

# 4.0.9.1

## Milestone 4.0.9

### Enhancements

- **Reduced texture I/O for glossy reflection:** For rays of type AI\_RAY\_GLOSSY, the differentials used to calculate texture sampling footprints have been improved resulting in generally larger filter sizes while still matching the requested visible detail. Texture sampling will now choose less detailed MIP levels when possible and will generally load less data from disk and do less work. (#3034)
- **Faster missing textures:** For handle-based texture access via AiTextureHandleAccess(), the texture subsystem will not be redundantly queried once we have determined that a handle corresponds to an unreadable file. This can improve performance in scenes with many missing textures, which surprisingly can happen in certain production pipelines. (#3040)

### API additions

### Incompatible changes

### Bug fixes

Ticket	Summary	Component	Owner	Priority	Version	Created
#3032	Statically link OIIO with jpeg/tiff/png/exr/boost in OSX	oiio	ramon	blocker	4.0	2 weeks
#3037	OIIO failed assertion with accumulated error messages	arnold	mike	blocker	4.0	13 days
#3035	fix "unspecified OIIO error" message for missing EXR textures	oiio	ramon	critical	4.0	2 weeks
#3041	Do not print empty OIIO error messages	arnold	ramon	critical	4.0	10 days
#2853	Crash when a texture map has non-power of two tiles	oiio	ramon	major	4.0	4 months
#2974	remove annoying log messages about unresolved tags	arnold	angel	major	3.3	7 weeks
#3026	cannot create packed arrays with more than about 1 billion elements	arnold	thiago	major	4.0	3 weeks
#3034	Compute ray direction differentials for glossy reflection	arnold	marcos	major	4.0	2 weeks
#3050	memory leak in AI_RENDER_MODE_FREE	arnold	thiago	major	4.0	7 days
#3036	reporting wrong number of keys in bvh_motion build	arnold	thiago	minor	4.0	13 days

Ticket	Summary	Keywords	Component	Owner	Priority	Milestone
#3052	Meshes with identical motion keys and unconnected vertices are corrupted	4.0.9.1	arnold	thiago	critical	4.0.10
#3048	Let volume shaders interact with skydome and distant lights	framestore, 4.0.9.1	arnold	ramon	major	4.0.10
#3049	Warn when loading procedurals with empty "dso" parameter	4.0.9.1	arnold	oscar	trivial	4.0.10