Enocean

1.0

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7.37	/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Response.java File Reference	160
7.38	Response.java	160
7.39	/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/SmartAck← Command.java File Reference	161
7.40	SmartAckCommand.java	161
7.41	/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Telegram ← Header.java File Reference	162
7.42	TelegramHeader.java	162
7.43	/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocea	
7.44	Sender.java	164
7.45	/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocea	
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Chapter 1

Namespace Index

1.1 Packages

Here are the packages with brief descriptions (if available):

ch				 						 			 	ç
ch.bfh				 						 			 	ć
ch.bfh.gr33nopo55um				 						 			 	ć
ch.bfh.gr33nopo55um.enocean				 						 			 	ć
ch.bfh.gr33nopo55um.enocean.application	1			 						 			 	10
ch.bfh.gr33nopo55um.enocean.helper				 						 			 	10
ch.bfh.gr33nopo55um.enocean.persistence	е			 						 			 	10
ch.bfh.gr33nopo55um.enocean.telegram				 						 			 	10
ch.bfh.gr33nopo55um.enocean.test				 						 			 	10

2 Namespace Index

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

All 1
An
Application
Checksum
Class
Class
CRC
DB
diagnosis
EncodeDecode
TelegramHeader
CommonCommand
Dummy
Event
Radio802
RadioERP1
RadioERP2
RadioMessage
RadioSubTel
RemoteManCommand
Response
SmartAckCommand
EnoceaListener
ERP1 3
ERP2 3
Logic
Main
Physical
Radio
ReadConfig
remote
SeedDB
Sender
Serveral
SMART ACK COMMAND

Hierarchical Index

Store									 			 						 		113
TelegramDBFactory																				
Tester			 						 			 						 		131
This			 						 			 						 		132
Time			 						 			 						 		133
TimeLogger			 						 			 						 		133
Used			 						 			 						 		138
When																				

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

AII	
An	. 12
Application	. 12
Checksum	. 13
Class	. 14
Class	. 14
CommonCommand	. 15
CRC	
DB	. 22
diagnosis	-
Dummy	
EncodeDecode	-
EnoceaListener	. 32
ERP1	. 33
ERP2	
Event	. 35
Logic	
Main	. 41
Physical	. 42
Radio	. 42
Radio802	
RadioERP1	. 53
RadioERP2	
RadioMessage	. 70
RadioSubTel	. 77
ReadConfig	. 87
remote	
RemoteManCommand	
Response	. 97
SeedDB	. 102
Sender	. 105
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SMART_ACK_COMMAND	
SmartAckCommand	. 107
Store	. 113

6 Class Index

TelegramDBFactor	ry													 							 -	115
TelegramHeader														 							-	117
Tester														 							 -	131
This														 							-	132
Time														 								133
TimeLogger																						
Used														 							 -	138
When																						

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/ Application.java	139
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/ EnoceaListener.java	139
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/ CRC.java	140
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/ ReadConfig.java	142
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/ TimeLogger.java	142
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ SeedDB.java	143
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ Store.java	144
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ TelegramDB ↔	
Factory.java	145
$/home/silas/Idea Projects/EnO cean/src/ch/bfh/gr33nopo55um/enocean/telegram/\textbf{CommonCommand.} \leftarrow \\$	
java	146
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ Dummy.java	147
/home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/EncodeDecode.java .	148
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ Event.java	149
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ Radio802.java	150
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioERP1.java	152
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioERP2.java	153
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioMessage.java	155
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioSubTel.java	156
$/home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/\textbf{RemoteManCommand.} \leftarrow 1.000 cean/src/ch/bfh/gr33nopo55um/enocean/telegram/\textbf{RemoteManCommand.} \leftarrow 1.000 cean/src/ch/bfh/gr33nopo55um/enocean/telegram/src/ch/bfh/gr33nopo50um/enocean/telegram/src/ch/bfh/gr33nopo50um/enocean/telegram/src/ch/bfh/gr33nopo50um/enocean/telegram/src/ch/bfh/gr30um/enocean/telegram/src/ch/bfh/gr30um/enocean/telegram/src/ch/bfh/gr30um/enocean/telegram/src/ch/bfh/gr30um/eno$	د
java	158
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ Response.java	160
$/home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/{\bf SmartAckCommand.} \leftarrow$	
java	161
$/home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ \textbf{TelegramHeader.java} \ .$	162
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo500000000000000000000000000000000000	/test/ Sender. ←
java	164
/home/silas/Idea Projects/EnO cean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/	/test/ Tester. ←
java	165

8 File Index

Chapter 5

Namespace Documentation

5.1 Package ch

Packages

• package **bfh**

5.2 Package ch.bfh

Packages

• package gr33nopo55um

5.3 Package ch.bfh.gr33nopo55um

Packages

• package enocean

5.4 Package ch.bfh.gr33nopo55um.enocean

Packages

- package application
- package helper
- package persistence
- package telegram
- package test

5.5 Package ch.bfh.gr33nopo55um.enocean.application

Classes

- · class Application
- · class EnoceaListener

5.6 Package ch.bfh.gr33nopo55um.enocean.helper

Classes

- · class CRC
- · class ReadConfig
- · class TimeLogger

5.7 Package ch.bfh.gr33nopo55um.enocean.persistence

Classes

- · class SeedDB
- · class Store
- class TelegramDBFactory

5.8 Package ch.bfh.gr33nopo55um.enocean.telegram

Classes

- class CommonCommand
- class **Dummy**
- interface EncodeDecode
- · class Event
- · class Radio802
- class RadioERP1
- class RadioERP2
- class RadioMessage
- class RadioSubTel
- · class RemoteManCommand
- class Response
- · class SmartAckCommand
- · class TelegramHeader

5.9 Package ch.bfh.gr33nopo55um.enocean.test

Classes

- · class Sender
- · class Tester

Chapter 6

Class Documentation

6.1 All

Collaboration diagram for All:



6.1.1 Detailed Description

Author

silas & louis cannot parsed into other tables.

The documentation for this class was generated from the following file:

 $\bullet \ / home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/\textbf{Dummy.java}$

12 Class Documentation

6.2 An

Collaboration diagram for An:



6.2.1 Detailed Description

Author

silas & louis primarily a confirmation for processes and procedures, incl. specific data content. For further informations check EnoceanSerialProtocol v3

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Event.java

6.3 Application

Collaboration diagram for Application:



Static Public Member Functions

• static void main (String args[]) throws Exception

6.4 Checksum 13

6.3.1 Detailed Description

Definition at line 7 of file Application.java.

6.3.2 Member Function Documentation

```
6.3.2.1 main()
```

Definition at line 9 of file Application.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/Application.java

6.4 Checksum

Collaboration diagram for Checksum:



6.4.1 Detailed Description

Author

silas

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/CRC.java

14 Class Documentation

6.5 Class

Collaboration diagram for Class:



6.5.1 Detailed Description

Author

silas the config file

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/**ReadConfig.java**

6.6 Class

Collaboration diagram for Class:



6.6.1 Detailed Description

Author

silas the config file

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/ReadConfig.java

6.7 CommonCommand 15

6.7 CommonCommand

Inheritance diagram for CommonCommand:



16 Class Documentation

Collaboration diagram for CommonCommand:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

6.7 CommonCommand 17

decodeTelegramData splits telegram data in parts

- int getCcCode ()
- int getCcData ()
- void decodeTelegramHeader (String hexTelegram)
- void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

• String toString ()

Private Member Functions

- void setCcCode (int ccCode)
- void setCcData (int ccData)

Private Attributes

- Long id
- int ccCode
- int ccData

Additional Inherited Members

6.7.1 Detailed Description

Definition at line 14 of file CommonCommand.java.

6.7.2 Member Function Documentation

6.7.2.1 decodeTelegramData()

decodeTelegramData splits telegram data in parts

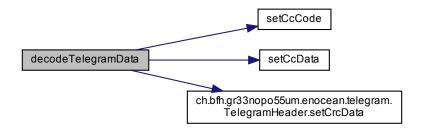
Parameters

Implements EncodeDecode (p. ??).

Definition at line 40 of file CommonCommand.java.

18 Class Documentation

Here is the call graph for this function:



6.7.2.2 decodeTelegramHeader()

```
void decodeTelegramHeader ( {\tt String}\ \textit{hexTelegram}\ )
```

decodeHeaderTelegram splits telegram in parts

Parameters

hexTelegram	EnOcean Telegram
-------------	------------------

Implements **EncodeDecode** (p. ??).

Definition at line 71 of file CommonCommand.java.

6.7.2.3 dumpData()

```
void dumpData ( )
```

dumpData Print Data, useful for logs and testing EnOcean Telegram

Implements **EncodeDecode** (p. ??).

Definition at line 79 of file CommonCommand.java.

Here is the call graph for this function:



6.7 CommonCommand 19

6.7.2.4 encodeTelegram()

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

String hexTelegram EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 26 of file CommonCommand.java.

6.7.2.5 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 35 of file CommonCommand.java.

6.7.2.6 getCcCode()

```
int getCcCode ( )
```

Definition at line 49 of file CommonCommand.java.

6.7.2.7 getCcData()

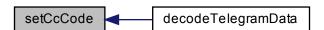
```
int getCcData ( )
```

Definition at line 57 of file CommonCommand.java.

6.7.2.8 setCcCode()

Definition at line 53 of file CommonCommand.java.

Here is the caller graph for this function:



6.7.2.9 setCcData()

Definition at line 61 of file CommonCommand.java.

Here is the caller graph for this function:



6.7.2.10 toString()

```
String toString ( )
```

Definition at line **86** of file **CommonCommand.java**.

Here is the caller graph for this function:



6.7.3 Member Data Documentation

6.7.3.1 ccCode

```
int ccCode [private]
```

Definition at line 22 of file CommonCommand.java.

6.7.3.2 ccData

```
int ccData [private]
```

Definition at line 23 of file CommonCommand.java.

6.8 CRC 21

6.7.3.3 id

```
Long id [private]
```

Definition at line 19 of file CommonCommand.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/CommonCommand.java

6.8 CRC

Collaboration diagram for CRC:



Static Public Member Functions

• static byte calc (byte[] data)

Static Private Attributes

- static byte [] crc8Table
- 6.8.1 Detailed Description

Definition at line 8 of file CRC.java.

6.8.2 Member Function Documentation

```
6.8.2.1 calc()
```

```
static byte calc (

byte [] data ) [static]
```

Definition at line 44 of file CRC.java.

6.8.3 Member Data Documentation

6.8.3.1 crc8Table

```
byte [] crc8Table [static], [private]
```

Definition at line 10 of file CRC.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/CRC.java

6.9 DB

Collaboration diagram for DB:



6.9.1 Detailed Description

inital gnerating

Author

silas

The documentation for this class was generated from the following file:

 $\bullet \ / home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/\textbf{SeedDB.java}$

6.10 diagnosis

6.10	diagnosis
6.10	diagnosis

Collaboration diagram for diagnosis:

diagnosis

6.10.1 Detailed Description

Author

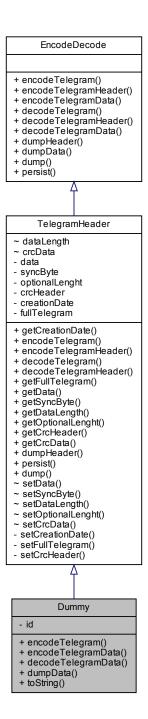
silas & louis . The packet design corresponds to the type RADIO_ERP1. The content of the OPTIONAL_DATA is altered slightly, for further informations check EnoceanSerialProtocol v3

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioSubTel.java

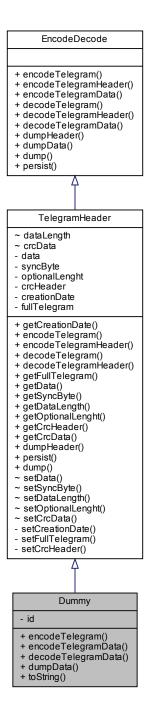
6.11 Dummy

Inheritance diagram for Dummy:



6.11 Dummy 25

Collaboration diagram for Dummy:



Public Member Functions

- String encodeTelegram ()
 - encode Telegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
- void decodeTelegramData (String hexTelegram)
- void dumpData ()

usally a dummy package does not have any data

• String toString ()

Private Attributes

• Long id

Additional Inherited Members

6.11.1 Detailed Description

Definition at line 13 of file Dummy.java.

6.11.2 Member Function Documentation

6.11.2.1 decodeTelegramData()

Parameters

hexTelegram	EnOcean Telegram
-------------	------------------

Implements **EncodeDecode** (p. ??).

Definition at line 40 of file Dummy.java.

```
6.11.2.2 dumpData()
```

```
void dumpData ( )
```

usally a dummy package does not have any data

Implements EncodeDecode (p. ??).

Definition at line 48 of file Dummy.java.

6.11.2.3 encodeTelegram()

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

String hexTelegram EnOcean Telegram

Implements **EncodeDecode** (p. ??).

Definition at line ${\bf 21}$ of file ${\bf Dummy.java}$.

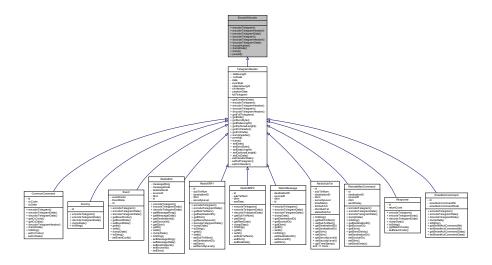
6.11 Dummy 27

6.11.2.4 encodeTelegramData() String encodeTelegramData () encodeTelegramData provides an example data hex for this packet type. Returns String hexTelegramData EnOcean Telegram Implements EncodeDecode (p. ??). Definition at line 31 of file Dummy.java. 6.11.2.5 toString() String toString () Returns PacketType=**Dummy** (p. **??**) Definition at line 56 of file Dummy.java. 6.11.3 Member Data Documentation 6.11.3.1 id Long id [private] Definition at line 17 of file Dummy.java. The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/**Dummy.java**

6.12 EncodeDecode

Inheritance diagram for EncodeDecode:



Collaboration diagram for EncodeDecode:

EncodeDecode + encodeTelegram() + encodeTelegramHeader() + encodeTelegramData() + decodeTelegramHeader() + decodeTelegramHeader() + decodeTelegramData() + dumpHeader() + dumpData() + dump() + persist()

Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramHeader ()
 - encodeTelegramHeader provides an example header hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.

6.12 EncodeDecode 29

void decodeTelegram (String hexTelegram)

decodeTelegram splits telegram in parts

void decodeTelegramHeader (String hexTelegram)

decodeHeaderTelegram splits telegram header in parts

void decodeTelegramData (String hexTelegram)

decodeTelegramData splits telegram data in parts

· void dumpHeader ()

dumpHeader Print Header, useful for logs and testing

· void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

· void dump ()

run both, the dumpHeader and the dumpData

• void persist ()

persist saves object to database

6.12.1 Detailed Description

Definition at line 7 of file EncodeDecode.java.

6.12.2 Member Function Documentation

6.12.2.1 decodeTelegram()

decodeTelegram splits telegram in parts

Parameters

hexTelegram	EnOcean Telegram
nex relegiani	Enocean relegiani

Implemented in **TelegramHeader** (p. ??).

6.12.2.2 decodeTelegramData()

decodeTelegramData splits telegram data in parts

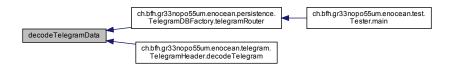
Parameters

hexTelegram	EnOcean Telegram

Implemented in RadioSubTeI (p. ??), RadioERP1 (p. ??), RadioERP2 (p. ??), Radio802 (p. ??), Response

(p. ??), RadioMessage (p. ??), RemoteManCommand (p. ??), Event (p. ??), SmartAckCommand (p. ??), CommonCommand (p. ??), and Dummy (p. ??).

Here is the caller graph for this function:



6.12.2.3 decodeTelegramHeader()

decodeHeaderTelegram splits telegram header in parts

Parameters

hexTelegram	EnOcean Telegram
-------------	------------------

Implemented in CommonCommand (p. ??), and TelegramHeader (p. ??).

6.12.2.4 dump()

```
void dump ( )
```

run both, the dumpHeader and the dumpData

Implemented in TelegramHeader (p. ??).

6.12.2.5 dumpData()

```
void dumpData ( )
```

dumpData Print Data, useful for logs and testing EnOcean Telegram

Implemented in RadioSubTeI (p. ??), Radio802 (p. ??), RadioERP1 (p. ??), RadioERP2 (p. ??), Event (p. ??), CommonCommand (p. ??), RemoteManCommand (p. ??), RadioMessage (p. ??), Response (p. ??), Smart \leftarrow AckCommand (p. ??), and Dummy (p. ??).

6.12 EncodeDecode 31

Here is the caller graph for this function:



6.12.2.6 dumpHeader()

```
void dumpHeader ( )
```

dumpHeader Print Header, useful for logs and testing

Implemented in **TelegramHeader** (p. ??).

6.12.2.7 encodeTelegram()

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

String hexTelegram EnOcean Telegram

Implemented in RadioSubTel (p. ??), TelegramHeader (p. ??), RadioERP2 (p. ??), Radio802 (p. ??), RadioE← RP1 (p. ??), RemoteManCommand (p. ??), Response (p. ??), RadioMessage (p. ??), Event (p. ??), Smart← AckCommand (p. ??), CommonCommand (p. ??), and Dummy (p. ??).

6.12.2.8 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implemented in RadioSubTel (p. ??), RadioERP2 (p. ??), Radio802 (p. ??), RadioERP1 (p. ??), Response (p. ??), RadioMessage (p. ??), RemoteManCommand (p. ??), Event (p. ??), SmartAckCommand (p. ??), CommonCommand (p. ??), and Dummy (p. ??).

Here is the caller graph for this function:



6.12.2.9 encodeTelegramHeader()

```
String encodeTelegramHeader ( )
```

encodeTelegramHeader provides an example header hex for this packet type.

Returns

String hexTelegramHeader EnOcean Telegram

Implemented in **TelegramHeader** (p. ??).

```
6.12.2.10 persist()
```

```
void persist ( )
```

persist saves object to database

Implemented in **TelegramHeader** (p. ??).

The documentation for this interface was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/EncodeDecode.java

6.13 EnoceaListener

Collaboration diagram for EnoceaListener:

EnoceaListenerlogger+ logger()

Public Member Functions

• void **logger** ()

Logger for Serial port.

Static Private Attributes

• static Logger logger = LogManager.getLogger()

6.14 ERP1 33

6.13.1 Detailed Description

Definition at line 16 of file EnoceaListener.java.

6.13.2 Member Function Documentation

6.13.2.1 logger()

```
void logger ( )
```

Logger for Serial port.

Definition at line 24 of file EnoceaListener.java.

Here is the call graph for this function:



6.13.3 Member Data Documentation

6.13.3.1 logger

```
Logger logger = LogManager.getLogger() [static], [private]
```

Definition at line 18 of file EnoceaListener.java.

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/EnoceaListener.java

6.14 ERP1

Collaboration diagram for ERP1:



6.14.1 Detailed Description

Author

silas , for further informations check EnoceanSerialProtocol v3. **This** (p. **??**) is usually the default telegram type.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioERP1.java

6.15 ERP2

Collaboration diagram for ERP2:



6.15.1 Detailed Description

telegram, for further informations check EnoceanSerialProtocol v3

Author

silas & louis

The documentation for this class was generated from the following file:

 $\bullet \ / home/silas/Idea Projects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/\textbf{RadioERP2.java} \\$

6.16 Event 35

6.16 Event

Inheritance diagram for Event:



Collaboration diagram for Event:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

6.16 Event 37

decodeTelegramData splits telegram in parts

- int getEventCode ()
- int getEventData ()
- void setEventData (int eventData)
- Long getId ()
- void setId (Long id)
- void dumpData ()

dumpData Print Data, useful for logs and testing

• String toString ()

Private Member Functions

void setEventCode (int eventCode)

Private Attributes

- int eventCode
- int EventData
- Long id

Additional Inherited Members

6.16.1 Detailed Description

Definition at line 13 of file Event.java.

6.16.2 Member Function Documentation

6.16.2.1 decodeTelegramData()

```
void decodeTelegramData ( String \ \textit{hexTelegram} \ )
```

decodeTelegramData splits telegram in parts

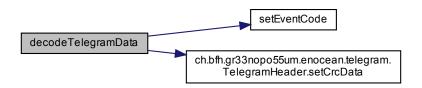
Parameters

hexTelegram in hex String

Implements EncodeDecode (p. ??).

Definition at line 46 of file Event.java.

Here is the call graph for this function:



6.16.2.2 dumpData()

```
void dumpData ( )
```

dumpData Print Data, useful for logs and testing

Implements **EncodeDecode** (p. ??).

Definition at line 83 of file Event.java.

Here is the call graph for this function:



6.16.2.3 encodeTelegram()

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements EncodeDecode (p. ??).

Definition at line 28 of file Event.java.

6.16 Event 39

6.16.2.4 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements **EncodeDecode** (p. ??).

Definition at line 37 of file Event.java.

6.16.2.5 getEventCode()

```
int getEventCode ( )
```

Definition at line 55 of file Event.java.

6.16.2.6 getEventData()

```
int getEventData ( )
```

Definition at line 63 of file Event.java.

6.16.2.7 getId()

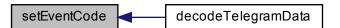
```
Long getId ( )
```

Definition at line 71 of file Event.java.

6.16.2.8 setEventCode()

Definition at line 59 of file Event.java.

Here is the caller graph for this function:



6.16.2.9 setEventData()

Definition at line 67 of file Event.java.

6.16.2.10 setId()

```
void setId ( \label{eq:long_id} \mbox{Long } id \mbox{ } )
```

Definition at line 75 of file Event.java.

6.16.2.11 toString()

```
String toString ( )
```

Definition at line 89 of file Event.java.

Here is the caller graph for this function:



6.16.3 Member Data Documentation

6.16.3.1 eventCode

```
int eventCode [private]
```

Definition at line 15 of file Event.java.

6.16.3.2 EventData

```
int EventData [private]
```

Definition at line 16 of file Event.java.

6.17 Logic 41

6.16.3.3 id

Long id [private]

Definition at line 20 of file Event.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Event.java

6.17 Logic

Collaboration diagram for Logic:



6.17.1 Detailed Description

Author

silas which packettype should be persisted.

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/TelegramDBFactory.

 java

6.18 Main

Collaboration diagram for Main:



6.18.1 Detailed Description

Author

silas

The documentation for this class was generated from the following file:

· /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/Application.java

6.19 Physical

Collaboration diagram for Physical:



6.19.1 Detailed Description

Author

silas & Iouis , for further informations check EnoceanSerialProtocol v3

The documentation for this class was generated from the following file:

 $\bullet \ / home/silas/Idea Projects/EnOcean/src/ch/bfh/gr 33 no po 55 um/enocean/telegram/\textbf{Radio802.java}$

6.20 Radio

Collaboration diagram for Radio:



6.20 Radio 43	3
6.20.1 Detailed Description	_
data without any radio telegram contents, for further informations check EnoceanSerialProtocol v3	
Author	
silas & louis	
The documentation for this class was generated from the following file:	
 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioMessage.java 	

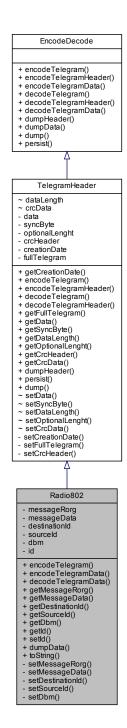
6.21 Radio802

Inheritance diagram for Radio802:



6.21 Radio802 45

Collaboration diagram for Radio802:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

decodeTelegramData splits telegram in parts

- int getMessageRorg ()
- int getMessageData ()
- int getDestinationId ()
- int getSourceId ()
- int getDbm ()
- Long getId ()
- void setId (Long id)
- · void dumpData ()

dumpData Print Data, useful for logs and testiing

• String toString ()

Private Member Functions

- void setMessageRorg (int messageRorg)
- void setMessageData (int messageData)
- void setDestinationId (int destinationId)
- void setSourceId (int sourceId)
- void setDbm (int dbm)

Private Attributes

- · int messageRorg
- int messageData
- int destinationId
- int sourceld
- int dbm
- Long id

Additional Inherited Members

6.21.1 Detailed Description

Definition at line 13 of file Radio802.java.

6.21.2 Member Function Documentation

6.21.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

Parameters

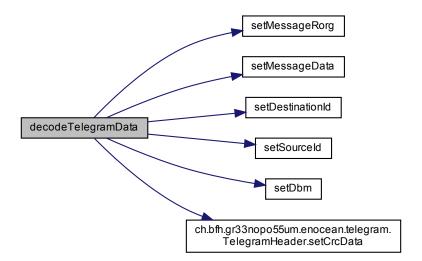
hexTelegram	in hex String

6.21 Radio802 47

Implements EncodeDecode (p. ??).

Definition at line 50 of file Radio802.java.

Here is the call graph for this function:



6.21.2.2 dumpData()

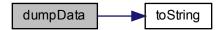
void dumpData ()

dumpData Print Data, useful for logs and testiing

Implements **EncodeDecode** (p. ??).

Definition at line 114 of file Radio802.java.

Here is the call graph for this function:



```
6.21.2.3 encodeTelegram()
String encodeTelegram ( )
encodeTelegram provides an example telegram hex for this packet type.
Returns
     telegram hex
Implements EncodeDecode (p. ??).
Definition at line 32 of file Radio802.java.
6.21.2.4 encodeTelegramData()
String encodeTelegramData ( )
encodeTelegramData provides an example data hex for this packet type.
Returns
     String hexTelegramData EnOcean Telegram
Implements EncodeDecode (p. ??).
Definition at line 41 of file Radio802.java.
6.21.2.5 getDbm()
int getDbm ( )
Definition at line 94 of file Radio802.java.
6.21.2.6 getDestinationId()
int getDestinationId ( )
Definition at line 78 of file Radio802.java.
6.21.2.7 getId()
Long getId ( )
```

Definition at line 102 of file Radio802.java.

6.21 Radio802 49

6.21.2.8 getMessageData()

```
int getMessageData ( )
```

Definition at line 70 of file Radio802.java.

6.21.2.9 getMessageRorg()

```
int getMessageRorg ( )
```

Definition at line 62 of file Radio802.java.

6.21.2.10 getSourceId()

```
int getSourceId ( )
```

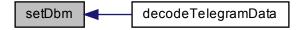
Definition at line 86 of file Radio802.java.

6.21.2.11 setDbm()

```
void setDbm ( \label{eq:condition} \text{int } dbm \text{ } ) \quad [\texttt{private}]
```

Definition at line 98 of file Radio802.java.

Here is the caller graph for this function:



6.21.2.12 setDestinationId()

```
void setDestinationId ( int \ \textit{destinationId} \ ) \quad [private]
```

Definition at line 82 of file Radio802.java.

Here is the caller graph for this function:



6.21.2.13 setId()

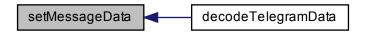
```
void setId ( {\tt Long} \ id \ )
```

Definition at line 106 of file Radio802.java.

6.21.2.14 setMessageData()

Definition at line 74 of file Radio802.java.

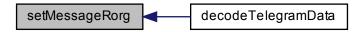
Here is the caller graph for this function:



6.21.2.15 setMessageRorg()

Definition at line 66 of file Radio802.java.

Here is the caller graph for this function:



6.21 Radio802 51

6.21.2.16 setSourceld()

Definition at line 90 of file Radio802.java.

Here is the caller graph for this function:



6.21.2.17 toString()

```
String toString ( )
```

Definition at line 124 of file Radio802.java.

Here is the caller graph for this function:



6.21.3 Member Data Documentation

6.21.3.1 dbm

```
int dbm [private]
```

Definition at line 21 of file Radio802.java.

6.21.3.2 destinationId

int destinationId [private]

Definition at line 18 of file Radio802.java.

52 **Class Documentation** 6.21.3.3 id Long id [private] Definition at line 24 of file Radio802.java. 6.21.3.4 messageData int messageData [private] Definition at line 16 of file Radio802.java. 6.21.3.5 messageRorg int messageRorg [private] Definition at line 15 of file Radio802.java. 6.21.3.6 sourceld int sourceId [private] Definition at line 20 of file Radio802.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Radio802.java

6.22 RadioERP1 53

6.22 RadioERP1

Inheritance diagram for RadioERP1:



Collaboration diagram for RadioERP1:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- int getSubTelNum ()

6.22 RadioERP1 55

- String getDestinationID ()
- int getDbm ()
- int getSecurityLevel ()
- void decodeTelegramData (String hexTelegram)

decodeTelegramData splits telegram in parts

• void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

- String toString ()
- Long getId ()
- void setId (Long id)

Private Member Functions

- void setSubTelNum (int subTelNum)
- void setDestinationID (String destinationID)
- void setDbm (int dbm)
- void setSecurityLevel (int securityLevel)

Private Attributes

- · Long id
- int subTelNum
- String destinationID
- int dbm
- int securityLevel

Additional Inherited Members

6.22.1 Detailed Description

Definition at line 14 of file RadioERP1.java.

6.22.2 Member Function Documentation

6.22.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

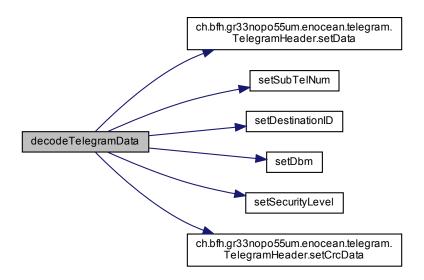
Parameters

hexTelegram	in hex String
nex relegram	III nex

Implements EncodeDecode (p. ??).

Definition at line 81 of file RadioERP1.java.

Here is the call graph for this function:



6.22.2.2 dumpData()

void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

Implements **EncodeDecode** (p. ??).

Definition at line 98 of file RadioERP1.java.



6.22 RadioERP1 57

```
6.22.2.3 encodeTelegram()
String encodeTelegram ( )
encodeTelegram provides an example telegram hex for this packet type.
Returns
     telegram hex
Implements EncodeDecode (p. ??).
Definition at line 31 of file RadioERP1.java.
6.22.2.4 encodeTelegramData()
String encodeTelegramData ( )
encodeTelegramData provides an example data hex for this packet type.
Returns
     String hexTelegramData EnOcean Telegram
Implements EncodeDecode (p. ??).
Definition at line 40 of file RadioERP1.java.
6.22.2.5 getDbm()
int getDbm ( )
Definition at line 60 of file RadioERP1.java.
6.22.2.6 getDestinationID()
String getDestinationID ( )
Definition at line 52 of file RadioERP1.java.
6.22.2.7 getId()
Long getId ( )
```

Definition at line 114 of file RadioERP1.java.

6.22.2.8 getSecurityLevel()

```
int getSecurityLevel ( )
```

Definition at line 68 of file RadioERP1.java.

6.22.2.9 getSubTelNum()

```
int getSubTelNum ( )
```

Definition at line 44 of file RadioERP1.java.

6.22.2.10 setDbm()

```
void setDbm (
          int dbm ) [private]
```

Definition at line 64 of file RadioERP1.java.

Here is the caller graph for this function:



6.22.2.11 setDestinationID()

Definition at line 56 of file RadioERP1.java.



6.22 RadioERP1 59

6.22.2.12 setId()

```
void setId ( Long\ id )
```

Definition at line 118 of file RadioERP1.java.

6.22.2.13 setSecurityLevel()

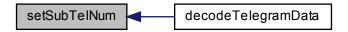
Definition at line 72 of file RadioERP1.java.

Here is the caller graph for this function:



6.22.2.14 setSubTelNum()

Definition at line 48 of file RadioERP1.java.



6.22.2.15 toString()

```
String toString ( )
```

Definition at line 105 of file RadioERP1.java.

Here is the caller graph for this function:



6.22.3 Member Data Documentation

6.22.3.1 dbm

```
int dbm [private]
```

Definition at line 22 of file RadioERP1.java.

6.22.3.2 destinationID

String destinationID [private]

Definition at line 21 of file RadioERP1.java.

6.22.3.3 id

Long id [private]

Definition at line 18 of file RadioERP1.java.

6.22.3.4 securityLevel

int securityLevel [private]

Definition at line 23 of file RadioERP1.java.

6.22 RadioERP1	61
6.22.3.5 subTelNum	
int subTelNum [private]	
Definition at line 20 of file RadioERP1.java .	
The documentation for this class was generated from the following file:	
 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioERP1.java 	

6.23 RadioERP2

Inheritance diagram for RadioERP2:



6.23 RadioERP2 63

Collaboration diagram for RadioERP2:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

decodeTelegramData splits telegram in parts

- int getSubTelNum ()
- int getDbm ()
- String getRawData ()
- void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

- String toString ()
- Long getId ()
- void setId (Long id)

Private Member Functions

- void setSubTelNum (int subTelNum)
- void setDbm (int dbm)
- void setRawData (String rawData)

Private Attributes

- Long id
- int subTelNum
- int dbm
- · String rawData

Additional Inherited Members

6.23.1 Detailed Description

Definition at line 14 of file RadioERP2.java.

6.23.2 Member Function Documentation

6.23.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

Parameters

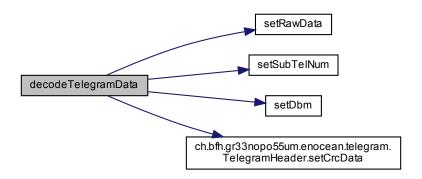
hexTelegram	in hex String

Implements EncodeDecode (p. ??).

Definition at line 53 of file RadioERP2.java.

6.23 RadioERP2 65

Here is the call graph for this function:



6.23.2.2 dumpData()

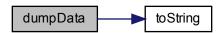
void dumpData ()

dumpData Print Data, useful for logs and testing EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 92 of file RadioERP2.java.

Here is the call graph for this function:



6.23.2.3 encodeTelegram()

String encodeTelegram ()

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements **EncodeDecode** (p. ??).

Definition at line 33 of file RadioERP2.java.

```
6.23.2.4 encodeTelegramData()
String encodeTelegramData ( )
encodeTelegramData provides an example data hex for this packet type.
Returns
     String hexTelegramData EnOcean Telegram
Implements EncodeDecode (p. ??).
Definition at line 43 of file RadioERP2.java.
6.23.2.5 getDbm()
int getDbm ( )
Definition at line 74 of file RadioERP2.java.
6.23.2.6 getId()
Long getId ( )
Definition at line 106 of file RadioERP2.java.
6.23.2.7 getRawData()
String getRawData ( )
Definition at line 82 of file RadioERP2.java.
6.23.2.8 getSubTelNum()
int getSubTelNum ( )
Returns
     subTelNum
```

Definition at line 66 of file RadioERP2.java.

6.23 RadioERP2 67

6.23.2.9 setDbm()

```
void setDbm (
          int dbm ) [private]
```

Definition at line 78 of file RadioERP2.java.

Here is the caller graph for this function:



6.23.2.10 setId()

```
void setId ( \label{eq:long_id} \mbox{Long } id \mbox{ } )
```

Definition at line 110 of file RadioERP2.java.

6.23.2.11 setRawData()

Definition at line 86 of file RadioERP2.java.

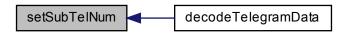


6.23.2.12 setSubTelNum()

```
void setSubTelNum ( int \ subTelNum \ ) \ \ [private]
```

Definition at line 70 of file RadioERP2.java.

Here is the caller graph for this function:



6.23.2.13 toString()

```
String toString ( )
```

Definition at line 99 of file RadioERP2.java.

Here is the caller graph for this function:



6.23.3 Member Data Documentation

6.23.3.1 dbm

```
int dbm [private]
```

Definition at line 23 of file RadioERP2.java.

6.23.3.2 id

Long id [private]

Definition at line 19 of file RadioERP2.java.

23.3.3 rawData	
tring rawData [private]	
Definition at line 24 of file RadioERP2.java .	
.23.3.4 subTelNum	
nt subTelNum [private]	
Definition at line 22 of file RadioERP2.java.	
he documentation for this class was generated from the following file:	
/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioERP2.java	

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6.23 RadioERP2

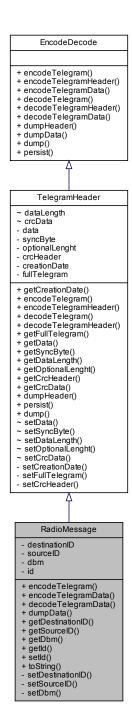
6.24 RadioMessage

Inheritance diagram for RadioMessage:



6.24 RadioMessage 71

Collaboration diagram for RadioMessage:



Public Member Functions

- String encodeTelegram ()
- String encodeTelegramData ()
- void decodeTelegramData (String hexTelegram)
- void dumpData ()
- String getDestinationID ()

- String getSourceID ()
- int getDbm ()
- Long getId ()
- void setId (Long id)
- String toString ()

Private Member Functions

- void setDestinationID (String destinationID)
- void setSourceID (String sourceID)
- void setDbm (int dbm)

Private Attributes

- String destinationID
- String sourceID
- int dbm
- Long id

Additional Inherited Members

6.24.1 Detailed Description

Definition at line 14 of file RadioMessage.java.

6.24.2 Member Function Documentation

6.24.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

Parameters

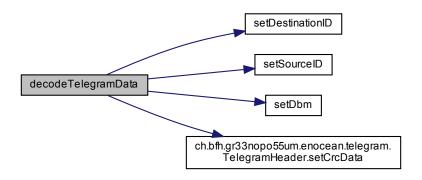
```
hexTelegram in hex String
```

Implements EncodeDecode (p. ??).

Definition at line 49 of file RadioMessage.java.

6.24 RadioMessage 73

Here is the call graph for this function:



6.24.2.2 dumpData()

void dumpData ()

dumpData Print Data, useful for logs and testiing

EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 63 of file RadioMessage.java.

Here is the call graph for this function:



6.24.2.3 encodeTelegram()

String encodeTelegram ()

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

 $Implements \ \textbf{EncodeDecode} \ \ (p.\ \textbf{??}).$

Definition at line 29 of file RadioMessage.java.

6.24.2.4 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 39 of file RadioMessage.java.

```
6.24.2.5 getDbm()
```

```
int getDbm ( )
```

Definition at line **84** of file **RadioMessage.java**.

6.24.2.6 getDestinationID()

```
String getDestinationID ( )
```

Definition at line 68 of file RadioMessage.java.

6.24.2.7 getId()

```
Long getId ( )
```

Definition at line 92 of file RadioMessage.java.

6.24.2.8 getSourceID()

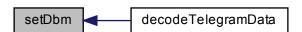
```
String getSourceID ( )
```

Definition at line 76 of file RadioMessage.java.

6.24.2.9 setDbm()

```
void setDbm (
          int dbm ) [private]
```

Definition at line 88 of file RadioMessage.java.



6.24 RadioMessage 75

6.24.2.10 setDestinationID()

Definition at line 72 of file RadioMessage.java.

Here is the caller graph for this function:



6.24.2.11 setId()

```
void setId ( {\tt Long} \ \textit{id} \ )
```

Definition at line 96 of file RadioMessage.java.

6.24.2.12 setSourceID()

Definition at line **80** of file **RadioMessage.java**.



6.24.2.13 toString()

```
String toString ( )
```

Definition at line 101 of file RadioMessage.java.

Here is the caller graph for this function:



6.24.3 Member Data Documentation

6.24.3.1 dbm

```
int dbm [private]
```

Definition at line 17 of file RadioMessage.java.

6.24.3.2 destinationID

```
String destinationID [private]
```

Definition at line 15 of file RadioMessage.java.

6.24.3.3 id

```
Long id [private]
```

Definition at line 21 of file RadioMessage.java.

6.24.3.4 sourceID

```
String sourceID [private]
```

Definition at line 16 of file RadioMessage.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioMessage.java

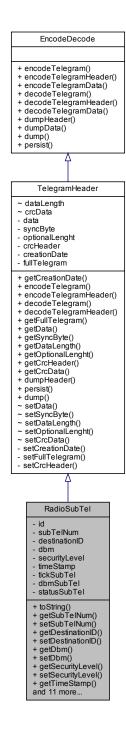
6.25 RadioSubTel 77

6.25 RadioSubTel

Inheritance diagram for RadioSubTel:



Collaboration diagram for RadioSubTel:



Public Member Functions

- String toString ()
- int getSubTelNum ()
- void setSubTelNum (int subTelNum)
- String getDestinationID ()
- void setDestinationID (String destinationID)

6.25 RadioSubTel 79

- int getDbm ()
- void setDbm (int dbm)
- int getSecurityLevel ()
- void setSecurityLevel (int securityLevel)
- String getTimeStamp ()
- void setTimeStamp (String timeStamp)
- String getTickSubTel ()
- void setTickSubTel (String tickSubTel)
- String **getDbmSubTel** ()
- void setDbmSubTel (String dbmSubTel)
- String getStatusSubTel ()
- void setStatusSubTel (String statusSubTel)
- String encodeTelegram ()

encodeTelegram provides an example telegram hex for this packet type.

• String encodeTelegramData ()

encodeTelegramData provides an example data hex for this packet type.

void decodeTelegramData (String hexTelegram)

decodeTelegramData splits telegram in parts

· void dumpData ()

dumpData Print Data, useful for logs and testiing

Private Attributes

- Long id
- int subTelNum
- String destinationID
- int dbm
- int securityLevel
- String timeStamp
- String tickSubTel
- String dbmSubTel
- String statusSubTel

Additional Inherited Members

6.25.1 Detailed Description

Definition at line 14 of file RadioSubTel.java.

6.25.2 Member Function Documentation

6.25.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

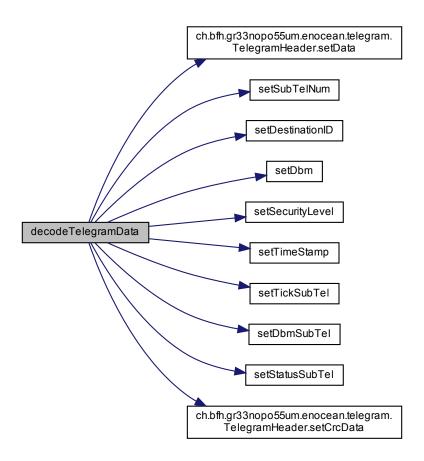
Parameters

hexTelegram

Implements EncodeDecode (p. ??).

Definition at line 131 of file RadioSubTel.java.

Here is the call graph for this function:



6.25.2.2 dumpData()

void dumpData ()

dumpData Print Data, useful for logs and testiing

Implements **EncodeDecode** (p. ??).

Definition at line 160 of file RadioSubTel.java.

6.25 RadioSubTel 81

Here is the call graph for this function:



```
6.25.2.3 encodeTelegram()
```

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements EncodeDecode (p. ??).

Definition at line 112 of file RadioSubTel.java.

```
6.25.2.4 encodeTelegramData()
```

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 121 of file RadioSubTel.java.

```
6.25.2.5 getDbm()
```

```
int getDbm ( )
```

Definition at line **59** of file **RadioSubTel.java**.

6.25.2.6 getDbmSubTel()

```
String getDbmSubTel ( )
```

Definition at line 91 of file RadioSubTel.java.

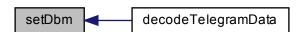
6.25.2.7 getDestinationID() String getDestinationID () Definition at line 51 of file RadioSubTel.java. 6.25.2.8 getSecurityLevel() int getSecurityLevel () Definition at line 67 of file RadioSubTel.java. 6.25.2.9 getStatusSubTel() String getStatusSubTel () Definition at line 99 of file RadioSubTel.java. 6.25.2.10 getSubTelNum() int getSubTelNum () Definition at line 43 of file RadioSubTel.java. 6.25.2.11 getTickSubTel() String getTickSubTel () Definition at line 83 of file RadioSubTel.java. 6.25.2.12 getTimeStamp() String getTimeStamp () Definition at line 75 of file RadioSubTel.java. 6.25.2.13 setDbm()

Definition at line 63 of file RadioSubTel.java.

Here is the caller graph for this function:

int dbm)

void setDbm (



6.25 RadioSubTel 83

6.25.2.14 setDbmSubTel()

Definition at line 95 of file RadioSubTel.java.

Here is the caller graph for this function:



6.25.2.15 setDestinationID()

Definition at line 55 of file RadioSubTel.java.

Here is the caller graph for this function:



6.25.2.16 setSecurityLevel()

Definition at line 71 of file RadioSubTel.java.



6.25.2.17 setStatusSubTel()

Definition at line 103 of file RadioSubTel.java.

Here is the caller graph for this function:

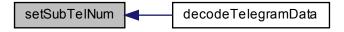


6.25.2.18 setSubTelNum()

```
void setSubTelNum ( int \ \mathit{subTelNum} \ )
```

Definition at line 47 of file RadioSubTel.java.

Here is the caller graph for this function:



6.25.2.19 setTickSubTel()

Definition at line 87 of file RadioSubTel.java.



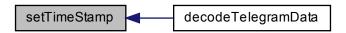
6.25 RadioSubTel 85

6.25.2.20 setTimeStamp()

```
\begin{tabular}{ll} \begin{tabular}{ll} void & setTimeStamp & ( \\ & String & timeStamp & ) \end{tabular}
```

Definition at line 79 of file RadioSubTel.java.

Here is the caller graph for this function:



6.25.2.21 toString()

```
String toString ( )
```

Definition at line 31 of file RadioSubTel.java.

Here is the caller graph for this function:



6.25.3 Member Data Documentation

6.25.3.1 dbm

```
int dbm [private]
```

Definition at line 23 of file RadioSubTel.java.

6.25.3.2 dbmSubTel

String dbmSubTel [private]

Definition at line 27 of file RadioSubTel.java.

6.25.3.3 destinationID String destinationID [private] Definition at line 22 of file RadioSubTel.java. 6.25.3.4 id Long id [private] Definition at line 20 of file RadioSubTel.java. 6.25.3.5 securityLevel int securityLevel [private] Definition at line 24 of file RadioSubTel.java. 6.25.3.6 statusSubTel String statusSubTel [private] Definition at line 28 of file RadioSubTel.java. 6.25.3.7 subTelNum int subTelNum [private] Definition at line 21 of file RadioSubTel.java. 6.25.3.8 tickSubTel

String tickSubTel [private]

Definition at line 26 of file RadioSubTel.java.

6.25.3.9 timeStamp

String timeStamp [private]

Definition at line 25 of file RadioSubTel.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/RadioSubTel.java

6.26 ReadConfig 87

6.26 ReadConfig

Collaboration diagram for ReadConfig:

ReadConfig
- inputStream
+ readPropertyValue()

Public Member Functions

• String readPropertyValue (String value) throws IOException

Private Attributes

· InputStream inputStream

6.26.1 Detailed Description

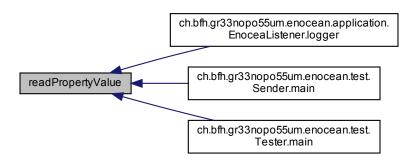
Definition at line 13 of file ReadConfig.java.

6.26.2 Member Function Documentation

6.26.2.1 readPropertyValue()

```
String readPropertyValue (
String value ) throws IOException
```

Definition at line 16 of file ReadConfig.java.



6.26.3 Member Data Documentation

6.26.3.1 inputStream

InputStream inputStream [private]

Definition at line 14 of file ReadConfig.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/ReadConfig.java

6.27 remote

Collaboration diagram for remote:



6.27.1 Detailed Description

Author

silas & louis structure. **This** (p. ??) structure is applied for the send as well as the receive case, for further informations check EnoceanSerialProtocol v3

The documentation for this class was generated from the following file:

6.28 RemoteManCommand

Inheritance diagram for RemoteManCommand:



Collaboration diagram for RemoteManCommand:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

6.28 RemoteManCommand 91

decodeTelegramData splits telegram in parts

• void dumpData ()

dumpData Print Data, useful for logs and testiing

- String toString ()
- String **getDestinationID** ()
- String getSourceID ()
- int getDbm ()
- int getSendDelay ()

Private Member Functions

- void setDestinationID (String destinationID)
- void setSourceID (String sourceID)
- void setDbm (int dbm)
- void setSendDelay (int sendDelay)

Private Attributes

- Long id
- String destinationID
- String sourceID
- int dbm
- int sendDelay

Additional Inherited Members

6.28.1 Detailed Description

Definition at line 13 of file RemoteManCommand.java.

6.28.2 Member Function Documentation

6.28.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

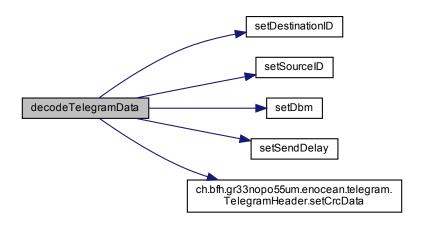
Parameters

hexTelegram	in hex String

Implements EncodeDecode (p. ??).

Definition at line 48 of file RemoteManCommand.java.

Here is the call graph for this function:



6.28.2.2 dumpData()

void dumpData ()

dumpData Print Data, useful for logs and testiing

Implements EncodeDecode (p. ??).

Definition at line 68 of file RemoteManCommand.java.

Here is the call graph for this function:



6.28.2.3 encodeTelegram()

String encodeTelegram ()

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements **EncodeDecode** (p. ??).

Definition at line ${f 30}$ of file ${f RemoteManCommand.java}$.

6.28 RemoteManCommand 93

6.28.2.4 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 39 of file RemoteManCommand.java.

6.28.2.5 getDbm()

```
int getDbm ( )
```

Definition at line 98 of file RemoteManCommand.java.

6.28.2.6 getDestinationID()

```
String getDestinationID ( )
```

Definition at line 82 of file RemoteManCommand.java.

6.28.2.7 getSendDelay()

```
int getSendDelay ( )
```

Definition at line 106 of file RemoteManCommand.java.

6.28.2.8 getSourceID()

```
String getSourceID ( )
```

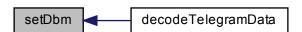
Definition at line 90 of file RemoteManCommand.java.

6.28.2.9 setDbm()

```
void setDbm (
          int dbm ) [private]
```

Definition at line 102 of file RemoteManCommand.java.

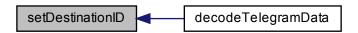
Here is the caller graph for this function:



6.28.2.10 setDestinationID()

Definition at line 86 of file RemoteManCommand.java.

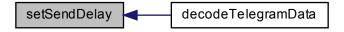
Here is the caller graph for this function:



6.28.2.11 setSendDelay()

Definition at line 110 of file RemoteManCommand.java.

Here is the caller graph for this function:



6.28.2.12 setSourceID()

Definition at line 94 of file RemoteManCommand.java.

Here is the caller graph for this function:



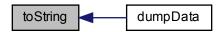
6.28 RemoteManCommand 95

6.28.2.13 toString()

```
String toString ( )
```

Definition at line 74 of file RemoteManCommand.java.

Here is the caller graph for this function:



6.28.3 Member Data Documentation

6.28.3.1 dbm

```
int dbm [private]
```

Definition at line 22 of file RemoteManCommand.java.

6.28.3.2 destinationID

String destinationID [private]

Definition at line 20 of file RemoteManCommand.java.

6.28.3.3 id

Long id [private]

Definition at line 18 of file RemoteManCommand.java.

6.28.3.4 sendDelay

int sendDelay [private]

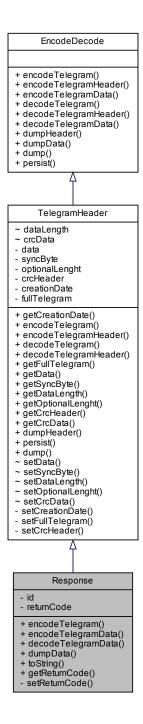
Definition at line 23 of file RemoteManCommand.java.

96	Class Documentation
6.28.3.5 sourceID	
String sourceID [private]	
Definition at line 21 of file RemoteManCommand.java.	
The documentation for this class was generated from the following file:	
 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Rer 	moteManCommand. <i>⇔</i>
java	

6.29 Response 97

6.29 Response

Inheritance diagram for Response:



Collaboration diagram for Response:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

6.29 Response 99

decodeTelegramData splits telegram in parts

• void dumpData ()

dumpData Print Data, useful for logs and testiing EnOcean Telegram

- String toString ()
- int getReturnCode ()

Private Member Functions

• void setReturnCode (int returnCode)

Private Attributes

- Long id
- int returnCode

Additional Inherited Members

6.29.1 Detailed Description

Definition at line 14 of file Response.java.

6.29.2 Member Function Documentation

6.29.2.1 decodeTelegramData()

```
void decodeTelegramData ( String \ \textit{hexTelegram} \ )
```

decodeTelegramData splits telegram in parts

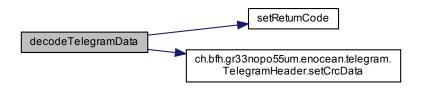
Parameters

hexTelegram in hex String

Implements EncodeDecode (p. ??).

Definition at line **50** of file **Response.java**.

Here is the call graph for this function:



6.29.2.2 dumpData()

```
void dumpData ( )
```

dumpData Print Data, useful for logs and testiing EnOcean Telegram

Implements **EncodeDecode** (p. ??).

Definition at line 62 of file Response.java.

Here is the call graph for this function:



6.29.2.3 encodeTelegram()

```
String encodeTelegram ( )
```

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements EncodeDecode (p. ??).

Definition at line 30 of file Response.java.

6.29 Response

6.29.2.4 encodeTelegramData()

```
String encodeTelegramData ( )
```

encodeTelegramData provides an example data hex for this packet type.

Returns

String hexTelegramData EnOcean Telegram

Implements EncodeDecode (p. ??).

Definition at line 40 of file Response.java.

6.29.2.5 getReturnCode()

```
int getReturnCode ( )
```

Definition at line 73 of file Response.java.

6.29.2.6 setReturnCode()

Definition at line 77 of file Response.java.

Here is the caller graph for this function:



6.29.2.7 toString()

```
String toString ( )
```

Definition at line 68 of file Response.java.

Here is the caller graph for this function:



6.29.3 Member Data Documentation

6.29.3.1 id

Long id [private]

Definition at line 19 of file Response.java.

6.29.3.2 returnCode

int returnCode [private]

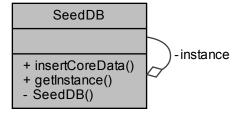
Definition at line 22 of file Response.java.

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Response.java

6.30 SeedDB

Collaboration diagram for SeedDB:



Public Member Functions

• void insertCoreData ()

Is used to store core data in Database, e.g User, etc.

Static Public Member Functions

• static SeedDB getInstance ()

Private Member Functions

• SeedDB ()

6.30 SeedDB 103

Static Private Attributes

· static SeedDB instance

6.30.1 Detailed Description

Definition at line 8 of file SeedDB.java.

6.30.2 Constructor & Destructor Documentation

6.30.2.1 SeedDB()

SeedDB () [private]

Definition at line 12 of file SeedDB.java.

Here is the call graph for this function:



Here is the caller graph for this function:



6.30.3 Member Function Documentation

6.30.3.1 getInstance()

static SeedDB getInstance () [static]

Returns

DBinstance

Definition at line 20 of file SeedDB.java.

Here is the call graph for this function:



Here is the caller graph for this function:



6.30.3.2 insertCoreData()

```
void insertCoreData ( )
```

Is used to store core data in Database, e.g User, etc.

Definition at line 30 of file SeedDB.java.

Here is the caller graph for this function:



6.30.4 Member Data Documentation

6.30.4.1 instance

SeedDB instance [static], [private]

Definition at line 10 of file SeedDB.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/SeedDB.java

6.31 Sender 105

6.31 Sender

Collaboration diagram for Sender:



Static Public Member Functions

• static void main (String args[])

6.31.1 Detailed Description

Used (p. ??) for Testing telegrams

Author

louis

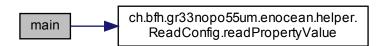
Definition at line 14 of file Sender.java.

6.31.2 Member Function Documentation

```
6.31.2.1 main()
```

Definition at line 16 of file Sender.java.

Here is the call graph for this function:



The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo55um/enocean/test/Sender.
 java

6.32 Serveral

Collaboration diagram for Serveral:



6.32.1 Detailed Description

Author

silas & Iouis further informations check EnoceanSerialProtocol v3

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/CommonCommand.java

6.33 SMART_ACK_COMMAND

Collaboration diagram for SMART_ACK_COMMAND:



6.33.1 Detailed Description

Author

silas & Iouis Optional Data), for further informations check EnoceanSerialProtocol v3

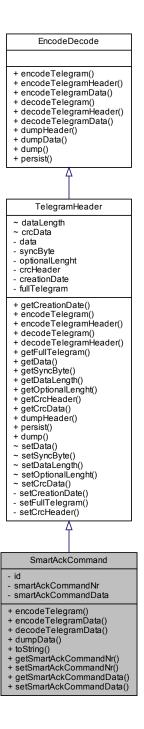
The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/SmartAckCommand.java

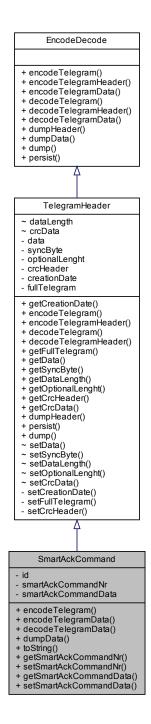
6.34 SmartAckCommand 107

6.34 SmartAckCommand

Inheritance diagram for SmartAckCommand:



Collaboration diagram for SmartAckCommand:



Public Member Functions

- String encodeTelegram ()
 - encodeTelegram provides an example telegram hex for this packet type.
- String encodeTelegramData ()
 - encodeTelegramData provides an example data hex for this packet type.
- void decodeTelegramData (String hexTelegram)

6.34 SmartAckCommand 109

decodeTelegramData splits telegram in parts

• void dumpData ()

dumpData Print Data, useful for logs and testing

- String toString ()
- int getSmartAckCommandNr ()
- void setSmartAckCommandNr (int smartAckCommandNr)
- int getSmartAckCommandData ()
- void setSmartAckCommandData (int smartAckCommandData)

Private Attributes

- Long id
- · int smartAckCommandNr
- · int smartAckCommandData

Additional Inherited Members

6.34.1 Detailed Description

Definition at line 13 of file SmartAckCommand.java.

6.34.2 Member Function Documentation

6.34.2.1 decodeTelegramData()

decodeTelegramData splits telegram in parts

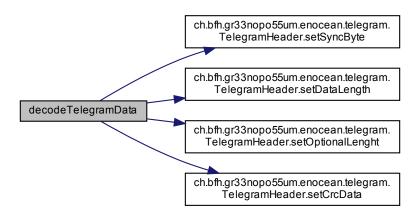
Parameters

hexTelegram in hex String

Implements EncodeDecode (p. ??).

Definition at line 46 of file SmartAckCommand.java.

Here is the call graph for this function:



6.34.2.2 dumpData()

void dumpData ()

dumpData Print Data, useful for logs and testing

Implements EncodeDecode (p. ??).

Definition at line 61 of file SmartAckCommand.java.

Here is the call graph for this function:



6.34.2.3 encodeTelegram()

String encodeTelegram ()

encodeTelegram provides an example telegram hex for this packet type.

Returns

telegram hex

Implements **EncodeDecode** (p. ??).

Definition at line 28 of file SmartAckCommand.java.

6.34 SmartAckCommand 111

6.34.2.4 encodeTelegramData() String encodeTelegramData () encodeTelegramData provides an example data hex for this packet type. Returns String hexTelegramData EnOcean Telegram Implements EncodeDecode (p. ??). Definition at line 37 of file SmartAckCommand.java. 6.34.2.5 getSmartAckCommandData() int getSmartAckCommandData () Definition at line 80 of file SmartAckCommand.java. 6.34.2.6 getSmartAckCommandNr() int getSmartAckCommandNr () Definition at line 72 of file SmartAckCommand.java. 6.34.2.7 setSmartAckCommandData() void setSmartAckCommandData (int smartAckCommandData) Definition at line 84 of file SmartAckCommand.java.

Definition at line 76 of file SmartAckCommand.java.

int smartAckCommandNr)

6.34.2.8 setSmartAckCommandNr()

void setSmartAckCommandNr (

6.34.2.9 toString()

```
String toString ( )
```

Definition at line 66 of file SmartAckCommand.java.

Here is the caller graph for this function:



6.34.3 Member Data Documentation

6.34.3.1 id

Long id [private]

Definition at line 18 of file SmartAckCommand.java.

6.34.3.2 smartAckCommandData

int smartAckCommandData [private]

Definition at line 21 of file SmartAckCommand.java.

6.34.3.3 smartAckCommandNr

int smartAckCommandNr [private]

Definition at line 20 of file SmartAckCommand.java.

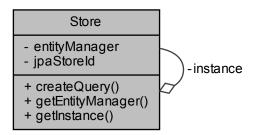
The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/SmartAckCommand.java

6.35 Store 113

6.35 Store

Collaboration diagram for Store:



Public Member Functions

- Query createQuery (String query)
- EntityManager **getEntityManager** ()

 create a enitityManager with the persistence.xml. Entity Manger is used for which class is relatet to each other...

Static Public Member Functions

• static Store getInstance ()

create a new Instance of a DB (p. ??)

Private Attributes

- EntityManager entityManager = null
- String jpaStoreId = "store"

Static Private Attributes

· static Store instance

6.35.1 Detailed Description

Definition at line 14 of file Store.java.

6.35.2 Member Function Documentation

6.35.2.1 createQuery()

```
Query createQuery ( {\tt String}~query~)
```

Parameters

query if you want to make queries on your own. with advantage use predefined queries;)

Returns

runnable query

Definition at line 39 of file Store.java.

6.35.2.2 getEntityManager()

```
EntityManager getEntityManager ( )
```

create a enitityManager with the persistence.xml. Entity Manger is used for which class is relatet to each other...

Returns

entity manager

Definition at line 48 of file Store.java.

Here is the caller graph for this function:



6.35.2.3 getInstance()

```
static Store getInstance ( ) [static]
```

create a new Instance of a DB (p. ??)

Returns

DB (p. ??) Instance

Definition at line 26 of file Store.java.

Here is the call graph for this function:



Here is the caller graph for this function:



6.35.3 Member Data Documentation

6.35.3.1 entityManager

```
EntityManager entityManager = null [private]
```

Definition at line 18 of file Store.java.

6.35.3.2 instance

```
Store instance [static], [private]
```

Definition at line 17 of file Store.java.

6.35.3.3 jpaStoreld

```
String jpaStoreId = "store" [private]
```

Definition at line 19 of file Store.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/Store.java

6.36 TelegramDBFactory

Collaboration diagram for TelegramDBFactory:

TelegramDBFactory

- logger

+ telegramRouter()

Public Member Functions

• TelegramHeader telegramRouter (String hexTelegram)

Static Private Attributes

• static Logger logger = LogManager.getLogger()

6.36.1 Detailed Description

Definition at line 11 of file TelegramDBFactory.java.

6.36.2 Member Function Documentation

6.36.2.1 telegramRouter()

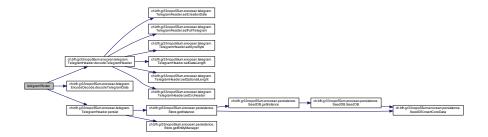
Parameters

Returns

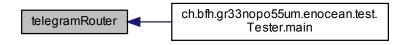
TelegramObject

Definition at line 19 of file TelegramDBFactory.java.

Here is the call graph for this function:



Here is the caller graph for this function:



6.37 TelegramHeader 117

6.36.3 Member Data Documentation

6.36.3.1 logger

```
Logger logger = LogManager.getLogger() [static], [private]
```

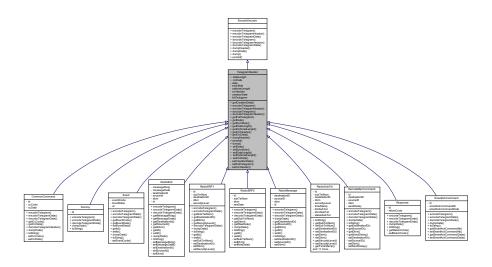
Definition at line 13 of file TelegramDBFactory.java.

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/TelegramDBFactory.
 java

6.37 TelegramHeader

Inheritance diagram for TelegramHeader:



Collaboration diagram for TelegramHeader:

EncodeDecode + encodeTelegram() + encodeTelegramHeader() + encodeTelegramData() + decodeTelegram() + decodeTelegramHeader() + decodeTelegramData() + dumpHeader() + dumpData() + dump() + persist() TelegramHeader ~ dataLength ~ crcData - data - syncByte - optionalLenght - crcHeader - creationDate - fullTelegram + getCreationDate() + encodeTelegram() + encodeTelegramHeader() + decodeTelegram() + decodeTelegramHeader() + getFullTelegram() + getData() + getSyncByte() + getDataLength() + getOptionalLenght() + getCrcHeader() + getCrcData() + dumpHeader() + persist() + dump() ~ setData() ~ setSyncByte() ~ setDataLength() ~ setOptionalLenght() ~ setCrcData() - setCreationDate() - setFullTelegram() - setCrcHeader()

Public Member Functions

- Timestamp getCreationDate ()
- String encodeTelegram ()
- String encodeTelegramHeader ()
- void decodeTelegram (String hexTelegram)
- void decodeTelegramHeader (String hexTelegram)

6.37 TelegramHeader 119

- String getFullTelegram ()
- · Long getData ()
- int getSyncByte ()
- int getDataLength ()
- int getOptionalLenght ()
- int getCrcHeader ()
- int getCrcData ()
- void dumpHeader ()

print Header in pretty print

• void persist ()

Create an entity manager and persist the current object.

• void dump ()

Used (p. ??) for debugging purposes.

Package Functions

- void setData (Long data)
- void setSyncByte (int syncByte)
- void setDataLength (int dataLength)
- void setOptionalLenght (int optionalLenght)
- void setCrcData (int crcData)

Package Attributes

- · int dataLength
- · int crcData

Private Member Functions

- void setCreationDate (Timestamp creationDate)
- void setFullTelegram (String fullTelegram)
- void setCrcHeader (int crcHeader)

Private Attributes

- · Long data
- int syncByte
- int optionalLenght
- · int crcHeader
- Timestamp creationDate
- String fullTelegram

6.37.1 Detailed Description

Author

silas & louis for all common fields of the telegrams. It also implements the Store procedure.

Definition at line 14 of file TelegramHeader.java.

6.37.2 Member Function Documentation

6.37.2.1 decodeTelegram()

```
void decodeTelegram ( String \ \textit{hexTelegram} \ )
```

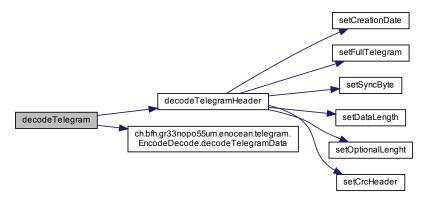
Parameters

hexTelegram	EnOcean Telegram
-------------	------------------

Implements **EncodeDecode** (p. ??).

Definition at line **63** of file **TelegramHeader.java**.

Here is the call graph for this function:



6.37.2.2 decodeTelegramHeader()

Parameters

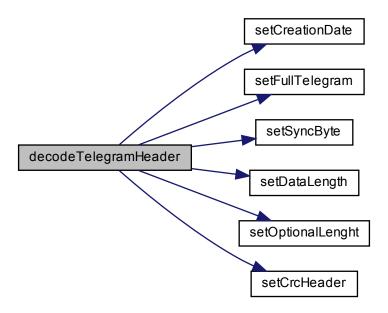
hexTelegram	EnOcean Telegram
-------------	------------------

Implements **EncodeDecode** (p. ??).

Definition at line 71 of file TelegramHeader.java.

6.37 TelegramHeader 121

Here is the call graph for this function:



Here is the caller graph for this function:



6.37.2.3 dump()

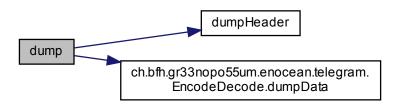
void dump ()

Used (p. ??) for debugging purposes.

Implements **EncodeDecode** (p. ??).

Definition at line 222 of file TelegramHeader.java.

Here is the call graph for this function:



6.37.2.4 dumpHeader()

void dumpHeader ()

print Header in pretty print

Implements **EncodeDecode** (p. ??).

Definition at line 192 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.5 encodeTelegram()

String encodeTelegram ()

6.37 TelegramHeader 123

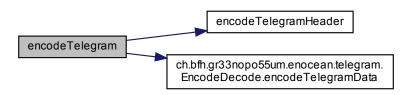
Returns

full telegram, header and data

Implements EncodeDecode (p. ??).

Definition at line 48 of file TelegramHeader.java.

Here is the call graph for this function:



6.37.2.6 encodeTelegramHeader()

```
String encodeTelegramHeader ( )
```

Returns

null, telegram header does not contain any data

Implements EncodeDecode (p. ??).

Definition at line 56 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.7 getCrcData()

int getCrcData ()

Returns

data checksum

Definition at line 178 of file TelegramHeader.java.

```
6.37.2.8 getCrcHeader()
int getCrcHeader ( )
Returns
     header checksum
Definition at line 162 of file TelegramHeader.java.
6.37.2.9 getCreationDate()
Timestamp getCreationDate ( )
Returns
     creationDate
Definition at line 33 of file TelegramHeader.java.
6.37.2.10 getData()
Long getData ( )
Returns
     Telegram data Data of the Telegram
Definition at line 101 of file TelegramHeader.java.
6.37.2.11 getDataLength()
int getDataLength ( )
Returns
     data Length, also used to determine package length
Definition at line 131 of file TelegramHeader.java.
6.37.2.12 getFullTelegram()
String getFullTelegram ( )
Returns
     full Telegram, helpful for finding persistence issues
```

Definition at line 85 of file TelegramHeader.java.

6.37 TelegramHeader 125

6.37.2.13 getOptionalLenght()

```
int getOptionalLenght ( )
```

Returns

optional Length, used for additional package information

Definition at line 146 of file TelegramHeader.java.

6.37.2.14 getSyncByte()

```
int getSyncByte ( )
```

Returns

syncByte is used to determine that the String recieved by Serial is an enocean Telegram

Definition at line 116 of file TelegramHeader.java.

6.37.2.15 persist()

```
void persist ( )
```

Create an entity manager and persist the current object.

Implements EncodeDecode (p. ??).

Definition at line 209 of file TelegramHeader.java.

Here is the call graph for this function:



Here is the caller graph for this function:



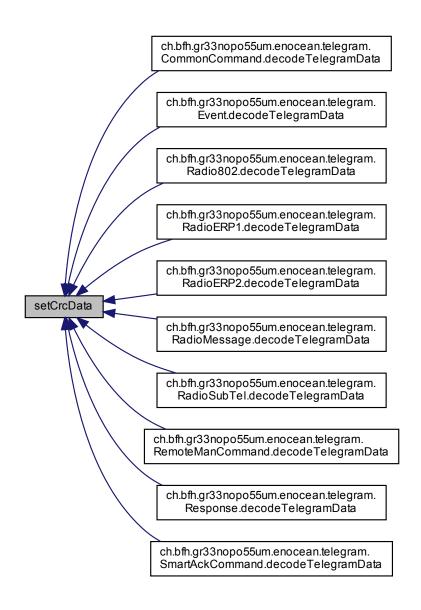
6.37.2.16 setCrcData()

Parameters

crcData checksum for data

Definition at line 185 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.17 setCrcHeader()

6.37 TelegramHeader 127

Parameters

crcHeader	checksum for header

Definition at line 170 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.18 setCreationDate()

Parameters

creationDate

Definition at line 41 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.19 setData()

```
void setData (
          Long data ) [package]
```

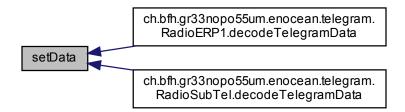
Parameters

data	Data of the Telegram

Definition at line 109 of file TelegramHeader.java.

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Here is the caller graph for this function:



6.37.2.20 setDataLength()

Parameters

dataLength	is used for mandatory data length
------------	-----------------------------------

Definition at line 139 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.21 setFullTelegram()

Parameters

fullTelegram	in hex String

Definition at line 93 of file TelegramHeader.java.

6.37 TelegramHeader 129

Here is the caller graph for this function:



6.37.2.22 setOptionalLenght()

Parameters

optionalLenght is used for additional data
--

Definition at line 154 of file TelegramHeader.java.

Here is the caller graph for this function:



6.37.2.23 setSyncByte()

Parameters

syncByte is used to determine that the String recieved by Serial is an enocean Telegram

Definition at line 123 of file TelegramHeader.java.

Here is the caller graph for this function:



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6.37.3 Member Data Documentation

```
6.37.3.1 crcData
```

```
int crcData [package]
```

Definition at line 18 of file TelegramHeader.java.

6.37.3.2 crcHeader

```
int crcHeader [private]
```

Definition at line 23 of file TelegramHeader.java.

6.37.3.3 creationDate

```
Timestamp creationDate [private]
```

Definition at line 26 of file TelegramHeader.java.

6.37.3.4 data

```
Long data [private]
```

Definition at line 20 of file TelegramHeader.java.

6.37.3.5 dataLength

```
int dataLength [package]
```

Definition at line 17 of file TelegramHeader.java.

6.37.3.6 fullTelegram

```
String fullTelegram [private]
```

Definition at line 27 of file TelegramHeader.java.

6.37.3.7 optionalLenght

```
int optionalLenght [private]
```

Definition at line 22 of file TelegramHeader.java.

6.38 Tester 131

6.37.3.8 syncByte

```
int syncByte [private]
```

Definition at line 21 of file TelegramHeader.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/TelegramHeader.java

6.38 Tester

Collaboration diagram for Tester:



Static Public Member Functions

• static void main (String args[])

6.38.1 Detailed Description

Used (p. ??) for Testing telegrams

Author

silas

Definition at line 14 of file Tester.java.

132 Class Documentation

6.38.2 Member Function Documentation

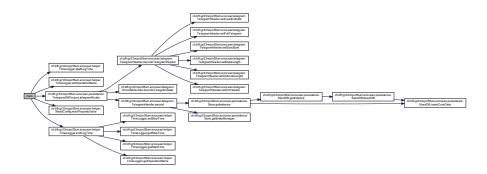
6.38.2.1 main()

```
static void main (

String args[]) [static]
```

Definition at line 16 of file Tester.java.

Here is the call graph for this function:



The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/Ch/bfh/gr33nopo55um/enocean/test/Tester.
 java

6.39 This

Collaboration diagram for This:



6.39.1 Detailed Description

Author

silas & louis basic encodeTelegram and decodeTelegramData methods for EnOcean telegrams.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/EncodeDecode.java

6.40 Time 133

6.40 Time

Collaboration diagram for Time:



6.40.1 Detailed Description

performance measurement

Author

silas

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/TimeLogger.java

6.41 TimeLogger

Collaboration diagram for TimeLogger:

TimeLogger - startTime - operationName - stopTime - logger + setStartTime() + setOperationName() + startLogTime() - endLogTime() - getStopTime() - getStartTime() - getStartTime() - getOperationName()

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Public Member Functions

- void setStartTime (long startTime)
- void setOperationName (String operationName)
- void startLogTime ()
- void endLogTime ()

Private Member Functions

- long getStopTime ()
- void setStopTime ()
- long getStartTime ()
- String getOperationName ()

Private Attributes

- long startTime = 0
- String operationName = ""
- long stopTime = 0

Static Private Attributes

static Logger logger = LogManager.getLogger()

6.41.1 Detailed Description

Definition at line 11 of file TimeLogger.java.

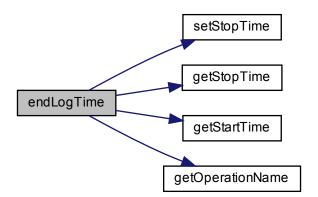
6.41.2 Member Function Documentation

6.41.2.1 endLogTime()

```
void endLogTime ( )
```

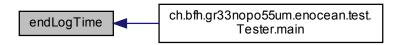
Definition at line 47 of file TimeLogger.java.

Here is the call graph for this function:



6.41 TimeLogger 135

Here is the caller graph for this function:



6.41.2.2 getOperationName()

```
String getOperationName ( ) [private]
```

Definition at line 34 of file TimeLogger.java.

Here is the caller graph for this function:

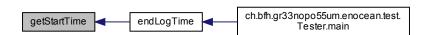


6.41.2.3 getStartTime()

```
long getStartTime ( ) [private]
```

Definition at line 26 of file TimeLogger.java.

Here is the caller graph for this function:



136 Class Documentation

6.41.2.4 getStopTime()

```
long getStopTime ( ) [private]
```

Definition at line 18 of file TimeLogger.java.

Here is the caller graph for this function:



6.41.2.5 setOperationName()

Definition at line 38 of file TimeLogger.java.

Here is the caller graph for this function:



6.41.2.6 setStartTime()

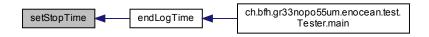
Definition at line 30 of file TimeLogger.java.

6.41.2.7 setStopTime()

```
void setStopTime ( ) [private]
```

Definition at line 22 of file TimeLogger.java.

Here is the caller graph for this function:



6.41 TimeLogger 137

6.41.2.8 startLogTime()

```
void startLogTime ( )
```

Definition at line **42** of file **TimeLogger.java**.

Here is the caller graph for this function:



6.41.3 Member Data Documentation

6.41.3.1 logger

```
Logger logger = LogManager.getLogger() [static], [private]
```

Definition at line 13 of file TimeLogger.java.

6.41.3.2 operationName

```
String operationName = "" [private]
```

Definition at line 15 of file TimeLogger.java.

6.41.3.3 startTime

```
long startTime = 0 [private]
```

Definition at line 14 of file TimeLogger.java.

6.41.3.4 stopTime

```
long stopTime = 0 [private]
```

Definition at line 16 of file TimeLogger.java.

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/TimeLogger.java

138 Class Documentation

6.42 Used

Collaboration diagram for Used:



6.42.1 Detailed Description

Author

silas. Store class is implementet in telegram header.

The documentation for this class was generated from the following file:

/home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/Store.java

6.43 When

Collaboration diagram for When:



6.43.1 Detailed Description

telegram, a RESPOND has to be expected. In this case, the following RESPONSE message gives the return codes: 00 RET_OK 02 RET_NOT_SUPPORTED 03 RET_WRONG_PARAM, for further informations check EnoceanSerialProtocol v3

Author

silas & louis

The documentation for this class was generated from the following file:

• /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/Response.java

Chapter 7

File Documentation

7.1 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/

Application.java File Reference

Classes

· class Application

Packages

• package ch.bfh.gr33nopo55um.enocean.application

7.2 Application.java

7.3 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/application/

EnoceaListener.java File Reference

Classes

· class EnoceaListener

Packages

• package ch.bfh.gr33nopo55um.enocean.application

7.4 EnoceaListener.java

```
00001 package ch.bfh.gr33nopo55um.enocean.application;
00003 import ch.bfh.gr33nopo55um.enocean.helper.ReadConfig;
{\tt 00004~import~it.polito.elite.enocean.enj.communication.EnJConnection;}
00005 import it.polito.elite.enocean.enj.link.EnJLink;
00006 import it.polito.elite.enocean.examples.SimpleDeviceListener;
00007 import org.apache.logging.log4j.LogManager;
00008 import org.apache.logging.log4j.Logger;
00009
00010 import java.io.IOException;
00011
00016 public class EnoceaListener {
00017
          private static Logger logger = LogManager.getLogger();
00019
00020
00024
          public void logger() {
00025
00026
              ReadConfig readConfig = new ReadConfig();
00028
              String serialPort;
00029
00033
                  serialPort = readConfig.readPropertyValue("serialPort");
00034
              } catch (IOException e) {
    serialPort = "/dev/ttyUSB0";
00035
00036
00037
                  logger.warn("No config found, taking default Port instead: " + serialPort);
00038
00039
              }
00040
00041
00046
              EnJLink linkLayer = null;
00047
00048
                  linkLayer = new EnJLink(readConfig.readPropertyValue("serialPort")
00049
              );
} catch (Exception e) {
00050
00051
                  e.printStackTrace();
00052
00053
00054
00059
              EnJConnection connection = new EnJConnection(linkLayer, null); //null persistent storage
00060
00061
00066
              SimpleDeviceListener listener = new SimpleDeviceListener();
00067
00068
00073
              connection.addEnJDeviceListener(listener);
00074
00078
              linkLayer.connect();
00079
08000
00081
00082
00083
00084 }
```

7.5 /home/silas/ldeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/C⊸ RC.java File Reference

Classes

· class CRC

7.6 CRC.java 141

Packages

package ch.bfh.gr33nopo55um.enocean.helper

7.6 CRC.java

```
00001
      package ch.bfh.gr33nopo55um.enocean.helper;
00002
00008 public class CRC {
00009
           private static byte[] crc8Table = new byte[]{
00010
00011
                    (byte) 0x00, (byte) 0x07, (byte) 0x0e,
                                                              (byte) 0x09, (byte) 0x1c, (byte) 0x1b, (byte) 0x12, (
00012
                                 (byte) 0x3f, (byte) 0x36,
                                                             (byte) 0x31,
                                                                           (byte) 0x24,
                                                                                          (byte) 0x23,
                                                                                                       (byte) 0x2a,
      byte) 0x2d,
00013
                    (byte) 0x70,
                                 (byte) 0x77, (byte) 0x7e,
                                                              (byte) 0x79,
                                                                           (byte) 0x6c,
                                                                                          (byte) 0x6b,
                                                                                                       (byte) 0x62.
      byte) 0x65,
                                                (byte) 0x46,
                                                              (byte) 0x41,
                                                                            (byte) 0x54,
                    (byte) 0x48,
                                 (byte) 0x4f,
                                                                                          (byte)
                                                                                                0x53,
                                                                                                       (byte) 0x5a,
      byte) 0x5d,
00015
                                                (byte) 0xee,
                                                              (byte) 0xe9,
                                                                            (byte) 0xfc,
      byte) 0xf5,
00016
                    (byte) 0xd8.
                                  (byte) 0xdf,
                                                (byte) 0xd6.
                                                              (byte) 0xd1,
                                                                            (byte) 0xc4,
                                                                                          (bvte)
                                                                                                 0xc3.
                                                                                                       (bvte) 0xca,
      byte) 0xcd,
00017
                    (byte) 0x90,
                                  (byte) 0x97,
                                                (byte) 0x9e,
                                                              (byte) 0x99,
                                                                            (byte) 0x8c,
                                                                                                 0x8b,
                                                                                                        (byte) 0x82,
                                                                                          (byte)
      byte) 0x85,
00018
                                                (byte) 0xa6,
                                  (byte) 0xaf,
                                                              (byte) 0xa1,
                                                                            (byte) 0xb4,
                                                                                          (byte)
                                                                                                 0xb3,
      byte) 0xbd,
00019
                    (byte) 0xc7,
                                  (byte) 0xc0,
                                                (byte) 0xc9,
                                                              (byte) 0xce,
                                                                            (byte) 0xdb,
                                                                                          (byte)
                                                                                                 0xdc.
                                                                                                        (byte) 0xd5,
      byte) 0xd2,
00020
                    (byte) 0xff,
                                 (byte) 0xf8,
                                                (byte) 0xf1,
                                                              (byte) 0xf6,
                                                                            (byte) 0xe3,
                                                                                          (byte) 0xe4,
                                                                                                        (byte) 0xed,
      byte) 0xea,
00021
                                  (byte) 0xb0,
                                                (byte) 0xb9,
                                                              (byte) 0xbe,
      byte) 0xa2,
                    (byte) 0x8f,
                                                                                          (byte)
                                                                                                 0x94.
                                                                                                        (byte) 0x9d.
00022
                                        0x88,
                                                (byte) 0x81,
                                                              (byte) 0x86,
                                                                            (byte) 0x93,
      byte) 0x9a,
00023
                    (byte) 0x27,
                                 (byte) 0x20,
                                                (byte) 0x29,
                                                              (byte) 0x2e,
                                                                            (byte) 0x3b,
                                                                                                 0x3c,
                                                                                          (byte)
                                                                                                       (byte) 0x35,
      byte) 0x32,
00024
                    (byte) 0x1f,
                                  (byte) 0x18,
                                                (byte) 0x11,
                                                              (byte) 0x16,
                                                                            (byte)
                                                                                   0x03,
                                                                                          (byte)
                                                                                                        (byte) 0x0d,
      byte) 0x0a,
00025
                    (byte) 0x57,
                                  (byte) 0x50,
                                                (byte) 0x59,
                                                              (byte) 0x5e,
                                                                            (byte) 0x4b,
                                                                                          (byte) 0x4c,
                                                                                                       (byte) 0x45,
      byte) 0x42,
00026
                                 (bvte) 0x68,
                                                (bvte) 0x61,
                                                              (bvte) 0x66,
                    (bvte) 0x6f,
                                                                            (bvte) 0x73,
                                                                                          (bvte)
                                                                                                 0x74.
                                                                                                        (bvte) 0x7d,
      byte) 0x7a,
00027
                                                (byte) 0x87,
                                                              (byte) 0x80,
                                                                            (byte)
                                                                                          (byte)
      byte) 0x9c,
00028
                    (byte) 0xb1,
                                  (byte) 0xb6,
                                                (byte) 0xbf,
                                                              (byte) 0xb8,
                                                                            (byte) 0xad,
                                                                                          (byte) 0xaa,
                                                                                                        (byte) 0xa3,
      byte) 0xa4,
00029
                    (byte) 0xf9,
                                 (byte) 0xfe,
                                                (byte) 0xf7,
                                                              (byte) 0xf0,
                                                                            (byte) 0xe5,
                                                                                          (byte)
                                                                                                 0xe2,
                                                                                                        (byte) 0xeb,
      byte) 0xec,
00030
                    (byte) 0xc1,
                                 (byte) 0xc6,
                                                (byte) 0xcf,
                                                              (byte) 0xc8,
                                                                            (byte) 0xdd,
                                                                                          (byte)
                                                                                                 0xda,
                                                                                                        (byte) 0xd3,
      byte) 0xd4,
                    (byte) 0x69,
                                                                                          (byte)
00031
                                  (byte) 0x6e,
                                                (byte) 0x67,
                                                              (byte) 0x60,
                                                                            (byte)
                                                                                   0x75,
                                                                                                 0x72.
                                                                                                        (byte)
                                                                                                               0x7b.
      byte) 0x7c,
00032
                    (byte) 0x51,
                                 (byte) 0x56,
                                                (byte) 0x5f,
                                                             (byte) 0x58,
                                                                            (byte) 0x4d,
                                                                                          (byte) 0x4a,
                                                                                                        (byte) 0x43,
      byte) 0x44,
00033
                                 (byte) 0x1e,
                                                (byte) 0x17,
                                                              (byte) 0x10,
                                                                            (byte) 0x05,
                                                                                          (byte)
                                                                                                        (byte) 0x0b,
      byte) 0x0c,
00034
                                        0x26,
                                                (byte) 0x2f,
                                                              (byte) 0x28,
                                                                            (byte) 0x3d,
                    (byte) 0x21,
                                                                                                 0x3a,
      byte) 0x34,
00035
                    (bvte) 0x4e,
                                 (bvte) 0x49,
                                                (bvte) 0x40.
                                                              (bvte) 0x47,
                                                                            (bvte) 0x52,
                                                                                          (bvte) 0x55,
                                                                                                       (bvte) 0x5c, (
      byte) 0x5b,
00036
                    (byte) 0x76,
                                  (byte) 0x71,
                                                (byte) 0x78,
                                                              (byte) 0x7f,
                                                                            (byte) 0x6A,
                                                                                          (byte)
                                                                                                 0x6d,
                                                                                                        (byte) 0x64,
      byte) 0x63,
00037
                                  (byte) 0x39,
                                                (byte) 0x30,
                                                              (byte) 0x37,
                                                                            (byte) 0x22,
                                                                                          (byte) 0x25,
                    (byte) 0x3e,
                                                                                                        (byte) 0x2c,
      byte) 0x2b,
00038
                    (byte) 0x06,
                                 (bvte) 0x01,
                                                (byte) 0x08,
                                                              (byte) 0x0f,
                                                                            (byte) 0x1a,
                                                                                          (byte) 0x1d,
                                                                                                        (bvte) 0x14,
      byte) 0x13,
00039
                    (byte) 0xae,
                                 (byte) 0xa9,
                                                (byte) 0xa0,
                                                              (byte) 0xa7,
                                                                            (byte) 0xb2,
                                                                                          (byte) 0xb5,
                                                                                                        (byte) 0xbc,
      byte) 0xbb,
00040
                    (byte) 0x96,
                                 (byte) 0x91,
                                                (byte) 0x98,
                                                              (byte) 0x9f,
                                                                            (byte) 0x8a,
      byte) 0x83,
00041
                    (byte) 0xde,
                                 (bvte) 0xd9,
                                                (byte) 0xd0.
                                                             (byte) 0xd7,
                                                                           (bvte) 0xc2.
                                                                                          (byte) 0xc5, (byte) 0xcc, (
      byte) 0xcb,
00042
                    (byte) 0xe6, (byte) 0xe1, (byte) 0xe8, (byte) 0xef, (byte) 0xfa, (byte) 0xfd, (byte) 0xf4, (
      byte) 0xf3};
00043
00044
           public static byte calc(byte[] data) {
               byte crc = \bar{0};
00045
00046
               for (byte aData : data) crc = crc8Table[(crc ^ aData) & 0xffl;
00047
               return crc;
00048
```

```
00049
00050
00051
```

7.7 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/Read ← Config.java File Reference

Classes

· class ReadConfig

Packages

• package ch.bfh.gr33nopo55um.enocean.helper

7.8 ReadConfig.java

```
00001 package ch.bfh.gr33nopo55um.enocean.helper;
00002
00003 import java.io.FileNotFoundException;
00004 import java.io.IOException;
00005 import java.io.InputStream;
00006 import java.sql.Date;
00007 import java.util.Properties;
00008
00013 public class ReadConfig {
       private InputStream inputStream;
00014
00015
00016
       public String readPropertyValue(String value) throws IOException {
00017
             String result = null;
00018
00019
                  Properties prop = new Properties();
00020
                  String propFileName = "config.properties";
00021
00022
00023
                 inputStream = getClass().getClassLoader().getResourceAsStream(propFileName);
00024
00025
                  if (inputStream != null) {
00026
                      prop.load(inputStream);
00027
                  } else {
                      throw new FileNotFoundException("property file '" + propFileName + "' not found in the
      classpath");
00029
00030
00031
                 Date time = new Date(System.currentTimeMillis());
00032
00037
                 result = prop.getProperty(value);
00038
00039
00043
             } catch (Exception e) {
                 System.out.println("Exception: " + e);
00044
00045
              } finally {
                 assert inputStream != null;
00047
                 inputStream.close();
00048
00049
              return result;
00050
         }
00051 }
00052
```

7.9 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/helper/Time
Logger.java File Reference

Classes

class TimeLogger

7.10 TimeLogger.java 143

Packages

package ch.bfh.gr33nopo55um.enocean.helper

7.10 TimeLogger.java

```
00001 package ch.bfh.gr33nopo55um.enocean.helper;
00003 import org.apache.logging.log4j.LogManager;
00004 import org.apache.logging.log4j.Logger;
00005
00011 public class TimeLogger {
00012
          private static Logger logger = LogManager.getLogger();
00014
          private long startTime = 0;
          private String operationName = "";
00015
00016
         private long stopTime = 0;
00017
         private long getStopTime() {
    return stopTime;
00018
00019
00020
00021
00022
         private void setStopTime() {
00023
              this.stopTime = System.currentTimeMillis();
00024
00025
00026
          private long getStartTime() {
00027
00028
00029
00030
         public void setStartTime(long startTime) {
00031
             this.startTime = startTime;
00032
00033
00034
         return operationName;
}
          private String getOperationName() {
00035
00036
00037
00038
          public void setOperationName(String operationName) {
00039
            this.operationName = operationName;
00040
00041
00042
          public void startLogTime() {
              //Log current time for performance measurement
00043
00044
              this.startTime = System.currentTimeMillis();
00045
00046
00047
         public void endLogTime() {
00048
00049
              //Log current time for performance measurement
00050
00051
              this.setStopTime();
00052
              long elapsedTime = this.getStopTime() - this.getStartTime();
logger.info(this.getOperationName() + " in: " + elapsedTime + " miliseconds.");
00053
00054
00055
          }
00056 }
```

7.11 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ SeedDB.java File Reference

Classes

class SeedDB

Packages

package ch.bfh.gr33nopo55um.enocean.persistence

7.12 SeedDB.java

```
00001 package ch.bfh.gr33nopo55um.enocean.persistence;
00008 public class SeedDB {
00009
00010
         private static SeedDB instance;
00011
00012
         private SeedDB() {
         // singelton
00013
00014
             insertCoreData();
00015
         }
00016
       public static SeedDB getInstance() {
00020
        if (instance == null) {
00021
                 instance = new SeedDB();
00023
00024
             return instance;
         }
00025
00026
00030
         public void insertCoreData() {
00031
             //not neccessary yet
00032
00033
00034
00035 }
```

7.13 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ Store.java File Reference

Classes

· class Store

Packages

• package ch.bfh.gr33nopo55um.enocean.persistence

7.14 Store.java

```
00001 package ch.bfh.gr33nopo55um.enocean.persistence;
00003 import javax.persistence.EntityManager;
00004 import javax.persistence.EntityManagerFactory;
00005 import javax.persistence.Persistence;
00006 import javax.persistence.Query;
00007
80000
00013 @SuppressWarnings("ALL")
00014 public class Store {
00015
00016
00017
          private static Store instance;
          private EntityManager entityManager = null;
private String jpaStoreId = "store";
00018
00019
00020
00021
          public static Store getInstance() {
00026
           if (instance == null) {
   instance = new Store();
00027
00029
00030
                   SeedDB.getInstance().insertCoreData();
00031
00032
               return instance;
00033
          }
00034
          public Query createQuery(String query) {
```

Reference 145

```
00040
              EntityManager manager = this.getEntityManager();
00041
             return manager.createQuery(query);
00042
00043
00048
         public EntityManager getEntityManager() {
         if (entityManager == null) {
00049
                 EntityManagerFactory emfactory = Persistence.createEntityManagerFactory("store");
00051
                 entityManager = emfactory.createEntityManager();
00052
00053
             return entityManager;
         }
00054
00055
00056
00057 }
```

7.15 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/persistence/ TelegramDBFactory.java File Reference

Classes

· class TelegramDBFactory

Packages

• package ch.bfh.gr33nopo55um.enocean.persistence

7.16 TelegramDBFactory.java

```
00001 package ch.bfh.gr33nopo55um.enocean.persistence;
00002
00003 import ch.bfh.gr33nopo55um.enocean.telegram.*;
00004 import org.apache.logging.log4j.LogManager;
00005 import org.apache.logging.log4j.Logger;
00006
00011 public class TelegramDBFactory {
00012
00013
         private static Logger logger = LogManager.getLogger();
00014
00019
         public TelegramHeader telegramRouter(String hexTelegram) {
00020
00021
00042
             TelegramHeader telegram;
00043
00044
00048
             if (Integer.parseInt(hexTelegram.substring(2, 4), 16) == 85) {
00049
00050
00051
                  switch
00052
                          (Integer.parseInt(hexTelegram.substring(10, 12), 16)) {
00053
00054
00055
                      case 1:
00056
                          telegram = new RadioERP1();
00057
00058
                         break;
00059
                      case 2:
00060
                         telegram = new Response();
00061
00062
00063
                      case 3:
00064
                         telegram = new Radio802();
00065
                          break;
00066
00067
                        telegram = new Event();
00068
00069
                          break;
00070
00071
00072
                          telegram = new CommonCommand();
```

```
00074
00075
                      case 6:
00076
                         telegram = new SmartAckCommand();
00077
                          break;
00078
00079
00080
                          telegram = new SmartAckCommand();
00081
00082
                         break;
00083
                      case 9:
00084
                         telegram = new Radio802();
00085
00086
00087
00088
                         telegram = new RadioERP2();
00089
00090
                         break;
00091
00092
                      default:
00093
                          telegram = new Dummy();
00094
00095
                 }
00096
00097
                  telegram.decodeTelegramHeader(hexTelegram);
00098
                  telegram.decodeTelegramData(hexTelegram);
00099
00100
                  logger.info("EnOcean Telegram: HEX=" + hexTelegram + " " + telegram.toString());
00101
00102
00103
                  return telegram:
00104
             } else {
00110
                 logger.warn("Wrong Telegram Sync byte! Taking dummy instead");
00111
                  telegram = new Dummy();
00112
00113
                  return telegram;
00114
             }
00115
         }
00116 }
```

7.17 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ CommonCommand.java File Reference

Classes

• class CommonCommand

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.18 CommonCommand.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00013 @Entity
00014 public class CommonCommand extends TelegramHeader {
00015
00016
00017
00018
          @GeneratedValue(strategy = GenerationType.AUTO)
00019
         private Long id;
00020
```

```
00022
          private int ccCode;
00023
         private int ccData;
00024
00025
         @Override
00026
         public String encodeTelegram() {
         return null;
00027
00029
00034
         @Override
00035
         public String encodeTelegramData() {
           return null;
00036
00037
00038
00039
00040
         public void decodeTelegramData(String hexTelegram) {
00041
00042
              this.setCcCode(Integer.parseInt(hexTelegram.substring(14, 16), 16));
00043
             this.setCcData(Integer.parseInt(hexTelegram.substring(16, 24), 16));
this.setCrcData(crcData = Integer.parseInt(hexTelegram.substring(24, 26), 16));
00044
00045
00046
00047
00048
00049
         public int getCcCode() {
           return ccCode;
00050
00051
00052
00053
         private void setCcCode(int ccCode) {
00054
            this.ccCode = ccCode;
00055
00056
00057
         public int getCcData() {
         return ccData;
00058
00059
00060
         private void setCcData(int ccData) {
00061
         this.ccData = ccData;
}
00062
00063
00064
00070
         @Override
00071
         public void decodeTelegramHeader(String hexTelegram) {
00072
00073
00074
         @Override
00078
00079
         public void dumpData() {
08000
           System.out.println(this.toString());
00081
00082
00083
00084
00085
         @Override
         public String toString() {
00086
         00087
00088
00089
                     " CommonCommandData=" + ccData;
         }
00091 }
```

7.19 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/

Dummy.java File Reference

Classes

· class Dummy

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.20 Dummy.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00012 @Entity
00013 public class Dummy extends TelegramHeader {
00014
00015
         @GeneratedValue(strategy = GenerationType.AUTO)
00016
00017
         private Long id;
00018
00019
00020
         @Override
00021
         public String encodeTelegram() {
00022
            return null;
         }
00023
00024
00030
00031
         public String encodeTelegramData() {
00032
             return null;
00033
00034
00035
00039
00040
          public void decodeTelegramData(String hexTelegram) {
00041
00042
00043
00047
          @Override
00048
         public void dumpData() {
00049
00050
00051
00055
          @Override
00056
         public String toString() {
00057
            return "PacketType=Dummy";
00058
00059 }
```

7.21 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ EncodeDecode.java File Reference

Classes

• interface EncodeDecode

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.22 EncodeDecode.java

```
00031
          void decodeTelegram(String hexTelegram);
00032
00037
          void decodeTelegramHeader(String hexTelegram);
00038
00043
          void decodeTelegramData(String hexTelegram);
00044
         void dumpHeader();
00049
00053
         void dumpData();
00054
00058
         void dump();
00059
00063
         void persist();
00064
00065 }
```

7.23 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/← Event.java File Reference

Classes

· class Event

Packages

· package ch.bfh.gr33nopo55um.enocean.telegram

7.24 Event.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType; 00006 import javax.persistence.Id;
00007
00012 @Entity
00013 public class Event extends TelegramHeader {
00014
          private int eventCode;
00015
00016
        private int EventData;
00017
00018
00019
          @GeneratedValue(strategy = GenerationType.AUTO)
00020
         private Long id;
00021
00022
00027
         @Override
          public String encodeTelegram() {
00028
            return null;
00030
00031
00036
         @Override
00037
          public String encodeTelegramData() {
00038
            return null;
00039
00040
00045
         @Override
00046
          public void decodeTelegramData(String hexTelegram) {
00047
00048
              this.setEventCode(Integer.parseInt(hexTelegram.substring(14, 16), 16));
00049
              this.setCrcData(Integer.parseInt(hexTelegram.substring(16, 18), 16));
00050
00051
00052
          }
00053
00054
00055
         public int getEventCode() {
00056
             return eventCode;
```

```
00058
00059
         private void setEventCode(int eventCode) {
00060
             this.eventCode = eventCode;
00061
00062
00063
         public int getEventData() {
00064
            return EventData;
00065
00066
         public void setEventData(int eventData) {
00067
00068
            EventData = eventData;
00069
00070
00071
         public Long getId() {
           return id;
00072
00073
00074
         public void setId(Long id) {
         __ vold setId
this.id = id;
}
00076
00077
00078
00082
         @Override
00083
         public void dumpData() {
00084
             System.out.println(this.toString());
00085
00086
00087
00088
         @Override
         public String toString() {
00089
         00090
00091
00092
00093
00094 }
```

7.25 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ Radio802.java File Reference

Classes

· class Radio802

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.26 Radio802.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00012 @Entity
00013 public class Radio802 extends TelegramHeader {
00014
00015
          private int messageRorg;
00016
         private int messageData;
00018
         private int destinationId;
00019
00020
          private int sourceId;
00021
         private int dbm;
@Id
00022
00023
         @GeneratedValue(strategy = GenerationType.AUTO)
00024
         private Long id;
```

7.26 Radio802.java 151

```
00025
00026
00031
          @Override
00032
          public String encodeTelegram() {
00033
             return null;
00034
00040
          @Override
00041
          public String encodeTelegramData() {
00042
             return null;
00043
00044
00049
          @Override
00050
          public void decodeTelegramData(String hexTelegram) {
00051
00052
              this.setMessageRorg(Integer.parseInt(hexTelegram.substring(14, 16), 16));
00053
              this.setMessageData(Integer.parseInt(hexTelegram.substring(16, 16 +
      dataLength), 16));
00054
              this.setDestinationId(Integer.parseInt(hexTelegram.substring(dataLength + 16,
      dataLength + 24), 16));
00055
              this.setSourceId(Integer.parseInt(hexTelegram.substring(dataLength + 24,
      dataLength + 32), 16));
00056
              this.setDbm(Integer.parseInt(hexTelegram.substring(dataLength + 32,
      dataLength + 34), 16));
00057
              this.setCrcData(Integer.parseInt(hexTelegram.substring(dataLength + 34,
      dataLength + 36), 16));
00058
00059
00060
00061
00062
          public int getMessageRorg() {
00063
             return messageRorg;
00064
00065
00066
          private void setMessageRorg(int messageRorg) {
00067
              this.messageRorg = messageRorg;
          }
00068
00069
00070
          public int getMessageData() {
00071
            return messageData;
00072
00073
00074
          private void setMessageData(int messageData) {
00075
              this.messageData = messageData;
00076
00077
00078
          return destinationId;
}
          public int getDestinationId() {
00079
00080
00081
00082
          private void setDestinationId(int destinationId) {
00083
              this.destinationId = destinationId;
00084
00085
00086
          public int getSourceId() {
00087
             return sourceId;
00088
00089
00090
          private void setSourceId(int sourceId) {
00091
              this.sourceId = sourceId;
00092
00093
00094
          public int getDbm() {
00095
            return dbm;
00096
00097
00098
          private void setDbm(int dbm) {
            this.dbm = dbm;
00099
00100
00101
00102
          public Long getId() {
00103
             return id;
00104
00105
00106
          public void setId(Long id) {
             this.id = id;
00107
00108
00109
00113
          @Override
          public void dumpData() {
00114
00115
00116
              System.out.println(this.toString());
00117
00118
          }
00119
00120
00121
          @brief pretty print
```

```
00122
00123
             @Override
00124
             public String toString() {
             return "PacketType=Radio802" +

" messageRorg=" + messageRorg +

" messageData=" + messageData +

" destinationId=" + destinationId +
00125
00126
00127
00128
00129
                              " sourceId=" + sourceId +
                              " dbm=" + dbm;
00130
00131
             }
00132 }
```

7.27 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioERP1.java File Reference

Classes

class RadioERP1

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.28 RadioERP1.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00002
00003
00004 import javax.persistence.Entity;
00005 import javax.persistence.GeneratedValue;
00006 import javax.persistence.GenerationType;
00007 import javax.persistence.Id;
80000
00013 @Entity
00014 public class RadioERP1 extends TelegramHeader {
00015
00016
00017
          @GeneratedValue(strategy = GenerationType.AUTO)
00018
          private Long id;
00019
00020
          private int subTelNum;
00021
          private String destinationID;
00022
          private int dbm;
00023
          private int securityLevel;
00024
00025
          @Override
00030
00031
          public String encodeTelegram() {
00032
              return null;
00033
00034
00039
          @Override
00040
          public String encodeTelegramData() {
00041
             return null;
00042
00043
00044
          public int getSubTelNum() {
          return subTelNum;
00045
00046
00047
00048
          private void setSubTelNum(int subTelNum) {
00049
              this.subTelNum = subTelNum;
00050
00051
00052
          return destinationID;
}
          public String getDestinationID() {
00053
00054
00055
          private void setDestinationID(String destinationID) {
```

```
00057
                              this.destinationID = destinationID;
00058
00059
00060
                     public int getDbm() {
                          return dbm;
00061
00062
00063
00064
                    private void setDbm(int dbm) {
                         this.dbm = dbm;
00065
00066
00067
                    public int getSecurityLevel() {
00068
                    return securityLevel;
}
00069
00070
00071
                    this.securityLevel = securityLevel;
00072
                    private void setSecurityLevel(int securityLevel) {
00073
00074
08000
                    public void decodeTelegramData(String hexTelegram) {
00081
00082
00083
00084
                             //start of data
00085
                             int endOfDataLength = 14 + dataLength;
00087
00088
                             this.setData(Long.parseLong(hexTelegram.substring(14, endOfDataLength), 16));
00089
                             this.setSubTelNum(Integer.parseInt(hexTelegram.substring(endOfDataLength, endOfDataLength + 2), 16)
00090
                             this.setDestinationID(hexTelegram.substring(endOfDataLength + 2, endOfDataLength + 10));
00091
                             this.setDbm(Integer.parseInt(hexTelegram.substring(endOfDataLength + 10, endOfDataLength + 12), 16)
00092
                             this.setSecurityLevel(Integer.parseInt(hexTelegram.substring(endOfDataLength + 12, endOfDataLength
             + 14), 16));
00093
                              this.setCrcData (Integer.parseInt (hexTelegram.substring (endOfDataLength + 14, endOfDataLength + 16), endOfDataLength + 16), endOfDataLength + 16), endOfDataLength + 17, endOfDataLength + 18, end
              16));
00094
00095
00096
00097
00098
                  public void dumpData() {
00099
00100
                              System.out.println(this.toString());
00101
00102
00103
                    @Override
00104
                    public String toString() {
00105
                    return "PacketType=RadioERP1" +
00106
                                             " SubTelNum=" + subTelNum +
00107
                                              " DestinationID=" + destinationID +
00108
                                              " dBm=" + dbm +
00109
                                              " SecurityLevel=" + securityLevel;
00110
                    }
00111
00112
00113
                  @Id
                 public Long getId() {
00114
00115
00116
00117
                    public void setId(Long id) {
00118
                    this.id = id;
00119
00120
00121 }
```

7.29 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/← RadioERP2.java File Reference

Classes

class RadioERP2

Packages

package ch.bfh.gr33nopo55um.enocean.telegram

7.30 RadioERP2.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00013 @Entity
00014 public class RadioERP2 extends TelegramHeader {
00015
00016
00017
00018
          @GeneratedValue(strategy = GenerationType.AUTO)
00019
          private Long id;
00020
00021
00022
         private int subTelNum;
00023
          private int dbm;
00024
          private String rawData;
00025
00026
00032
          @Override
00033
         public String encodeTelegram() {
00034
             return null;
00035
00036
00042
          @Override
00043
          public String encodeTelegramData() {
00044
              return null;
00045
00046
00052
         @Override
00053
          public void decodeTelegramData(String hexTelegram) {
00054
00055
              this.setRawData(hexTelegram.substring(14, 26));
00056
              this.setSubTelNum(Integer.parseInt(hexTelegram.substring(26, 28), 16));
00057
              this.setDbm(Integer.parseInt(hexTelegram.substring(28, 30), 16));
00058
              this.setCrcData (Integer.parseInt (hexTelegram.substring (30, 32), 16));\\
00059
00060
00061
00066
          public int getSubTelNum() {
00067
              return subTelNum;
00068
00069
         private void setSubTelNum(int subTelNum) {
00071
              this.subTelNum = subTelNum;
00072
00073
00074
          public int getDbm() {
00075
              return dbm;
00076
00077
00078
          private void setDbm(int dbm) {
00079
              this.dbm = dbm;
08000
00081
00082
          public String getRawData() {
00083
            return rawData;
00084
00085
00086
          private void setRawData(String rawData) {
00087
              this.rawData = rawData;
00088
00089
00090
00091
          @Override
          public void dumpData() {
00092
00093
             System.out.println(this.toString());
00094
00095
00096
00097
00098
          @Override
00099
          public String toString() {
00100
             return "PacketType=RadioERP2" +
                      " SubTelNum=" + subTelNum +
00101
                      " dBm=" + dbm +
00102
00103
                      " RawData=" + rawData;
00104
          }
00105
00106
         public Long getId() {
00107
             return id;
00108
```

7.31 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RadioMessage.java File Reference

Classes

class RadioMessage

Packages

· package ch.bfh.gr33nopo55um.enocean.telegram

7.32 RadioMessage.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00002
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00013 @Entity
00014 public class RadioMessage extends TelegramHeader {
00015 private String destinationID;
00016 private String sourceID;
        private int dbm;
00018
00019
         @Id
00020
         @GeneratedValue(strategy = GenerationType.AUTO)
00021
         private Long id;
00022
00028
00029
         public String encodeTelegram() {
         .. scring en
return null;
}
00030
00031
00032
00038
         @Override
00039
         public String encodeTelegramData() {
00040
            return null;
00041
00042
00048
         @Override
         public void decodeTelegramData(String hexTelegram) {
00049
00050
              this.setDestinationID(hexTelegram.substring(14, 22));
00052
              this.setSourceID(hexTelegram.substring(22, 30));
00053
              this.setDbm(Integer.parseInt(hexTelegram.substring(30, 32), 16));
00054
             this.setCrcData(Integer.parseInt(hexTelegram.substring(32, 34), 16));
00055
         }
00056
00062
         @Override
00063
         public void dumpData() {
          System.out.println(this.toString()
00064
00065
             );
00066
         }
00067
00068
         return destinationID;
}
         public String getDestinationID() {
00069
00070
00071
00072
         private void setDestinationID(String destinationID) {
00073
              this.destinationID = destinationID;
00074
```

```
public String getSourceID() {
            return sourceID;
00078
00079
08000
         this.sourceID = sourceID;
          private void setSourceID(String sourceID) {
00081
00083
00084
          public int getDbm() {
         return dbm;
00085
00086
00087
00088
         private void setDbm(int dbm) {
00089
            this.dbm = dbm;
00090
00091
00092
          public Long getId() {
         return id;
00093
00094
00095
00096
         public void setId(Long id) {
00097
            this.id = id;
00098
00099
00100
         @Override
         public String toString() {
          return "PacketType=RadioMessage" +
00102
                     " DestinationID=" + destinationID +
" SourceID=" + sourceID +
" dBm=" + dbm;
00103
00104
00105
00106
          }
00107 }
```

7.33 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/← RadioSubTel.java File Reference

Classes

class RadioSubTel

Packages

package ch.bfh.gr33nopo55um.enocean.telegram

7.34 RadioSubTel.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00012 @SuppressWarnings("ALL")
00013 @Entity
00014 public class RadioSubTel extends TelegramHeader {
00015
00016
00017
00018
00019
          @GeneratedValue(strategy = GenerationType.AUTO)
          private Long id;
00021
          private int subTelNum;
00022
          private String destinationID;
00023
          private int dbm;
00024
          private int securityLevel;
00025
          private String timeStamp;
00026
          private String tickSubTel;
          private String dbmSubTel;
```

```
00028
          private String statusSubTel;
00029
00030
          @Override
          public String toString() {
    return "PacketType=RadioSubTel" +
00031
00032
                        SubTelNum=" + subTelNum +
00033
                      " DestinationID=" + destinationID +
00035
                       " dBm=" + dbm +
                       " SecurityLevel=" + securityLevel +
00036
                      " TimeStamp=" + timeStamp +
" TickSubTel=" + tickSubTel +
00037
00038
                       " dBmSubTel=" + dbmSubTel +
00039
                       " StatusSubTel='" + statusSubTel;
00040
00041
00042
00043
          public int getSubTelNum() {
         return subTelNum;
00044
00045
00046
00047
          public void setSubTelNum(int subTelNum) {
00048
             this.subTelNum = subTelNum;
00049
00050
00051
          public String getDestinationID() {
00052
              return destinationID;
00053
00054
00055
          public void setDestinationID(String destinationID) {
00056
            this.destinationID = destinationID;
00057
00058
00059
          public int getDbm() {
00060
            return dbm;
00061
00062
          public void setDbm(int dbm) {
00063
          this.dbm = dbm;
00064
00065
00066
00067
          public int getSecurityLevel() {
00068
            return securityLevel;
00069
00070
00071
          public void setSecurityLevel(int securityLevel) {
00072
            this.securityLevel = securityLevel;
00073
00074
00075
          public String getTimeStamp() {
00076
              return timeStamp;
00077
00078
00079
          public void setTimeStamp(String timeStamp) {
08000
             this.timeStamp = timeStamp;
00081
00082
00083
          public String getTickSubTel() {
00084
            return tickSubTel;
00085
00086
00087
          public void setTickSubTel(String tickSubTel) {
            this.tickSubTel = tickSubTel;
00088
00089
00090
00091
          public String getDbmSubTel() {
            return dbmSubTel;
00092
00093
00094
00095
          public void setDbmSubTel(String dbmSubTel) {
00096
             this.dbmSubTel = dbmSubTel;
00097
00098
00099
          public String getStatusSubTel() {
           return statusSubTel;
00100
00101
00102
00103
          public void setStatusSubTel(String statusSubTel) {
00104
             this.statusSubTel = statusSubTel;
00105
00106
00111
          @Override
00112
          public String encodeTelegram() {
00113
             return null;
00114
00115
00120
          @Override
          public String encodeTelegramData() {
00121
00122
              return null;
```

```
00123
          }
00124
00125
00130
         @Override
00131
         public void decodeTelegramData(String hexTelegram) {
00132
00134
              this.setData(Long.parseLong(hexTelegram.substring(14, 14 + dataLength), 16));
00135
00136
             this.setSubTelNum(Integer.parseInt(hexTelegram.substring(dataLength + 14,
     dataLength + 16), 16));
00137
00138
              this.setDestinationID(hexTelegram.substring(dataLength + 16, dataLength + 24));
00139
00140
             this.setDbm(Integer.parseInt(hexTelegram.substring(dataLength + 24,
     dataLength + 26), 16));
00141
00142
             this.setSecurityLevel (securityLevel = Integer.parseInt (hexTelegram.substring (
      dataLength + 26, dataLength + 28), 16));
00143
             this.setTimeStamp(timeStamp = hexTelegram.substring(dataLength + 28,
      dataLength + 32));
00145
             this.setTickSubTel(tickSubTel = hexTelegram.substring(dataLength + 32,
00146
     dataLength + 34));
00147
00148
             this.setDbmSubTel(dbmSubTel = hexTelegram.substring(dataLength + 34,
     dataLength + 36));
00149
00150
             this.setStatusSubTel(statusSubTel = hexTelegram.substring(dataLength + 36,
     dataLength + 38));
             this.setCrcData(crcData = Integer.parseInt(hexTelegram.substring(
     dataLength + 38, dataLength + 40), 16));
00153
00154
00155
         @Override
00160
         public void dumpData() {
            System.out.println(this.toString());
00161
00162
00163 }
```

7.35 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ RemoteManCommand.java File Reference

Classes

· class RemoteManCommand

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.36 RemoteManCommand.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00002
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00012 @Entity
00013 public class RemoteManCommand extends TelegramHeader {
00014
00015
00016 @Id
00017 @GeneratedValue(strategy = GenerationType.AUTO)
```

```
00018
          private Long id;
00019
00020
          private String destinationID;
00021
          private String sourceID;
00022
          private int dbm;
00023
          private int sendDelay;
00024
00029
          @Override
00030
          public String encodeTelegram() {
00031
              return null;
00032
00033
00038
          @Override
00039
          public String encodeTelegramData() {
00040
            return null;
00041
00042
00047
          @Override
00048
          public void decodeTelegramData(String hexTelegram) {
00049
00050
00051
              this.setDestinationID(hexTelegram.substring(14, 22));
00052
00053
              this.setSourceID(hexTelegram.substring(22, 30));
00054
00055
              this.setDbm(Integer.parseInt(hexTelegram.substring(30, 32), 16));
00056
00057
              this.setSendDelay(Integer.parseInt(hexTelegram.substring(32, 34), 16));
00058
00059
              this.setCrcData(Integer.parseInt(hexTelegram.substring(34, 36), 16));
00060
00061
00062
00063
00067
          @Override
          public void dumpData() {
00068
00069
              System.out.println(this.toString());
00070
00071
00072
00073
          @Override
00074
          public String toString() {
00075
             return "PacketType=RemoteManCommand" +
00076
                      " DestinationID=" + destinationID +
                      " SourceID=" + sourceID +
00077
                      " dBm=" + dbm +
00078
                      " SendWithDelay=" + sendDelay;
00079
08000
          }
00081
00082
          public String getDestinationID() {
          return destinationID;
}
00083
00084
00085
00086
          private void setDestinationID(String destinationID) {
00087
              this.destinationID = destinationID;
00088
          }
00089
00090
          public String getSourceID() {
00091
            return sourceID;
00092
00093
00094
          private void setSourceID(String sourceID) {
00095
              this.sourceID = sourceID;
00096
00097
00098
          public int getDbm() {
00099
             return dbm;
00100
          }
00101
          private void setDbm(int dbm) {
00102
00103
            this.dbm = dbm;
00104
00105
00106
          public int getSendDelay() {
00107
             return sendDelay;
00108
00109
00110
          private void setSendDelay(int sendDelay) {
00111
              this.sendDelay = sendDelay;
          }
00112
00113 }
```

7.37 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/← Response.java File Reference

Classes

· class Response

Packages

• package ch.bfh.gr33nopo55um.enocean.telegram

7.38 Response.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00013 @Entity
00014 public class Response extends TelegramHeader {
00015
00016
00017
          @Id
00018
          @GeneratedValue(strategy = GenerationType.AUTO)
00019
         private Long id;
00020
00021
00022
         private int returnCode;
00023
          @Override
00030
          public String encodeTelegram() {
00031
             return null;
00032
00033
00039
         @Override
          public String encodeTelegramData() {
00040
00041
             return null;
00042
00043
00049
         @Override
00050
          public void decodeTelegramData(String hexTelegram) {
00051
00052
              this.setReturnCode(Integer.parseInt(hexTelegram.substring(14, 4), 16));
00053
              this.setCrcData(Integer.parseInt(hexTelegram.substring(14, 16), 16));
00054
00055
00056
00061
          @Override
00062
          public void dumpData() {
00063
             System.out.println(this.toString());
00064
00065
00066
00067
         @Override
00068
          public String toString() {
00069
             return "PacketType=Response" +
00070
                      " ReturnCode=" + returnCode;
00071
00072
00073
         public int getReturnCode() {
             return returnCode;
00075
00076
00077
00078
          private void setReturnCode(int returnCode) {
              this.returnCode = returnCode;
00079
00080 }
00081
```

/home/silas/ldeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/SmartAckCommand.java File Reference

File Reference 7.39 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/← SmartAckCommand.java File Reference

Classes

class SmartAckCommand

Packages

· package ch.bfh.gr33nopo55um.enocean.telegram

7.40 SmartAckCommand.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00002
00003 import javax.persistence.Entity;
00004 import javax.persistence.GeneratedValue;
00005 import javax.persistence.GenerationType;
00006 import javax.persistence.Id;
00007
00012 @Entity
00013 public class SmartAckCommand extends TelegramHeader {
00015
00016
00017
         @GeneratedValue(strategy = GenerationType.AUTO)
00018
         private Long id;
00019
00020
         private int smartAckCommandNr;
00021
         private int smartAckCommandData;
00022
00027
         @Override
         public String encodeTelegram() {
00028
00029
             return null:
00030
00031
00036
         @Override
00037
         public String encodeTelegramData() {
00038
            return null;
00039
00040
00045
00046
         public void decodeTelegramData(String hexTelegram) {
00047
00048
              this.setSyncByte(Integer.parseInt(hexTelegram.substring(2, 4), 16));
00049
             this.setDataLength(Integer.parseInt(hexTelegram.substring(4, 8), 16));
00050
00051
              this.setOptionalLenght(Integer.parseInt(hexTelegram.substring(8, 10), 16));
00052
              this.setCrcData(Integer.parseInt(hexTelegram.substring(12, 14), 16));
00053
00054
00055
         }
00056
00060
         @Override
00061
         public void dumpData() {
00062
             System.out.println(this.toString());
00063
00064
00065
         @Override
00066
         public String toString() {
          return "PacketType=SmartAckCommand" +
00067
00068
                     " SmartAckCommandNr=" + smartAckCommandNr +
                     " SmartAckData=" + smartAckCommandData;
00069
00070
         }
00071
         public int getSmartAckCommandNr() {
00073
            return smartAckCommandNr;
00074
00075
00076
         public void setSmartAckCommandNr(int smartAckCommandNr) {
00077
             this.smartAckCommandNr = smartAckCommandNr;
00078
```

7.41 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/telegram/ TelegramHeader.java File Reference

Classes

· class TelegramHeader

Packages

package ch.bfh.gr33nopo55um.enocean.telegram

7.42 TelegramHeader.java

```
00001 package ch.bfh.gr33nopo55um.enocean.telegram;
00003 import ch.bfh.gr33nopo55um.enocean.persistence.Store;
00004
00005 import javax.persistence.Column;
00006 import javax.persistence.MappedSuperclass;
00007 import java.sql.Timestamp;
00008
00013 @MappedSuperclass
00014 public abstract class TelegramHeader implements EncodeDecode {
00015
00016
00017
         int dataLength;
00018
         int crcData;
00019
         //some data could be longer than int
         private Long data;
00021
         private int syncByte;
00022
         private int optionalLenght;
00023
         private int crcHeader;
00024
00025
         @Column(name = "creationDate")
00026
         private Timestamp creationDate;
00027
         private String fullTelegram;
00028
00029
00033
         public Timestamp getCreationDate() {
00034
            return creationDate;
00035
00036
00037
00041
         private void setCreationDate(Timestamp creationDate) {
00042
             this.creationDate = creationDate;
00043
00044
00048
         public String encodeTelegram() {
            return encodeTelegramHeader() + encodeTelegramData();
00049
00050
00051
00052
00056
         public String encodeTelegramHeader() {
00057
           return null;
00058
00059
00063
         public void decodeTelegram(String hexTelegram) {
00064
              decodeTelegramHeader(hexTelegram);
00065
              decodeTelegramData(hexTelegram);
00066
```

```
00067
00071
           public void decodeTelegramHeader(String hexTelegram) {
00072
               Timestamp timestamp = new Timestamp(System.currentTimeMillis());
               this.setCreationDate(timestamp);
00073
00074
               this.setFullTelegram(hexTelegram);
00075
               this.setSyncByte(Integer.parseInt(hexTelegram.substring(2, 4), 16));
               this.setDataLength(Integer.parseInt(hexTelegram.substring(4, 8), 16));
00076
00077
                this.setOptionalLenght(Integer.parseInt(hexTelegram.substring(8, 10), 16));
00078
               this.setCrcHeader(Integer.parseInt(hexTelegram.substring(12, 14), 16));
00079
           }
00080
00081
           public String getFullTelegram() {
    return fullTelegram;
00085
00086
00087
00088
           private void setFullTelegram(String fullTelegram) {
00093
00094
               this.fullTelegram = fullTelegram;
00095
00096
00097
00101
           public Long getData() {
             return data;
00102
00103
00104
00105
00109
           void setData(Long data) {
00110
              this.data = data;
00111
00112
00116
           public int getSyncByte() {
00117
              return syncByte;
00118
00119
00123
           void setSyncByte(int syncByte) {
00124
               this.syncByte = syncByte;
00125
00127
00131
           public int getDataLength() {
00132
              return dataLength;
00133
00134
00135
00139
           void setDataLength(int dataLength) {
00140
               this.dataLength = dataLength;
00141
00142
00146
           public int getOptionalLenght() {
00147
              return optionalLenght;
00148
00149
00150
00154
           void setOptionalLenght(int optionalLenght) {
00155
               this.optionalLenght = optionalLenght;
00156
00158
00162
           public int getCrcHeader() {
00163
             return crcHeader;
00164
00165
00166
00170
           private void setCrcHeader(int crcHeader) {
00171
               this.crcHeader = crcHeader;
00172
00173
00174
00178
           public int getCrcData() {
00179
              return crcData;
00180
00181
00185
           void setCrcData(int crcData) {
00186
               this.crcData = crcData;
00187
00188
00192
           public void dumpHeader() {
00193
               System.out.println("TelegramHeader{" +
00194
00195
                         "data=" + data +
                         ", syncByte=" + syncByte +
", dataLength=" + dataLength +
00196
00197
                        ", otallength=" + dataBength +
", optionalLenght=" + optionalLenght +
", crcData=" + crcData +
", crcHeader=" + crcHeader +
", creationDate=" + creationDate +
", fullTelegram='" + fullTelegram + '\'' + '}' + '}');
00198
00199
00200
00201
00202
```

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```
00203
00204
00205
00209
          public void persist() {
00210
00211
              Store.getInstance().getEntityManager().getTransaction().begin();
00212
              Store.getInstance().getEntityManager().persist(this);
00213
              Store.getInstance().getEntityManager().getTransaction().commit();
00214
00215
00216
          }
00217
00218
00222
00223
00224
              System.out.println("Echo: " + this.getClass().toString() + "telegram");
00225
00226
              dumpHeader();
              dumpData();
00228
          }
00229
00230 }
```

7.43 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr33nopo50um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr30um/enocean/test/ch/bfh/gr

Classes

· class Sender

Packages

• package ch.bfh.gr33nopo55um.enocean.test

7.44 Sender.java

```
00001 package ch.bfh.gr33nopo55um.enocean.test;
00003 import ch.bfh.gr33nopo55um.enocean.helper.ReadConfig;
00004 import it.polito.elite.enocean.enj.link.EnJLink;
00005 import it.polito.elite.enocean.protocol.serial.v3.network.packet.ESP3Packet;
00006
00007 import java.io.IOException;
80000
00014 public class Sender {
00015
00016
          public static void main(String args[]) {
00017
00018
              ReadConfig readConfig = new ReadConfig();
00020
                  System.out.println(readConfig.readPropertyValue("serialPort"));
00021
              } catch (IOException e) {
00022
                  e.printStackTrace();
              }
00023
00024
00025
              EnJLink linkLayer = null;
00026
00027
                  linkLayer = new EnJLink(readConfig.readPropertyValue("serialPort")
00028
00029
              } catch (Exception e) {
00030
                  e.printStackTrace();
00031
00032
              linkLayer.connect();
00033
00034
              * Loop for masssending 0x55 000a 07 01 eb a50000000c019134fc00 01 fffffffff 3d 00 2f \,
00035
00036
00037
              for (int i = 0; i < 10; i++) {</pre>
00038
                  byte packetType = (byte)1;
```

Reference

```
00039
                                                                                                                                                                                       { (byte)0xa5, (byte)0x00, (byte)0x00, (byte)0x00, (byte)0x0c, (byte)
                                                                              byte[] data = new byte[]
                         0x01, (byte) 0x91, (byte) 0x34, (byte) 0x6c, (byte) 0x00 };

byte[] optData = new byte[] { (byte) 0x01, (byte) 0xff, (byte
00040
                        )0x3d, (byte)0x00 };
00041
00042
                                                                            ESP3Packet esp3Packet = new ESP3Packet(packetType, data, optData);
                                                                             esp3Packet.buildPacket();
00044
                                                                             linkLayer.send(esp3Packet);
00045
                                                                           try {
00046
                                                                                            Thread.sleep(200);
00047
                                                                           } catch (InterruptedException e) {
00048
                                                                                           e.printStackTrace();
00049
                                                                            }
00050
00051
00052
                                                            * Loop for masssending 0x55 0007 07 01 7af6000022a13420 01 fffffffff 33 00 88 \,
00053
00054
00055
                                                            for (int i = 0; i < 10; i++) {
00056
                                                                            byte packetType = (byte)1;
                                                                            byte[] data = new byte[] { (byte)0x7a, (byte)0xf6, (byte)0x00, (byte)0x00, (byte)0x22, (byte)
                       0xa1, (byte) 0x34, (byte) 0x20 };
                                                                          byte[] optData = new byte[] { (byte)0x01, (byte)0xff, 
00058
                       )0x33, (byte)0x00 };
00059
00060
                                                                            ESP3Packet esp3Packet = new ESP3Packet(packetType, data, optData);
00061
                                                                             esp3Packet.buildPacket();
00062
                                                                            linkLayer.send(esp3Packet);
00063
                                                                           try {
00064
                                                                                             Thread.sleep(200);
00065
                                                                           } catch (InterruptedException e) {
00066
                                                                                           e.printStackTrace();
00067
00068
                                                          }
00069
                                        }
00070 }
```

7.45 /home/silas/IdeaProjects/EnOcean/src/ch/bfh/gr33nopo55um/enocean/test/ch/bfh/gr33nopo55um/e

Classes

· class Tester

Packages

package ch.bfh.gr33nopo55um.enocean.test

7.46 Tester.java

```
00001 package ch.bfh.gr33nopo55um.enocean.test;
00002
00003 import ch.bfh.gr33nopo55um.enocean.helper.ReadConfig;
00004 import ch.bfh.gr33nopo55um.enocean.helper.TimeLogger;
00005 import ch.bfh.gr33nopo55um.enocean.persistence.TelegramDBFactory;
00007 import java.io.IOException;
80000
00014 public class Tester {
00015
00016
          public static void main(String args[]) {
00017
00018
00019
              TimeLogger timeLogger = new TimeLogger();
00020
00021
              timeLogger.startLogTime();
00022
              timeLogger.setOperationName("Application");
00023
00024
              TelegramDBFactory telegramDBFactory = new TelegramDBFactory();
```

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```
00025
                    00026
00027
00028
                    for (int i = 0; i < 20; i++) {
    telegramDBFactory.telegramRouter("0x55000707017af6000022a1342001ffffffff3a0035");
    telegramDBFactory.telegramRouter("0x55000a0701eba50000000019134fc0001ffffffff3d002f");</pre>
00029
00030
00031
00032
00033
                    ReadConfig readConfig = new ReadConfig();
                   try {
    System.out.println(readConfig.readPropertyValue("serialPort"));
} catch (IOException e) {
    e.printStackTrace();
}
00034
00035
00036
00037
00038
00039
00040
                    timeLogger.endLogTime();
00042
              }
00043
00044
00045 }
```

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