom GmbH

## **Bus-FMS-Standard**

Bus-FMS-Standard-Simulation User Manual

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fms\_bus\_simulation\_211\_manual\_e

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## 1 Introduction

### 1.1 Work

With the program *BusFMSSim* (Bus-FMS-Standard-Simulation) you can create, change individually all CAN data packages of Bus-FMS-Standard (Version 00.02) and send them to a CAN-Adapter or in a logfile.

#### 1.2 System requirements

- Processor is Pentium-class
- Windows NT 4.0 with Service Pack 5 or 6 Windows 2000 Professional Windows XP Professional Windows 7
- 64 MB RAM
- 10 MB free Hard Disc Drive (plus 20 MB of temporary memory for the installation)
- SVGA-Monitor with minimum 256 colours and a resolution of 800 x 600 pixels
- Installed CAN-Adapter from Vector Informatik GmbH or IXXAT Automation GmbH

#### 1.3 Supported CAN-Adapter

#### **IXXAT** Automation GmbH:

- PC-T 04/PCI
- PC-T 04/104
- PC-T 03
- CANdy lite
- iPC-I 320/PCI
- iPC-I 320/104
- iPC-I 320
- iPC-I 165/PCI
- iPC-I 165
- CAN@net
- tinCAN 161
- USB-to-CAN II
- USB-to-CAN compact
- CANBlue

Vector Informatik GmbH:

- CANcardX
- CANcardY
- CANcardXL
- CANcard2
- CAN-AC2-PCI
- CAN-AC2
- CANpari
- EDICcard
- CANcaseXL
- CANboardXL
- CANboardXL\_C



## 2 Installation

### 2.1 Driver for CAN-Adapter

Requirements for the use of all functions of the program *BusFMSSim* (Bus-FMS-Standard-Simulation) are the installation and put in operation of a CAN-Adapter from Vector Informatik GmbH or IXXAT Automation GmbH.

To this you have to install the fitting CAN-Driver-Library:

| IXXAT Automation GmbH  | VCI V2, Version 2.16            |
|------------------------|---------------------------------|
| For Windows 7 user:    | VCI V3, Version 3.3             |
| Vector Informatik GmbH | CAN Driver Library, Version 4.3 |

The CAN-Driver-Library and further information could be found on the internet pages of the mentioned companies:

| IXXAT Automation GmbH  | http://www.ixxat.de             |
|------------------------|---------------------------------|
| Vector Informatik GmbH | http://www.vector-informatik.de |

### 2.2 Program "BusFMSSim"

For the installation of the program *BusFMSSim* (Bus-FMS-Standard-Simulation) please use the installation program *fms\_bus\_simulation\_210\_setup.exe*, which could be started for example with Windows Explorer or by "double-click" on the file.

Please follow the instructions of the installation program.



## 3 User manual

### 3.1 Registration

During the first run of the program *BusFMSSim* (Bus-FMS-Standard-Simulation) you should to do your registration.

| CogiCom - Bus-FMS-Standard-Simulation |            |  |
|---------------------------------------|------------|--|
| Registration                          | 1          |  |
| Source of FMS-Standard                |            |  |
| Vehicle Simulation                    | Simulation |  |
| O Internal LogFile                    | Recent     |  |
| O User Logfile                        | Repeat     |  |
|                                       |            |  |
| Manipulation                          |            |  |
| Valid Manipulation                    | Config     |  |
|                                       | Options    |  |
| Destination of FMS-Standard           |            |  |
| 🔽 Data Monitor                        | Monitor    |  |
| CAN-Adapter                           | Config     |  |
| 🗖 Logfile                             | Save       |  |
| Start Info                            | Close      |  |

Please press the button \_\_\_\_\_\_ and type in the *User* and *Key* you have got from LogiCom.

| L | (LogiCom - Bus-FMS-Standard-Simulation - Registration | × |
|---|---|---|
|   | Please enter User and Key for registration            |   |
|   | Registration  |   |
|   | User  |   |
|   | Key   |   |
|   | Contact   | _ |
|   | LogiCom GmbH  |   |
|   | Gautinger Strasse 51                                  |   |
|   | 82152 Krailling<br>Germany<br>Phone ±49.89.85663425   |   |
|   | Phone +49 89 85663425                                 |   |
|   | Telefax +49 89 85663426                               |   |
|   | eMail info@logicom.de GmbH                            |   |
|   |   |   |
|   | OK Cancel   |   |

After the registration you can use the program *BusFMSSim* (Bus-FMS-Standard-Simulation) with all its functions without any restrictions and without any limitation.



### 3.2 Program "BusFMSSim"

After the start of the program *BusFMSSim* (Bus-FMS-Standard-Simulation) you will see the following main window. All actions will be started from this window.

| 📙 LogiCom - Bus-FMS-Standa  | ard-Simulation | × |
|-----------------------------|----------------|---|
| User: LogiCom               |                |   |
| Source of FMS-Standard      |                |   |
| Vehicle Simulation          | Simulation     |   |
| 🔿 Internal LogFile 🔄        |                |   |
| O User Logfile              | Repeat         |   |
|                             |                |   |
| Manipulation                |                |   |
|                             |                |   |
| Valid Manipulation          | Config         |   |
|                             | Options        |   |
| Destination of FMS-Standard |                |   |
| 🔽 Data Monitor              | Monitor        |   |
| CAN-Adapter                 | Config         |   |
| 🗖 Logfile                   | Save           |   |
| Start                       | Close          |   |

## 3.2.1 Group "Source of Bus-FMS-Standard"

In the first group of the main window *Source of FMS-Standard* you choose the source for the Bus-FMS-Standard data packages. You have the choice between *Vehicle Simulation*, *Internal Logfile* or *User Logfile*.

If you choose *Vehicle Simulation* all Bus-FMS-Standard data packages will be produced according the vehicle simulation. By choosing *Internal Logfile* or *User Logfile* all stored data packages will be sent without changes.

| Simulation |
|------------|
| Repeat     |
|            |
|            |
|            |



## 3.2.1.1 Vehicle Simulation

If you choose *Vehicle Simulation* for the source of Bus-FMS-Standard data packages, you can start the simulation by pressing the button **Simulation**.

| 🕻 LogiCom - Vehicle Simulation   | × ×  |
|--|--|
| Simulation Cockpit   | Measured values  |
|  | Service Brake Air Pressure 1 ( kPa ) 1000.0  |
|  | Service Brake Air Pressure 2 ( kPa ) 1000.0  |
| (• • •)  | Bellow Pressure Front Axle Left (kPa) 400.0  |
|  | Bellow Pressure Front Axle Right (kPa) 400.0   |
| Wheel based speed  | Bellow Pressure Rear Axle Left (kPa) 400.0   |
| 0.00   | Bellow Pressure Rear Axle Right (kPa) 400.0  |
| Fuel level (%) Tot vehicle dist (m) Eng. coolant temp. (*C)                                | Driver's Identification  |
| 100 0 15   | Driver 1 Driver_ID_000001  |
| Total fuel used (1)     Fuel Rate (L/h)     Total engine hours (h)       0     0     0.000 | Driver 2 Driver_ID_000002  |
| Fuel Eco (Km/L)  | Tell Tale Status   |
| 0<br>Cruise control Starter   ✓ Ignition   |  |
| Parking  |  |
| Clutch Brake Accel. Gear   |  |
|  |  |
|  |  |
|  | Image: Stop light Base light Base light Buse light Buse light Buse light   Image: Stop light Image: Stop light Image: Stop light Image: Stop light Image: Stop light Image: Stop light |
| Auto   | Ad<br>Blue   |
| ☐ No automatic simulation  |  |
|  |  |
|  | Hide   |

With the vehicle simulation you can change the content of the Bus-FMS-Standard data packages by using the cockpit window.

By clicking on the symbols of Tell Tale Status you can change the status.

## 3.2.1.2 Internal Logfile

If you choose *Internal Logfile* for the source of Bus-FMS-Standard data packages, an internal Logfile will be used.



## 3.2.1.3 User Logfile

| Öffnen              |                                       |         | <u>?</u> ×      |
|---------------------|---------------------------------------|---------|-----------------|
| <u>S</u> uchen in:  | 🔁 LogFile                             | - 🗧 🛨 ( | •               |
| StdLog.as           | c                                     |         |                 |
|                     |                                       |         |                 |
|                     |                                       |         |                 |
|                     |                                       |         |                 |
|                     |                                       |         |                 |
| Datei <u>n</u> ame: | StdLog.asc                            |         | Ö <u>f</u> fnen |
| Datei <u>t</u> yp:  | *.asc                                 | •       | Abbrechen       |
|                     | · · · · · · · · · · · · · · · · · · · |         |                 |

If you choose *User Logfile* for the source of Bus-FMS-Standard data packages, you can choose the filename by pressing the button \_\_\_\_\_\_.

### 3.2.2 Group "Manipulation"

Within the second group of the main window *Manipulation* you can directly manipulate the Bus-FMS-Standard data packages for test purpose.

| Manipulation       |         |
|--------------------|---------|
| Valid Manipulation | Config  |
|                    | Options |

### 3.2.2.1 Valid Manipulation

You can change the valid flags for manipulation of the content of the Bus-FMS-Standard data packages within the window *Valid Manipulation*.

By pressing the button <u>voin</u> you can change the valid flags of each data field individually.



| LogiCom - Valid Manipulatio                           | n - Config       | LogiCom - Valid      | Manipulation - Config | ×          | 🔣 LogiCom - Valid Manipulatio       | n - Config   |   |
|---|------------------|----------------------|-----------------------|------------|-------------------------------------|--------------|---|
| Measured Value Name                                   | Range Name       | Measured Value Nar   |                       |            | Measured Value Name                 | Range Name   |   |
|   |                  | Lock Status of Door  | 1 Valid Signal        | <b>– –</b> | open status or poor 7               | Valid Signal | • |
| Parking Brake Switch                                  | Valid Signal 👻   | Open Status of Door  | 1 Valid Signal        | -          | Enable Status of Door 7             | Valid Signal | • |
| Wheel based speed                                     | Valid Signal 💌   | Enable Status of Do  | or 1 Valid Signal     | •          | Lock Status of Door 8               | Valid Signal | - |
| Clutch switch   | Valid Signal 💌   | Lock Status of Door  | 2 Valid Signal        | •          | Open Status of Door 8               | Valid Signal | * |
| Brake switch  | Valid Signal 💌   | Open Status of Door  | 2 Valid Signal        | •          | Enable Status of Door 8             | Valid Signal | - |
| Cruise control active                                 | Valid Signal 💌   | Enable Status of Do  | or 2 Valid Signal     | •          | Lock Status of Door 9               | Valid Signal | - |
| Accelerator pedal position                            | Valid Signal 💌   | Lock Status of Door  | 3 Valid Signal        | •          | Open Status of Door 9               | Valid Signal | • |
| Total fuel used                                       | Valid Signal 💌   | Open Status of Door  | 3 Valid Signal        | -          | Enable Status of Door 9             | Valid Signal | - |
| Fuel level  | Valid Signal 💌   | Enable Status of Do  | or 3 Valid Signal     | -          | Lock Status of Door 10              | Valid Signal | - |
| Engine speed  | Valid Signal 💌   | Lock Status of Door  |                       | -          | Open Status of Door 10              | Valid Signal | - |
| Total engine hours                                    | Valid Signal 💌   | Open Status of Door  | 1                     |            | Enable Status of Door 10            | Valid Signal | - |
| Vehicle identification number                         | Valid Signal 🔹   | Enable Status of Do  |                       | -          | Seconds                             | Valid Signal | - |
| Requests supported                                    | Valid Signal 🔹   | Lock Status of Door  |                       | -          | Minutes                             | Valid Signal | - |
| Diagnostics supported                                 | Valid Signal 💌   | Open Status of Door  |                       |            | Hours                               | Valid Signal | - |
| W-version supported                                   | Valid Signal 🔹   | Enable Status of Do  | 1                     | -          | Month                               | Valid Signal | - |
| High resolution total vhcl. distance                  | Valid Signal 👻   | Lock Status of Door  |                       |            | Day                                 | Valid Signal | - |
| Drive recognize                                       | Valid Signal 🔹   | Open Status of Door  | ,                     |            | Year                                | Valid Signal | - |
| Driver 1 working state                                | Valid Signal 🔹   | Enable Status of Do  | 1                     |            | Service Brake Air Pressure Circuit1 | Valid Signal | - |
| Driver 2 working state                                | Valid Signal 🔹   | Lock Status of Door  | Vala orginal          |            | Service Brake Air Pressure Circuit2 | Valid Signal | - |
| Dverspeed   | Valid Signal 🔹   | Open Status of Door  | r dia orginal         |            | Alternator Status 1                 | Valid Signal | - |
| Driver 1 card   | Valid Signal 👻   | Enable Status of Do  | Vala Jigha            | -          | Alternator Status 2                 | Valid Signal | • |
| Driver 1 time rel. state                              | Valid Signal 👻   | Lock Status of Door  | Valu Signal           | -          | Alternator Status 3                 | Valid Signal |   |
| Driver 2 card   | Valid Signal 💌   | Dinen Status of Door | - Valid Sightar       | -          | Alternator Status 4                 | Valid Signal | • |
| Driver 2 time rel. state                              | Valid Signal     | Enable Status of Do  | Valu Signal           | <b>•</b>   | Selected Gear                       | Valid Signal |   |
| Direction indicator                                   | Valid Signal 👻   | Lock Status of Door  | vala orginal          |            | Current Gear                        | Valid Signal | - |
| achograph performance                                 | Valid Signal     |                      | Vala orginar          | <u> </u>   | Below Pressure Front Axle Left      | Valid Signal | - |
| Handling information                                  | Valid Signal     | Open Status of Door  | · Vaid Signal         | <u> </u>   | Below Pressure Front Axle Right     |              | - |
| System event  |                  | Enable Status of Do  | Valu Signal           | •          | Below Pressure Rear Axle Left       | Valid Signal | • |
| Tachograph vehicle speed                              |                  | Lock Status of Door  | Valid Signal          | -          | Below Pressure Rear Axle Right      | Valid Signal | - |
| Engine coolant temperature                            |                  | Open Status of Door  | Value orginal         | •          | Driver 1 identification             | Valid Signal | - |
| Ambient Air Temperatur                                |                  | Enable Status of Do  | or 10 Valid Signal    | -          | Driver 1 identification             | Valid Signal | - |
| Ambient Air Temperatur<br>Status 2 of Doors           | Valid Signal     | Seconds              | Valid Signal          | •          |                                     | Valid Signal | • |
| Status 2 of Doors<br>Ramp / Wheel Chair Lift Position | Valid Signal 💌   | Minutes              | Valid Signal          | -          | Fuel Rate                           | Valid Signal | - |
| Positions of doors                                    | Valid Signal 👻   | Hours                | Valid Signal          | -          | Instantaneous Fuel Economy          | Valid Signal | • |
| Positions of dools                                    | Valid Signal 💌 , | Month                | Valid Signal          |            | Tell Tale Status                    | Valid Signal | + |

## 3.2.2.2 Options

By pressing the button you can change additional configurations for the generation of the Bus-FMS-Standard data packages.

| 🖌 LogiCom -          | Manipulation - Options  |  |  |
|----------------------|---|--|--|
| □CAN frame opt       | tions   |  |  |
|                      |   |  |  |
| Source addre         | ess (Hex) x00   |  |  |
| Priority             | 6   |  |  |
|                      | J.  |  |  |
| _<br>□ Delivered CAN | l frames  |  |  |
| ×xFEF1               | Cruise Control/Vehicle Speed                                      |  |  |
|                      | Electronic Engine Controller #2                                   |  |  |
| ✓ xxFEE9             | Fuel Consumption  |  |  |
|                      | Dash Display  |  |  |
|                      | Electronic Engine Controller #1                                   |  |  |
|                      | Engine Hours, Revolutions   |  |  |
|                      | Vehicle Identification  |  |  |
|                      | FMS-Standard Interface  |  |  |
|                      | High Resolution Vehicle Distance                                  |  |  |
|                      | Tachograph  |  |  |
|                      | Engine Temperature  |  |  |
|                      | Ambient Conditions  |  |  |
|                      | Door Control 1  |  |  |
|                      | Door Control 2  |  |  |
|                      | Time/Date   |  |  |
|                      | Air Supply Pressure<br>Alternator Speed                           |  |  |
|                      | Electronic Transmission Controller 2                              |  |  |
|                      |   |  |  |
|                      | xxFE58 Air Suspension Control 4<br>xxFE6B Driver's Identification |  |  |
|                      | Fuel Economy  |  |  |
|                      | Tell Tale Status  |  |  |
| Jes miles / 2        |   |  |  |
|                      | Apply OK Cancel   |  |  |

You can define data fields in the data packages and switch off individual data packages.



### 3.2.3 Group "Destination of Bus-FMS-Standard"

In the third group of the main window *Destination of Bus-FMS-Standard* the destination will be chosen. You have the choice between *Data Monitor*, *CAN-Adapter* and/or *Logfile*.

| Destination of FMS-Standard |         |  |  |  |
|-----------------------------|---------|--|--|--|
| 🔽 Data Monitor              | Monitor |  |  |  |
| CAN-Adapter                 | Config  |  |  |  |
| Logfile                     | Save    |  |  |  |

### 3.2.3.1 Data Monitor

If you choose *Data Monitor* for the destination of the Bus-FMS-Standard data packages, you can start the data monitor by pressing the button <u>Monitor</u>.

|   |   | × | 🚺 LogiCom - Data Monitor  | ×  | 11 LogiCom - Data Monitor   | ×   |
|---|---|---|---|--|---|---|
| Actual Data   |   |   | Actual Data   |  | Actual Data   |   |
| Parking Brake Switch  | b   | - | Driver 1 working state  | 0  | Positions of doors  | 2   |
| Wheel based speed   | 21.901  |   | Driver 2 working state  | 0  | Lock Status of Door 1   | 0   |
| Clutch switch   | 0   |   | Overspeed   | 0  | Open Status of Door 1   | 0   |
| Brake switch  | 0   |   | Driver 1 card   | 0  | Enable Status of Door 1   | 0   |
| Cruise control active   |   |   | Driver 1 time rel. state  | 0  | Lock Status of Door 2   | 0   |
| Accelerator pedal position  | 0   |   | Driver 2 card   | 0  | Open Status of Door 2   | 0   |
| Total fuel used   | 17.0  |   | Driver 2 time rel. state  | 0  | Enable Status of Door 2   | 0   |
| Fuel level  | 0.3   |   | Direction indicator   | 0  | Lock Status of Door 3   | 0   |
| Engine speed  | 99.7  |   | Tachograph performance  | 0  | Open Status of Door 3   | 0   |
| Total engine hours  | 1277.623  |   | Handling information  | 0  | Enable Status of Door 3   | 0   |
| Vehicle identification number   | 0.02  |   | System event  | 0  | Lock Status of Door 4   | 0   |
| Requests supported  | Vehicle_ID_00001*   |   | Tachograph vehicle speed  | 20.73  | Open Status of Door 4   | 0   |
| Diagnostics supported   | 1   |   | Engine coolant temperature  | 21   | Enable Status of Door 4   | 0   |
| SW-version supported  | 1   |   | Ambient Air Temperatur  | 22.000   | Lock Status of Door 5   | 0   |
| High resolution total vhcl. distance  | 0101  |   | Status 2 of Doors   | 0  | Open Status of Door 5   | 0   |
| -   | 429   | _ | Ramp / Wheel Chair Lift Position  | 0  | Enable Status of Door 5   | 0   |
| Drive recognize   | 0   | - |   | <u> </u>   | Last Participante   | ·   |
|   | Hide  |   |   | Hide   |   | Hide  |
|   |   |   |   |  |   |   |
|   |   |   |   |  |   |   |
|   |   |   |   |  |   |   |
| 🚺 LogiCom - Data Monitor  |   | × | 12 LogiCom - Data Monitor   | ×  | 1 LogiCom - Data Monitor  | ×   |
| LogiCom - Data Monitor  |   | × | 11 LogiCom - Data Monitor   | ×  | 1 LogiCom - Data Monitor  | ×   |
| Actual Data   |   | × | Actual Data   |  | Actual Data   | 1000  |
| Actual Data<br>Lock Status of Door 6  | 0   |   | Actual Data<br>Minutes  | 20   | Actual Data<br>Service Brake Air Pressure Circuit2  | 1000  |
| Actual Data   | 0   |   | Actual Data<br>Minutes<br>Hours   | 20   | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1   | 1000 A  |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6   | 0   |   | Actual Data<br>Minutes<br>Hours<br>Month  | 20<br>12<br>12   | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2  | 1000<br>0<br>0  |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 6<br>Lock Status of Door 7   | 0   |   | Actual Data<br>Minutes<br>Hours<br>Month<br>Day   | 20<br>12<br>12<br>12<br>12 00  | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3   | 1000     ▲       0     0       0     0  |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 6  | 0<br>0<br>0<br>0  |   | Actual Data<br>Minutes<br>Hous<br>Month<br>Day<br>Year  | 20<br>12<br>12<br>12<br>12<br>2004   | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4  | 1000<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  |
| Actual Data<br>Lock: Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 6<br>Lock: Status of Door 7<br>Open Status of Door 7  | 0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hours<br>Month<br>Day   | 20<br>12<br>12<br>12 00<br>2004<br>1000  | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear   | 1000 ▲<br>1000 0<br>0 0<br>0 0<br>0 0<br>3 3  |
| Actual Data<br>Lock, Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 6<br>Lock, Status of Door 7<br>Open Status of Door 7<br>Enable Status of Door 7   | 0<br>0<br>0<br>0<br>0<br>0  |   | Actual Data<br>Mirules<br>Hours<br>Morth<br>Day<br>Year<br>Service Brake Air Pressure Circuit   | 20<br>12<br>12<br>12<br>12<br>2004<br>1000<br>1000   | Actual Data<br>Service Brake Ait Pressure Dicut2<br>Alternator Stetus 1<br>Alternator Stetus 2<br>Alternator Stetus 2<br>Alternator Stetus 4<br>Selected Gear<br>Curret Gear  | 1000  |
| Actual Data<br>Lock Statur of Door 6<br>Dpen Statur of Door 6<br>Enable Statur of Door 7<br>Lock Statur of Door 7<br>Open Statur of Door 7<br>Enable Statur of Door 7<br>Lock Statur of Door 8  | 0<br>0<br>0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hours<br>Morth<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit   | 20<br>12<br>12<br>1200<br>2004<br>1000<br>1000<br>0  | Actual Data<br>Service Brake Air Pressure Circut2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Selected Gear<br>Current Grav<br>Below Pressure Front Axle Left   | 1000<br>0<br>0<br>0<br>0<br>3<br>3<br>400.0<br>↓  |
| Actual Data<br>Lock Statur of Door 6<br>Open Statur of Door 6<br>Enable Statur of Door 7<br>Lock Statur of Door 7<br>Open Statur of Door 7<br>Enable Statur of Door 7<br>Lock Statur of Door 7<br>Open Statur of Door 8   | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hous<br>Month<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Alternator Status 1   | 20<br>12<br>12<br>2004<br>1000<br>1000<br>0<br>0<br>0  | Actual Data<br>Service Brake Air Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear<br>Currert Gear<br>Bedow Pressure Front Aide Left<br>Bedow Pressure Front Aide Left   | 1000<br>0<br>0<br>0<br>3<br>400.0<br>1000<br>0<br>10<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>1000<br>100 |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 7<br>Lock Status of Door 7<br>Deen Status of Door 7<br>Lock Status of Door 8<br>Open Status of Door 8<br>Enable Status of Door 8   | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  |   | Actual Data<br>Minutes<br>Hous<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Atternator Status 1<br>Alternator Status 2   | 20<br>12<br>12<br>12<br>1200<br>2004<br>1000<br>1000<br>1000<br>0<br>0<br>0<br>0<br>0<br>0   | Actual Data<br>Service Brake Ait Pressure Dircut2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2<br>Alternator Status 4<br>Selected Gave<br>Currer Gave<br>Betwo Pressure Front Ade Left<br>Betwo Pressure Front Ade Left<br>Betwo Pressure Front Ade Left  | 1000<br>0<br>0<br>0<br>0<br>3<br>400.0<br>400.0<br>400.0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enneke Status of Door 7<br>Doen Status of Door 7<br>Denes Status of Door 7<br>Enneke Status of Door 8<br>Doen Status of Door 8<br>Doen Status of Door 8<br>Enneke Status of Door 8<br>Enneke Status of Door 9  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  |   | Actual Data<br>Minutes<br>Hours<br>Morth<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Alternator Status 1<br>Alternator Status 1<br>Alternator Status 3  | 20<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12   | Actual data<br>Service Brake Ait Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear<br>Duriert Gear<br>Below Pressure Front Avie Left<br>Below Pressure Front Avie Left   | I'000     ▲       0     0       0     0       3     3       400.0     400.0       400.0     400.0   |
| Actual Data<br>Lock Statur of Door 6<br>Open Statur of Door 6<br>Enable Statur of Door 7<br>Lock Statur of Door 7<br>Open Statur of Door 7<br>Enable Statur of Door 7<br>Lock Statur of Door 8<br>Open Statur of Door 8<br>Enable Statur of Door 8<br>Lock Statur of Door 9<br>Open Statur of Door 9  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  |   | Actual Date<br>Minutes<br>Hours<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2   | 20     ▲       12     12       12.00     2004       2000     1000       0     0       0     0       0     0       3     4  | Actual Data<br>Service Brake Air Pressure Circut2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2<br>Alternator Status 4<br>Selected Gear<br>Currert Gear<br>Below Pressue Ficet Ade Right<br>Below Pressue Ficet Ade Right<br>Below Pressue Ficet Ade Right<br>Driver 1 identification  | 1000<br>0<br>0<br>0<br>3<br>3<br>400.0<br>400.0<br>400.0<br>10<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enddle Status of Door 7<br>Lock Status of Door 7<br>Enddle Status of Door 7<br>Lock Status of Door 8<br>Open Status of Door 8<br>Enddle Status of Door 8<br>Enddle Status of Door 9<br>Open Status of Door 9<br>Dopen Status of Door 9<br>Enddle Status of Door 9<br>Enddle Status of Door 9   | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hous<br>Month<br>Day<br>Year<br>Service Broke Air Pressure Circuit<br>Service Broke Air Pressure Circuit<br>Attennator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear   | 20     ▲       12     1       12     1       1200     1       2004     1       1000     1       1000     1       1000     1       1000     1       1000     1       1000     1       1000     1       1000     1       1000     1       11000     1       12000     1       13     1 | Actual Data<br>Service Brake Air Pressure Dircut2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2<br>Alternator Status 4<br>Selected Gew<br>Currer Gew<br>Below Pressure Front Ade Left<br>Below Pressure Front Ade Left<br>Below Pressure Front Ade Hight<br>Below Pressure Front Ade Hight<br>Delow Pressure Front Ade Hight<br>Delow Pressure Front Ade Hight<br>Divert 1 Identification  | 1000<br>0<br>0<br>0<br>3<br>3<br>400.0<br>400.0<br>400.0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1   |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Endeb Status of Door 7<br>Open Status of Door 7<br>Denes Status of Door 7<br>Endeb Status of Door 7<br>Lock Status of Door 8<br>Denes Status of Door 8<br>Endeb Status of Door 9<br>Open Status of Door 9<br>Open Status of Door 9<br>Denes Status of Door 9<br>Denes Status of Door 9<br>Denes Status of Door 9<br>Denes Status of Door 9<br>Endeb Status of Door 9<br>Endeb Status of Door 9<br>Endeb Status of Door 9 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hours<br>Morth<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Alternator Statu<br>Alternator Statu<br>Alternator Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu<br>Statu | 20<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12   | Actual Data<br>Service Brake Arl Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear<br>Duriert Gear<br>Below Pressure Front Avie Left<br>Below Pressure Front Avie Left | Troov     Image: mail of the second   |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 7<br>Deen Status of Door 7<br>Enable Status of Door 7<br>Lock Status of Door 7<br>Lock Status of Door 8<br>Open Status of Door 8<br>Enable Status of Door 8<br>Doer Status of Door 8<br>Deen Status of Door 9<br>Lock Status of Door 9<br>Enable Status of Door 9<br>Lock Status of Door 10<br>Open Status of Door 10  | 0       0 |   | Actual Data<br>Minutes<br>Hours<br>Month<br>Day<br>Year<br>Service Brake Air Pressure Encuit<br>Service Brake Air Pressure Encuit<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2<br>Alternator Status 4<br>Selected Great<br>Eurom Gear<br>Below Pressure Front Ade Left  | 20     ▲       12     1       12.00     2004       1000     1       1000     0       0     0       0     0       3     3       400.0     ↓   | Actual Data<br>Service Brake Air Pressure Circut2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 2<br>Alternator Status 4<br>Selected Gear<br>Currer Gear<br>Below Pressure Front Aide Left<br>Below Pressure Front Aide Left<br>Below Pressure Front Aide Left<br>Below Pressure Front Aide Right<br>Driver 1 identification<br>Driver 2 identification<br>Fruit Rate<br>Instantaneous Fuel Economy  | 1000     ▲       0     0       0     0       0     0       3     3       3     400.0       400.0     400.0       0     0       0     0       3     3       3     0       400.0     0       0     0       0     0       0     0       0     0       1000001*     0       0     0       0     0       0     0       10     0       3     109  |
| Actual Data<br>Lock Status of Door 6<br>Open Status of Door 6<br>Enable Status of Door 7<br>Open Status of Door 7<br>Copen Status of Door 7<br>Lock Status of Door 7<br>Doer Status of Door 8<br>Lock Status of Door 8<br>Lock Status of Door 9<br>Open Status of Door 9<br>Doen Status of Door 9<br>Enable Status of Door 9<br>Lock Status of Door 9<br>Enable Status of Door 10<br>Den Status of Door 10<br>Enable Status of Door 10  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |   | Actual Data<br>Minutes<br>Hous<br>Month<br>Day<br>Year<br>Service Brake Air Pressure Circuit<br>Service Brake Air Pressure Circuit<br>Aitemator Status 1<br>Aitemator Status 2<br>Aitemator Status 2<br>Aitemator Status 3<br>Atemator Status 4<br>Selected Gear<br>Current Gear<br>Below Pressure Front Asle Flight  | 20<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>12   | Actual Data<br>Service Brake Arl Pressure Circuit2<br>Alternator Status 1<br>Alternator Status 2<br>Alternator Status 3<br>Alternator Status 4<br>Selected Gear<br>Duriert Gear<br>Below Pressure Front Avie Left<br>Below Pressure Front Avie Left | Troov     Image: mail of the second   |

The data monitor visualises all contents of the Bus-FMS-Standard data packages.



## 3.2.3.2 CAN-Adapter

| iCom - CAN-A  | dapter - Config                    | × | Lo | giCom - CAN-A | dapter - Config      |
|---------------|------------------------------------|---|----|---------------|----------------------|
| AN            |                                    |   | Г  | CAN           |                      |
| CAN Driver    | Vector Informatik GmbH (VCANL 3.2) |   |    | CAN Driver    | IXXAT GmbH (VCI 2.0) |
| Card Type     | CANcardX 💌                         |   |    | Card Type     | USBtoCAN 💌           |
| Card Index    | 1                                  |   |    | Card Index    | 1                    |
| Card Channel  | 1                                  |   |    | Card Channel  | 1                    |
| 🔽 init access |                                    |   |    | 🔽 init access |                      |
| Baudrate      | 250000                             |   |    | Baudrate      | 500000               |
| sjw           | 2                                  |   |    | sjw           | 1                    |
| tseg1         | 8                                  |   |    | tseg1         | 8                    |
| tseg2         | 7                                  |   |    | tseg2         | 7                    |
| sam           | 1                                  |   |    | sam           | 1                    |
| presc         | 2                                  |   |    | presc         | 1                    |
|               |                                    |   |    |               |                      |
| ок            | Cancel                             |   |    | ок            | Cancel               |

If you choose *CAN-Adapter* for the destination, you can configure the installed CAN-Adapter cards by pressing the button **Config**.

More information about the configuration of the CAN-Adapter could be found in the product manuals of the manufacturer.

## 3.2.3.3 Logfile

If you choose *Logfile* for the destination, you can choose a Logfile for the save of the data by pressing the button \_\_\_\_\_\_.

| Datei speiche       | ern unter     |   | ? ×               |
|---------------------|---------------|---|-------------------|
| Spejchern           | 😋 LogFile 💽 🗲 | £ | 💣 🎟 •             |
| StdLog.as           | c             |   |                   |
|                     |               |   |                   |
|                     |               |   |                   |
|                     |               |   |                   |
|                     |               |   |                   |
| I                   |               | _ |                   |
| Datei <u>n</u> ame: | Example       |   | <u>S</u> peichern |
| Datei <u>t</u> yp:  | *.asc         | • | Abbrechen         |
|                     |               |   | ///               |



### 3.2.4 Main group

By pressing the buttons of the main group you can start/stop the generation and the output of the Bus-FMS-Standard data packages. You can also have a look into the program information or close the program.

| Start | Info | Close |
|-------|------|-------|
| Stop  | Info | Close |

With the buttons and and you can start/stop the generation and the output of the Bus-FMS-Standard data packages.

With the button you can look into the program information. By pressing the button you can close the program *BusFMSSim* (Bus-FMS-Standard-Simulation).



## 4 Appendix

## 4.1 User-Logfiles (ASC-File)

#### Structure and format

| Description               | Length | Position | Remark                             |
|---------------------------|--------|----------|------------------------------------|
| Timpstamp (Seconds)       | 8      | 1-8      | dezimal representation (123.4567)  |
| Space                     | 1      | 9        | 20h                                |
| CAN-Identifier (Extended) | 8      | 10-17    | hexadezimal representation (29Bit) |
| CAN-Databytes             | 16     | 18-33    | hexadezimal representation (64Bit) |
| CR                        | 1      | 34       | 13h                                |
| LF                        | 1      | 35       | 10h                                |

## Example

1 2 3 12345678901234567890123 4 5

| Timestamp (Seconds):       | 000.2685        |
|----------------------------|-----------------|
| CAN-Identifier (Extended): | 18F00300        |
| CAN-Databytes:             | FFFAFFFFFFFFFFF |



## 4.2 History of Changes

### 4.2.1 Version 1.10

- Integration and changing: Frame Door Control 1
- Integration and changing: Frame Door Control 2

### 4.2.2 Version 1.11

BugFix
Requests Supported and Diagnostics Supported

#### 4.2.3 Version 2.00

- Integration: Frame Driver's Identification
- Integration: Frame Fuel Economy
- Integration: Frame Tell Tale Status
- Correction: Bit position of Door Control 2

### 4.2.4 Version 2.10

• Integration IXXAT Driver VCI 3 for Windows 7 user

### 4.2.5 Version 2.11

• Extension of Driver ID 19 Byte