Subject: Problem with polygon inside polygon... in Painter
Posted by Tom1 on Sat, 19 Nov 2011 11:30:15 GMT
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Hi,

I have run into trouble rendering maps using Painter. When there is an island within a pond within an island within a lake.... well you know, this is a nested polygon problem and rendering this complex polygon describing the water colored areas -- as well as the differently colored polygon describing the land areas produce unsatisfactory results. With X and GDI this works perfectly, but with painter there is a prerequisite to order the vertices at each nesting level to an alternating clockwise and counter-clockwise order.

Is there a possibility to change Painter to render polygons inside polygons using the same coverage logic as X and GDI does?

Here is a test case showing a green reference with X/GDI, a Painter result in red and a re-ordered Painter result in blue:

```
void Paint(Draw &w){
 Rect rect=GetSize();
 w.DrawRect(rect,White());

 // Create geometry (a polygon inside a polygon inside a polygon ...)
 Vector<Point> vertices;
 for(int i=0;i<80;i+=10){
  vertices.Add(Point(i,i));
  vertices.Add(Point(i,300-i));
  vertices.Add(Point(300-i,300-i));
  vertices.Add(Point(300-i,i));
  vertices.Add(Point(i,i));
 }

 // Draw reference geometry
 w.DrawPolygon(vertices,Green());

 // Draw painter geometry
 PaintingPainter pn(300,300);
 pn.Clear(White());
 pn.DrawPolygon(vertices,Red());
 w.DrawPainting(300,0,300,300,pn);

 // Create geometry (a polygon inside a polygon inside a polygon ...)
 // This time only with alternating clockwise and counter-clockwise vertex ordering
 vertices.Clear();
 for(int i=0;i<80;i+=10){
  if((i/10)%2){ // CCW
```

```
   vertices.Add(Point(i,i));
   vertices.Add(Point(i,300-i));
   vertices.Add(Point(300-i,300-i));
   vertices.Add(Point(300-i,i));
   vertices.Add(Point(i,i));
  }
  else{ // CW
   vertices.Add(Point(i,i));
   vertices.Add(Point(300-i,i));
   vertices.Add(Point(300-i,300-i));
   vertices.Add(Point(i,300-i));
   vertices.Add(Point(i,i));
  }
 }

 // Draw alternate painter geometry
 pn.Clear(White());
 pn.DrawPolygon(vertices,Blue());
 w.DrawPainting(600,0,300,300,pn);
}
```

Best regards,

Tom