

Graphics Foundation Library Release Notes

Version 1.0.2

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

Confidential

These coded instructions, statements, and computer programs contain proprietary information of Nintendo of America Inc. and/or Nintendo Company Ltd. and are protected by Federal copyright law. They may not be disclosed to third parties or copied or duplicated in any form, in whole or in part, without the prior written consent of Nintendo.

Table of Contents

1	The Graphics Foundation Library	5
1.1	Functions Provided in the Graphics Foundation Library	5
1.1.1	VRAM Managers	5
1.1.2	VRAM Transfer Manager	5
1.2	Multi-Thread Operation	5
2	Major Changes	6
2.1	Major Changes from Version 1.1.0	6
2.1.1	General	6
2.2	Major Changes from Version 1.0.0	6
2.2.1	General	6
2.2.2	Frame Texture VRAM Manager	6
2.2.3	Linked List Texture VRAM Manager	6
2.3	Major Changes from Version 0.1.0	6
2.3.1	General	6
2.3.2	Frame Texture VRAM Manager	6
3	Known Issues	7
4	Future Release Plans	7

Revision History

Version	Revision Date	Description
1.0.2	09/01/2005	Added information display function for debugging.
1.0.1	12/06/2004	Fixed bugs in the linked list VRAM manager
1.0.0	11/10/2004	Updated version to 1.0.0
0.2.0	10/10/2004	<ul style="list-style-type: none">• Added linked list VRAM manager• Changed the search order for the free regions for frame texture VRAM manager.• Added cautions relating to multi-thread operation
0.1.0	07/20/2004	Initial Version

1 The Graphics Foundation Library

The Graphics Foundation Library provides basic features for handling NITRO graphics.

1.1 Functions Provided in the Graphics Foundation Library ---

The Graphics Foundation Library currently provides the below functions.

1.1.1 VRAM Managers ---

VRAM managers dynamically allocate and free memory from VRAM. There are two types of VRAM managers. One is the texture VRAM manager for securing and releasing texture memory, and the other is the palette VRAM for securing and releasing palette memory. For further details, refer to the VRAM manager manual `VramManager.pdf` and the function reference.

1.1.2 VRAM Transfer Manager ---

The VRAM transfer manager provides functionality to register user requests to rewrite VRAM to the queue as VRAM transfer tasks, and to then write the data to the VRAM according to that registered VRAM transfer task during the V-Blank interval. For further details, refer to the VRAM transfer manager manual `VramTransferManager.pdf` and the function reference.

1.2 Multi-Thread Operation ---

NITRO-System library is not designed to be fundamentally thread-safe (supporting multi-thread). Therefore, it may not operate normally when calling the Graphics Foundation library API from the interrupt handler or a different thread.

2 Major Changes

2.1 Major Changes from Version 1.1.0

2.1.1 General

The function that outputs debugging information `NNS_GfdDumpXXX()` has been added to various VRAM managers.

2.2 Major Changes from Version 1.0.0

2.2.1 General

- In order to improve performance, some internal functions were changed to inline functions.
- Added three sample demos that show how to use each of the VRAM Managers.

2.2.2 Frame Texture VRAM Manager

- The problem was fixed in which initialization was not being executed correctly when the manager was initialized multiple times under different parameters using `NNS_GfdInitFrmTexVramManager()` (The bug involving the settings of the search order of the manager's free regions being fixed to the settings of the first initialization was fixed. Under normal circumstances, the search order of free regions should be changed optimally for each initialization based on parameters.)

2.2.3 Linked List Texture VRAM Manager

- The problem was fixed where the manager was not initialized properly when the control VRAM region size was specified as smaller than the size of 1 slot (0x20000).
- The bug was fixed where the manager was not initialized properly when the control region size was specified in units smaller than the size of 1 slot (0x20000).

2.3 Major Changes from Version 0.1.0

2.3.1 General

- Link list VRAM manager added.

2.3.2 Frame Texture VRAM Manager

- Changed the order of free region search in accordance with the number of VRAM slots that the frame texture VRAM manager controls. This change makes it possible to use available VRAM efficiently.

3 Known Issues

At this time, there are no known issues.

4 Future Release Plans

There are no future plans at this point.

© 2005 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 Co. Ltd.