First some definitions: (The example below explains this)

MapPicture dimensions

Offset X = 22Offset Y = 0

MapPictureWidth = 377 MapPictuereHeight = 457

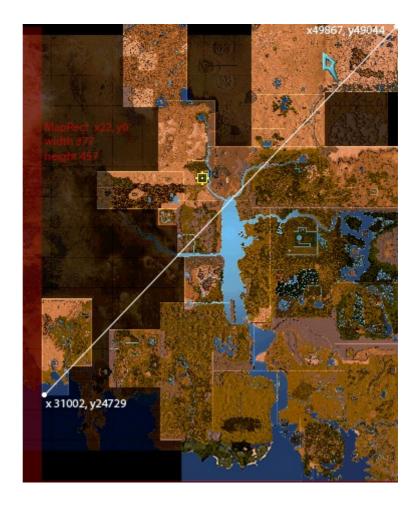
Map dimensions

Pwidth = 49867 - 31002 = 18865Pheight= 49044 - 24729 = 24315

PbaseX = 31002PbaseY = 24729

Mapratio

RX = Pwidth / MapPictureWidth RY = Pheight / MapPictureWidth



The translation of any object position within a zone is done by:

```
MapCoordX = (((ZoneBaseCoordX - PbaseX) + ObjectLocationX) / RX) + OffsetX
MapCoordY = (((ZoneBaseCoordY - PbaseY) + ObjectLocationY) / RY) + OffsetY
```

Example

Our reference point is the point that is located in the lowest SW corner. I made an error in the image above; there should be another point marked as the lowest point (this is the basecoordY of the lower zones, Omni Forest, Omni Greater Forest and Southern Fouls Hills). The point in Broken shores gives us the point that is the most west.

The coords for the lowest point are (31002, 24729)

For the upper NE point we take the basecoord of Perpetual Wastelands added with zonesize. This is at (49867, 49044). Now that these two points are known we can calculate the size of the entire rectangle of the map. (see mapdimensions above)

Since the size of the planetmap figure is known we can now calculate the ratio between the two. (see mapratio above)

The ratio for the default map at the default zoomlevel turns out to be roughly 52 on both axis.

Now that we know the ratio the only thing that remains is to translate any coordinate to actual dimensions of the map (ZoneBaseCoord_ - Pbase_) added with the location of the object in that zone (ObjectLocation_) and diveded by the ratio.

Pos: 287.0, 220.0, 11.6, Area: West Athen. Time: 2010-05-28 15:49:19 (UTC) Suppression field at 75 Wildlife may attack you.

```
<Playfield id="545" name="West Athen" x="39122" xscale="1.00000" z="40646" zscale="1.00000"/>
```

```
RealMapLocationX = (39122 - 31002) = 8120
RealMapLocationY = (40646 - 24729) = 15917
```

The location of the object = (287, 220)

```
RealObjectLocationX = 8120 + 287 = 8407
RealObjectLocationX = 15917+ 220 = 16137
```

The ratio is the image size of the map in respect to the offset divided by the actual dimensions of the planet.

RX =
$$(49867 - 31002) / (377 - 22) = 18865 / 355 \approx 53$$

RY = $(49044 - 24729) / (457 - 0) = 24315 / 457 \approx 53$

Which would result in the following pixel coordinate:

```
X = 8407 / 53 \approx 180

Y = 16137 / 53 \approx 304 (or 457 - 304 \approx 153 to invert Y)
```