



Mali GPU Binary Asset Exporter Errata

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Abstract

This document describes known errata in the EAC release of Mali GPU Mali Binary Assets Exporter version 2.2. This is a working document throughout the product lifecycle and, as such, the content may be modified as new information is uncovered.

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General suggestion for additions and improvements are also welcome.

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1 PREFACE

1.1 Change Control

Issue	Date	Change
1.0	Sep 2009	Errata for version 2.2 EAC release

1.2 Scope

This document describes the errata discovered in the implementation of Mali GPU Mali Binary Assets Exporter version 2.2, categorized by level of severity. Each description includes:

- the conditions under which erroneous behavior occurs
- the implications of the erratum with respect to typical applications
- the application and limitations of a 'work-around' where possible

1.3 Terms and Abbreviations

This document uses the following terms and abbreviations:

Term	Description
GPU	Graphics Processing Unit
COLLADA	An open standard XML schema for exchanging digital assets among various graphics software applications that might otherwise store their assets in incompatible file formats.
Cat	Category
GUI	Graphical User Interface

2 CATEGORIZATION OF ERRATA

Errata recorded in this document are split into three groups:

- Category 1** Features which are impossible to work around and severely restrict the use of the software in all or the majority of applications rendering the software unusable.
- Category 2** Features which contravene the specified behavior and may limit or severely impair the intended use of specified features but does not render the software unusable in all or the majority of applications.
- Category 3** Features that were not the originally intended behavior but should not cause any problems in applications.

2.1 Errata Summary

The following tables summarize all errata associated with this product.

Mali GPU Mali Binary Assets Exporter version 2.2 Errata Summary

ID	Cat	Summary of Erratum
4049	Cat 2	The Mali GPU Mali Binary Assets Exporter only supports a limited subset of COLLADA Geometry.
5315	Cat 3	The graphical user interface does not disable the “normalize” and “scale and bias” options for data types for which they are not supported.

3 CATEGORY 1 ERRATA

No Category 1 errata.

4 CATEGORY 2 ERRATA

4.1 The Mali GPU Mali Binary Assets Exporter only supports a limited subset of COLLADA Geometry.

Status

Affects: Mali GPU Mali Binary Assets Exporter version 2.2

Fault status: Cat 2

Description

The Mali GPU Mali Binary Assets Exporter supports a limited subset of COLLADA. Instead of listing all the things that are not supported, we list out the facilities that are supported.

Facilities that are supported:

- You will presumably want a <library_geometries> with one or more <geometry> sections.
- Each <geometry> section should have one <mesh>.
- Each <mesh> may have a number of <source> sections, one <vertices> and one <triangles> section.
- Each <source> section should contain a <float_array> and <technique_common> (arrays with thousands of elements have been successfully tested). Observe that <int_array>, among others, does not work.
- Observe that you may only have one primitive_elements in a <mesh>, which must be a <triangles> section. The <input> subsections in this should only refer <vertices> and <source>s in the same <mesh>. Observe that you cannot use lines or polygons, nor triangle fans or strips.
- Other elements:
 - (You will get a warning if you do not have an <asset> in the outer <COLLADA> section, but the <asset> data is not used by this tool).
 - You may have <library_materials> and <library_effects> sections, but only simple fixed-function specifications can be handled (typically <profile_COMMON> with <phong>).
 - You may have a <library_cameras> with <perspective>.
 - You may have a <library_visual_scenes> with one <visual_scene>, with one or more <node> sections.
 - A <node> may comprise <translate>, <rotate>, <scale>, <matrix>, <instance_geometry> and <instance_camera> subsections.
 - You may have a final <scene> section in the <COLLADA>, but that earns a warning.
- Support for having more than one geometric primitive element in a <mesh>.
- Support for the following previously unsupported geometric primitive elements: <lines>, <linestrips>, <trifans> and <tristrips>.
- Support for the following data types: <bool_array> and <int_array>.
- Support for the <samplerCUBE> element.

Implications

One must limit oneself to the subset of COLLADA structures that are supported when using the Mali GPU Mali Binary Assets Exporter.

Workaround

There are no workarounds for unsupported features.

5 CATEGORY 3 ERRATA

5.1 The graphical user interface does not disable the “normalize” and “scale and bias” options for data types for which they are not supported.

Status

Affects: Mali GPU Mali Binary Assets Exporter version 2.2

Fault status: Cat 3

Description

The “normalize” and “scale and bias” options are not supported for all data types. Ideally, the GUI should disable these options for data types for which they are not supported. But the GUI does not disable these options.

Implications

“Normalize” and “scale and bias” will not necessarily be performed on all the geometry it is requested for.

Workaround

Export the geometry to Mali Binary Assets files without “normalize” or “scale and bias”.