

## Shared Library

### Appendix C

Generated by Doxygen 1.8.3.1

Sun Feb 24 2013 13:31:10



# Contents

<b>1</b>	<b>Hierarchical Index</b>	<b>1</b>
1.1	Class Hierarchy . . . . .	1
<b>2</b>	<b>Class Index</b>	<b>3</b>
2.1	Class List . . . . .	3
<b>3</b>	<b>Class Documentation</b>	<b>5</b>
3.1	AbstractBehaviour Class Reference . . . . .	5
3.2	AbstractNetwork Class Reference . . . . .	5
3.3	AIState Class Reference . . . . .	6
3.4	ArtificialIntelligence Class Reference . . . . .	7
3.5	AssaultRifle Class Reference . . . . .	8
3.6	AttackState Class Reference . . . . .	8
3.7	Box3Tests Class Reference . . . . .	9
3.8	BSPTree Class Reference . . . . .	9
3.9	BulletBehaviour Class Reference . . . . .	10
3.10	CommandModel Class Reference . . . . .	10
3.11	CommandQueue Class Reference . . . . .	11
3.12	CompareShapesAstar Struct Reference . . . . .	11
3.13	ComplexDataTests Class Reference . . . . .	11
3.14	Data Class Reference . . . . .	12
3.15	DataHelper Class Reference . . . . .	13
3.16	DataHelperTests Class Reference . . . . .	13
3.17	DataTests Class Reference . . . . .	13
3.18	DedicatedModel Struct Reference . . . . .	14
3.19	EnemyMixin Class Reference . . . . .	14
3.20	GameObject Class Reference . . . . .	15
3.21	IBroadcast Class Reference . . . . .	16
3.22	IPacketEventHandler Class Reference . . . . .	16
3.23	ISettings Struct Reference . . . . .	17
3.24	LightBullet Class Reference . . . . .	18
3.25	LightCrate Class Reference . . . . .	19

3.26	LightEnemy Class Reference	19
3.27	LightFactory Class Reference	20
3.28	LightObstacle Class Reference	20
3.29	LightSoldier Class Reference	21
3.30	LightTree Class Reference	21
3.31	LightTrigger Class Reference	22
3.32	LightWater Class Reference	22
3.33	LightWeapon Class Reference	23
3.34	Line2Intersection Class Reference	23
3.35	Line2Tests Class Reference	24
3.36	Mission Class Reference	24
3.37	MoveState Class Reference	25
3.38	NetworkRegistry Class Reference	25
3.39	ObjCapture Class Reference	26
3.40	ObjDefend Class Reference	26
3.41	ObjDestroy Class Reference	27
3.42	Objective Class Reference	27
3.43	Packet Class Reference	28
3.44	PacketEventMixin Class Reference	29
3.45	PacketReader Class Reference	29
3.46	PacketTypeHelper Struct Reference	30
3.47	Pathfinding Class Reference	30
3.48	PathWalker Class Reference	31
3.49	PlayerModel Class Reference	31
3.50	Rocket Class Reference	31
3.51	RocketLauncher Class Reference	32
3.52	RouteDetails Struct Reference	32
3.53	Serializable Class Reference	33
3.54	Services Class Reference	33
3.55	SharedException Class Reference	33
3.56	Space Class Reference	34
3.57	Squad Class Reference	34
3.58	SquadAttack Class Reference	35
3.59	SquadFlocking Class Reference	35
3.60	SquadMove Class Reference	36
3.61	StandardBullet Class Reference	37
3.62	Test Class Reference	37
3.63	TestingTests Class Reference	39
3.64	TestSuite Class Reference	39
3.65	ThreadedReader Class Reference	39

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3.66 ThreadedWriter Class Reference . . . . .	40
3.67 UID Class Reference . . . . .	40
3.68 Vector3StdMap Class Reference . . . . .	40
3.69 Vector3Tests Class Reference . . . . .	41
3.70 WeaponBehaviour Class Reference . . . . .	41
 <b>Index</b>	 <b>42</b>



# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

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

AbstractBehaviour . . . . .	5
BulletBehaviour . . . . .	10
Rocket . . . . .	31
StandardBullet . . . . .	37
WeaponBehaviour . . . . .	41
AssaultRifle . . . . .	8
RocketLauncher . . . . .	32
CommandModel . . . . .	10
CommandQueue . . . . .	11
CompareShapesAstar . . . . .	11
Composite	
Squad . . . . .	34
Composite	
ArtificialIntelligence . . . . .	7
PathWalker . . . . .	31
Data . . . . .	12
DataHelper . . . . .	13
DedicatedModel . . . . .	14
EnemyMixin . . . . .	14
LightEnemy . . . . .	19
Entity	
GameObject . . . . .	15
LightBullet . . . . .	18
LightCrate . . . . .	19
LightEnemy . . . . .	19
LightObstacle . . . . .	20
LightSoldier . . . . .	21
LightTree . . . . .	21
LightTrigger . . . . .	22
LightWater . . . . .	22
LightWeapon . . . . .	23
Mission . . . . .	24
Objective . . . . .	27
ObjCapture . . . . .	26
ObjDefend . . . . .	26
ObjDestroy . . . . .	27
Pathfinding . . . . .	30

IBroadcast . . . . .	16
IHandleMessage	
AIState . . . . .	6
AttackState . . . . .	8
MoveState . . . . .	25
SquadAttack . . . . .	35
SquadFlocking . . . . .	35
SquadMove . . . . .	36
IPacketEventHandler . . . . .	16
AbstractNetwork . . . . .	5
ThreadedReader . . . . .	39
ISettings . . . . .	17
IUpdateable	
AIState . . . . .	6
Layer	
BSPTree . . . . .	9
LightFactory . . . . .	20
NetworkRegistry . . . . .	25
Packet . . . . .	28
PacketEventMixin . . . . .	29
AbstractNetwork . . . . .	5
PacketReader . . . . .	29
PacketTypeHelper . . . . .	30
PhantomException	
SharedException . . . . .	33
PlayerModel . . . . .	31
RouteDetails . . . . .	32
Serializable . . . . .	33
Services . . . . .	33
Space . . . . .	34
Test . . . . .	37
Box3Tests . . . . .	9
ComplexDataTests . . . . .	11
DataHelperTests . . . . .	13
DataTests . . . . .	13
Line2Intersection . . . . .	23
Line2Tests . . . . .	24
TestingTests . . . . .	39
Vector3StdMap . . . . .	40
Vector3Tests . . . . .	41
TestSuite . . . . .	39
Thread	
ThreadedReader . . . . .	39
ThreadedWriter . . . . .	40
UID . . . . .	40



## Chapter 2

# Class Index

### 2.1 Class List

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

AbstractBehaviour	5
AbstractNetwork	5
AIState	6
ArtificialIntelligence	7
AssaultRifle	8
AttackState	8
Box3Tests	9
BSPTree	9
BulletBehaviour	10
CommandModel	10
CommandQueue	11
CompareShapesAstar	11
ComplexDataTests	11
Data	12
DataHelper	13
DataHelperTests	13
DataTests	13
DedicatedModel	14
EnemyMixin	14
GameObject	15
IBroadcast	16
IPacketEventHandler	16
ISettings	17
LightBullet	18
LightCrate	19
LightEnemy	19
LightFactory	20
LightObstacle	20
LightSoldier	21
LightTree	21
LightTrigger	22
LightWater	22
LightWeapon	23
Line2Intersection	23
Line2Tests	24
Mission	24
MoveState	25
NetworkRegistry	25

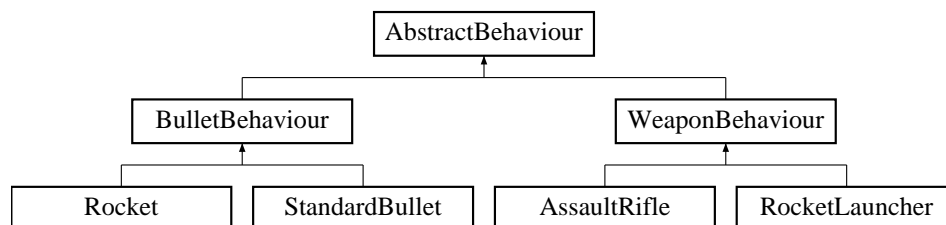
ObjCapture	26
ObjDefend	26
ObjDestroy	27
Objective	27
Packet	28
PacketEventMixin	29
PacketReader	29
PacketTypeHelper	30
Pathfinding	30
PathWalker	31
PlayerModel	31
Rocket	31
RocketLauncher	32
RouteDetails	32
Serializable	33
Services	33
SharedException	33
Space	34
Squad	34
SquadAttack	35
SquadFlocking	35
SquadMove	36
StandardBullet	37
Test	37
TestingTests	39
TestSuite	39
ThreadedReader	39
ThreadedWriter	40
UID	40
Vector3StdMap	40
Vector3Tests	41
WeaponBehaviour	41

## Chapter 3

# Class Documentation

### 3.1 AbstractBehaviour Class Reference

Inheritance diagram for AbstractBehaviour:



#### Public Member Functions

- virtual void **render** (phantom::Graphics \*g)=0
- string **getType** ()

#### Protected Member Functions

- virtual void **checkType** ()

#### Protected Attributes

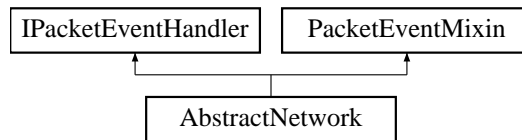
- string **\_typeName**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/AbstractBehaviour.h

### 3.2 AbstractNetwork Class Reference

Inheritance diagram for AbstractNetwork:



### Public Member Functions

- bool **isConnected** ()
- void **connect** (string host, int port)
- virtual void **sendPacket** ([Packet](#) \*packet)
- virtual void **onPacket** ([Packet](#) \*packet)
- virtual void **onConnectionSuccess** (void)=0
- virtual void **onConnectionFail** (const yaxl::socket::SocketException &ex)=0
- virtual void **onDisconnect** (void)=0

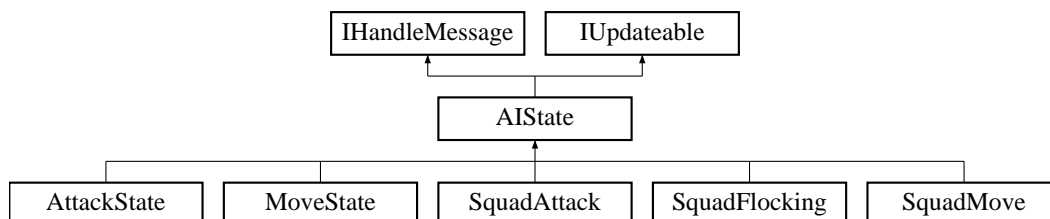
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/AbstractNetwork.h

## 3.3 AIState Class Reference

Inheritance diagram for AIState:



### Public Member Functions

- virtual void **construct** ()
- virtual void **destruct** ()
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- virtual void **update** (const phantom::PhantomTime &time)=0
- bool **isEnabled** ()

### Public Attributes

- [ArtificialIntelligence](#) \* **ai**

### Protected Member Functions

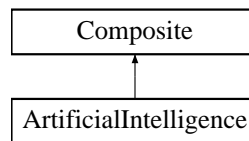
- `GameObject * getOwner ()`

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/AIState.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/AIState.cpp

## 3.4 ArtificialIntelligence Class Reference

Inheritance diagram for ArtificialIntelligence:



### Public Member Functions

- virtual void **update** (const phantom::PhantomTime &time)
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- void **insertState** (AIState \*state)
- void **disableAll** (void)
- template<class T >  
T \* **getState** ()
- template<class T >  
T \* **setActive** ()
- template<class T >  
T \* **setNonActive** ()
- GameObject \* **getOwner** (void)
- template<class T >  
T **getOwner** (void)

### Static Public Member Functions

- static vector< GameObject \* > \* **getSoldiers** ()

### Public Attributes

- GameObject::ResidenceState **runat**
- deque< AIState \* > **states**

### Static Public Attributes

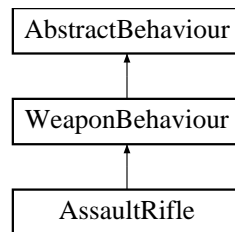
- static vector< GameObject \* > **soldiers**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/ArtificialIntelligence.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/ArtificialIntelligence.cpp

### 3.5 AssaultRifle Class Reference

Inheritance diagram for AssaultRifle:



#### Public Member Functions

- virtual void **render** (phantom::Graphics \*g)

#### Protected Member Functions

- void **setType** ()

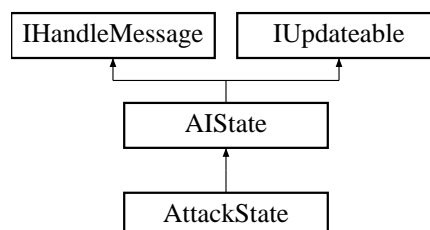
#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/AssaultRifle.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/AssaultRifle.cpp

### 3.6 AttackState Class Reference

Inheritance diagram for AttackState:



#### Public Member Functions

- **AttackState** ([GameObject](#) \*enemyG, float attackRange)
- void **update** (const phantom::PhantomTime &time)

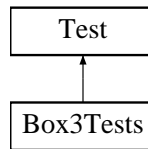
#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/AttackState.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/AttackState.cpp

## 3.7 Box3Tests Class Reference

Inheritance diagram for Box3Tests:



### Public Member Functions

- virtual void **run** ()

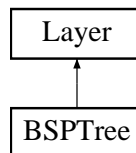
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/Box3Tests.h

## 3.8 BSPTree Class Reference

Inheritance diagram for BSPTree:



### Public Member Functions

- **BSPTree** (float initialWidth, float initialHeight, float smallestSize, unsigned int collisionMaxPerSpace)
- virtual void **addComponent** (Composite \*component)
- virtual void **update** (const PhantomTime &time)
- virtual void **removeComponent** (Composite \*who)
- virtual void **destroyComponent** (Composite \*who)
- void **enableDebug** ()
- void **disableDebug** ()
- bool **inlineOfSight** (Entity \*eye, Entity \*target)
- bool **inlineOfSight** (Entity \*eye, const Vector3 &b)
- bool **inlineOfSight** (const Vector3 &a, const Vector3 &b)
- vector< Entity \* > **getEntitiesFromBox** (const Box3 &location)
- void **getEntitiesAt** (vector< Entity \* > &out, Vector3 &location)

### Public Attributes

- [Pathfinding](#) \* **pathfinding**

## Friends

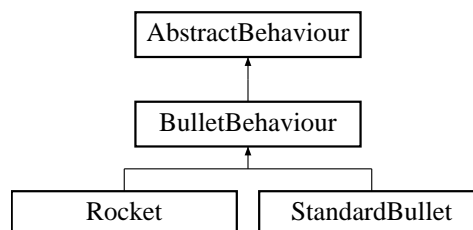
- class **Space**
- class **Pathfinding**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/BSPTree.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/BSPTree.cpp

## 3.9 BulletBehaviour Class Reference

Inheritance diagram for BulletBehaviour:



### Public Member Functions

- virtual void **onCollision** (Composite \*entity, CollisionData &collisionData)
- virtual void **update** (const PhantomTime &time)
- virtual Vector3 **setDirection** (Vector3 &direction)
- virtual void **render** (Graphics \*g)=0

### Protected Member Functions

- virtual void **setType** ()

### Protected Attributes

- Vector3 **\_position**
- Vector3 **\_direction**
- Vector3 **\_velocity**
- double **\_creationTime**
- double **\_ttl**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/BulletBehaviour.h

## 3.10 CommandModel Class Reference

### Public Member Functions

- [Data](#) **toData** ()



### Static Public Member Functions

- static [CommandModel](#) **fromData** ([Data](#) &data)

### Public Attributes

- string **UID**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/models/CommandModel.h

## 3.11 CommandQueue Class Reference

### Public Types

- typedef std::function< void(void)> **Command**

### Public Member Functions

- void **run** (void)
- void **add** (Command command)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/CommandQueue.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/CommandQueue.cpp

## 3.12 CompareShapesAstar Struct Reference

### Public Member Functions

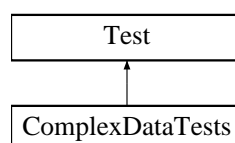
- bool **operator()** (const [Space](#) \*a, const [Space](#) \*b)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/Space.h

## 3.13 ComplexDataTests Class Reference

Inheritance diagram for ComplexDataTests:



## Public Member Functions

- virtual void **run** ()

## Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/ComplexDataTests.h

## 3.14 Data Class Reference

### Public Types

- typedef std::map< std::string, [Data](#) >::iterator **iterator**
- typedef std::pair< std::string, [Data](#) > **KeyValue**

### Public Member Functions

- [Data](#) & **operator=** (const std::string &value)
- [Data](#) & **operator=** (const int &value)
- [Data](#) & **operator=** (const float &value)
- **operator int** ()
- **operator std::string** ()
- **operator float** ()
- [Data](#) & **operator()** (const std::string &key)
- [Data](#) & **operator()** (const int &key)
- std::map< std::string, [Data](#) >::iterator **begin** ()
- std::map< std::string, [Data](#) >::iterator **end** ()
- bool **isSubset** (void)
- bool **hasKey** (const int &key)
- bool **hasKey** (const string &key)
- [Data](#) & **parseJson** (std::string data)
- std::string **toString** ()
- std::string **toJson** (const bool &pretty=false)
- template<class T > std::vector< T > **toVector** ()

### Static Public Member Functions

- static [Data](#) **fromJson** (const std::string &json)
- static [Data](#) **fromPacket** ([Packet](#) \*packet)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/serialization/Data.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/serialization/Data.cpp

## 3.15 DataHelper Class Reference

### Static Public Member Functions

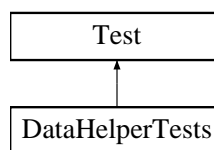
- static [Data](#) **routeToData** (Pathfinding::Route &route)
- static Pathfinding::Route **dataToRoute** ([Data](#) &data)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/serialization/DataHelper.h

## 3.16 DataHelperTests Class Reference

Inheritance diagram for DataHelperTests:



### Public Member Functions

- virtual void **run** ()

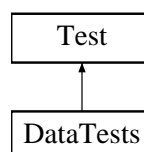
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/DataHelperTests.h

## 3.17 DataTests Class Reference

Inheritance diagram for DataTests:



### Public Member Functions

- virtual void **run** ()

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/DataTests.h

### 3.18 DedicatedModel Struct Reference

#### Public Member Functions

- [Data](#) **toData** ()

#### Static Public Member Functions

- static [DedicatedModel](#) **fromData** ([Data](#) &data)

#### Public Attributes

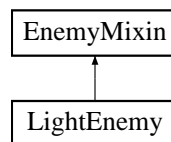
- int **uid**
- string **session**
- string **name**
- int **port**
- string **ipv4**
- double **lastPing**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/models/DedicatedModel.h

### 3.19 EnemyMixin Class Reference

Inheritance diagram for EnemyMixin:



#### Public Member Functions

- **EnemyMixin** ([GameObject](#) \*me)
- virtual void **move** (const Vector3 &location)=0
- void **attack** ([GameObject](#) \*victim)
- void **shootAt** (UID::Type uid)
- void **stopShooting** ()
- bool **hasVictim** ()
- [GameObject](#) \* **getVictim** ()
- bool **isAttacking** ()

#### Protected Attributes

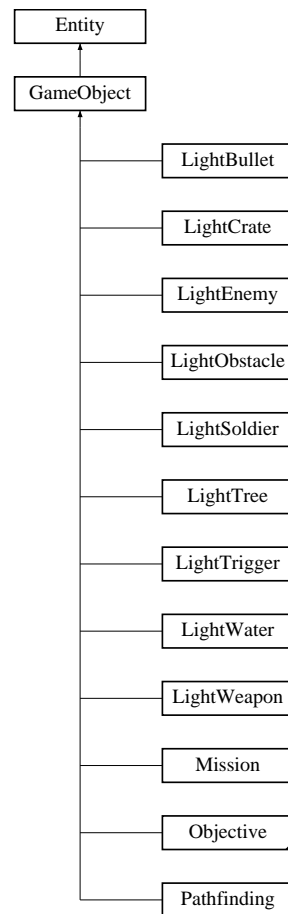
- [GameObject](#) \* **\_victim**
- bool **\_isAttacking**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/EnemyMixin.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/EnemyMixin.cpp

## 3.20 GameObject Class Reference

Inheritance diagram for GameObject:



### Public Types

- enum **ResidenceState** { **CLIENT** = 1, **SERVER** = 2, **BOTH** = 3 }

### Public Member Functions

- bool **canHover** (void)
- virtual void **onMouseHover** (const Vector3 &mouseLocationWorld, const Vector3 &mouseLocationScreen)
- virtual void **onClick** (MouseState \*mousestate)
- virtual void **onUnClicked** (MouseState \*mousestate)
- virtual void **onSelect** (void)
- virtual void **onDeselect** (void)
- virtual void **onDestruction** (void)
- virtual bool **removeHealth** (float amount)
- virtual void **paint** (void)
- virtual void **repaint** (void)
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- virtual void **fromData** ([Data](#) &data)
- virtual void **toData** ([Data](#) &data)
- float **getHealth** ()
- float **getTotalHealth** ()

- void **registerDestoryEvent** (IHandleMessage \*subscriber)
- void **unregisterDestoryEvent** (IHandleMessage \*subscriber)
- virtual void **destroy** (void)
- bool **hasSquad** (void)
- vector< string > **getKillList** (void) const

### Public Attributes

- UID::Type **UID\_network**
- UID::Type **UID\_local**
- ResidenceState **residence**
- Squad \* **squad**
- ArtificialIntelligence \* **ai**

### Protected Member Functions

- virtual void **setHealth** (float value)

### Protected Attributes

- bool **\_canHover**
- float **\_health**
- float **\_totalHealth**
- vector< string > **\_killList**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/GameObject.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/GameObject.cpp

## 3.21 IBroadcast Class Reference

### Public Member Functions

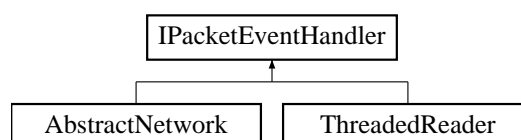
- virtual void **broadcast** (GameObject \*recipient, Message< Data > \*message)=0

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/services/IBroadcast.h

## 3.22 IPacketEventHandler Class Reference

Inheritance diagram for IPacketEventHandler:



## Public Member Functions

- virtual void **onPacket** ([Packet](#) \*packet)=0

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/ThreadedReader.h

## 3.23 ISettings Struct Reference

### Public Member Functions

- void **load** (void)
- bool **loadFromFile** (string filename)
- void **exportToFile** (string filename)

### Public Attributes

- double **ping\_interval**
- double **ping\_interval\_master**
- double **master\_ping\_gracetime**
- string **master\_host**
- int **master\_port**
- float **bsp\_width**
- float **bsp\_height**
- float **bsp\_smallestsize**
- unsigned int **bsp\_maxcollisionperspace**
- int **dedicated\_port**
- int **dedicated\_socketbacklog**
- double **dedicated\_auth\_gracetime**
- double **dedicated\_ping\_gracetime**
- bool **dedicated\_self\_echo**
- string **dedicated\_name**
- string **tmp\_dedicated\_host**
- int **tmp\_dedicated\_port**
- string **nickname**
- float **squad\_max\_distance\_to\_leaderSq**
- float **helicopter\_detection\_range**
- float **helicopter\_start\_flying\_range**
- float **helicopter\_movement\_speed**
- float **tank\_detection\_range**
- float **tank\_start\_driving\_range**
- float **tank\_movement\_speed**
- float **mech\_tank\_detection\_range**
- float **mech\_tank\_start\_driving\_range**
- float **mech\_tank\_movement\_speed**
- int **pathfinding\_g\_cost**
- float **pulse\_soldier\_vs\_soldier\_speed**
- char **pulse\_soldier\_vs\_soldier\_weight**
- float **pulse\_soldier\_vs\_soldier\_friction**
- float **pulse\_soldier\_vs\_any\_speed**
- char **pulse\_soldier\_vs\_any\_weight**
- float **pulse\_soldier\_vs\_any\_friction**

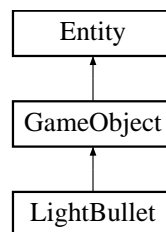
- float **pulse\_dominant\_speed**
- char **pulse\_dominant\_weight**
- float **pulse\_dominant\_friction**
- float **pulse\_soldier\_vs\_leader\_speed**
- char **pulse\_soldier\_vs\_leader\_weight**
- float **pulse\_soldier\_vs\_leader\_friction**

The documentation for this struct was generated from the following files:

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/services/ISettings.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/services/ISettings.cpp

### 3.24 LightBullet Class Reference

Inheritance diagram for LightBullet:



#### Public Member Functions

- void **setBehaviour** ([BulletBehaviour](#) \*newBehaviour)
- virtual void **update** (const PhantomTime &time)
- virtual void **fromData** ([Data](#) &data)
- virtual void **toData** ([Data](#) &data)
- virtual void **onDestruction** ()
- void **setDirection** (Vector3 &direction)
- void **setAuthority** (bool hasAuthority)
- virtual void **killList** (vector< string > killList)

#### Public Attributes

- [GameObject](#) \* **owner**

#### Protected Attributes

- [BulletBehaviour](#) \* **\_bulletBehaviour**
- Vector3 **\_velocity**
- double **\_creationTime**
- double **\_ttl**
- float **\_damage**
- bool **\_hasAuthority**
- vector< string > **\_killList**



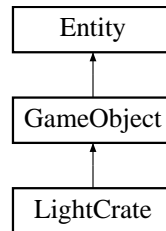
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightBullet.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightBullet.cpp

## 3.25 LightCrate Class Reference

Inheritance diagram for LightCrate:



### Public Member Functions

- virtual void **toData** (Data &data)
- virtual void **fromData** (Data &data)
- virtual void **update** (const PhantomTime &time)
- virtual void **onCollision** (Composite \*entity, CollisionData &collisionData)

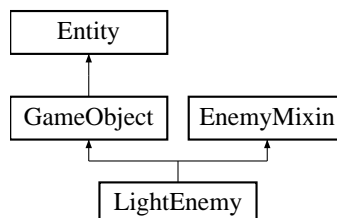
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightCrate.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightCrate.cpp

## 3.26 LightEnemy Class Reference

Inheritance diagram for LightEnemy:



### Public Member Functions

- **LightEnemy** (Data enemyinfo)
- void **move** (const Vector3 &location)

- MessageState **handleMessage** (AbstractMessage \*message)
- void **fromData** (Data &data)
- void **toData** (Data &data)
- string **name** ()

#### Public Attributes

- LightWeapon \* **weapon**

#### Protected Attributes

- Data **\_initialEnemyInfo**

#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightEnemy.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightEnemy.cpp

### 3.27 LightFactory Class Reference

#### Static Public Member Functions

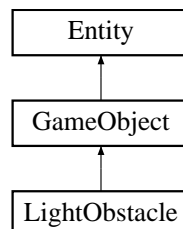
- static GameObject \* **create** (string objectName, string subname="")

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightFactory.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightFactory.cpp

### 3.28 LightObstacle Class Reference

Inheritance diagram for LightObstacle:



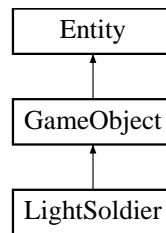
#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightObstacle.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightObstacle.cpp

## 3.29 LightSoldier Class Reference

Inheritance diagram for LightSoldier:



### Public Member Functions

- virtual void **update** (const PhantomTime &time)
- virtual void **fromData** ([Data](#) &data)
- virtual void **toData** ([Data](#) &data)
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- virtual void **onCollision** (Composite \*other, CollisionData &collisionData)
- virtual bool **canShootAt** (Entity \*gameobject)
- bool **isSquadLeader** ()
- bool **hasSquad** () const

### Public Attributes

- int **playerId**
- [LightWeapon](#) \* **weapon**

### Protected Attributes

- Pathfinding::Route **\_path**
- [GameObject](#) \* **\_victim**

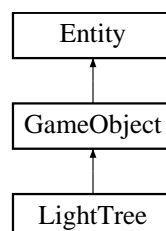
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightSoldier.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightSoldier.cpp

## 3.30 LightTree Class Reference

Inheritance diagram for LightTree:



## Public Member Functions

- virtual void **onCollision** (Composite \*other, CollisionData &collisionData)

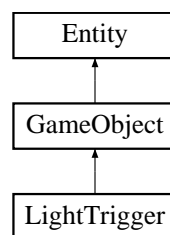
## Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightTree.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightTree.cpp

## 3.31 LightTrigger Class Reference

Inheritance diagram for LightTrigger:



## Public Member Functions

- void **subscribe** (phantom::Composite \*subscriber)
- void **subscribe** (CommandQueue::Command command)
- virtual void **update** (const PhantomTime &time)
- virtual void **onCollision** (Composite \*other)
- void **onTrigger** ()
- vector< Composite \* > **getSubscribers** ()

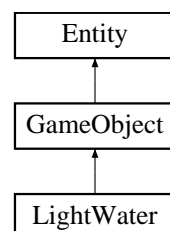
## Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightTrigger.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightTrigger.cpp

## 3.32 LightWater Class Reference

Inheritance diagram for LightWater:



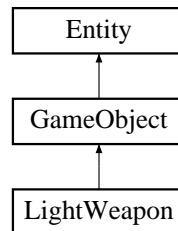
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightWater.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightWater.cpp

## 3.33 LightWeapon Class Reference

Inheritance diagram for LightWeapon:



### Public Member Functions

- virtual [LightBullet](#) \* **createBullet** ()
- void **setWeaponBehaviour** ([WeaponBehaviour](#) \*newBehaviour)
- float **getRange** (void)
- float **getRangeSq** (void)
- bool **isCooldownExpired** (void)
- void **startCooldown** (void)

### Protected Attributes

- float **\_range**
- double **\_cooldownTimeSeconds**
- double **\_lastShootTime**
- [WeaponBehaviour](#) \* **\_weaponBehaviour**

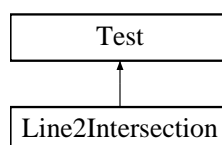
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightWeapon.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/LightWeapon.cpp

## 3.34 Line2Intersection Class Reference

Inheritance diagram for Line2Intersection:



### Public Member Functions

- virtual void **run** ()

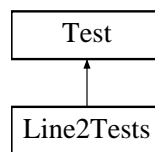
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/Line2Intersection.h

## 3.35 Line2Tests Class Reference

Inheritance diagram for Line2Tests:



### Public Member Functions

- virtual void **run** ()

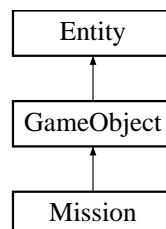
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/Line2Tests.h

## 3.36 Mission Class Reference

Inheritance diagram for Mission:



### Public Member Functions

- **Mission** (const std::string &title)
- void **addObjective** ([Objective](#) \*objectiveID)
- void **removeObjective** ([Objective](#) \*objectiveID)
- void **checkIfCompleted** ()
- void **onMissionComplete** ()

- virtual void **update** (const PhantomTime &time)
- virtual void **fromData** ([Data](#) &data)
- virtual void **toData** ([Data](#) &data)

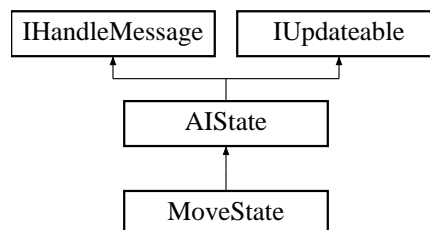
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/Mission.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/Mission.cpp

## 3.37 MoveState Class Reference

Inheritance diagram for MoveState:



### Public Member Functions

- **MoveState** ([GameObject](#) \*enemyG, float detectionRange, float startDrivingDistance, bool hasLineOfSight)
- void **update** (const phantom::PhantomTime &time)

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/MoveState.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/MoveState.cpp

## 3.38 NetworkRegistry Class Reference

### Static Public Member Functions

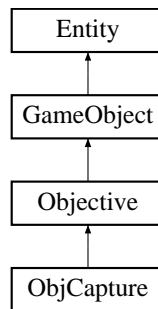
- static void **add** ([GameObject](#) \*gameobject)
- static void **remove** ([GameObject](#) \*gameobject)
- static [GameObject](#) \* **get** (const UID::Type &UID\_network)
- static bool **contains** (const UID::Type &UID\_network)
- static void **destroy** ()
- static void **dump** (void)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/NetworkRegistry.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/NetworkRegistry.cpp

### 3.39 ObjCapture Class Reference

Inheritance diagram for ObjCapture:



#### Public Member Functions

- **ObjCapture** (phantom::Box3 poi, string title)
- virtual void **update** (const PhantomTime &time)
- virtual void **paint** ()
- virtual void **onCollision** (Composite \*entity)
- virtual void **setConditions** ()
- virtual bool **conditionsMet** ()

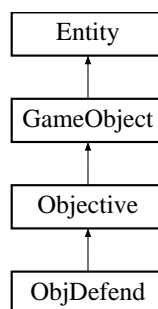
#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjCapture.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjCapture.cpp

### 3.40 ObjDefend Class Reference

Inheritance diagram for ObjDefend:



#### Public Member Functions

- **ObjDefend** (GameObject \*target, string title)
- virtual void **update** (const PhantomTime &time)
- virtual void **setConditions** ()
- virtual bool **conditionsMet** ()



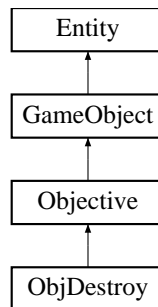
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjDefend.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjDefend.cpp

## 3.41 ObjDestroy Class Reference

Inheritance diagram for ObjDestroy:



### Public Member Functions

- **ObjDestroy** (string title)
- void **addObject** (GameObject \*gob)
- virtual void **setConditions** ()
- virtual void **addComponent** (Composite \*composite)
- bool **conditionsMet** ()

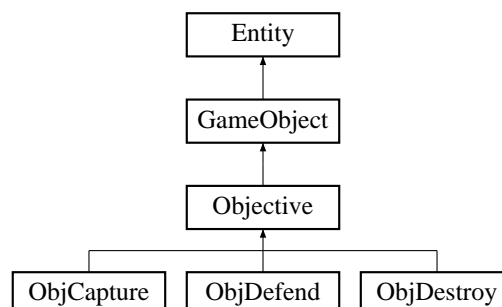
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjDestroy.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/ObjDestroy.cpp

## 3.42 Objective Class Reference

Inheritance diagram for Objective:



### Public Member Functions

- **Objective** (string title)
- virtual void **setConditions** ()=0
- virtual bool **conditionsMet** ()=0
- string **getTitle** ()
- std::vector< [GameObject](#) \* > \* **getComposites** ()

### Public Attributes

- bool **wasMore**
- bool **forcedComplete**

### Protected Member Functions

- virtual void [generate](#) ()  
*HINT: PROCEDURAL CONTENT GEN :O.*

### Protected Attributes

- std::vector< [GameObject](#) \* > **\_objects**
- unsigned int **difficulty**
- string **\_title**

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/Objective.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/missions/Objective.cpp

## 3.43 Packet Class Reference

### Public Member Functions

- **Packet** (const [Packet](#) \*origin)
- **Packet** (short type)
- **Packet** (short type, string payload)
- **Packet** (short type, string payload, char priority)
- **Packet** (short type, string payload, char priority, char version)
- size\_t **length** (void)
- char **getParity** (void)
- const char \* **getBytes** (void)
- string **getPayload** (void)
- void **setPayload** (string payload)
- short **getType** (void)
- size\_t **getPayloadLength** (void)
- char **getPriority** (void)
- char **getVersion** (void)
- void **retain** (void)
- void **release** (void)
- uint64\_t **getTimestamp** (void)
- uint64\_t **estimatedLatency** (void)

### Static Public Member Functions

- static [Packet](#) \* **createHeader** (const char \*bytes)
- static char **computeParity** (const char \*bytes)
- static string **formatByte** (const char byte)
- static uint64\_t **currentTimestamp** (void)

### Static Public Attributes

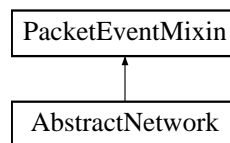
- static const char **EOT** = '>'
- static const int **headerPrefixLength** = 8 + 8
- static const int **headerPostfixLength** = 1

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/Packet.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/Packet.cpp

## 3.44 PacketEventMixin Class Reference

Inheritance diagram for PacketEventMixin:



### Public Types

- typedef std::function< [Packet](#) \*([Packet](#) \*)> **PacketEvent**

### Public Member Functions

- void **registerPacketEvent** (PacketType type, PacketEvent event)
- void **emitPacketEvent** ([Packet](#) \*packet)
- void **clearPacketEvents** ()
- virtual void **sendPacket** ([Packet](#) \*packet)=0

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/PacketEventMixin.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/PacketEventMixin.cpp

## 3.45 PacketReader Class Reference

### Public Member Functions

- **PacketReader** (yaxl::socket::InputStream &inputStream)

- [Packet](#) \* **readNext** (void)
- void **setBlocking** (bool isBlocking)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/PacketReader.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/PacketReader.cpp

### 3.46 PacketTypeHelper Struct Reference

#### Static Public Member Functions

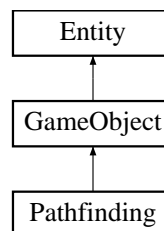
- static std::string **toString** (const short &type)
- static std::string **toString** (const PacketType type)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/PacketType.h

### 3.47 Pathfinding Class Reference

Inheritance diagram for Pathfinding:



#### Public Types

- typedef deque< Vector3 > **Route**

#### Public Member Functions

- **Pathfinding** ([BSPTree](#) &layer)
- void **drawRect** (Box3 &area, Color color)
- void **drawRect** ([Space](#) \*whom, Color color)
- Route **getPath** (Entity \*entity, const Vector3 &goal)
- [RouteDetails](#) **getPathDetailed** (Entity \*entity, const Vector3 &goal)

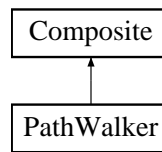
#### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/Pathfinding.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/Pathfinding.cpp

## 3.48 PathWalker Class Reference

Inheritance diagram for PathWalker:



### Public Member Functions

- void **onParentChange** (Composite \*parent)
- void **setPath** (Pathfinding::Route route)
- virtual void **update** (const PhantomTime &time)
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- const Vector3 & **getTarget** ()

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/PathWalker.h

## 3.49 PlayerModel Class Reference

### Public Member Functions

- [Data](#) **toData** ()

### Static Public Member Functions

- static [PlayerModel](#) **fromData** ([Data](#) &data)

### Public Attributes

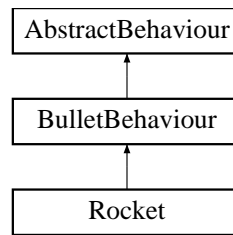
- int **id**
- string **nickname**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/models/PlayerModel.h

## 3.50 Rocket Class Reference

Inheritance diagram for Rocket:



### Public Member Functions

- virtual void **render** (Graphics \*g)
- void **onDestroy** (Graphics \*g)

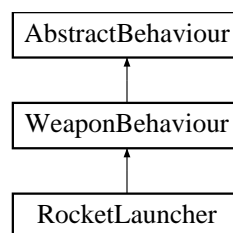
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Rocket.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Rocket.cpp

## 3.51 RocketLauncher Class Reference

Inheritance diagram for RocketLauncher:



### Public Member Functions

- virtual void **render** (phantom::Graphics \*g)

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Rocket-Launcher.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Rocket-Launcher.cpp

## 3.52 RouteDetails Struct Reference

### Public Member Functions

- **RouteDetails** (phantom::Entity \*\_entity, Route \_route, float \_distanceSq)

- bool **operator**< (const [RouteDetails](#) &other) const

#### Public Attributes

- Entity \* **entity**
- Route **route**
- float **distanceSq**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/RouteDetails.h

### 3.53 Serializable Class Reference

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/serialization/Serializable.h

### 3.54 Services Class Reference

#### Static Public Member Functions

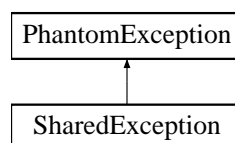
- static void **broadcast** ([GameObject](#) \*recipient, Message< [Data](#) > \*message)
- static void **setBroadcast** ([IBroadcast](#) \*broadcast)
- static void **setSettings** ([ISettings](#) \*settings)
- static [ISettings](#) \* **settings** ()

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/services/Services.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/services/Services.cpp

### 3.55 SharedException Class Reference

Inheritance diagram for SharedException:



#### Public Member Functions

- **SharedException** (std::string error)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/SharedException.h

## 3.56 Space Class Reference

### Public Member Functions

- **Space** (float x, float y, float width, float height, const unsigned smallestSize)
- void **insert** (Entity \*entity)
- void **remove** (Entity \*entity)
- void **clear** ()
- bool **contains** (Entity \*entity)
- void **render** (Graphics &g)
- vector< Entity \* > &**getEntities** ()
- **Space** \* **getSpaceAt** (const Vector3 &v)
- **Space** \* **getSpaceAtUsingHeuristic** (const Vector3 &v, Entity \*entity)
- vector< **Space** \* > &**getNeighboursOf** (**Space** \*whom, Entity \*entity=nullptr)
- void **addNeighbour** (**Space** \*neighbour)
- bool **isLeaf** ()
- Box3 & **getArea** ()
- Vector3 **getCenter** ()
- float **getF** () const
- void **getCollisionSpaces** (vector< **Space** \* > &out, const unsigned int &maxPerSpace)
- void **cleanPathfinding** ()

### Public Attributes

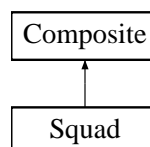
- **Space** \* **astarParent**
- bool **isInOpenList**
- float **g**
- float **h**

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/Space.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/pathfinding/Space.cpp

## 3.57 Squad Class Reference

Inheritance diagram for Squad:



### Public Member Functions

- **Squad** (**GameObject** \*leader)
- **Squad** (const **Squad** &original)
- void **attack** (**GameObject** \*victim)
- void **march** (Vector3 where)
- void **removeLeader** ()
- void **removeMember** (**GameObject** \*member)



- void **addMember** ([GameObject](#) \*member)
- [GameObject](#) \* **getLeader** ()
- bool **isLeader** ([GameObject](#) \*who) const
- unsigned **size** () const

### Static Public Member Functions

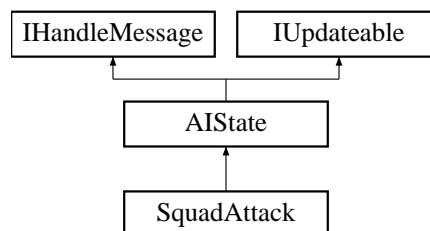
- static vector< [Squad](#) \* > **createSquads** (vector< [GameObject](#) \* > gameobjects, const Vector3 &target, const float &distanceToLeader)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/models/Squad.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/models/Squad.cpp

## 3.58 SquadAttack Class Reference

Inheritance diagram for SquadAttack:



### Public Member Functions

- void **setVictim** ([GameObject](#) \*gameobject)
- virtual void **construct** ()
- virtual void **update** (const phantom::PhantomTime &time)
- virtual MessageState **handleMessage** (AbstractMessage \*message)
- virtual void **destruct** ()

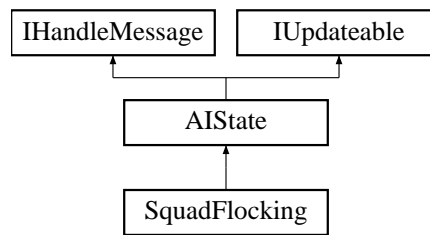
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/Squad-Attack.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/Squad-Attack.cpp

## 3.59 SquadFlocking Class Reference

Inheritance diagram for SquadFlocking:



### Public Member Functions

- virtual void **setLeader** ([GameObject](#) \*leader)
- virtual void **construct** ()
- virtual void **update** (const phantom::PhantomTime &time)
- virtual void **destruct** ()
- virtual MessageState **handleMessage** (AbstractMessage \*message)

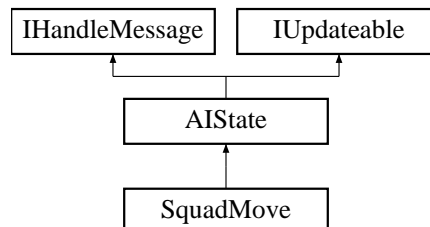
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/SquadFlocking.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/SquadFlocking.cpp

## 3.60 SquadMove Class Reference

Inheritance diagram for SquadMove:



### Public Member Functions

- void **setTarget** (const Vector3 &target)
- virtual void **construct** ()
- virtual void **update** (const phantom::PhantomTime &time)
- virtual void **destruct** ()

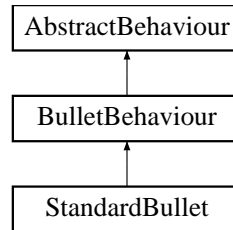
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/SquadMove.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/artificialintelligence/squad/SquadMove.cpp

## 3.61 StandardBullet Class Reference

Inheritance diagram for StandardBullet:



### Public Member Functions

- virtual void **onCollision** (Composite \*entity)
- virtual void **render** (Graphics \*g)

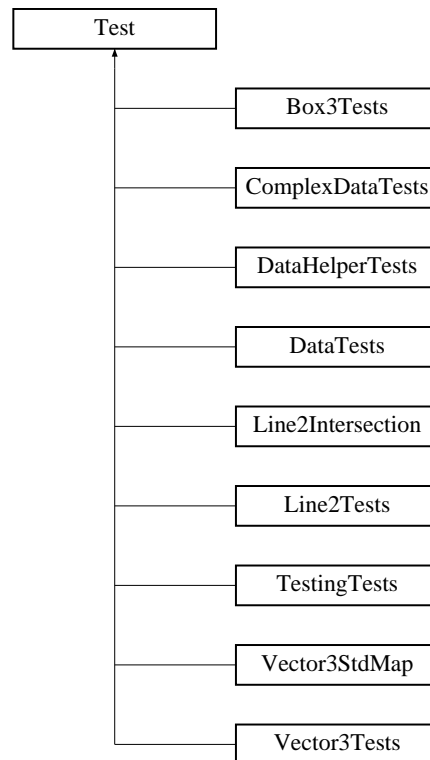
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Standard-Bullet.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Standard-Bullet.cpp

## 3.62 Test Class Reference

Inheritance diagram for Test:



## Public Member Functions

- **Test** (string name)
- string **getName** ()
- virtual void **run** (void)=0
- int **getFailed** ()
- int **getPassed** ()
- const std::string **getTraceBuffer** ()

## Protected Member Functions

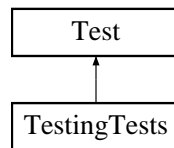
- bool **assertTrue** (const bool condition)
- bool **assertFalse** (const bool condition)
- bool **assertEquals** (const string a, const string b)
- bool **assertEquals** (const char \*a, const char \*b, const int len)
- bool **assertEquals** (const Vector3 &v, const float &x, const float &y, const float &z=0.0f)
- bool **assertWithinRange** (const float &number, const float &expected, const float &epsilon)
- void **trace** (string data)
- void **trace** (string data, string data1)
- void **trace** (string data, string data1, string data2)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/Test.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/Test.cpp

## 3.63 TestingTests Class Reference

Inheritance diagram for TestingTests:



### Public Member Functions

- virtual void **run** ()

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/TestingTests.h

## 3.64 TestSuite Class Reference

### Public Member Functions

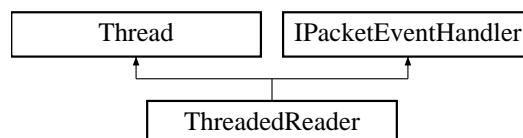
- void **run** ()
- void **addTest** ([Test](#) \*test)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/TestSuite.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/TestSuite.cpp

## 3.65 ThreadedReader Class Reference

Inheritance diagram for ThreadedReader:



### Public Member Functions

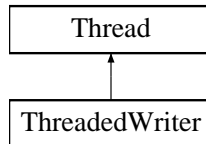
- **ThreadedReader** (yaxl::socket::Socket \*socket, [IPacketEventHandler](#) \*handler=nullptr)
- void **forceQuit** (void)
- virtual void **run** (void)
- void **onDisconnect** (std::function< void(void)> callback)
- virtual void **onPacket** ([Packet](#) \*packet)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/ThreadedReader.h

### 3.66 ThreadedWriter Class Reference

Inheritance diagram for ThreadedWriter:



#### Public Member Functions

- **ThreadedWriter** (yaxl::socket::Socket \*socket)
- void **forceQuit** (void)
- void **write** (Packet \*packet)
- void **run** (void)

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/ThreadedReader.h

### 3.67 UID Class Reference

#### Public Types

- typedef string **Type**

#### Static Public Member Functions

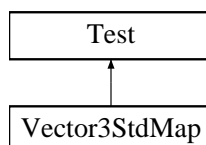
- static string **generate** ()

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/UID.h
- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/networking/UID.cpp

### 3.68 Vector3StdMap Class Reference

Inheritance diagram for Vector3StdMap:



### Public Member Functions

- virtual void **run** ()

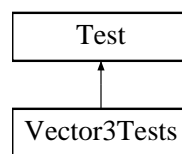
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/Vector3StdMap.h

## 3.69 Vector3Tests Class Reference

Inheritance diagram for Vector3Tests:



### Public Member Functions

- virtual void **run** ()

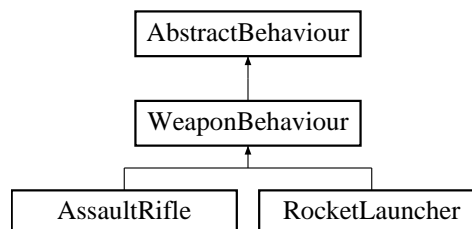
### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/testsuite/tests/Vector3Tests.h

## 3.70 WeaponBehaviour Class Reference

Inheritance diagram for WeaponBehaviour:



### Public Member Functions

- virtual float **getRange** (void)
- virtual float **getRangeSq** (void)
- virtual bool **isCoolDownExpired** (void)
- virtual void **startCoolDown** (void)
- virtual void **render** (phantom::Graphics \*g)=0

### Protected Attributes

- float **\_rateOfFire**
- float **\_range**
- double **\_cooldownTimeSeconds**
- double **\_lastShootTime**

### Additional Inherited Members

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

- C:/Users/Sander/Documents/Projects/PCCS/sharedlib/src/sharedlib/gameobjects/behaviours/Weapon-Behaviour.h



# Index

AIState, [6](#)  
AbstractBehaviour, [5](#)  
AbstractNetwork, [5](#)  
ArtificialIntelligence, [7](#)  
AssaultRifle, [8](#)  
AttackState, [8](#)  
  
BSPTree, [9](#)  
Box3Tests, [9](#)  
BulletBehaviour, [10](#)  
  
CommandModel, [10](#)  
CommandQueue, [11](#)  
CompareShapesAstar, [11](#)  
ComplexDataTests, [11](#)  
  
Data, [12](#)  
DataHelper, [13](#)  
DataHelperTests, [13](#)  
DataTests, [13](#)  
DedicatedModel, [14](#)  
  
EnemyMixin, [14](#)  
  
GameObject, [15](#)  
  
IBroadcast, [16](#)  
IPacketEventHandler, [16](#)  
ISettings, [17](#)  
  
LightBullet, [18](#)  
LightCrate, [19](#)  
LightEnemy, [19](#)  
LightFactory, [20](#)  
LightObstacle, [20](#)  
LightSoldier, [21](#)  
LightTree, [21](#)  
LightTrigger, [22](#)  
LightWater, [22](#)  
LightWeapon, [23](#)  
Line2Intersection, [23](#)  
Line2Tests, [24](#)  
  
Mission, [24](#)  
MoveState, [25](#)  
  
NetworkRegistry, [25](#)  
  
ObjCapture, [26](#)  
ObjDefend, [26](#)  
ObjDestroy, [27](#)  
  
Objective, [27](#)  
  
Packet, [28](#)  
PacketEventMixin, [29](#)  
PacketReader, [29](#)  
PacketTypeHelper, [30](#)  
PathWalker, [31](#)  
Pathfinding, [30](#)  
PlayerModel, [31](#)  
  
Rocket, [31](#)  
RocketLauncher, [32](#)  
RouteDetails, [32](#)  
  
Serializable, [33](#)  
Services, [33](#)  
SharedException, [33](#)  
Space, [34](#)  
Squad, [34](#)  
SquadAttack, [35](#)  
SquadFlocking, [35](#)  
SquadMove, [36](#)  
StandardBullet, [37](#)  
  
Test, [37](#)  
TestSuite, [39](#)  
TestingTests, [39](#)  
ThreadedReader, [39](#)  
ThreadedWriter, [40](#)  
  
UID, [40](#)  
  
Vector3StdMap, [40](#)  
Vector3Tests, [41](#)  
  
WeaponBehaviour, [41](#)