

# StandardEngine

INHERITS FROM RandomEngine

## CLASS DESCRIPTION

The StandardEngine class is a wrapper for the standard C/UNIX rand() and srand() functions supplied on the NeXT computer. An instance of the StandardEngine class can be a source of pseudorandom bits usable by the Random class.

Note that rand() generates only 31 pseudo-random bits per call and the Random class expects multiples of 8 bits. Rather than throw away 7 of the 31 bits (to leave 24), StandardEngine generates 32 words (each with 31 pseudo-random bits). One of those words is used as a source of high-order bits for the other 31. So, StandardEngine generates a unit of 31 words or 124 bytes at a shot.

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## METHOD TYPES

Creating and freeing instances

+ alloc  
- free

Generation of random bits - makeRandom:

+ unit

Archiving

- read:  
- write:

## CLASS METHODS

**alloc**

+ **alloc**

Returns a new uninitialized instance.

**unit**

+ (int)**unit**

Returns the number of bytes each invocation of **makeRandom:** will produce. For StandardEngine, this is 124.

## INSTANCE METHODS

**free**

- **free**

Frees the memory occupied by the StandardEngine instance and returns **nil**.

**makeRandom:**

- **makeRandom:**(uchar \*)*storage*

Makes 32 calls to rand(), and stuffs the results into *storage* (note that only 31 words of pseudo-random bits are generated).

**read:**

- **read:**(NXTypedStream \*)*stream*

Unarchives a StandardEngine from *stream*.

See also: - **write:**

**write:**

- **write:**(NXTypedStream \*)*stream*

Archives a StandardEngine to *stream*.

See also: - **read:**