

Stegosaurus

1.0

Generated by Doxygen 1.8.11

Contents

1	Namespace Index	1
1.1	Packages	1
2	Hierarchical Index	3
2.1	Class Hierarchy	3
3	Class Index	5
3.1	Class List	5
4	Namespace Documentation	7
4.1	Stegosaurus Namespace Reference	7
4.2	Stegosaurus.Algorithm Namespace Reference	7
4.3	Stegosaurus.Algorithm.GraphTheory Namespace Reference	7
4.4	Stegosaurus.Carrier Namespace Reference	8
4.5	Stegosaurus.Carrier.AudioFormats Namespace Reference	8
4.6	Stegosaurus.Cryptography Namespace Reference	8
4.7	Stegosaurus.Exceptions Namespace Reference	8
4.8	Stegosaurus.Utility Namespace Reference	9
4.9	Stegosaurus.Utility.Extensions Namespace Reference	9
4.10	Stegosaurus.Utility.InputTypes Namespace Reference	9

5	Class Documentation	11
5.1	Stegosaurus.Cryptography.AESProvider Class Reference	11
5.1.1	Member Function Documentation	12
5.1.1.1	Decrypt(byte[] _data)	12
5.1.1.2	Encrypt(byte[] _data)	12
5.1.1.3	GenerateKey()	12
5.1.1.4	SetKey(string _keyString)	12
5.2	Stegosaurus.Carrier.AudioCarrier Class Reference	12
5.2.1	Member Function Documentation	13
5.2.1.1	Decode()	13
5.2.1.2	Encode()	13
5.2.1.3	IsExtensionCompatible(string _extension)	13
5.2.1.4	LoadFromFile(string _filePath)	13
5.2.1.5	SaveToFile(string _destination)	13
5.3	Stegosaurus.Carrier.AudioFormats.AudioFile Class Reference	14
5.3.1	Constructor & Destructor Documentation	14
5.3.1.1	AudioFile(string _filePath)	14
5.3.2	Member Function Documentation	15
5.3.2.1	CopyInnerData()	15
5.3.2.2	Parse(string _filePath)	15
5.3.2.3	SetInnerData(byte[] _innerData)	15
5.3.2.4	ToArray()	15
5.3.3	Property Documentation	15
5.3.3.1	BitsPerSample	15
5.3.3.2	BlockAlign	15
5.3.3.3	ByteRate	15
5.3.3.4	NumberOfChannels	15
5.3.3.5	SampleRate	16
5.4	Stegosaurus.Utility.InputTypes.CarrierType Class Reference	16
5.5	Stegosaurus.Algorithm.CommonSampleAlgorithm Class Reference	16

5.5.1	Member Function Documentation	17
5.5.1.1	ComputeBandwidth()	17
5.5.1.2	Embed(StegoMessage _message , IPProgress< int > _progress , Cancellation←Token _ct)	17
5.5.1.3	Extract()	17
5.5.2	Property Documentation	17
5.5.2.1	MaxDistance	17
5.5.2.2	MaxSampleCount	18
5.6	Stegosaurus.Utility.InputTypes.ContentType Class Reference	18
5.7	Stegosaurus.Algorithm.GraphTheory.Edge Class Reference	18
5.8	Stegosaurus.Algorithm.GraphTheoreticAlgorithm Class Reference	19
5.8.1	Member Function Documentation	19
5.8.1.1	ComputeBandwidth()	19
5.8.1.2	Embed(StegoMessage _message , IPProgress< int > _progress , Cancellation←Token _ct)	20
5.8.1.3	Extract()	20
5.9	Stegosaurus.Carrier.ICarrierMedia Interface Reference	20
5.9.1	Member Function Documentation	21
5.9.1.1	Decode()	21
5.9.1.2	Encode()	21
5.9.1.3	IsExtensionCompatible(string _extension)	21
5.9.1.4	LoadFromFile(string _filePath)	21
5.9.1.5	SaveToFile(string _destination)	21
5.9.2	Property Documentation	21
5.9.2.1	ByteArray	21
5.9.2.2	BytesPerSample	21
5.9.2.3	OutputExtension	22
5.9.2.4	Thumbnail	22
5.10	Stegosaurus.Cryptography.ICryptoProvider Interface Reference	22
5.10.1	Member Function Documentation	23
5.10.1.1	Decrypt(byte[] _data)	23

5.10.1.2	Encrypt(byte[] _data)	23
5.10.1.3	GenerateKey()	23
5.10.1.4	SetKey(string _keyString)	23
5.10.2	Property Documentation	23
5.10.2.1	HeaderSize	23
5.10.2.2	Key	23
5.10.2.3	KeySize	23
5.10.2.4	Name	23
5.10.2.5	Seed	24
5.11	Stegosaurus.Utility.InputTypes.IInputType Interface Reference	24
5.12	Stegosaurus.Carrier.ImageCarrier Class Reference	24
5.12.1	Member Function Documentation	25
5.12.1.1	Decode()	25
5.12.1.2	Encode()	25
5.12.1.3	IsExtensionCompatible(string _extension)	25
5.12.1.4	LoadFromFile(string _filePath)	25
5.12.1.5	SaveToFile(string _destination)	25
5.12.2	Property Documentation	26
5.12.2.1	ImageData	26
5.13	Stegosaurus.InputFile Class Reference	26
5.13.1	Constructor & Destructor Documentation	26
5.13.1.1	InputFile(string _name, byte[] _content)	26
5.13.1.2	InputFile(string _filePath)	26
5.13.2	Member Function Documentation	26
5.13.2.1	SaveTo(string _destination)	26
5.13.3	Property Documentation	27
5.13.3.1	Content	27
5.13.3.2	Name	27
5.14	Stegosaurus.Exceptions.InvalidCarrierFileException Class Reference	27
5.15	Stegosaurus.Exceptions.InvalidImageFileException Class Reference	28

5.16 Stegosaurus.Exceptions.InvalidWaveFileException Class Reference	28
5.17 Stegosaurus.Algorithm.LSBAAlgorithm Class Reference	29
5.17.1 Member Enumeration Documentation	30
5.17.1.1 BitValues	30
5.17.2 Member Function Documentation	30
5.17.2.1 ComputeBandwidth()	30
5.17.2.2 Embed(StegoMessage _message, IProgress< int > _progress, Cancellation← Token _ct)	30
5.17.2.3 Extract()	30
5.17.3 Property Documentation	30
5.17.3.1 WorkingBit	30
5.18 Stegosaurus.Utility.RandomNumberList Class Reference	30
5.18.1 Constructor & Destructor Documentation	31
5.18.1.1 RandomNumberList(int _seed, int _maxValue)	31
5.18.2 Property Documentation	31
5.18.2.1 Next	31
5.19 Stegosaurus.Exceptions.RandomNumbersOutOfRangeException Class Reference	31
5.20 Stegosaurus.Cryptography.RSAKeyPair Class Reference	32
5.21 Stegosaurus.Cryptography.RSAProvider Class Reference	32
5.21.1 Member Function Documentation	33
5.21.1.1 Decrypt(byte[] _data)	33
5.21.1.2 Encrypt(byte[] _data)	33
5.21.1.3 GenerateKey()	33
5.21.1.4 GenerateKeys(int _keySize)	33
5.21.1.5 SetKey(string _keyString)	33
5.21.1.6 SignData(byte[] _originalData)	33
5.21.1.7 VerifyData(byte[] _originalData, byte[] _signedData)	33
5.21.2 Member Data Documentation	34
5.21.2.1 Seed	34
5.22 Stegosaurus.Algorithm.Sample Class Reference	34
5.22.1 Member Function Documentation	34

5.22.1.1	GetSampleListFrom(ICarrierMedia _carrierMedia, byte _bitwiseModFactor)	34
5.22.1.2	Swap(Sample _otherSample)	35
5.23	Stegosaurus.Cryptography.SavedPublicKey Class Reference	35
5.23.1	Constructor & Destructor Documentation	35
5.23.1.1	SavedPublicKey(string _alias, string _key)	35
5.23.2	Property Documentation	35
5.23.2.1	Alias	35
5.23.2.2	Key	35
5.24	Stegosaurus.Algorithm.StegoAlgorithmBase Class Reference	36
5.24.1	Member Function Documentation	36
5.24.1.1	ComputeBandwidth()	36
5.24.1.2	Embed(StegoMessage _message, IProgress< int > _progress, Cancellation← Token _ct)	36
5.24.1.3	Extract()	37
5.24.2	Member Data Documentation	37
5.24.2.1	Seed	37
5.24.3	Property Documentation	37
5.24.3.1	CarrierMedia	37
5.24.3.2	CryptoProvider	37
5.24.3.3	Name	37
5.24.3.4	Signature	37
5.25	Stegosaurus.Exceptions.StegoAlgorithmException Class Reference	37
5.26	Stegosaurus.Exceptions.StegoCarrierException Class Reference	38
5.27	Stegosaurus.Exceptions.StegoCryptoException Class Reference	38
5.28	Stegosaurus.StegoMessage Class Reference	39
5.28.1	Constructor & Destructor Documentation	39
5.28.1.1	StegoMessage()	39
5.28.1.2	StegoMessage(string _textMessage)	39
5.28.1.3	StegoMessage(byte[] _fromArray, ICryptoProvider _cryptoProvider=null)	40
5.28.2	Member Function Documentation	40
5.28.2.1	GetCompressedSize()	40

5.28.2.2	ToByteArray(ICryptoProvider _cryptoProvider=null)	40
5.28.3	Property Documentation	40
5.28.3.1	InputFiles	40
5.28.3.2	PrivateSigningKey	40
5.28.3.3	SignedBy	40
5.28.3.4	SignState	40
5.28.3.5	TextMessage	40
5.29	Stegosaurus.Exceptions.StegoMessageException Class Reference	41
5.30	Stegosaurus.Exceptions.StegosaurusException Class Reference	41
5.31	Stegosaurus.Algorithm.GraphTheory.Vertex Class Reference	41
5.32	Stegosaurus.Carrier.AudioFormats.WaveFile Class Reference	42
5.32.1	Constructor & Destructor Documentation	42
5.32.1.1	WaveFile(string _filePath)	42
5.32.2	Member Function Documentation	43
5.32.2.1	Parse(string _filePath)	43
5.32.2.2	ToArray()	43
5.32.3	Property Documentation	43
5.32.3.1	AudioFormat	43
5.32.3.2	ChunkSize	43
5.32.3.3	DataSubChunkSize	43
5.32.3.4	FormatSubChunkSize	43
Index		45

Chapter 1

Namespace Index

1.1 Packages

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

Stegosaurus	7
Stegosaurus.Algorithm	7
Stegosaurus.Algorithm.GraphTheory	7
Stegosaurus.Carrier	8
Stegosaurus.Carrier.AudioFormats	8
Stegosaurus.Cryptography	8
Stegosaurus.Exceptions	8
Stegosaurus.Utility	9
Stegosaurus.Utility.Extensions	9
Stegosaurus.Utility.InputTypes	9

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Stegosaurus.Carrier.AudioFormats.AudioFile	14
Stegosaurus.Carrier.AudioFormats.WaveFile	42
Stegosaurus.Algorithm.GraphTheory.Edge	18
Exception	
Stegosaurus.Exceptions.StegosaurusException	41
Stegosaurus.Exceptions.InvalidCarrierFileException	27
Stegosaurus.Exceptions.InvalidImageFileException	28
Stegosaurus.Exceptions.InvalidWaveFileException	28
Stegosaurus.Exceptions.RandomNumbersOutOfRangeException	31
Stegosaurus.Exceptions.StegoAlgorithmException	37
Stegosaurus.Exceptions.StegoCarrierException	38
Stegosaurus.Exceptions.StegoCryptoException	38
Stegosaurus.Exceptions.StegoMessageException	41
Stegosaurus.Carrier.ICarrierMedia	20
Stegosaurus.Carrier.AudioCarrier	12
Stegosaurus.Carrier.ImageCarrier	24
Stegosaurus.Cryptography.ICryptoProvider	22
Stegosaurus.Cryptography.AESProvider	11
Stegosaurus.Cryptography.RSAProvider	32
Stegosaurus.Utility.InputTypes.IInputType	24
Stegosaurus.Utility.InputTypes.CarrierType	16
Stegosaurus.Utility.InputTypes.ContentType	18
Stegosaurus.InputFile	26
Stegosaurus.Utility.RandomNumberList	30
Stegosaurus.Cryptography.RSAKeyPair	32
Stegosaurus.Algorithm.Sample	34
Stegosaurus.Cryptography.SavedPublicKey	35
Stegosaurus.Algorithm.StegoAlgorithmBase	36
Stegosaurus.Algorithm.CommonSampleAlgorithm	16
Stegosaurus.Algorithm.GraphTheoreticAlgorithm	19
Stegosaurus.Algorithm.LSBAAlgorithm	29
Stegosaurus.StegoMessage	39
Stegosaurus.Algorithm.GraphTheory.Vertex	41

Chapter 3

Class Index

3.1 Class List

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

Stegosaurus.Cryptography.AESProvider	11
Stegosaurus.Carrier.AudioCarrier	12
Stegosaurus.Carrier.AudioFormats.AudioFile	14
Stegosaurus.Utility.InputTypes.CarrierType	16
Stegosaurus.Algorithm.CommonSampleAlgorithm	16
Stegosaurus.Utility.InputTypes.ContentType	18
Stegosaurus.Algorithm.GraphTheory.Edge	18
Stegosaurus.Algorithm.GraphTheoreticAlgorithm	19
Stegosaurus.Carrier.ICarrierMedia	20
Stegosaurus.Cryptography.ICryptoProvider	22
Stegosaurus.Utility.InputTypes.IInputType	24
Stegosaurus.Carrier.ImageCarrier	24
Stegosaurus.InputFile	26
Stegosaurus.Exceptions.InvalidCarrierFileException	27
Stegosaurus.Exceptions.InvalidImageFileException	28
Stegosaurus.Exceptions.InvalidWaveFileException	28
Stegosaurus.Algorithm.LSBAlgorithm	29
Stegosaurus.Utility.RandomNumberList	30
Stegosaurus.Exceptions.RandomNumbersOutOfRangeException	31
Stegosaurus.Cryptography.RSAKeyPair	32
Stegosaurus.Cryptography.RSAProvider	32
Stegosaurus.Algorithm.Sample	34
Stegosaurus.Cryptography.SavedPublicKey	35
Stegosaurus.Algorithm.StegoAlgorithmBase	36
Stegosaurus.Exceptions.StegoAlgorithmException	37
Stegosaurus.Exceptions.StegoCarrierException	38
Stegosaurus.Exceptions.StegoCryptoException	38
Stegosaurus.StegoMessage	39
Stegosaurus.Exceptions.StegoMessageException	41
Stegosaurus.Exceptions.StegosaurusException	41
Stegosaurus.Algorithm.GraphTheory.Vertex	41
Stegosaurus.Carrier.AudioFormats.WaveFile	42

Chapter 4

Namespace Documentation

4.1 Stegosaurus Namespace Reference

Namespaces

Classes

- class [InputFile](#)
- class [StegoMessage](#)

4.2 Stegosaurus.Algorithm Namespace Reference

Namespaces

Classes

- class [CommonSampleAlgorithm](#)
- class [GraphTheoreticAlgorithm](#)
- class [LSBAlgorithm](#)
- class [Sample](#)
- class [StegoAlgorithmBase](#)

4.3 Stegosaurus.Algorithm.GraphTheory Namespace Reference

Classes

- class [Edge](#)
- class [Vertex](#)

4.4 Stegosaurus.Carrier Namespace Reference

Namespaces

Classes

- class [AudioCarrier](#)
- interface [ICarrierMedia](#)
- class [ImageCarrier](#)

4.5 Stegosaurus.Carrier.AudioFormats Namespace Reference

Classes

- class [AudioFile](#)
- class [WaveFile](#)

4.6 Stegosaurus.Cryptography Namespace Reference

Classes

- class [AESProvider](#)
- interface [ICryptoProvider](#)
- class **PublicKeyList**
- class [RSAKeyPair](#)
- class [RSAProvider](#)
- class [SavedPublicKey](#)

4.7 Stegosaurus.Exceptions Namespace Reference

Classes

- class [InvalidCarrierFileException](#)
- class [InvalidImageFileException](#)
- class [InvalidWaveFileException](#)
- class [RandomNumbersOutOfRangeException](#)
- class [StegoAlgorithmException](#)
- class [StegoCarrierException](#)
- class [StegoCryptoException](#)
- class [StegoMessageException](#)
- class [StegosaurusException](#)

4.8 Stegosaurus.Utility Namespace Reference

Namespaces

Classes

- class **Compression**
- class **IconExtractor**
- class **KeyDeriver**
- class [RandomNumberList](#)
- class **SizeFormatter**

4.9 Stegosaurus.Utility.Extensions Namespace Reference

Classes

- class **ByteArrayExtensions**
- class **StreamExtensions**

4.10 Stegosaurus.Utility.InputTypes Namespace Reference

Classes

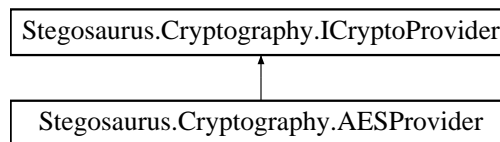
- class [CarrierType](#)
- class [ContentType](#)
- interface [IInputType](#)

Chapter 5

Class Documentation

5.1 Stegosaurus.Cryptography.AESProvider Class Reference

Inheritance diagram for Stegosaurus.Cryptography.AESProvider:



Public Member Functions

- `byte[] Encrypt (byte[] _data)`
Encrypts and returns encrypted data.
- `byte[] Decrypt (byte[] _data)`
Decrypts and returns decrypted data.
- `byte[] GenerateKey ()`
Generates and returns a key which can be used with the algorithm.
- `void SetKey (string _keyString)`
Set the Key from a string.

Public Attributes

- `string Name => "AES"`
- `int Seed => Key?.ComputeHash() ?? 0`
- `int HeaderSize => Key == null ? 0 : 16`
- `int KeySize => 256`

Properties

- `byte[] Key [get, set]`

5.1.1 Member Function Documentation

5.1.1.1 `byte [] Stegosaurus.Cryptography.AESProvider.Decrypt (byte[] _data)`

Decrypts and returns decrypted data.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.1.1.2 `byte [] Stegosaurus.Cryptography.AESProvider.Encrypt (byte[] _data)`

Encrypts and returns encrypted data.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.1.1.3 `byte [] Stegosaurus.Cryptography.AESProvider.GenerateKey ()`

Generates and returns a key which can be used with the algorithm.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.1.1.4 `void Stegosaurus.Cryptography.AESProvider.SetKey (string _keyString)`

Set the Key from a string.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Cryptography/AESProvider.cs

5.2 Stegosaurus.Carrier.AudioCarrier Class Reference

Inheritance diagram for Stegosaurus.Carrier.AudioCarrier:

Public Member Functions

- bool [IsExtensionCompatible](#) (string _extension)
Check if a certain extension is compatible with this carrier media.
- void [LoadFromFile](#) (string _filePath)
Open file from specified path.
- void [Encode](#) ()
Encodes ByteArray back into the carrier media.
- void [Decode](#) ()
Decodes the carrier media and sets ByteArray to the inner data.
- void [SaveToFile](#) (string _destination)
Saves the carrier media to the specified destination.

Public Attributes

- string **OutputExtension** => ".wav"
- Image **Thumbnail** => IconExtractor.ExtractIcon(OutputExtension).ToBitmap()
- int **BytesPerSample** => audioFile.BitsPerSample / 8

Properties

- byte[] **ByteArray** [get, set]

5.2.1 Member Function Documentation

5.2.1.1 void Stegosaurus.Carrier.AudioCarrier.Decode ()

Decodes the carrier media and sets ByteArray to the inner data.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.2.1.2 void Stegosaurus.Carrier.AudioCarrier.Encode ()

Encodes ByteArray back into the carrier media.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.2.1.3 bool Stegosaurus.Carrier.AudioCarrier.IsExtensionCompatible (string _extension)

Check if a certain extension is compatible with this carrier media.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.2.1.4 void Stegosaurus.Carrier.AudioCarrier.LoadFromFile (string _filePath)

Open file from specified path.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.2.1.5 void Stegosaurus.Carrier.AudioCarrier.SaveToFile (string _destination)

Saves the carrier media to the specified destination.

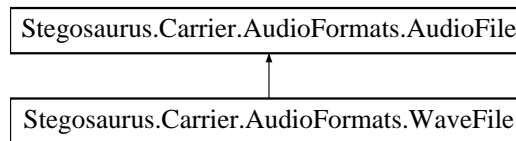
Implements [Stegosaurus.Carrier.ICarrierMedia](#).

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Carrier/AudioCarrier.cs

5.3 Stegosaurus.Carrier.AudioFormats.AudioFile Class Reference

Inheritance diagram for Stegosaurus.Carrier.AudioFormats.AudioFile:



Public Member Functions

- abstract void [Parse](#) (string _filePath)
Parses an audio file by reading its headers and samples.
- abstract byte[] [ToArray](#) ()
Reconstructs and returns the entire byte array of the file, including headers.
- virtual void [SetInnerData](#) (byte[] _innerData)
Sets the innerData of the audio file, which contains the original samples.
- virtual byte[] [CopyInnerData](#) ()
Returns a clone of the innerData array which can be manipulated by an algorithm.

Protected Member Functions

- [AudioFile](#) (string _filePath)
Construct an [AudioFile](#) from a file path.

Protected Attributes

- byte[] **InnerData**

Properties

- short [NumberOfChannels](#) [get, protected set]
Get or set the number of channels.
- int [SampleRate](#) [get, protected set]
Get or set the sample rate.
- int [ByteRate](#) [get, protected set]
Get or set the byte rate.
- short [BlockAlign](#) [get, protected set]
Get or set the block align.
- short [BitsPerSample](#) [get, protected set]
Get or set the bits per sample.

5.3.1 Constructor & Destructor Documentation

5.3.1.1 Stegosaurus.Carrier.AudioFormats.AudioFile.AudioFile (string _filePath) [protected]

Construct an [AudioFile](#) from a file path.

5.3.2 Member Function Documentation

5.3.2.1 `virtual byte [] Stegosaurus.Carrier.AudioFormats.AudioFile.CopyInnerData () [virtual]`

Returns a clone of the innerData array which can be manipulated by an algorithm.

5.3.2.2 `abstract void Stegosaurus.Carrier.AudioFormats.AudioFile.Parse (string _filePath) [pure virtual]`

Parses an audio file by reading its headers and samples.

Implemented in [Stegosaurus.Carrier.AudioFormats.WaveFile](#).

5.3.2.3 `virtual void Stegosaurus.Carrier.AudioFormats.AudioFile.SetInnerData (byte[] _innerData) [virtual]`

Sets the innerData of the audio file, which contains the original samples.

5.3.2.4 `abstract byte [] Stegosaurus.Carrier.AudioFormats.AudioFile.ToArray () [pure virtual]`

Reconstructs and returns the entire byte array of the file, including headers.

Implemented in [Stegosaurus.Carrier.AudioFormats.WaveFile](#).

5.3.3 Property Documentation

5.3.3.1 `short Stegosaurus.Carrier.AudioFormats.AudioFile.BitsPerSample [get],[protected set]`

Get or set the bits per sample.

5.3.3.2 `short Stegosaurus.Carrier.AudioFormats.AudioFile.BlockAlign [get],[protected set]`

Get or set the block align.

5.3.3.3 `int Stegosaurus.Carrier.AudioFormats.AudioFile.ByteRate [get],[protected set]`

Get or set the byte rate.

5.3.3.4 `short Stegosaurus.Carrier.AudioFormats.AudioFile.NumberOfChannels [get],[protected set]`

Get or set the number of channels.

5.3.3.5 `int Stegosaurus.Carrier.AudioFormats.AudioFile.SampleRate` `[get], [protected set]`

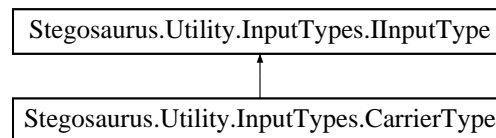
Get or set the sample rate.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Carrier/AudioFormats/AudioFile.cs

5.4 Stegosaurus.Utility.InputTypes.CarrierType Class Reference

Inheritance diagram for Stegosaurus.Utility.InputTypes.CarrierType:



Public Member Functions

- **CarrierType** (string _filePath)

Properties

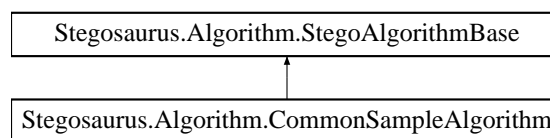
- string **FilePath** `[get, set]`

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Utility/InputTypes/CarrierType.cs

5.5 Stegosaurus.Algorithm.CommonSampleAlgorithm Class Reference

Inheritance diagram for Stegosaurus.Algorithm.CommonSampleAlgorithm:



Public Member Functions

- override void **Embed** (StegoMessage _message, IProgress< int > _progress, CancellationToken _ct)
Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.
- override [StegoMessage](#) **Extract** ()
Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.
- override long **ComputeBandwidth** ()
Returns the data capacity of the carrier media with the given algorithm.

Public Attributes

- override string **Name** => "Common [Sample](#)"

Protected Attributes

- override byte[] **Signature** => new byte[] { 0x0C, 0xB3, 0x11, 0x84 }

Properties

- int [MaxDistance](#) [get, set]
Get or set the maximum distance.
- int [MaxSampleCount](#) = 250 [get, set]
Get or set the maximum sample count.

5.5.1 Member Function Documentation

5.5.1.1 override long Stegosaurus.Algorithm.CommonSampleAlgorithm.ComputeBandwidth () [virtual]

Returns the data capacity of the carrier media with the given algorithm.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.5.1.2 override void Stegosaurus.Algorithm.CommonSampleAlgorithm.Embed ([StegoMessage](#) _message, IProgress< int > _progress, CancellationToken _ct) [virtual]

Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.5.1.3 override [StegoMessage](#) Stegosaurus.Algorithm.CommonSampleAlgorithm.Extract () [virtual]

Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.5.2 Property Documentation

5.5.2.1 int Stegosaurus.Algorithm.CommonSampleAlgorithm.MaxDistance [get], [set]

Get or set the maximum distance.

5.5.2.2 `int Stegosaurus.Algorithm.CommonSampleAlgorithm.MaxSampleCount = 250` `[get]`, `[set]`

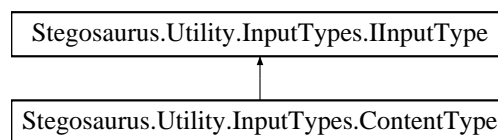
Get or set the maximum sample count.

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/CommonSampleAlgorithm.cs`

5.6 Stegosaurus.Utility.InputTypes.ContentType Class Reference

Inheritance diagram for `Stegosaurus.Utility.InputTypes.ContentType`:



Public Member Functions

- **ContentType** (string `_filePath`)

Properties

- string **FilePath** `[get, set]`

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Utility/InputTypes/ContentType.cs`

5.7 Stegosaurus.Algorithm.GraphTheory.Edge Class Reference

Public Member Functions

- **Edge** (int `_firstVertex`, int `_secondVertex`, short `_weight`, byte[] `_bestSwaps`)
- override string **ToString** ()

Public Attributes

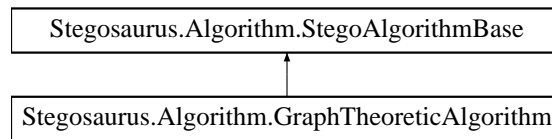
- int[] **Vertices**
- short **Weight**
- byte[] **BestSwaps**

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/GraphTheory/Edge.cs`

5.8 Stegosaurus.Algorithm.GraphTheoreticAlgorithm Class Reference

Inheritance diagram for Stegosaurus.Algorithm.GraphTheoreticAlgorithm:



Public Member Functions

- override long [ComputeBandwidth](#) ()
Returns the data capacity of the carrier media with the given algorithm.
- override void [Embed](#) ([StegoMessage](#) _message, IProgress< int > _progress, CancellationToken _ct)
Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.
- override [StegoMessage](#) [Extract](#) ()
Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.

Public Attributes

- override string **Name** => "Graph Theoretic Algorithm"

Protected Attributes

- override byte[] **Signature** => new byte[] { 0x47, 0x54, 0x41, 0x6C }

Properties

- byte **SamplesPerVertex** [get, set]
- byte **MessageBitsPerVertex** [get, set]
- int **DistanceMax** [get, set]
- int **DistancePrecision** [get, set]
- int **VerticesPerMatching** [get, set]

5.8.1 Member Function Documentation

5.8.1.1 override long Stegosaurus.Algorithm.GraphTheoreticAlgorithm.ComputeBandwidth () [virtual]

Returns the data capacity of the carrier media with the given algorithm.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.8.1.2 `override void Stegosaurus.Algorithm.GraphTheoreticAlgorithm.Embed (StegoMessage _message, IProgress< int > _progress, CancellationToken _ct) [virtual]`

Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.8.1.3 `override StegoMessage Stegosaurus.Algorithm.GraphTheoreticAlgorithm.Extract () [virtual]`

Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/GraphTheoreticAlgorithm.cs

5.9 Stegosaurus.Carrier.ICarrierMedia Interface Reference

Inheritance diagram for Stegosaurus.Carrier.ICarrierMedia:

Public Member Functions

- bool [IsExtensionCompatible](#) (string _extension)
Check if a certain extension is compatible with this carrier media.
- void [LoadFromFile](#) (string _filePath)
Open file from specified path.
- void [Encode](#) ()
Encodes ByteArray back into the carrier media.
- void [Decode](#) ()
Decodes the carrier media and sets ByteArray to the inner data.
- void [SaveToFile](#) (string _destination)
Saves the carrier media to the specified destination.

Properties

- byte[] [ByteArray](#) [get, set]
The byte array containing samples of the carrier media. This array is to be used by algorithms.
- string [OutputExtension](#) [get]
The default output extension for this carrier media. Example:
- Image [Thumbnail](#) [get]
Get the thumbnail associated with this carrier media.
- int [BytesPerSample](#) [get]
The amount of bytes per sample, where a sample is defined as a sequence of bytes. For example, the pixels in an image are samples, where the amount of bytes is the amount of channels.

5.9.1 Member Function Documentation

5.9.1.1 void Stegosaurus.Carrier.ICarrierMedia.Decode ()

Decodes the carrier media and sets ByteArray to the inner data.

Implemented in [Stegosaurus.Carrier.ImageCarrier](#), and [Stegosaurus.Carrier.AudioCarrier](#).

5.9.1.2 void Stegosaurus.Carrier.ICarrierMedia.Encode ()

Encodes ByteArray back into the carrier media.

Implemented in [Stegosaurus.Carrier.ImageCarrier](#), and [Stegosaurus.Carrier.AudioCarrier](#).

5.9.1.3 bool Stegosaurus.Carrier.ICarrierMedia.IsExtensionCompatible (string _extension)

Check if a certain extension is compatible with this carrier media.

Implemented in [Stegosaurus.Carrier.ImageCarrier](#), and [Stegosaurus.Carrier.AudioCarrier](#).

5.9.1.4 void Stegosaurus.Carrier.ICarrierMedia.LoadFromFile (string _filePath)

Open file from specified path.

Implemented in [Stegosaurus.Carrier.ImageCarrier](#), and [Stegosaurus.Carrier.AudioCarrier](#).

5.9.1.5 void Stegosaurus.Carrier.ICarrierMedia.SaveToFile (string _destination)

Saves the carrier media to the specified destination.

Implemented in [Stegosaurus.Carrier.ImageCarrier](#), and [Stegosaurus.Carrier.AudioCarrier](#).

5.9.2 Property Documentation

5.9.2.1 byte [] Stegosaurus.Carrier.ICarrierMedia.ByteArray [get], [set]

The byte array containing samples of the carrier media. This array is to be used by algorithms.

5.9.2.2 int Stegosaurus.Carrier.ICarrierMedia.BytesPerSample [get]

The amount of bytes per sample, where a sample is defined as a sequence of bytes. For example, the pixels in an image are samples, where the amount of bytes is the amount of channels.

5.9.2.3 string Stegosaurus.Carrier.ICarrierMedia.OutputExtension [get]

The default output extension for this carrier media. Example:

5.9.2.4 Image Stegosaurus.Carrier.ICarrierMedia.Thumbnail [get]

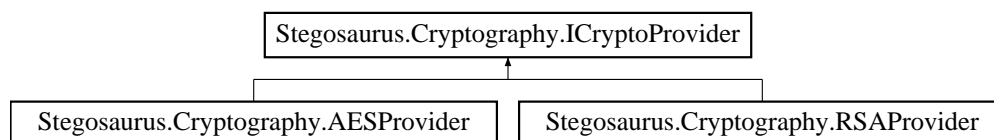
Get the thumbnail associated with this carrier media.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Carrier/ICarrierMedia.cs

5.10 Stegosaurus.Cryptography.ICryptoProvider Interface Reference

Inheritance diagram for Stegosaurus.Cryptography.ICryptoProvider:



Public Member Functions

- void [SetKey](#) (string _keyString)
Set the Key from a string.
- byte[] [GenerateKey](#) ()
Generates and returns a key which can be used with the algorithm.
- byte[] [Encrypt](#) (byte[] _data)
Encrypts and returns encrypted data.
- byte[] [Decrypt](#) (byte[] _data)
Decrypts and returns decrypted data.

Properties

- byte[] [Key](#) [get, set]
The key to be used, either in encryption or decryption.
- int [HeaderSize](#) [get]
The size of the header.
- string [Name](#) [get]
The name of the algorithm.
- int [KeySize](#) [get]
The maximum key size in bits.
- int [Seed](#) [get]
The seed to be optionally used by algorithms, typically a hash of the encryption key. If an implementation of [ICryptoProvider](#) is asymmetric, it should still provide a symmetric seed.

5.10.1 Member Function Documentation

5.10.1.1 `byte [] Stegosaurus.Cryptography.ICryptoProvider.Decrypt (byte[] _data)`

Decrypts and returns decrypted data.

Implemented in [Stegosaurus.Cryptography.AESProvider](#), and [Stegosaurus.Cryptography.RSAPProvider](#).

5.10.1.2 `byte [] Stegosaurus.Cryptography.ICryptoProvider.Encrypt (byte[] _data)`

Encrypts and returns encrypted data.

Implemented in [Stegosaurus.Cryptography.RSAPProvider](#), and [Stegosaurus.Cryptography.AESProvider](#).

5.10.1.3 `byte [] Stegosaurus.Cryptography.ICryptoProvider.GenerateKey ()`

Generates and returns a key which can be used with the algorithm.

Implemented in [Stegosaurus.Cryptography.RSAPProvider](#), and [Stegosaurus.Cryptography.AESProvider](#).

5.10.1.4 `void Stegosaurus.Cryptography.ICryptoProvider.SetKey (string _keyString)`

Set the Key from a string.

Implemented in [Stegosaurus.Cryptography.RSAPProvider](#), and [Stegosaurus.Cryptography.AESProvider](#).

5.10.2 Property Documentation

5.10.2.1 `int Stegosaurus.Cryptography.ICryptoProvider.HeaderSize` `[get]`

The size of the header.

5.10.2.2 `byte [] Stegosaurus.Cryptography.ICryptoProvider.Key` `[get]`, `[set]`

The key to be used, either in encryption or decryption.

5.10.2.3 `int Stegosaurus.Cryptography.ICryptoProvider.KeySize` `[get]`

The maximum key size in bits.

5.10.2.4 `string Stegosaurus.Cryptography.ICryptoProvider.Name` `[get]`

The name of the algorithm.

5.10.2.5 int Stegosaurus.Cryptography.ICryptoProvider.Seed [get]

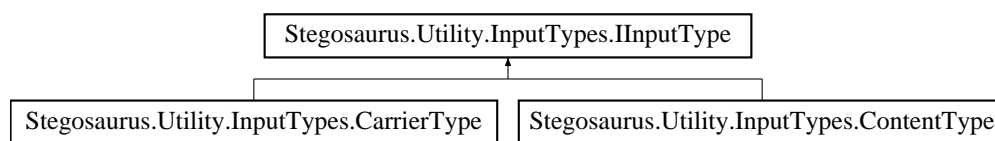
The seed to be optionally used by algorithms, typically a hash of the encryption key. If an implementation of [ICryptoProvider](#) is assymetric, it should still provide a symmetric seed.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Cryptography/ICryptoProvider.cs

5.11 Stegosaurus.Utility.InputTypes.IInputType Interface Reference

Inheritance diagram for Stegosaurus.Utility.InputTypes.IInputType:



Properties

- string **FilePath** [get, set]

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Utility/InputTypes/IInputType.cs

5.12 Stegosaurus.Carrier.ImageCarrier Class Reference

Inheritance diagram for Stegosaurus.Carrier.ImageCarrier:

Public Member Functions

- unsafe void [Decode](#) ()
Decodes the carrier media and sets ByteArray to the inner data.
- bool [IsExtensionCompatible](#) (string _extension)
Check if a certain extension is compatible with this carrier media.
- void [LoadFromFile](#) (string _filePath)
Open file from specified path.
- unsafe void [Encode](#) ()
Encodes ByteArray back into the carrier media.
- void [SaveToFile](#) (string _destination)
Saves the carrier media to the specified destination.

Public Attributes

- string **OutputExtension** => ".png"
- Image **Thumbnail** => [ImageData](#)
- int **BytesPerSample** => 3

Properties

- byte[] **ByteArray** [get, set]
- Bitmap [ImageData](#) [get, set]
Returns the inner instance of Image.

5.12.1 Member Function Documentation

5.12.1.1 unsafe void Stegosaurus.Carrier.ImageCarrier.Decode ()

Decodes the carrier media and sets ByteArray to the inner data.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.12.1.2 unsafe void Stegosaurus.Carrier.ImageCarrier.Encode ()

Encodes ByteArray back into the carrier media.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.12.1.3 bool Stegosaurus.Carrier.ImageCarrier.IsExtensionCompatible (string _extension)

Check if a certain extension is compatible with this carrier media.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.12.1.4 void Stegosaurus.Carrier.ImageCarrier.LoadFromFile (string _filePath)

Open file from specified path.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.12.1.5 void Stegosaurus.Carrier.ImageCarrier.SaveToFile (string _destination)

Saves the carrier media to the specified destination.

Implements [Stegosaurus.Carrier.ICarrierMedia](#).

5.12.2 Property Documentation

5.12.2.1 Bitmap Stegosaurus.Carrier.ImageCarrier.ImageData [get], [set]

Returns the inner instance of Image.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Carrier/ImageCarrier.cs

5.13 Stegosaurus.InputFile Class Reference

Public Member Functions

- [InputFile](#) (string _name, byte[] _content)
A constructor to construct a [InputFile](#) from byte array.
- [InputFile](#) (string _filePath)
A constructor to construct a [InputFile](#) from a file path.
- void [SaveTo](#) (string _destination)
This method is used to save the file in the file system of the operating system.

Properties

- string [Name](#) [get]
The name of the file.
- byte[] [Content](#) [get]
A byte array containing the files contents.

5.13.1 Constructor & Destructor Documentation

5.13.1.1 Stegosaurus.InputFile.InputFile (string _name, byte[] _content)

A constructor to construct a [InputFile](#) from byte array.

5.13.1.2 Stegosaurus.InputFile.InputFile (string _filePath)

A constructor to construct a [InputFile](#) from a file path.

5.13.2 Member Function Documentation

5.13.2.1 void Stegosaurus.InputFile.SaveTo (string _destination)

This method is used to save the file in the file system of the operating system.

5.13.3 Property Documentation

5.13.3.1 `byte [] Stegosaurus.InputFile.Content` [get]

A byte array containing the files contents.

5.13.3.2 `string Stegosaurus.InputFile.Name` [get]

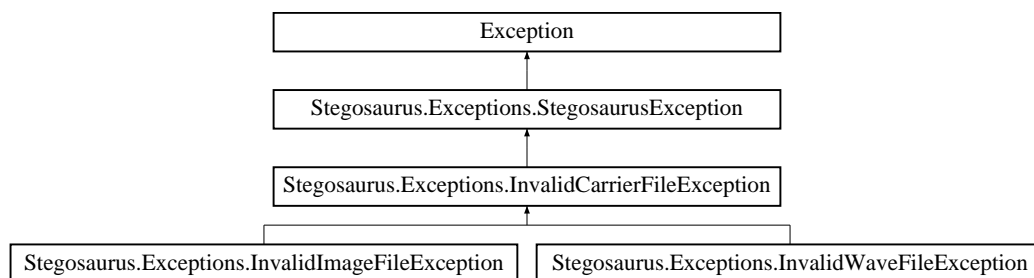
The name of the file.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/InputFile.cs

5.14 Stegosaurus.Exceptions.InvalidCarrierFileException Class Reference

Inheritance diagram for Stegosaurus.Exceptions.InvalidCarrierFileException:



Public Member Functions

- **InvalidCarrierFileException** (string _message, string _fileName)

Properties

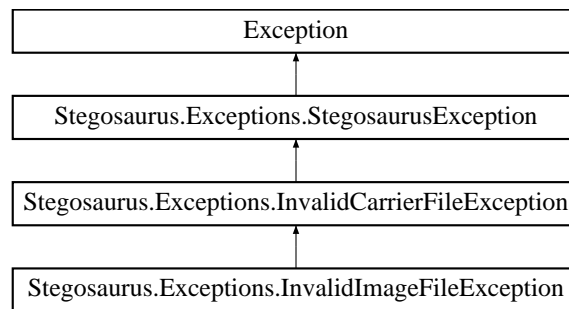
- string **FileName** [get]

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/InvalidCarrierFileException.cs

5.15 Stegosaurus.Exceptions.InvalidImageFileException Class Reference

Inheritance diagram for Stegosaurus.Exceptions.InvalidImageFileException:



Public Member Functions

- **InvalidImageFileException** (string _message, string _fileName)

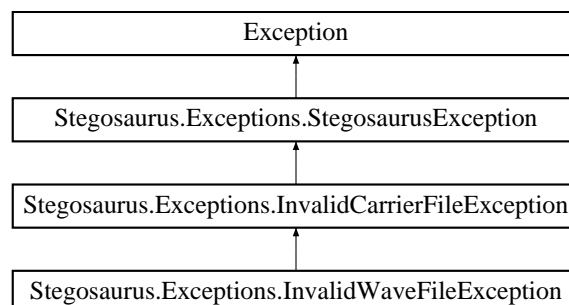
Additional Inherited Members

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/InvalidImageFileException.↔
cs

5.16 Stegosaurus.Exceptions.InvalidWaveFileException Class Reference

Inheritance diagram for Stegosaurus.Exceptions.InvalidWaveFileException:



Public Member Functions

- **InvalidWaveFileException** (string _message, string _fileName)

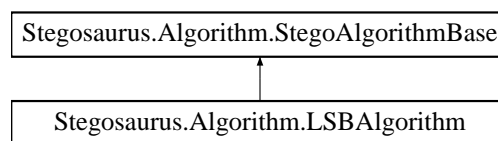
Additional Inherited Members

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/InvalidWaveFileException.↵
cs

5.17 Stegosaurus.Algorithm.LSBAlgorithm Class Reference

Inheritance diagram for Stegosaurus.Algorithm.LSBAlgorithm:



Public Types

- enum [BitValues](#) : byte {
First = 0x1, **Second** = 0x2, **Third** = 0x4, **Fourth** = 0x8,
Fifth = 0x10, **Sixth** = 0x20, **Seventh** = 0x40, **Eighth** = 0x80 }

Enum containing the different bit values.

Public Member Functions

- override void [Embed](#) ([StegoMessage](#) _message, IProgress< int > _progress, CancellationToken _ct)
Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.
- override [StegoMessage](#) [Extract](#) ()
Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.
- override long [ComputeBandwidth](#) ()
Returns the data capacity of the carrier media with the given algorithm.

Public Attributes

- override string **Name** => "Least Significant Bit"

Protected Attributes

- override byte[] **Signature** => new byte[] { 0x6C, 0x73, 0x62, 0x51 }

Properties

- [BitValues](#) [WorkingBit](#) [get, set]
Get or set the bit that will be modified or read from.

5.17.1 Member Enumeration Documentation

5.17.1.1 enum `Stegosaurus.Algorithm.LSBAlgorithm.BitValues` : `byte` `[strong]`

Enum containing the different bit values.

5.17.2 Member Function Documentation

5.17.2.1 override `long` `Stegosaurus.Algorithm.LSBAlgorithm.ComputeBandwidth` () `[virtual]`

Returns the data capacity of the carrier media with the given algorithm.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.17.2.2 override `void` `Stegosaurus.Algorithm.LSBAlgorithm.Embed` (`StegoMessage` `_message`, `IProgress`< `int` > `_progress`, `CancellationToken` `_ct`) `[virtual]`

Embeds a [StegoMessage](#) in the public `ByteArray` of the `CarrierMedia`.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.17.2.3 override `StegoMessage` `Stegosaurus.Algorithm.LSBAlgorithm.Extract` () `[virtual]`

Returns a [StegoMessage](#) by extracting from the public `ByteArray` of the `CarrierMedia`.

Implements [Stegosaurus.Algorithm.StegoAlgorithmBase](#).

5.17.3 Property Documentation

5.17.3.1 `BitValues` `Stegosaurus.Algorithm.LSBAlgorithm.WorkingBit` `[get]`, `[set]`

Get or set the bit that will be modified or read from.

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/LSBAlgorithm.cs`

5.18 Stegosaurus.Utility.RandomNumberList Class Reference

Public Member Functions

- [RandomNumberList](#) (`int` `_seed`, `int` `_maxValue`)
Construct a [RandomNumberList](#) with a seed and maximum value.

Properties

- `int Next` [get]

Get the next integer in the random number sequence. Throws a *RandomNumbersOutOfRangeException* if there are no numbers left to generate.

5.18.1 Constructor & Destructor Documentation

5.18.1.1 `Stegosaurus.Utility.RandomNumberList.RandomNumberList (int _seed, int _maxValue)`

Construct a [RandomNumberList](#) with a seed and maximum value.

5.18.2 Property Documentation

5.18.2.1 `int Stegosaurus.Utility.RandomNumberList.Next` [get]

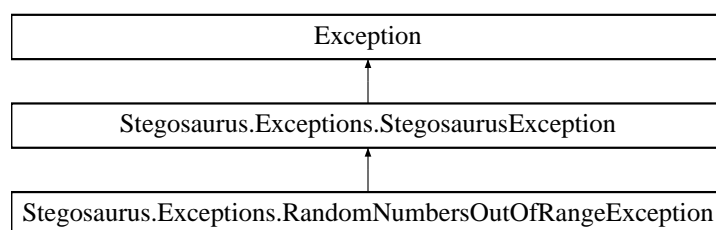
Get the next integer in the random number sequence. Throws a *RandomNumbersOutOfRangeException* if there are no numbers left to generate.

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Utility/RandomNumberList.cs`

5.19 Stegosaurus.Exceptions.RandomNumbersOutOfRangeException Class Reference

Inheritance diagram for `Stegosaurus.Exceptions.RandomNumbersOutOfRangeException`:



Additional Inherited Members

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/RandomNumbersOutOfRangeException.cs`

5.20 Stegosaurus.Cryptography.RSAKeyPair Class Reference

Properties

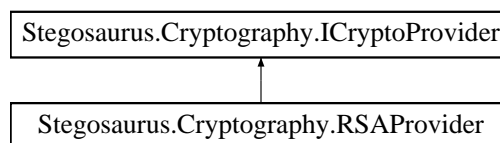
- string **PublicKey** [get, set]
- string **PrivateKey** [get, set]

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Cryptography/RSAKeyPair.cs

5.21 Stegosaurus.Cryptography.RSAProvider Class Reference

Inheritance diagram for Stegosaurus.Cryptography.RSAProvider:



Public Member Functions

- byte[] **Decrypt** (byte[] _data)
Decrypts and returns decrypted data.
- byte[] **Encrypt** (byte[] _data)
Encrypts and returns encrypted data.
- byte[] **SignData** (byte[] _originalData)
Sign data using a private key.
- bool **VerifyData** (byte[] _originalData, byte[] _signedData)
Verify data using a public key.
- void **SetKey** (string _keyString)
Set the Key from a string.
- byte[] **GenerateKey** ()
Generates and returns a key which can be used with the algorithm.

Static Public Member Functions

- static **RSAKeyPair GenerateKeys** (int _keySize)
Generate a valid RSA keypair.

Public Attributes

- string **Name** => "RSA"
- int **Seed** => Key == null ? 0 : Parameters.Modulus.ComputeHash()
The same seed is needed for encryption and decryption. Since the public and private key share modulus, we use its hash as a seed.
- int **HeaderSize** => Key == null ? 0 : symmetricAlgorithm.KeySize / 8 + symmetricAlgorithm.HeaderSize
- int **KeySize** => 2048

Properties

- `byte[] Key` [get, set]

5.21.1 Member Function Documentation

5.21.1.1 `byte[] Stegosaurus.Cryptography.RSAProvider.Decrypt (byte[] _data)`

Decrypts and returns decrypted data.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.21.1.2 `byte[] Stegosaurus.Cryptography.RSAProvider.Encrypt (byte[] _data)`

Encrypts and returns encrypted data.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.21.1.3 `byte[] Stegosaurus.Cryptography.RSAProvider.GenerateKey ()`

Generates and returns a key which can be used with the algorithm.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.21.1.4 `static RSAKeyPair Stegosaurus.Cryptography.RSAProvider.GenerateKeys (int _keySize) [static]`

Generate a valid RSA keypair.

5.21.1.5 `void Stegosaurus.Cryptography.RSAProvider.SetKey (string _keyString)`

Set the Key from a string.

Implements [Stegosaurus.Cryptography.ICryptoProvider](#).

5.21.1.6 `byte[] Stegosaurus.Cryptography.RSAProvider.SignData (byte[] _originalData)`

Sign data using a private key.

5.21.1.7 `bool Stegosaurus.Cryptography.RSAProvider.VerifyData (byte[] _originalData, byte[] _signedData)`

Verify data using a public key.

5.21.2 Member Data Documentation

5.21.2.1 `int Stegosaurus.Cryptography.RSAProvider.Seed => Key == null ? 0 : Parameters.Modulus.ComputeHash()`

The same seed is needed for encryption and decryption. Since the public and private key share modulus, we use its hash as a seed.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Cryptography/RSAProvider.cs

5.22 Stegosaurus.Algorithm.Sample Class Reference

Public Member Functions

- **Sample** (byte[] _values)
 - void **UpdateModValue** (byte _bitwiseModFactor)
 - short **DistanceTo** ([Sample](#) _otherSample)
 - override int **GetHashCode** ()
 - bool **Equals** ([Sample](#) _other)
 - object **Clone** ()
 - void **Swap** ([Sample](#) _otherSample)
- Swap the values of this sample with another sample.*

Static Public Member Functions

- static List< [Sample](#) > **GetSampleListFrom** ([ICarrierMedia](#) _carrierMedia, byte _bitwiseModFactor)
- Returns a list of all samples in the CarrierMedia.*

Public Attributes

- byte[] **Values**
- byte **ModValue**
- byte **TargetModValue**
- short **LastDistance**

5.22.1 Member Function Documentation

5.22.1.1 `static List<Sample> Stegosaurus.Algorithm.Sample.GetSampleListFrom (ICarrierMedia _carrierMedia, byte _bitwiseModFactor) [static]`

Returns a list of all samples in the CarrierMedia.

5.22.1.2 void Stegosaurus.Algorithm.Sample.Swap (Sample _otherSample)

Swap the values of this sample with another sample.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/Sample.cs

5.23 Stegosaurus.Cryptography.SavedPublicKey Class Reference

Public Member Functions

- [SavedPublicKey](#) (string _alias, string _key)
Constructs a new [SavedPublicKey](#).

Properties

- string [Alias](#) [get]
The Alias of the owner of this public key.
- string [Key](#) [get]
The public Key used to verify data.

5.23.1 Constructor & Destructor Documentation

5.23.1.1 Stegosaurus.Cryptography.SavedPublicKey.SavedPublicKey (string _alias, string _key)

Constructs a new [SavedPublicKey](#).

5.23.2 Property Documentation

5.23.2.1 string Stegosaurus.Cryptography.SavedPublicKey.Alias [get]

The Alias of the owner of this public key.

5.23.2.2 string Stegosaurus.Cryptography.SavedPublicKey.Key [get]

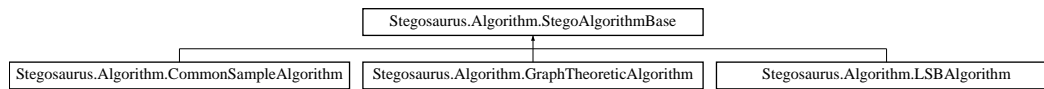
The public Key used to verify data.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Cryptography/SavedPublicKey.cs

5.24 Stegosaurus.Algorithm.StegoAlgorithmBase Class Reference

Inheritance diagram for Stegosaurus.Algorithm.StegoAlgorithmBase:



Public Member Functions

- abstract long [ComputeBandwidth](#) ()
Returns the data capacity of the carrier media with the given algorithm.
- abstract void [Embed](#) ([StegoMessage](#) _message, IProgress< int > _progress, CancellationToken _ct)
Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.
- abstract [StegoMessage](#) [Extract](#) ()
Returns a [StegoMessage](#) by extracting from the public ByteArray of the CarrierMedia.

Protected Attributes

- virtual int [Seed](#) => [CryptoProvider](#)?.Seed ?? 0
Get Seed used in pseudo-random pattern.

Properties

- abstract string [Name](#) [get]
Get the name of the algorithm.
- virtual [ICryptoProvider](#) [CryptoProvider](#) [get, set]
Get or set crypto provider.
- virtual [ICarrierMedia](#) [CarrierMedia](#) [get, set]
Get or set CarrierMedia.
- abstract byte[] [Signature](#) [get]
Get signature.

5.24.1 Member Function Documentation

5.24.1.1 abstract long Stegosaurus.Algorithm.StegoAlgorithmBase.ComputeBandwidth () [pure virtual]

Returns the data capacity of the carrier media with the given algorithm.

Implemented in [Stegosaurus.Algorithm.CommonSampleAlgorithm](#), [Stegosaurus.Algorithm.LSBAlgorithm](#), and [Stegosaurus.Algorithm.GraphTheoreticAlgorithm](#).

5.24.1.2 abstract void Stegosaurus.Algorithm.StegoAlgorithmBase.Embed ([StegoMessage](#) _message, IProgress< int > _progress, CancellationToken _ct) [pure virtual]

Embeds a [StegoMessage](#) in the public ByteArray of the CarrierMedia.

Implemented in [Stegosaurus.Algorithm.GraphTheoreticAlgorithm](#), [Stegosaurus.Algorithm.LSBAlgorithm](#), and [Stegosaurus.Algorithm.CommonSampleAlgorithm](#).

5.24.1.3 **abstract** `StegoMessage` `Stegosaurus.Algorithm.StegoAlgorithmBase.Extract ()` [pure virtual]

Returns a [StegoMessage](#) by extracting from the public `ByteArray` of the `CarrierMedia`.

Implemented in [Stegosaurus.Algorithm.GraphTheoreticAlgorithm](#), [Stegosaurus.Algorithm.CommonSampleAlgorithm](#), and [Stegosaurus.Algorithm.LSBAAlgorithm](#).

5.24.2 Member Data Documentation

5.24.2.1 **virtual** `int` `Stegosaurus.Algorithm.StegoAlgorithmBase.Seed => CryptoProvider?.Seed ?? 0` [protected]

Get Seed used in pseudo-random pattern.

5.24.3 Property Documentation

5.24.3.1 **virtual** `ICarrierMedia` `Stegosaurus.Algorithm.StegoAlgorithmBase.CarrierMedia` [get], [set]

Get or set `CarrierMedia`.

5.24.3.2 **virtual** `ICryptoProvider` `Stegosaurus.Algorithm.StegoAlgorithmBase.CryptoProvider` [get], [set]

Get or set crypto provider.

5.24.3.3 **abstract** `string` `Stegosaurus.Algorithm.StegoAlgorithmBase.Name` [get]

Get the name of the algorithm.

5.24.3.4 **abstract** `byte []` `Stegosaurus.Algorithm.StegoAlgorithmBase.Signature` [get], [protected]

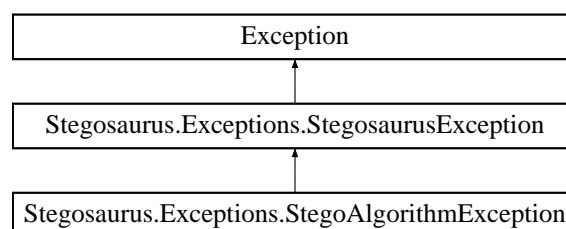
Get signature.

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

- `C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/StegoAlgorithmBase.cs`

5.25 Stegosaurus.Exceptions.StegoAlgorithmException Class Reference

Inheritance diagram for `Stegosaurus.Exceptions.StegoAlgorithmException`:



Public Member Functions

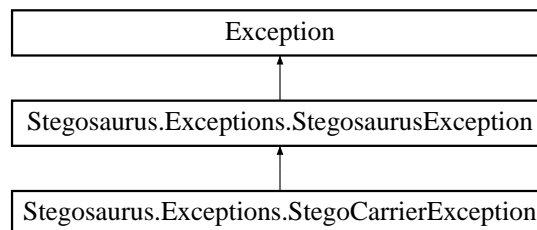
- **StegoAlgorithmException** (string message)

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/StegoAlgorithmException.↔
cs

5.26 Stegosaurus.Exceptions.StegoCarrierException Class Reference

Inheritance diagram for Stegosaurus.Exceptions.StegoCarrierException:



Public Member Functions

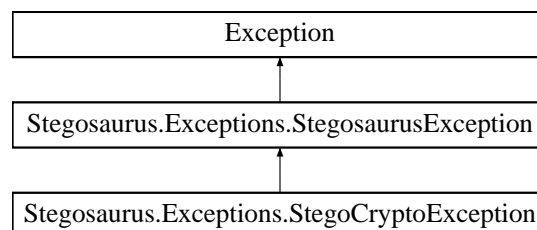
- **StegoCarrierException** (string _message)

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/StegoCarrierException.cs

5.27 Stegosaurus.Exceptions.StegoCryptoException Class Reference

Inheritance diagram for Stegosaurus.Exceptions.StegoCryptoException:



Public Member Functions

- **StegoCryptoException** (string message)
- **StegoCryptoException** (string message, Exception inner)

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Exceptions/StegoCryptoException.cs

5.28 Stegosaurus.StegoMessage Class Reference

Public Types

- enum **StegoMessageFlags** { **Encoded** = 0x1, **Compressed** = 0x2, **Encrypted** = 0x4, **Signed** = 0x8 }
- enum **StegoMessageSignState** { **Unsigned**, **SignedByKnown**, **SignedByUnknown** }

Public Member Functions

- [StegoMessage](#) ()
Empty constructor.
- [StegoMessage](#) (string _textMessage)
This constructor is used if only a text message is applied.
- [StegoMessage](#) (byte[] _fromArray, [ICryptoProvider](#) _cryptoProvider=null)
This constructor takes a byte array containing the data to add to the [StegoMessage](#).
- byte[] [ToByteArray](#) ([ICryptoProvider](#) _cryptoProvider=null)
Converts text and/or file(s) into a byte array and combines them using a List. First part of the byte array contains the message file(s). The last part of the byte array is the text message if there is any.
- long [GetCompressedSize](#) ()
This method returns the compressed size of the data stored in this [StegoMessage](#).

Public Attributes

- StegoMessageFlags **Flags**

Properties

- string [TextMessage](#) [get, set]
This is the text message that can be saved in the [StegoMessage](#).
- List< [InputFile](#) > [InputFiles](#) [get]
This is where each file will be stored in the [StegoMessage](#).
- string [PrivateSigningKey](#) = new List<[InputFile](#)>() [get, set]
Private Signing Key used to verify the authenticity of the sender.
- string [SignedBy](#) [get]
Indicates who has signed this message, if any.
- StegoMessageSignState [SignState](#) [get]
Indicates whether the message has been signed or not.

5.28.1 Constructor & Destructor Documentation

5.28.1.1 Stegosaurus.StegoMessage.StegoMessage ()

Empty constructor.

5.28.1.2 Stegosaurus.StegoMessage.StegoMessage (string _textMessage)

This constructor is used if only a text message is applied.

5.28.1.3 Stegosaurus.StegoMessage.StegoMessage (byte[] _fromArray, ICryptoProvider _cryptoProvider = null)

This constructor takes a byte array containing the data to add to the [StegoMessage](#).

5.28.2 Member Function Documentation

5.28.2.1 long Stegosaurus.StegoMessage.GetCompressedSize ()

This method returns the compressed size of the data stored in this [StegoMessage](#).

5.28.2.2 byte [] Stegosaurus.StegoMessage.ToByteArray (ICryptoProvider _cryptoProvider = null)

Converts text and/or file(s) into a byte array and combines them using a List. First part of the byte array contains the message file(s). The last part of the byte array is the text message if there is any.

5.28.3 Property Documentation

5.28.3.1 List<InputFile> Stegosaurus.StegoMessage.InputFiles [get]

This is where each file will be stored in the [StegoMessage](#).

5.28.3.2 string Stegosaurus.StegoMessage.PrivateSigningKey = new List<InputFile>() [get], [set]

Private Signing Key used to verify the authenticity of the sender.

5.28.3.3 string Stegosaurus.StegoMessage.SignedBy [get]

Indicates who has signed this message, if any.

5.28.3.4 StegoMessageSignState Stegosaurus.StegoMessage.SignState [get]

Indicates whether the message has been signed or not.

5.28.3.5 string Stegosaurus.StegoMessage.TextMessage [get], [set]

This is the text message that can be saved in the [StegoMessage](#).

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/StegoMessage.cs

Public Attributes

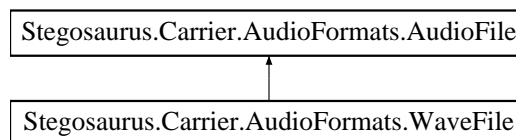
- [Sample\[\]](#) **Samples**
- List< [Edge](#) > **Edges** = new List<[Edge](#)>()
- byte **Value**
- bool **IsValid**

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Algorithm/GraphTheory/Vertex.cs

5.32 Stegosaurus.Carrier.AudioFormats.WaveFile Class Reference

Inheritance diagram for Stegosaurus.Carrier.AudioFormats.WaveFile:



Public Member Functions

- [WaveFile](#) (string _filePath)
Construct a [WaveFile](#) from a file path.
- override void [Parse](#) (string _filePath)
Parses an audio file by reading its headers and samples.
- override byte[] [ToArray](#) ()
Reconstructs and returns the entire byte array of the file, including headers.

Properties

- int [ChunkSize](#) [get]
Get or set the chunk size.
- int [FormatSubChunkSize](#) [get]
Get or set the size of the format subchunk.
- int [DataSubChunkSize](#) [get]
Get or set the size of the data subchunk.
- short [AudioFormat](#) [get]
Get or set the audio format.

Additional Inherited Members

5.32.1 Constructor & Destructor Documentation

5.32.1.1 Stegosaurus.Carrier.AudioFormats.WaveFile.WaveFile (string _filePath)

Construct a [WaveFile](#) from a file path.

5.32.2 Member Function Documentation

5.32.2.1 `override void Stegosaurus.Carrier.AudioFormats.WaveFile.Parse (string _filePath) [virtual]`

Parses an audio file by reading its headers and samples.

Implements [Stegosaurus.Carrier.AudioFormats.AudioFile](#).

5.32.2.2 `override byte [] Stegosaurus.Carrier.AudioFormats.WaveFile.ToArray () [virtual]`

Reconstructs and returns the entire byte array of the file, including headers.

Implements [Stegosaurus.Carrier.AudioFormats.AudioFile](#).

5.32.3 Property Documentation

5.32.3.1 `short Stegosaurus.Carrier.AudioFormats.WaveFile.AudioFormat [get]`

Get or set the audio format.

5.32.3.2 `int Stegosaurus.Carrier.AudioFormats.WaveFile.ChunkSize [get]`

Get or set the chunk size.

5.32.3.3 `int Stegosaurus.Carrier.AudioFormats.WaveFile.DataSubChunkSize [get]`

Get or set the size of the data subchunk.

5.32.3.4 `int Stegosaurus.Carrier.AudioFormats.WaveFile.FormatSubChunkSize [get]`

Get or set the size of the format subchunk.

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

- C:/Development/Uni/P2/Steganography/Steganography/Stegosaurus/Carrier/AudioFormats/WaveFile.cs

Index

- Alias
 - [Stegosaurus::Cryptography::SavedPublicKey, 35](#)
- AudioFile
 - [Stegosaurus::Carrier::AudioFormats::AudioFile, 14](#)
- AudioFormat
 - [Stegosaurus::Carrier::AudioFormats::WaveFile, 43](#)
- BitValues
 - [Stegosaurus::Algorithm::LSBAlgorithm, 30](#)
- BitsPerSample
 - [Stegosaurus::Carrier::AudioFormats::AudioFile, 15](#)
- BlockAlign
 - [Stegosaurus::Carrier::AudioFormats::AudioFile, 15](#)
- ByteArray
 - [Stegosaurus::Carrier::ICarrierMedia, 21](#)
- ByteRate
 - [Stegosaurus::Carrier::AudioFormats::AudioFile, 15](#)
- BytesPerSample
 - [Stegosaurus::Carrier::ICarrierMedia, 21](#)
- CarrierMedia
 - [Stegosaurus::Algorithm::StegoAlgorithmBase, 37](#)
- ChunkSize
 - [Stegosaurus::Carrier::AudioFormats::WaveFile, 43](#)
- ComputeBandwidth
 - [Stegosaurus::Algorithm::CommonSample↔Algorithm, 17](#)
 - [Stegosaurus::Algorithm::GraphTheoreticAlgorithm, 19](#)
 - [Stegosaurus::Algorithm::LSBAlgorithm, 30](#)
 - [Stegosaurus::Algorithm::StegoAlgorithmBase, 36](#)
- Content
 - [Stegosaurus::InputFile, 27](#)
- CopyInnerData
 - [Stegosaurus::Carrier::AudioFormats::AudioFile, 15](#)
- CryptoProvider
 - [Stegosaurus::Algorithm::StegoAlgorithmBase, 37](#)
- DataSubChunkSize
 - [Stegosaurus::Carrier::AudioFormats::WaveFile, 43](#)
- Decode
 - [Stegosaurus::Carrier::AudioCarrier, 13](#)
 - [Stegosaurus::Carrier::ICarrierMedia, 21](#)
 - [Stegosaurus::Carrier::ImageCarrier, 25](#)
- Decrypt
 - [Stegosaurus::Cryptography::AESProvider, 12](#)
 - [Stegosaurus::Cryptography::ICryptoProvider, 23](#)
 - [Stegosaurus::Cryptography::RSAPProvider, 33](#)
- Embed
 - [Stegosaurus::Algorithm::CommonSample↔Algorithm, 17](#)
 - [Stegosaurus::Algorithm::GraphTheoreticAlgorithm, 19](#)
 - [Stegosaurus::Algorithm::LSBAlgorithm, 30](#)
 - [Stegosaurus::Algorithm::StegoAlgorithmBase, 36](#)
- Encode
 - [Stegosaurus::Carrier::AudioCarrier, 13](#)
 - [Stegosaurus::Carrier::ICarrierMedia, 21](#)
 - [Stegosaurus::Carrier::ImageCarrier, 25](#)
- Encrypt
 - [Stegosaurus::Cryptography::AESProvider, 12](#)
 - [Stegosaurus::Cryptography::ICryptoProvider, 23](#)
 - [Stegosaurus::Cryptography::RSAPProvider, 33](#)
- Extract
 - [Stegosaurus::Algorithm::CommonSample↔Algorithm, 17](#)
 - [Stegosaurus::Algorithm::GraphTheoreticAlgorithm, 20](#)
 - [Stegosaurus::Algorithm::LSBAlgorithm, 30](#)
 - [Stegosaurus::Algorithm::StegoAlgorithmBase, 36](#)
- FormatSubChunkSize
 - [Stegosaurus::Carrier::AudioFormats::WaveFile, 43](#)
- GenerateKey
 - [Stegosaurus::Cryptography::AESProvider, 12](#)
 - [Stegosaurus::Cryptography::ICryptoProvider, 23](#)
 - [Stegosaurus::Cryptography::RSAPProvider, 33](#)
- GenerateKeys
 - [Stegosaurus::Cryptography::RSAPProvider, 33](#)
- GetCompressedSize
 - [Stegosaurus::StegoMessage, 40](#)
- GetSampleListFrom
 - [Stegosaurus::Algorithm::Sample, 34](#)
- HeaderSize
 - [Stegosaurus::Cryptography::ICryptoProvider, 23](#)
- ImageData
 - [Stegosaurus::Carrier::ImageCarrier, 26](#)
- InputFile
 - [Stegosaurus::InputFile, 26](#)
- InputFiles
 - [Stegosaurus::StegoMessage, 40](#)
- IsExtensionCompatible
 - [Stegosaurus::Carrier::AudioCarrier, 13](#)
 - [Stegosaurus::Carrier::ICarrierMedia, 21](#)
 - [Stegosaurus::Carrier::ImageCarrier, 25](#)
- Key

- Stegosaurus::Cryptography::ICryptoProvider, 23
 - Stegosaurus::Cryptography::SavedPublicKey, 35
- KeySize
 - Stegosaurus::Cryptography::ICryptoProvider, 23
- LoadFromFile
 - Stegosaurus::Carrier::AudioCarrier, 13
 - Stegosaurus::Carrier::ICarrierMedia, 21
 - Stegosaurus::Carrier::ImageCarrier, 25
- MaxDistance
 - Stegosaurus::Algorithm::CommonSample↔Algorithm, 17
- MaxSampleCount
 - Stegosaurus::Algorithm::CommonSample↔Algorithm, 17
- Name
 - Stegosaurus::Algorithm::StegoAlgorithmBase, 37
 - Stegosaurus::Cryptography::ICryptoProvider, 23
 - Stegosaurus::InputFile, 27
- Next
 - Stegosaurus::Utility::RandomNumberList, 31
- NumberOfChannels
 - Stegosaurus::Carrier::AudioFormats::AudioFile, 15
- OutputExtension
 - Stegosaurus::Carrier::ICarrierMedia, 21
- Parse
 - Stegosaurus::Carrier::AudioFormats::AudioFile, 15
 - Stegosaurus::Carrier::AudioFormats::WaveFile, 43
- PrivateSigningKey
 - Stegosaurus::StegoMessage, 40
- RandomNumberList
 - Stegosaurus::Utility::RandomNumberList, 31
- SampleRate
 - Stegosaurus::Carrier::AudioFormats::AudioFile, 15
- SaveTo
 - Stegosaurus::InputFile, 26
- SaveToFile
 - Stegosaurus::Carrier::AudioCarrier, 13
 - Stegosaurus::Carrier::ICarrierMedia, 21
 - Stegosaurus::Carrier::ImageCarrier, 25
- SavedPublicKey
 - Stegosaurus::Cryptography::SavedPublicKey, 35
- Seed
 - Stegosaurus::Algorithm::StegoAlgorithmBase, 37
 - Stegosaurus::Cryptography::ICryptoProvider, 23
 - Stegosaurus::Cryptography::RSAProvider, 34
- SetInnerData
 - Stegosaurus::Carrier::AudioFormats::AudioFile, 15
- SetKey
 - Stegosaurus::Cryptography::AESProvider, 12
 - Stegosaurus::Cryptography::ICryptoProvider, 23
 - Stegosaurus::Cryptography::RSAProvider, 33
- SignData
 - Stegosaurus::Cryptography::RSAProvider, 33
- SignState
 - Stegosaurus::StegoMessage, 40
- Signature
 - Stegosaurus::Algorithm::StegoAlgorithmBase, 37
- SignedBy
 - Stegosaurus::StegoMessage, 40
- StegoMessage
 - Stegosaurus::StegoMessage, 39
- Stegosaurus, 7
 - Stegosaurus.Algorithm, 7
 - Stegosaurus.Algorithm.CommonSampleAlgorithm, 16
 - Stegosaurus.Algorithm.GraphTheoreticAlgorithm, 19
 - Stegosaurus.Algorithm.GraphTheory, 7
 - Stegosaurus.Algorithm.GraphTheory.Edge, 18
 - Stegosaurus.Algorithm.GraphTheory.Vertex, 41
 - Stegosaurus.Algorithm.LSBAlgorithm, 29
 - Stegosaurus.Algorithm.Sample, 34
 - Stegosaurus.Algorithm.StegoAlgorithmBase, 36
 - Stegosaurus.Carrier, 8
 - Stegosaurus.Carrier.AudioCarrier, 12
 - Stegosaurus.Carrier.AudioFormats, 8
 - Stegosaurus.Carrier.AudioFormats.AudioFile, 14
 - Stegosaurus.Carrier.AudioFormats.WaveFile, 42
 - Stegosaurus.Carrier.ICarrierMedia, 20
 - Stegosaurus.Carrier.ImageCarrier, 24
 - Stegosaurus.Cryptography, 8
 - Stegosaurus.Cryptography.AESProvider, 11
 - Stegosaurus.Cryptography.ICryptoProvider, 22
 - Stegosaurus.Cryptography.RSAKeyPair, 32
 - Stegosaurus.Cryptography.RSAProvider, 32
 - Stegosaurus.Cryptography.SavedPublicKey, 35
 - Stegosaurus.Exceptions, 8
 - Stegosaurus.Exceptions.InvalidCarrierFileException, 27
 - Stegosaurus.Exceptions.InvalidImageFileException, 28
 - Stegosaurus.Exceptions.InvalidWaveFileException, 28
 - Stegosaurus.Exceptions.RandomNumbersOutOf↔RangeException, 31
 - Stegosaurus.Exceptions.StegoAlgorithmException, 37
 - Stegosaurus.Exceptions.StegoCarrierException, 38
 - Stegosaurus.Exceptions.StegoCryptoException, 38
 - Stegosaurus.Exceptions.StegoMessageException, 41
 - Stegosaurus.Exceptions.StegosaurusException, 41
 - Stegosaurus.InputFile, 26
 - Stegosaurus.StegoMessage, 39
 - Stegosaurus.Utility, 9
 - Stegosaurus.Utility.Extensions, 9
 - Stegosaurus.Utility.InputTypes, 9
 - Stegosaurus.Utility.InputTypes.CarrierType, 16
 - Stegosaurus.Utility.InputTypes.ContentType, 18
 - Stegosaurus.Utility.InputTypes.IInputType, 24
 - Stegosaurus.Utility.RandomNumberList, 30
 - Stegosaurus::Algorithm::CommonSampleAlgorithm
 - ComputeBandwidth, 17
 - Embed, 17
 - Extract, 17
 - MaxDistance, 17
 - MaxSampleCount, 17
 - Stegosaurus::Algorithm::GraphTheoreticAlgorithm

- ComputeBandwidth, 19
- Embed, 19
- Extract, 20
- Stegosaurus::Algorithm::LSBAlgorithm
 - BitValues, 30
 - ComputeBandwidth, 30
 - Embed, 30
 - Extract, 30
 - WorkingBit, 30
- Stegosaurus::Algorithm::Sample
 - GetSampleListFrom, 34
 - Swap, 34
- Stegosaurus::Algorithm::StegoAlgorithmBase
 - CarrierMedia, 37
 - ComputeBandwidth, 36
 - CryptoProvider, 37
 - Embed, 36
 - Extract, 36
 - Name, 37
 - Seed, 37
 - Signature, 37
- Stegosaurus::Carrier::AudioCarrier
 - Decode, 13
 - Encode, 13
 - IsExtensionCompatible, 13
 - LoadFromFile, 13
 - SaveToFile, 13
- Stegosaurus::Carrier::AudioFormats::AudioFile
 - AudioFile, 14
 - BitsPerSample, 15
 - BlockAlign, 15
 - ByteRate, 15
 - CopyInnerData, 15
 - NumberOfChannels, 15
 - Parse, 15
 - SampleRate, 15
 - SetInnerData, 15
 - ToArray, 15
- Stegosaurus::Carrier::AudioFormats::WaveFile
 - AudioFormat, 43
 - ChunkSize, 43
 - DataSubChunkSize, 43
 - FormatSubChunkSize, 43
 - Parse, 43
 - ToArray, 43
 - WaveFile, 42
- Stegosaurus::Carrier::ICarrierMedia
 - ByteArray, 21
 - BytesPerSample, 21
 - Decode, 21
 - Encode, 21
 - IsExtensionCompatible, 21
 - LoadFromFile, 21
 - OutputExtension, 21
 - SaveToFile, 21
 - Thumbnail, 22
- Stegosaurus::Carrier::ImageCarrier
 - Decode, 25
 - Encode, 25
 - ImageData, 26
 - IsExtensionCompatible, 25
 - LoadFromFile, 25
 - SaveToFile, 25
- Stegosaurus::Cryptography::AESProvider
 - Decrypt, 12
 - Encrypt, 12
 - GenerateKey, 12
 - SetKey, 12
- Stegosaurus::Cryptography::ICryptoProvider
 - Decrypt, 23
 - Encrypt, 23
 - GenerateKey, 23
 - HeaderSize, 23
 - Key, 23
 - KeySize, 23
 - Name, 23
 - Seed, 23
 - SetKey, 23
- Stegosaurus::Cryptography::RSAProvider
 - Decrypt, 33
 - Encrypt, 33
 - GenerateKey, 33
 - GenerateKeys, 33
 - Seed, 34
 - SetKey, 33
 - SignData, 33
 - VerifyData, 33
- Stegosaurus::Cryptography::SavedPublicKey
 - Alias, 35
 - Key, 35
 - SavedPublicKey, 35
- Stegosaurus::InputFile
 - Content, 27
 - InputFile, 26
 - Name, 27
 - SaveTo, 26
- Stegosaurus::StegoMessage
 - GetCompressedSize, 40
 - InputFiles, 40
 - PrivateSigningKey, 40
 - SignState, 40
 - SignedBy, 40
 - StegoMessage, 39
 - TextMessage, 40
 - ToByteArray, 40
- Stegosaurus::Utility::RandomNumberList
 - Next, 31
 - RandomNumberList, 31
- Swap
 - Stegosaurus::Algorithm::Sample, 34
- TextMessage
 - Stegosaurus::StegoMessage, 40
- Thumbnail
 - Stegosaurus::Carrier::ICarrierMedia, 22
- ToArray
 - Stegosaurus::Carrier::AudioFormats::AudioFile, 15

- Stegosaurus::Carrier::AudioFormats::WaveFile, [43](#)
- ToByteArray
 - Stegosaurus::StegoMessage, [40](#)
- VerifyData
 - Stegosaurus::Cryptography::RSAProvider, [33](#)
- WaveFile
 - Stegosaurus::Carrier::AudioFormats::WaveFile, [42](#)
- WorkingBit
 - Stegosaurus::Algorithm::LSBAlgorithm, [30](#)