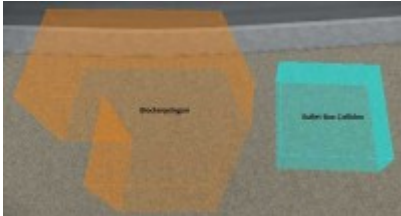


Virtual Objects (QSF)

Blocker Polygon

Blocker Polygons are used to block areas for AI. If you have areas, that should be blocked and can't be blocked with blocking objects, you can create invisible objects with polygons into the map.

There are two ways to block areas. With "Bullet Box Collision" or with "Blocker Polygone".



Blocker polygons have the advantage that they can contain any number of corners. However, they are not as efficient as Bullet Box Collisions, which consist of only four corners and are rectangular.

Blocker polygon must have the following object properties:



Important in creating a blocker polygon is, that the Triangle Mesh Collision [Component](#) has to be placed above the blocker polygon in the Object Properties.

The best way to create blocker polygons is by making a right click in the scene and select 'Object' -> 'CreateObject'. Then delete the mesh with right click in the Object Properties window -> 'Delete' and add with right click in the Object Properties a new [component](#): First the Triangle Mesh Collision [Component](#), which by default is correctly set for blocker polygons and afterwards add with right click in the Object Properties the blocker Polygon that is empty at first.

This means that blocker polygons will only work if it is placed above the Triangle Mesh Collision [Component](#). You can edit the blocker polygon by clicking 'Tool' -> 'Polygon' -> 'Edit' button and then you can add, delete or move nodes.

Bullet Box Collisions must have the following Object Properties:



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The preparation is identical to blocker polygons, the only difference is, that it doesn't require the Triangle Mesh Collision [Component](#) and instead in case of blocker polygons the Bullet Box Collision [Component](#) is added.

It's important that you turn on "Show Collision" under 'Customize' -> 'Preferences' -> 'Debug' -> 'QSF General' to see the blue bullet box. If you do not see it, simply select the object and again reselect.

You can edit the Bullet Box Collision, by changing the values in the property 'HalfExtends'.

Debug boxes with event tag

If we define areas for gameplay logic (= not AI), we do not use polygons but debug boxes instead. The box has to be scaled, that it comprises the defined zone and is provided with a corresponding event tag (e.g. MUNICH_ME01_SCENE).

Water

GFX

To make graphic water, use the Liquid Polygon. The height setting does not affect anything.

Game Logic

To make an area be recognized as water by the game logic, use an EM5 AI Water Polygon. The position of the polygon should be 1m below the water surface and the height of the polygon should be 2m.

Properties:

Nothing (only liquid polygon, no additional EM5 Deep Water Polygon) -> Water so shallow that anyone will walk in it is not edged out by a polygon.

SHALLOW_WATER -> Only divers can walk here.

MEDIUM_DEEP_WATER -> Only divers and motorboats can move here, divers swim.

DEEP_WATER -> Only divers, motorboats and fireboats (FLB) can move here, divers swim.

Deeper water will overwrite more shallow water. This means that for example in a lake, three EM5 AI Water Polygons should be placed on top of each other, with the DEEP_WATER smallest and in the middle, the MEDIUM_DEEP_WATER a little bigger, and the SHALLOW_WATER largest.

Because polygons with more than ~30 nodes are slow to edit, several overlapping polygons should be used to edit large water areas. Be sure that they really overlap in this case and there is no free spot in the middle that should be recognized as water.