

Ah there you are again. Back for more stuff to learn right? Well here we go again. Get set, ready, go!

All about the mouse cursor or a crosshair if you need.

Instead of using the cursors that come standard with 3D Game studio A8 we use the ones I created for you. This way you can easily replace them for your own created cursor/crosshair pictures.

The pictures are called: mcursor.pcx and crosshair.pcx

The mouse is often used in games. Think of clicking the menu buttons or steer models with it by clicking them and pointing them where to go. In order to be able to do that we need to learn how to use the basic stuff first. There are four mouse modes to choose from; each one of these modes can be set using a simple line of code that looks like this:

```
mouse_mode = 0; // we can use 0,1, 2, or 4 here
```

Here is the explanation of what these modes represent.

set "**mouse_mode = 0;**" and the mouse pointer will become invisible, as if the mouse didn't exist at all
set "**mouse_mode =1;**" create a pointer that is visible and also able to control the camera position or angles
set "**mouse_mode =2;**" get a pointer that is visible and moveable, but can't control the camera
set "**mouse_mode =4;**" lets the mouse automatically follow the Windows mouse

Mode 0 is used for games like: race and shooting games when you use the mouse only for menu stuff.

Mode 1 is used for games like: first / third person action games, role-playing games.

Mode 2 is used for games like: strategy games, board games

Mode 4 is used for games like: games that use the windows mouse control

Just like with picture and sound files we need to define the 2 pictures we are going to use.

Put these lines of code above your main code.

```
BMAP* mcursor_pcx = "mcursor.pcx";
```

```
BMAP* crosshair_pcx = "crosshair.pcx";
```

Then add the following code right under it.

```
function change_mouse_mode()//<< the function name remember ? yes we make another function here
{
mouse_mode += 1;/// <<<mousemode
variable mouse_mode %= 3;
if (1 == mouse_mode)/////<< remember the if ? /////
mouse_map = crosshair_pcx;///<<our crosshair picture
if (2 == mouse_mode)/////<<mousemode variable
mouse_map = mcursor_pcx;///<< our cursor picture
}
```

In our main function we add the following lines of code

```
function main()
{
video_aspect = 1.333; // enforce 4:3 mode
video_screen = 2;////« starts game in window mode
video_mode = 8;///< starts game in 1024x 768 mode
level_load ("workshop04.wmb"); ///«loads our level
on_m = change_mouse_mode; ///« remember the on_key ? here we use it to activate our mouse_mode
function
while (1)
{
mouse_pos.x = mouse_cursor.x; ///« uses the screen area
mouse_pos.y = mouse_cursor.y; ///« uses the screen area
camera.pan -= mouse_force.x; ///« moves the camera along the screen
camera.tilt += mouse_force.y;///« moves the camera along the screen
wait (1);
}
}
```

Run it and see what happens when you press the M key. That's right!!! You can use 3 different mouse modes because we made it happen with a few lines of code. The first at start is mouse_mode 4 you don't see a cursor the second is mouse_mode 1 the crosshair and the camera moves along. And last but not least mouse_mode 2 you can move the cursor but not the camera or angles. Not bad.

If you paid attention in the previous lessons you noticed some stuff you learned earlier came back in this chapter. Did you see it?

- You created a function
- You created a variable
- You defined 2 pictures
- You used the If command
- You used while
- You used on_key press

Basically you already used what you have learned in order to make the mouse work in your game. You have done well my fellow coders ☺

Hey but Realspawn how does it work that if I touch a model in game with my mouse cursor I can make it do something say start rotating or give light ? Well for that we will use an action and we use the event function. Make sure before we begin you delete the previous function change_mouse_mode and in the main the on_m line. We are going to do it in a new way since we use only one mouse_mode to do this.

Place this code above your main function.

```
BMAP* mcursor_pcx = "mcursor.pcx";///<< we define the picture to use as cursor

function highlight_event()
{
if (event_type == EVENT_TOUCH) // the model was touched with the mouse?
{
my.ambient = 100; // the make it look bright
my.lightrange = 200; // and generate light on a radius of 200 quants!
}
else if (event_type == EVENT_RELEASE) // the mouse was moved away from it?
{
my.ambient = 0; // then restore its initial ambient value (zero)
my.lightrange = 0; // and stop it from generating light around it
}
}

action model_lights() // this action is attached to the model
{
// make the model sensitive to mouse touching and releasing
my.emask = ENABLE_TOUCH | ENABLE_RELEASE;
// run function highlight_event the model is touched or released
my.event = highlight_event;
}
```

Add these lines in you main function and see what it does :

```
mouse_mode = 2; // We use mouse mode 2
mouse_map = mcursor_pcx; // set the mouse pointer bitmap
while (1)
{
mouse_pos.x = mouse_cursor.x; // allow the mouse pointer to move along the screen mouse_pos.y =
mouse_cursor.y; // on the x and y axis wait (1);
}
}
```

Ok if you have done this give any model the action light_model and run it to see if it all works as we planned. Wow when you touch the model it lights up and when you move away it goes dark again coooooool Oh and yes you know also know how to use light in your projects isn't that great.

My.ambient makes the model darker or lighter the higher the number the more lighted it will be.

My.lightrange will generate light in the radius of the model. The higher the number the bigger the light radius.

This was a fine chapter. Now experiment and try stuff out. Create your own event. Make the model rotate on touch or make it play a sound you should know how right? ☺ Test and use different mouse_modes as you should understand now how to use it. Next chapter we will try to create a button and a slider to see if our mouse can activate and use them. Till then have fun.

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