Morrowind Mod Maker's Bible

Compiled By Nether Void

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By Nethervoid

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Thank you, and enjoy the MMM Bible!

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Revision Record

?? Revision 1.1.4 – 6-8-02

New Topics:

- o Editing Menu Textures
- o Global Scripts
- o Message Box Scripting
- o Setting (or Editing) the Amount of Gold a Vendor Carries
- o Global Lighting in an Interior Cell

?? Revision 1.1.3 – 6-3-02

New Topics:

- o Distance and Faction Variables
- o Removing "Dirty" Mods from a Saved Game

Revised Topics:

- o Fixed a scripting error in the topic "Part 6 – Scripting Multiple Outcome Events"

?? Revision 1.1.2 – 5-29-02

New Topics:

- o Getting Started
- o Navigating in the Render Window
- o Adding a Script to a Static – A Better Way
- o Building a Room (4 part tutorial)

?? Revision 1.1.1 – 5-23-02

- o Fixed a whole bunch of pages out of order
- o Moved a few sub-topics under more appropriate topics

New Topics:

- o Item Activated Doors
- o Creating New Armor Skins Using Existing Models
- o Hex Editing .nif Files

- o The Cell Path Grid
- o Setting Item Respawn on NPC Vendors
- o Protecting Your Plug-Ins and Savegames

Revised Topics:

- o Added content to the Disclaimer
- o Changed the topic "Birth Signs" to "Adding a New Image to a Birthsign"
- o Split the topic "Skills" into two separate topics; "Altering Skill Progression" and "Altering the Hand-to-Hand Skill"
- o Added more resources to the "Additional Resources" page
- o Added more sources to the "Places to Host Your Mod/Download Mods"

Deleted Topics

- o Deleted the Misc page – Obsolete page

?? Revision 1.1.0 – 5-22-02

- o Added a Title Page
- o Added a Revision Record
- o Added a Disclaimer
- o Added the "Additional Resources" page
- o Added the "Places to Post Your Mod/Download Mods" page

New Topics:

- o Adding New Siltstrider Locations
- o NPC "Train" Option
- o Time Based Scripting
- o Interior Cell Size Limitation
- o Water in an Interior Cell
- o Changing the PC Starting Location
- o Adding Pre-Built "Skins" to a New Race
- o Adding a Script to a Static – A Workaround
- o Function Definitions
- o Generating the TES Hint Guide
- o Sorting Object Lists in the Editor
- o Implementing Plug-Ins
- o Importing Skins into Morrowind
- o Resizing a Creature

Revised Topics:

- o Changed old Topic name "Creating a New Faction" to "Adding "Join Faction" Dialogue"

- o Took the content from the topic "Races" and put it under the sub-topic "Adding New "Skins" to a New Race"
- o Took the content from the topic "NPC "Travel" Option and made it a new sub-topic "NPC "Travel" Service under the topic "NPC Services"
- o Added Rukinea's name to the top of "Creating Quest NPCs"

General Info

In the Render Window:
- ?? "A" Turns on/off All brightness for total lighting.
- ?? "C" Zooms in to an isometriC view of the selected object(s).
- ?? "D" Dislodges you from the selected object(s) to allow for more freeform movement of the camera.
- ?? "F" Drops (or makes the object(s) Fall) to the top level of the object below them.
- ?? "L" Allows you to see/not see the Light radius of all lights in the view.
- ?? "T" Zooms in to a Top view of the selected object(s).
- ?? "V" Allows you to zoom in and out on the selected object with the mouse.
- ?? "W" Turns on/off Wireframe mode.
- ?? "X" Allows you to manipulate object(s) in the X axis.
- ?? "Y" Allows you to manipulate object(s) in the Y axis.
- ?? "Z" Allows you to manipulate object(s) in the Z axis.
- ?? "F4" Shows collision detection of all objects in the Render Window.

In the Preview Window:
- ?? "A" Pans the view left.
- ?? "D" Pans the view right.
- ?? "S" Pans the view down.
- ?? "W" Pans the view up.
- ?? "Insert" Rotates the object on it's ? axis.
- ?? "Home" Rotates the object on it's ? axis.
- ?? "Page Up" Zooms in.
- ?? "Page Down" Zooms out.
- ?? "Down Arrow" Rotates the object on it's ? axis.
- ?? "Left Arrow" Rotates the object on it's ? axis.
- ?? "Right Arrow" Rotates the object on it's ? axis.
- ?? "Up Arrow" Rotates the object on it's ? axis.

In Render mode, how do you zoom in and out?
How do you rotate the camera, if possible?

To zoom in or out, hold the "V" key and move the mouse forward or backward.
To rotate the camera, hold shift and use the mouse to rotate up, down, left or right.

Changing Object Attributes

The short answer:

Double-click the object. (In the preview window. You can use the object window to quickly zoom to any object in the current cell.)

The long answer:

Not every object you place will have all of the same reference information. For instance, if you want to change the color of a light, you may think to drag that light into the world, double-click, and edit the RGB values. That would be bad, though, because you're not editing the values for just this instance (reference), but for the master object itself - so you'd be changing all instances of that light everywhere.

In general, the objects with their own individual reference data (that you can modify for just that object) are the things you can pick up. Armor, Misc Items, Weapons. Doors may each have their own specific Lock / Trap information. Containers their own contents. (Though there are many pre-generated containers with pre-assigned - usually random - contents.) Static objects, the things you put down most of (architecture, furniture) have very little in the way of reference data: I've found I have to create unique statics (that there's usually only one instance of) any time I need to attach a script to it. A bit annoying.

ALL objects, however, retain their own individual location, rotation, and scale. So you CAN use an existing static at half or double size, without having to create a new static.

By the way - if you *do* need to modify non-reference (template) data for an object, CREATE A NEW OBJECT. Do not trounce on the objects included with the ESM, especially not objects there are already 439 instances of, and not even objects there are 0 instances of. Make your own new object. Keep a notepad by your keyboard and keep track of the new IDs you create. Name them according to your module; I can see how someone might argue for following the existing naming convention, but really, I **would strongly advocate going against the ESM naming convention** and using your own personal naming convention instead. This is to try and be friendlier with other mods - since two designers might get it in their head to make a new light named,

light_candle_20

whereas you avoid this problem altogether using,

_ds_alchemy_light_candle_20

(ds is my calltag - dragonsong - alchemy is the name of the mod, and the _ at the beginning makes it sort to the top of the list.)

Editor Preferences

In the editor main window, under **File**, select **preferences**.

In the window this opens, you will see a number of fields you can change.

Movement Speeds: This function allows you to adjust how slowly or quickly things move when you drag them with your mouse. If you change these, do it by small increments, in general, because it's a fine tune control and fairly sensitive on most systems.

Grid Snap: This function is the increment with which an object will move on the X, Y, or Z plane when you drag it. It defaults to 64, I believe, and as long as you remain with multiples of 2 or 4, etc, you shouldn't have a terrible time lining things up sufficiently with a little practice. Simply use a large number to move things around quickly and a smaller number for fine-tuning once you have your pieces "roughed-in".

> **Note:** Pieces do not actually "snap" together as legos do, but very close to that. They should line up with a vaguely visible seam, but no gaps when they are together properly. (I'll provide an example near the end of this post.) It can be okay to overlap pieces at times (and is pretty much necessary in some cases, like adding rocks to dungeons without edges showing...just look in the example dungeon I list at the end) but it is good form and practice to try and keep the overlap of pathway or "main level" pieces to a minimum for best results.

(You'll almost always want "Use Grid" turned on when you're first getting the hang of things, by the way...)

Angle snap: This function is the degree an object will rotate when you are dragging to rotate. Turn it on to keep a sense of order to your object rotation, if you wish. I believe it defaults to 45 degrees, but you'll likely have to lower that quite a bit or turn it off entirely to get the proper angle you need to line certain pieces up properly.

Function Definitions

?? **GetPos –** By Ziegfelding - The GetPos function returns the given component of the affected item's coordinates. So, in the console, in game
player->getpos x
player->getpos y
player->getpos z

should give you the (x, y, z) of the player's current coordinates.

Generating the TES Hint Guide
By SecretChimp

Before you do this, be sure you're ready, since it may require that you terminate the editor with CTL-ALT-DEL and "End Task." In that event, any unsaved work will be lost.
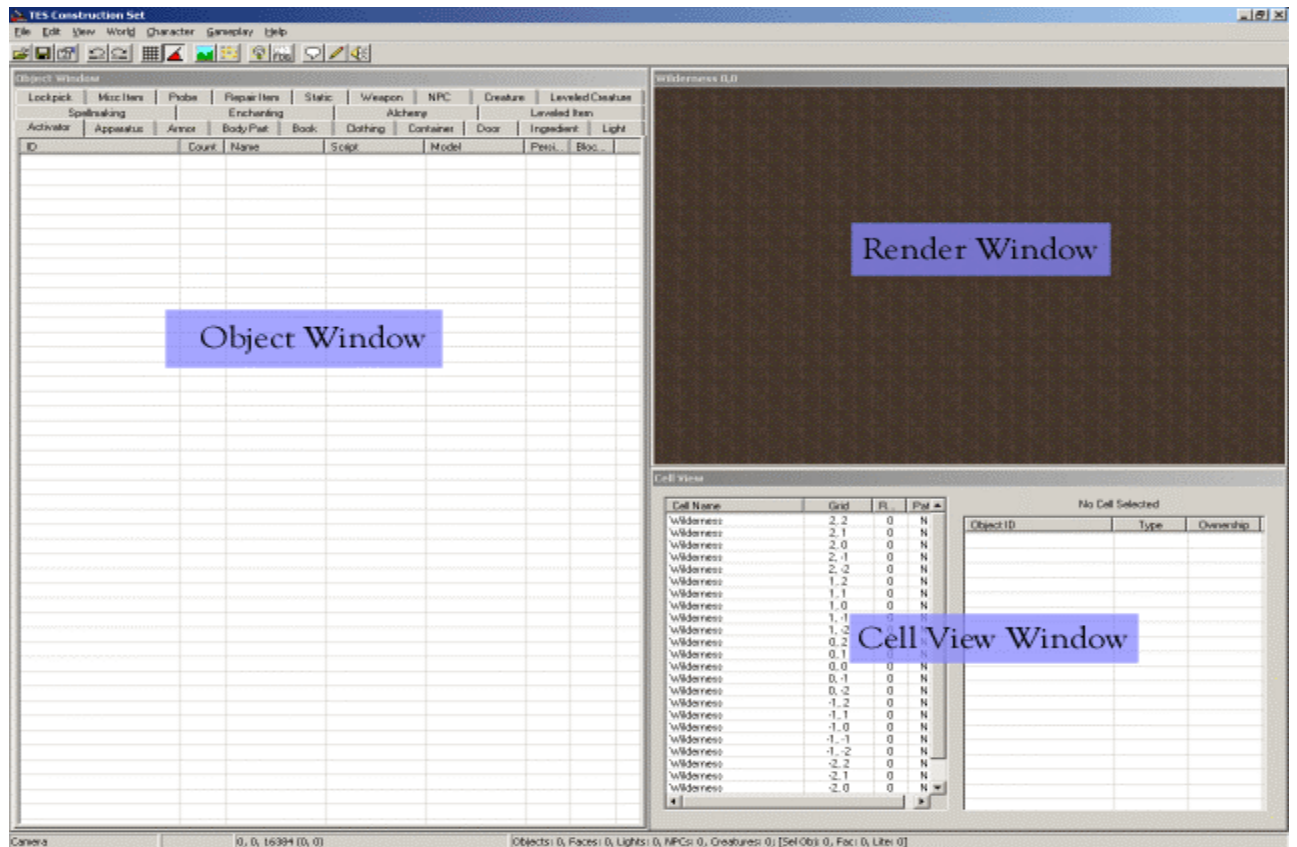
Go to the Main Menu and choose File, Export Data. At the very bottom of the list is "Hint Guide." Choose it. Think of a snappy filename for the hint guide, like "Hint Guide." Now, when you choose OK, the game is going to start running through its object list and printing the object's name along with a few items of information about it. This happens for every (or at least very many) object in the game, so if you let it run to completion it can take a long time. That's why the Ctl-Alt-Del method of program management can come in handy here.

Now go to the Morrowind directory and open up Hint Guide.txt.

Getting Started
By Dragonsong

So you've played around in the game a little and now you're just itchin' to see what that toolset that everyone's talking about can do for *you*, eh? The first thing you're probably wondering is, "So how do I install this thing?" Your game did come with two CDs, after all, and one of them's labeled, "Construction Set".

Actually, if you've installed Morrowind, chances are you've already installed TESCS (The Elder Scrolls Construction Set), too. It was one of your options during installation. If you're not sure if you did, or you're sure you didn't, then go ahead and run the Setup.exe on the CS CD. What's important is that you *do not* try to install this before installing MW. Apparently, the devs tell us, *that's a Bad Idea(tm)*.

Right, all ready to get started? One more thing, first. *Bump your resolution as high as you can possibly stand.* TESCS has lots of windows with lots of information and your Render Window is just one of them. Trying to run TESCS in a low resolution (anything under 1024x768) makes Baby Jesus cry. Well, it makes *me* cry, anyway. I run it at 1280x1024 myself (on a 19" monitor), and I still have a hard time managing my real estate with all those windows.

Once you're inside TESCS, you'll see you have three windows in front of you:

You'll also find that, browsing through all the tabs in Object View, you don't have a whole lot to work with. What you need to really get started is all the stuff in the Morrowind.ESM file, the file you've been using so far (unwitting or no) to play the pre-packaged game.

Hit the File menu, up at top-left, and select Data Files. Double-click on Morrowind.esm so that it's checked, and click OK.
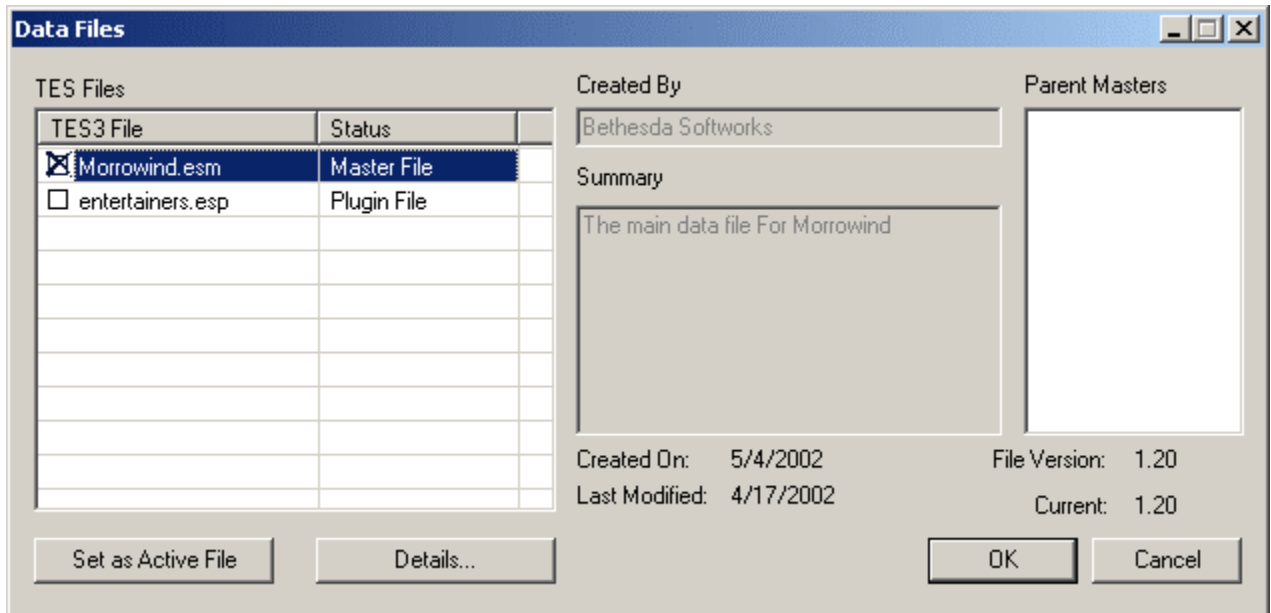
(Note: you may see some "plugin" (ESP) files already listed, any that you've downloaded. You don't need to check them, even if you're using them in your current game. In fact, do *not* check any of them, unless you really know what you're doing. We'll get into more detail on what these Data Files mean, later.)

Woah! Now you have *scads* of stuff to work with. Take a few moments to browse through all of the tabs in the Object Window. It can be overwhelming at first, to be sure, and you may start to think to yourself: "Wait - am I going to spoil any of the game by looking at this stuff? Maybe I should wait until I'm done with the game?" Well ... that's up to you. You *may* spoil a few parts of the game by working with the CS, but myself, I've actually managed to find out very little about the pre-packaged game working in TESCS. I'm not digging through every single object and looking at all the scripts, though, and if you know you're the curious type, but you don't want the plot spoiled, and you can suppress the creative bug for a little longer, then you might want to put off design for a while.

To make all of that information in Objects a little less daunting, let's walk through each of the tabs you have available, to get a brief overview of what each is for:

Activator

There's more to it than this, but think of Activators as switches and levers that you would use to "activate" something, like a door or a gate.

Apparatus

For Alchemy. These are a special kind of object because dragging one onto yourself from your Inventory window will open the Alchemy dialogue.

Armor

You wear this stuff because you don't like dying. Armor, unlike Clothing, has an AR (Armor Rating) and a Health (how much wear and tear it can take).

Body Part

Armor and Clothing are both actually composed of these - you'd use a Body Part as the "Biped Object" for creating your own new piece of Armor or Clothing. Think of the difference between like so: the Body Part is the generic 3D model with no specific information, except which part of the body it attaches to (and upon which layer: skin, clothing, or armor). Armor and Clothing, on the other hand, have specific information, like AR or Enchantments. Two pieces of armor could both use the same Body Part, but have entirely different stats.

Book

Books, notes, writs, and magic scrolls.

Clothing

Unlike Armor, Clothing has no AR nor Health.

Container

These are the chests, barrels, sacks, and crates of the world. Note how each already has its own predefined contents (even if that's "empty"). If you want to make a crate full of crab meat, you *create a new container* and stock it full of that yummy dead crustacean flesh -- but more on that later. (The creating, not the dead crustacean flesh.)

Door

Doors are, well, doors. Actually, if you're clever, you'll quickly realize that "Doors" are actually *Transporters*, they transport you somewhere different when you "activate" them (which means using the Spacebar, by default, in game). So a door doesn't actually have to be a solid mass of wood under a stone archway - notice "Eat Me" and "Drink Me", for example.

Ingredient

You use these things in Alchemy. Only an Ingredient may be used in Alchemy (in the four windows where you may select said ingredients), and only Ingredients provide those "effects" that you mix-and-match to create potions. Say, don't know how Alchemy works? Here's a *real quick* run-down: you combine two Ingredients with the *same effect*, and you get a potion with that effect (if you succeed your Alchemy check). See how Daedra's Heart and Void Salts both have "Restore Magicka" as an effect? Mix those two, and you'll get a potion of Restore Magicka.

Light

Anything that gives off light is a light. A dim glow coming from lichen, a candle on the desk, a torch in a sconce (including the flames), these are all lights.

Lockpick

You use one of these to pick open doors. The game only comes with a pretty limited selection of them, but feel free to be creative! You could use a model for a teddy bear as a new kind of uber-lockpick and stick it on the secret Master Assassin's bed by the cute pink pillow!

Misc Item

These are things you can pick up and carry around that don't otherwise fit into one of the other categories. Gold, keys, kitchenware, and all the little "details" that make the world seem so much more real.

Probe

Like Lockpicks, you use these in Thievery, to disarm traps.

Repair Item

Used with the Armorer skill to repair worn armor and weapons.

Static

You may at first be confused by the difference between Misc Items and Statics. Misc Items are things you can pick up and carry with you. Statics, you cannot. That means the most of the world is actually comprised of Statics - and it's with Statics that you'll be spending the majority of your time building. Everything from landscape to architecture to potted plants to furniture fits into the Static category.

Weapon

Unlike Armor, Weapons do not use a template (Body Part), but rather all of the information for any given weapon is defined by its own unique object.

NPC

All of the actors of the world. *Including yourself!* The star of the show is listed but humbly as, "player". *All the world's a stage, and all the men and women merely NPCs.*

Creature

The difference between a creature and an NPC is that creatures only have a "type" (Creature, Daedra, Humanoid, Undead), whereas NPCs have a Race, Class, and Faction/Rank. Otherwise, creatures are precisely the same (in terms of interface) as NPCs.

Leveled Creature

Also known as Ninja Monkies - because that's what you'll see in the editor for a Leveled Creature. These are creatures that spawn differently based on the level of the player. Take a look at the very first one in the list: ex_ascadianisles_lev+0. The list on the right shows you what kind of monsties you might run into should you drop one of these bad boys down: from a lowly kwama forager at level 1, to the mighty betty netch at level 10 or beyond. Multiple creatures can be listed for a single level, meaning there's a chance that any one of those creatures might spawn.

Spellmaking

If you're familiar with the Spellmaking interface in the game, this will make plenty of sense to you. This is where you create new "Spells". Not *Spell Effects* mind you, but new Spells - like a spell that grants you Levitation at level 40 for 60 seconds, grants you Invisibility for 30 seconds, and bestows Shield level 20 upon you for 120 seconds.

Enchanting

Much like Spellmaking, this is related directly to the Enchanting interface in the game, except that you're designing generic (or specific) enchantments in this case, which you

could then apply to Armor, Clothing, Weapons, etc. Again, you can't define new *effects*, but you can mix and match any combination of existing effects however you see fit.

Alchemy

Potions (and such) that apply an enchantment. Spells do the same thing, but Alchemy objects don't require any sort of skill check, and generally come in the form of a potion that the player quaffs.

Leveled Item

Read the description for Leveled Creature, and now think "Leveled Item". Yup. These are loot-objects that change based on the player's level, so a player at level 1 might open a chest only to find 5 gold inside, while a player level 10 could find a sword of Betty Netch Ass Kicking.

Implementing Plug-Ins
By Vaulimere

First move the esp file into the Data Files folder where Morrowind is installed. If the plug-in has textures, meshes, or other files that aren't already in the game, those files will also need to be put in the proper folder structure under the Data Files directory. What directory they go in depends on the type of file and how you linked it.

Once you have the files in the right place, just click on the Data Files option when you start Morrowind, and select the plug-in you want loaded. (Double click to select/deselect the plug-in)

Once a mod is selected it will be active for EVERY savegame you load unless you deselect it again from the Data Files window.

I don't know if others have had problems adding plug-ins after starting a game, but I have not had any trouble with it so far. Sometimes removing a mod has left a few bits after loading a savegame that was using it, but I think after you save the next time it's supposed to be corrected.

Keep in mind that if you use anything like a house plug-in where you store your stuff, and then remove the plug-in, your stuff will be gone (you just need to move it to somewhere else before un-checking the plug-in).

Navigating in the Render Window

By Dragonsong

By now you're probably *just dying* to get into the editor and actually *do something*, but you'll have to bear with me for just a little longer. Besides knowing what all of those tabs in the Object Window do, it's absolutely *imperative* that you know your way around the Render Window. That's the window at the top-right, which at start just displays what looks like a flat, mottled brown surface.

You should have your Morrowind.ESM file loaded, so you'll have a list of cells (Interior and Exterior) in the Cell View Window, below the Render Window. Highlight an entry in the list, and on your keyboard, hit the letter S. You'll see that you scroll down to the beginning of the S entries. You can type multiple letters, too, like 'SE', in short sequence. (Note that you may need to click away from your "result", or use one of the arrow keys, between "jumps".) Find the entry for "Seyda Neen, Arrille's Tradehouse", and double-click on it.

After a brief loading sequence, you'll probably see something like:
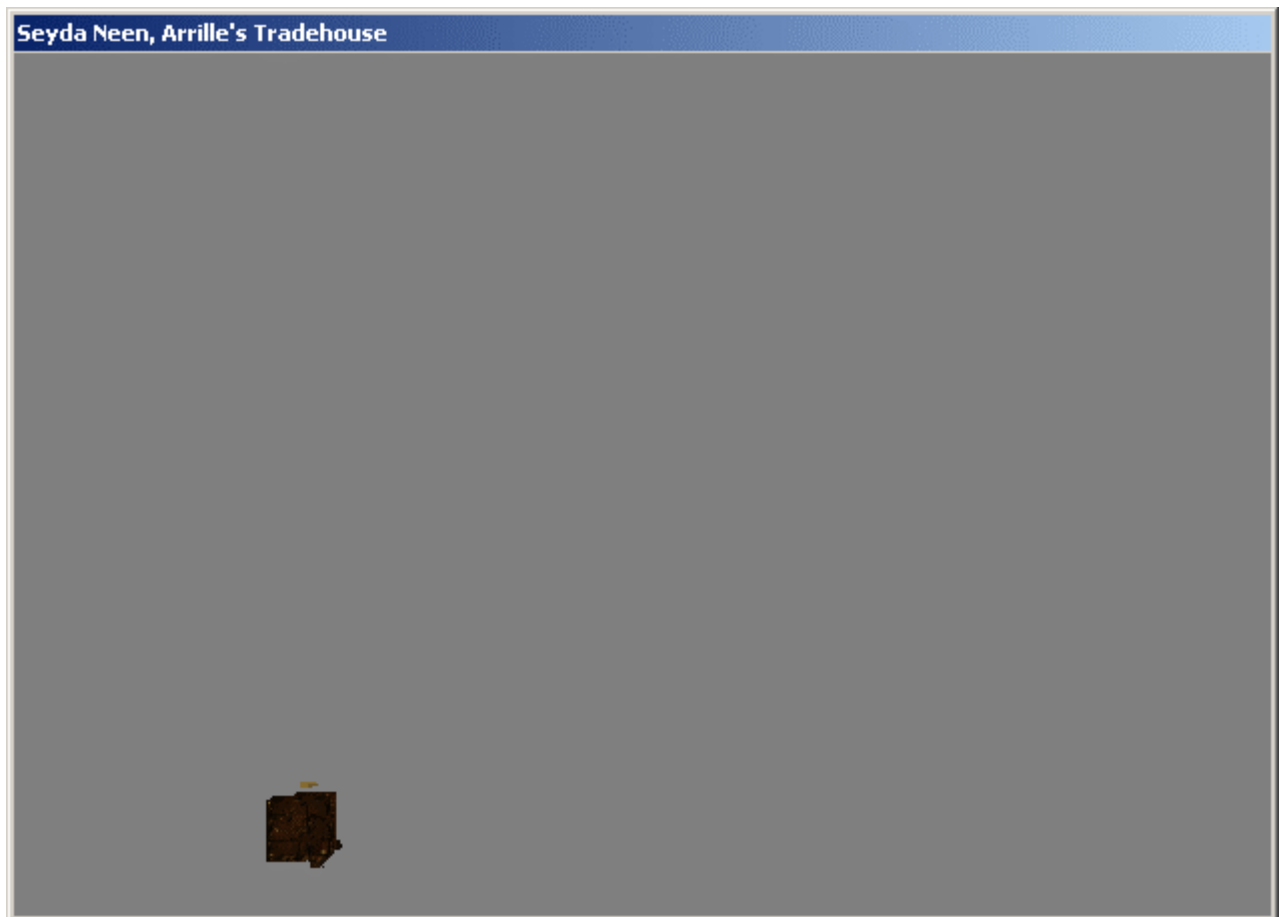
"Um, what the heck is *that?*" you're wondering. Well, it's good ol' Arrille's Tradehouse, indeed - zoomed *way* out. The grey "ether" surrounding the little blotch of color is just that: empty space, the nothingness that you would see were you able to look through a hole in the wall. This isn't actually a part of the rest of the world, it is indeed its own "cell" of space, that is linked with the outside by means of a door that teleports you to a different cell - the cell for Seyda Neen.

The quickest way to get yourself zoomed in and ready to work with a cell is to double-click on one of the objects listed on the right half of the Cell View Window. Try double-clicking Tolvise Othralen.
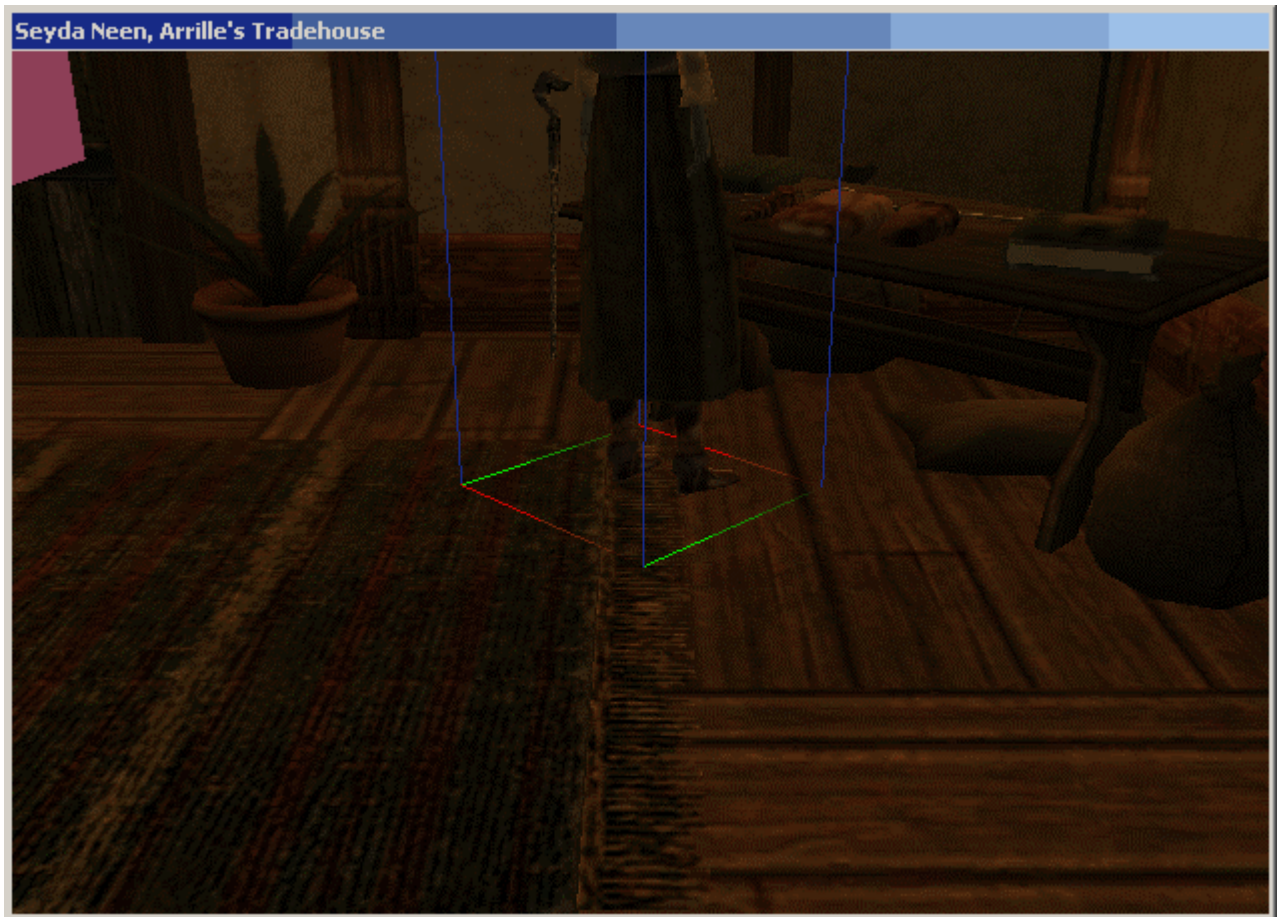
Ahh, much better. Well, kinda.

It's a little dark in here, and when you're editing things, you'll usually want a very clear view of everything. You can turn on all the lights with the A key:

Seyda Neen, Arrille's Tradehouse

"Now how the heck do I move around?" you're wondering next, grasshopper? It is good you should ask. Getting a hang for navigating in the Render Window is one of the first, and most important skills you will learn, in TESCS.

First, you'll always find you have to click on the Render Window itself before you can navigate in it. Now hold down the Shift key on the keyboard, and move the mouse around. Holding down the Shift key is the equivalent of putting you into "mouselook" mode.

Get the hang of mouselooking before you go much farther. Hit D on the keyboard (de-select) and see how that affects your mouselook.

You can zoom your view in and out with the mousewheel, or by holding down V and moving the mouse, much like you use Shift. In general, V provides a more granular level of zoom, and is a bit less agonizing than flinging through the wheel five times just to get zoomed out to the right level you want. Now pan the camera around a bit by holding down the spacebar (or middle mouse button), and dragging. Practice using combinations of shift, V, and spacebar to move yourself around Arrille's Tradehouse. Try going downstairs and back up, or turning a circle around an object.

If this is your first 3D editing experience, it may be a bit disconcerting at first to have to move around in so unnatural a fashion: you'll find you want to walk, strafe, jump, and look around an object with it centered in your field of view. It just takes some getting used to. Remember that you're operating in true 3-dimensional space, here, and the controls which allow you to move and look don't necessarily assume such nuisances as gravity and the limited mobility of the human body.

If you get yourself lost, remember that you can always double-click on an object in the Cell View window to re-orient yourself. There are two other ways to get yourself back on track: the T and C keys. Select an object somewhere just off-camera, and hit T. You'll see you zoom in to the object, looking down at it from above. Try the same thing with C. Now you get a "perspective" view. This helps if you see an object that you want to zoom in on or center your view upon, but don't want to go hunting it down in the object list. Moving around using just the C and T keys can become very natural after a while, and you'll find yourself zipping around your cells with the greatest of ease.

This is handy, too: not sure exactly what you have selected? The name of it appears at the lower-left, as well as its type, coordinates, and cell (respectively, moving over to the right).

Now what about moving objects inside of the Render View? Well, this is done with the most intuitive of actions: simply select the object, and drag it around with the (left) mouse button. (I'll say "left", but if you have your mouse buttons switched, of course I mean your "primary" mouse button.) Give Hrisskar a double-click, remember to re-select your Render Window, hit T to give yourself a better view of him, and drag him around like the big ol' pussycat he is.

Note how you can only move him when your mouse gives you the four-way arrow icon. This makes moving very thin or small objects difficult, so using zoom and mouselook to get a good angle is critical.

Now use Shift (mouselook) to give yourself a different angle on him, and try dragging him around a little more. You should see that you continue to move him only along the X and Y planes (left/right, forward/back), but not along the Z plane (up/down). To move an object along the Z axis, you have to hold down Z, and drag with the mouse. In fact, you can also hold down either X or Y to move an object only along one of those planes, too. This is very useful for aligning objects.

Speaking of aligning objects, you may have noticed that as you drag around ol' Hrisskar, you don't have much precision - you're free to place him pretty much wherever you like. This is usually fine for things like NPCs or objects, but when it comes time to put architecture together, you're probably going to want to make sure everything aligns perfectly, with no visible seams or gaps. This is easily accomplished with the snap-to-grid button:
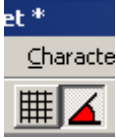
And as you can see, by default it's off. The button next to it, snap-to-angle, is used for rotating objects, and by default it's on. Now, with snapping turned on, try moving Hrisskar again. You'll see he now snaps around at an increment, and you can line him up easily with the walls or the floor.

There's actually a much easier way to get something to align with the floor (or any surface), though: the F key. Use Z to drag Hrisskar a ways up into the air, then hit F. He should land perfectly flat on the floor again. Drag him over to and above the bar and drop him on top of it. Drop him on top of Elone. Trying hitting F multiple times: see how Hrisskar sinks to new depths (he continues to snap to each progressive surface level down). Get used to using F. F stands for "friend".

I mentioned rotating. Yes, you can rotate things, too. What good would your world be if everything only faced north? Well, might be kind of eery in a cool way, but a little boring, too. You use the right (alternate) mouse button to rotate. And as you can see, your rotate is snapped, as well (by default to 45-degree increments). You can turn that off with the other button shown above. And, as with moving objects, you can also change the axis upon which you're rotating by holding down either X, Y, or Z while you drag with the right button. **But,** Z doesn't rotate on the Z axis, as you'd first expect. In fact, **Z rotates on the Y axis**, and you don't need to hold down any key to rotate on the Z axis (it's the default). Yes it's a little weird. But I guess it's not so bad once you get the hang of it. Also, note how NPCs will only rotate on the Z axis: you can only change an NPC's facing, not its tilt or pitch.

You'll probably find you want to change the increments by which you're moving or rotating things, at some point. You can change those increments by going to File, Preferences, and setting them in the Grid Snap and Angle Snap fields:
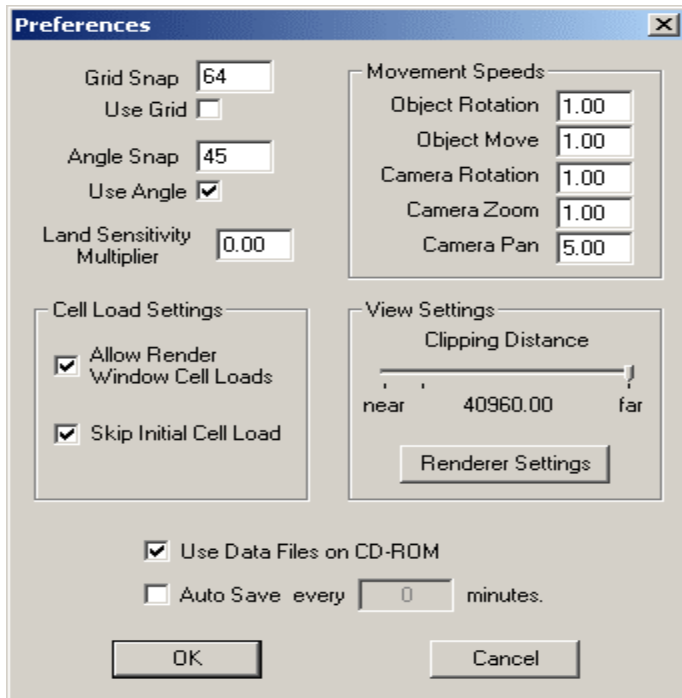
Some of the other settings in this window bear mentioning, too. The Movement Speeds change how quickly you can move things around with the mouse (including the camera, when in mouselook mode). Not the *increment* of how *far* things move, but how quickly they get there. In general, leaving these at 1.00 is a good idea, unless you find you need to move things really long distances really fast. I also often touch the Camera settings when I need greater or finer control over the camera.

The "Use Data Files on CD-ROM" option is, by default, checked, and you'll probably want to leave it checked, unless you've copied all of the files from your CS CD onto your hard drive (which can be useful, but I won't cover that in this tutorial). You will find, however, that with that option checked, if you hit OK to this dialogue,
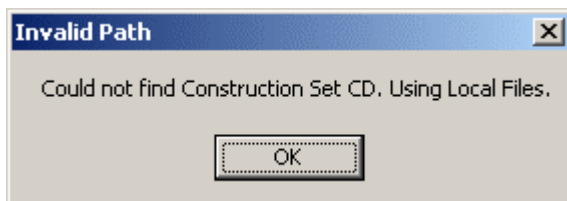
this little nag may come up. It's telling you that you don't have the CS CD in your CD-ROM, so it won't be able to "use" those files. Everything's fine, and you don't have to have the CS CD in your CD-ROM to run the editor (except in more advanced scenarios, where you need to grab some of the meshes and art from the CD), so just click OK if you get that one. You'll still need the game CD in your CD-ROM to test your mod anyhow, so swapping CDs every time you want to look at your work so far could get a little annoying.

Performance Issues

Best I can tell, all parts of an object are rendered whether visible in your cell or not. So if you have a ton of unseen polys outside of walls, your cell is going to chug on average systems even if the visible area is very simplistic and smooth. Someone correct me if they find out differently, but from what I've done thus far, it seems that even if only 5 polys of a 180 poly rock are showing in the interior of a level, that entire 180 poly rock is still being rendered by the game engine as if it were wholely visible.

Protecting Your Plug-Ins and Savegames

By Traven and Nethervoid

Traven: When you are playtesting a MOD, I recommend everyone have a special save game file JUST for playtesting. The reason for this is very simple, things tend to get messed up when you play around with TESCS too much. Having a special save game file that tests everything before you actually save it into your 'real game' will help you reduce the amount of error messages and problems you will have in your game files.

Also, I recommend not using a MOD in the game until you are sure it is as perfect as it can get. I know this seems like common sense, but I've fallen victim to "I'll just rush in and test it for a minute with my 'Real Game'.... oh [censored], I just saved it and I'm not done!" It happens to the best of us, and I'd like to see you all not fall into the same traps I did.

Nethervoid: Another thing is always have your plug-in backed up so that if you encounter some error, which crashes your whole mod or even something that just changes everything (so you get a bunch of little * where you don't want them) you can always revert back. I've found that if you make a mistake and get a bunch of little * everywhere, even if you fix it there is no way to remove the little *s. They end up everywhere. People will think you are making dirty plug-ins when, in reality, you are not.

Removing "Dirty" Mods from a Saved Game
By Ziegfelding and Mysterial

Q: Can anyone help here? I downloaded Dark Mansion (MANSIONSANC.ESP) way back before I knew what I was doing with the game. I installed it about 15 faction quests ago, and maybe 10 levels. Since then, I've added my own high-level monster "packs" with efreeti, Liches, etc., and the game is the most fun I've ever had.

I had NO IDEA that the MANSIONSANC.ESP deleted the "latest rumors", "little advice", "Nerevarian", "Imperial", and "price on your head" dialogue trees. As a thief and a potential Nerevarian, I think I need those trees!

I've tried everything I can think of to get these trees back in the game. I've undeleted them in the MANSIONSANC.ESP and I've made new mods with addition information in these trees (ex: under "Latest Rumors", for all occupants of Seyda, a rumor of how p*ssed I am at the bugged mansion). Nothing seems to work on any of the games I've played since loading that bugged mod. All my changes work just fine if I start a new game.

Ziegfelding - The problem is that those deleted topics are now in the save game as being deleted. Its like if there's a chest in the corner of the room and a plug-in moves it to the center and you open the chest and save. The chest is now in your save in the center of the room. If you remove the plug-in, the chest does not go back to the corner because you have saved it in the center. Its the same thing with these deleted topics.

However, there's a tricky way to remove the bad topics from your save with the details window in the editor. Rename your save game to be an esp file and put it in with the plug-ins. Then, start up the editor and click on your save game in the data files list. Click the details button and it will give you a list of everything in it. Find those topics, select them, and hit the delete key. This will mark them as ignored. Rename the save game back to an ess file and put it back with the saves. When you load it again, you should have your topics back.

Mysterial - One important thing that you didn't mention though is that after cleaning the broken mods out, you need to load your game and **then** save it again **before** loading it into the editor. Otherwise, the deleted topics won't be listed in your savegame at all.

Sorting Object Lists in the Editor
By SecretChimp

In the Object List, click on the bar at the top of a particular column to sort everything in that column in ascending or descending alphabetical order. For instance, under Weapons, click on Type. Now all the weapons are sorted according to type, beginning with those of type "Arrow." To sort them further, hit "Name." Now they're sorted by type and by name. If you want to reverse the sort, so that it's in descending order, just click on the bar a second time.

ToddTest Cell

The master file for Morrowind comes complete with a goodie from Bathesda. ToddTest is an interior cell that doesn't appear to have a way in from the game unless you create one.

Inside the mini-building you can find some very interesting stuff. Azura's soul gem, daedric weapons, drums that play custom sounds, bells that reverb with offset tones, a custom NPC that has all of the various NPC flags (Enchanter, SpellMaker, Repair, ...), and a drum that sets your character up for testing purposes. The setting up process automatically sets some skills to 100 and others to 50. Give you items, infects you with Vampirism, and so on.

Some may have not run across this test cell included with the game and it may be of use to those wanting to create NPC's that can do incredible things or items that can modify stats and such.

The Cell Path Grid
By SecretChimp

The Cell Path Grid is what guides NPC movement. To see the cell path grid for the current cell, choose "Edit Cell Path Grid" from the menu. Now, if this is a new cell, you'll want to choose a granularity (node spacing) value and click "Generate Default Grid." But if it's an existing cell, you won't want to do that since you'll screw up the existing grid.

After the grid is in view, you'll be looking at a mesh of blue dots joined together by yellow paths. The blue dots are the movable path nodes, the yellow paths are the route NPC's will take between them.

If you want to add path nodes to an existing grid, right click on the landscape. A blue dot will appear that signifies the new node. This dot is movable just like any other object--i.e. you use the same commands to place it that you use for objects--so you can move it around where you want it if it's not already there.

Now, to connect your new node to the existing grid, make sure the new node is selected (green square around it) and choose a blue node on the existing grid. Control + click on it. A yellow path is created between your new node and the existing node. That path is now accessible to your NPC's. When you've got everything the way you want it, choose "Save User Points" and click "Save."

Paths for wandering NPC's are merely suggestions. They only represent the possible places NPC's can walk. I don't think there's a way to assign an NPC a specific path. Even when you want them to travel to a specific place, you only choose the destination, not the path. So, if you want to narrow down the character's wayfinding choices, the only way to do that, so far as I know, is by deleting and/or moving existing path nodes. (Thus, if you want everybody in the area to walk a single file line, eliminate all but a couple of nodes. Then they have no choice.)

I haven't messed with pathfinding all that much yet, but something I noticed: a cell path grid is limited in size to a single cell. However, even though there are therefore no explicit paths *between cells*, NPC's nevertheless seem capable of negotiating the transition. As long as grid nodes from neighboring cells are fairly close together, the NPC will make the leap. (This is fairly preliminary, though. YMMV.)

Q: Do creatures use this same grid? This way I could maybe limit where my creatures roam?

A: I don't know, to be honest with you. I haven't messed with the pathing that extensively. My guess is they will, since their info (AI) box looks just like any other NPC's.

One thing I've noticed is that NPC's will wander, if they have Wander AI, even when

they're not near a path. There must be some default movement algorithm that covers this. But when they're near a path, they'll follow it. Creatures will probably do the same.

Worldwide Object Search
By SecretChimp

Choose Edit, Find from the main menu. You will get a box with a dropdown list that allows you to choose any object in the game. Just choose it and push OK. The appropriate cell will be loaded and the camera will be near said object. It acts like a kind of global "C" command. Very nifty.

Adding New Siltstrider Locations

By Anonymous

Q: How do i add travel markers for like silt striders? I added an NPC, and a strider no prob, and i can enable travel pretty easily.

But, I added Khuul (khuul -9, 6) just like the other origin locations have it but it drops me just down the hill from the actual strider. If i click "select marker" it adds another green marker

I added my location as it appears under the a_strider in the object window but it drops me on a freakin mountain.

So, I need two things

1) How do i link from my new strider to the khuul strider

2) How do i add a travel marker to my location, and then link it to khuul and molog maar.

A: Ok, i got it to work from Khuul to my location by finding the travel marker inside the mountain and placing it on the top of the ramp.

Do i need a seperate marker for each one?

Well, hell. They are stacking multiple travel markers in the same location. That only took 30 minutes to figure out.

Assigning a Region to Your New Cells

Regions are the way the game groups cells for purposes of weather and determining what kind of creature interrupts you when you're sleeping. If you manually rename a cell, the game considers it a town cell and treats it that way--i.e. it puts a little square on the ingame world map--but if you make it a part of a region, then it doesn't get special treatment. However, in neither case is anything actually painted on the world map. You either get the little square from calling it a town or you get nothing. Thus, until somebody figures out how to actually paint the world map, judicious use of town designations might be in order to make your area show up at all. The local map is a different story; the landscape you create always shows up on the local map ingame.

Anyway, setting the region is easy. When you create or choose one, a window will come up that allows you to set the weather pattern for that region and choose the animal that interrupts sleepers. There's also a window displaying a list of sounds that I haven't gotten into yet, so I'll say no more about them. The last two things in the window are a button called Region Paint and a section to set the region color. Push Region Paint.

What you're looking at is the actual map of all external cells in the game. Note how the regions are distinguished by color. This color is what is set in the "Region Map Color" section of the window you just left. You'll note that the color by default is a beautiful black. You'll want to go back and change that before actually choosing any cells, since the rest of the background is black by default as well. Beyond that, it's simply a matter of clicking on all the cells you want to make a part of your region. Voila, viola, and violin. You're done.

This map is also a handy reference tool. Notice how the grid locations show up when you hover your mouse pointer over a cell? This can greatly aid you in finding stuff on the map. Also note, just for the sake of reference, that the origin is at the very bottom of the Ashlands region (light grey, one cell up from the bottom on the left.) If you look at the printed map that came with the game, that cell is in the faydwa (or whatever those lava trenches are called) northeast of Balmora and southeast of Caldera. Just so you know.

Creating a New Island

Jump to a location close to any edge of Vvardenfell (Bitter Coast for example), scroll out a ways and use the arrow keys to jump left several cells. You'll see the index (like -10, -2 for example) and the name of the cell area. When it says Wilderness, continue for a few more cells to give yourself room to work.

You have to pull the land up from under water so you may want to change the land sensitivity multiplier to something like 20 otherwise it could take a lot of click and drags to get the land above the water line.

You can change the land sensitivity in preferences under the file menu.

Exterior Cell Theory

Notice when you first start up the game how there are 25 cells already in the cell window? 25 is the minimum number of cells in the game. The origin cell is at 0,0 and all the rest surround it to form a five by five square around the origin. The idea is that no matter what cell you are working on, there is a buffer of two on every side of you at all times. Thus, when you move into a cell that doesn't have such a two-cell buffer on every side, the program creates the necessary 2-cell buffer. Note that you DON'T have to do any scrolling around in order to make this happen; you can just double click on a border cell in the Cell List window. It will load and any other necessary cells will be created automatically. Try it now. Start up the editor but don't load a file. Now double-click on Wilderness cell 2,2 (a border cell). See what happens? The other cells necessary to maintain a two cell buffer around you are created automatically.

This is how the exterior map editor works. Cells aren't real. They're simply how the object database is organized. You as a designer never have to concern yourself with cells at all, other than to name them appropriately so you can remember where stuff is. The map itself is continuous and potentially infinite in all directions and isn't broken up into discrete chunks that have to be loaded and unloaded or even paid attention to at all by you. The game and the editor take care of everything automatically.

Anyway, perhaps you've guessed by now that that patch of brown you're looking at when you first start up the editor is actually the pure, pristine ground level of a new world. You're looking at it from a top-down view, through water, which you can't see until you rotate the view down. Go ahead. Rotate it. See?

Well, I'll leave it at that. This should give you enough of an idea of how the game is organized that you can fill in the blanks yourself. Good luck. (And don't bother thinking you can make a whole new world. Unless you know how to create an .esm file, you can't.)

Landscape Editing

Go to World>Landscape editing (or hit H on the keyboard, or use the Icon in the menu bar), set your edit radius and falloff (100 smooth, 0 cliff edge) and start pulling up the land (L click hold and drag up).

When you have finished the basic shape of the island, exit the landscape editor and find the cells you modified in the Cell View window. L click one of the cells (pause) and left click again and you can edit the name to something more meaningful than Wilderness - 18, 2 for example. If you modified more than one cell, you will want to change the name on each of the cells you modified (MyIslandNorth, MyIslandWest, etc.)

Don't forget to save your work, the first time it will give you an option to name the file. The next time you load it, you'll need to mark it as the Active file to modify it some more.

Adding Content

Now you will most likely want to add statics, creatures, etc to your new cells. Turn landscape editing off and select your items toolbox. Find an area where you want to place (insert what you want to place here) and drag the icon from the toolbox to the render window. A copy of the thing will appear in the render window. Hit "F" on the keyboard to bring your object to the "F"loor of your new cell. Be careful with the amount of "things" in your new cell. If there are too many "things" for the game to render, the framerate will suffer greatly.

Resizing a Creature

By Anonymous

Select a creature on the map and hold down s. Now drag up or down on him with the mouse.

(**note from Nethervoid – this will only affect the creature selected – it is not global)

Adding "Join Faction" Dialogue

Q: (I have created a new faction and am ready for my PC to join this new faction), but when I get to the faction leader and the dialog part...woah...stump city. It's probably something simple I can do. I just need to know where to look and how to create a new script that will (allow my character to join this new faction by way of this) new faction leader. Any help would be appreciated here.

A: In the "Result" text field for your dialog topic, add the following line.

PCJoinFaction "Your Faction Name Here"

This will cause the PC to join the faction.

You should probably have a condition of Function/Same Faction=0 in order to ensure that you don't ask a PC to join if he's already a member of your faction, although this will be based on how convoluted you want the dialogue steps for joining to be.

Creating a New Faction
By Morgoth666 and Sapper

Morgoth666 - Go to the character menu I believe and then click on faction. And then you click on new, name your faction, give it an ID and begin making the ranks in it. To create a new rank, click on the top-left most cell in the table that is at the bottom of the faction dialogue. Name the rank, (ie. journeyman) and then you can proceed to fill in the numerical stats there concerning attributes and reputation. You do this by clicking on the boxes above each column, not the actual cells. *sigh* This is a pretty poor description, but just open the mages guild in that same faction window and you'll see what I'm talking about.

Q: It won't let me add a new rank. I can create the faction, add the reactions to other factions, and set the primary attributes, but I can't add ranks. It just won't let me enterthe information. I can edit the requirments for each rank for other guilds, but even then Ican't add new ranks or change the names of the ranks.

Sapper - Don't double click the name field, click once to select, wait, then click again (in the name field) it should change to a little cursor you can enter the name into. Then use the values above to set the skill requirements.

General Image Moding

NetImmerse FF Plug In for 3D Studio Max: Where Can I find this FF plug-in from 3ds max? I'd like to make a mod... but I can't figure out how to export my netimmerse files properly...

Do a search for" Net Immerse" and get their Freedom Force plug-in. Drop the plug in your Max plug-ins folder. When your in max you can now go to "export" then change the file extension in the pull down to NIL. Now export to the MW mesh folder. BTW you can also use the FF NIL viewer that is at the FF site.

Adding an New Image to a Birthsign

Put your image in datafiles/textures/birthsigns under your morrowind dir.

Creating New Armor Skins Using Existing Models

By Sorcerer

In this tutorial we will go through how to create totally new types of armor, well kinda, we will still use the basic models that came with the game. In this example we will make a new type of light armor...Spidersilk.

Before you start:
Making a new dir for your files is highly recommended:

Make a new directory (called MOD in this example) and recreate the basic directory tree you see in morrowind:

MOD
--Game Data
----Meshes
------A
----Textures

Copy the textures and models you want to work with from the editor CD (or local editor dir) into their appropriate dirs.

In my case I wanted to make a new type of light armor, that would give my char a more thievish look. so I decided to use those dark brown stealth suits as a base I copied ALL the meshes and skins from C_Commonshirt_C3 and C_commonpants_4 (i think, writing this from the top of my head)

NOTE: there are both male and female versions of many of the models, if you want females to have a more female like set of clothes you have to edit a second set of files using the female versions of the models.

Remember the file structure
Textures -> mod/gamedata/textures
Meshes -> mod/gamedata/meshes/a

Renaming Models & Skins

First I renamed the models to A_Spidersilk_(S for shirt P for Pants)_(part) because I think Bethesda's naming system works pretty good in identifying the files afterwards.

Rename files to something appropriate, remember to keep the filenames at roughly the same length as this simplifies hex editing

The part bit:
UA - upper arm

LA - lower arm
LL - lower leg
UL - upper leg
w - wrist
g - groin
c - chest
a - ankle

Now it doesn't necessarily have to be like that but it works.

Now do the same to the textures, then open them all up. I did something rather simple with mine, I darkened and gray-scaled the pictures.

NOTE: If you're making a second model for females you do NOT have to use a different texture, simply hex edit the models to use them for females as well.

Example:

the models
A_Spidersilk_FS_C
A_Spidersilk_MS_C

Both use texture
A_Spidersilk_S_C

Hex Editing

After I finished naming my files, I started hex editing the models to use my newly created textures.

Making the Armor

I copied all the files in the mods dir into my game dir and fired up the editor to start the actual armor making (if you copy the gamedata from the mods dir just paste it in the morrowind root folder).

Here comes the part that people fail to notice; armor parts must be created as a body part before they can be pieced together as armor.

Create new body parts with your newly made models.

Load up your models, name them appropriately and remember to tick the ARMOR tag. If you made female armor as well, tick the FEMALE tag too.

Make a New Armor Item

Switch to the armor tab and right click -> new (if needed)

Last notes

Now, for my Spidersilk armor I decided to
make it a bit different from other armor, since
it essentially is strong clothing. I included the
upper arms of the shirt in the torso part,
deleted the lower arms and also added some
retextured shoulder guards from the Boiled
Netch armor greaves.

The greaves are attached to the Clavicle part
BTW. Took me a while to figure that out.

Now if you were to add an additional pair of
greaves to this armor in-game, the arm and
shoulder part will be exchanged with the
greaves part. Essentially you can make a
complete armor set that is worn from a single
location. Khajiit suits anyone? :P

As always, if you have any questions or
comments on this tutorial email me at
Tordstorlien@hotmail.com

Editing Menu Textures
By Sapper and Niyt Owl

Q: I want to change the textures of the menus. How can I go about doing this?

Sapper: Well. There are probably some textures somewhere for the windows. You could change their looks. (* note from Nethervoid – This will change the texture of the menus only, not the shape of them)

Q: Does anyone know where I can access the textures he's talking about?

Niyt Owl: Take a look at the second CD - there are a ton of textures in the Textures directory.

Morrowind keeps a master copy of textures and meshes in the morrowind.bsa file. If you want to change one of the defaults, look on the second CD, find the file you want to change, then place it in the same directory on your HD (you may have to create the directory in the case of icons or meshes) or load your replacement file there.

When Morrowind initializes, it checks those directories. Any file it finds there that duplicates one of the entries in the morrowind.bsa file will override that entry.

Looking at the textures, it appears you can entirely reskin the menu.

Q: So how do I get into the morrwind.bsa file to see which is file I'm going to override? Can I delete the one in the morrowind.bsa file somehow??

Niyt Owl: Err...you don't "get" into the morrowind.bsa file. It's like a master collection; you don't change it. You can make alterations by placing modified files into the appropriate directory on your HD. Just look at the textures on the second CD, decide what you want to change, copy the files and you're done. No need to look at the morrowind.bsa file. I just threw that in to confuse ya.

Actually, it's so you understand why there are no files in the Texture and Meshes directories on your HD until you move some there. I've heard of people who manually copy everything from CD 2 onto their HD, which just makes the game load a bit slower.

Say you want to change the cursor that appears when you've grabbed an item out of your inventory. Go to CD2, grab the Cursor_drop.tga file out of the Textures directory, edit it up, maybe change it to a hand, then save the changed file to your Morrowind\Data Files\Textures directory on the HD. When you load up the game, that file will override the default entry in the morrowind.bsa file, changing that arrow cursor into a hand.

BTW, I recommend a program called Irfanview (even though I have Photoshop) for viewing graphics. Small, fast, does wonderful contact sheets (thumbnails of pictures with the filenames) and it's free! No hidden spyware either. It works great for creating a

complete reference of all the graphics in the Textures directory.

Hex Editing .nif Files
By Sorcerer

Greetings, and welcome to my Hex editing tutorial. This will explain the workings of a hex editor, how you can use one to change the textures on your Morrowind models and how you can use a shorter or longer filename without messing up the NIF file.

Before you start messing with the models, I recommend taking a backup of them just in case.

What the hell is Hex anyway?

Most hex editors are split into two parts, a hex side and an ascii side.

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 | . . . .

I wont go very deep into the inner workings of hex, but looking at the line above, there are 16 double digits and 16 dots. Those double zeroes are the hex value of the corresponding dot behind the line. For instance, if we type a 1 to replace the third dot, the third hex value will change to the hex value of that 1. This also works in the reverse order. If you change the hex value, the appropriate character will appear on the line behind the pipe.

00 00 01 00 00 00 00 00 00 00 00 00 00 00 00 00 | . . 1 . . . .

Hex doesn't stop at 9. It goes all the way to F before adding another digit. For example:

01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 - and so on

How can we use this to our advantage? Well as you already should know, you can change the textures used in the Morrowind .nif files by hex editing the files and searching for the texture name. Most hex editors have a 'string search' button. Set this to ascii, and search for TX. The program should take you to the proper location.

NOTE: Look at the ascii values. Most of it is gibberish, but some places you can see an occasional letter, while in other places you can see entire words. The only thing we can really edit are those words.

You should see something like this:

TX_C_COMMONSHIRT_C_3C.bmp

If the filename is long, it might be spread across more than one line. Don't worry about it though. Now replace the filename with the texture file you want to change it to, but before you do so, read on...

Explaining the use of hex

The model file has a registry at the top, which explains to the program where it should look for stuff. For instance, the texture info starts at a certain string and the model info starts at another. We can't actually change these values, so be sure not to remove or add any strings yet because it will mess up your nif file. This means you need to use the EXACT number of letters in the new texture files as the old one.

C	_	C	O	M	M	O	N	S	H	I	R	T	_	C	_	3	C
C	_	C	O	M	M	O	N	S	H	I	R	T	_	C	_	5	A

There is a way to get around this.

Shorter Filenames

Have a look at what I did when I made my Spidersilk armor:

C	_	O	M	M	O	N	S	H	I	R	T	_	C	3	_	C
A	_	S	P	I	D	E	R	S	I	L	K	_	S	_	C	- -

As you can see, our new name is two characters less than the old one. If we were to just remove those and load up the model we would get an error. What we do instead is (pad the filename) with null values (by adding two null values to the end of our filename).

Look at the hex display side of your editor. If you select the space after the name you should see a [05]. That's the (end of filename indicator). If you have to edit the length of the filename, do it before this hex entry. Let's replace the "_" and "C" with null values:

 [00]

Longer Filenames

(If your filename is longer than the one supplied, say by two characters), find the [05] value after the name again and check the next two values.   If these are [00] (null values), they are safe to change. (**REPLACE** those null values with hex values (not sure on all hex editors but on mine its simply backspace)). (Make sure the new) hex values are **IN FRONT** of the [05] (this is **VERY** important).

Remember: Delete behind [05] -- Insert in front (of [05])

Using this technique, replace all the texture files in the models with your own and you should be good to go. I Hope that made sense. If you're still confused, feel free to mail me at Tordstorlien@hotmail.com.

Importing Skins into Morrowind
By Kathykitten

First off, you will need a hex editing program such as Hex Workshop, available at
http://www.bpsoft.com/

Once that is secured you will need to place the .nif file of the model you are re-skinning into the /meshes folder. It is important to note that if you are doing a body part that it is placed in a subfolder called /B!!! Armor goes in the /A folder (if in doubt, check where the .nif file you are re-skinning resides on the TES Construction Set disk) It should then be renamed to something unique. For example, if I am editing the file, B_N_nord_f_head_01.nif I might change it to B_N_kats_f_head_01.nif, or whatever suits your fancy, it just needs the B_N_ part at the beginning.

Okie, now that is clear, place the texture in the /textures folder, make sure it is in the main folder. Also it needs "tx_" in front of the filename.

Now the fun part begins. Launch your hex editor and open the .nif file you have renamed. Find the "Replace" option under "Edit". Now search the file for the .nif name: For example, we used the .nif file, B_N_nord_f_head_01.nif, so search for B_N_nord_f_head_01 It should be renamed to the new name of the .nif, in our case its B_N_kats_f_head_01. Just FYI there should be TWO of these . Now we need to tell the file what texture to use. So your search should be for something like this, tx_nord_f_head_01.BMP This should be changed to tx_kats_f_head_01.BMP Or whatever you have named it, so long as it resides in the /textures folder and has a tx_ in front of it.
There should be only one instance to change here.

But you aren't done yet! =)

Go into the TES Editor. I'm not sure if its necessary to load the main plug-in or not, but I usually do anyway. Since we are doing a body part in our example, go to the Body Part tab. Right click the menu, select the option that says New. Now type in a name for the object to be displayed in the editor window, such as kats_f_head_01 in our example. Now click the "Add Artwork" button. Select the .nif file you edited in your /meshes folder. Check all the cooresponding information as well, such as the Race, female toggle, and the body part you are working on.

Save the plug-in, run it in MW.

General Interior Cell Information

Start Interior Cells at 0, 0, 0: It's very helpful to center your interior cell around 0,0,0. That way, if you ever get frustrated trying to drag something into position, you can just type in the coordinate(s) and get it near where you want it lickety split.

Building a Room

By Dragonsong

(** note by Nethervoid – I have moved the first two sections of this tutorial, which deal with editor set-up and the like, into the general information section – You can find them by looking for "Getting Started" and "Navigating in the Render Window". – I did this for navigational reasons – Please visit Dragonsong's tuts page for the full rendition – You can find his link on the "Additional Resources" page. – He has the best Morrowind tuts I have seen thus far! You won't be dissapointed!)

By the end of the tutorial, you'll have a small home built, and we'll even go over how you can drop it into the game as a place of your own, where you can stash all of your hard-won loot and cumbersome supplies.

The tutorial is meant for the absolute beginner. If you're good at figuring things out on your own, or you've already used the Construction Set a bit, the tutorial may move a little slow for you. Advanced topics like creating your own unique items, scripting, and module cleanup are covered in later tutorials.

This tutorial is still under construction. I'm looking for feedback, errata, and suggestions on it.

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Part 2 - Adding...Stuff
Part 3 - Coming and Going
Part 4 - Let There Be Light

Part 1 – The Room

Okay, now that you've trudged through all that, you're finally ready to actually do some building, grasshopper.

You're going to want a space of your own to work in. What you need to do is create a new cell - we'll use an Interior Cell, since they're a bit easier to work with, when you're first starting. Go to the World menu up top, and select Interior Cell. Now click the New button.
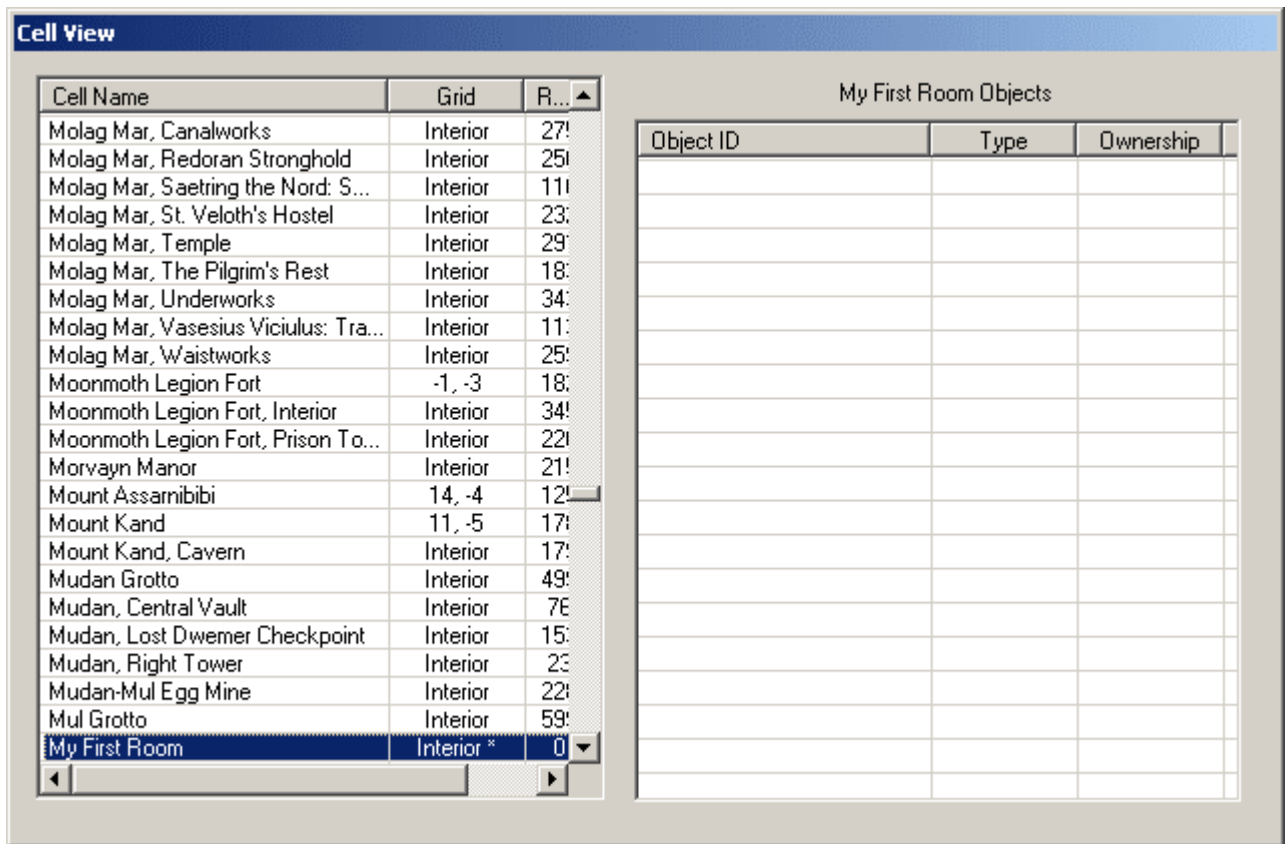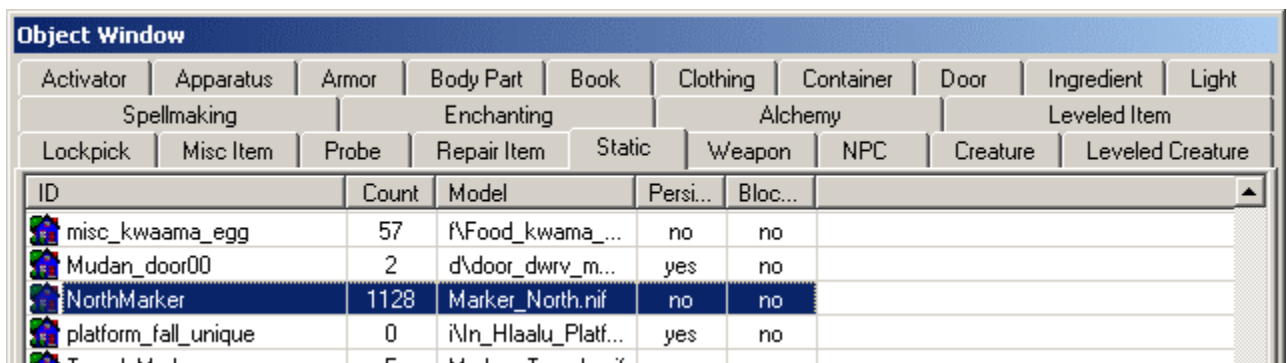
Give it a name:
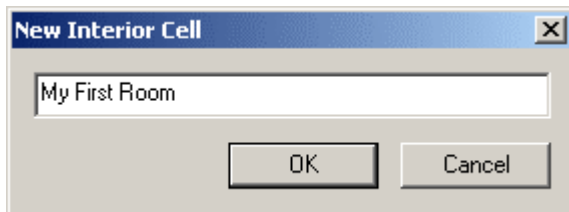
And just accept the defaults:
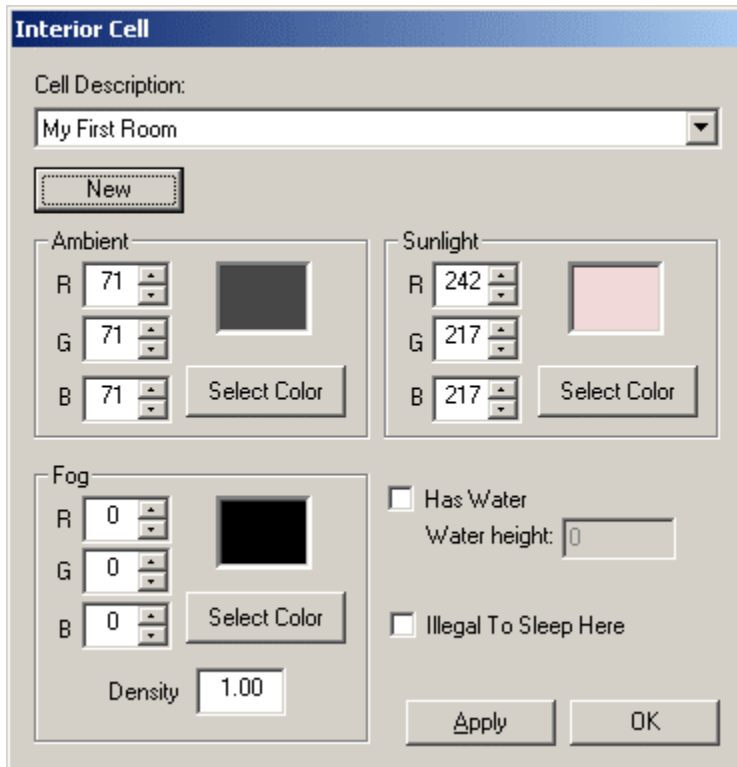
Click OK.

"Whuh? Nothing happened!" Not to fear, grasshopper. Your cell is there, you just have to open it, same as you did with Arrille's Tradehouse. Find it in the Cell View, and double-click it:

And your new room contains... *absolutely nothing!* Well, well, where to begin?
You always begin by placing a "NorthMarker". This is what helps the player maintain his mystical preternatural understanding of where north always is. A NorthMarker is a Static type of object, so in your Object Window, open the Static tab, and find NorthMarker.

The trick to adding objects to your cell is drag-and-drop, which may not be immediately intuitive, but does make mod creation pretty quick once you get the hang of it. Drag the NorthMarker anywhere into the endless grey of your Render Window.
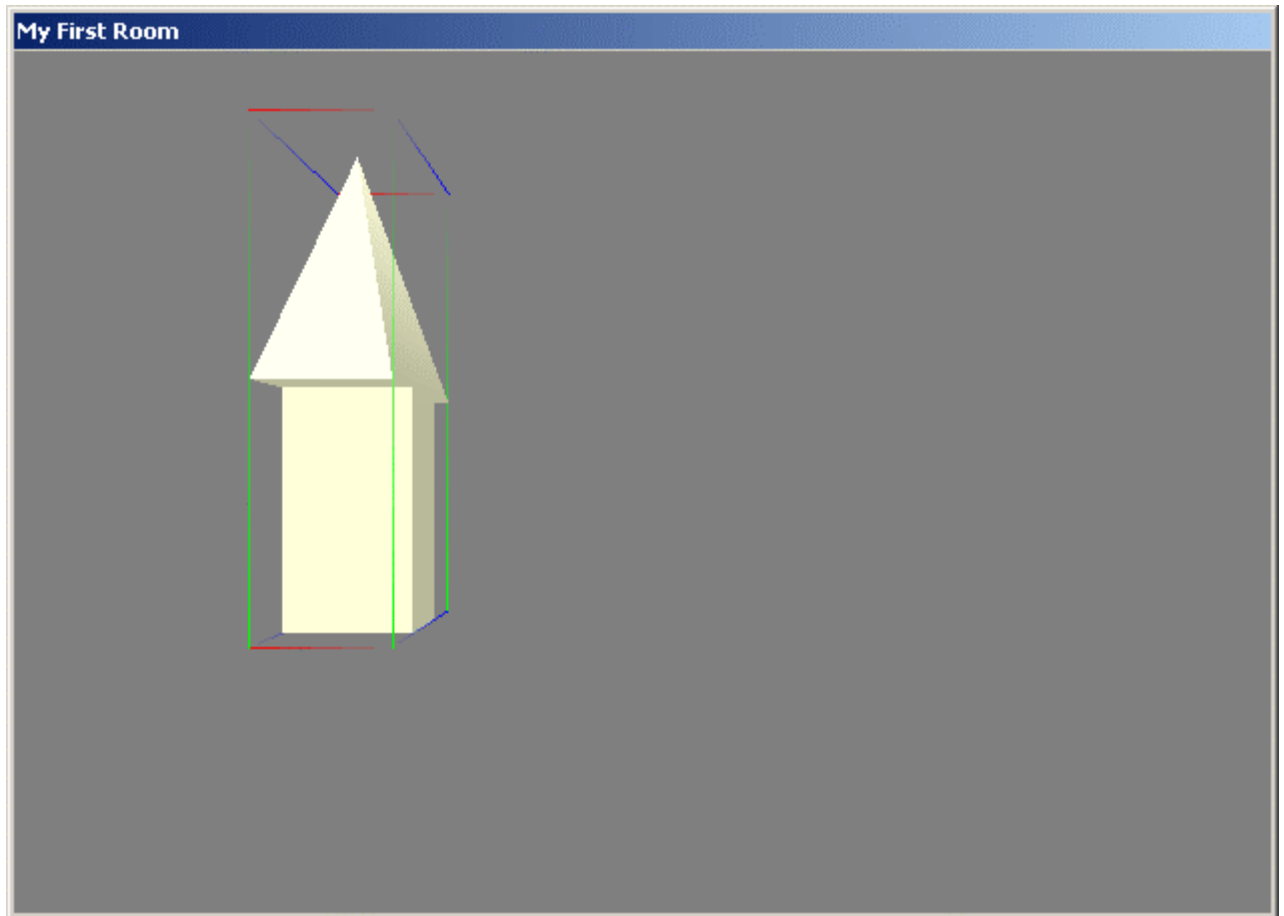
Now for a little bit of good-housekeeping advice. It's generally a Good Idea(tm) to center your cell around the coordinates of 0,0. If you've worked with 3D before, this should make sense to you. If you're just scratching your head, then please bear with me. The justifications for a lot of my "good-housekeeping" tips make much more sense later on, but it's better to get into the habit of them now.

Double-click on the NorthMarker. Double-clicking on an object is how you bring up its properties. In this case, we'll see the standard properties window for a Static type of object:

Static   [X]

ID   NorthMarker

☐ References Persist

Marker_North.nif

[Save]   Cancel

☐ Blocked

Reference Data

Position
X 3951.775 ⬍ 1.00
Y 4142.541 ⬍ 1.00
Z 15741.635 ⬍ 1.00

Rotation
X 0.0 ⬍ 1.00
Y 0.0 ⬍ 1.00
Z 0.0 ⬍ 1.00

3D Scale 1.00

☐ Extra Data
Health Left [   ]
Soul
[▼]

Assignable Data
Owner
[▼]
Global Variable/Rank
[▼]
Apply to Selection

☐ Teleport
Load Cell
Abaelun Mine - Interior ▼
Select Marker

☐ Locked
Level [   ]
Key [▼]
Trap [▼]

☐ Reference Blocked

Notice how my position coordinates are way funky. The first object you drag into a blank Render Window tends to be way out there. You can manually edit these values, so just plug in 0, 0, 0 for each of them. Then **click the X at the top-right**. Do not click Save. In general, it is a **Bad Idea(tm)** to click the Save button for any object. Unfortunately, the underlying reasons for this are far more complicated than I can get into now (though I do have another tutorial that answers this question in very thorough detail), so for the time being you'll just have to take it from me: it's another of those good-housekeeping tips. **Don't click Save!**

Hmm, now where'd that NorthMarker go? Well, your camera is still looking at the same point in space, but your NorthMarker is somewhere completely different. But you remeber how to instantly zoom onto any object in the cell, right? Sure you do: double-click it in the Cell View Window. (And notice how it's currently the only object listed for this cell.)

Now that we have a NorthMarker, the real fun can begin! Right? Well, no, not quite. There's an important step in building that, sadly, most overlook. It's called *design*, and I can already hear you groaning, but fear not, just this once I've done the work for you, so

you won't have to waste that whole extra hour drawing out your design on paper so as to save yourself five hours fiddling around and making mistakes in the editor.
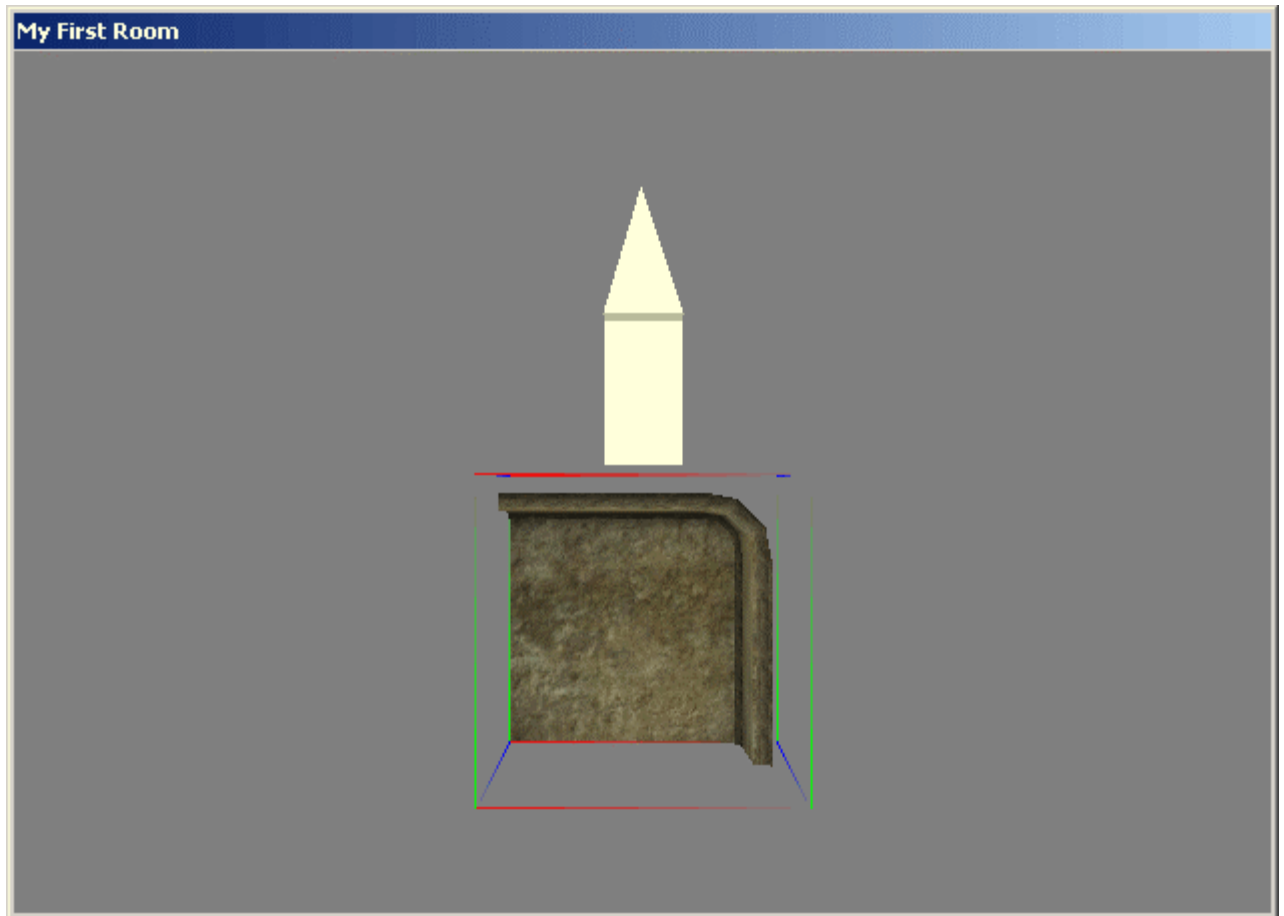Here's the basic layout your "home" is going to have, to start:
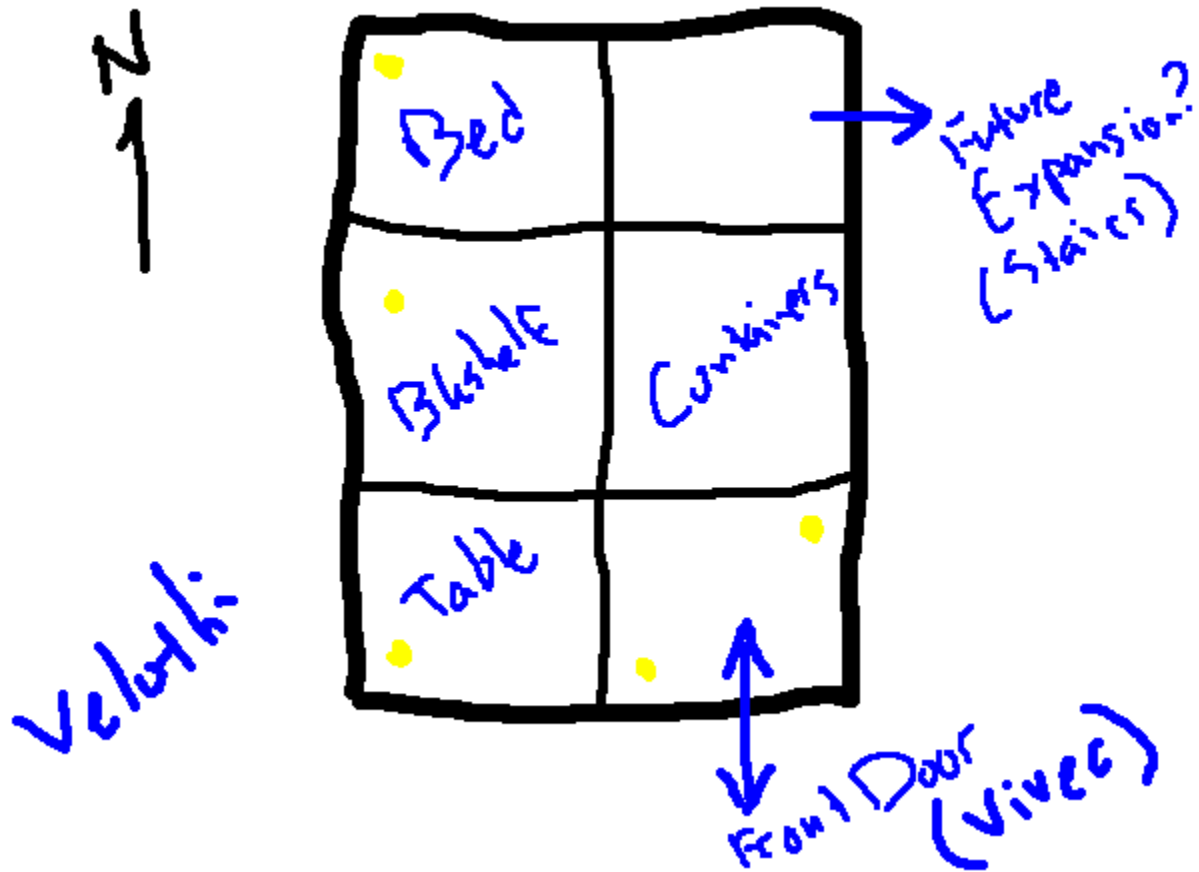
Be it ever so humble! Not a very grand design, to be sure, but we're starting small, after all. At the very end of this tutorial, we'll be setting your new "home" down in Vivec, so I've chosen the "Velothi" architectural style, which is in-line with the rest of Vivec. As you get more accustomed to all of the objects and Statics available to you, your ability to design more complex and architecturally diverse cells will grow.

Referring to our strikingly accurate blueprint, we'll see we have six "blocks" of interior space, based on a grid; four corners, and two walls. Building rooms in TESCS is based on assembling "lego blocks" of architecture, which is certainly far easier than building everything in a strictly 3D fashion, as you would do with the editors for most FPS games. In fact, all you'll need to build the design on our blueprint are two specific "lego blocks": a corner block, and a wall block.

Again, I've done the work for you ahead of time, and found the two specifics Statics you need. The first one is named in_v_s_int_corner_01 (interior - velothi - small - interior corner). Find it in the Static list, and drag it out into the Render Window.
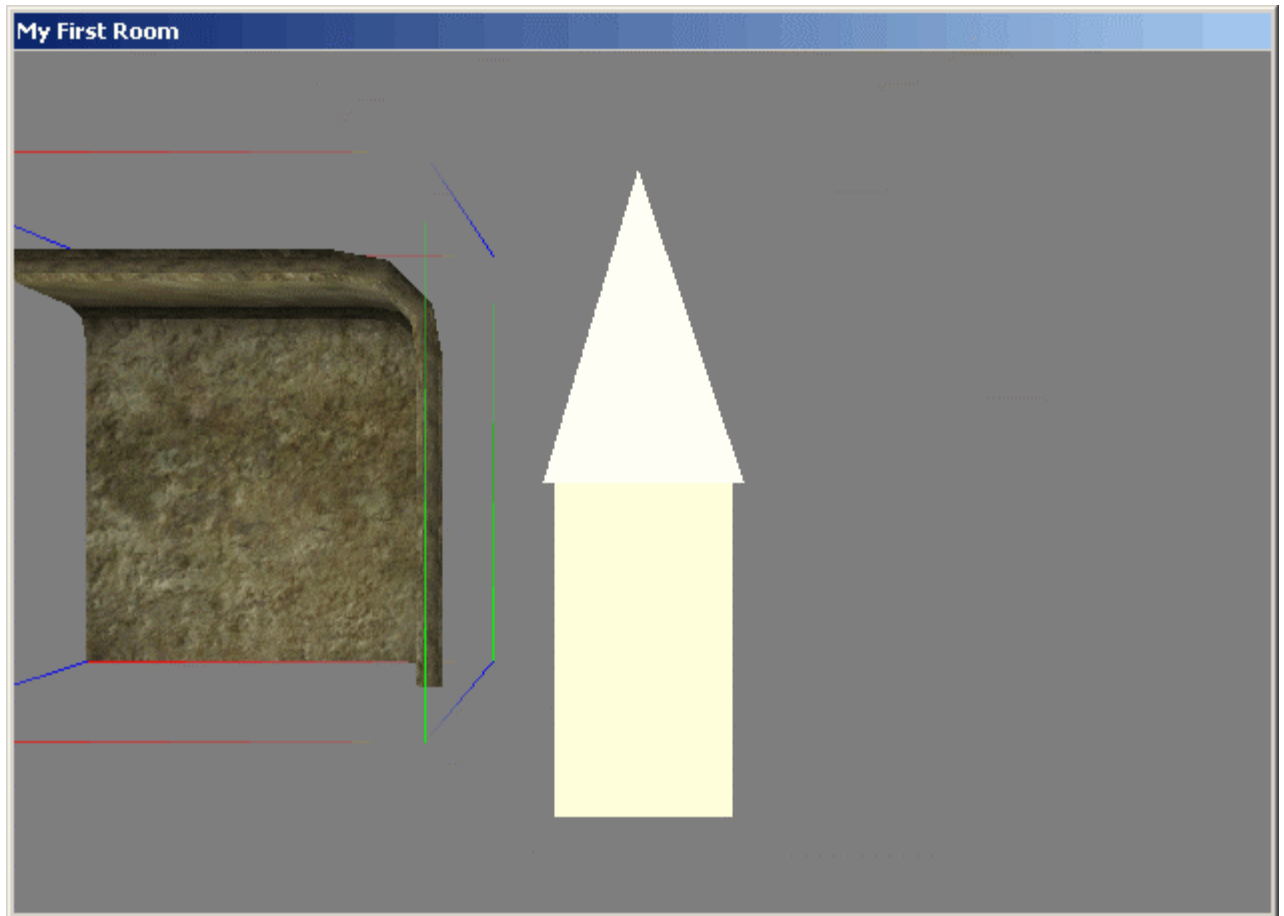
In keeping with our good-housekeeping tips, we're going to set the floor to be at Z 0. Double-click on your corner, and edit the Z position to 0. Leave the other two alone for the time being, we'll get there. Remember, click the X when you're done. Don't worry, the editor doesn't need you to click any OK button, and certainly not the Save button.
Now get yourself a top-down view of the corner with the T button, and make sure you have both grid-snapping and angle-snapping turned on (the two buttons up top, remember?). You may also want to get into your preferences, and set your grid-snapping to 64, since we're moving around fairly large objects, right now.
Got all that done? Good. Drag your corner until it's positioned like about so:

If you need to rotate it to get it into the proper facing (the corner pointing northeast), go right ahead. You use the right mouse-button to do so, but you already knew that. Also, it may "snap" down to a different Z level, and you'll have to get back into its properties to reset it to 0. (This tends to happen more often than I like in the editor, mild annoyance.) Now we need another corner, that will be just to the west of this first one. There are a few ways you could go about creating it. You could drag in another in_v_s_int_corner_01, and drag it around a while to get it to line up. You could use the Ctrl+C and Ctrl+V keys to copy the corner you have selected, and paste in a duplicate (and drag it around a little, to line it up). You could use Ctrl+C and Shift+Ctrl+V to paste a copy in-place, which makes lining up the new duplicate quite a bit easier. Or just use Ctrl+D, which is exactly the same as using Ctrl+C / Shift+Ctrl+V.
I'll go with the Ctrl+D approach:

My First Room
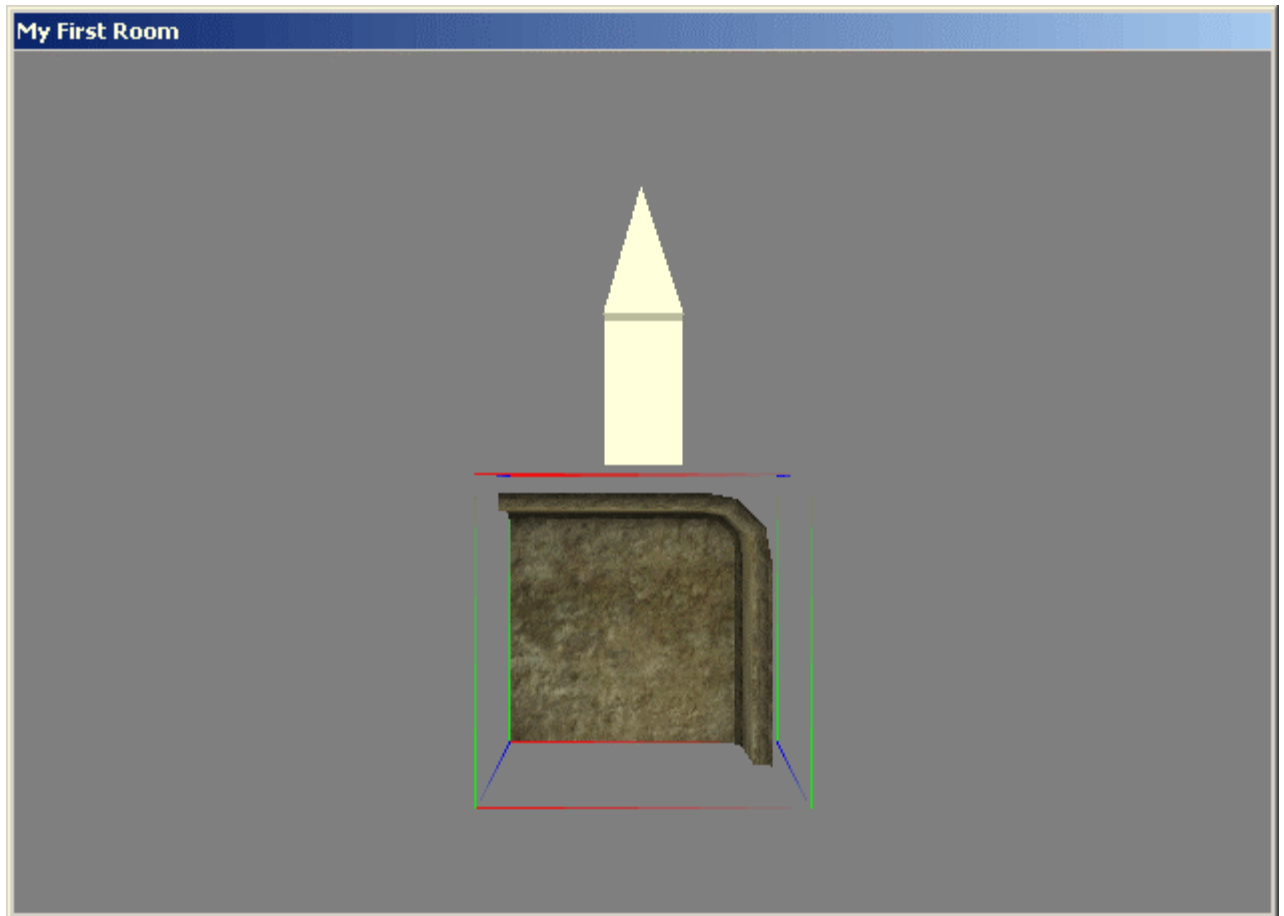
Yeah, it's there, it's just that it's *right in the same place* as your first corner, so it appears as though the two are just one. You've also kinda' lost your selection, even though the bounding box still appears (a semi-annoying glitch, I suppose), so you'll need to re-select your corner. (Just double-click either one in the Cell View objects list, below.)

Now get a top view, and rotate the corner in-place 90 degrees counter-clockwise, then drag it out to the left so that it "snaps" together with its neighbor:
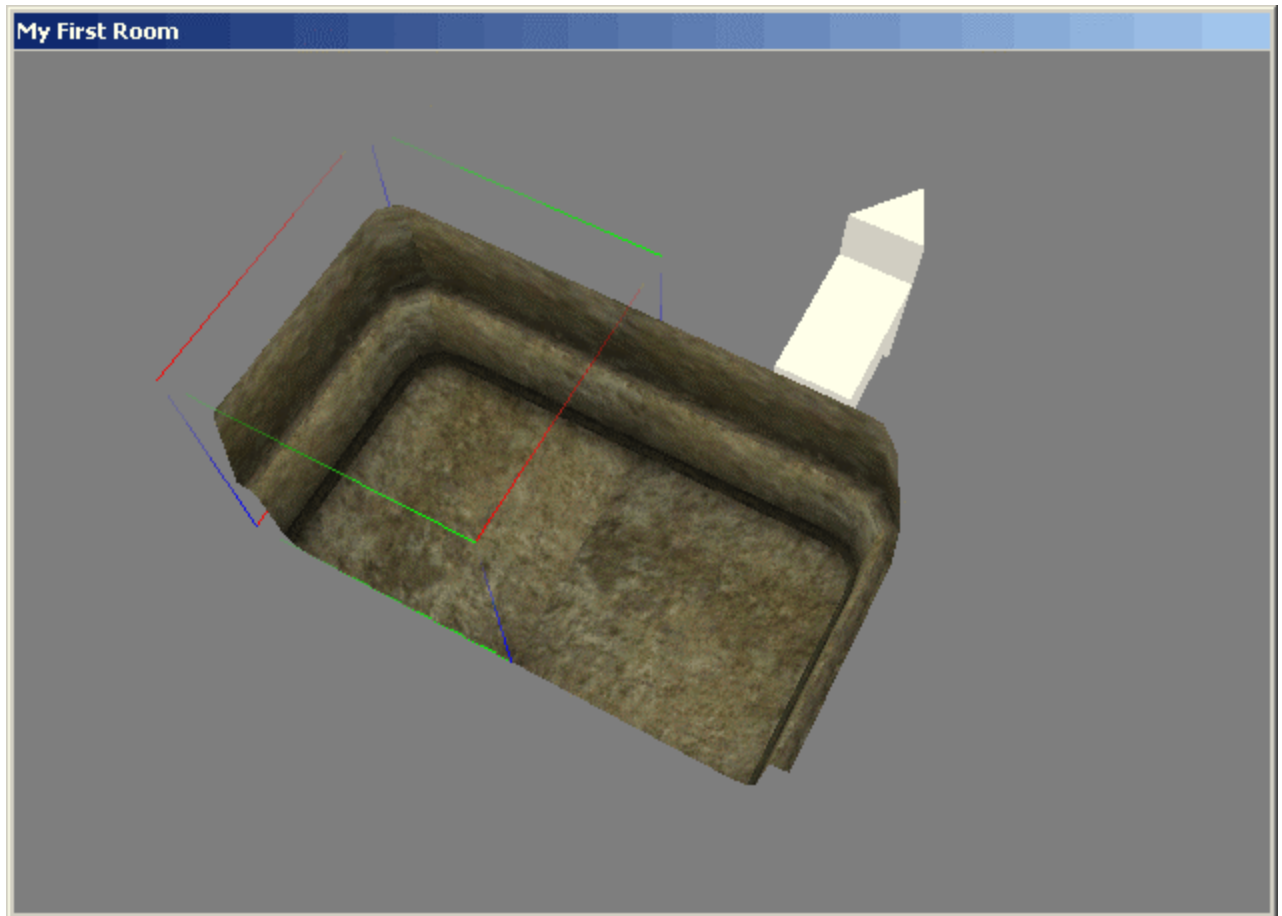
Woohoo!

RAD

In the programming world, the term "RAD" means "Rapid Application Development", and it usually means a special tool someone uses to make complete programs real fast. Well, here in TESCS, the trick to "RAD" (Rapid Architectural Development) is getting the hang of Ctrl+D, camera panning and zooming, and moving objects on just one axis with the X, Y, and Z keys.

You're going to need one more Static, the v_s_int_wall_01, in order to accomplish the completed bare-bones room shown in the original blueprint. Here's a top-down view of what it should look like when you're finished:

My First Room

But I'm not going to walk you through it, this time. Get the hang of all the different keyboard shortcuts you need to use, mess up a few of the pieces and get them back into place. Once you've got the above assembled properly, and you feel pretty comfortable with your RAD skills, we'll move on to interior decoration.

Want a handy list of shortcut keys available for when you forget what the one is for zooming in without using the middle mouse wheel? From the editor, click Help, go to Contents, open the Building and Editing topic, Main Editing Windows, and The Render Window. (There's also a link to the same item in Getting Started: What is the Construction Set?, the very first topic.)

As you're working, you may start to feel like it's about time for that first Save. You certainly don't want to wait until you've got fifteen more Statics down, even if having to start over due to a sudden lightning strike *would* mean honing your RAD skills to an even sharper edge.

Go to the File menu, and simply hit Save. Since this is the first time you've chosen to save, you'll get a dialogue box asking you for the name of your mod (your ESP), and its location. Stay with the default location, since this is where the game looks for ESPs, and name it whatever you like.

And now for a bit of a detour:

What exactly is an ESP file? What kind of information gets stored in it? These may sound like boring details to you, grasshopper, but preparing yourself now for the gritty reality of designing user-friendly, clean mods is much better than realizing halfway through your uber money-dungeon-hack mod that you've been going about it all wrong.
Let's go back to the File menu, and choose Data Files this time.
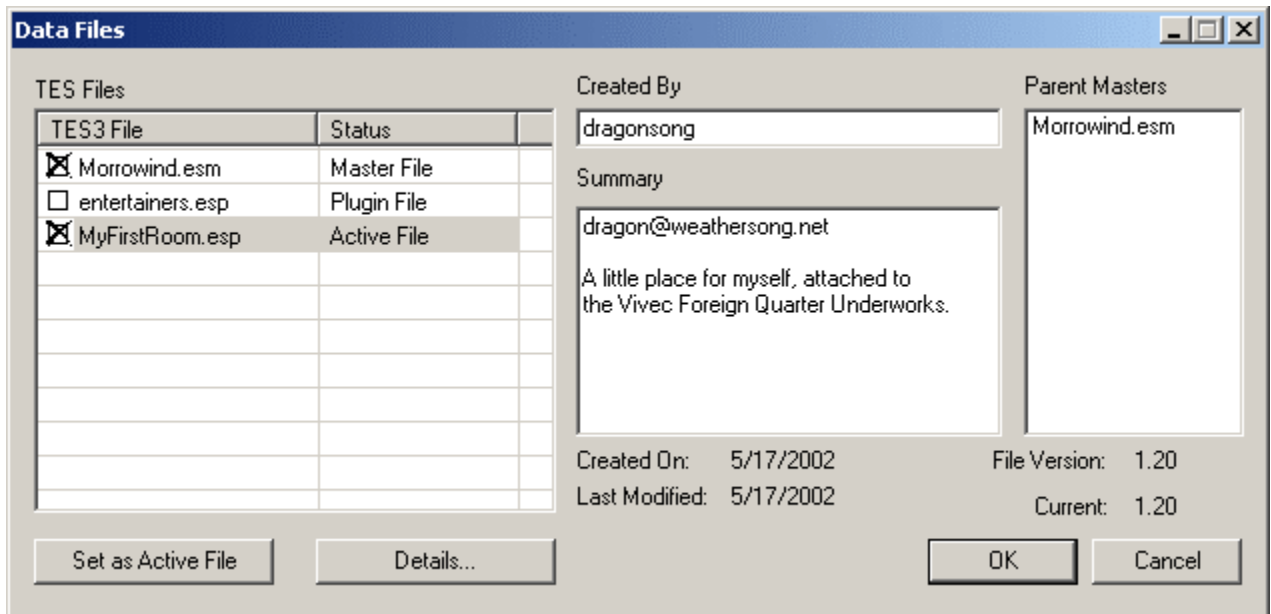
You'll see your own mod listed, marked "Active File" (since it's the one you're working on, making changes to), with Morrowind.esm checked as well (remember that this is where you get all of your objects from), and there's a space where you can add notes.
Now click the Details button:
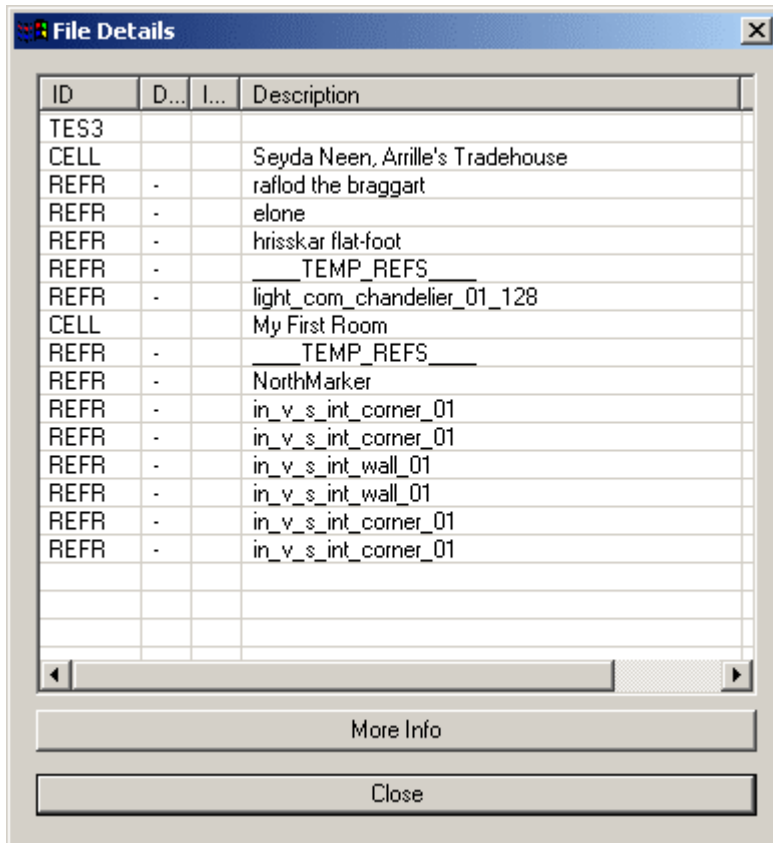
What we have here is a list of everything you've either added to or changed in the world. That is, when you play the game with this plugin activated, all of the things in this list are what get changed.

"Well, funny, why all of those extra things in Seyda Neen?" you should be wondering. (And your list may indeed appear quite different than the one pictured.) Well, those objects are marked as "different from original" because you played around with them when you were first experimenting in Seyda Neen. "But hey! I don't want my mod to change anything like that! How do I undo all of that?" you should be wondering. (You had better be wondering!) Indeed, making sure your mod is "clean" should be a priority concern of yours, especially when you're developing a mod you intend on providing to the general public!

I have a more in-depth tutorial that covers everything about designing and maintaining a clean ESP, but for now, to keep things simple, we'll just leave this list as it is. If you're really very concerned about changes you've made in Seyda Neen or elsewhere, then feel free to scrap your mod and start again from scratch: in the Data Files screen, double-click to de-select your plugin, and with just the Morrowind.esm selected, click OK. You'll re-load the master with no changes, and you can start again from "Ex Nihilo". When it comes time to save, just overwrite your old plugin with the new one. A "clean" details list on your Data File would look like so:
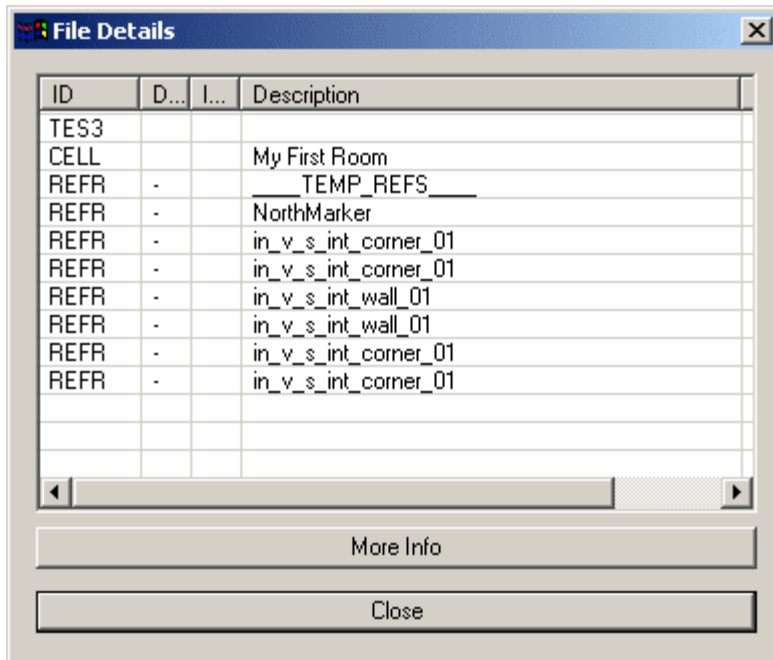
When you're done browsing in the Data Files window, hit Cancel. Clicking OK will re-load whatever you have selected, but if you were just there to look around, Cancel will return you right to where you were working.

Note that when you exit the editor and come back, you'll use the Data Files dialogue to select both Morrowind.esm and your plugin file, to resume work on it. *You'll also need to choose "Set as Active File"* on your plugin file in order to actually make new changes to it. You'll be reminded of this should you not select an Active File.

Part 2 – Adding...Stuff

Of course an empty room with no rugs or wall hangings or furniture is pretty dull, so we need to add some **stuff** to it to make it a worthy home for our intrepid hero!
Going back to our blueprint, we've decided to put a bed in the northwest corner, a bookshelf just south, a table in the southwest corner, and a few containers (to stash loot in) on the east wall. At least, to start.

You'll find most of the things you need under the Statics tab, starting with "furn_", but for the bed you're actually going to need an Activator. That's because beds allow you to interact with them: specifically, when you "use" a bed, it gives you the opportunity to rest. Hit the Activator tab, and hunt down the list of beds under active_com_bed_. You can also click on the column header "Name" to sort all of the objects in the Activator list by Name, making it easier to track down an object you already know goes by the name of "Bed":

Object Window

Spellmaking		Enchanting			Alchemy			Leveled Item	
Lockpick	Misc Item	Probe	Repair Item	Static	Weapon	NPC	Creature	Leveled Creature	
Activator	Apparatus	Armor	Body Part	Book	Clothing	Container	Door	Ingredient	Light

ID	Count	Name	Script	Model	Persi...	Bloc...
furn_bannerd_trader_V_BA	1	Balen Andrano: ...		f\Furn_bannerD...	no	no
active_sign_balmora_01	8	Balmora		f\Active_signpo...	no	no
active_sign_balmora_02	46	Balmora		f\Active_signpo...	no	no
Ex_balmora_roadmarker_01	2	Balmora		x\Ex_Gnisis_roa...	no	no
active_cauldron_balyn	1	Balyn's Cauldron	poisonfoodScript	f\Furn_Com_Ca...	yes	no
Active_Com_Bar_Door	2	Bar Door	BarDoor	f\Active_Com_B...	no	no
Active_De_Bar_Door	10	Bar Door	BarDoor	f\Active_De_Ba...	no	no
active_com_bed_01	2	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_02	14	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_03	10	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_04	22	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_05	10	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_06	6	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bed_07	3	Bed	Bed_Standard	f\Furn_Com_Be...	no	no
active_com_bunk_01	11	Bed	Bed_Standard	f\Furn_Com_Bu...	no	no
active_com_bunk_02	15	Bed	Bed_Standard	f\Furn_Com_Bu...	no	no
active_de_p_bed_03	57	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_04	56	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_05	8	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_09	45	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_10	35	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_11	18	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_12	5	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_13	27	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_14	21	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_15	9	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_p_bed_16	9	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_07	6	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_08	5	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_21	14	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_22	6	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_23	9	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_24	11	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_25	10	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_26	13	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_pr_bed_27	2	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_01	57	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_06	20	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_17	15	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_18	24	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_19	13	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_r_bed_20	27	Bed	Bed_Standard	f\Active_De_Be...	no	no
active_de_bedroll	334	Bedroll	Bed_Standard	f\Active_De_Be...	no	no
CharGen_Bed	1	Bedroll	CharGenBed	f\Active_De_Be...	no	no
active_6th_bell_01	20	Bell	Sixth_Bell_06	f\Furn_6th_Bell1...	no	no

Wow, that's a lot of beds to choose from!

Go ahead and drag a few of them into your world and check them out. If you don't like your choice, just hit the Delete key (with the bed selected) to remove it from your cell. (Note that it's still "clean" to do this.) You can use the Count as a general guide for which are most popular amongst the citizens of Morrowind: in this case it's a tie between active_de_r_bed_01 and active_de_p_bed, although technically the Bedroll beats them both, with a whopping 334 total entries!

Once you've got your bed picked out, get it located in the correct cell, using F to drop it neatly onto floor level. You may find you're ready to jump down to a smaller snap setting, like 32 or 16, or if you like, just place the bed arbitrarily without snap turned on at all. Myself, I wanted something a bit lavish for my illustrious Thief, so I put down this beauty:

Next on the blueprint is that bookshelf. This time, we're just going to use a plain old Static. Statics don't have "names" so it can be a bit trickier to hunt down the one you want, but familiarizing yourself with everything starting with furn_ will eventually be a good idea anyhow. Don't get too ambitious just yet, though. Find furn_com_r_bookshelf_01, and set it up against the wall:

By now you should be getting the hang of getting things positioned in the world, and you should be thinking to yourself, "Gee, this is actually pretty easy!" Indeed, building an entire dungeon or even a whole town should no longer appear so daunting - it's really just a matter of time and attention to detail.

But back to our humble beginnings. The table and containers are next. For the table, use furn_com_r_table_01, and for the containers (found on the Container tab, of course), try an assortment of your own choosing of barrels, crates, sacks, and chests. Make sure you check the contents of the containers you use, though: use empty containers, unless you decide you'd like to give yourself a few presents - but whatever you do, do *not* try and get ahead by adding stuff into the containers you choose. For the same reason that you shouldn't hit Save on any of your objects, do not (just yet) try adding stuff to your containers! (What will happen is you'll change the contents for that same container type *everywhere in the world*.) The next tutorial in this series should cover things such as this, as well as making your own unique items in general.

Here's what I've got, when I finished:

You may be looking around your room and thinking, "Man, this place still looks pretty... bare." Well, feel free - spruce it up. Add more *stuff.* If you feel your character can't really afford much in the way of interior decorating, then keep it simple for now. If you've justified a rather posh lifestyle (after robbing every single noble plantation along the Lake Amaya waterfront) then go nuts. Myself, I decided to just keep things simple for now, and added three rugs (furn_de_rug_big_09), some wall hangings (furn_com_tapestry_03), a chair for my table (furn_com_r_chair_01), and a stool (furn_com_pm_stool_02) next to the bed where I can keep a night-light and something to read for those restive occasions between looting quiet manors. Oh, and a pillow for the bed - misc_uni_pillow_01 (a Misc Item type object). I take one last look around the room, fix up the Z on a few things (the table and the bed), and, voila!

My First Room
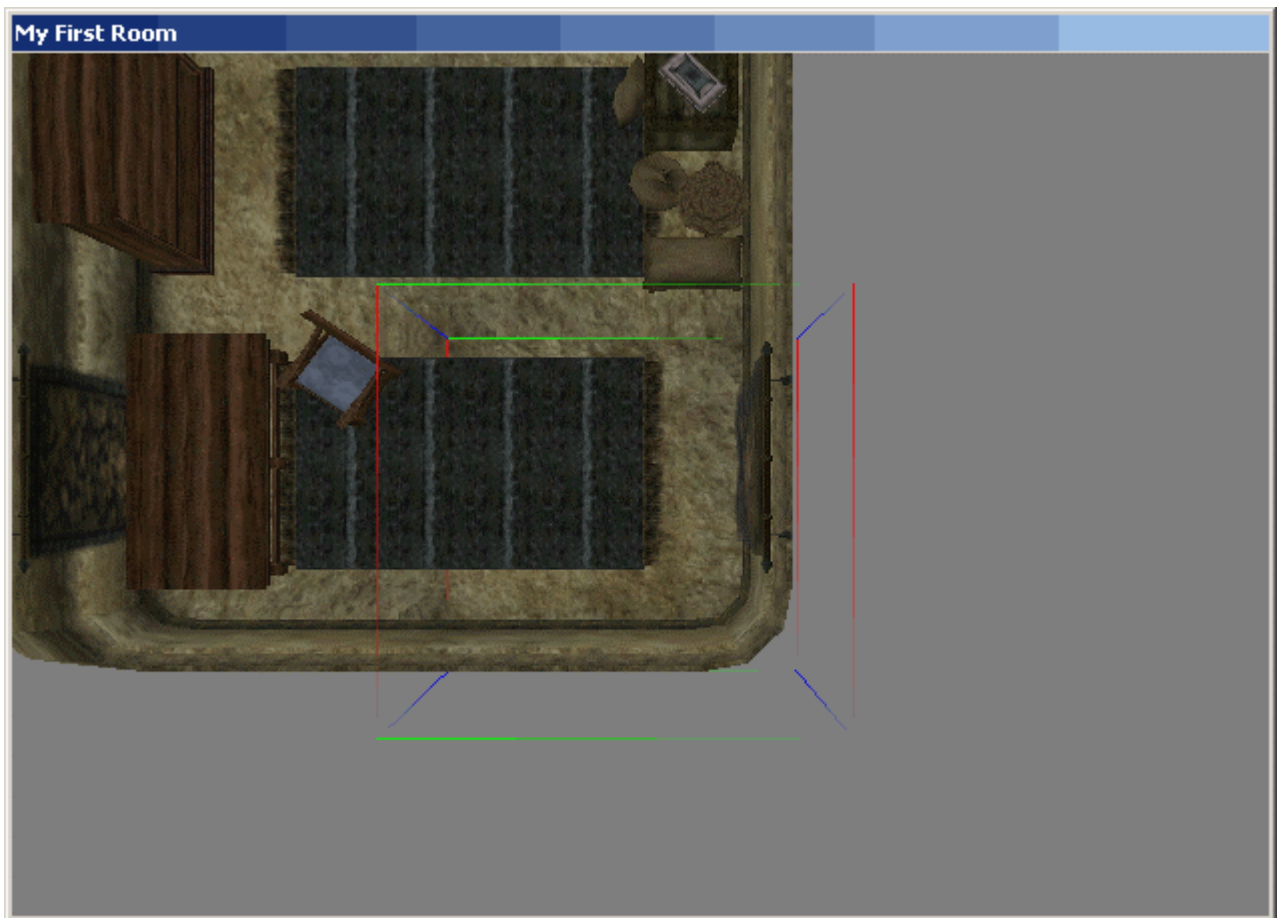
Part 3 – Coming and Going

So now you're probably just about desperate to see how your mod actually *looks*, in game, from the character's point of view.

Before you can jump in and have a gander, though, you're going to need a way for your character to actually get into the room, since currently it's not actually linked with anywhere in the outside world.

Let's start by adding a door to the room. On our blueprint, it's in the southeast corner. Right now we have one of those in_v_s_int_corner_01 lego blocks there, but we're going to need to change that, to something with an archway for a door. Here's another good-housekeeping tip for you: if you've already got architecture in place that you just need to replace, it's easiest to use Search&Replace function to put the new architecture in exactly the same spot as the old architecture.

First of all, select the southeast corner:

Now go to the Edit menu, and select Search&Replace. You pick what you want to replace (Search for) and what to replace it with (Replace with). You can replace objects

everywhere (**not** a good idea) by unchecking both boxes, or in the current cell only, or (what we want) just within the current selection (which can, remember, be more than one object). Note how you'll handily already have the corner object picked for you in Search for. Tick off Selection Only, and in Replace with, choose in_v_s_wall_column_01. Then hit OK:
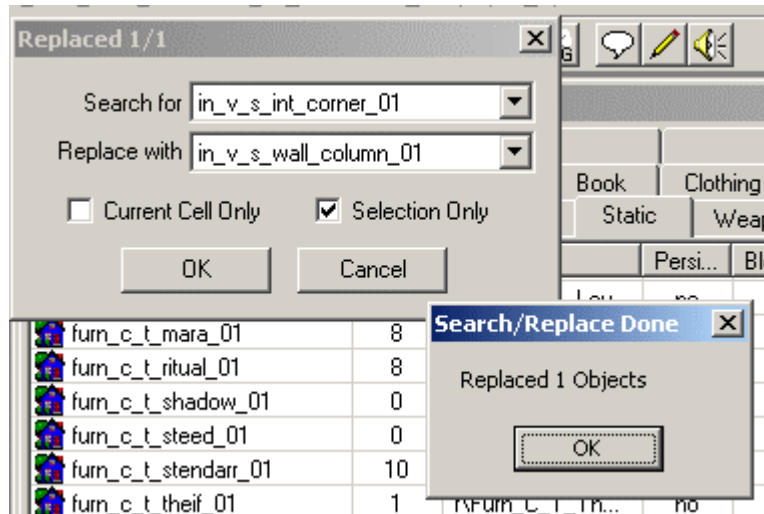
The new architecture isn't rotated quite right, though. Shift it 90 degrees clockwise. Now we need to add a "door jam" to the empty space, which will include the archway for the door. This is the Static named in_velothismall_dj_01, and you'll want it set up right on the south edge of your open corner:
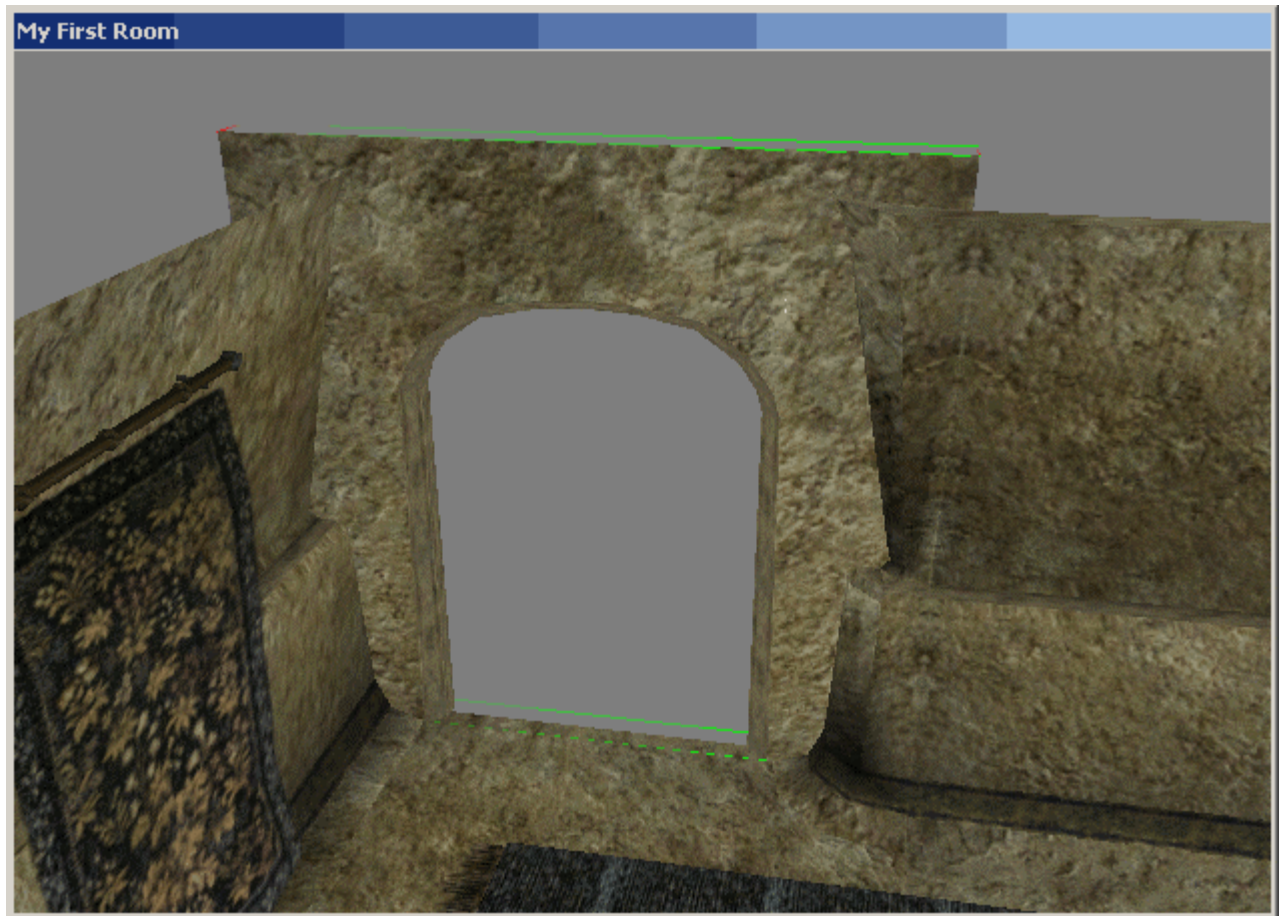
And finally the door - in_velothismall_ndoor_01:

Great, now - where does this door lead? Well, save up your ESP, and let's head outside, to the cell named "Vivec, Foreign Quarter Canalworks".

I browse around and decide on a spot for the entrance to my lair. Rather odd to have a bedroom down in the canalworks, but being the cunning Master Thief that I am, I find it rather fitting that it should be hidden away down in so innocuous and uninviting a place.
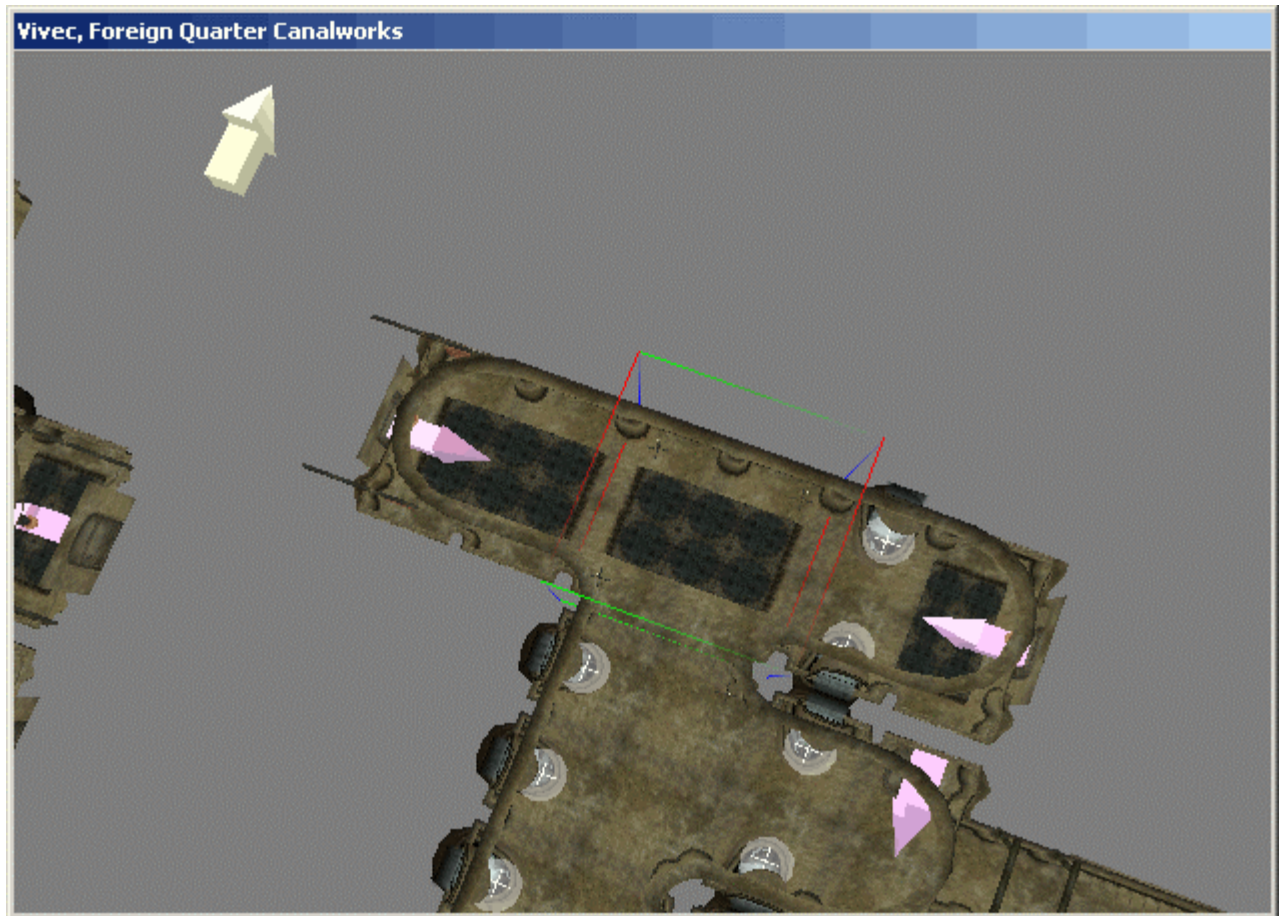
I need to do much the same thing I did in my interior cell: find a fitting replacement for the lego block I want to add my door to, perform a Search&Replace, add the door jam, and then add the door.

In this case, I decide I'm going to replace the 3way I have selected with a 4way, and add a connector to the new open node much like there already are on the west and east sides. I use a multiple selection of the connector, door jam and rug, for a Ctrl+D, that quickly lets me rotate and drag in all of the same stuff from the west hall into the new north addition. Then I drag in a new door for myself (in_velothismall_ndoor_01 again) as the final touch:
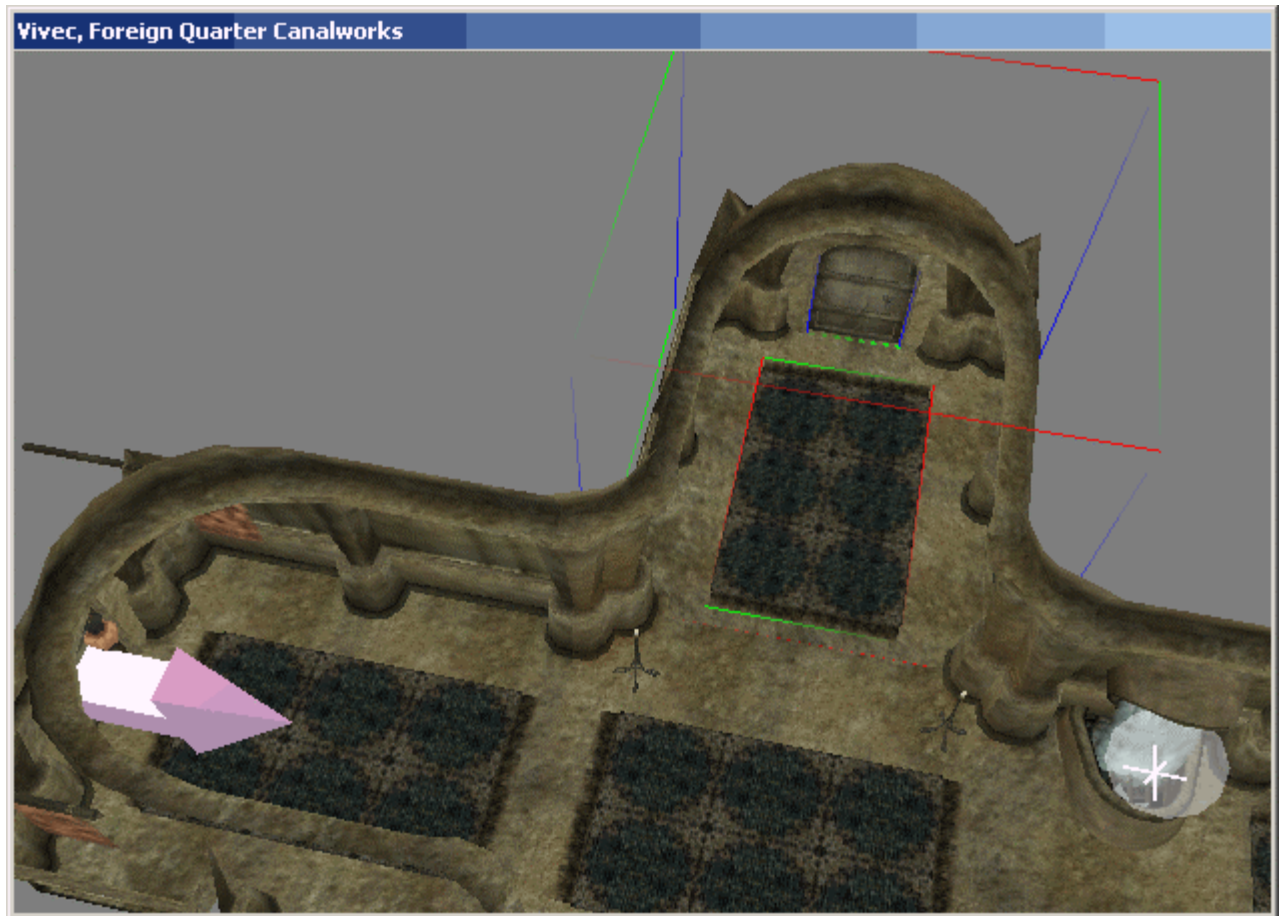
Later on, I might decide to put some personalizations outside my door, much like my neighbor down the west hall, but for now I'm just going to leave my entryway looking pretty unassuming.

The last step is to get these doors to actually teleport to one another. Starting with the door out here in the canalworks, I set my door to teleport, and set the teleport destination to My First Room,

And then click Select Marker.
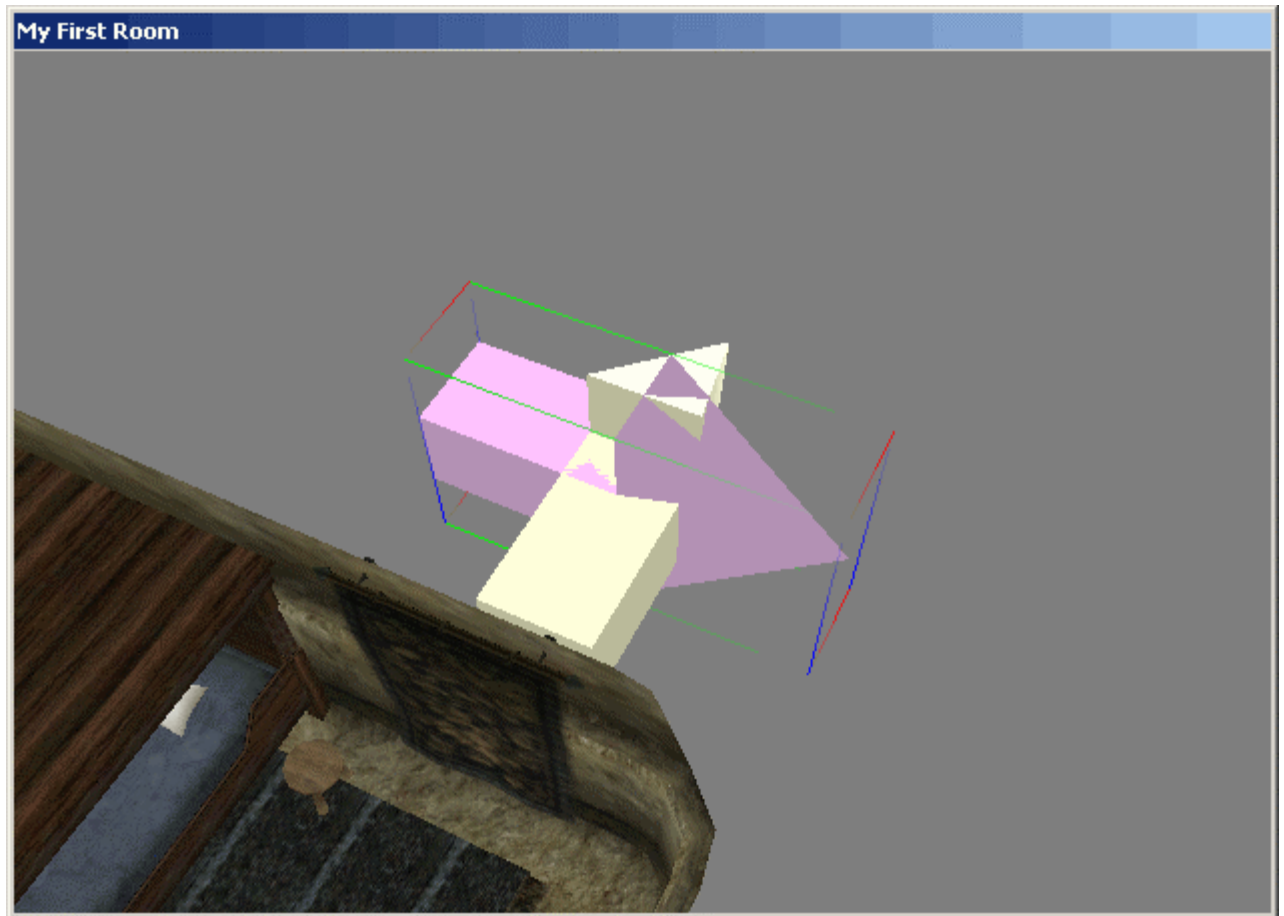
I'm immediately teleported back to the My First Room cell, my Render Window shows my new DoorMarker (I've changed the view to make it more obvious - note how it defaulted to a location of 0,0), and I still have the properties sheet up for that door out in the canalworks. Close the properties sheet, and set up your DoorMarker to sit in front of your door, pointing in the direction you'd be facing when you first arrive inside:
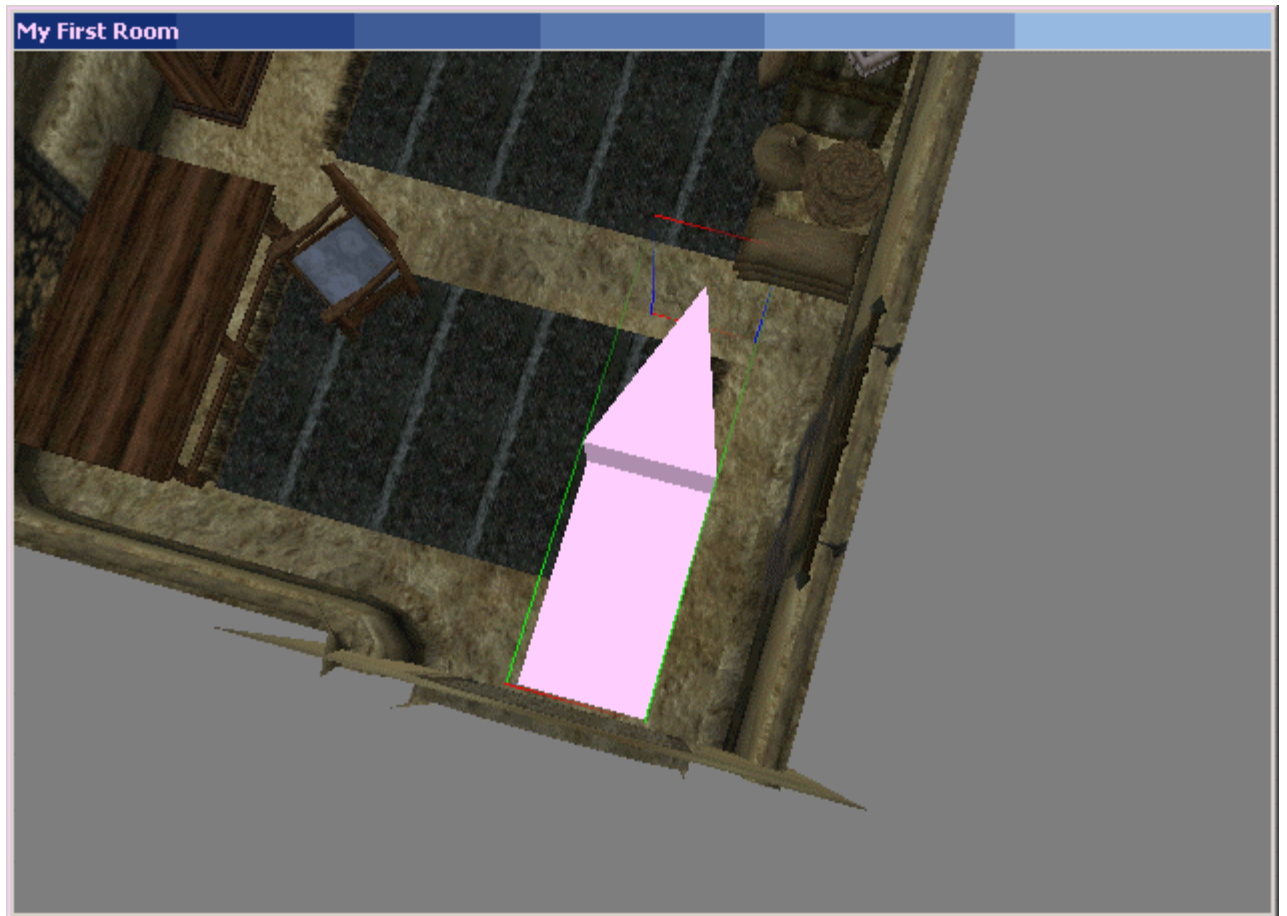
Now repeat the process for the door inside your room: choose a teleport destination (Vivec, Foreign Quarter Canalworks), hit Select Marker, and position the DoorMarker that appears to sit in front of the new door in the canalworks, pointing forward.
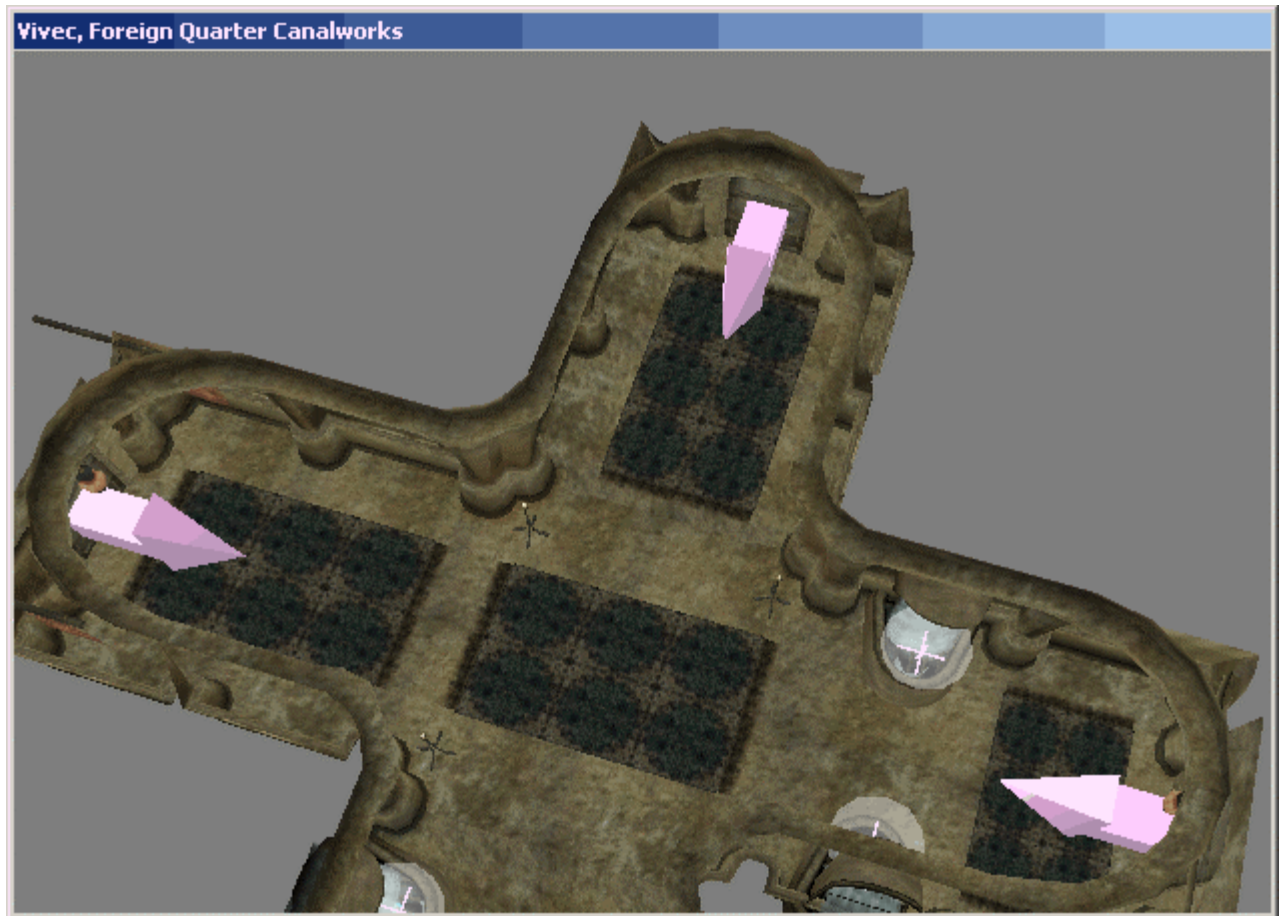
Great! Now, save up your ESP, and start Morrowind. Before you actually jump into the game, choose the Data File options, and make sure your ESP is checked. (You can have other plugins checked too, but in general, when you're debugging your mod, it's best to play with just your plugin checked, and to make any savegames in their own separate track, away from your usual savegames.)

That done, load up a previous save game (one that has you near or in Vivec, if possible), and visit your new room. Yes, grasshopper, *your* new room.

Part 4 – Let there be Light

I've saved it for last in my tutorial, but you can do lighting first or at any time during the build process, really. You may even skip lighting altogether - as you were looking around your room, you may have noticed that the lighting level was already fairly adequate, a neutral level that's not too bright, not too dim. (Remember that we used the default settings for lighting, when first creating the interior cell.)

But lighting is what really sets the mood for a place, and you don't want just another drab interior, do ya? Heck no, grasshopper, you want *ambience!*

Let's tone down the background lighting, first of all, and then drag in a few candles, again according to the blueprint (those little yellow dots).

Go to the World menu, and open Interior Cell.
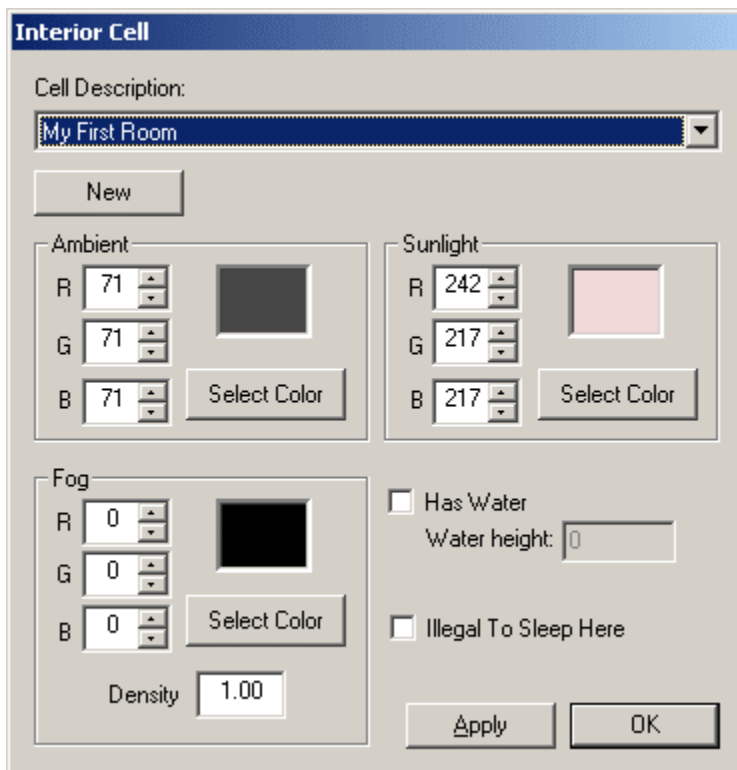
The values for each of these categories are R, G, and B. That's Red, Green, and Blue. The range for each is 0 (none) to 255 (full). So R 255, G 0, B 0 would be bright red, R 0, G 50, B 50 would be a dim cyan. Yellow is red plus green. (Just trust me on this one.) Of course, you can always just use "Select Color" if you'd prefer to hunt through a pallette, instead of fiddling with the numbers.

I decided I'd give my room just a touch of blue, to complement my existing color scheme, and I've kept things pretty dim. I leave fog alone, and I also tone down sunlight to be a flat "100 grey":
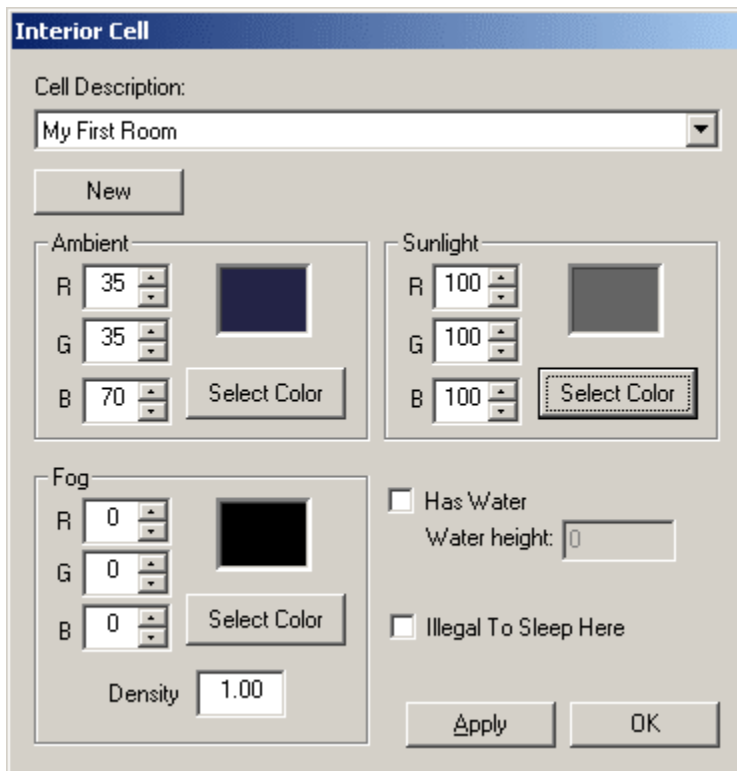
Now in the Render Window, to get an idea for how the new ambient lighting has taken effect, I hit A to turn off the floodlights:

This isn't an *exact* representation of how the lighting will look - at least, I've found that in-game, things still tend to be a little brighter. But this looks about like what I want, so I turn on the floods again (to make editing easier), and hit the Light tab.

I start with the major accents, and then add minor accents. The primary source of light, I've decided, is going to be a bright candle on a stand closeby the containers, a little off-center for the room so as to give things a more asymmetrical feel. The light I'm using is light_de_lamp_01_128.

As you move around the light, you may notice that its "effect" (the flame atop the wick) does not move with it. Don't worry, it's not a separate object that you'll have to get placed precisely. It's actually just a bit of a glich in TESCS. To get it redrawn in the right spot, hit L on your keyboard (to toggle the radii for all lights), and then if you don't like all that extra information, hit L to turn it back off again. (The radii can be useful, however, to get a basic idea for how much light coverage you have.)

Now for some candles. I'm going to have one portable candle that I can carry around the room with me, while the rest will be immobile candles. For the portable, I pick out light_de_candle_blue_01_64. It's going to be just left of the door as I walk in. Rather than just drop it on the floor, I also set up another stool for myself, the same kind as I've got next to the bed. Since I've forgotten what kind that is, of course I just click on it, and check the name as it appears at the bottom-left. (Or, even better, just use Ctrl+D on the existing one over there.)

Lights annoy me sometimes because they seem to be less responsive to F (lining up with the nearest flat surface). So sometimes I have to get them positioned just right next to the surface I want, before F seems to do anything. Sometimes toggling the radii (L) seems to help, too.

After the candlestick on the stool, I set down three light_com_candle_04, one on the table, one on the middle shelf of the bookshelf, and then one more down by the nightstand.

Things still seem a little dim - but then, that's just the mood I'm looking for. Of course, for your own room, feel free to add as many of whatever other kinds of lights as you wish. Just one word of caution: do not fiddle with the values of the lights. You may well end up unwittingly changing 500 other lights in the process.

All that's left now is playtesting. Jump into the game and take a look around. Still feel too sparse? Too dark, too bright? Thinking maybe you'd like to add that downstairs addition after all? Save a copy of the room you have now, should you want to follow along with the next tutorial in this series (which will pick up from where this one leaves off), and then build to your heart's content.

The world is yours.

Dungeon Seams and Positioning Example

Here's something everyone will have that can be easily used as a "how-to" reference. There is a dungeon in the main game called **Adanumuran** in the region of the Ascadian Isles. (Most people have probably stumbled across it when traveling from the first city to Balmora on foot...)

Load that dungeon up in the editor by selecting it from the **Cell View** window in the lower right of the editor. (Double click the name to load it into the rendering window.)

Once it has loaded up, press "A" to turn on full lights so you can see the junctions of the level. Then select an object at random and press "T" to get a quick zoom down to the level itself. Look around...pull some pieces apart and look at how they put it all together. Double click a static and see how the reference data has been altered. This alone will probably help you understand things much better.

Global Lighting in an Interior Cell
By EsnRedshirt

Q: I created a dungeon, which is supposed to be very dark. Most of the light sources have a stunted radius, and dark hues. Unfortunately, when I tested it, I found it lit up as brightly as when you have the light button pushed in the editor. (How can I make my cell darker?)

EsnRedshirt: (Edit) the cell settings and adjusting your "Sunlight" color to a much darker setting.

Interior Cell Size Limitation

By Smudge (Bethesda Employee)

(There is no set size limitation, but) when making ours, we tried to keep it in the 60000 poly range. If you are running around in yours and see no noticeable drop in frame rate, then its not too big. If it is, you can always split it into two or more cells simply by adding a load door and copy-paste the other half into a new interior cell

Water in an Interior Cell

By Saber and Anonymous

Saber - First, make sure you have water activated for your cell. (go up to the menu and click 'World', then 'Interior Cell...") Check the 'Has Water' box..

The water height is the Z coordinate of the water level. I'd guess your structure is sitting at a Z of around 15000 (select any object and check the coords in the status bar), for some reason the camera always starts at an insane height when you view a cell.

Easiest course of action (if you have already placed objects into your cell) is to lasso (all of your objects) and drag (them) down to the water level. Keep in mind the water level is global...ie, you can't create a small cube of water to put in, say, a pool (as far as I know), you simply drag it beneath the water level.

Anonymous - What I had to do was start a new cell make the water first THEN the other stuff. I don't know why but it worked that way. I was making the rooms then the water before, but for some reason that wasn't working.

General NPC Information

"Attack causes crime report" flag: For some reason when you attack a ANY npc in my dungeon before they attack you, it's counted as a crime...

What can I do about this?
I've tried bout everything I can think of.
They are not assigned to a faction or anything (sense I didn't understand it much I decided not to mess with it)

you must set disposition to zero, then under AI change alarm to zero also. that should do it

Editing previously visited NPC's: If you have visited the NPC in the game already, their inventory isn't stored in the base file anymore, it's in your save game. You can't add things to NPC inventories (shop keepers) if you've already visited them. If you need more, make a new NPC dealer and set that one up.

Creating Quest NPCs – An Example
By Rukinea

Index

Introduction: Let's start with a little explanation of exactly what we're going for in this tutorial. What we're going to try to do is create 2 NPC's and a small quest to go along with them. The first NPC is Bob the Bully, who isn't very fond of our second NPC Jim. Here's what should happen when we're done and we run the quest. The player talks to Bob who gives the player a task. The task is to take a note Bob gives you to Jim. When the player finds Jim and gives him the note, Jim decides he'd like to share a few words of his own with Bob and wants the player to take him to Bob. Once Jim sees Bob they attack one another ending with poor Bob's death. Don't worry, Bob wasn't such a great guy anyway. After Jim does Bob in the player gets a reward from Jim for leading him to Bob. I'll try to be as detailed as possible through out this tutorial. So, let's get started shall we?

Part 1 - Creating a New NPC

Load up the editor and when it's all set click on File/Data Files. Since we don't yet have a mod to work with, just double click the Morrowind.esm file and click OK. Wait until the editor is finished loading the file and then go to your Cell View window, which is on the lower right. This window has 2 selection boxes in it. We need the one on the left, which lists all the areas in the game. We'll make our mod in Seyda Neen since it's the beginning area and it'll be easy to test.

In the left hand selection box of the Cell View window, scroll down until you find the Seyda Neen listings. There's a lot listed, and you could load them up individually until you find the one you want, but we'll just use the Seyda Neen that is at Grid -2, -9. Double click that listing and wait a few moments while the editor loads the area.

Now you should have a top down view of Seyda Neen in your render window. Click the render window to make it the active window. It might be a good idea to resize it a little larger than it is now. Once it's sized to your satisfaction, click one of the buildings or NPCs near the center of town and press C.

The C key centers you on the object as you've probably noticed. And if it was a building you picked you've probably got a nice close view of a thatch roof. Since that's not very helpful, press and hold V and move your mouse down. That will zoom you out. Moving the mouse up zooms you in. Once you have a better view, click on one of the NPCs closer to the center of town. I chose Vodunius Nuccius. Once you have one selected, press C again to center on him. Zoom out again to get a better view of town. Holding down the Shift key and moving the mouse left or right spins your view. Holding the space bar and moving your mouse up or down raises and lowers your view, while moving your mouse left or right slides your view.

Once you have a nice view of the center of town, pick out a spot where you'd like to put Bob. Once you know where you want to put him, go to the Object window on the left side of your screen and click on the NPC tab. Just so we cover as much as we can, we'll create a new NPC. Right click in the Object window and select new. This brings up the NPC interface where you can change skills, inventory, AI, dialogue and just about anything else you can imagine.

Up at the top you'll see a space that says ID next to it. This is the name that the engine uses to filter dialouge options along with other uses. Name your new NPC something unique. It can be anything you want, it's not the actual name of the NPC it's just used by the engine to reference this NPC type. I named my new NPC npc_bob just in case you want to follow along exactly.

Next comes the field with Name next to it. This is the actual name you'll see in the game when you target this NPC. I named him Bob the Bully.

Next field is the script field. We'll come back to that later on. The field after that is the race field. You can choose any race you'd like. I picked Breton. The class can also be anything you'd like. I used commoner although you could use a "real" class such as mage or warrior. Faction and rank can also be set here although we have no real need for them.

Click the OK button and you'll have a new NPC all set to be put into the world.

To get him into the world though, you have to find him on the list of NPCs. Click on the list of NPCs in the Object window and type the first few letters of the name you put in the ID field. Presto! The editor goes to your new NPC, or at least close to it. So now that you've found him in the list we need to get him into the actual world. To do that, click and drag his name and move it over the render window and release.

Ok, so he doesn't look too impressive with no clothes and no hair. We'll get to that in a minute. The more pressing problem is that he may be floating in the air unless you happened to be zoomed in close to the ground when you dragged him into the render window. To fix that simply press the F key. The F key causes the selected object to fall to the top level of the object below it, in this case the ground. Once he's there you can click on him and hold the mouse button while moving your mouse to position him where you want him to be. If he's facing the wrong way, hold the right mouse button and move the mouse left or right to spin him.

Now that he's positioned let's get the poor guy some clothes. In the Object window, select the tab at the top that says Clothing. Double click on your NPC to bring up the NPC interface again. Now in order to give him any item, but in our case clothes, you find what you want in the Object window list and just drag it's name over to his inventory box. The inventory box is on the right side of the NPC interface just above the save and cancel buttons. Ok, back to the clothes. Since my Bob NPC is a commoner I scroll down to the common section of the list and find him a common belt, shirt, pants and shoes which I drag into his inventory box. You'll notice that as you add wearable items such as clothes the NPC will equip them when you press the save button. If you equip something and later decide to remove it, just select it and press the delete key. You can play dress up with your NPC until you're satisfied with his look and then we'll get on to changing his face and hair.

While you're in the NPC interface you might want to click the AI button and delete the listing in the box. This keeps the NPC in one place instead of wandering around. You can always replace it later, but for testing it's much easier if you don't have to look all over for you NPC.

To change your NPCs physical looks just take a look at the top right hand corner of the NPC interface and you'll notice 2 boxes, one on top of the other with a listing of files. At the end of each file you'll note it says head in the top box and hair in the bottom. To change your NPCs face and hair, just select any combination of the 2 and click save to see how he looks. Once you're happy with that you can go ahead and create your second

NPC you'll need for this tutorial. Remember what the second NPCs name is you use in the ID field, but don't place him in the world yet.

Part 2 – Creating Dialogue

If you don't already have the NPC interface open for your first NPC, find him and double click on him to bring it up. In the lower left corner you'll see a button with Dialogue on it. Click that and give the editor a couple seconds to load it all up.

When it loads what you'll be seeing is the games dialogue filtered for your NPC. That means that out of all the possible dialogue options in the game, your NPC can only talk about what is listed. To make our own dialogue we'll need to do a few things.

First, in the lower left corner there's a selection box labled "Filter for" that should have your NPCs ID name in it. Click that box, scroll to the top, and select the blank entry. Now what you're seeing on the left hand side is the dialogue keywords the game uses. The keywords are the blue words you see in the text when you talk to an NPC in the game. So in order for us to give Bob something to talk about that will be helpful to us we have to give him a couple keywords and a greeting.

If you already know what you want your NPC to talk about and you already know the keywords you'll be using you can create those first. But to make things easier we'll do the greeting first. At the very top left corner of the Dialogue window you'll see some tabs. Select the Greetings tab. When you select that, and if you don't have a filter selected, you should get a list with Greetings 0 - Greetings 9. We'll put our greeting dialogue in the Greetings 1 section. You can actually put it in any of them, but the developers have things neatly sorted and I see no reason to change it.

Select the Greetings 1 option and then in the Info/Response window select the top listing and right click, then select new. You can either enter your text directly on the new line, or click on the box below the Info/Response box and type your greeting in there. Here's what I wrote -

Greetings friend. Would you care to help me with a task?

Standard stuff I know, but it'll do as an example. Once you're finished writing your greeting dialogue find the field labeled ID. Click the ID selection box and type the first few letters of your NPCs ID name, or just scroll down to it. What this does is filter this greetings so that only NPCs with the ID you chose (npc_bob in my case) can give this greeting. If you were to go back to your NPC list and drag npc_bob off the list again and place him in the world with a name other than Bob the Bully, you'd have 2 NPCs with the same ID so each could use this greeting but no other NPC could because the computer only looks for the ID when filtering, not the name you gave the NPC.

That's it for setting up the greeting. There are other filters you can use but we only really need the ID field for now. We'll get to the result box at the bottom and the Function/Variable boxes later.

Now pick out a word in your greeting that you'll use as a keyword to get more information about what Bob wants. I chose the word task. Once you have a word selected, go back up to the upper left corner and click the Topic tab again. Right click anywhere on the list and type in the keyword you want to use and press enter. This part is similar to the greetings part. You now have to enter the text you want the player to see when he clicks on the keyword in your greetings dialogue. For example, my keyword was task. I right click in the topic list, enter task and then right click and select new in the Info/Response box at the top and enter -

Yes, a task. Are you up to it or not?

Again, filter this response to your NPC by selecting his ID in the ID selection box. For this part of the tutorial I ask that you make your keyword dialogue a question like mine. We're now going to see how you give the player options in the dialogues.

In the Result box you will type in the responses you want the player to have to the NPCs question. My responses are "Sure, I'm up for it." and "No way buddy.". In order to make these responses into a choice for the player you type into the result box at the bottom -

choice "Sure, I'm up for it." 1 "No way buddy." 2

Don't forget the " " or the numbers. The numbers are for the engine to know which choice was made. The numbers won't show up in the dialogue.

Before we go any further you can save your plug-in and test it out to make sure that the dialogue works properly and that your NPC is in the right spot. To save, just click the OK button on the dialogue, click the save button on the NPC interface if it's still open, and click File and Save. Name your plug-in and run Morrowind. At the Morrowind Launcher screen, select Data Files and double click on the name of your mod to enable it. Click play and test out your mod. Now, because we haven't finished the dialogue yet you wont actually be able to finish the conversation with him. In fact you'll be in a loop and won't be able to say goodbye to the NPC. This isn't exactly a bug so don't worry about it. Just hit escape and exit out of Morrowind.

Once you're sure the NPC is where you wanted him to be and the dialogue works up to the part where you get a choice to help or not, load the editor back up. This time when you select File and then Data Files you can just double click your plug-in and click the set as active file button. This loads the main Morrowind.esm and your plug-in all at once and sets your plug-in as the file to work with.

Either select your NPCs ID from the NPC tab list or select the Seyda Neen cell from the Cell View window and find your NPCs ID in the Cell View object list. Either way, double click on the NPCs ID.

Once the NPC interface opens, click on the dialogue button again. When the dialogue window opens it should be filtered to your NPC. Find your dialogue keyword in the list

on the left and select it. Now we're back to where we were before we tested our plug-in. Now we need to give the NPC some answers to use. One answer for each choice you gave him. I gave him 2 choices therefore I'll need 2 answers.

To give him the response to the "Sure, I'm up for it." choice, select the dialogue you have in the Info/Response box and right click. Select new. Give your NPC a response to the player accepting the quest. Mine goes like this -

"Good. Very good. Take this letter to Jim. He can be found by the cave behind the siltstrider platform."

That gives all the information the player needs to begin this quest, although if it were a complex and involved quest you could also have further keywords here. They would be added the same way we added the greeting keyword. We'll get to adding the letter to the players inventory in a moment.

Right now add a response also for what the NPC says if the player refuses the quest. Again right clicking in the Info/Response box and typing in a reply. Here's mine -

"Can't handle a simple task huh? I should've known."

It's important that these responses be ABOVE the reply with the choices. Because of the way the game looks for dialogue options if they're below the first response you had you'll never see them. Now that you have both responses make sure you filter them for your NPC in the ID selection box. Now, how does the game know which response to use for which selection? Well, that's where the Function/Variable box comes in.

Find your NPCs reply to the player accepting the quest and in the Function/Variable box select Function, in the second box select choice and in the third box type in 1. Do the same for the player refusing the quest, but in the third box put a 2. Now when you talk to this NPC and accept his quest he will reply with the response you set to 1 and will respond with the alternate if you refuse the quest.

Part 3 – Item Transferring between NPCs and the Player

Now that you have both the "accept" and "refuse" dialogues complete, we have to add Bobs letter to the players inventory when the player accepts the quest. Now, we could use a scroll that is already pre-made, and for the most part we will, but just to show you how to edit text on a scroll we'll make one that Bob can give the player.

In the Object window, click on the Books tab and scroll down the list until you get to the sc_ items. We could use just about any item in the game for this, but I figured a scroll would be good so you'll get to see how to edit the text on it. Double click on any of the sc_ items, it doesn't really matter which one.

Now lets change the scroll properties. First thing we need to do is give it a new name. I'll call mine "Bob's Note to Jim". Change the ID field to something similar to what you named your NPC. My scroll ID is sc_npcbob. Down at the bottom where it says Enchanting, click on the box and scroll to the top and select the blank entry. You could have this note magical and it would be treated like a spell scroll, but that's not needed for our quest. The weight and value can be left as they are. Now, to change the text on the scroll, just edit it the Book Text window to suit your needs. One thing to notice though, if you picked a spell scroll, is that inside the <> style brackets is the font color, font size and font face that will be on the scroll if you read it in the game. The face on most, if not all spell scrolls is Daedric. I myself don't read Daedric so to change that to a nicer looking font and one that's readable you can change Daedric to Magic Cards.
After you get your scroll text edited click the save button. The editor will ask you if you want to create a new item. Click yes.

Now that our custom scroll is made we need to find a way to give it to the player when they accept the quest. This is easily done. Go back to the dialogue window either through the NPC interface as before, or by clicking the word balloon icon at the top of the editor. Make sure the dialogue window is filtered for your NPCs ID and click on your keyword. Once you're back at your keyword find the reply that you used when the player takes the quest. At the very bottom of your reply there's a box labeled Result. This is a handy little box that allows you to do a number of things. One of them is using script. As long as the script is no longer than 1 line long, in other words no "if" statements, you can put it here. In order to give the player the scroll you just made, enter this in the result box -

Player->AddItem, "sc_npcbob" 1

Make sure you get the capitol letters correct and the " " and the comma. What this little bit of script does is:

Player-> - Tells the computer who gets what's coming.

AddItem - Just what it says, adds an item.

"sc_npcbob" - This is the item that the previous command is to create. Your scroll may be named something else, if so use that.

1 - The number of items to create with the AddItem command.

Now, when you save your plug-in and run it if you talk to your NPC you'll get the 2 options you entered in your keyword dialogue. Accept, or refuse. If you refuse the quest he'll reply with his dialogue for that choice, but if you accept you'll be notified that a scroll has been added to your inventory.

At some point in your quest you may want an NPC to remove some item from your player's inventory. To do this you would use the following lines in the script area associated with a certain response:

Player->RemoveItem, "sc_npcbob" 1

And if this completes the quest you may also want to add a line such as:

Player->AddItem, "Gold_001" 50

Part 4 – Creating Journal Entries

At this point we should also make accepting the quest give you a journal entry. Having a journal entry isn't required, but I'm trying to cover as much as I can.

To make a journal entry, go to the dialogue window and click the right arrow up by the Topics tab until you come to the journal tab. Once you get to it, right click on the list that's on the left hand side and select new. I named my entry Tutorial_001, but again name it what you wish. Enter some text describing the quest. Who gave it, and what you're supposed to do is always a good idea, but put what you want. If you look where the filter boxes are you'll notice a box called Index. Put any number you want in there, we'll need it later so remember it.

Part 5 – Creating a Second NPC and His/Her Dialog

For the most part this is the same as creating the first NPC. Create one, place him outside of town and get him clothed.

Once he's in place, open up the dialogue window and create a new greeting. This greeting is a standard one he'll give you if you haven't started the quest yet. I used a standard "Hello. How may I help you?" greeting for this one. When you're done entering your standard greeting set the filter to him.

Now we'll create the greeting he'll use if you have the letter. For this one I have the NPC say "Hello %PCName, I see you have something for me.". If you're curious the %PCName is used to put the players name into the dialogue. There's a list of % defines in the help files if you want more. Anyway, after you have the greeting that you'll use after the player has the quest you'll want to give the player a choice to either give him the letter, or not give him the letter. This isn't totally needed, you could just force the player to give him the letter when they talk to the NPC but I like to give the player options. In the result box I typed -

choice "Give him the letter." 1 "Hide the letter." 2

You'll need to make a few more dialogues if you use this, but I think it's better to give the player a choice in how they want to continue.

Before we get to making those other dialogues for the choices, head up to the Function/Variables box again. This time set the first box to Function, the box to it's right to state and the last box enter a number. Any number will do, but it should be a unique one. I used 850. This is another sort of filter option. The player will only see this greeting if the NPC is in "state" 850. I'll show you how we put the NPC in that state in a minute. First let's finish up the dialogue options we just created.

Click to the Topics tab and make sure the Filter for box in the lower left is empty.

Now, create a new keyword. Make sure the keyword is in the greeting you just created, the one you changed the Function/Variable on. My greeting was "Hello %PCName, I see you have something for me.", so I used the word "something" for my keyword. Once you have your new keyword made, you'll want to make a response for the keyword.

All together you'll need 3 new responses, the keyword response, the one where you give the player the choice to give the letter up or not, a "Yes" response and a "No" response.

Be sure to set both responses Function/Variable boxes to the same number as your greeting otherwise they wont be seen. You'll also have to set one of the Function/Variable boxes to Function and the box next to it to Choice. The last box should be set to 1 for one reply and 2 for the other, just like before.

Hope that wasn't too confusing. On with the tutorial...

Now that you have all 3 responses, find the response you'll use when the player gives you the letter. Select that response and at the bottom in the Result box enter this -

Player->RemoveItem, "sc_npcbob" 1
Player->AddItem, "Gold_001" 50

The first line is the exact opposite of the "AddItem" command. "RemoveItem" will remove an item. Simple enough. If you named your scroll something other than sc_npcbob use that instead, but keep the quotes there.

The second part gives the player 50 gold for his troubles. Doesn't help our mod any, but I thought I'd add it anyway.

If everything went well, and my tutorial wasn't too confusing you should have your dialogue all set up for the quest up to the point where you give the scroll to the second NPC. To actually get him to take it you'll need some scripting which is where we'll go next.

Part 6 – Scripting Multiple Outcome Events

Now we actually get to change the way the game behaves. The first script we'll be doing
will be for the second NPC, which will allow him to take the scroll from the player.

Click on the pencil icon at the top of the editor, this will open the script editor. Once
you're in the editor, select Script then new. You'll now be looking at a blank script. I'll
give you the script here first and then explain what it does.

Begin jimScript

short state

if (MenuMode == 1)
        return
endif

if (GetJournalIndex Tutorial_001 >= 10)
        return
endif

if (Player->GetItemCount, "sc_npcbob" == 1)
        set state to 850
        Player->RemoveItem, "sc_npcbob" 1
        return
endif

End

Ok, first line -
Begin - Starts the script
jimScript - The name of the script. Can be anything you want.

Second line -
short state - Keeps track of the local state variable.

Third line -
if (MenuMode == 1)   -   Best to put that in every script. If the menus are up, do
return   nothing.
endif   -   Ends the statement.

Fourth line -
if (GetJournalIndex Tutorial_001 >= 10)   - Checks to see if the player has this entry in
endif   their journal. Does nothing really in this
                                        script but it can be used to activate a
                        quest NPC.

Fifth line -

if (Player->GetItemCount, "sc_npcbob == 1) - Checks to make sure the player has the
note.
   set state to 850   If yes, then it puts Jim NPC at state 850 so
                                     you can get to the dialogue about the letter.
Player->RemoveItem, "sc_npcbob" 1

   return   Player->RemoveItem removes the letter when
endif   the NPC is talked to.

Sixth line -
End   -   Ends the script.

Now that you've got the script written, save it and find your newest NPC you created and
open up his NPC interface. Up at the top on the left you'll see a field called Script. Pull
down the menu and find the script you just wrote. Click the save button and go try out
your plug-in to make sure everything works right. If all goes well this is what you should
get so far...

If you talk to the second NPC first you should get some sort of standard greeting.
If you talk to the first NPC first you should get the option to deliver a note for him. If
you click no, that's the end of the topic. If you click yes you should get the letter and a
journal update if you added that part.

Once you have the note and you talk to the second NPC you should get a new greeting
with a keyword in it. If you click the keyword you should get the option to give him the
note, or keep it yourself. If you give him the note it should be removed from your
inventory and you should be compensated 50 gold by the NPC.

In order to get the second NPC (Jim) to follow you to the first NPC (Bob) we'll have to
do a bit more dialogue editing and some more scripting. We'll do the dialogue editing
first since it's the most involved.

Open the dialogue editor and filter it for your second NPC, Jim in my case. Find your
keyword that brings up the option to give him the letter. Select your dialogue that you
use to give the letter to him. Now, if you don't already have it, put the name Bob (or
whatever you named your first NPC) somewhere in that dialogue text. Now, unfilter
your Topics list so you can make a new keyword. Make the new keyword Bob, or again
whatever you named your first NPC.

Select the keyword and type something to the effect of "Bob!? That no good lousy
trouble maker? Where is he? Will you take me to him?". Now in the result box at the
bottom we're going to add 2 choices again. One we lead him to poor Bob, and the other
we leave him standing where he is. Type in the result box -

choice "Lead Jim to Bob." 1 "Don't lead Jim to Bob." 2

Or something similar.

Now, just like before, make 2 more dialogues in the Bob keyword. 1 for each choice.
Say whatever you like in them, but when you're done set your Functions/Variables box in
your dialogues to Local, next one over to state and the last to 850. This is so we'll be able
to see them as dialogues when the NPC is switched over to state 850 when the quest is
activated.

In your "Lead Jim to Bob" dialogue, set the Functions/Variable boxes to Function, then
choice and finally 1, this is in addition to having one of the other Function/Variable sets
read Local, state, 850. At the bottom in the Result box add -

StartScript jimfollowScript

We don't have that script yet, but we'll create it as soon as we're finished with the other

Do the same for the "Don't Lead Jim to Bob." dialogue, except that instead of 1 in the last
box you'll use 2 and don't add the StartScript in the Result box.

Now onto the follow script. We need this so that when you tell Jim you'll take him to
Bob he'll follow you over there. Here's the script -

StartScript jimfollowScript

short followNow

if (GetCurrentAIPackage != 3)
   set followNow to 1
   AiFollow Player 0 0 0 0 0
endif

if (GetDistance npc_bob <= 200)
   set followNow to 0
   StartCombat, npc_bob
endif

if (GetTarget npc_bob == 1)
      if (GetHealth <= 0)
         set followNow to 0
         StopCombat
         AiWander 280 6 0 40 30 20 0 0 0
      endif
endif

End

The first if statement just says that if the NPC is using any AI type other than follow, to put him in follow mode and track the player. The second if statement is pretty obvious. If npc_bob gets within 200 units of Jim, Jim stops following me and attacks Bob. The last statement just says that if Jims target is Bob, he should check Bobs health. If Bobs health drops to 0 or below then Jim should stop following me, stop combat and start his wander AI.

Now, since I want Jim to win I'll edit Bobs health and give Jim a weapon. Just open the NPC interface for Bob and adjust his stats. Just uncheck the auto-calc skill stats box and they're all editable. As for Jims weapon, just find one in the editor and drag it into his inventory box, just like you did with clothing.

Now, to give ourselves a reward for killing poor Bob, we'll make a script to give us a ring when Bob dies. You could either have it just pop into your inventory or you can have it on Bobs body when he dies. The script for the instant ring in your inventory when Bob dies is -

Begin deadbobScript

```
if ( OnDeath == 1 )
    Player->AddItem, "ring_keley" 1
    PlaySound, "mysticism cast"
    MessageBox, "You've recieved a magic ring!
    return
endif
```

End

To have the ring spawn on Bobs corpse just remove the Player-> part of the script along with the messagebox text.. Open Bobs NPC interface and attach the script to him in the script box and you'll get a ring one of two ways when you get Jim to kill Bob.

By going back and adding more dialogue to Jim you could also have him thank the player for their help and give them the reward.

That's about it for this tutorial. There's still a few tweaks/fixes you could apply to it if you're ambitious, but this should get your started.

Good luck all!

-   Rukinea*

* I decided to leave Rukinea's name in this part of the bible because of the awesome explanation she has done!

Journal Entries

Character -> Dialogue...
Then scroll on the top of window :
topic - voice - greeting - persuasion – **journal**

Open the "Journal" tab in the Dialog window of the NPC stat sheet. Add a new Journal entry, give it a unique ID. I used my initials + the quest name just so I could keep the Journal IDs grouped on the list:

CF_quest1

Then, under the ID CF_Quest1, you can create any number of entries, in the dialog/response window, each with their own index. In my quest, I add journal entries at each stage:

Index 101 "I was offered the quest"
Index 109 "I refused the quest"
Index 111 "I accepted the quest"
Index 121 "I completed the quest"

Index numbers are totally arbitrary, but using my number system I can put logic into my NPC dialog .

In the NPC dialog window, after you create a response tree to NPC questions, you can assign each of the player's responses a journal entry in the "Results" box at the bottom:

Journal CF_quest1 112

Then in scripting you can retrieve the current journal id -- (Be SURE to look up the actual syntax for getting a journal index ID, I'm going from my rusty memory here as I'm at work):

If (GetJournalIndex(CF_Quest1) < 111)
** NPC knows you don't have the quest and will re-offer it
elseif (GetJournalIndex(CF_Quest) > 111)
** NPC knows you took the quest, and will not offer it a second time
else
** You've completed the quest, no more interaction on that matter
endif

That's the rough idea, anyway. The journal indexes give our MODs a nice persistent way to keep track of quest progress in game.

NPC "Train" Service

By Scarabus

Q: How do you tell who is a trainer in the constructor? (nethervoid – or how would you add "train" to the NPC)

A: Double click in the NPC. Click the "AI" button. Click the "Services" tab.

NPC "Travel" Service

Open up the properties for your NPC and go to AI. There is an option there for his behavior (I can't remember the exact tab name). Select that tab. On the lower-right hand side there is a list of travel locations. Select the location you want him to travel to. You can select the marker and go to that spot also.

Do the same the other way with one little thing. After you add the location to the other NPC (the one in ebonheart, for instance), click on the location marker. You should be taken back to your island and have a travel marker selected. Move the travel marker to the correct spot (where the PC should arrive at, like near a ship) and point it the right direction.

Setting (or Editing) the Amount of Gold a Vendor Carries
By Chris Woods

?? Open up the NPC for editing.

?? Click on the "AI" Button near the bottom of the new window, and change the tab to "Services"

?? Edit the number in the Money field. (May be called "Gold", can't remember the name.)

?? Set this number to be negative if you want the merchant's gold to regenerate, positive if you want the merchant to only have so much gold to spend throughout the entire game.

(* note from Nethervoid – Remember that if you change an NPC and load the new plug-in into one of your savegames in which you've already had any dealings with that specific NPC, there will be no changes to the NPC since the attributes of that NPC are saved in your savegame file.)

Setting Item Respawn on NPC Vendors
By Traven

(If you want your NPC to respawn items they have for sale,) simply give the item a negative quantity instead of a positive one. This tells the game to regenerate the item on a daily basis.

Changing the PC Starting Location
By SecretChimp and Nethervoid

SecretChimp - You can set the starting cell in the Morrowind.ini file. Unfortunately this won't help for a plug-in, since plug-ins don't alter .ini files (I don't think, anyway). So you need to do it with a script. Edit the CharGen script so that it puts the player in a different start location. Specifically, you'll want to change the line

Player->PositionCell 61,-135,24,340, "Imperial Prison Ship"

As for changing the character generation method, I know it's possible, but I haven't researched it in depth. My suggestion is to take a look at the other CharGen scripts and see where that leads you.

Nethervoid - You need to watch out though. If you alter the starting sequence of events you will lose some of the game functionality. For example: I'm creating a mod located on a new island. In order to test it, I placed a teleportation ring in the starting building. After I chose my class and such I went to the table where the dagger is stuck through that note. My ring is placed there. Well I used the ring before going outside where you get your map and later the ability to save. I got to my new island but couldn't save the game. I think changing the starting position would also require you to move the npc's responsible for all of the starting dialogue as well. That way a character can still receive all of it's functionality like inventory and such.

SecretChimp - Good point, although you don't have to move or use the chargen NPC's. You just have to make sure you start all the same services and set the same variables via scripting that the NPC's scripts do right now.

Adding New "Skins" to a New Race

Once the plug-in has loaded into the construction editor Look up at the tabs and find body parts. Now right click down in the text part of the body parts file and then just press NEW. Assuming you've already set the stats and generalized features for the new race, you just adjust the NAME OF THE RACE you want to add new body parts for (I think argonians will be listed first in this box) it's over at the right of the window that will pop up about middle ways and leave the normal button set to "normal". Then the button at the top left is for choosing the body parts individually and you have to do them ONE at a time and give each of them an ID (I used DN_Hands, FEET, CHEST etc etc for the ID names). Don't make the mistake I did and do all the body parts at one time without pressing OK for EACH new body part you do. It won't save it to disc that way you have to make a NEW body part file for each body part of your new race. For every piece of hair you want to be able to pick from you have to make a new hair file, same goes for the head so the list could get very long.

Now you ask but where are the ART FILES. There's a button to the top right that says ART FILES or something similar. Click on that and find your ART files for Body parts under your Cdrom Drive letter and look for the MESHES folder and then open the "B" file. That's where all the body part meshes are for every race in the game. Also do not try to mix and match male and female HANDS. For some reason I think there is a bug in the hands because when I get to the game I have no hands on the 1st person screen until I put a glove on. The 3rd person screen shows them, but not the 1st person without a glove. I tried every way I could think of and used the other races body part makeup for hands, I notice you have to put TWO hand files in, and it looks like one is for 3rd person and you use the race(gender).skn file for this. For the 2nd hand you use the hand(gender)_1st.inf which I take this to mean 1st person hands but, like I said, the 1st person hands don't seem to want to show up without some kind of glove on. My necro had just stubs for a while until I tried that out with the gloves. Just about everything else you can mix and mess around with. Basically unless you can draw a new skin you have to use the skins in the game that are pre-built, but you can come out with some pretty funny looking characters doing this. It takes awhile to create all the body part files. It's not drag and drop, it's search and search and search and find. The body part menu in that B folder is quite long.

If you mess something up just use the right click on the text window where the files are and click delete and that's all folks!

Adding Pre-built "Skins" to a New Race
By Olsor

A: In the Object Window, click on the Body Parts tab, scroll down until you find b_n_breton_f_ankle (which is the first in the list of Breton models) and double click this to bring up the properties for that model.

Simply change the race to match the name of your new race. There is no need to rename the models, or for anyone to download more models within your plug-in. This simply tells the editor to use the existent models for the Bretons and apply them to your race as well. Now, you just have to repeat this process with all of the Breton models, so that you have a bit of variety.

Q: But will the user be able to play the Bretons if I do that?

A: The editor saves the differences between what you have done and the main morrowind.esm file. As long as you don't save over the morrowind.esm file, then the player will still be able to play as a Breton.

The game will load everything as normal from the morrowind.esm file, and then load the differences (i.e. your race, and the information needed for it) from your plug-in.

Altering Skill Progression

(Go to) Character menu, Skills. Pick the skill you want to edit in the first Combo Box. Lower or raise the Use Value to the right of the action to adjust learning. For example: For the Acrobatics skill, Fall has a 3.0 Use Value. Lower that value to 1.5, and now falling teaches half as much as it used to.

My question is on changing other areas of skill progression.

1) Skill Caps

   ?? Rats should not teach any weapons or armor skills past 50, maybe even lower.
   ?? Spells should not teach any magic skill past their difficulty level. A spell that is very difficult to cast teaches a lot, but once you have 100% success rate, that spell should teach nothing. Every skill needs a cap for certain actions.

2) Exponential Learning Curve

   Say I want to tweak the learning curve so skills are much more progressively difficult than at present, making skills over 90 nearly impossible to learn through practice, is this possible with the editor?

   From what I've seen the editor is pretty straightforward on what you can edit with skill learning and its very limiting. I hope I'm wrong.

fMajorSkillBonus = 0.75
fSpecialSkillBonus = 0.8
fMinorSkillBonus = 1.0
fMiscSkillBonus = 1.25

I tested these values as follows...
1st HighElf Mage, Acrobatics as Misc skill...using original settings..
Jumped in place 10 times, Acrobatics moves from 0 to 20% towards next lvl.

2nd HighElfMage, Acrobatics as Misc skill...using double all settings (iow
fMinorSkillBonus = 2.0, etc)
Jumped in place 10 times, Acrobatics moves from 0 to 17% towards next level.

2nd HighElfMage, Acrobatics as Misc skill...using quadruple settings..
Immediately upon load, Acrobatics is now at 5% towards next level (down from 17%)...
Jumped in place 10 times, Acrobatics moves from 5% to 10% towards next level.

Obviously there are some variables here, which have not been taken into account. Maybe the ground was a little uneven in spots, or I wasn't holding the E (jump) button consistently, etc, but its safe to say that the higher you set these variables, the slower the learning. The only way I can figure it is that there is a "pool" of learning towards your

next level and the variable affects the size of the pool. If it was an actual learning bonus, you'd think Major skills would receive the most sizable bonus while Misc. skills would receive the least.

Altering the Hand-to-Hand Skill

Here are the variables you probably want to play with:

"996" "fMinHandToHandMult" 0.1000
"997" "fMaxHandToHandMult" 0.5000
"998" "fHandtoHandHealthPer" 0.1000
"1084" "fHandToHandReach" 1.0000

These are found in the "Game Settings" options

General Scripting

General Questions: 1. When does a script fire? It seems to me that when I am in a cell, all scripts on all objects fire continuously unless a Stopscript is done.

2. What is the call order for scripts? Many people have mentioned, and I have seen coded where the function which is being checked in the code is called last, so that the results are set in the next iteration of the script. How is the Call Stack working here?

3. Are local variables local? Is there any way for me to interact with another object's script without creating a global variable?

4. Can a script call another 'non-global' script? (Honestly, I just havent checked this one)

5. Can conditional statements have multiple conditions? I notice a lot of nested if's, which are sometimes needed, but can I have a if (x OR y) statement?

6. Can I use variables in the Move/Rotate functions? It seems I must hard-code a value for move or Rotate functions. Is this the case or am I making a mistake. For example:

npc_01->Move Z 10 ; works fine

but

short npcMove
set npcMove to 10
npc_01->Move Z npcMove ; DOES NOT WORK

1. the scripts fire all the time.
2. no idea.
3. if an object has the local variable "temp" you can use it in other scripts
using
theobject->temp

4. the startscript-command ("startscript myscript") should work.. i think.
5. I've tried but never made it work.
6. apperently not.

Adding a Script to a Static – A Workaround

By Dragonsong

Statics do not have an option for attaching scripts. Various builders will have various tricks to work around this. Mine is to attach the script to a light. Lights have a pretty vague effect in the world anyhow, and if you really needed to, you could just turn the light off and specify no NIF to ensure you have a truly invisible script triggering location.

Of course, for the script to have any effect on other objects or the player, you're going to be using global variables or, at least, referencing other scripts, using the dot (.) convention.

Note that whatever method you choose, ***be sure to create your own unique object to attach the script to!*** Do not, for the love of Azura, try and attach a script to an object already defined (by Morrowind.ESM) and then hit Save to make the changes permanent. You will not only potentially be trouncing on some other object out there already, but even worse, you could really mess up someone's game/Savegame when they try to use yer' mod!

Adding a Script to a Static – A Better Way
By Nethervoid

Here is a better way to add a script to a static. (I think I read this in one of Dragonsong's tuts)

- ?? Double-click the static you wish to add a script to.
- ?? Record the image files the static uses.
- ?? Create a new misc object. Name it whatever you wish.
- ?? Click the image buttons and change the image to that of the static you wish to emulate.

That's it! You now have an object, which looks like the static you wanted, but allows for a script to be added to it!

Easy as pie.

Distance and Faction Variables
By Niyt Owl

Q: I have a Telvanni wizard guarding a small island which leads to a boat travelling to Sadrith Mora. I'd like the wizard to attack the player if he or she doesn't belong to House Telvanni, and comes within a certain distance of the wizard. I've got signposts near the bridge to the island, warning players. How would this be scripted?

Niyt Owl - Change "wizard_id" to the ID of your wizard. You can adjust how close the combat begins by changing the 500 to something else.

```
begin _ri_combat

short FightMe

if ( FightMe == 1 )
return
endif

if ( CellChanged == 0 )
return
endif
; conserve CPU cycles - don't process unless player crosses a cell boundary

if ( GetDistance Player < 500 )
if ( SameFaction == 0 )
"wizard_id"->SetFight 100
"wizard_id"->StartCombat Player
"wizard_id"->SetDisposition 10
set FightMe to 1
return
endif
endif

end _ri_combat
```

Global Scripts
By Nether Void

Global scripts are just that: global. Global means that they run in all parts of the game no matter which cell your player happens to be in. Globals also are not affected by any happenings in the world unless so scripted. By this I mean that globals are stand alone scripts. They are not dependant on any item. In this way they are very powerful, but at the same time very dangerous. Globals will continue to run (and eat processes) until turned off. Even with a return clause they will consume processes. So if you only intend the global to run one time, make sure you issue a stopscript whatever_your_script_name_is so that you don't inadvertantly bog the CPU. Some of the pre-built globals written by bethseda have this command (and it is supposedly only valid for global scripts - or so the help file says).

Item Activated Doors
By Ziegfelding

(**message from Nethervoid – Before adding the forthcoming script to your door, you would first have to create a new item (like a key) with a new item ID)

Q: I've created some keys and locked a number of doors in a dungeon I am working on, the only problem is, I want to make the doors so they can only be unlocked with the keys. It appears the highest lock value I can set is 100, this is no good as someone could create a powerful unlock spell or have high enough skill to pick the lock.

(How can I use these keys to force) the player to explore the whole of my dungeon, getting the keys to progress further?

A: You could maybe hack something together with script. Something like:
```
if ( OnActivate == 1 )
if (player->hasitem "door 1 key" )
Activate
else
Message "An unseen force prevents you from opening this door..."
endif
endif
```

With something like that the door wouldn't even have to be locked in the traditional sense.

Message Box Scripting
By Snograth

The deal with GetButtonPressed is that it returns the value of the last MessageBox option chosen. It returns 0 for the first option, 1 for the second option, 2 for the 3rd option, etc. It doesn't return a keyboard key pressed as far as I can tell. Since scripts run both on PC and XBox versions, it doesn't make as much sense in an XBox context to try to get the keyboard key pressed since I don't think they have keyboards (haven't really looked at them since I'm a PC gamer guy). Plus like someone pointed out, people can customize their keyboard controls so maybe the button you want is being used by something already.

When a MessageBox comes up for you to make a choice, the script keeps running away in the background. It doesn't stop the execution of the script at that line like and wait for response in the same way it would with MessageBoxes in VB or alerts in Javascipt.

You have to write the script to keep testing to see if a response was clicked from the messagebox. A pain in the butt.

I did a fairly complex message box/teleporting example with comments if it will be of any help to people. I used a status variable to keep track of whether it was time to do nothing, display a messagebox or check for a messagebox response. Here it is if it's helpful on how to use these functions. Additionally, this is a little more complicated since I wanted to give more choices than could fit on only one messagebox (only 8 or 9 items will fit as response buttons)--that's why the multiple messageboxes and other items.

Begin TelePortyRingScript

; Changes to 1 for a frame when equipped

short OnPCEquip

; Holds the choice number made by player in menu

short Button

;ScriptStatus 0 for nothing, 1 for item barely equipped

; 10 = display 1st menu, 11 = display 2nd menu, 12 = display 3rd menu

; 20 = wait for response to 1st menu, 21 = wait for 2nd, 22 = wait for 3rd

short ScriptStatus

;exit if menu is up

```
if ( MenuMode == 1)
    return
endif

;Set ScriptStatus to 10 if equipped and then reset OnPCEquip

if ( OnPCEquip == 1 )
    Set ScriptStatus to 10

    Set OnPCEquip to 0
Endif

;exit if nothing is going on with the ring--only continue if item equipped, displaying
menu, or waiting for response

if ( ScriptStatus == 0 )
    Return
endif

;This is Status 10--display menu 1

; Choice 7 = more places, 8 = cancel

if ( ScriptStatus == 10 )
        MessageBox "Teleport to?", "Balmora", "Vivec", "Suran", "Molag Mar",
"Erabenimsum Camp", "Sadrith Mora", "Vos", "More Places", "Cancel"

        Set ScriptStatus to 20
EndIf

;This is Status 11--display menu 2

; Choice 7 = more places, 8 = cancel

If ( ScriptStatus == 11 )
        MessageBox "Teleport to ?", "Dagon Fel", "Urshilaku Camp", "Khuul", "Gnisis",
"Maar Gan", "Ald'Ruhn", "Gnaar Mok", "More Places", "Cancel"

        Set ScriptStatus to 21
Endif

;This is Status 12--display menu 3

; Choice 4 = cancel
```

```
If ( ScriptStatus == 12 )
        MessageBox "Teleport to ?", "Odai Plateau", "Seyda Neen","Dren Plantation",
"Ghost Gate", "Cancel"

        Set ScriptStatus to 22
endif

;If ScriptStatus indicates waiting for a response then get button pressed

if ( ScriptStatus > 19)
        Set button to GetButtonPressed

        if ( button > 8 )
                return
        endif

        if ( button < 0 )
                return
        endif
endif

;Check first menu set (status code 20)

If ( ScriptStatus == 20 )
        ; messagebox, "First Set = %.0f", button

        ; Choice 7 = more places, 8 = cancel

        ; Setting to 0 means that it won't check more after finishing this round

        Set ScriptStatus to 0

        ;********** Put Teleport Commands for this menu in here **********

        if ( button == 0 )
                Player->PositionCell -21278.23, -17613.51, 534.02, 0, "Balmora (-3, -3)"
        endif

        if ( button == 1 )
                Player->PositionCell 29872.33, -82108.47, 578.00, 180, "Vivec, Foreign
                Quarter (3, -10)"
        endif

        if ( button == 2 )
```

```
                Player->PositionCell 55835.01, -52552.30, 885.48, 147.38, "Suran (6, -7)"
        endif

        if ( button == 3 )
                Player->PositionCell 107572.33, -64351.20, 578.00, -174.91, "Molag Mar
                (13, -8)"
        endif

        if ( button == 4 )
                Player->PositionCell 109549.27, -3477.20, 554.00, -32.38, "Erabenimsum
                        Camp (13, -1)"
        endif

        if ( button == 5 )
                Player->PositionCell 143035.19, 36072.27, 465.27, 99.66, "Sadrith Mora
                        (17, 4)"
        endif

        if ( button == 6 )
                Player->PositionCell 93274.27, 116737.07, 1486.31, 84.52, "Vos (11, 14)"
        endif

        ;********** End Put Teleport Commands for menu in here **********

        ;resets Script Status to display next menu instead

        if ( button == 7 )
                Set ScriptStatus to 11
        endif
Endif

;Check second menu set (status code 21)

If ( ScriptStatus == 21 )
        ; messagebox, "Second Set = %.0f", button

        ; Choice 7 = more places, 8 = cancel

        ; Setting to 0 means that it won't check more after finishing this round

        Set ScriptStatus to 0

        ;********** Put Teleport Commands for this menu in here **********

        if ( button == 0 )
                Player->PositionCell 63871.94, 182709.30, 523.33, -103.56, "Dagon Fel
```

```
                              (7, 22)"
        endif

        if ( button == 1 )

                Player->PositionCell -27466.17, 150231.19, 706.00, 162.22, "Urshilaku
                        Camp (-4, 18)"
        endif

        if ( button == 2 )
                Player->PositionCell -67169.52, 140831.81, 266.17, -172.11, "Khuul (-9,
                        17)"
        endif

        if ( button == 3 )
                Player->PositionCell -83083.41, 92268.80, 1017.70, -131.62, "Gnisis (-11,
                        11)"
        endif

        if ( button == 4 )
                Player->PositionCell -21059.40, 102734.50, 1978.00, -70.44, "Maar Gan
                        (-3, 12)"
        endif

        if ( button == 5 )
                Player->PositionCell -12288.00, 53248.00, 2322.00, -12.99, "Ald-ruhn (-
                        2, 6)"
        endif

        if ( button == 6 )
                Player->PositionCell -61378.48, 27556.68, 446.78, 145.78, "Gnaar Mok (-
                        8, 3)"
        endif

        ;********** End Put Teleport Commands for menu in here **********

        ; Resets Script Status to Display next menu instead

        if ( button == 7 )
                Set ScriptStatus to 12
        endif
Endif

;Check second menu set (status code 22)
```

```
If ( ScriptStatus == 22 )
        ; messagebox, "Third Set = %.0f", button

        ; Setting to 0 means that it won't check more after finishing this round

        Set ScriptStatus to 0

        ;********** Put Teleport Commands for this menu in here **********

        if ( button == 0 )
                Player->PositionCell -35076.82, -34959.90, 1764.50, 39.39, "Odai Plateau
                        (-5, -5)"
        endif

        if ( button == 1 )
                Player->PositionCell -11387.63, -70615.68, 236.78, -53.21, "Seyda Need
                        (-2, -9)"
        endif

        if ( button == 2 )
                Player->PositionCell 22758.64, -55310.48, 853.02, 153.82, "Dren
                        Plantation (2, -7)"
        endif

        if ( button == 3 )
                Player->PositionCell 18997.88, 35421.90, 815.90, 30, "Ghostgate (2, 4)"
        endif

        ;********** End Put Teleport Commands for menu in here **********
Endif

End TelePortyRingScript
```

NPC Quest Script

You can check out my script I used and how I set up the NPCs responses from the plugin, so I'll just go over it so everyone can see how it works since I didn't document it.

When you load it up the NPC is in Seyda Neen. She's a librarian who's "lost" a book. The book to her left is the one she wants. If you talk to her without the book you'll get a standard response.

Give her the book and you get a new topic about a rare book. If you talk to her again without the rare book you'll get, "Have you found the book yet?" for which you can only reply, "goodbye". Grab the other book and she'll ask you if you want to sell it to her for 100 gold. Agree and you'll get 100 gold and she gets the book.

Now on to how I did it...

First the script I used for the NPC - I'll make a small comment after each function so everyone knows what it does.

--

Begin librarianScript

short state

if (Player->GetItemCount quest_book != 1)
set state to 300
endif
Comment Tells the NPC to check to see if the player has the first book. If not, they get a standard response. *Comment end*

if (Player->GetItemCount quest_book == 1)
set state to -300
endif
Comment Checks to see if the player has the book and if they do to give them a different greeting, one in which they can give the book to the NPC. *Comment end*

if (Player->GetItemCount quest_rarebook == 1)
if (GetJournalIndex Quest_Journal_001 >= 10)
set state to 400
endif
endif
Comment You may not need this one if you have no keywords in the dialogue you use when the player has both the quest and the book. While it may look confusing it just tells the NPC to make sure that the player has both the Rare Book and the journal entry for it. This is in case the player just happend to pick up the Rare Book but never got the quest

for it, this way the NPC wont say anything about the quest to the player. That way you can "bury" a quest so it's only found after the player does the first quest - i.e. the first book quest. If the player does have both the book and the journal entry then the NPC will use another set of dialogue where the player may sell the book to her. Hope that all made sense. *Comment end*

End

--

Now to set up the NPC -

On the dialogue that is used when the player has the quest, and the book you have to set the Function/Variable section to have:

Item quest_rarebook = 1
Journal Quest_Journal_001 >= 10

And the dialogue that is used when the player has the quest, but not the book the Function/Variable boxes are set to:

Item quest_rarebook = 0
Journal Quest_Journal_001 >= 10

Of course if your quest doesn't give a journal entry you should remove all references to it in the script and from the Function/Variable boxes. I gave the rare book quest a journal entry to be sure that the player couldn't just pick up the rare book and sell it to the NPC, they'd have to have the quest from the NPC first.

Teleportation Upon Item Equip

I have created a script that allows one to Teleport anywhere in the world. I have chosen to Teleport myself back to home when I equip a ring that contains the script. This is what the script looks like (Note that for the purpose of this post, I have included my comments between ** and ** marker. If you copy and paste this script, remove the ** and everything in between it):

Begin TeleportHome **Teleport Home is the name of the script**

short OnPCEquip **Define Variable**

if (OnPCEquip == 1) **If Ring is equiped**
Player->PositionCell, 3775 3690 15705 0 "Home" **Teleport Home**
endif

Set OnPCEquip to 0 **After Teleportation, Turn effect off**

End TeleportHome **End Script**

For such a small little script, this took me about 2 hours to make. I kept getting stuck in the world and it took me awhile before I realized I had to turn the effect off after it teleported me 😜I also tried running this with a pop up question, asking if you wanted to teleport but abandoned my efforts.

Here's how the whole thing works:

-First, create your script. Click on "Gameplay" then "Edit Scripts". Create a new script and save it. Give it a unique name like TeleportHome

-Then must create an item to house this script. This should be a unique item. To create a ring to house this spell, simply start the editor and load your plug-ins. In the Object Window, click the Clothing tab. Double click on any ring or amulet and change it's ID (Make sure and give it a unique name like TeleportationRing). Then click Save. A prompt will appear, asking if you want to create a new item because the ID has changed. Select YES. Double click on this new item and insert your script. Then Save it.

-Place the ring somewhere easy. I chose one of my house barrels.

-When you want to Teleport, simply equip the ring. You can choose to leave it on if you want after you've been Teleported. If you do, unequip then re-equip to teleport again.

Whats great about this is that it saves your Mark and Recall spells for dungeons if you need to sell items. Oh, about the script itself:

The following line is obviously the core of the script:

PositionCell, 3775 3690 15705 0 "Home"

The Function "Position Cell" means that you are teleporting to an Indor Cell (I.E. Dungeon, tavern, house, etc).

The 4 sets of numbers you see are your X, Y, Z and ZRotate coordinates respectively.

The "Home" is the name of the Interior Cell that you are recalling to.

If you want to recall to an Exterior Cell, replace "PositionCell" with "Position" and elinate the Cell name (in my script the Cell name is "Home"). An example of an Exterior Teleport line would be:

Position 100, 200, 100, 0,

**Note from Nethervoid – There is a much better script already in the game. Open the clothing menu and find rings. Next, search in the script column for a script with the word "tele" in the name. Open this script and you will see it looks much like the one above except with a tad better set up.

Time Based Scripting
By thebigMuh

The GameHour variable holds the time of the day. You could do a script that checks for the time of the day, and, if you are past 18:00 and before 06:00, does an AddEffect on the player with Nighvision, and a RemoveEffect to remove it again before day breaks. Using StartScript you could start this globally running script at a certain event. The rest is in the help...

Adding Default .mp3 Tracks

I threw in several "Lord Of The Rings" (and a couple of Gladiator ones) MP3's in the Explore and Battle Music directories. Turns out MW plays whatever music in these directories randomly. No name-changing of MP3's necessary! Very kewl.

Don't get me wrong, I LOVE the original music (which still plays), but my heart get pounding BIG time when I'm in a battle and LOTR's "Bridge of Khazad Dum" is playing

Resizing Static Objects

As you've probably noticed, a lot of the objects don't come in the sizes you first saw them in somewhere else in the game when dropped straight into the rendering window. All objects in game are "references". This means that they are all references to (or based on, if you will) an actual object in the main .esm file.

You can double click a selected static and change anything below the **Reference Data** section in the pop-up window. This will only affect that particular selected static and will leave all other references to that object untouched.

To resize a static to better fit your specific needs, you simply change the value of **3D Scale** on its pop-up attribute window. The default **1.00** is equal to standard size. (100%).

Statics can be effectively scaled down to 50% of their standard size by entering **0.5** in this field and scaled up to 200% of their standard size by entering **2.0** Any size in between those seems to work decently, but those seem to be the upper and lower limits, for reference.

Keep in mind that editing static references is much different from editing lights and other such objects. It can be very easy to accidentally change ALL instances of a light in the world while trying to edit the single one you just dropped in without thinking. When in doubt on lighting, just click on the Objects window under the Lights tab and hit "Insert" to create a new one and keep yourself from mucking up an existing light elsewhere in the land of Vvardenfell.

Weapons

- ?? Right-click on an item or blank space under the Weapons tab in the Object Window.
- ?? Click on New for a brand new weapon or Edit if changing an existing one. Give the weapon a unique ID. Using your initials in front of the ID field is usually a good practice to help keep things unique between mods.
- ?? Name your weapon in the Name field. This is the name that will show up in-game.
- ?? What type of weapon is it? Select it in the Type drop-down list.
- ?? If you wish the weapon to have a script associated with it, select it in the Script drop-down list or click the button beside the list to browse for one.
- ?? Select a reasonable (or unreasonable) amount of weight for your weapon in the Weight field.
- ?? How valuable do you feel your weapon is? What would you buy it for? Figure it out and put it in the Value field.
- ?? How durable (amount of damage that can be taken before it is considered unusable) is your weapon? Figure it out and enter it into the Health field.
- ?? The Speed field determines how quickly the weapon will be used. The higher the value over 1.0, the quicker it is. Conversely, the lower the value under 1.0, the slower it is.
- ?? The Reach field determines how close you need to be to make contact with such a weapon.
- ?? Enchantment is just the amount of enchantment points bestowed into the weapon.
- ?? While Enchanting is the actual enchantment imprinted onto the weapon itself. Select it from the drop-down list.
- ?? To make your weapon hit "normal weapon immunity"-type creatures, you must enable the Ignore Normal Weapon Resistance checkbox. If it's not checked, then it will not affect such creatures.
- ?? The Add Art Field button allows you to browse for a model of the weapon itself. It is usually a good idea to have the Preview Window (View > Preview Window) open when doing this, as it allows you to see the model you are selecting while selecting it.
- ?? The Inventory Image button allows you to select the weapon's representative (or icon) when viewing it in your inventory screen.
- ?? The three damage types for your weapon can be adjusted in the Damage fields. Remember that ranged-type weapons only use Chop damage. The References Persist checkbox is for making the weapon persistent in the world.
- ?? The Blocked checkbox is for making the object read-only when checked.
- ?? Click OK to save your work and exit the Weapon dialog or click Cancel or the window close button on the title bar to cancel anything you have done in that window since opening it, thus making the Weapon dialog window close.

Creating a "Clean" Mod

I'm more than just a little surprised at how easy it is to create a *dirty* mod. Little things like accidentally changing information on a global object (a light, a static, a container) while you're first getting the hang of things, can literally double the size of your mod, and impact the entire "world" of Morrowind. Not to mention, potentially, other peoples' mods... or the savegames of people to which you distribute your mod.

I'd like to make a few suggestions to ANYONE developing a mod. Before EVER releasing, you should scrutinize the following:

Save your ESP. Now go to File, Data Files, select your ESP, and hit Details. You should see a list of *everything your ESP changes when employed*. Learn to read and understand this list. Every single line of it. If you find it's tremendously long, when you've only added one internal cell with a few pieces of furniture, then your mod is **not clean**. You have three choices at that point: 1) start over, 2) hex edit your ESP to remove the improper entries (this isn't as hard as it sounds, actually), 3) release a dirty mod.

Here's a brief, no-screenshot version of a tutorial I plan on making, aimed at "Building a Cleaner ESP":

Starting from the top, you'll have a list of all the new objects you've added *or modified from the original* with your ESP. An example list:

SCPT ds_saree_scpt_bottle
SCPT ds_saree_scpt_winerack
ACTI _ds_saree_vsva_winerack
MISC _ds_saree_vsva_skey
STAT _ds_saree_vsva_crate
CONT barrel_01
CELL

The list *ends* with the first reference to a CELL.

This list should be self-explanatory, but I'll explain it anyhow. 😊The column on the left lists the type of object. I have listed here two scripts, an activator, a miscellaneous, a static, and a container. Their names are listed to the right. Remember, these are objects *I have added or changed from the original.*

Note the funky names I've used for my objects. Pretty long and cumbersome, aren't they? But looking at the list, it's pretty easy to identify *exactly what and where* every single one of those objects is. Each object starts with my calltag, ds. This gives me my own indepedent namespace, apart from any other mod designer's objects, so that I should theoretically never trample over anyone else's objects. (So long as no on else uses the same convention and same calltag.)

The second part of my naming convention is the mod name. That way, two mods that I create won't trample over one another. This particular ESP is named Saree. Next, I denote the location. In this case, "vsva" stands for "Vivec, Saree Velas: Alchemist", the interior cell where those objects are located. And finally, the object's role / name itself.

The names begin with an underscore so that they sort to the top of a list. That's very handy, believe you me.

The scripts are a bit different. For one, script names apparently cannot begin with an underscore. (Bleah.) The names also can't be too long, as selecting them from the drop-down list suffers from the problem of seeing only the first twenty or so characters of the name. (Double bleah!) So I chopped out the location information (not such a big deal for scripts) and dropped the beginning underscore.

(This naming convention is a work in progress. It's a useful idea, I think, but the editor has a hard time with these names - specifically, scripts. If you want to adopt this naming convention, but you're a heavy scripter, you may encounter some problems. Try using quotes around the names of objects that use this convention.)

Getting back to my list, I see that I have:

A script, which is assigned to a special bottle.
A script, which is assigned to a winerack.
An activator, a winerack in Saree's shop.
A misc, Saree's key.
A static, a crate in Saree's shop.
A container, barrel_01.

I know I keep saying this, but keep in mind this list *should only reflect entirely new objects you have added, or objects you have changed from the original*. Keeping this in mind, and keeping in mind the question "am I clean?" I now scrutinize this list. I ask, for each object, "New object: am I actually using this? Changed object: did I really, truly, positively mean to change this from the original?"

The scripts are new, and I am certainly using them. Ditto for the activator and key. The crate seems a little funny, so I jump off of the list, and hit Cancel on the Data Files dialogue (so as to prevent having to re-load the entire ESP). I open up the VSVA interior cell (selecting it from the list of cells) and hunt down that object from the list at the lower-right (made much easier since I have a distinguished name for it). Oh, yes, I see now - I had to make a distinguished "crate" object that a script operates upon. Scripts like objects whose "references persist", and the original static crate (furn_crate_open_01) does not persist. Of course, I could have just dropped in furn_crate_open_01, set it to persist, and hit that Save button on the object - but then I wouldn't have a clean ESP, since I'd have just modified 84 other crates in the original ESM!

(You scripters in the audience should also immediately recognize the fact that operating

on an object almost *always* requires you have a unique name for that object. Otherwise, if you just specify "furn_crate_open_01", you may end up operating on some crate halfway across Vvardenfell! If you need a script to operate on an object, you'll find you nearly always need to create your own special object for it - DO NOT simply change the name and properties of some existing object to suit your needs! That would be **dirty!**)

Okay, back to my list. One more object. The container, barrel_01.

Ah, yes, I stuck a barrel downstairs with five gold in it.

That's fine, right?

Wrong.

This is exactly the kind of mistake the novice is bound to make, and it's the kind of thing the paranoid mod-downloader has every right to fear. When you stick objects into a container, you're not harmlessly creating just one container with the objects you want, you're *changing the contents for each and every instance of that object in the entire world*. barrel_01 was originally empty, looked like a prime target to me. Now, I'll find that if I check the contents of any instance of barrel_01, anywhere in the world, I'll find they *all* have five gold in them!

It gets worse.

I may realize the error of my ways, change barrel_01 back to the way it was, and as a wiser mod builder, make my own copy of barrel_01 (_ds_saree_vsva_barrel01), and change its contents to my heart's content.

But my mod is still *dirty*.

When I go back to my list of objects, I'll now find:

SCPT ds_saree_scpt_bottle
SCPT ds_saree_scpt_winerack
ACTI _ds_saree_vsva_winerack
MISC _ds_saree_vsva_skey
STAT _ds_saree_vsva_crate
CONT barrel_01
CONT _ds_saree_vsva_barrel01

barrel_01 is still listed, you see, and I've still "changed" it everywhere in the world. Its changes may not be any *different* than the original barrel, but picture the two following scenarios:

1. I'm playing around with objects and accidentally rename misc_com_bottle_05. Oops, what I wanted was a copy of that object, not to rename the original. So I make my copy,

and rename the original to its correct original name. Well, tough luck mister, your mod still contains modified reference information for **991** instances of misc_com_bottle_05. The editor doesn't know well enough to understand that the changes you made "should have equaled zero", because **two wrongs don't make a right**. If you try this test, then go back to look at your "Details", you'll be astonished at all the *crap* you see on your list - changes to places you've *never even heard of*, and the size of your ESP will probably effectively double. (Although the size of the ESP probably won't bother most people. They're not that big.)

2. You think you change the object back to original, but you forget something critical. Now your mod is not only dirty, it's also harmful.

The casual, lazy mod developer is going to look at the first scenario, shrug, and say, "Yeah, but so what? It *is* back like the original, right?"

Not so for this mod developer. I'm a stickler for quality, and I managed to make a pretty dirty mod *when I was trying to be on my best behavior*. Now imagine a mod developer who doesn't really care about how he names objects, or that he might be changing references to objects in 900 other places. Suddenly, I become just a little critical of downloading anyone else's mod.

Is it safe?

Is it clean?

So, a plea to all of my fellow mod developers:

First, and probably most important, **make your own objects!** Do not modify the originals! And please, if you can spare the tiny bit of extra effort, name your objects something distinct and obvious, and keep a running list of all the new objects in your mod. (This makes debugging SO much easier!)

Second, before you ever distribute your mod, go to the Details list, and see just how clean that ESP really is! If you can account for everything on that list, then you're a-okay. But if you find you have scads and scads of objects that *aren't yours* and you thought you hadn't modified (or suddenly realize you shouldn't have!) then please, at least consider telling people in advance.

I know this tut seems already rather verbose, but I'm in fact working on releasing an even more in-depth version, since this seems like a weighty enough issue to me. It should effect every mod developer, everywhere. And I haven't even addressed how one goes about cleaning (hex editing!) a dirty mod. It can be done, and it's not so hard, actually. I'd like to include some screenshots, and more examples, too.

If anyone has feedback, bring it on. Think dirty mods aren't worth so much worry? Know

of a better way to clean a mod than hex editing? Got a suggestion for a better naming convention? I'd love to hear it.

~~~~~~

Hahaha! When I was doing the research for my app, I found out a quite remarkable thing. You CAN remove illegal (dirty) references from the mod in the editor.

Click open, select the mod file, click on Details.
You get the same list you mentioned.

Now see what happens if you select an item and press "Delete". It gets market as Ignored, and is loaded by neither the editor or the game!

yay for me! (come to think of it.. I might write my app anyway)

Places to Post Your Mod/Download Mods

?? **Morrowind Summit -** http://www.rpgplanet.com/morrowind/goods/plugins2.asp

?? **Morrowind Files -** http://morrowindfiles.com/

(**note from Nethervoid – if any of these sites are dead, please email me so I can remove them from this list – thanks -- the_nether_void@hotmail.com)

World Testing

Warning!: When using any world testing option, be absolutely SURE you want to commit the time to it before you click it. All of these take quite a while to run and none of them can be canceled midway through without just ctrl-alt-del'ing the program and possibly losing some of your work.

There are several tools available to help you test your plugin for errors before you even run it. This can help reduce debugging time for your plugin by a great degree once you're used to what they are each for. These options are found under the **World** menu as (oddly enough 😊) "World Testing" options. Since there isn't much documentation on what they are for or how exactly they work, I'll add a little here to save people time and trouble.

The first thing which should be mentioned is whenever you run a world test of any sort, it doesn't simply test the cells altered in your plugin, it runs through the entire list of cells in the game for whichever type of scan you run. This can be time consuming and annoying if you've only altered one dungeon in the game or moved a book or such. For this reason, I typically only use these when I've made more major alterations like scripting, large building modifications, or multiple changes to multiple cells.

If all you changed was adding a door to a house which opens on a new interior cell you made, it's much easier to just try and run the plugin, then fix things as you encounter problems.

That said...here's what the different testing options are for. Help manual definitions followed by clarification where needed...

Model Test
Runs through all objects in the file (plugin) to verify that all have valid 3D.

If you're having problems with missing items in your world, (objects, hands or other bodyparts I've seen mentioned, for instance) this should return an error and point out where and what the problems are if you have any.

Dialogue Conflicts
Returns a list of dialogue topics that share an ID with something else in the world, which could cause problems with the replaceID function in scripts.

Basically, this is a failsafe to keep you from overwriting scripts in another part of the world by changing something you didn't mean to. 😊It will point out if you're using the same ID for something in two different dialogues, in case you don't mean to have two different dialogues pointing to the same reference. If you write some new dialogue for any reason, it's time-consuming to run this test, but it will ultimately prevent you from changing an ID for something by accident while creating new dialogue.

This will often allow you to find and fix "down the road" problems that you otherwise would not see until you had been playing the plugin for quite some time. Handy.

Non-Teleporting Doors
Returns a list of all exterior doors that are not linked to anything.

Though it seemingly is quite fine to have an exterior door which doesn't go anywhere when clicked, this will help you locate the ones you might have placed by accident. As always, this scans the ENTIRE list of external cells and can take some time. It is often easier to use the changed cell * trick I pointed out at the beginning of this post to simply find the doors manually.

I generally do not add my external doors until I've finished working on the interior for them, (hint: that's a good habit to get into...) so I never have non-teleporting doors around, but should you happen to put out some placeholders and forget where they are, this will find them for you.

Non-Teleporting Interiors
Returns a list of all interior cells that are not linked to either another interior or the exterior world.

Please note, this is not the same as the one above. This does not check individual interior doors specifically, it instead checks to make sure that you have no interiors without an entry and exit to them. This doesn't seem to work completely correctly in that it will not return an error on interior cells which link to other interior cells without an external access point. Meaning...

If I had two interior cells that link to each other, it sometimes does not give an error, even though there is no link to get from those two interior cells to the external world. (ie. It won't let me know that I can't get into those cells, because for all purposes, they're connected to something else and accessible. 😃)

This is a good check to run if you've made a few alterations and added multiple dungeons or interior cells. After all, what good is an interior cell you can't access? 😃

Test ALL land
Returns a list of exterior cells that have border seam problems.

This will scan ALL exterior world cells and give you a list of problematic areas. (Could be areas where there are odd gaps in the world, or simply areas where there is a problem-causing overlap of some sort.) Useful if you've done a lot of alteration to any external cell...including one you may have just created off the coast for your own, personal island.

Test/Fix All Path Grids
Runs through all path grids, removing points underwater and points without any

connections. Also moves underground points to ground level.

I honestly haven't played with this enough to figure out the full use. Been trying to work with path grids just before I started to write this and still haven't entirely figured out their proper usage. More on this later... 😊

Test all cells
Hurt me, please! Okay...okay...seriously, though.

Runs through ALL the cells in the world, moving the camera and redrawing to check for animation errors.

This one takes a LONG time if you run it, because it basically does a speedy camera fly-by through every cell in the world. It's useful if you want to make sure there will be no render or blend errors with the new areas you've created, but if you've got the kind of time to run this for a tiny little plugin you just wrote...well...come wash my car or something while you wait. 😊

Test all Interior Cells
Performs the same function as "Test all cells", but just on interiors.

As it says, same as above, but the lite version. Good if you're only up for half the painful timewasting activity. 😊 This runs through all interiors and renders the camera in a flyby to check for errors. I ran this one and ended up ctrl-alt-del'ing to shut down the editor when I realized it hadn't even finished the A's after a number of minutes. Hehe.

Whew...that's enough for now. I'm going to take a break and run the new plugin I've been playing with to check my lighting and sound ideas, then we'll see what else I feel like writing up today.

So far, I've received requests for basic guides on the following topics...add something or request something as you see fit. I'll try to do whichever seem to be the most needed first.

Door Functionality: Placing/Using Markers and Teleports.

Lighting: How to, what the altering functions do, how not to screw up every instance of a light in the world.

Away I go for a snack.

Decon
General Editing Info

Additional Resources

If you cannot find the answer you were looking for. Here are some additional places to look:

?? **Nethervoid's MMM Bible -** http://repoland.hypermart.net/mmmbible/

?? **Dragonsong's Tutorials –** http://www.weathersong.net/tomorrow/tuts/

?? **MajHavoc's Tutorial Database -** http://www.mindflightsystems.com/modules.php?name=Sections&sop=listarticles&secid=3

?? **Olsor's Tutorials** http://liquidfusion.fateback.com/fusion/tuts/morrowind.html

?? **Gamefaq's Morrowind Tutorials -** http://www.gamefaqs.com/computer/doswin/game/3365.html

?? **Official Morrowind Forums -** http://www.elderscrolls.com/ubbthreads/ubbthreads.php

?? **Kathykitten's Tutorials -** http://www.angelfire.com/wizard/kathykitten/journeys.html

?? **Dark Blade Design – Mod Group -** http://web.sysrq.no/sorcerer/dbd/index.htm

(**note from Nethervoid – if any of these sites are dead, please email me so I can remove them from this list – thanks -- the_nether_void@hotmail.com)