

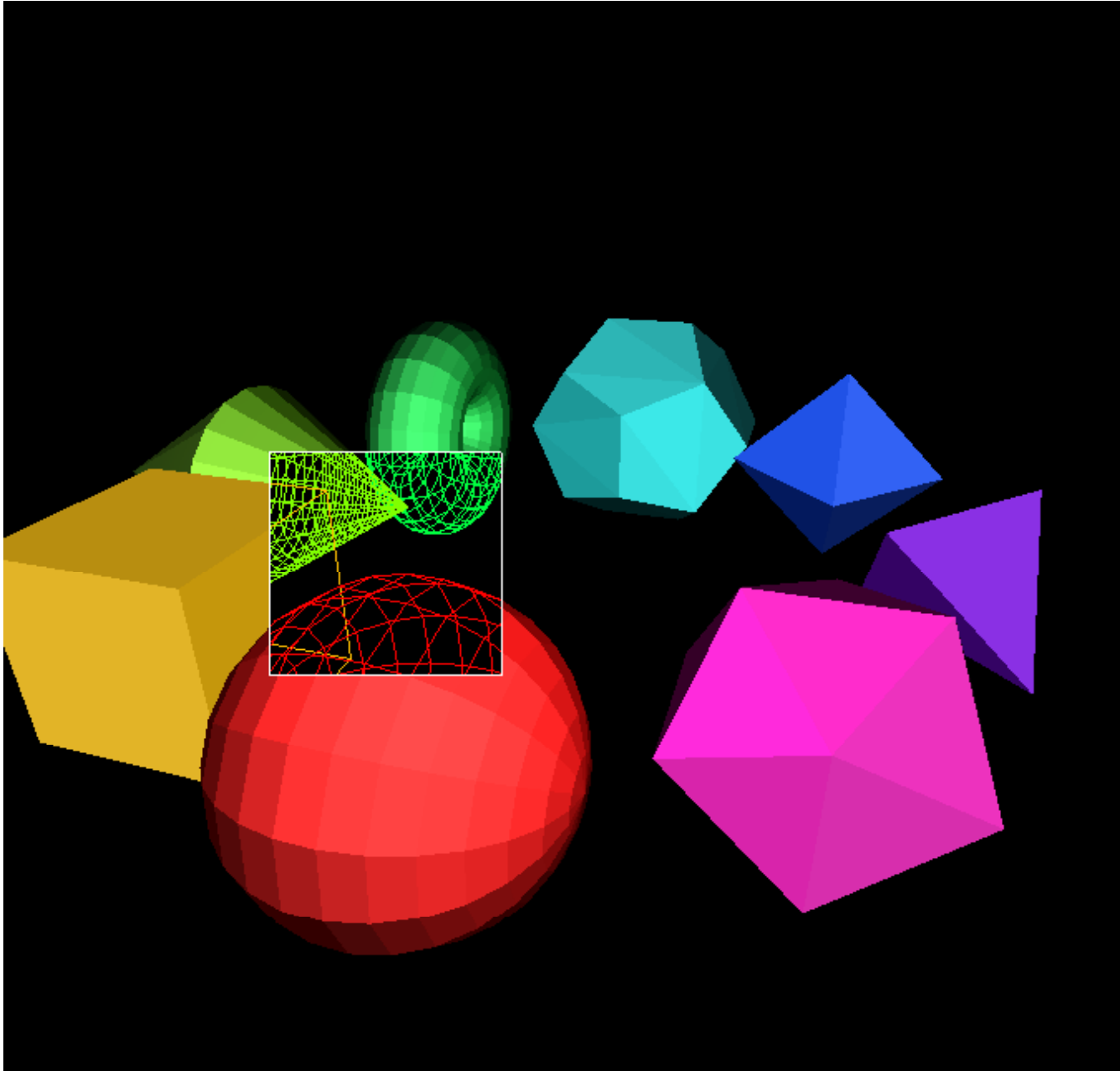
Stencil Buffer Examples

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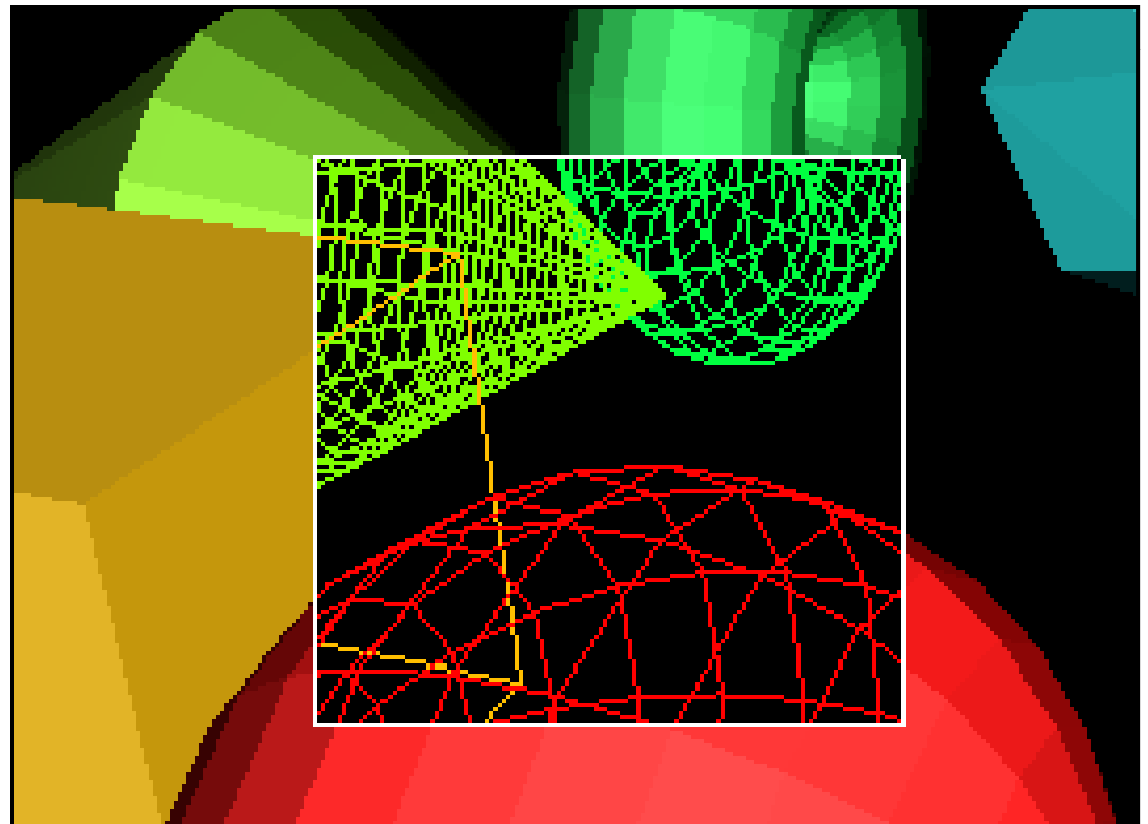


Using the Stencil Buffer to Create a *Magic Lens*

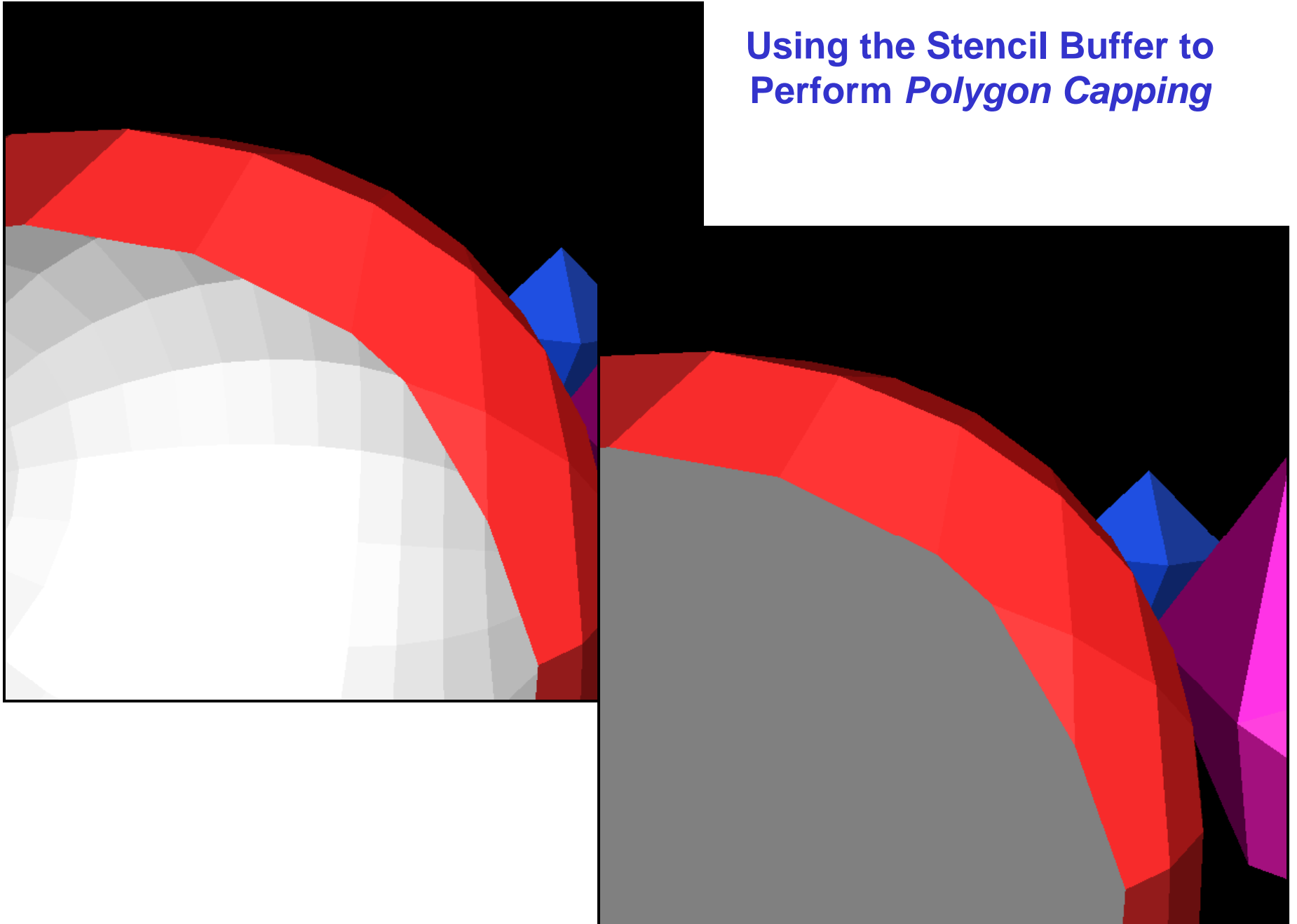


Using the Stencil Buffer to Create a *Magic Lens*

1. Clear the SB = 0
2. Write protect the color buffer
3. Draw a square, setting SB = 1
4. Write-enable the color buffer
5. Draw the solids wherever SB == 0
6. Draw the wireframes wherever SB == 1

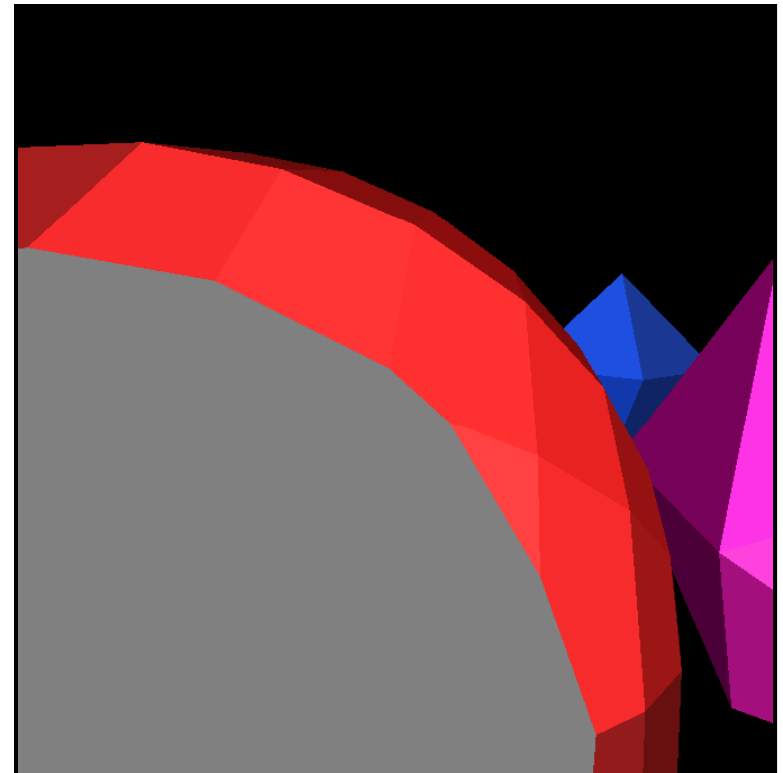


Using the Stencil Buffer to Perform *Polygon Capping*



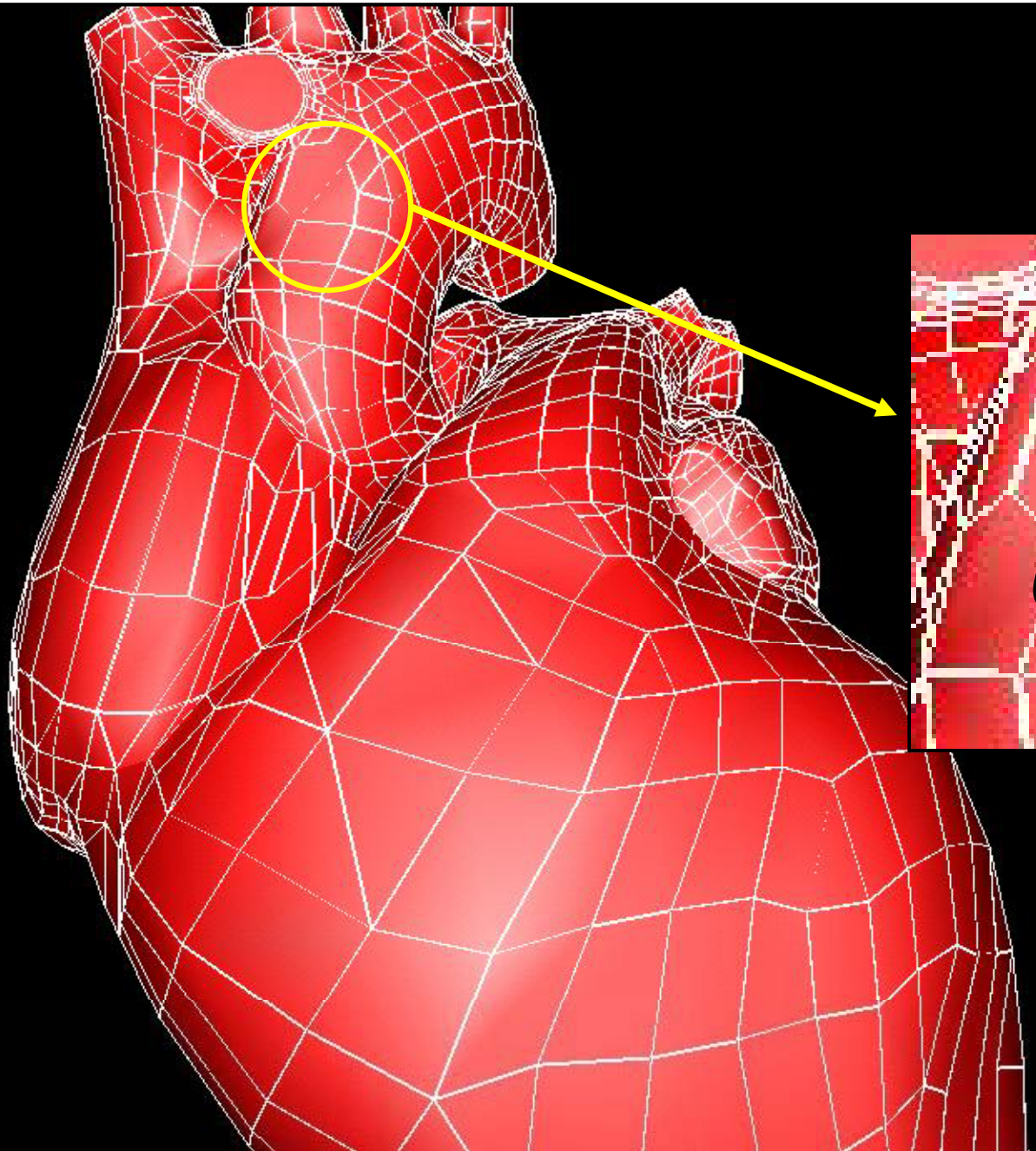
Using the Stencil Buffer to Perform *Polygon Capping*

1. Clear the SB = 0
2. Draw the polygons, setting SB = ~ SB
3. Draw a large gray polygon across the entire scene wherever SB != 0



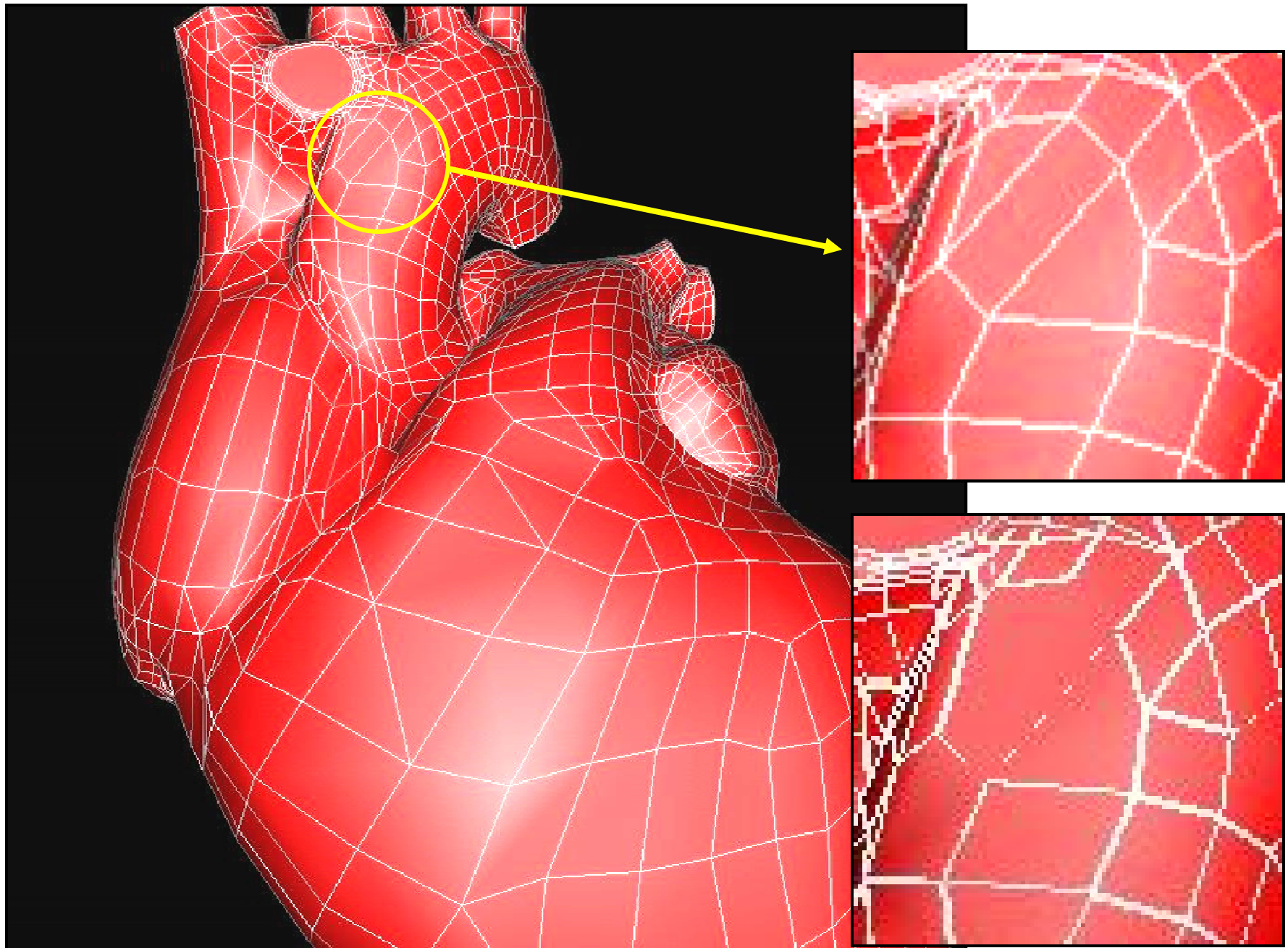
Outlining Polygons the Naive Way

1. Draw the polygons
2. Draw the edges



Z-fighting

Using the Stencil Buffer to Better Outline Polygons



Using the Stencil Buffer to Better Outline Polygons

```
Clear the entire SB = 0
```

```
for( each polygon )
```

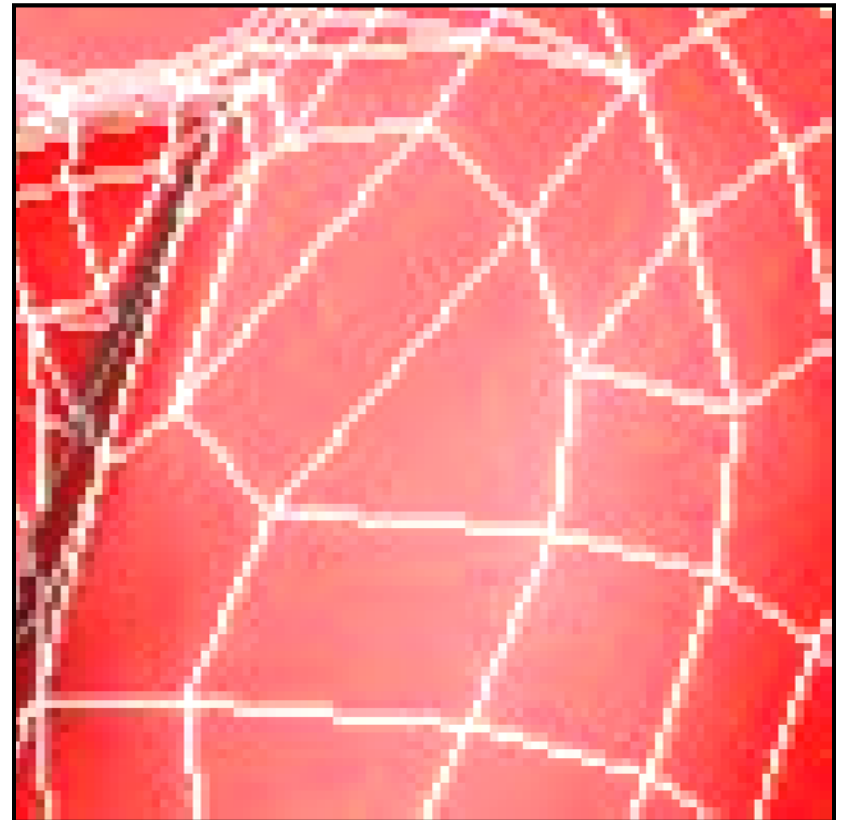
```
{
```

```
    Draw the edges, setting SB = 1
```

```
    Draw the polygon wherever SB != 1
```

```
    Draw the edges, setting SB = 0
```

```
}
```



Using the Stencil Buffer to Perform *Hidden Line Removal*

