Subject: I need information on how vechicle movement works
Posted by gibberish on Wed, 19 May 2004 07:17:14 GMT
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Dunno If this will help you much, but I might as well get the ball rolling:

If a vehicle is moving in a straight line we have:

Circumference = Pi * WheelRadius * 2

- The Distance a vehicle travels
Distance = Rotations * Circumference

- Also Distance is related to speed
Distance = Speed * Time

Note: Speed is in GameUnits per second.

- So putting this together we get:
Speed * Time = Rotations * Pi * WheelRadius * 2

- However time is determined by the interval between the frames.
Time = 1 / FPS

- So we now have
Speed / FPS = Rotations * Pi * WheelRadius * 2

- So re-arranging for rotations we get
Rotations = Speed / (FPS * Pi * WheelRadius * 2)

Now you can just multiple Rotations by 360 to get Degrees or 2 Pi for Radians.

Note: If you use Radians you can elimiate Pi from the calculation completely:

RadiansPerFrame = Speed / (FPS * WheelRadius)