GLTF Physics Standard #393

Pinned **funksoup** started this conversation in **Constellation of Standards**

funksoup last month Collaborator edited

Short link to this page: https://bit.ly/gltfstandard

We are at risk of a limiting, confusing standard becoming the default for glTF physics. There are currently two competing glTF physics standards, OMI and MSFT.

Please add your voice and input to make sure the best standard gets accepted. Ideally we would like this Khronos PR be merged.

Why this is a big deal:
OMI's specs are designed to be portable between engines, the specs include tables and other information that details how to convert the physics information to several game engines. Engines without dedicated character/vehicle types just use kinematic/rigid, but the distinction helps engines that do have dedicated types/modes like Godot and Unreal. MSFT's specs tend to align closely with how Unity works, such as the isKinematic boolean. This risks an unclear, non-portable standard.

Summary of OMI spec compared to MSFT spec:

Item	OMI spec	MSFT spec
Collider shape definition	String for the type (similar to how the official KHR_lights_punctual extension works)	different key names each with sub-JSON
Type of body definition	Text String for the type (similar to how the official KHR_lights_punctual extension works)	`isKinematic` boolean
Type of body categories	Kinematic, rigid, static, character, vehicle, trigger bodies	Kinematic, not kinematic
Joints definition	Defined on a separate spec that combines for a larger standard	Defined as a required part of the rigid body spec
Materials definition	Defined on a separate spec and is optional on the body	Defined on the rigid body spec and is required (otherwise the body is a non-solid trigger)

Item	OMI spec	MSFT spec
Trigger definition	Explicitly defined on the body	Defines a trigger as a body without a physics material

Read more about the specific issues: https://github.com/eoineoineoin/glTF_Physics/issues

More information:
OMI physics (OMI_collider and OMI_physics_body) https://github.com/omigroup/gltf-extensions/tree/main/extensions/2.0
Khronos discussion:
Khronos PR regarding OMI physics KhronosGroup/glTF#2258
Khronos PR regarding MSFT physics KhronosGroup/glTF#2257
MSFT physics (MSFT_CollisionPrimitives and MSFT_RigidBodies)
https://github.com/eoineoineoin/glTF_Physics

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0 comments

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1 participant