Interactive Graphics Systems

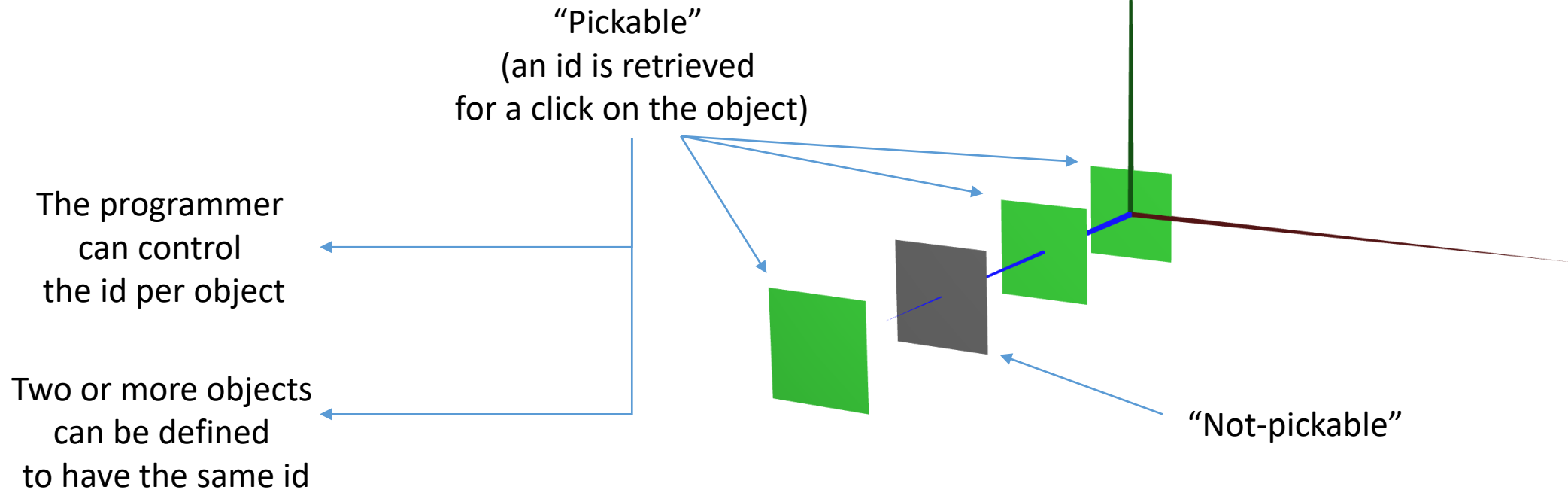**Picking**

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Picking

- Run demo code (requires WebCGF lib)

- 1st, 2nd and 4th quads are pickable.

- 3rd is not pickable.

- Open browser console. Pick quads and check console output

Picking example

Open the browser output console window, ensure INFO level is ON and click one of the quad planes.
The grey quad is not pickable. For all the others (green) it is expected to see:
Picked Object [Object, Object] with pick id NN
Where NN= {1,2,3}

"Pickable"
(an id is retrieved
for a click on the object)

The programmer
can control
the id per object

Two or more objects
can be defined
to have the same id

"Not-pickable"

Picking

MyScene class, init method:

```
// the activation of picking capabilities in WebCGF
// will use a shader for picking purposes (lib\shaders\picking\vertex.glsl
// and lib\shaders\picking\fragment.glsl)
this.setPickEnabled(true);
```

MyScene class, display method:

```
…
this.logPicking();
this.clearPickRegistration();
var id = 0
…
// for all objects from a list...
        // object is pickable? Register it for pick => assign an id
        this.registerForPick(id++, this.objects[i]); // defined an association id ⇔ objects[i]. Id must be > 0. -1 == unpickable
        …
        this.objects[i].display(); // the object displayed will have associated a particular id
```

Picking

MyScene class, logPicking method:

```
// ispickmode false? pickmode alternates between true/false. If true, the picking shader is used
// to draw each object having the color equal to the id. Z-buffer is used.
// See picking shaders. When false the default shader is used and program can look at the results
if (this.pickMode == false) {
  if (this.pickResults != null && this.pickResults.length > 0) { // are there picking results?
    for (var i=0; i< this.pickResults.length; i++) { // for each result….
    var obj = this.pickResults[i][0]; // get the nth pickable result object
    if (obj !== null) {  // is this object valid?
      var customId = this.pickResults[i][1]; // retrieve the ID from the result
      console.log("Picked object: " + obj + ", with pick id " + customId); // do something with the id
    }
  }
  this.pickResults.splice(0,this.pickResults.length); // empty pickResults array
}
```