Table Of Content

vision		2
	Config	2
	<u>Vision</u>	3
vision.	controller	4
	<u>Controller</u>	4
	<u>HeaterController</u>	6
	<u>PluginController</u>	7
	WindowController	9
vision.	model	11
	<u>Database</u>	12
	<u>Groundplan</u>	14
	JSONConverter	14
	Model	16
	ObjectFactory	20
	PluginLoader	21
	<u>Position</u>	21
	Sample	23
	<u>Sensor</u>	26
	<u>StaticObject</u>	30
	<u>Update</u>	30
	<u>UpdateThread</u>	32
	<u>Wall</u>	33
vision.	<u>view</u>	34
	<u>GuiAppState</u>	34
	<u>HeaterPlugin</u>	35
	MainAppState	36
	<u>Plugin</u>	37
	<u>View</u>	40
	WindowPlugin	42
Indev		15

Package vision

Class Summary

Config

Holds global configuration variables

Vision

Main class starts up the whole software

vision

Class Config

< Fields > < Constructors >

public class **Config** extends java.lang.Object

Holds global configuration variables

Fields

serverUrl

public static final java.lang.String serverUrl
 defines where to fetch the sensor updates

updateIntervall

public static final int updateIntervall defines how often the sensor data is refreshed

Constructors

Config

```
public Config()
```

vision

Class Vision

< Constructors > < Methods >

public class **Vision** extends java.lang.Object

Main class starts up the whole software

Constructors

Vision

public Vision()

<u>Methods</u>

main

public static void main(java.lang.String[] args)

Package vision.controller

Class Summary

Controller

the main controller that passes key presses, user inputs and events to the subcontrollers and the model

HeaterController

Controller for the heater-plugin

PluginController

abstract superclass for all plugin controllers

WindowController

vision.controller

Class Controller

```
< Constructors > < Methods >
```

public class Controller extends java.lang.Object

the main controller that passes key presses, user inputs and events to the subcontrollers and the model

Constructors

Controller

```
public Controller()
```

Methods

bind

binds the nifty instance to this controller

getModel

```
public Model getModel()
```

Getter of the property model

Returns:

Returns the model.

getPluginController

```
public java.util.Collection getPluginController()
```

Getter of the property pluginController

Returns:

Returns the pluginController.

getView

```
public <u>View</u> getView()
```

Getter of the property view

Returns:

Returns the view.

onEndScreen

```
public void onEndScreen()
```

onStartScreen

```
public void onStartScreen()
```

pluginButton

```
public void pluginButton(java.lang.String id)
```

pluginButton gets called by nifty if a button of a plugin was pressed and forwards it to the respective plugin controller

pluginCheckbox

```
public void pluginCheckbox(java.lang.String id)
```

gets called by nifty if a checkbox of a plugin was pressed and forwards it to the respective plugin controller

setModel

```
public void setModel(Model model)
```

Setter of the property model

Parameters:

model - The model to set.

setPluginController

```
public void setPluginController(java.util.Collection pluginController)
```

Setter of the property pluginController

Parameters:

pluginController - The pluginController to set.

setView

```
public void setView(View view)
```

Setter of the property view

Parameters:

view - The view to set.

vision.controller

Class HeaterController

public class **HeaterController** extends **PluginController**

Controller for the heater-plugin

Constructors

HeaterController

public HeaterController()

Methods

getHeaterPlugin

public HeaterPlugin getHeaterPlugin()

Getter of the property heaterPlugin

Returns:

Returns the heaterPlugin.

setHeaterPlugin

public void setHeaterPlugin(HeaterPlugin heaterPlugin)

Setter of the property heaterPlugin

Parameters:

heaterPlugin - The heaterPlugin to set.

vision.controller

Class PluginController

Direct Known Subclasses:

HeaterController, WindowController

```
< Constructors > < Methods >
```

public abstract class **PluginController** extends java.lang.Object

Constructors

PluginController

Methods

buttonPressed

```
public void buttonPressed(java.lang.String id)
```

callback function that gets called by the main controller if the user clicks on a plugin buttons

Parameters:

id - the id of the button

createButtons

```
public java.util.Map createButtons()
```

returns a List of plugin-defined buttons that the main system creates for the plugin

Returns:

a Map of button ids and their Text

createCheckBoxes

```
public java.util.Map createCheckBoxes()
```

returns a List of plugin-defined checkboxes (options) that the main system creates for the plugin **Returns**:

a Map of checkbox ids and their texts

getModel

```
public Model getModel()
```

Getter of the property model

Returns:

Returns the model.

setModel

```
public void setModel(Model model)
```

Setter of the property model

Parameters:

model - The model to set.

vision.controller

Class WindowController

< Constructors > < Methods >

public class **WindowController** extends <u>PluginController</u>

Constructors

WindowController

public WindowController()

Methods

getWindowPlugin

public WindowPlugin getWindowPlugin()

Getter of the property windowPlugin

Returns:

Returns the windowPlugin.

setWindowPlugin

public void setWindowPlugin(WindowPlugin windowPlugin)

Setter of the property windowPlugin

Parameters:

windowPlugin - The windowPlugin to set.

Package vision.model

Class Summary

Database

manages the database connection and saves sensordata

Groundplan

contains all static models, building architecture.

JSONConverter

Model

provides a facade for all objects belonging to the model

ObjectFactory

stub - autogenerated by jaxb

PluginLoader

loads all plugins from a configured subdirectory

Position

3-dimensional vector

Sample

holds a sensor measurement and the time it was taken

Sensor

The Sensor class holds all sensor data

StaticObject

implements a static object in the environment

Update

manages the server connection and fetches the sensor data

UpdateThread

updates the sensor data in the background.

Wall

vision.model

Class Database

```
< Constructors > < Methods >
```

public class **Database** extends java.lang.Object

manages the database connection and saves sensordata

Constructors

Database

```
public Database()
```

Methods

getAllSensorData

```
public java.util.List getAllSensorData(int id)
```

Parameters:

id - id of the sensor

Returns:

a list of all sensor samples belonging to the given sensor

getDaten

```
public Model getDaten()
```

Getter of the property daten

Returns:

Returns the daten.

getSensordata

fetches the sensor samples collected

getUpdate

```
public <u>Update</u> getUpdate()
```

Getter of the property update

Returns:

Returns the update.

setDaten

```
public void setDaten(Model daten)
```

Setter of the property daten

Parameters:

daten - The daten to set.

setUpdate

```
public void setUpdate(Update update)
```

Setter of the property update

Parameters:

update - The update to set.

updateSensors

saves a sensor object in the database

vision.model

Class Groundplan

```
< Constructors > < Methods >
```

public class **Groundplan** extends java.lang.Object

contains all static models, building architecture.

Constructors

Groundplan

public Groundplan()

Methods

load

public void load()

vision.model

Class JSONConverter

< Constructors > < Methods >

public class **JSONConverter** extends java.lang.Object

Constructors

JSONConverter

public JSONConverter()

Methods

addSensorToList

public void addSensorToList()

convert

public void convert()

getSensorList

public java.util.List getSensorList()

getUpdate

public <u>Update</u> getUpdate()

Getter of the property update

Returns:

Returns the update.

getUrl

public void getUrl()

setUpdate

```
public void setUpdate(Update update)
```

Setter of the property update

Parameters:

update - The update to set.

vision.model

Class Model

```
< Constructors > < Methods >
```

public class **Model** extends java.lang.Object

provides a facade for all objects belonging to the model

Constructors

Model

```
public Model(View view)
```

Methods

getDatenbank

```
public Database getDatenbank()
```

Getter of the property datenbank

Returns:

Returns the datenbank.

getGroundplan

```
public Groundplan getGroundplan()
```

Getter of the property groundplan

Returns:

Returns the groundplan.

getPlugin

```
public java.util.Collection getPlugin()
```

Getter of the property plugin

Returns:

Returns the plugin.

getPluginList

```
public java.util.List getPluginList()
```

Getter of the property pluginList

Returns:

Returns the pluginList.

getPluginLoader

```
public PluginLoader getPluginLoader()
```

Getter of the property pluginLoader

Returns:

Returns the pluginLoader.

getSensor

```
public java.util.Collection getSensor()
```

Getter of the property sensor

Returns:

Returns the sensor.

getSensordata

getTaggedSensors

public void getTaggedSensors(java.util.List tags)

getUpdate

public <u>Update</u> getUpdate()

Getter of the property update

Returns:

Returns the update.

getView

public <u>View</u> getView()

Getter of the property view

Returns:

Returns the view.

setDatenbank

public void setDatenbank(Database datenbank)

Setter of the property datenbank

Parameters:

datenbank - The datenbank to set.

setGroundplan

public void setGroundplan(Groundplan groundplan)

Setter of the property groundplan

Parameters:

groundplan - The groundplan to set.

setPlugin

public void setPlugin(java.util.Collection plugin)

Setter of the property plugin

Parameters:

plugin - The plugin to set.

setPluginList

public void setPluginList(java.util.List pluginList)

Setter of the property pluginList

Parameters:

pluginList - The pluginList to set.

setPluginLoader

public void setPluginLoader(PluginLoader pluginLoader)

Setter of the property pluginLoader

Parameters:

pluginLoader - The pluginLoader to set.

setSensor

public void setSensor(java.util.Collection sensor)

Setter of the property sensor

Parameters:

sensor - The sensor to set.

setUpdate

```
public void setUpdate(Update update)
```

Setter of the property update

Parameters:

update - The update to set.

setView

```
public void setView(View view)
```

Setter of the property view

Parameters:

view - The view to set.

vision.model

Class ObjectFactory

< Constructors >

class **ObjectFactory** extends java.lang.Object

stub - autogenerated by jaxb

Constructors

ObjectFactory

ObjectFactory()

vision.model

Class PluginLoader

< Constructors > < Methods >

public class **PluginLoader** extends java.lang.Object

loads all plugins from a configured subdirectory

Constructors

PluginLoader

public PluginLoader()

Methods

loadPlugins

public java.util.List loadPlugins()

vision.model

Class Position

< Constructors > < Methods >

public class **Position** extends java.lang.Object

3-dimensional vector

Constructors

Position

```
public Position()
```

Methods

getSensor

```
public <u>Sensor</u> getSensor()

Getter of the property sensor

Returns:

Returns the sensor.
```

getX

```
public float getX()

Getter of the property x

Returns:

Returns the x.
```

getY

```
public float getY()

Getter of the property y

Returns:

Returns the y.
```

getZ

```
public float getZ()

Getter of the property z

Returns:

Returns the z.
```

setSensor

```
public void setSensor(Sensor sensor)

Setter of the property sensor

Parameters:
    sensor - The sensor to set.
```

setX

```
public void setX(float x)
Setter of the property x
Parameters:
    x - The x to set.
```

setY

```
public void setY(float y)
Setter of the property y
Parameters:
    y - The y to set.
```

setZ

```
public void setZ(float z)
Setter of the property z
Parameters:
    z - The z to set.
```

vision.model

Class Sample

< Constructors > < Methods >

public class **Sample** extends java.lang.Object

holds a sensor measurement and the time it was taken

Constructors

Sample

public Sample()

Methods

getMesswert

public void getMesswert()

getSensor

```
public <u>Sensor</u> getSensor()
```

Getter of the property sensor

Returns:

Returns the sensor.

getTyp

```
public java.lang.String getTyp()
```

Getter of the property typ

Returns:

Returns the typ.

getUnit

```
public java.lang.String getUnit()
```

Getter of the property unit

Returns:

Returns the unit.

getUpdate

```
public int getUpdate()
```

Getter of the property update

Returns:

Returns the update.

getValue

```
public float getValue()
```

Getter of the property value

Returns:

Returns the value.

setMesswert

```
public void setMesswert()
```

setSensor

```
public void setSensor(Sensor sensor)
```

Setter of the property sensor

Parameters:

sensor - The sensor to set.

setTyp

```
public void setTyp(java.lang.String typ)
```

Setter of the property typ

Parameters:

typ - The typ to set.

setUnit

```
public void setUnit(java.lang.String unit)
```

Setter of the property unit

Parameters:

unit - The unit to set.

setUpdate

```
public void setUpdate(int update)
```

Setter of the property update

Parameters:

update - The update to set.

setValue

```
public void setValue(float value)
```

Setter of the property value

Parameters:

value - The value to set.

vision.model

Class Sensor

< Constructors > < Methods >

public class **Sensor** extends java.lang.Object

The Sensor class holds all sensor data

Constructors

Sensor

```
public Sensor()
```

Methods

getDescription

Returns:

```
public java.lang.String getDescription()

Getter of the property Description
```

Returns the description.

getld

```
public java.lang.String getId()
```

Getter of the property id

Returns:

Returns the id.

getMesswert

```
public <u>Sample</u> getMesswert()
```

Getter of the property messwert

Returns:

Returns the messwert.

getPosition

```
public Position getPosition()
```

Getter of the property position

Returns:

Returns the position.

getTags

```
public java.util.List getTags()
```

Getter of the property tags

Returns:

Returns the tags.

getUpdate

```
public int getUpdate()
```

Getter of the property update

Returns:

Returns the update.

isRegistered

```
public boolean isRegistered()
```

Getter of the property registered

Returns:

Returns the registered.

setDescription

```
public void setDescription(java.lang.String description)
```

Setter of the property Description

Parameters:

Description - The description to set.

setId

```
public void setId(java.lang.String id)
```

Setter of the property id

Parameters:

id - The id to set.

setMesswert

public void setMesswert(Sample messwert)

Setter of the property messwert

Parameters:

messwert - The messwert to set.

setPosition

public void setPosition(Position position)

Setter of the property position

Parameters:

position - The position to set.

setRegistered

public void setRegistered(boolean registered)

Setter of the property registered

Parameters:

registered - The registered to set.

setTags

```
public void setTags(java.util.List tags)
```

Setter of the property tags

Parameters:

tags - The tags to set.

setUpdate

public void setUpdate(int update)

Setter of the property update

Parameters:

update - The update to set.

vision.model

Class StaticObject

< Constructors >

public class **StaticObject** extends java.lang.Object

implements a static object in the environment

Constructors

StaticObject

public StaticObject()

vision.model

Class Update

< Constructors > < Methods >

public class **Update** extends java.lang.Object

manages the server connection and fetches the sensor data

Constructors

Update

```
public Update()
```

Methods

getAllData

public void getAllData()

getDatabase

```
public Database getDatabase()
```

Getter of the property database

Returns:

Returns the database.

getDaten

```
public Model getDaten()
```

Getter of the property daten

Returns:

Returns the daten.

getJSONConverter

```
public JSONConverter getJSONConverter()
```

Getter of the property jSONConverter

Returns:

Returns the jsonConverter.

setDatabase

```
public void setDatabase(Database database)
```

Setter of the property database

Parameters:

database - The database to set.

setDaten

```
public void setDaten(Model daten)
```

Setter of the property daten

Parameters:

daten - The daten to set.

setJSONConverter

```
public void setJSONConverter(<u>JSONConverter</u> jsonConverter)
```

Setter of the property jSONConverter

Parameters:

jSONConverter - The jsonConverter to set.

store

```
public void store(int time)
```

vision.model

Class UpdateThread

All Implemented Interfaces:

java.lang.Runnable

```
< Constructors > < Methods >
```

public class **UpdateThread** extends java.lang.Thread

updates the sensor data in the background.

Constructors

UpdateThread

```
public UpdateThread()
```

Methods

getUpdate

Returns:

```
public Update getUpdate()

Getter of the property update
```

Returns the update.

setUpdate

```
public void setUpdate(Update update)
Setter of the property update
Parameters:
     update - The update to set.
```

vision.model

Class Wall

< Constructors >

public class **Wall** extends java.lang.Object

Constructors

Wall

```
public Wall()
```

Package vision.view

Class Summary

GuiAppState

renders the user interface

HeaterPlugin

MainAppState

Renders all static objects and rooms

Plugin

View

main class of the view package.

WindowPlugin

vision.view

Class GuiAppState

< Constructors > < Methods >

public class **GuiAppState** extends AbstractAppState

renders the user interface

Constructors

GuiAppState

```
public GuiAppState()
```

Methods

initialize

vision.view

Class HeaterPlugin

< Constructors > < Methods >

public class **HeaterPlugin** extends <u>Plugin</u>

Author:

idle This class represents the plugins of the heater

Constructors

HeaterPlugin

```
public HeaterPlugin()
```

Methods

clientUpdate

```
protected void clientUpdate(Application application)
    updates the client
    Overrides:
        clientUpdate in class Plugin
```

getHeaterController

public HeaterController getHeaterController()

Getter of the property heaterController

Returns:

Returns the heaterController.

getHeaters

```
public java.util.List getHeaters()
```

Getter of the property heaters

Returns:

Returns the heaters1.

setHeaterController

public void setHeaterController(HeaterController heaterController)

Setter of the property heaterController

Parameters:

heaterController - The heaterController to set.

setHeaters

```
public void setHeaters(java.util.List heaters)
```

Setter of the property Heizungen

Parameters:

Heizungen - The heizungen to set.

vision.view

Class MainAppState

public class MainAppState
extends AbstractAppState

Renders all static objects and rooms

Constructors

MainAppState

public MainAppState()

Methods

initialize

vision.view

Class Plugin

Direct Known Subclasses:

HeaterPlugin, WindowPlugin

< Constructors > < Methods >

public abstract class **Plugin** extends AbstractAppState

Constructors

Plugin

```
public Plugin()
```

Methods

clientUpdate

protected void clientUpdate(Application application)

getApp

```
public Application getApp()
```

Getter of the property app

Returns:

Returns the app.

getApplication

protected Application getApplication()

getDaten

```
public Model getDaten()
```

Getter of the property daten

Returns:

Returns the daten.

getSensors

```
public java.util.List getSensors()
```

Getter of the property sensors

Returns:

Returns the sensors.

getTags

```
public java.lang.String[] getTags()
```

Getter of the property tags

Returns:

Returns the tags.

initialize

setDaten

```
public void setDaten(Model daten)
```

Setter of the property daten

Parameters:

daten - The daten to set.

setSensors

```
public void setSensors(java.util.List sensors)
```

Setter of the property sensors

Parameters:

sensors - The sensors to set.

setTags

```
public void setTags(java.lang.String[] tags)
```

Setter of the property tags

Parameters:

tags - The tags to set.

update

public void update(Application application)

vision.view

Class View

```
< Constructors > < Methods >
```

public class **View** extends SimpleApplication

main class of the view package. contains the main update loop and calls the plugin and main views

Constructors

View

public View()

Methods

getController

public Controller getController()

Getter of the property controller

Returns:

Returns the controller.

getDaten

```
public Model getDaten()
```

Getter of the property daten

Returns:

Returns the daten.

getGuiAppState

```
public <u>GuiAppState</u> getGuiAppState()
```

Getter of the property guiAppState

Returns:

Returns the guiAppState.

getMainAppState

```
public MainAppState getMainAppState()
```

Getter of the property mainAppState

Returns:

Returns the mainAppState.

setController

```
public void setController(Controller controller)
```

Setter of the property controller

Parameters:

controller - The controller to set.

setDaten

```
public void setDaten(Model daten)
```

Setter of the property daten

Parameters:

daten - The daten to set.

setGuiAppState

public void setGuiAppState(GuiAppState guiAppState)

Setter of the property guiAppState

Parameters:

guiAppState - The guiAppState to set.

setMainAppState

public void setMainAppState(MainAppState mainAppState)

Setter of the property mainAppState

Parameters:

mainAppState - The mainAppState to set.

simpleInitApp

public void simpleInitApp()

initializes the view

simpleUpdate

public void simpleUpdate()

is called every frame by jmonkey

vision.view

Class WindowPlugin

< Constructors > < Methods >

Constructors

WindowPlugin

public WindowPlugin()

Methods

clientUpdate

protected void clientUpdate(Application application)

Overrides:

clientUpdate in class Plugin

getWindowController

public WindowController getWindowController()

Getter of the property windowController

Returns:

Returns the windowController.

getWindows

```
public java.util.List getWindows()
```

Getter of the property windows

Returns:

Returns the windows.

setWindowController

public void setWindowController(WindowController)

Setter of the property windowController

Parameters:

windowController - The windowController to set.

setWindows

public void setWindows(java.util.List windows)

Setter of the property windows

Parameters:

windows - The windows to set.

INDEX

Α		G
	addSensorToList 15	getAllData 31
В		<u>getAllSensorData</u> 12 <u>getApp</u> 38
D		getApplication 38
	<u>bind</u> 4	getController 40
	buttonPressed 8	getDatabase 31
_		getDaten 12
C		getDaten 31
	clientUpdate 35	getDaten 38
	clientUpdate 38	<u>getDaten</u> 41 <u>getDatenbank</u> 16
	clientUpdate 43	getDescription 27
	convert 15	getGroundplan 17
	createButtons 8	getGuiAppState 41
	createCheckBoxes 8	getHeaterController 36
	Config 2 Config 2	getHeaterPlugin 7
	Controller 4	getHeaters 36
	Controller 4	<u>getld</u> 27
	<u></u>	getJSONConverter 31
D		getMainAppState 41
	D / I	<u>getMesswert</u> 24 <u>getMesswert</u> 27
	Database 12	getModel 5
	Database 12	getModel 9
		getPlugin 17
		getPluginController 5
		getPluginList 17
		getPluginLoader 17
		getPosition 27
		getSensor 17
		<u>getSensor</u> 22 <u>getSensor</u> 24
		<u>getSensordata</u> 13
		getSensordata 18
		getSensorList 15
		getSensors 38
		getTaggedSensors 18
		getTags 28
		getTags 39
		<u>getTyp</u> 24 <u>getUnit</u> 24
		<u>getUpdate</u> 13
		getUpdate 15
		getUpdate 18
		getUpdate 25
		getUpdate 28
		getUpdate 33
		<u>getUrl</u> 15
		<u>getValue</u> 25 <u>getView</u> 5
		getView 18
		getWindowController 4
		getWindowPlugin 10
		getWindows 43
		<u>getX</u> 22
		<u>getY</u> 22
		getZ 22
		Groundplan 14
		<u>Groundplan</u> 14 <u>GuiAppState</u> 34
		GuiAppState 34
		The state of the s

Н		S	
	HeaterController 6		serverUrl 2
	HeaterController 7		setController 41
	HeaterPlugin 35		setDatabase 31
	HeaterPlugin 35		setDaten 13
_			setDaten 32
			setDaten 39
	initialize 35		setDaten 41
	initialize 37		setDatenbank 18
	initialize 39		setDescription 28 setGroundplan 19
	isRegistered 28		setGuiAppState 42
			setHeaterController 36
J			setHeaterPlugin 7
	ISONConvertor 14		setHeaters 36
	JSONConverter 14 JSONConverter 15		<u>setId</u> 28
	<u>JOONCOHVERER</u> 10		setJSONConverter 32
L			setMainAppState 42
_			setMesswert 25
	<u>load</u> 14		setMesswert 29
	<u>loadPlugins</u> 21		setModel 6 setModel 9
N #			setPlugin 19
M			setPluginController 6
	main 3		setPluginList 19
	MainAppState 36		setPluginLoader 19
	MainAppState 37		setPosition 29
	<u>Model</u> 16		setRegistered 29
	<u>Model</u> 16		setSensor 19
_			setSensor 23
O			setSensor 25
	onEndScreen 5		setSensors 39
	onStartScreen 5		setTags 29
	ObjectFactory 20		setTags 39 setTyp 25
	ObjectFactory 20		setUnit 26
_			setUpdate 13
Р			setUpdate 16
	pluginButton 5		setUpdate 20
	pluginCheckbox 6		setUpdate 26
	Plugin 37		setUpdate 29
	<u>Plugin</u> 37		setUpdate 33
	PluginController 7		setValue 26 setView 6
	PluginController 8		setView 20
	PluginLoader 21		setWindowController 43
	PluginLoader 21		setWindowPlugin 10
	Position 21 Position 22		setWindows 44
	FOSITION 22		<u>setX</u> 23
			<u>setY</u> 23
			<u>setZ</u> 23
			simpleInitApp 42
			simpleUpdate 42
			store 32
			<u>Sample</u> 23 <u>Sample</u> 24
			Sensor 26
			<u>Sensor</u> 27
			StaticObject 30
			StaticObject 30

U <u>update</u> ... 40 updateIntervall ... 2 updateSensors ... 13 <u>Update</u> ... 30 <u>Update</u> ... 30 UpdateThread ... 32 UpdateThread ... 33 ٧ <u>View</u> ... 40 <u>View</u> ... 40 <u>Vision</u> ... 3 Vision ... 3 Wall ... 33 Wall ... 33 WindowController ... 9 WindowController ... 9 WindowPlugin ... 42 WindowPlugin ... 43