

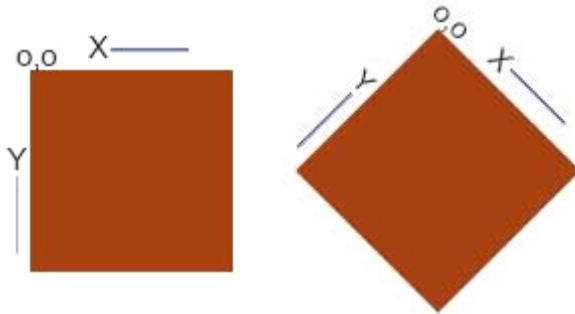
Advanced Game Prototyping

Isometric tiles made easy in *Photoshop*

by *Morphosis*

An Isometric view can help a game world become almost real and make the player feel almost godlike as she looks over the world and almost sees all. In an isometric view game, tiles are used to save computer memory space in a 2D game environment. These tiles are just square images and are almost always power-of-two in size (e.g., 16 x 16, 32 x 32, 64 x 64 pixels, etc.).

Isometric tiles fit together to form a diamond-shaped game map. With 2D maps, the result is always a square or rectangle. Isometric maps look like a 2D map rotated 45 degrees clockwise. Here are a couple of pictures for illustration:



The isometric view has been popularized by its 3D-like representation of levels in games such as *Ant Attack* on the ZX Spectrum (the first isometric platformer), *Zaxxon*, and **Atari's** *Marble Madness* game. Since 1982, many game developers have continued to use and improve upon the isometric view. It should be stressed that the isometric view should be fully understood before deciding to use it in a game or application. Isometrics should only be used when you need to illustrate depth or provide a non-standard way of looking at something. Isometric views tend to be visually complex and when used incorrectly, can detract from game play.

Most non-isometric view games are oriented in a straight-on fashion. Because the screen is square, the x-coordinate increases as you move left and y-coordinate increases as you move down – which makes it very easy to draw content to the screen. Most platformer games like *Super Mario Bros.* use this straight-on view. Unfortunately, there is no perceptual depth in most of these games. Overlapping, scaling, and parallax scrolling are tools most often used to ‘fake’ depth in these games.

Parallax scrolling basically means that something behind and in front of the object of focus is being scrolled in parallel with the object of focus. Objects in the foreground will scroll quickly; background objects will scroll slower. Parallax scrolling does a nice job of illustrating the depth comparison. However, parallax rarely plays a meaningful role in the game play – it is merely an artistic illusion. Whereas an isometric view can be thought of as a camera’s eye view, flying in any direction horizontally, over a landscape looking downward at a constant, unchanged angle.

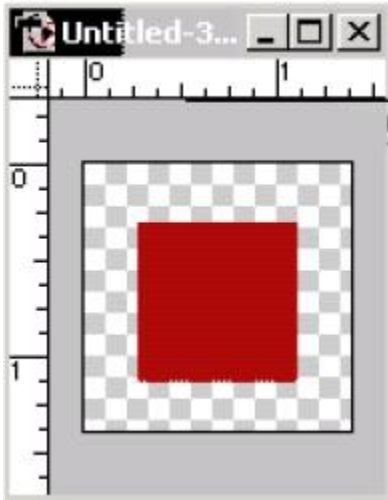


As you can see, **Interplay's** classic *Fallout* uses an isometric view.

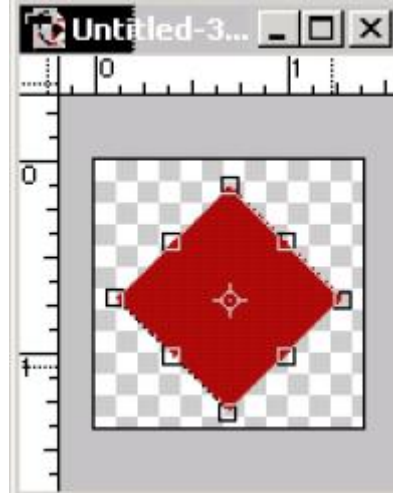


As does **Maxis' SimGolf**.

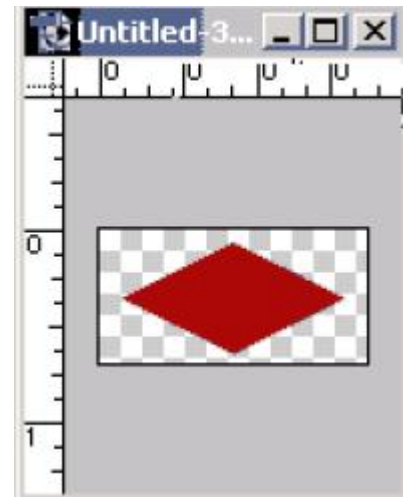
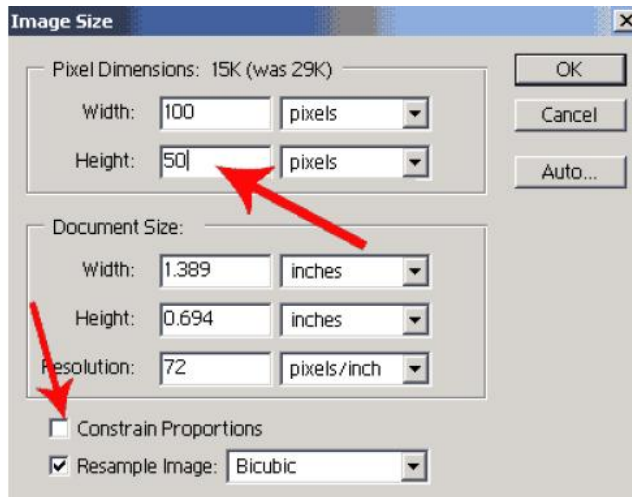
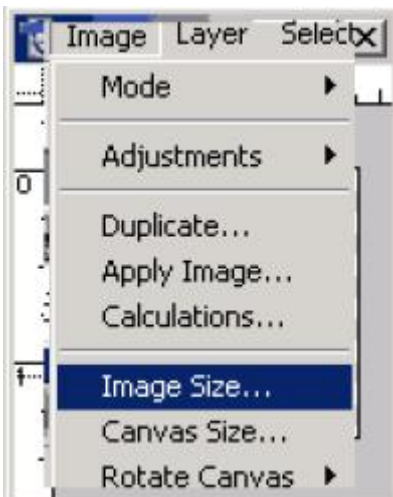
Ok now let's begin. Here you need *Photoshop*, *Paintshop Pro* or even other programs might have functions similar to the ones we will use here.



It's simple, really.
Make a new file that is 100 x 100 pixels.
In the center, make an equal-sided square. <Hold-Shift> in *Photoshop* while making a square mask.
Fill it in with the color you want.



The rotate your square 90 degrees.



Then go to **Image / Image Size**.

Uncheck the **Constraint Proportions** box and make the height '50.'

Now your file is 100 x 50 pixels.

To complete this isometric tile, be sure you zoom in and crop the corners neatly. That way the tiles will fit well and look tight. *And that's it!*

