

N I N T E N D O
NITRO-System
Foundation Library
Release Notes

Version 1.0.1a

The contents in this document are highly
confidential and should be handled accordingly.

Table of Contents

1	About the Foundation Library	4
1.1	Functionality Provided in the Foundation Library	4
1.1.1	Memory Manager	4
1.1.2	Archive Manager	4
1.1.3	List Structure	4
1.1.4	Memory Allocator.....	4
1.2	Multi-Thread Operations.....	4
2	Main Updates	5
2.1	Updates in Version 2005/09/01	5
2.1.1	Memory Allocator.....	5
2.2	Updates in Version 2004/11/10	5
2.2.1	Extended Heap Manager.....	5
2.2.2	Archiver Revision.....	5
2.3	Updates in Version 2004/09/02	5
2.3.1	Extended Heap manager.....	5
2.4	Updates in Version 2004/08/02	6
2.4.1	Frame Heap Manager	6
2.4.2	Unit Heap Manager	6
2.4.3	Memory Allocator.....	6
2.5	Updates in Version 2004/07/20	6
2.5.1	Unit Heap Manager	6
2.5.2	Common to All Heaps.....	6
2.6	Updates in Version 2004/06/10	6
2.6.1	Archive Manager	6
2.7	Updates in Version 2004/05/28	6
2.7.1	List structure.....	6
3	Known Problems	7
4	Future Plans	7

Revision History

Version	Revision Date	Description
1.0.1a	2007/04/27	Changed dates in Revision History to international format.
1.0.1	2005/01/24	Changed an instance of "NITRO" to "Nintendo DS."
1.0.0	2004/11/10	Added support for 11/10/2004 version (revised heap manager and archiver).
0.5.1	2004/10/12	Added warnings about multi-thread operations.
0.5.0	2004/08/20	Added support for 09/02/2004 (fixed heap manager).
0.4.0	2004/08/02	Added support for 08/02/2004 version (fixed heap manager; added memory allocator).
0.3.0	2004/07/20	Added support for 07/20/2004 version (fixed heap manager).
0.2.0	2004/06/10	Added support for version 6/10/2004 (Archive Manager added).
0.1.1	2004/05/28	Added support for version 5/28/2004.
0.1.0	2004/04/06	Initial version.

1 About the Foundation Library

The Foundation Library provides system-related managers and functions for handling memory.

1.1 Functionality Provided in the Foundation Library

The Foundation Library currently provides the following functionality.

1.1.1 Memory Manager

A memory management system helps you to use the 4-megabyte memory effectively. The Foundation Library provides three types of memory managers that have special functionality for game software use. For details, see the Memory Manager Manual, `MemoryManager.pdf`, and function references.

1.1.2 Archive Manager

The Foundation Library provides an archive manager that your Nintendo DS application can use to easily manipulate archives that are created with the `nnsarc` general-purpose archiver that comes with NITRO-System. For details, see the manual for the Archive Manager (`ArchiveManager.pdf`) and the function reference.

1.1.3 List Structure

The Foundation Library provides functionality that makes it easy to realize a doubly-linked list structure. For details see the function reference.

1.1.4 Memory Allocator

The Foundation Library provides a way to allocate and release memory regardless of the type of Memory Manager. For details, see the manual for the Memory Allocator (`Allocator.pdf`) and the function reference.

1.2 Multi-Thread Operations

NITRO-System library was not designed to be fundamentally thread-safe (to support multiple threads). Note that foundation library API calls made from interrupt handlers and differing threads may not always work correctly.

2 Main Updates

2.1 Updates in Version 2005/09/01

2.1.1 Memory Allocator

The function `FndInitAllocatorForSDKHeap` was accidentally called `FndInitAllocatorForOSHeap`. This has been corrected.

2.2 Updates in Version 2004/11/10

2.2.1 Extended Heap Manager

In previous versions, the `NNS_FndCheckExpHeap()` and `NNS_FndCheckForMBlockExpHeap()` functions always returned `FALSE` in the final ROM (`FinalROM`) version library, and indicated that an error had been discovered. The functions have been changed so that they now always return `TRUE` to indicate that an error was not discovered.

2.2.2 Archiver Revision

The archiver **nnsarc** is now version 1.0.0. Changes in version 1.0.0 are as follows.

- When specifying `-x` (`--extract`) mode and getting files in the archive, error processing did not occur correctly when the specified directory could not be created. We have fixed this bug.
- When specifying the `-i` (`--index`) option and outputting the C-language file ID definition header file, two consecutive underscores were inserted after the symbol prefix when the beginning of the file name was a number. We have fixed this bug.

2.3 Updates in Version 2004/09/02

2.3.1 Extended Heap manager

Added the `NNS_FndCheckExpHeap()` function and the `NNS_FndCheckForMBlockExpHeap()` function. These functions allow you to check if the extended heap and the memory block that are allocated from the extended heap are destroyed.

2.4 Updates in Version 2004/08/02

2.4.1 Frame Heap Manager

Added the `NNS_FndResizeForMBlockFrmHeap()` function. You can use this function to change the size of the memory block allocated from the frame heap.

2.4.2 Unit Heap Manager

Added the `NNS_FndGetMemBlockSizeForUnitHeap()` function. You can use this function to get the size of each memory block set in the unit heap.

2.4.3 Memory Allocator

Added the initial version of Memory Allocator.

2.5 Updates in Version 2004/07/20

2.5.1 Unit Heap Manager

Added the `NNS_FndCalcHeapSizeForUnitHeap()` function. You can use this function to get the necessary unit heap size from the memory block size and number.

2.5.2 Common to All Heaps

Corrected the `NNS_FndDumpHeap()` function so that it performs no processing in the last ROM (FinalROM) version library.

2.6 Updates in Version 2004/06/10

2.6.1 Archive Manager

Added the initial version of the Archive Manager.

2.7 Updates in Version 2004/05/28

2.7.1 List structure

Fixed the bug with `NNS_FndInsertListObject` in which the object was not inserted correctly

3 Known Problems

There are no known problems.

4 Future Plans

© 2004-2007 Nintendo

The contents of this document cannot be duplicated, copied, reprinted, transferred, distributed or loaned in whole or in part without the prior approval of Nintendo.