



optimization

Use instanced mesh to
reduce draw calls

Messin

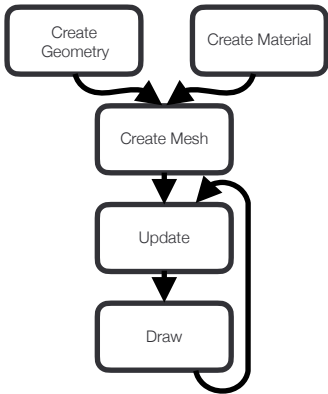
Create
Geometry

Create Material

Create Mesh

Update

Draw



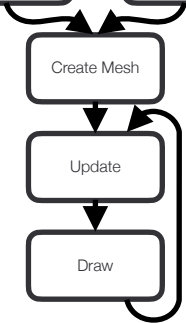
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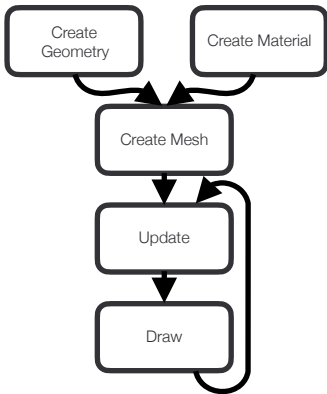
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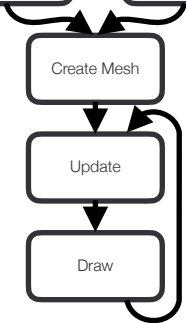
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InstancedMesh

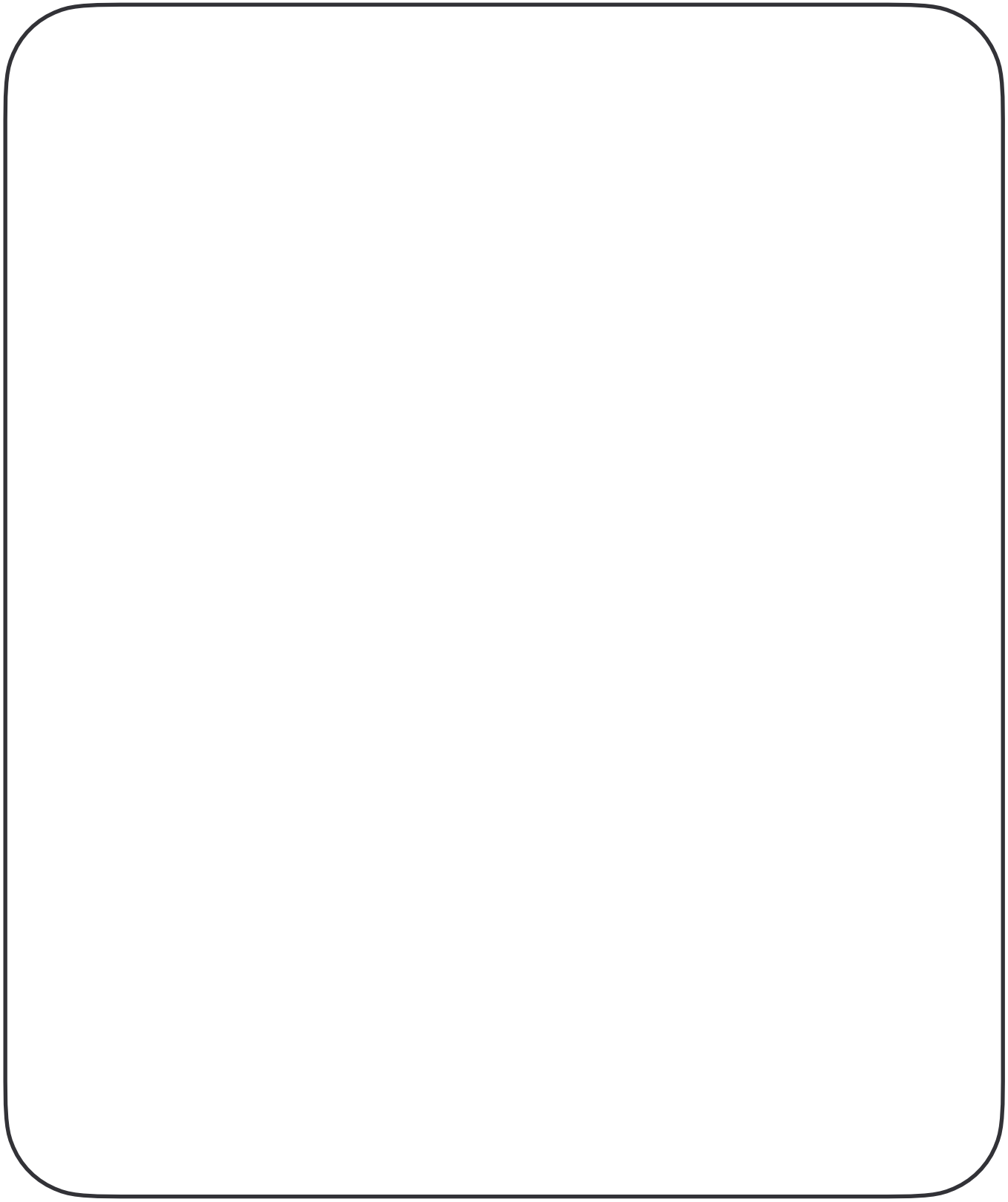
Create
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Create
Mesh

Create
Material

Update
(transformations,

Draw

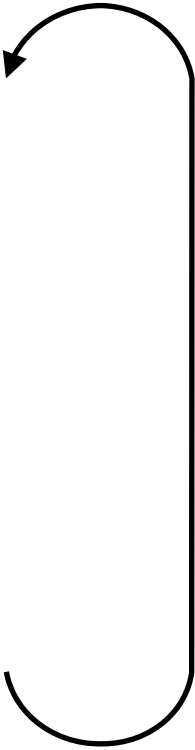












$$\textit{drawCalls} = n_{\textit{meshes_in_frustum}}$$

dracals = 1

Reducing Draw Calls - Instanced Mesh

Performance is poor because of:

- Too many objects
 - Expensive frustum culling
 - Too many draw calls
- Unnecessary geometry complexity



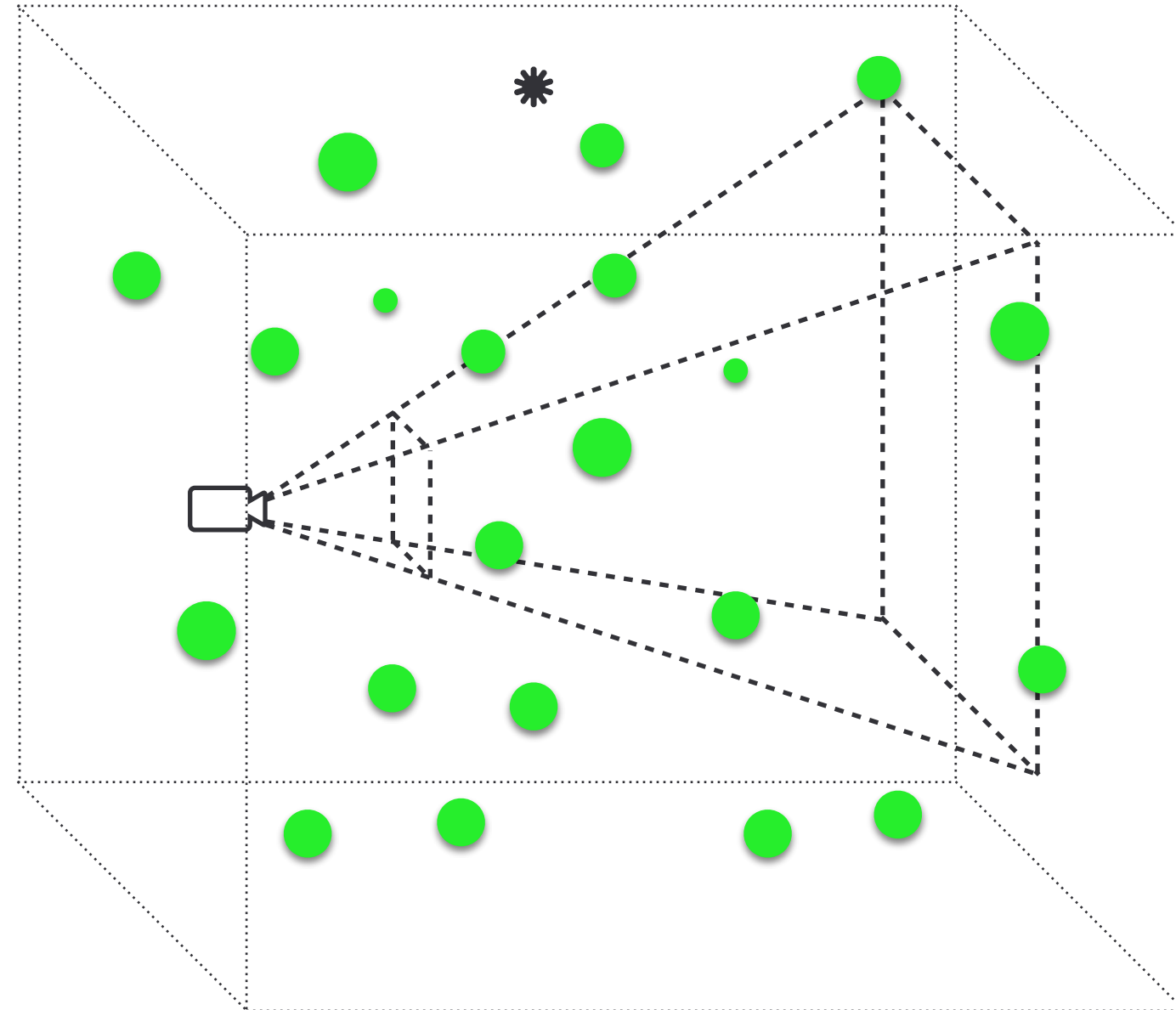
→ An InstancedMesh with

~1M instances?

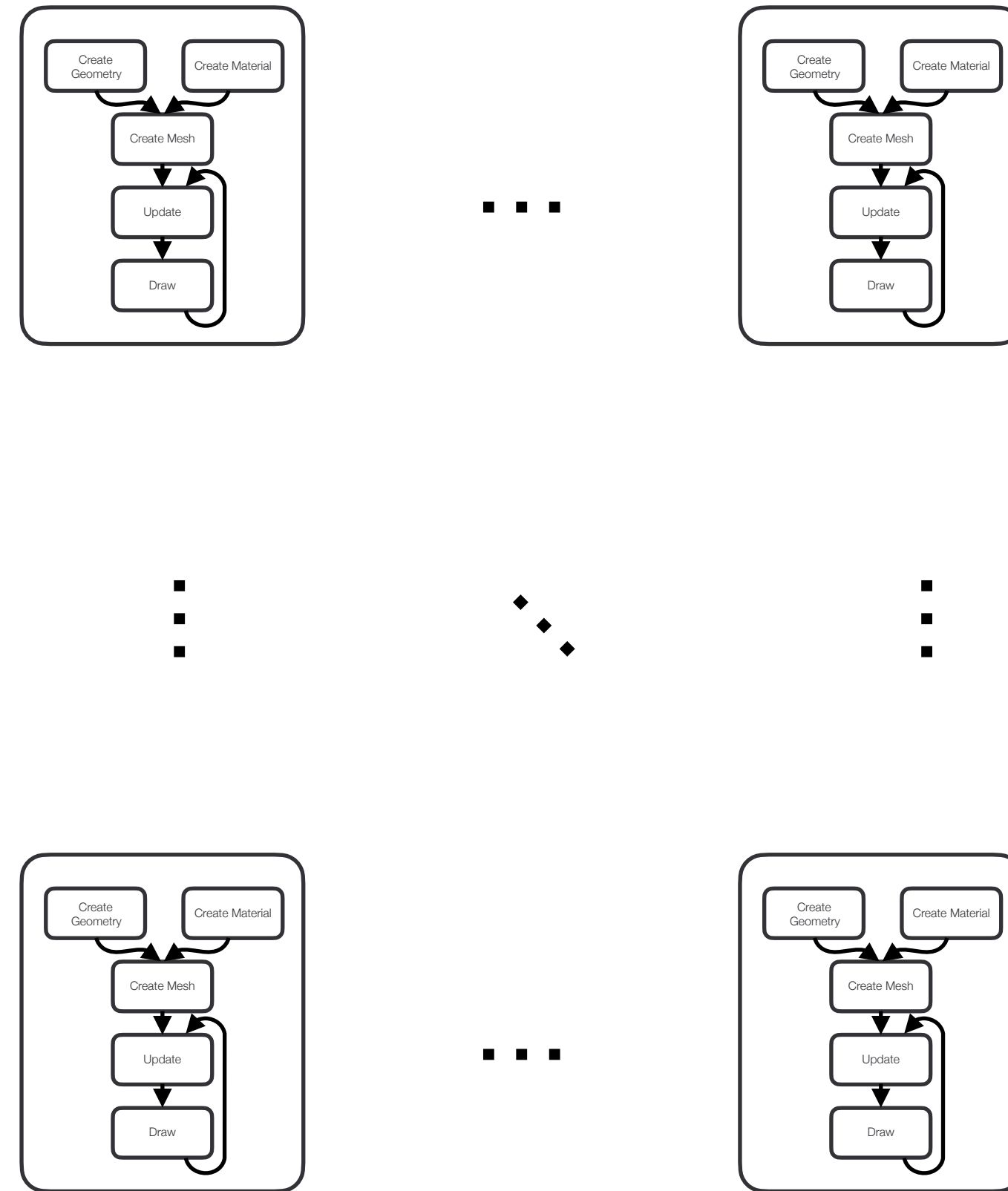
Reducing Draw Calls - InstancedMesh

Use instanced mesh to
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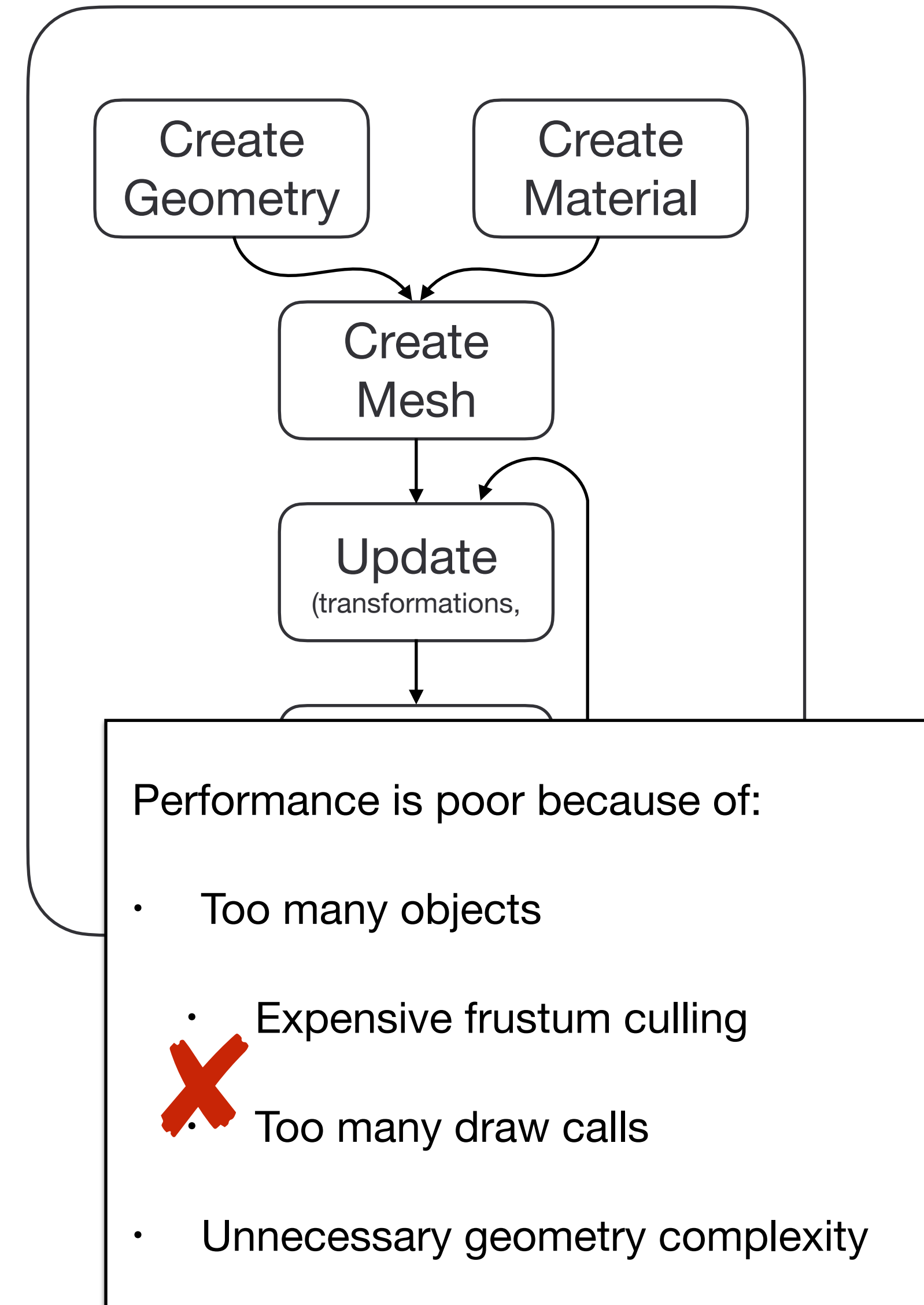
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Mesh



Instanced Mesh



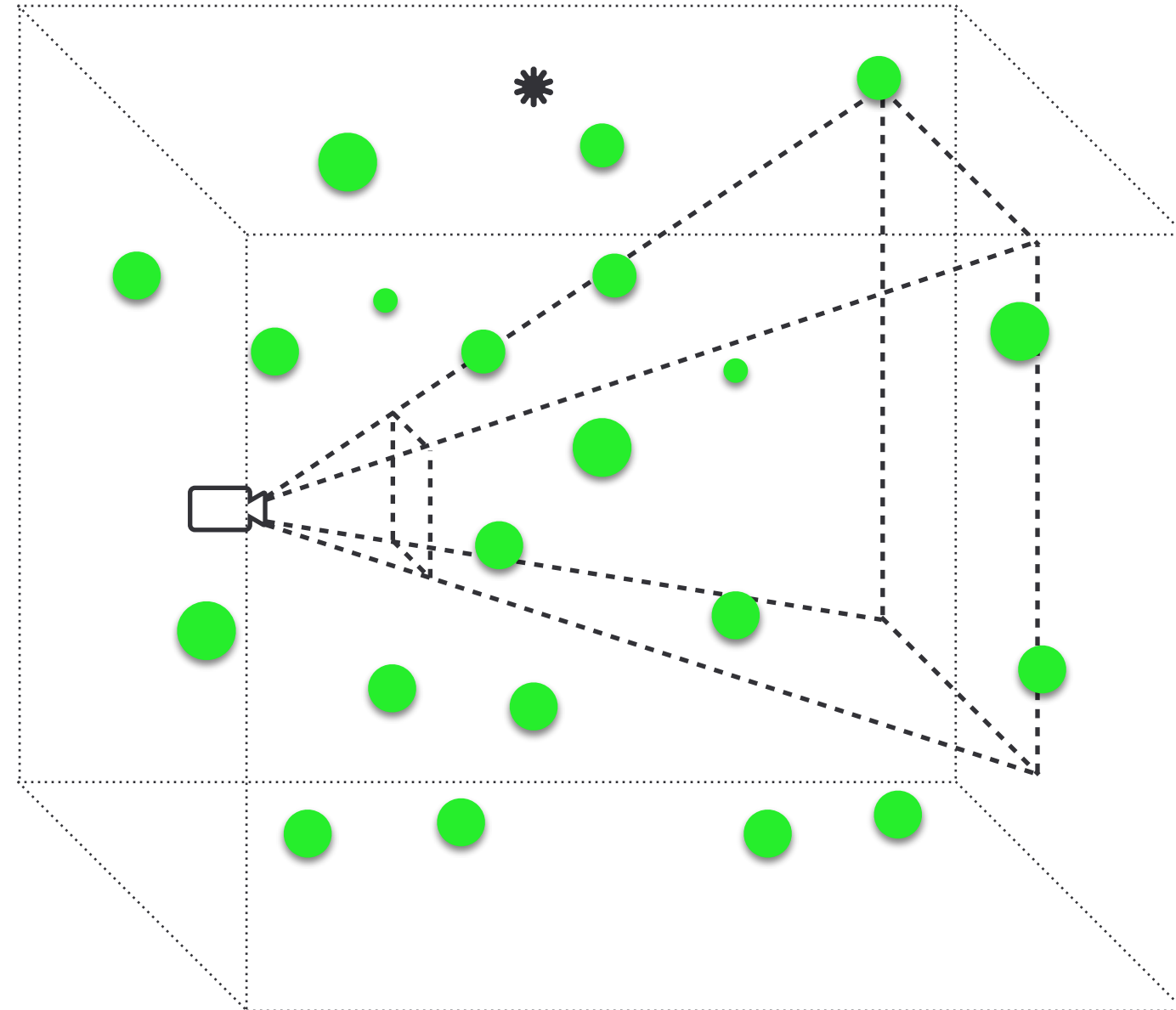
$$drawCalls = n_{meshes_in_frustum}$$

Optimization

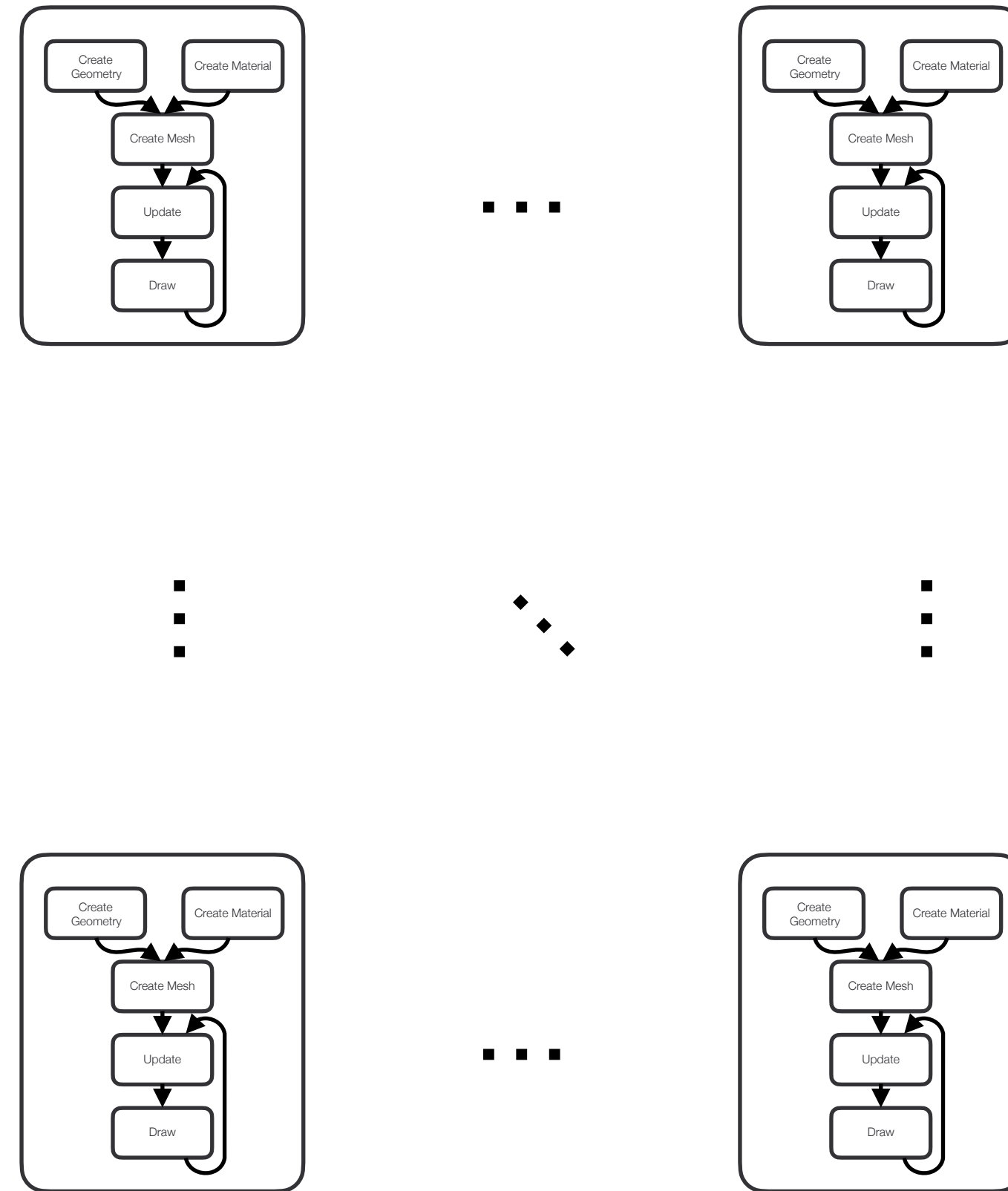
Reducing Draw Calls - InstancedMesh

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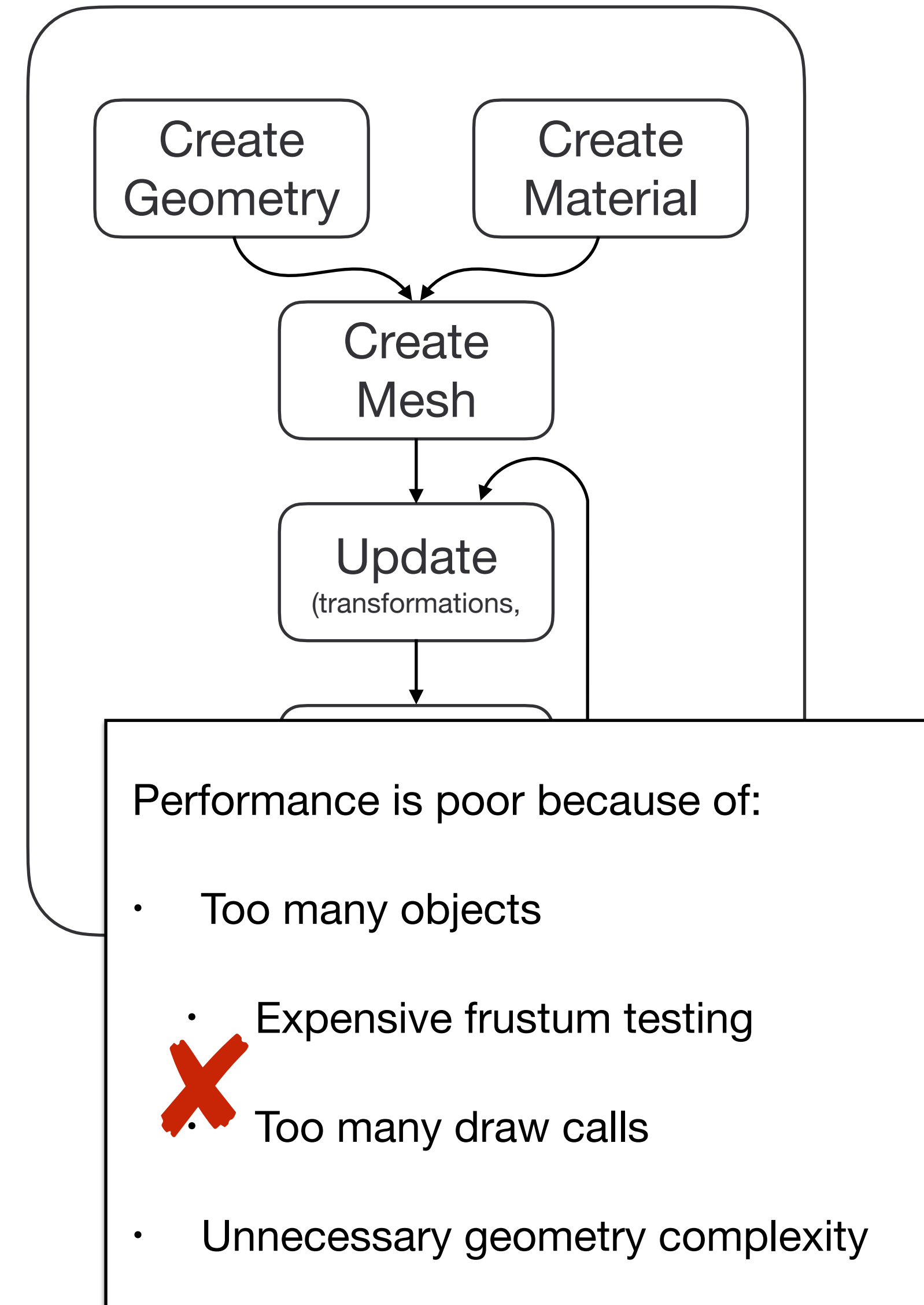
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Mesh



Instanced Mesh



$$drawCalls = n_{meshes_in_frustum}$$