Vehicle Tagging Guide

General Rules

1. Vehicles must always face down the **x-axis**.
2. Vehicles can only have wheels or tracks and cannot be mixed together.
3. The outermost vehicle node must have its origin helper point at 3dstudio MAX's origin.
4. The bottom of the wheels or tracks must have a z component of 0.0.
5. Wheel and track nodes must not be grouped under the vehicle's body node.
6. When placing helper points for the vehicles suspension, it is very import to be precise. Each shock should be of equal length.
7. Shocks must be exactly vertical.

Wheeled Vehicles

General Rules

1. Must have at least four wheels
2. Must have an even number of wheels

Node Hierarchy

Group all body geometry and label it with the following name <n><body>
Group each wheel geometry and label it with <n><leftwheel#> for left wheels and <n><rightwheel#> for right wheels. Numbering starts at zero and wheels are tagged from front to back. (E.g. The front wheels would be called <n><leftwheel0> and <n><rightwheel0>)
Any doors or glass on the vehicle should be attached to the <n><body> node and tagged appropriately in the map editor.
Select the body and wheel groups and create a new group with a unique name. The name must have a <n> in it. Make sure the new group has an origin helper point at MAX's origin.

Body Suspension Tagging

Attached to the body node should be a series of attachment helper points that begin with a **^**. These helper points will be used for specifying the suspension of each wheel. Each wheel should have a helper point that represents the top of the shock. The bottom of the shock is represented by the wheel center.

Naming Format:
^leftwheel#anchor
^rightwheel#anchor

Like the wheel nodes, numbering starts at zero and tagging goes from front to back.

Engine Block Tagging

Create a BOX and name it "staticengineblock".
Group the box with the vehicles <body> node.
Tag the engine block as not-rendered
To spawn effects when the engine block is damaged, put a "[eb]" in the front of the ^helper point names. (E.g. ^[eb]generaleffect12)

Passenger Tagging

Each passenger spot must contain two helper points, one that represents where the passenger sits, and the other where the passenger will exit the vehicle.

Naming Format:

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^seat#	Where the passenger sits
^eject#	Where the passenger will exit the vehicle

Numbering starts at zero and must be consecutive. The first seat, ^seat0, must always be the driver's seat.

Tracked Vehicles

General Rules
1. Must have two tracks

Node Hierarchy
Group all body geometry and label it with the following name <n><body>
Group each track and label it with a <n><lefttrack> for the left track and a <n><righttrack> for the right track.
Any doors or glass on the vehicle should be attached to the <n><body> node and tagged appropriately in the map editor.
If the vehicle has a turret then do the following
- o Group the turret and label it <n><turret>
- o Group the main gun and label <n><maingun>
- o Attach the <n><maingun> group to the <n><turret> group.

Body Suspension Tagging
Attached to the body node should be a 4 sets of attachment helper points that being with a ^ and represent the four shocks that allow the vehicle body to rotate independently of the tracks. Each shock consists of two helper points with the following naming format.

Naming Format:
^bodyanchor#   Top part attached to the body
^trackanchor#   Bottom part attached to the track

Left front = 0, Left back = 1, Right front = 2, Right back = 3

Track Tagging
Each track should have two attachment helper points that represent the points of contact.

Naming Format:
^contactpoint#

Front = 0, Back = 1

Turret Tagging
A vehicle can have up to one turret. A turret consists of two parts; the first part is the main turret body that is connected to the vehicle body, and the second part is the main gun of the turret. Each weapon on the turret must have a helper point specifying the muzzle flash location. The machine gun muzzle flash helper point should be labeled ^WeaponFX0 and its x-axis should point in the direction of fire. The main gun muzzle flash helper point should be labeled ^WeaponFX1 and its x-axis should also point in the direction of fire.

Destruction Animation Tagging

Any part of a vehicle, that will have destruction animations attached, needs to have the

"<ian>" tag in the MAX node name. (e.g. <n><turret><ian>, <n><maingun><ian>). Destruction animations are saved to an *.anm file and are loaded by the application when the vehicle is destroyed. If at any time the vehicle node names are changed, all *.anm files for that vehicle must be re-exported.

Animations will only export correctly if the animation controllers are set to linear, this can be changed in Track View. Open Track View..
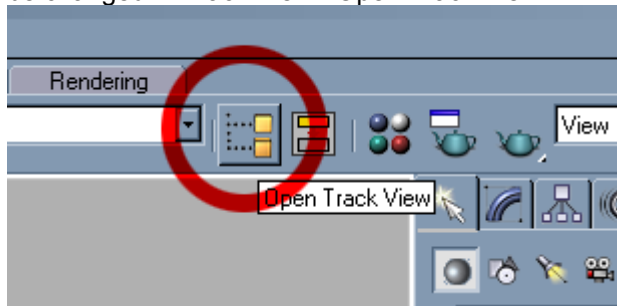
Select a position or rotation node in Track View then press the Assign Controller button, select linear position or linear rotation..
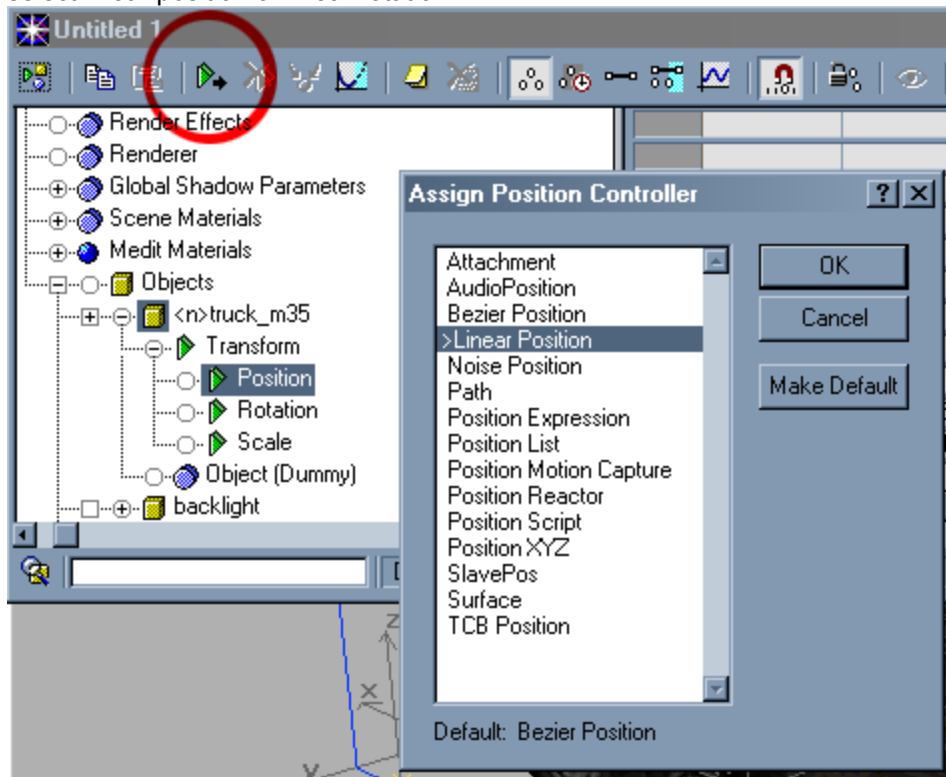
Destruction Effect Tagging

To spawn effects when a vehicle is destroyed, put a "[d0]" in front of the effect helper points. (E.g. ^[d0]smoke_type1)

Headlight Tagging

If the vehicle has headlights, they must consist of the lens geometry only and be broken off into a separate <n> object.

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Textures

The headlight geometry should be mapped with a separate texture from the vehicle body because it will be switched out at night and when damaged. Create a texture and call it something (e.g. vehicle_headlight.rsb). This texture should be the one mapped onto the vehicle in max. Now create a night texture and put "_night" at the end of the texture name.

(e.g. vehicle_headlight_night.rsb). After creating a damaged headlight texture, open up the

RSBEditor and select the headlight and headlight night textures. Open the properties dialog, and select the Game tab. Attach the damaged headlight texture to the other two textures by browsing for it through the "Damaged Texture" interface.

Effects

Grouped with the headlight node should be an effect projection helper point with the z-axis pointing in the direction of the light, and a light halo positioned just in front of the headlight and not inside any geometry. Both the effect projection and light halo must have a "[hl]" tag in front of the regular effect helper point name. (E.g. ^[hl]spotlight_type1, ^[hl]lighthalo_type1)

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