

Keeping level designers in the zone through level editor design

Robin-Yann Storm



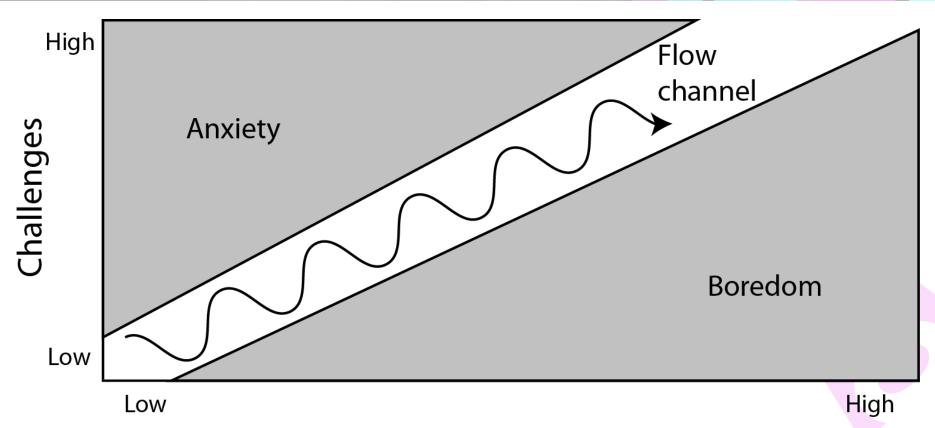






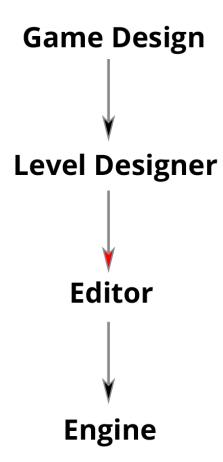






Skills

















- Navigating the editor
- Creating geometry
- Snapping
- Editing geometry
- Terrain
- Texturing
- Lighting
- Importing assets
- Placing assets
- Playtesting



- Scripting/IO/Visual scripting
- Shader editing
- Nav editing
- Optimization
- Quests/Speech trees
- Etc.

Too little time!





Navigating the editor

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Generating a flow state for navigation

- Get to where you need to be, fast
- Quickly see any part of the level from any angle



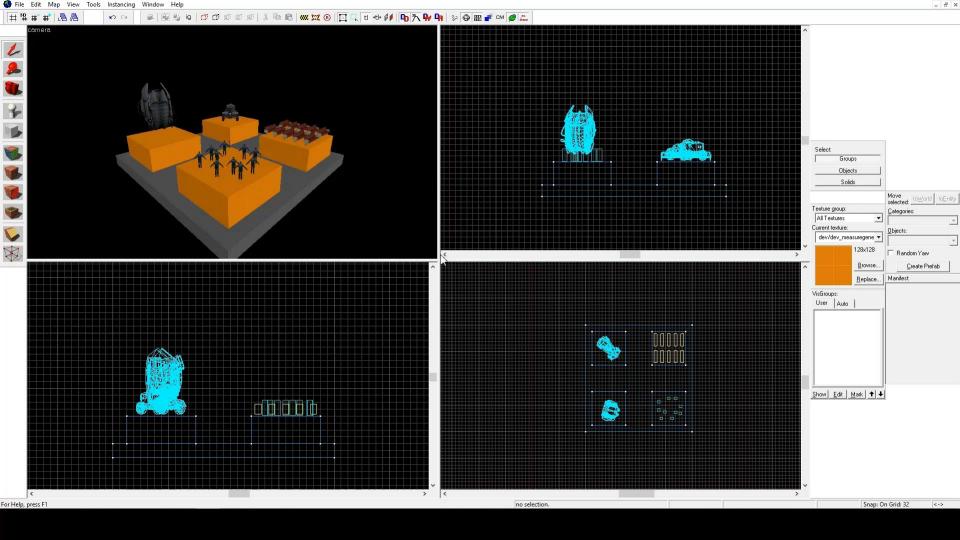


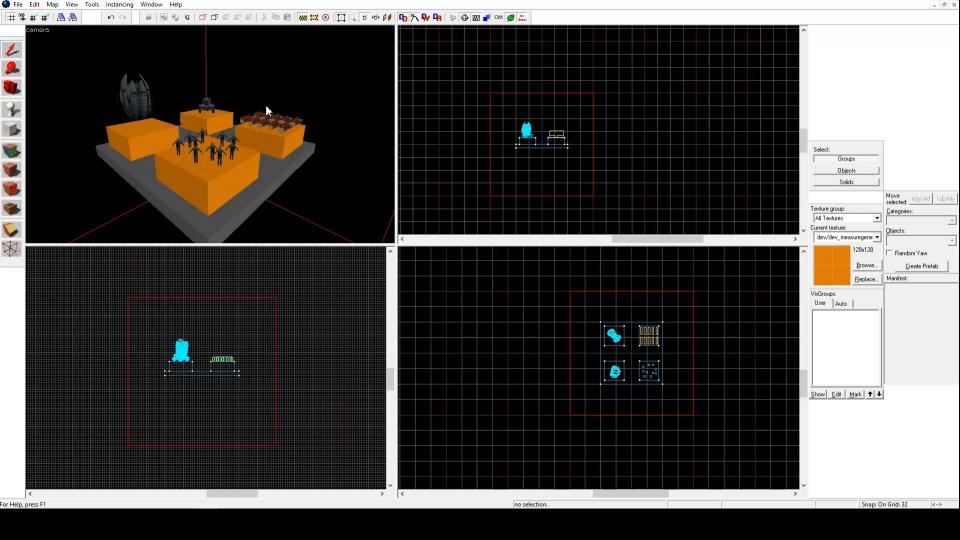






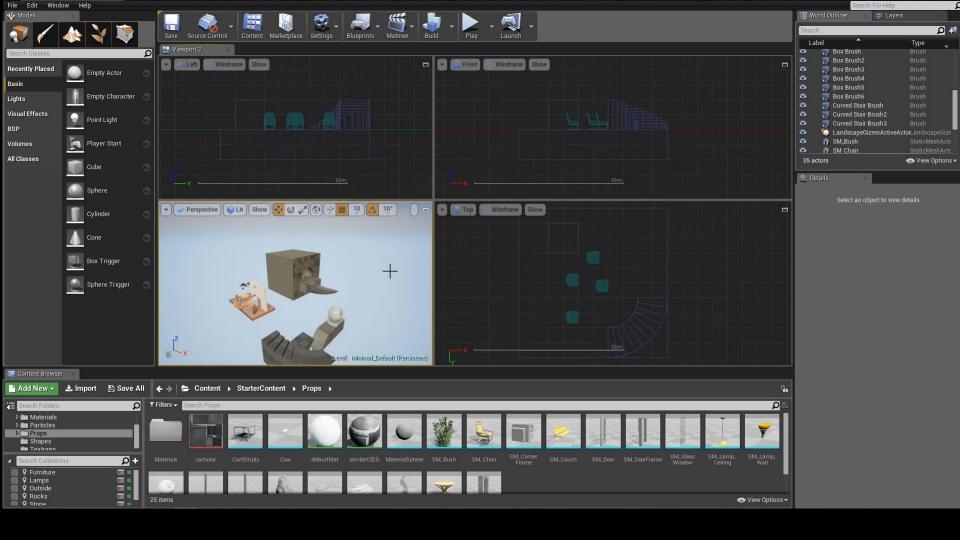




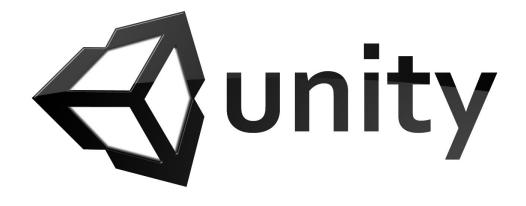


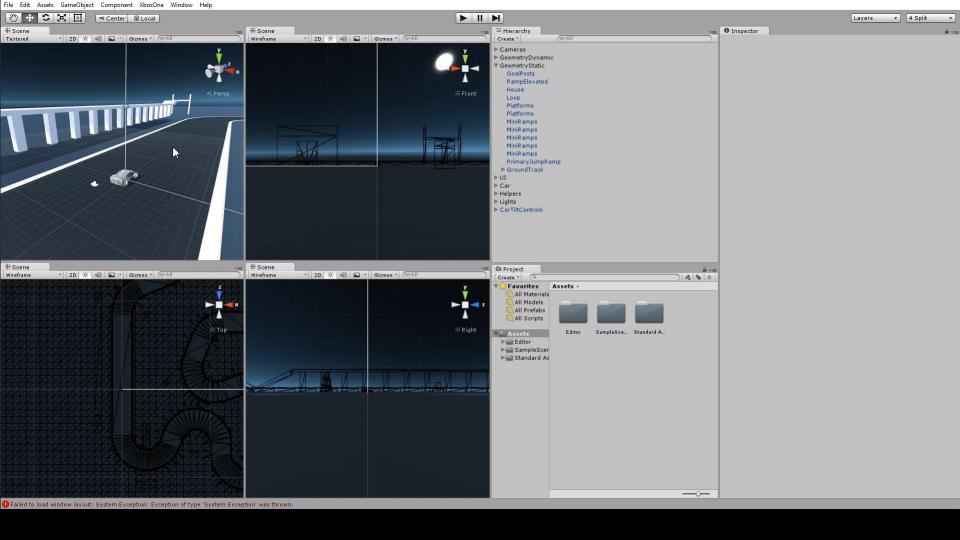








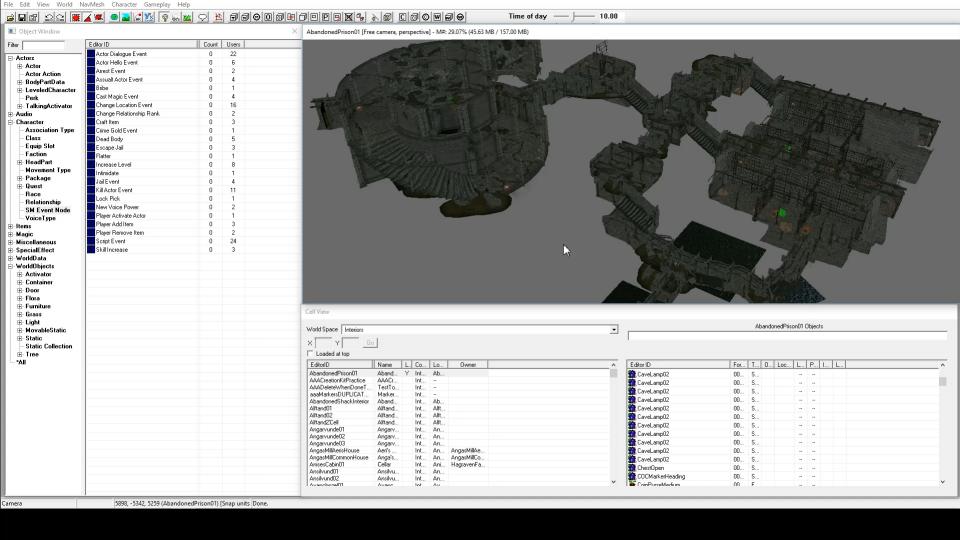






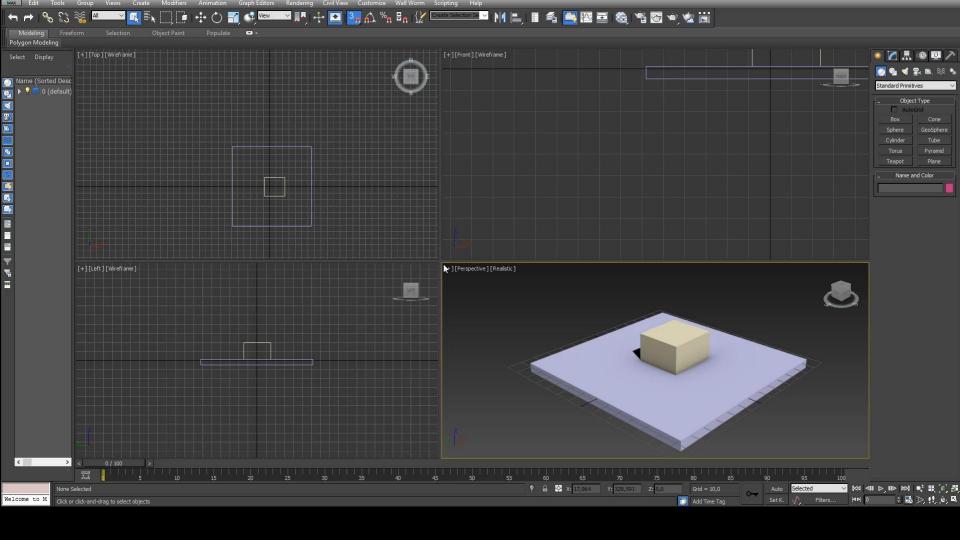










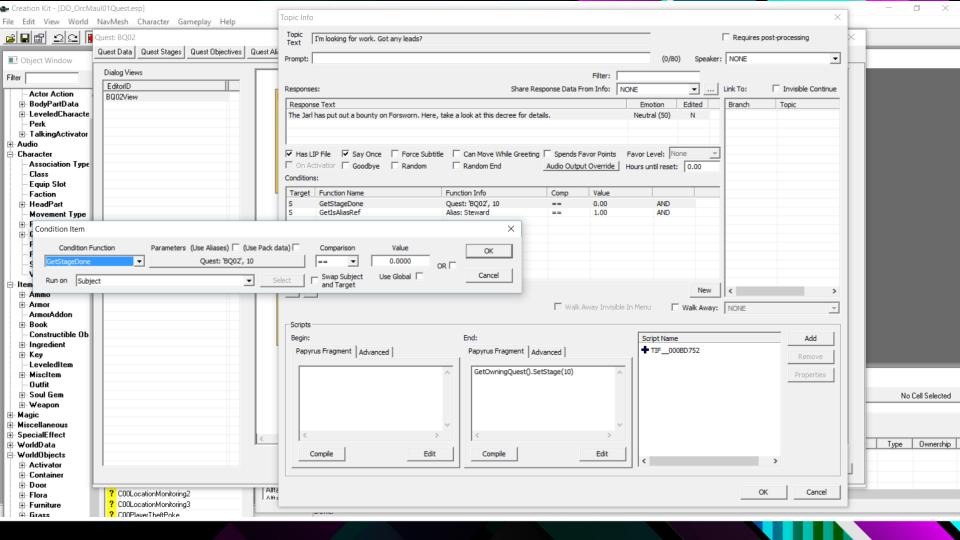




Navigation Take-away

- Multi window
- Docking windows
- Flying/FPS camera & Orbital Camera

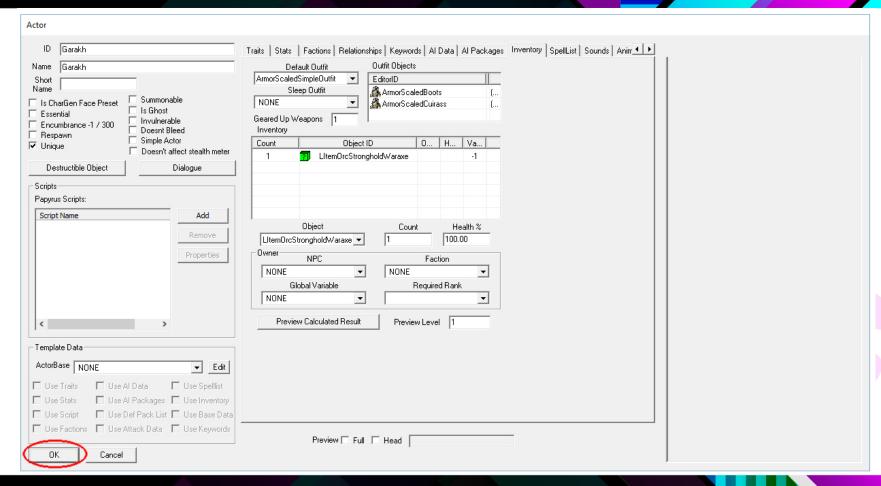
Cordon system



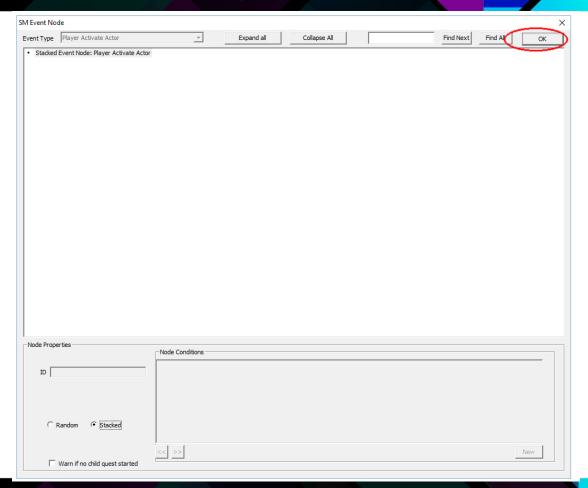


Quest: DA07 Quest Data		Quest Objectives	Quest Aliases	Dialogue Views	Player Dialogue	Favor Dialogue	Scenes Comb	at Favors	Detection	Service Misc	Scripts		_		×
Index 5 10 111			Start Up Stage Shut Down Stage Keep Instance Data From Here On Log Entry Conditions												
13 15 20 25			EMPTY												
30 35 40 45 50 52			Log Entry					Papyrus Fragr	ment Advanc	ced					
50 52 53 55 60 65 70								kmyQue ;CODE NOT	est NONE						-
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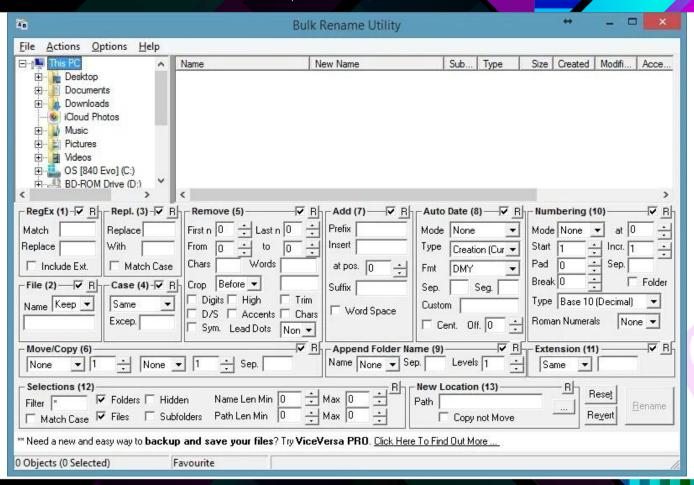




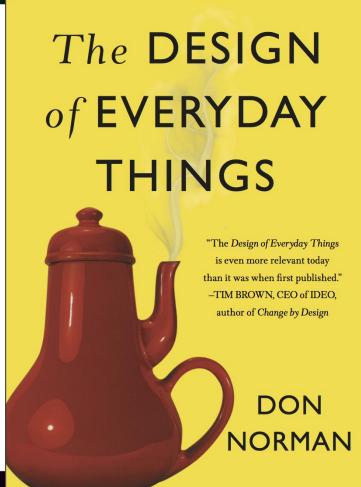














- Navigating the editor
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What does a level designer need for flow?

- Be able to quickly place & size basic geometry
- Replace large sections of the map quickly and accurately

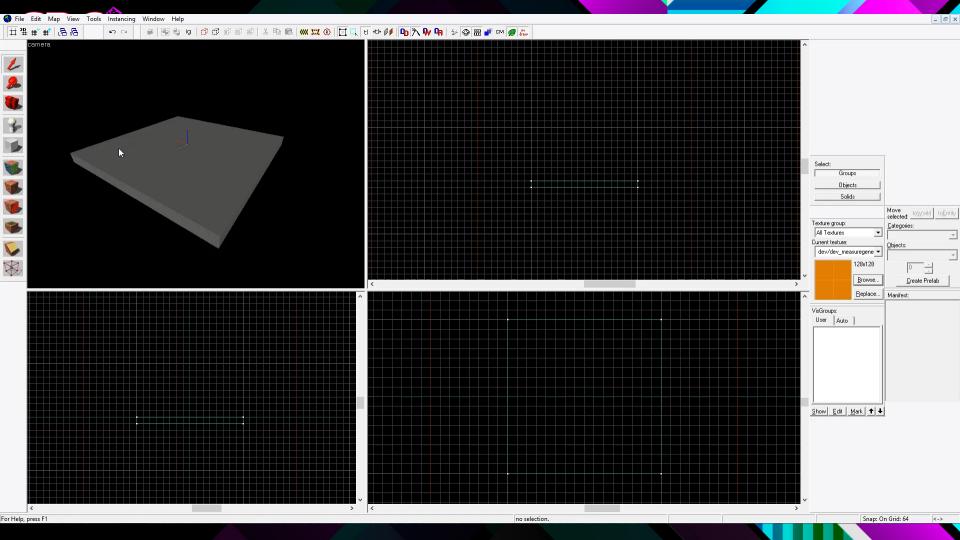






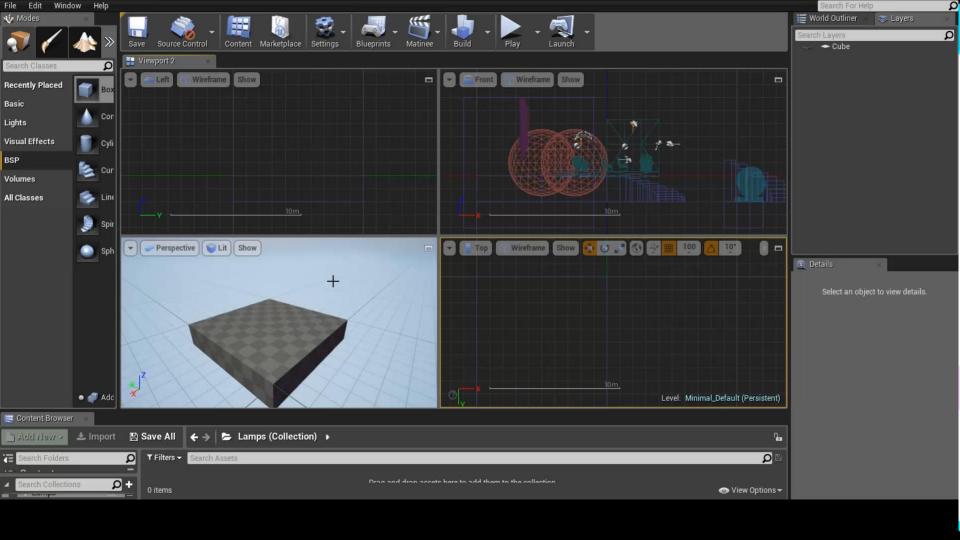




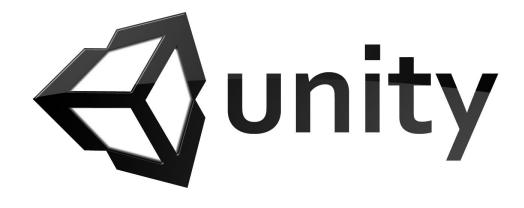


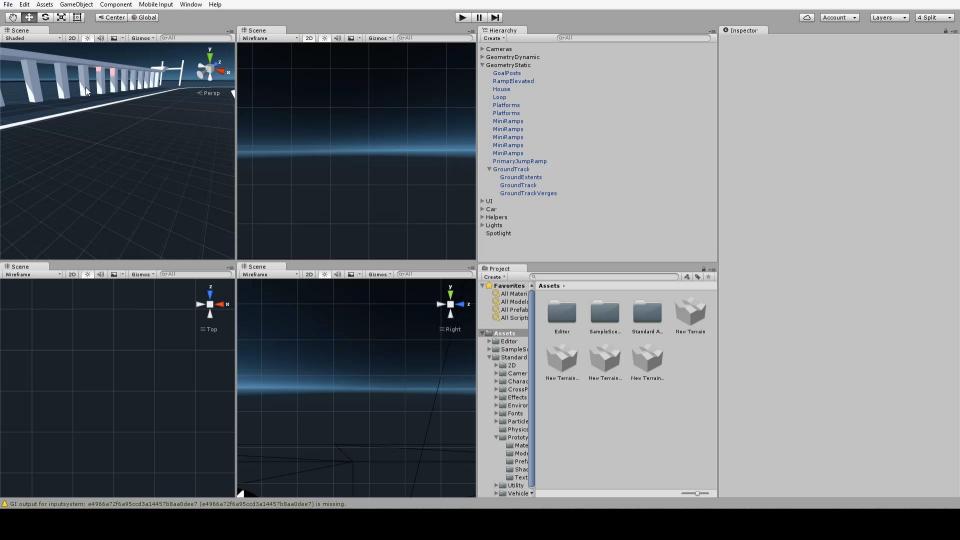








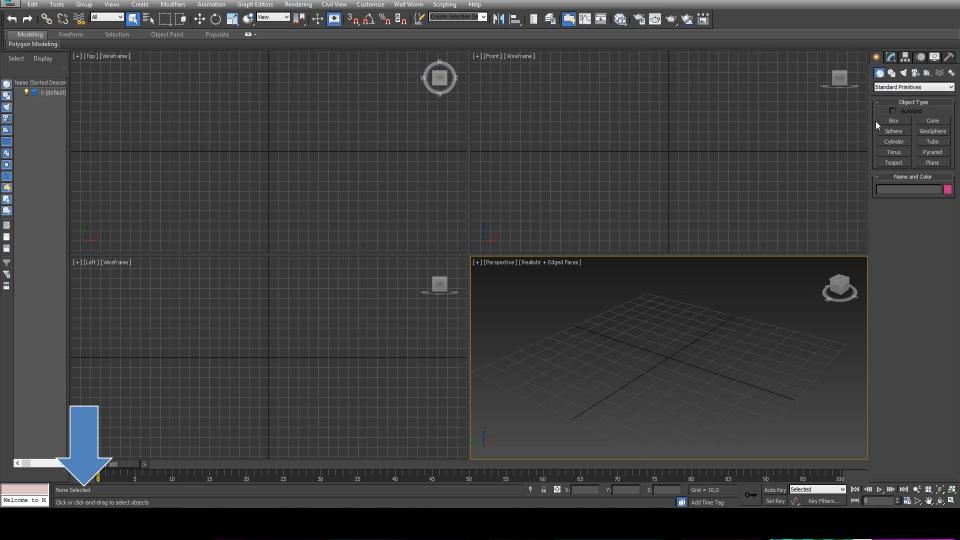






Creating Basic Geometry





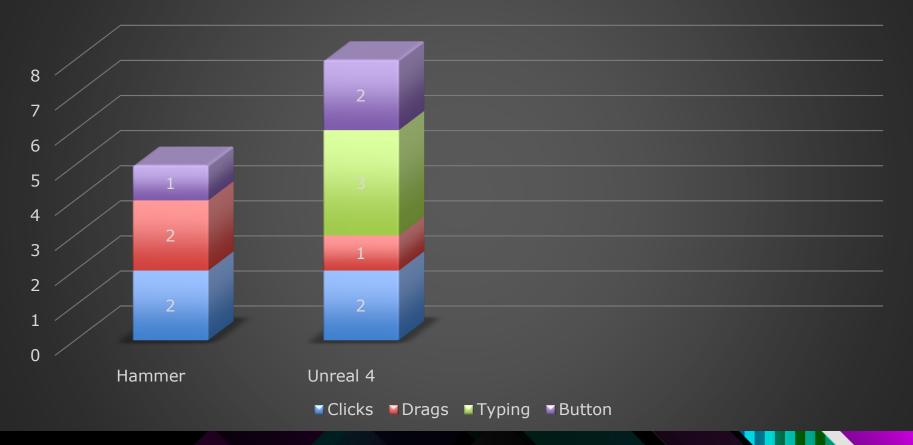


Creating Basic Geometry Take-away

- Quick placement & basic shaping
- Visible measurements
- Large variety of basic geometry
- Everything near the users' current view

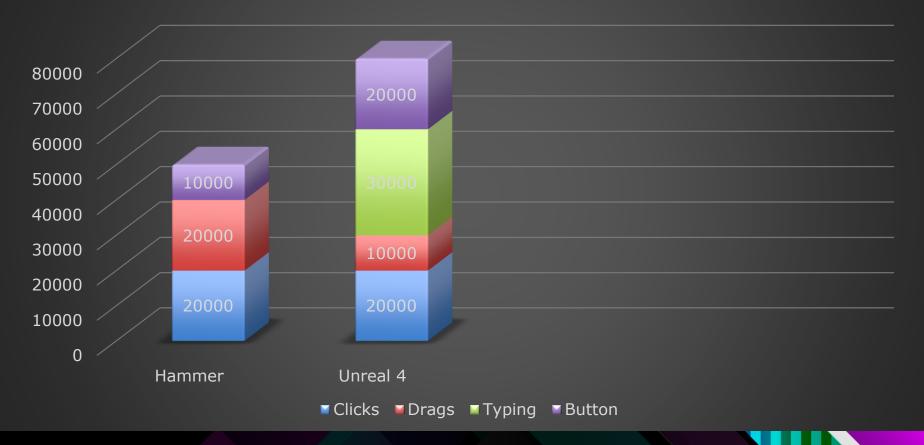


Time differences via UX actions





Actions for 10.000 brushes





Creating Complex Geometry

What does a level designer need for flow?

- Be able to quickly place & size complex geometry
- Replace large sections of the map quickly and accurately

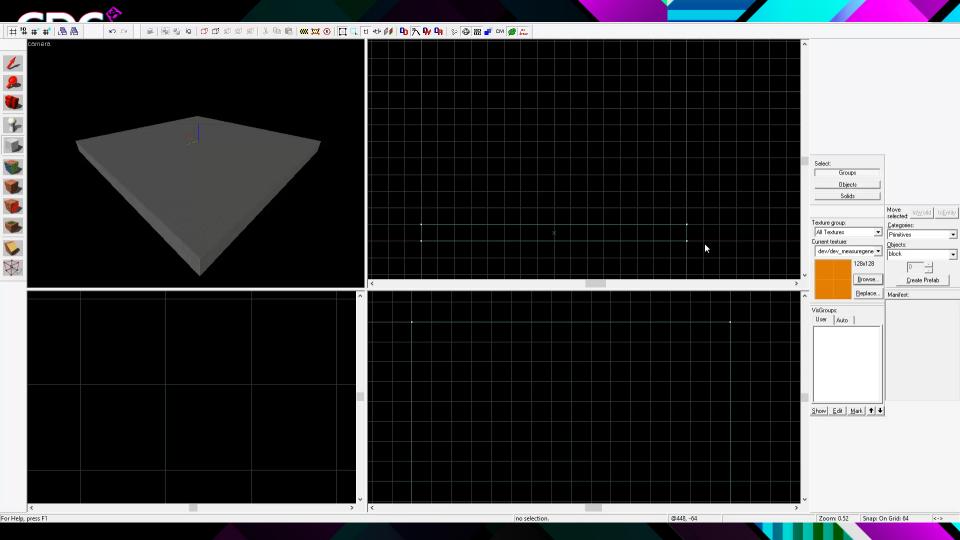






Creating Complex Geometry

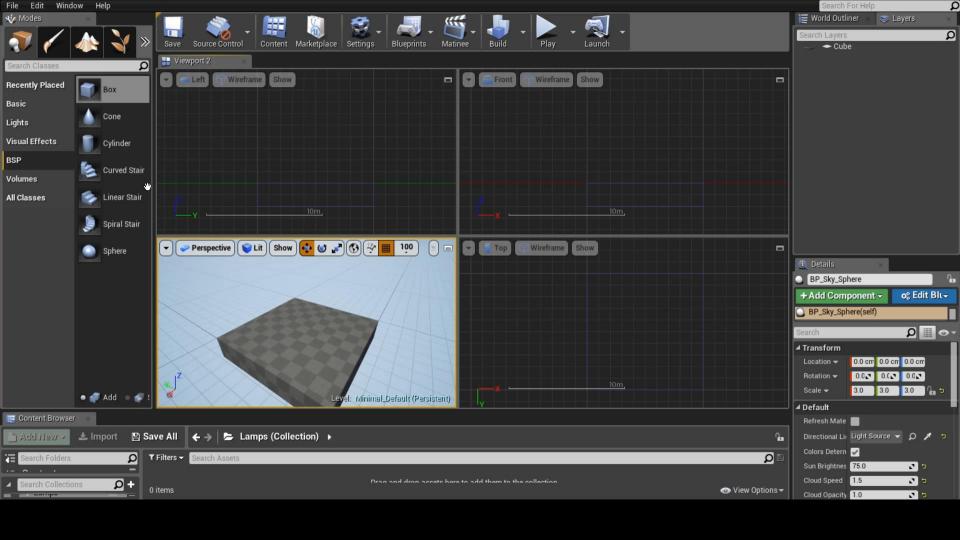


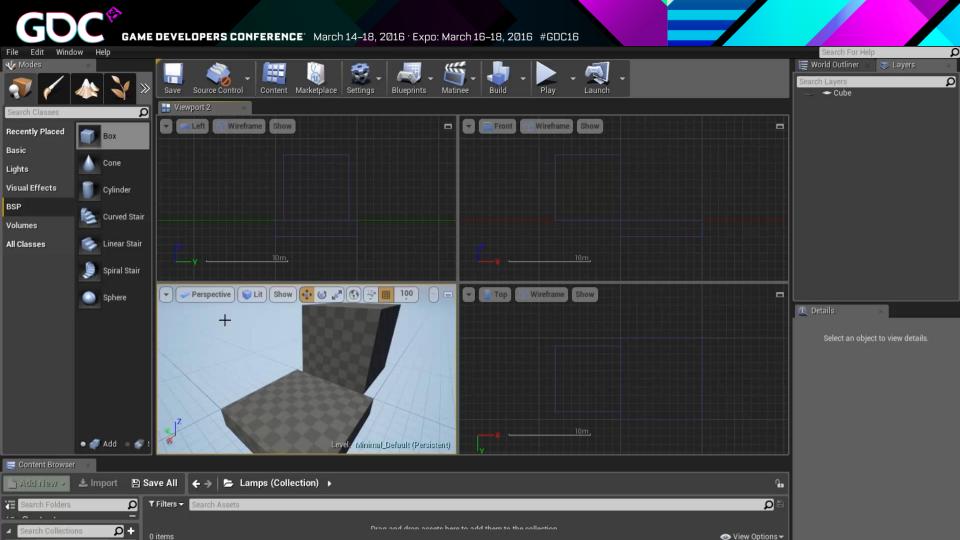




Creating Complex Geometry









Creating Complex Geometry Take-away

- Variety of primitives
- Complex pre-sets save time
- Numerical value changes
- Instantly visual



Interesting design comes from iteration and trying things out. If the editor does not facilitate this, then the design of the game will stagnate.

GOC TO

Rayman Legends: The Design Process Within the UbiArt Framework

By: Chris McEntee

Chapter Selection

How Is It Done?

What's the Magic Tech?

What is the UbiArt Framework?

Rayman Origins and Legends

Useful Systems and Tools

Gamepaly Geometry: Friezes

Pipe Friezes

Meta Frieze

Bezier Friezes

Whitebox Friezes

Whitebox Prototypes

Whitebox Sketching

LUA Scripting

Sequence Editor

C---



GAME DEVELOPERS CONFERENCE: 2014

MARCH 17-21, 2014 GDCONF.COM

What is the UbiArt Framework?

- 2D game engine
- · Full HD at 60FPS
- Artist friendly







13:12 | 58:25











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What does a level designer need for flow?

Be able to quickly snap anything to anywhere



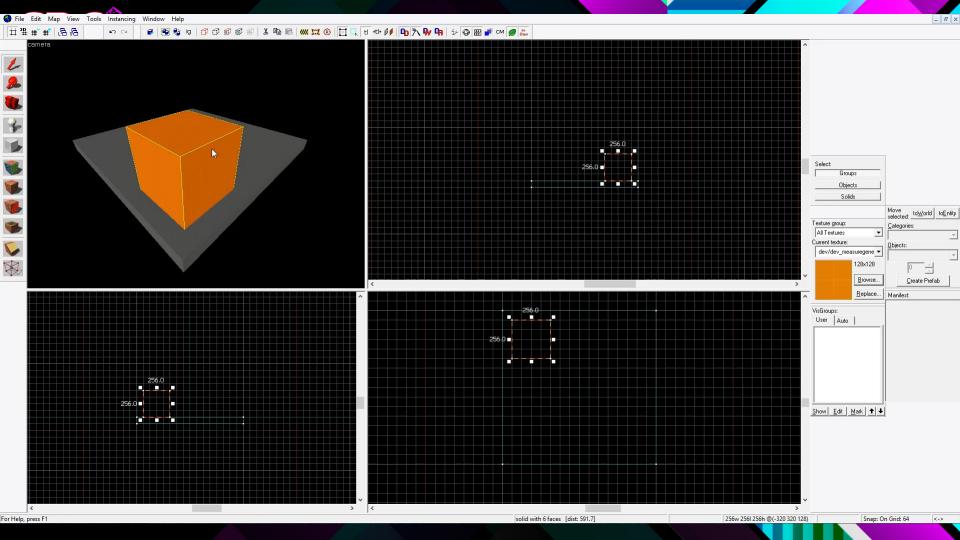






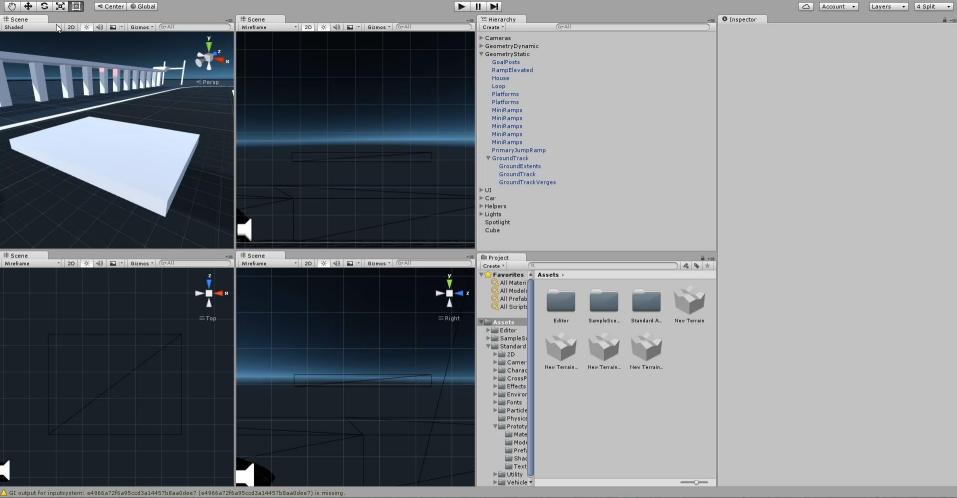








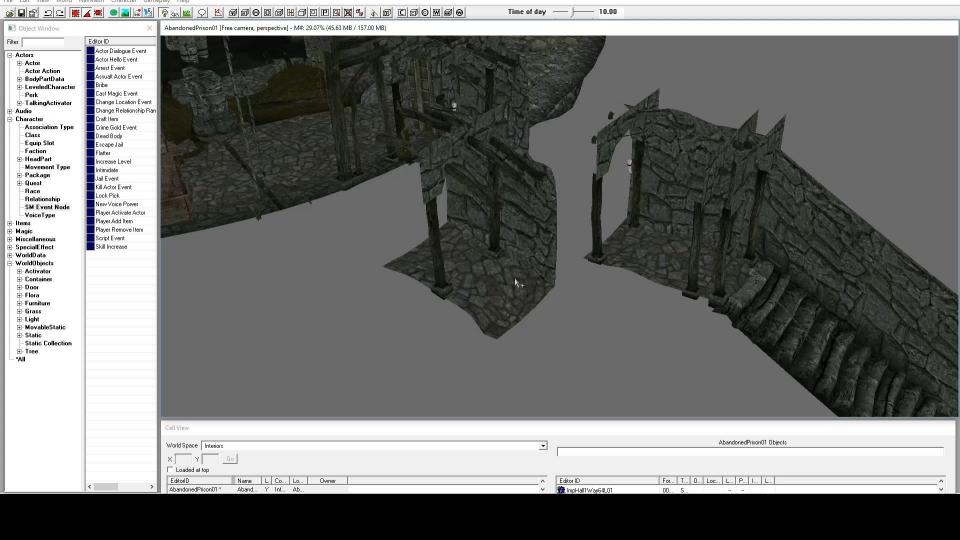




File Edit Assets GameObject Component Mobile Input Window Help

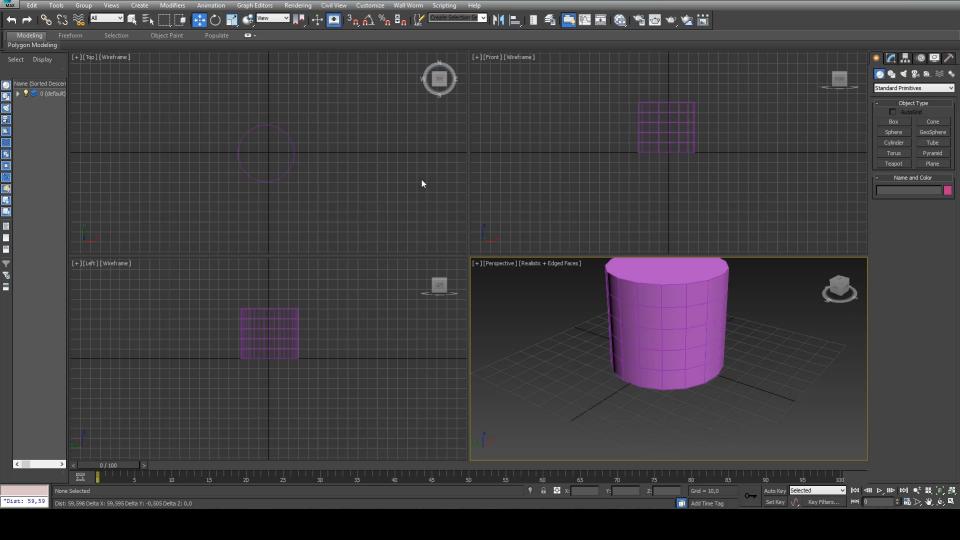












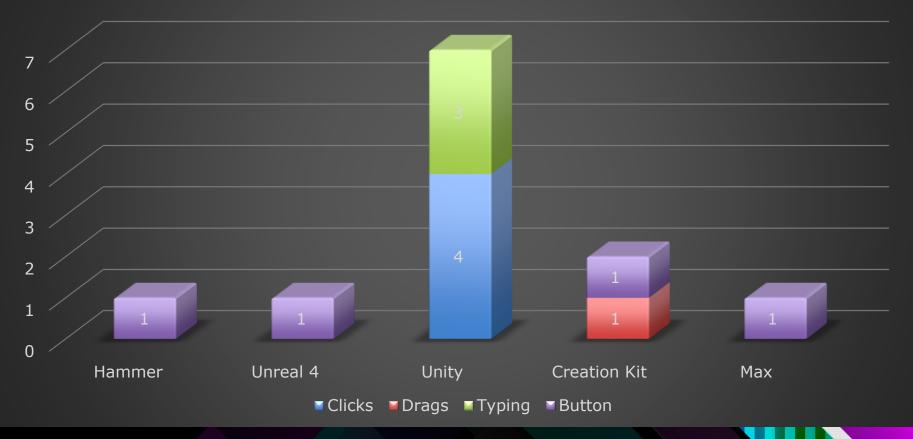


Snapping tools Take-away

- Large variety of snaps
- Vertex snap for modular games
- Off-grid snaps
- Create the possibility for complex level geometry
- Fast snap changes with hotkeys



Changing snaps, UX actions

























HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION: THERE ARE 14 COMPETING STANDARDS.



500N:

SITUATION: THERE ARE 15 COMPETING STANDARDS.



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Editing Geometry

What does a level designer need for flow?

 Be able to quickly and accurately edit geometry into any shape they might need



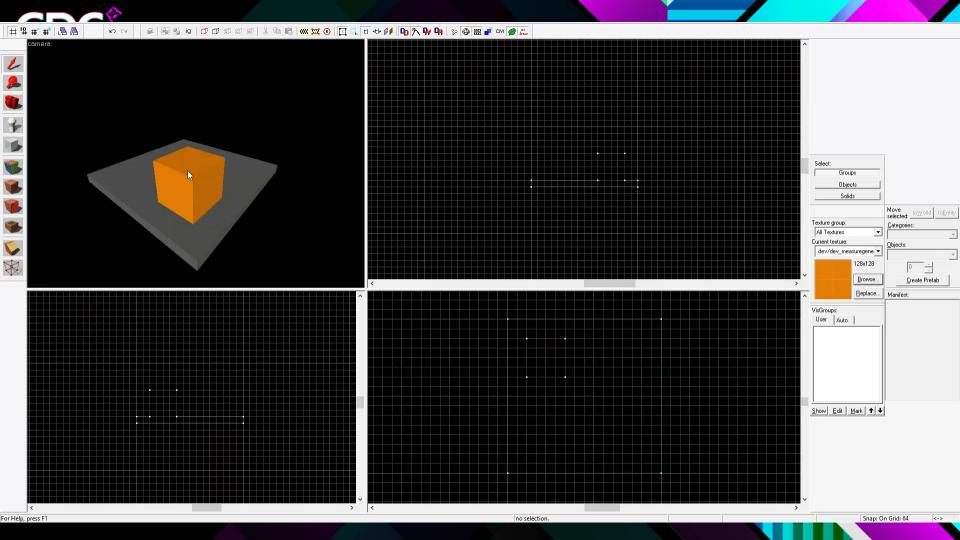


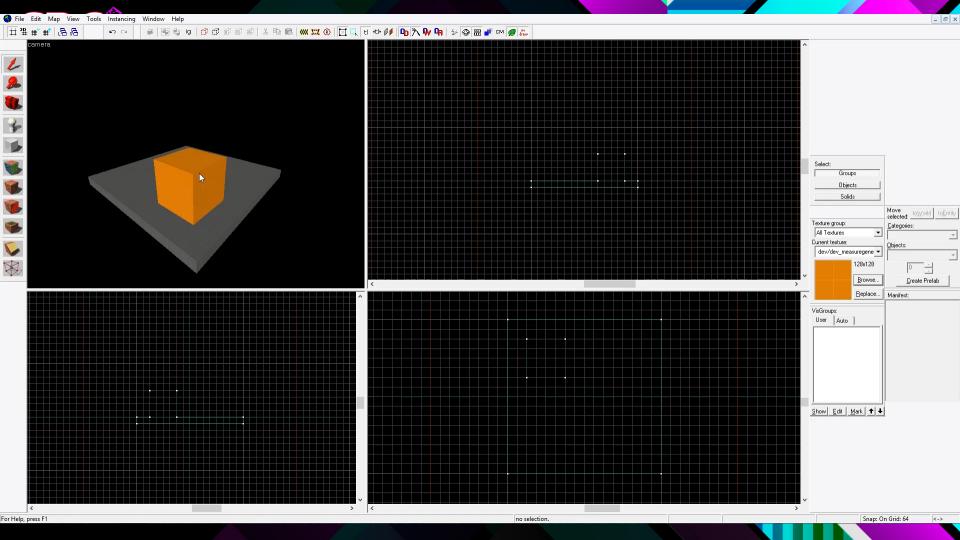




Editing Geometry



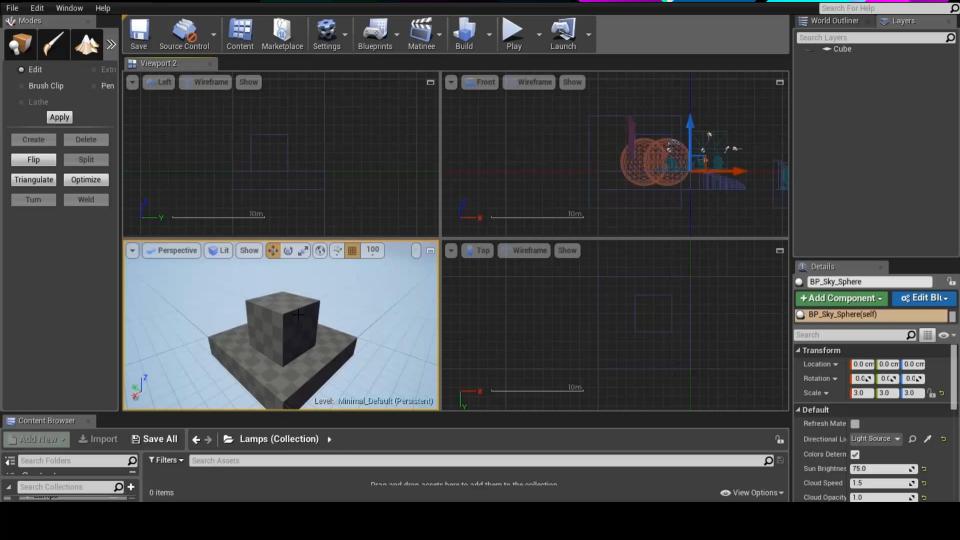


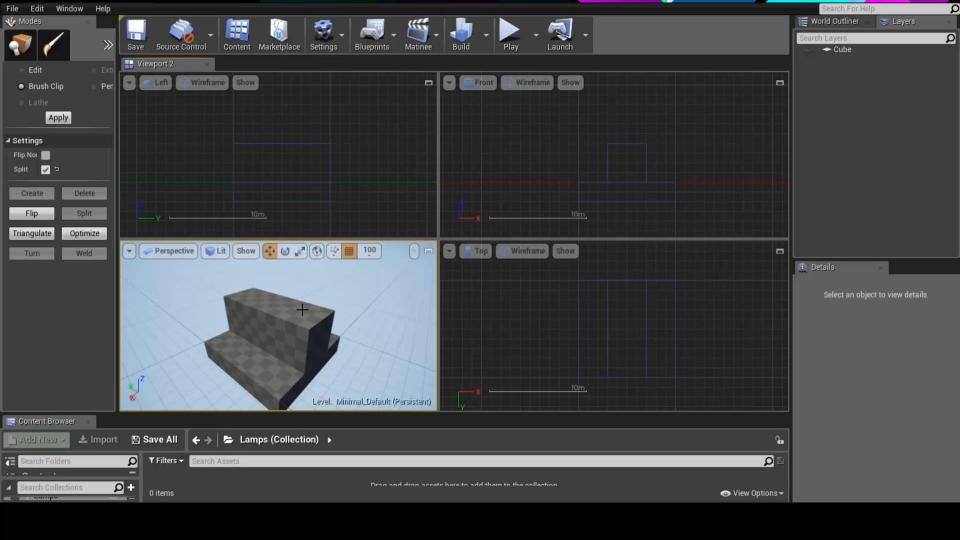




Editing Geometry



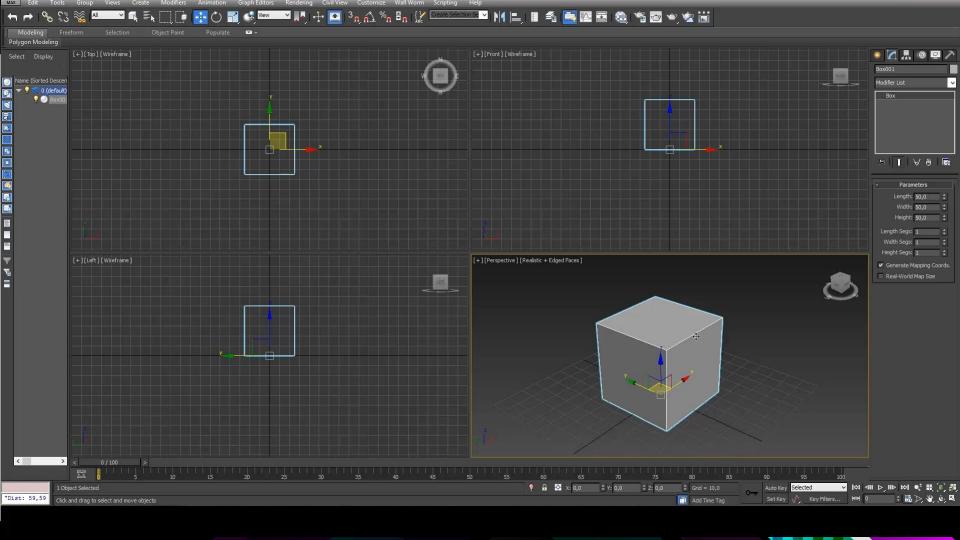






Editing Geometry







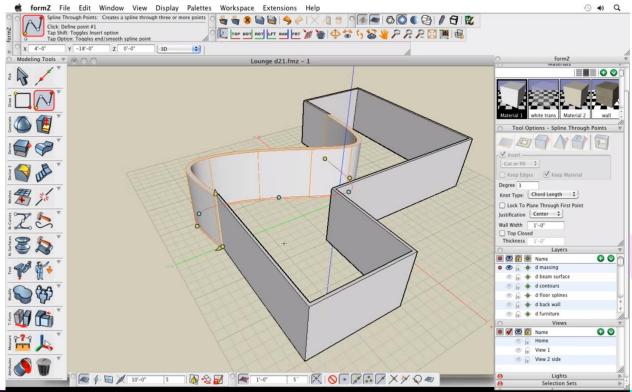
Editing Geometry Take-away

- Modifiers are insane
- Geometry editing tools need clear visuals



We can learn from other fields

- Architecture
- Design





Just because the pipeline is functional

Doesn't mean the pipeline is done

UX and UI matters for games UX and UI matters for editors

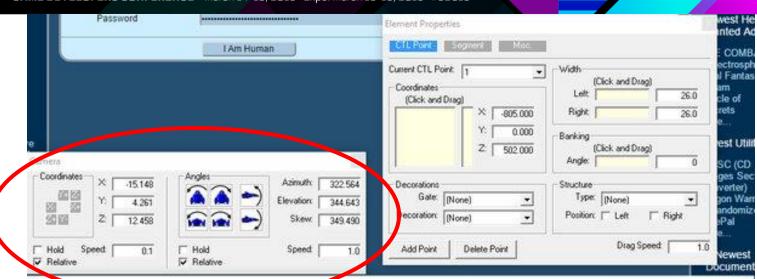






Preview

GAME DEVELOPERS CONFERENCE: March 14–18, 2016 · Expo: March 16–18, 2016 #GDC16





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What does a level designer need for flow?

 Be able to quickly edit terrain into any shape they might need

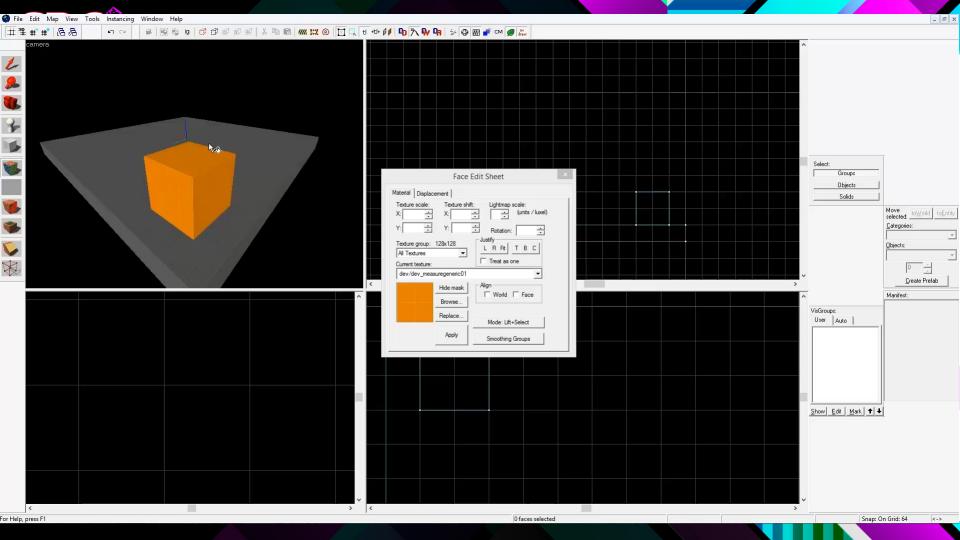






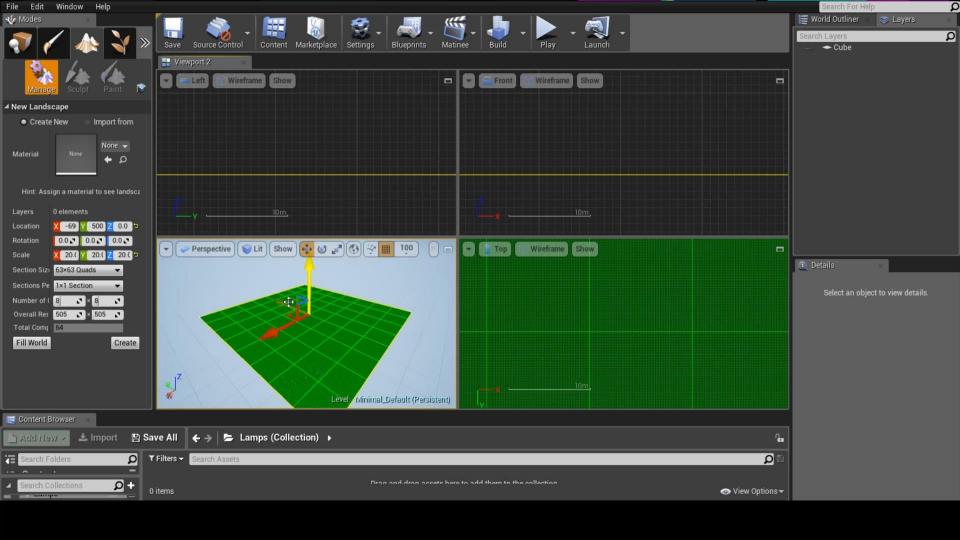




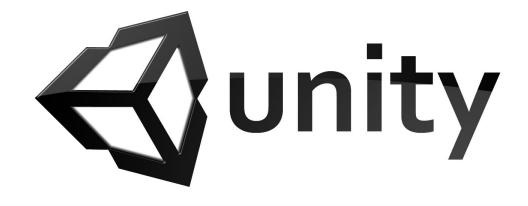


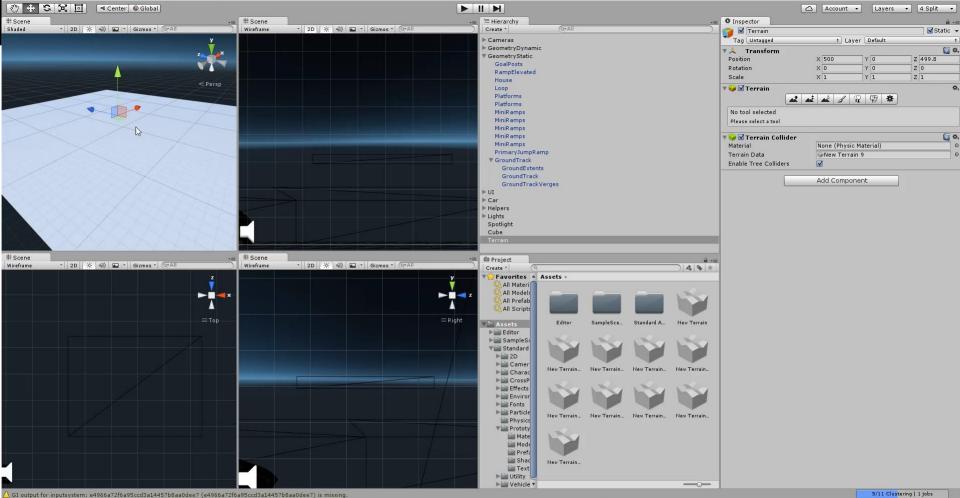












File Edit Assets GameObject Component Mobile Input Window Help

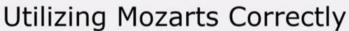


Terrain Creation Take-away

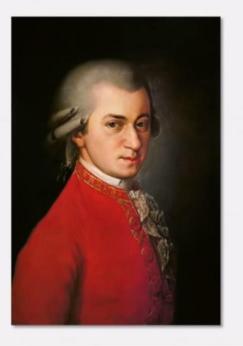
- Large terrain tools vs Small terrain tools
 - Unreal vs Hammer
 - Complexity vs Speed
- Height maps
- Texture maps







- Automate process
- · Avoid menial process task fatigue
- · Avoid rocket powered shit shoveling
- · Keep skilled workers doing skilled work
- · Allows for tiers of workers



MARCH 2-6, 2015 GDCONF.COM

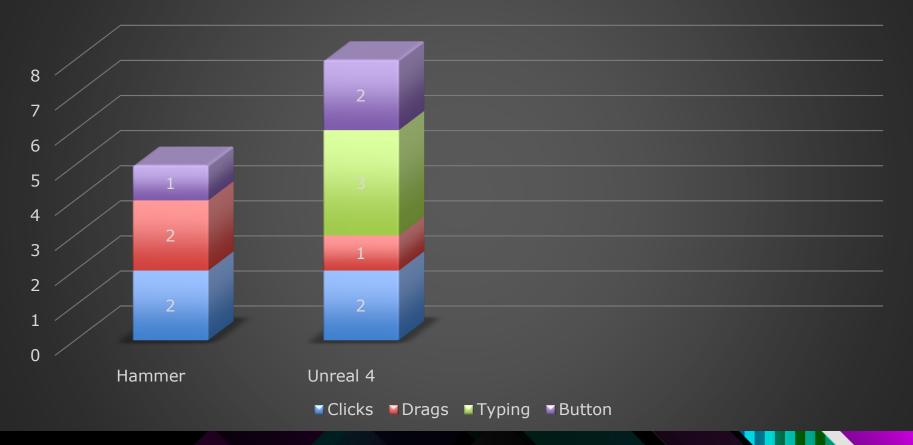


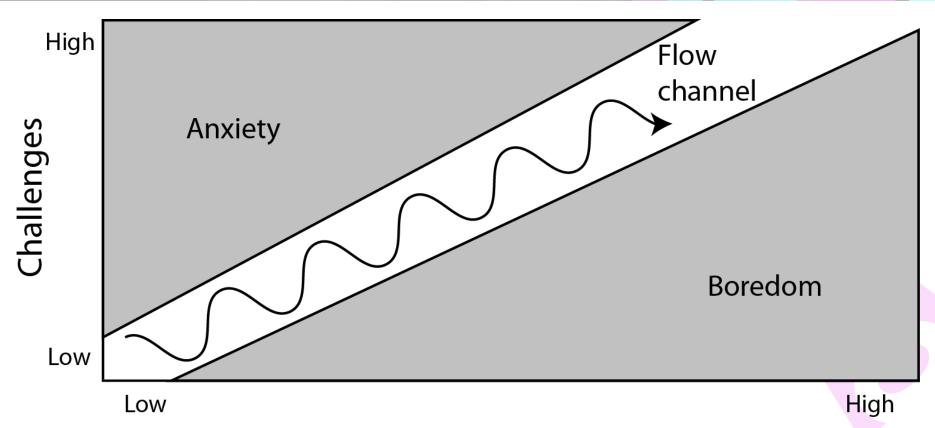






Time differences via UX actions





Skills



Fatigue happens, when one of these runs out:

- Physical energy
- Mental energy
- Psychological energy



Fatigue happens, when one of these runs out:

- Physical energy Uncomfortable
- Mental energy Lose creativity
- Psychological energy Cannot work



Just because the pipeline is functional

Doesn't mean the pipeline is done



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What does a level designer want from texturing tools?

- Find available textures quickly
- Texture basic and complex geometry quickly
- Retexture large sections of the map quickly and accurately

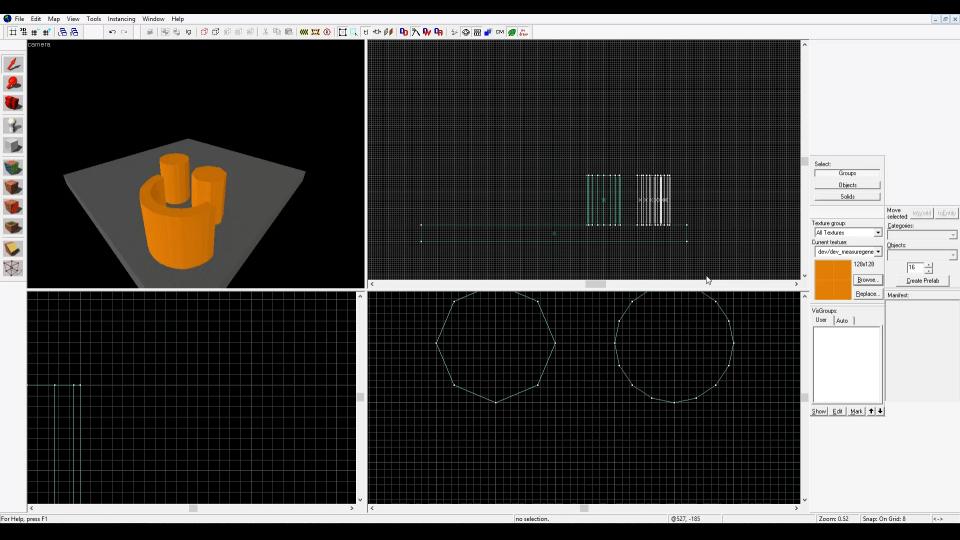


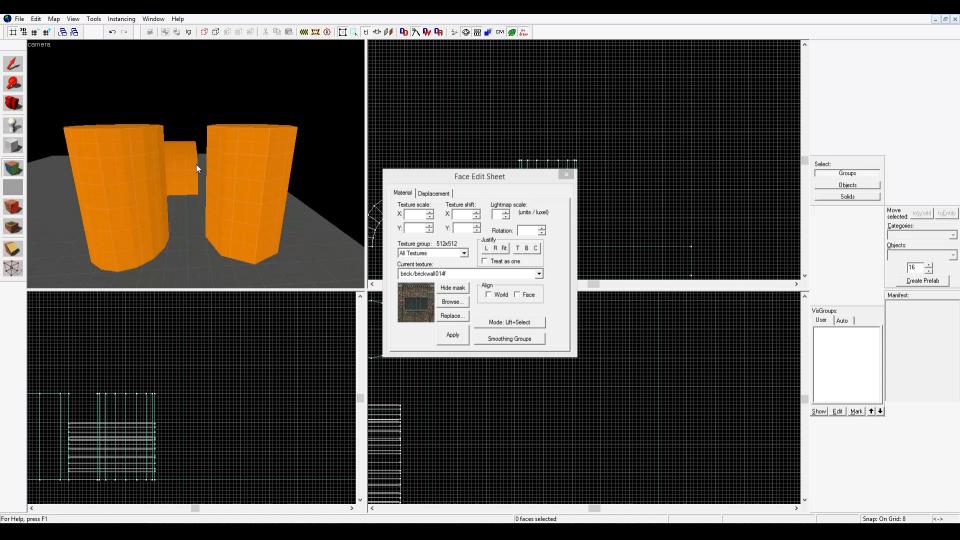






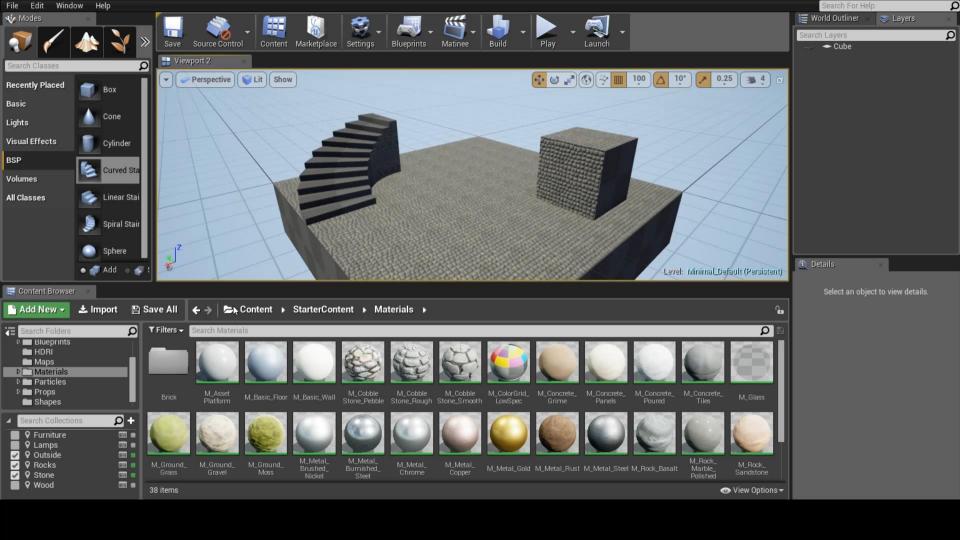


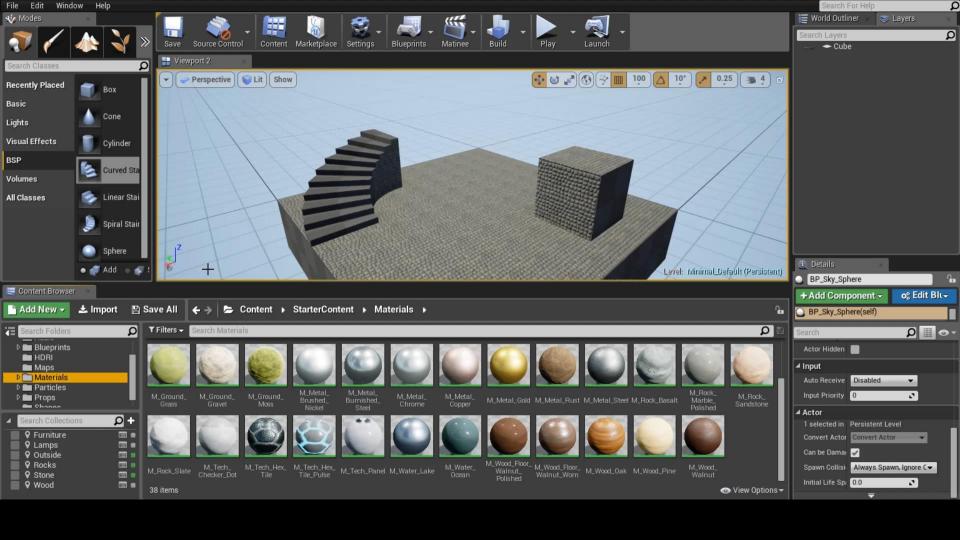


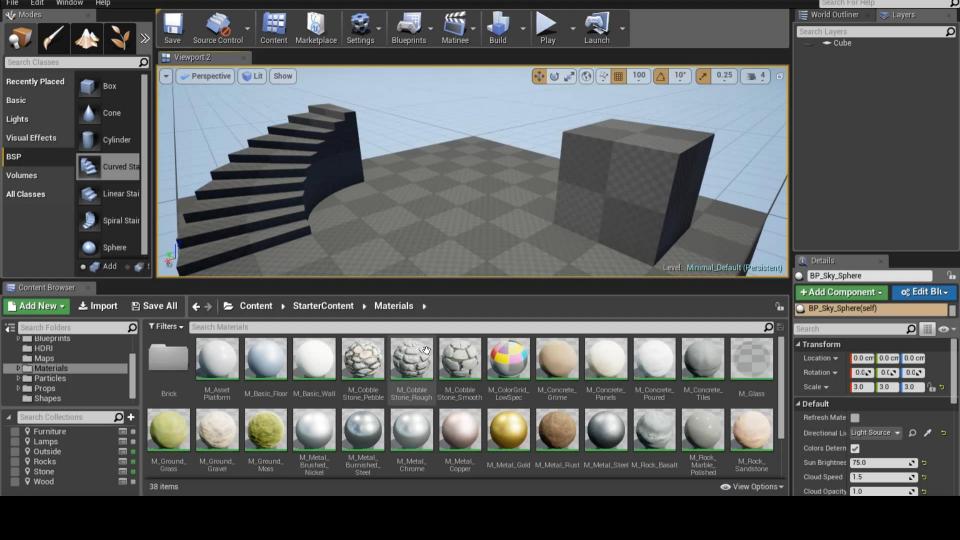






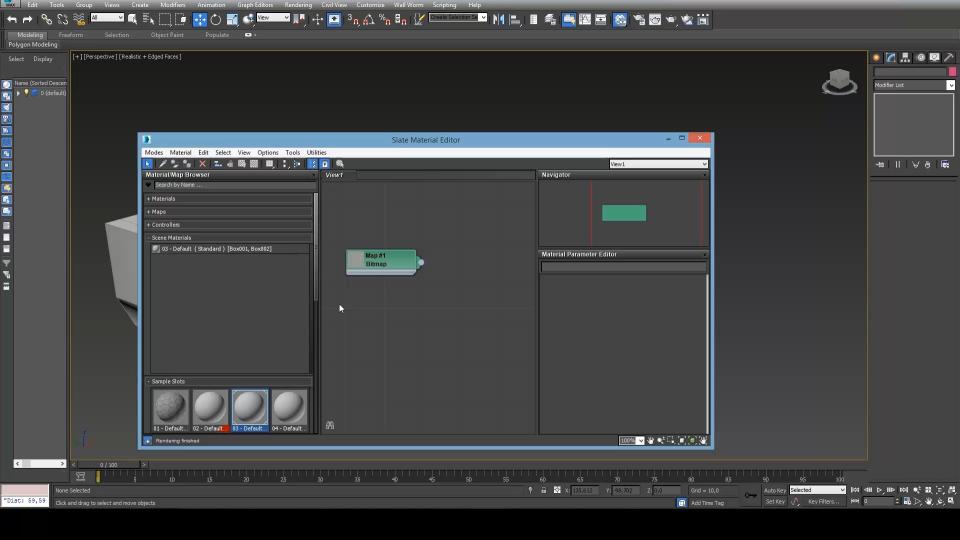










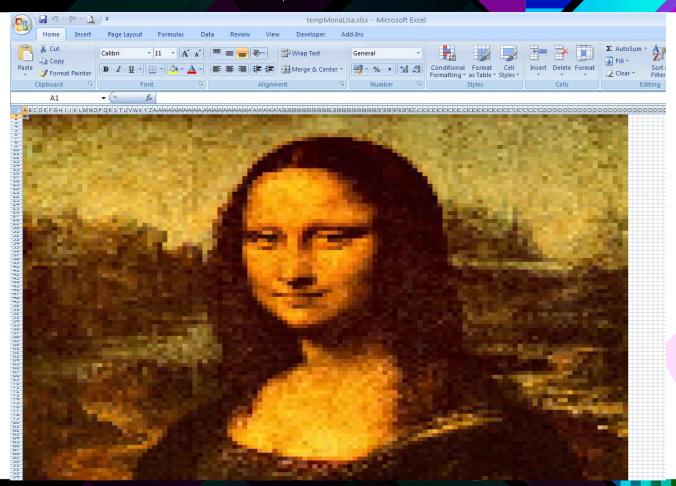




Texturing Take-away

- Fast texture application
- Fast UVing
- Texture archiving/searching/lookup system
 - Collection system (Unreal)
 - Tag system (Unity)







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What does a level designer want from lighting tools?

- Place lights quickly
- Change their settings quickly
- Quickly see what they look like



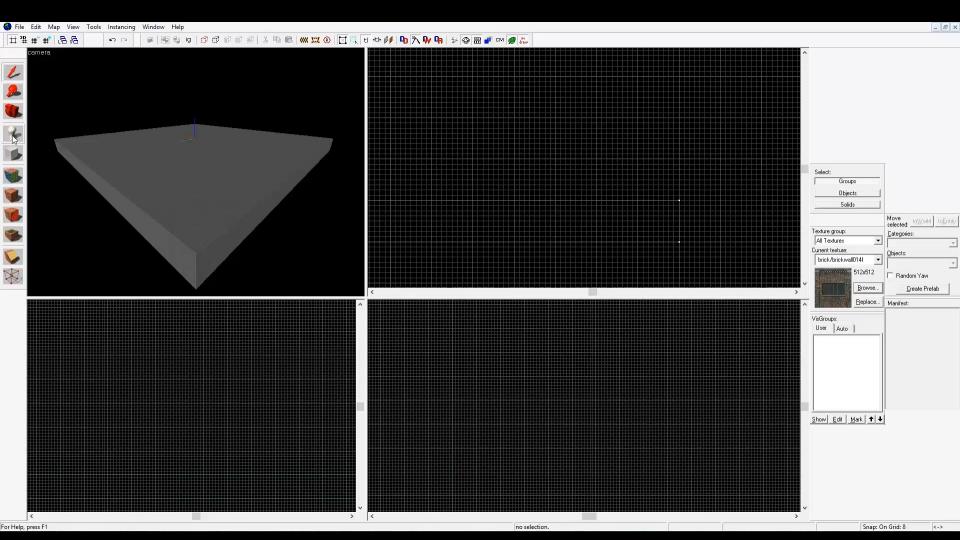






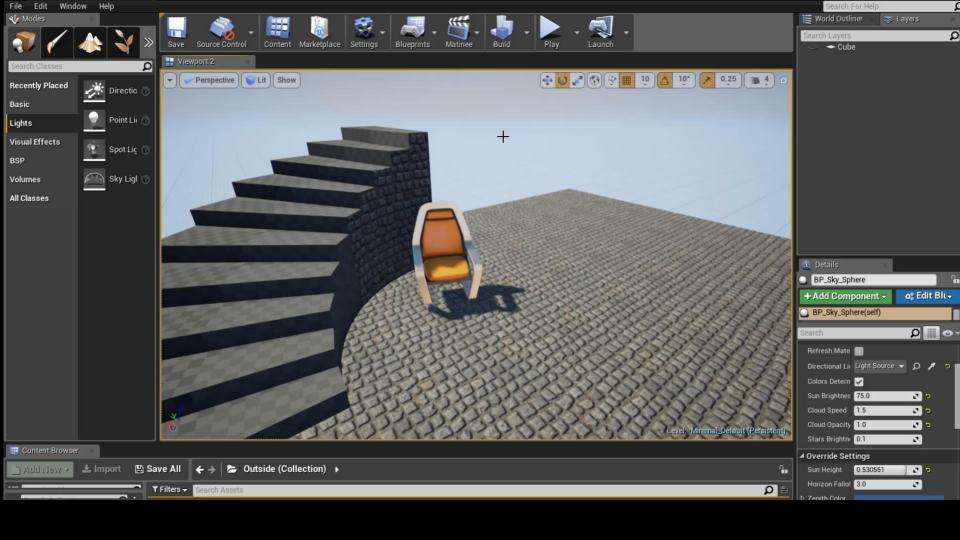








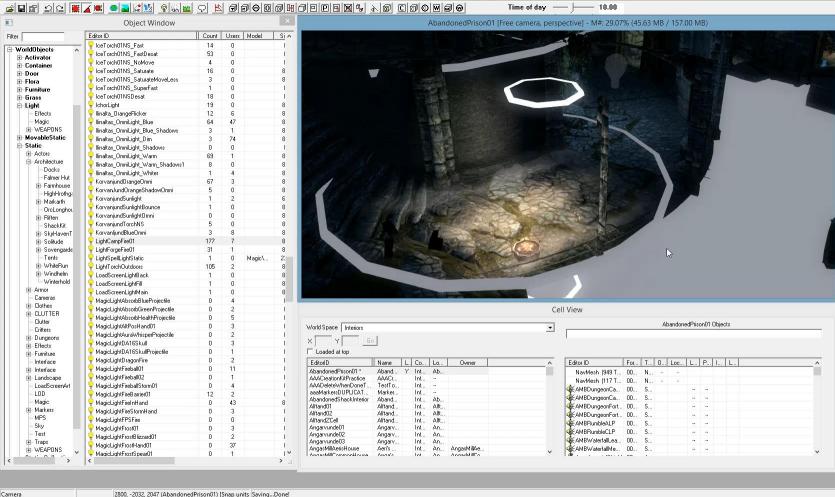




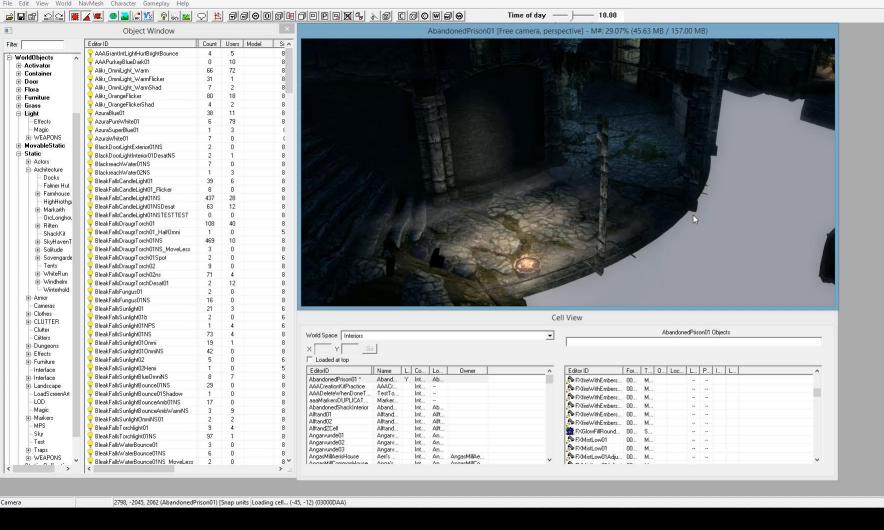






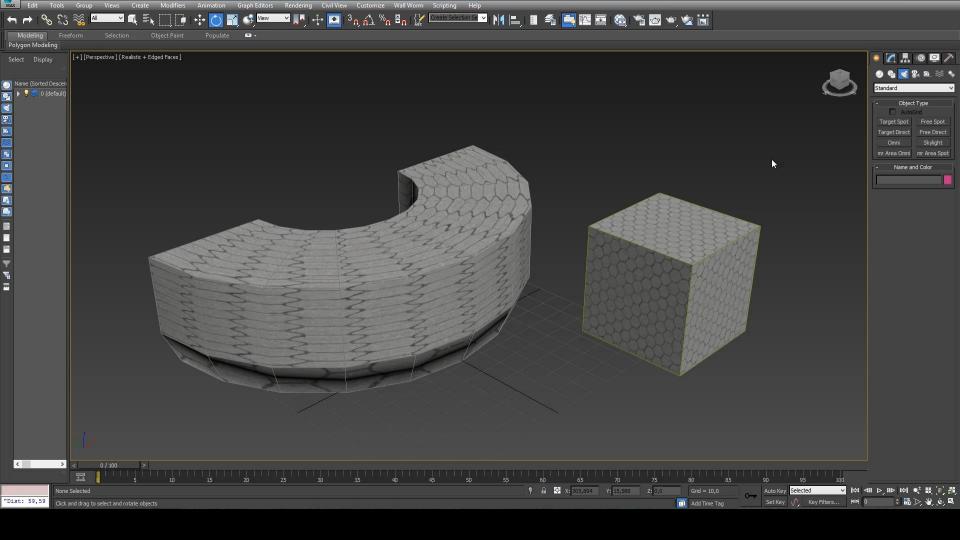


File Edit View World NavMesh Character Gameplay Help











Lighting Take-away

- Live lighting
 - Engine dependent
- Huge pre-set list to choose from
- Visible guidelines
- Compiling/Baking for better results



GDC Death to Drawers: How a Mythbuster Organizes His Workshop

Step one is getting rid of tool boxes and drawers.



By Eric Limer Aug 7, 2015 @ 3:06 PM Home Tools



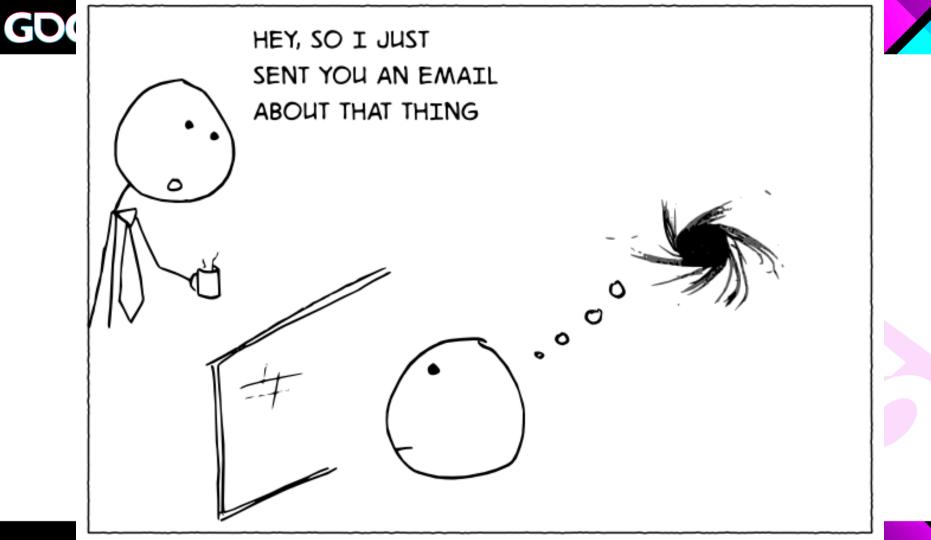
834 Shares

When accomplished prop-maker and Mythbuster Adam Savage steps into his workshop, he's no doubt getting down to serious business. And luckily for all of us who enjoy his work , he's meticulously designed his workshop so that it wastes none of his precious time. We could all stand to learn a thing or two from his clever approach.







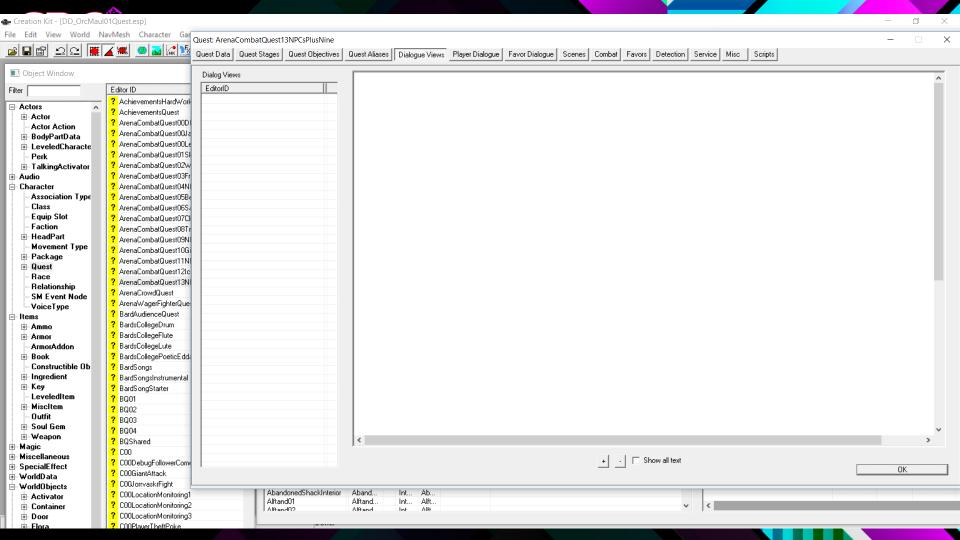


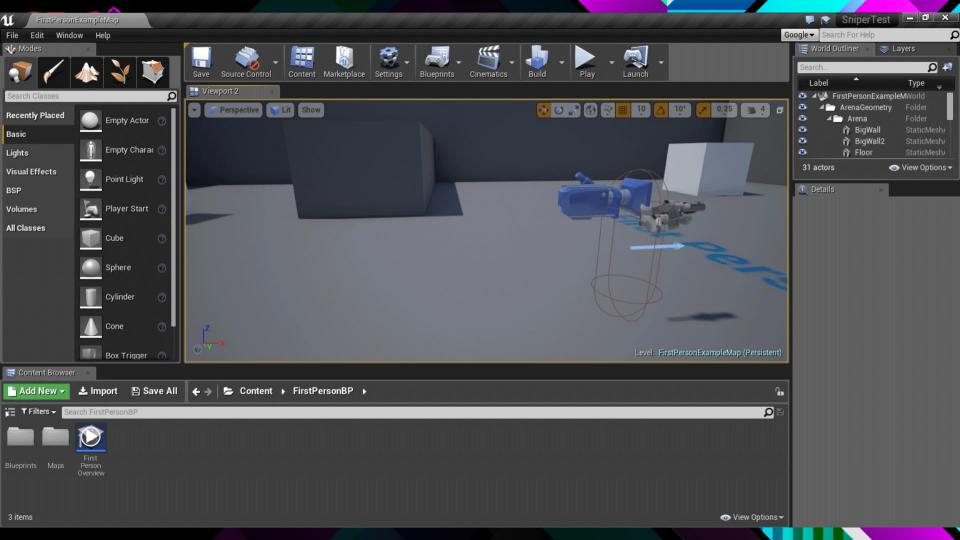


Getting into the zone

- Create space for creativity and flow
- Remove trivial barriers
- Set up for good quality content

Don't click through 5 tabs







- Navigating the editor
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What does a level designer want from importing assets?

Be able to quickly get any assets into the editor



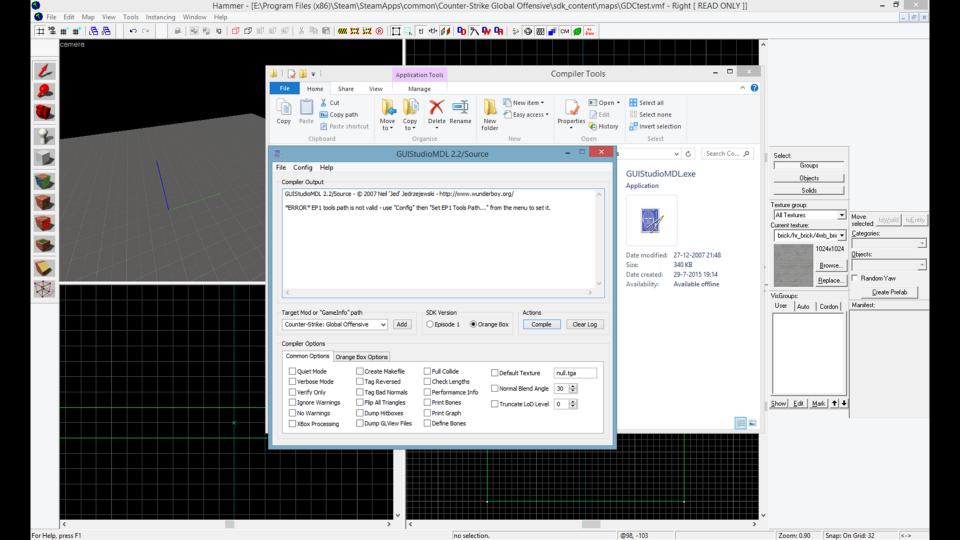












Navigation

Support

Steam Community

Source SDK Hub Steam Games

Tools

What links here Related changes Printable version Permanent link

Page information

Page Discussion

3DS Max

One of the most popular modeling programs in game design, it is a very powerful toolbox. Discreet, a division of Autodesk, makes this program along with several others for creative professionals, in not only the entertainment software industry, but for motion

pictures, visualization, architecture, and many other professions. 3ds Max comes with several options for modeling solids, including polygonal modeling, NURBS modeling, and patch modeling. GMax, a free version of this program specifically designed for modding games has been discontinued.

You can now use 3ds Max as your level editor with Wall Worm. You can learn more about this by reading Hammered to the Max. A Hammer User's Guide to 3ds Max &

Tutorials

- Making flexes using 3ds Max by Cannonfodder commented by Snotball
- Creating Flex VTA files with 3D Studio Max using Wunderboy's VTA exporter.

Plugins

- .smd Exporter and Importer

 by Cannonfodder ■ 3DS Max 9/2008/2009/2010&2011/2012 SMD exporter • 3DS Max 9/2008/2009/2010&2011/2012 SMD exporter
- 3DS Max 9/2008/2009/2010&2011/2012 SMD importer -
- 3DS Max 9/2008/2009/2010&2011/2012 VTA exporter ■
- 3DSMax VTF plugin
- Game Level Builder .map Exporter → by Maple3D
- Note: This plugin has been retired by the developer. An older version is still available on the developer's site.
- Convexity .VMF Exporter by Maple3D
- Note: This is a newer commercial version that replaced GLB mentioned above.
- Wall Worm Model Tools Wall Worm Model Tools for 3ds Max .

 - Note: Wall Worm includes: DMX Exporter, SMD Exporter, VTA Exporter, SMD Importer, QC generator, VMF Exporter, VMF Importer, MAP Exporter, MAP Importer and more.
- Sky Writer

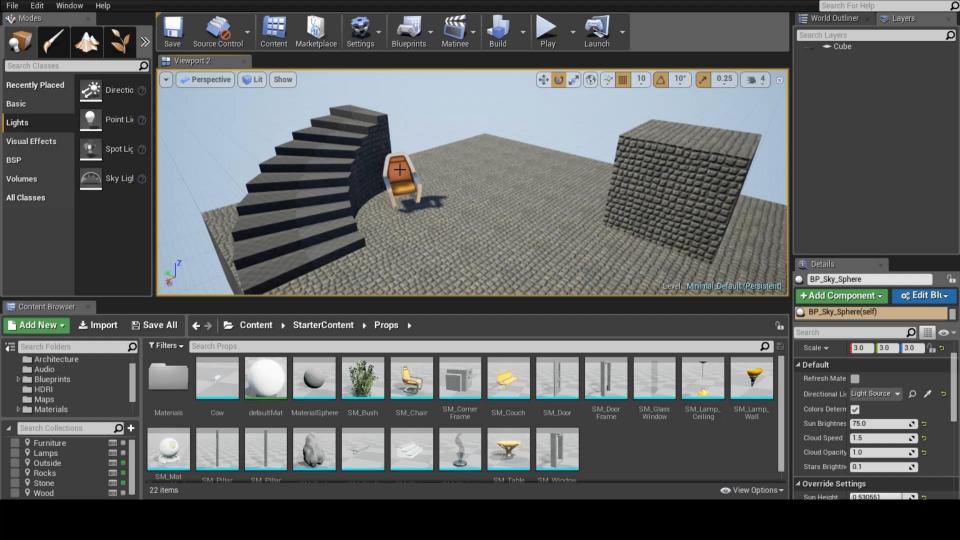
External links

- Autodesk Official website
- 3DS Max Official web page.
- Design3 3ds Max modeling Video Tutorials

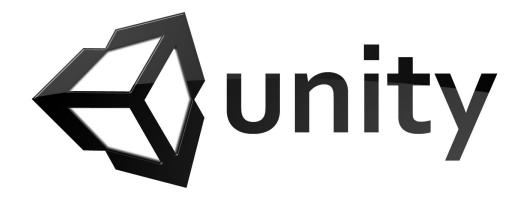
Categories: Third Party Tools | 3DS Max

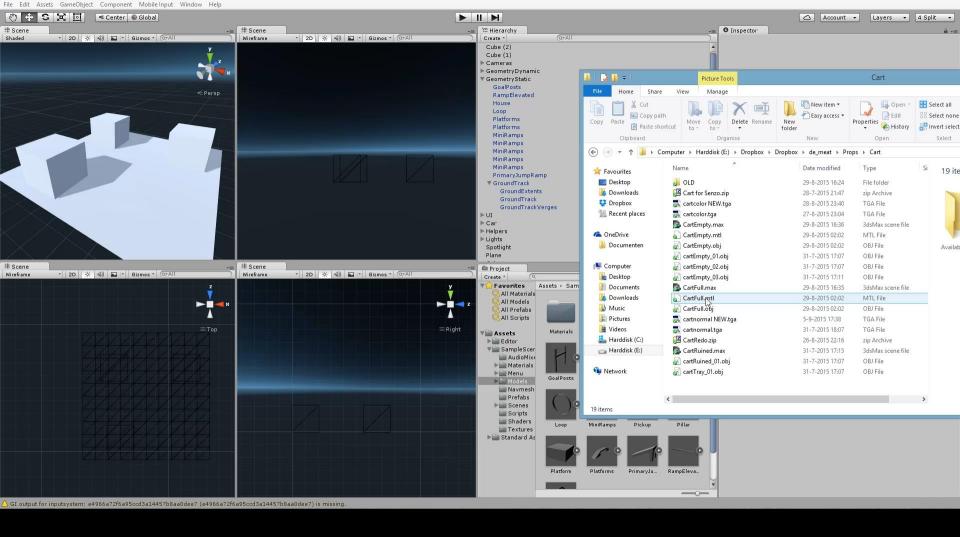






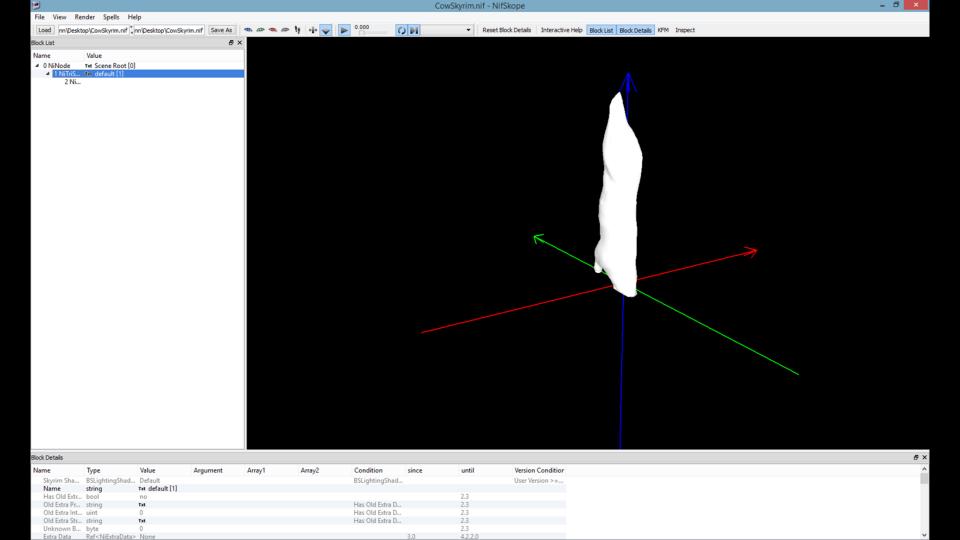












Unofficial 3ds Max Nif Importer-Exporter

This is a fork of the niftools.org 3ds max nif importer-exporter. I am only building and releasing as a courtesy to the community and do not plan on maintaining it much as the multi-year gap in releases should indicate.

The plugin currently consists of an exporter, importer and a miscellaneous properties (Collision, Dismemberment, Furniture Markers) for 3ds Max and gmax for read and writing Gamebryo/Netimmerse related files and specifically targeted at Skyrim.

A wiki for the 3ds Max plugins is available at: http://www.niftools.org/wiki/index.php/3ds_Max

Testing

While all versions have been compiled, only 3ds Max 2015 and 3ds Max 2016 have received any testing and that will continue to be the case as I do not intend to install the old versions at this time.

Requirements

3D Studio Max 2015, 2016 (Partially Tested)
3D Studio Max 5, 6, 7, 8, 9, 2008, 2009, 2010, 2011, 2012, 2013, 2014, gmax 1.2 (Untested)

Installation

Installer

The installer will configure the plugins for any max releases it detects on your machine. It will also optionally configure texture and mesh paths for various games that we know their settings for as a convenience.

If you insist on using the zip version then manually copy files to correct locations: Copy NifPlugins.dlu, to your 3dsmax\plugins directory.

Copy MaxNifTools.ini to the correct plugcfg directory:

Windows XP:

%APPDATA%\Autodesk\3dsMax\<version>\enu\plugcfg

Windows Vista and Greater:

%USERPROFILE%\AppData\Local\Autodesk\3dsMax\<version>\enu\en-U5\plugcfg %USERPROFILE%\AppData\Local\Autodesk\3dsMax\<version> - 64bit\enu\en-U5\plugcfg

emax notes

Nifflugins.dlu goes in gmax\plugin folder
MaxNifTools.ini goes in gmax\plugCFG folder
winmm.dll goes in gmax folder where gmax.exe is located.
Do not place it in the windows system folder.

<u>Usage</u>

Exporter

Funart files urine "File | Funart | Nationmarce/Famaham /* NIF * VF









Importing assets Take-away

- Clicking and dragging
- Directory load system
- Automatic import for textures
 - Avoids manual errors
- Automatic icon creation





Spiral of good UX

Creative problem solving

Happy developers

Faster development time

Quality Content

Spiral of bad UX

One-way problem solving

Unhappy developers

Slower development time

Inferior Content



Solving a signposting issue

Leveldesigner

- Geometry
- Import assets
- Lighting
- Playtests in-editor

Programmers

 New arrow system

Producers

- Find a way for the teams to communicate effectively
- Find a way to scope this within the time limits

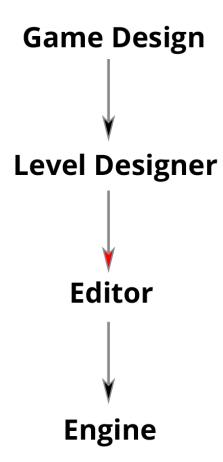
Artists

 New arrow model or art

QA

 Test new arrow system "There is a direct correlation between a tool being more revolutionary and the difficulty of getting people behind that process, simply due to the perceived risk"







- Navigating the editor
- Creating geometry
- Snapping
- Editing geometry
- Terrain
- Texturing
- Lighting
- Importing assets
- Placing assets
- Playtesting





What does a level designer want from placing asset tools?

- Be able to quickly find assets
- Be able to quickly place assets
- Reposition quickly on both the small and large volumes

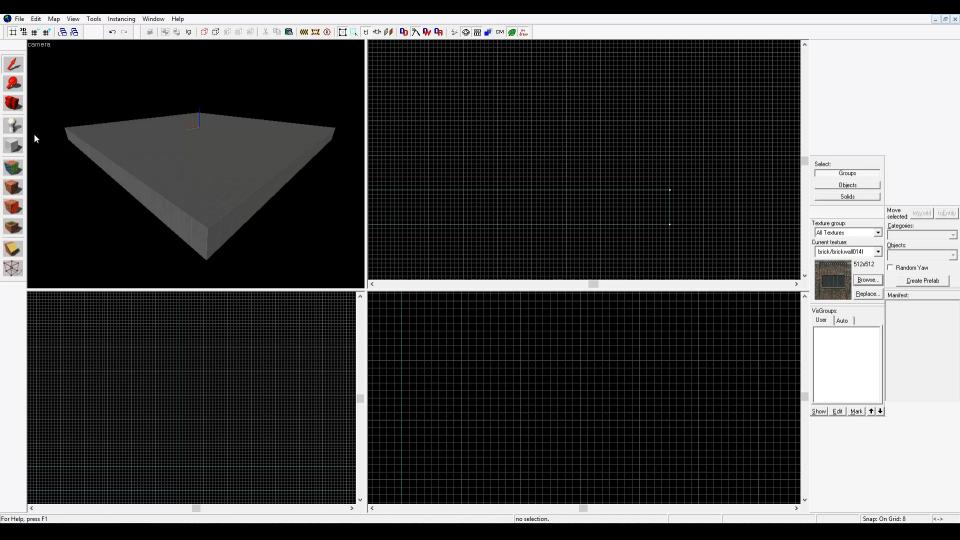


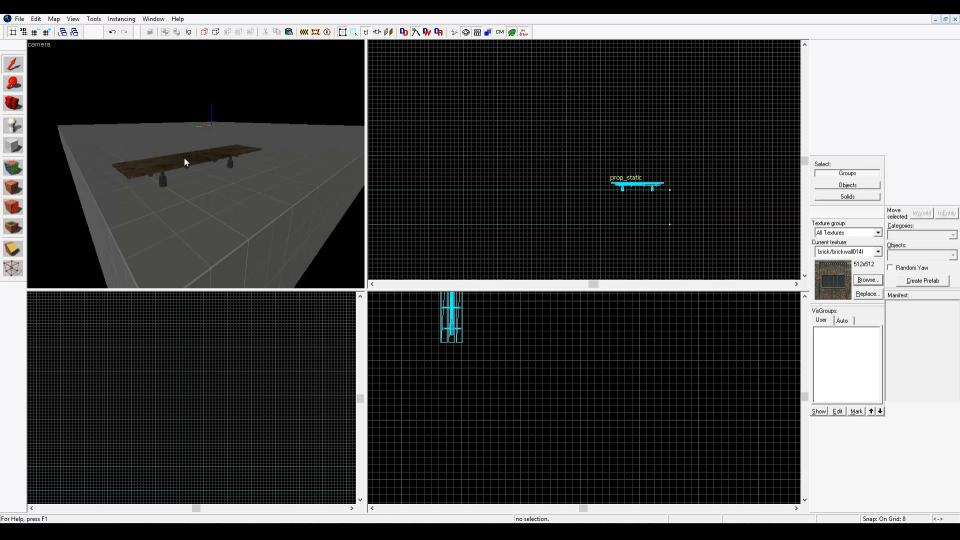


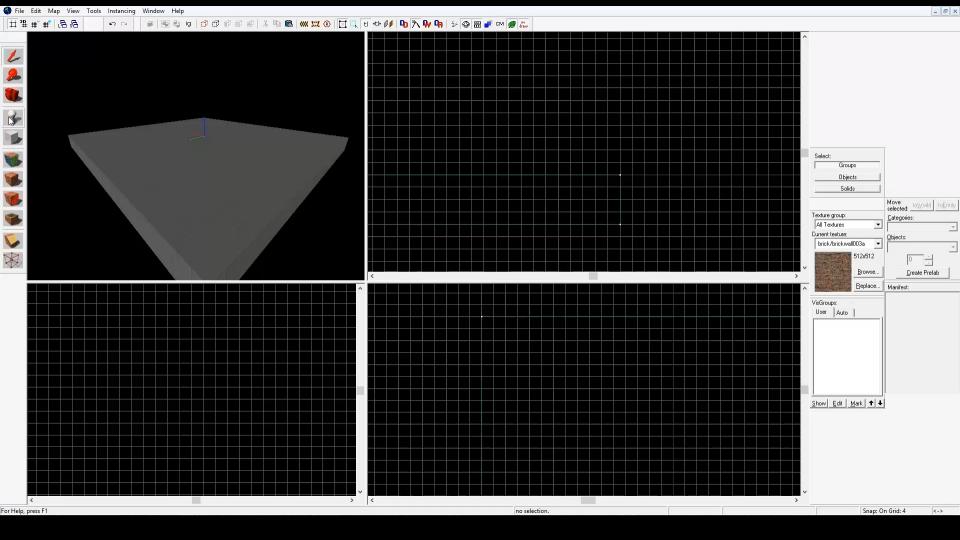






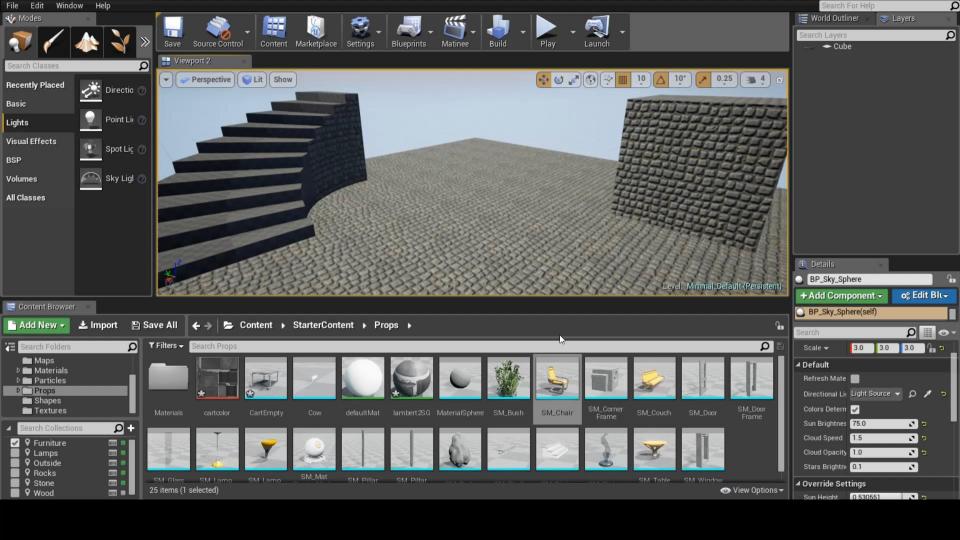






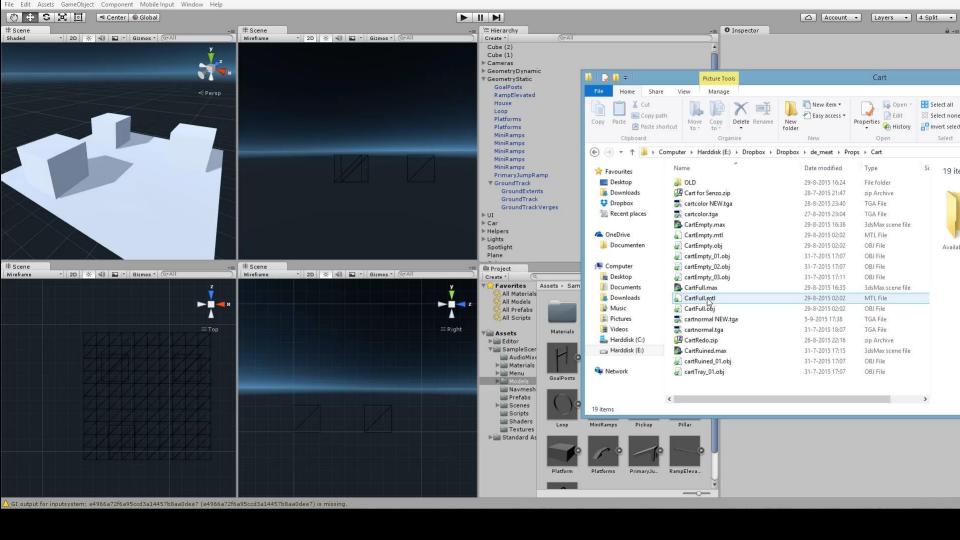






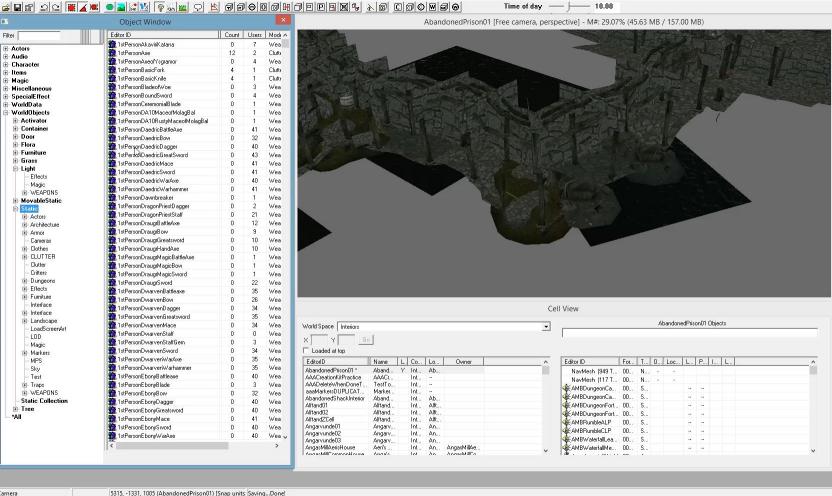












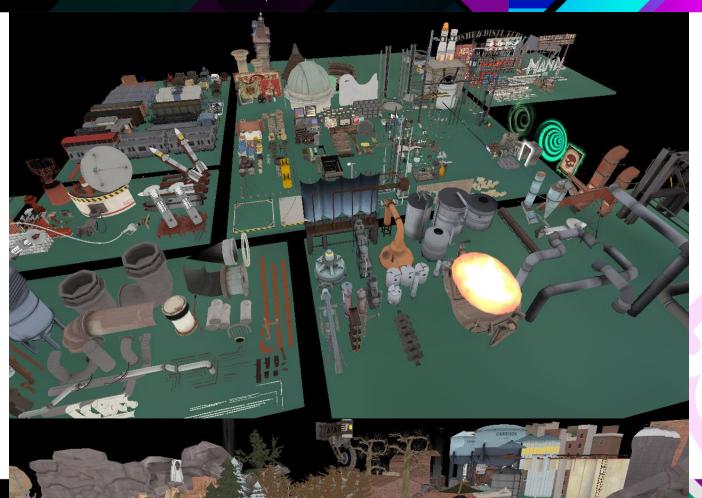
File Edit View World NavMesh Character Gameplay Help

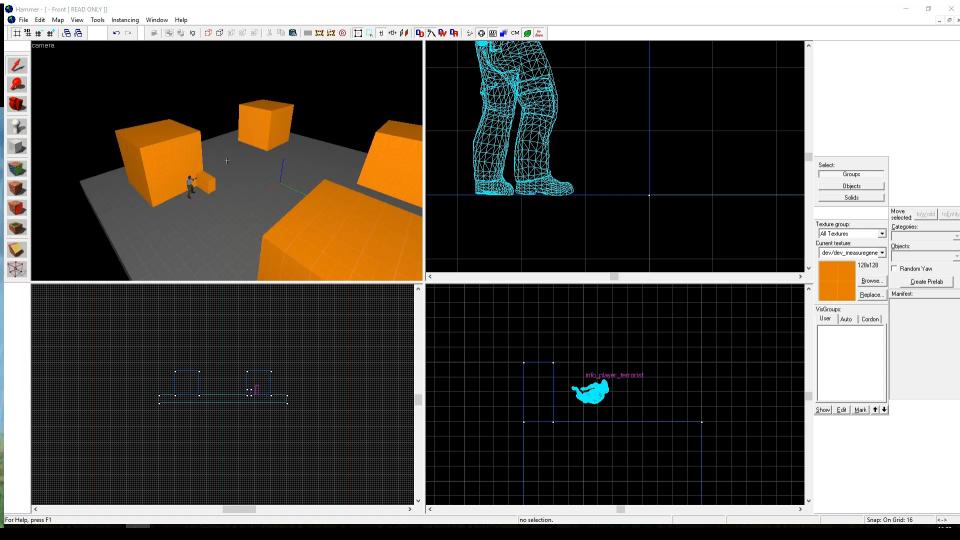


Placing assets Take-away

- Icon searching is fast
- Collection/Tagging systems
- Positional copying
- Instancing/Prefabs





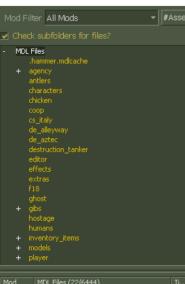


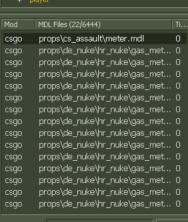


Name that model!

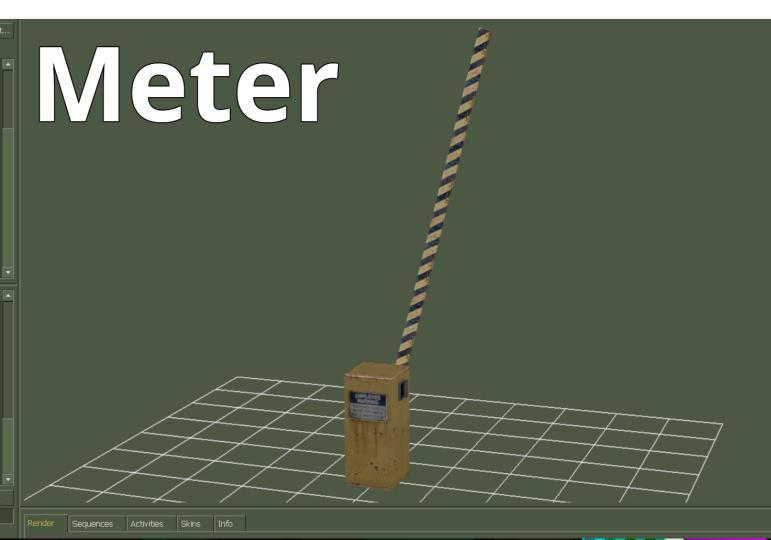


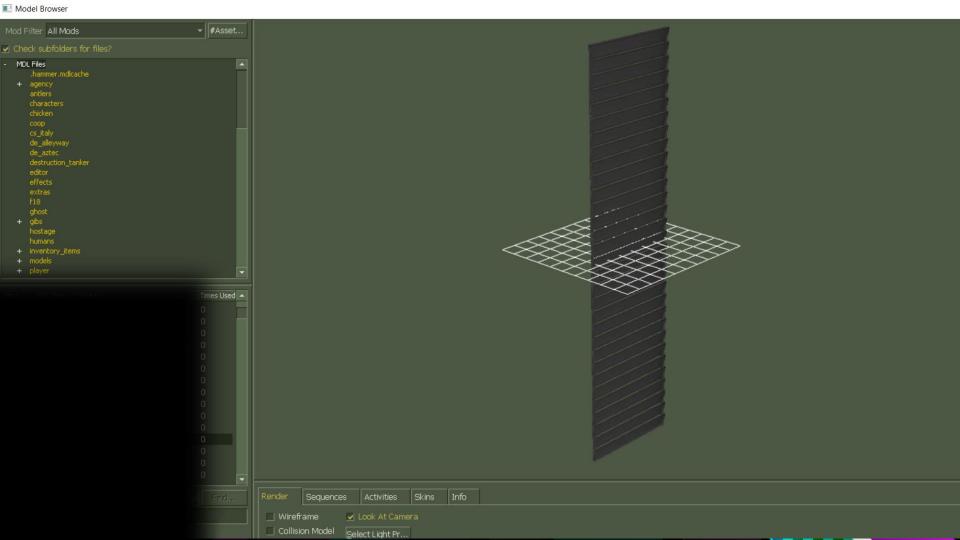




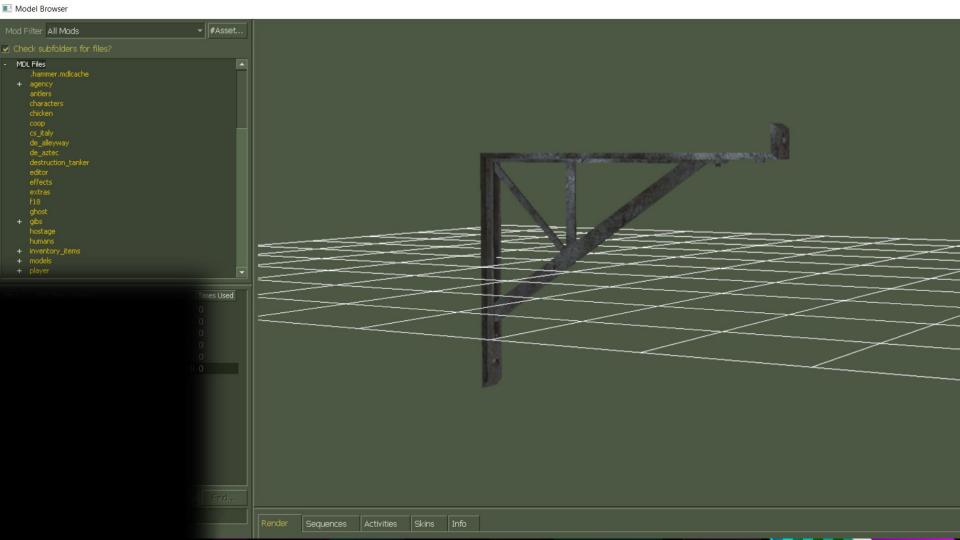


Filter meter



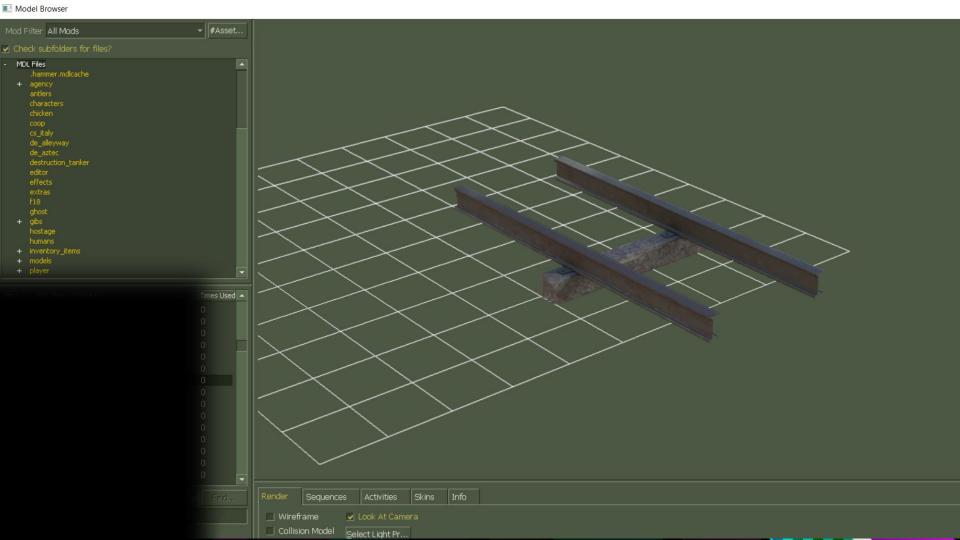








Model Browser d Filter All Mods scaffolding_building_edge_support de aztec MDL Files (170/6444) Times Used props\gq_tibet\awningsupport_single.mdl props\gq_tibet\awningsupport_double.mdl props\de_vertigo\stairsupport_tall.mdl props\de_vertigo\stairsupport_short.mdl props\de_vertigo\scaffolding_building_edge_support.mdl 0 props\de_vertigo\lift_support.mdl props\de_vertigo\256_support_jack.mdl props\de_train\hr_t\metal_support_a\metal_support_b... 0 props\de train\hr t\metal support a\metal support a... 0 props\de_train\hr_t\crane_a\crane_a_support.mdl props\de overpass\overpass bridge support.mdl props\de_nuke\hr_nuke\wires_001\wires_005a_suppor... 0 props\de_nuke\hr_nuke\wires_001\wires_004a_suppor... 0 props\de_nuke\hr_nuke\wires_001\wires_001b_suppor... 0 props\de_nuke\hr_nuke\wires_001\wires_001b_suppor... 0 Seauences Activities Filter support Wireframe Collision Model







- Navigating the editor
- Creating geometry
- Snapping
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Playtesting

What does a level designer want from playtesting?

 Quickly get in and out of any part of the level to playtest and iterate





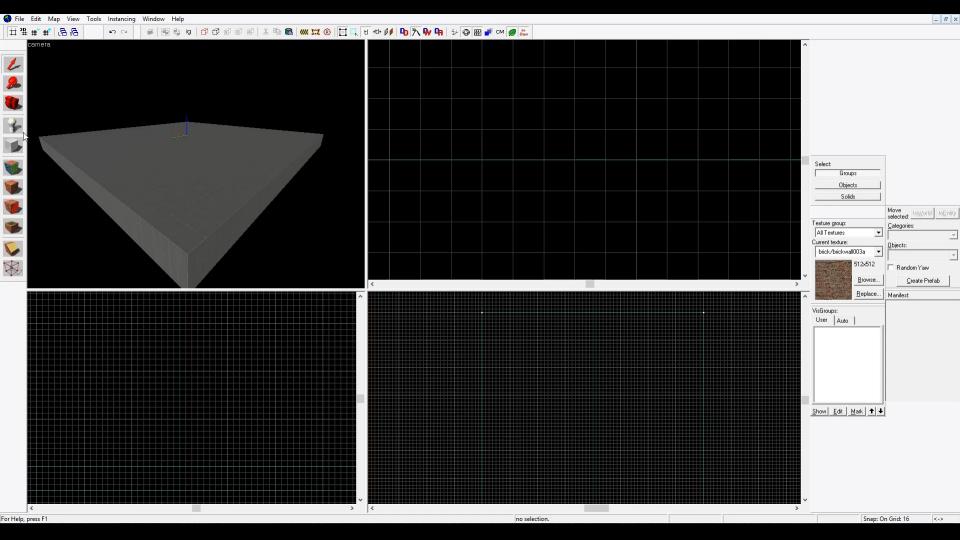






Playtesting

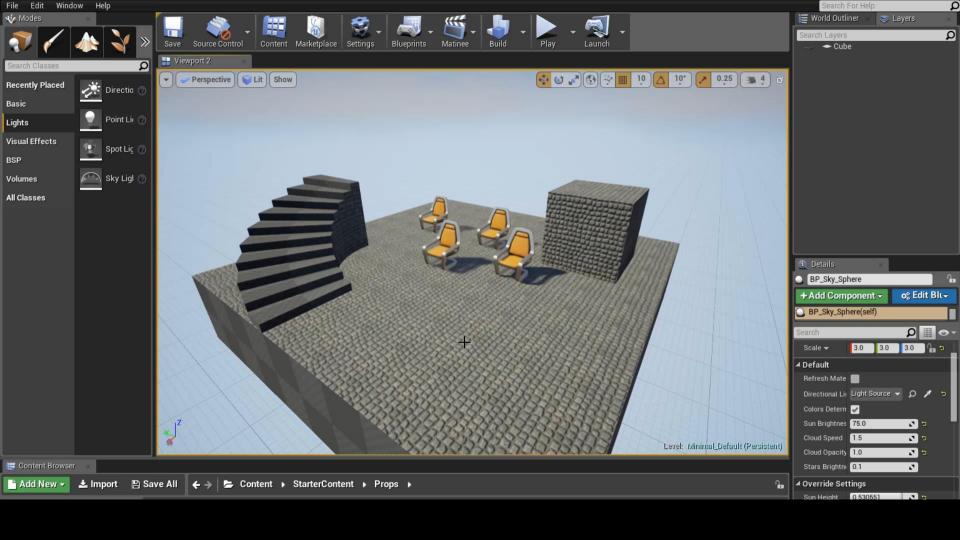






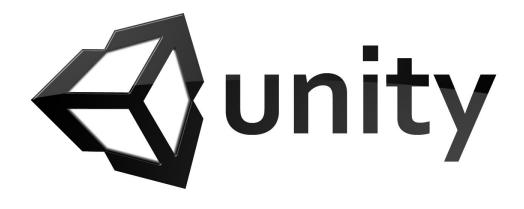
Playtesting

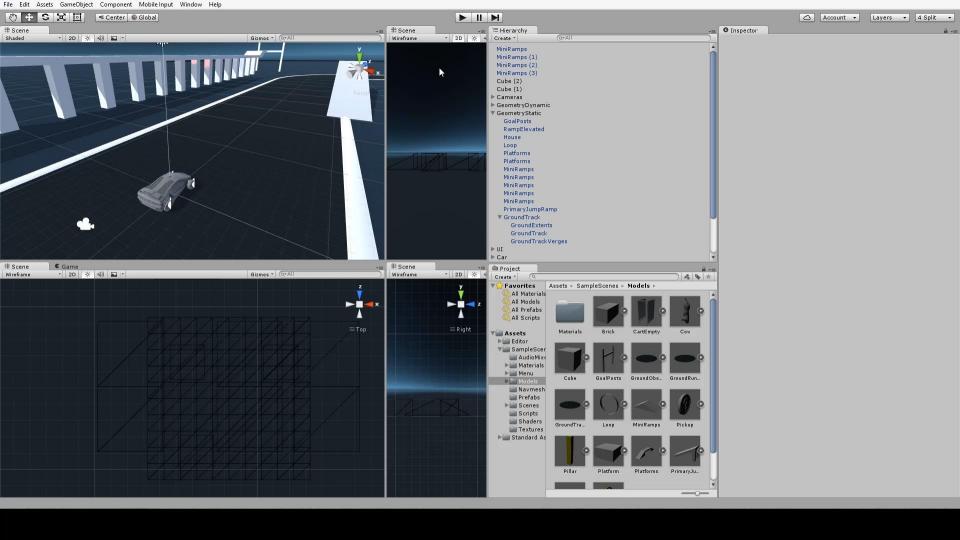






Playtesting

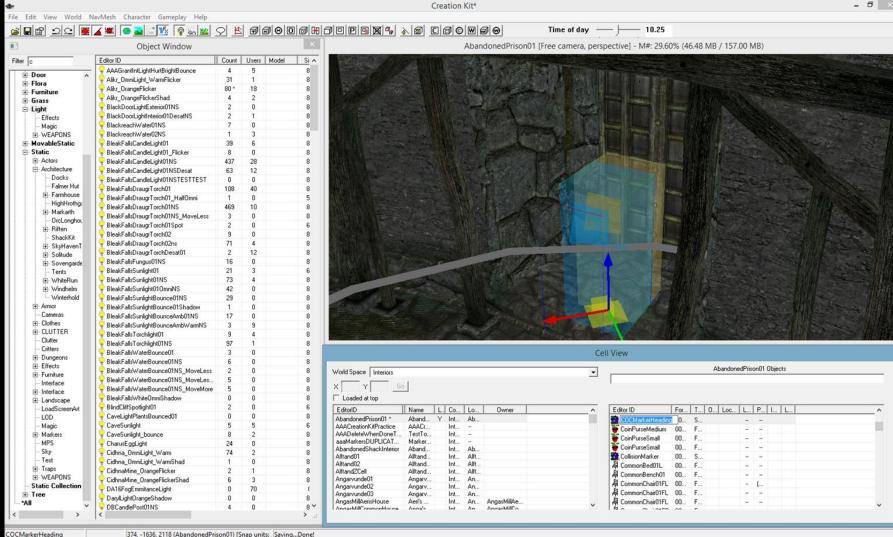






Playtesting







Playtesting





Playtesting Take-away

- In editor check
- Can keep game & editor running
- Click location to play
- Fly & Edit during pausetime
- All engine dependent













Look at other games for inspiration

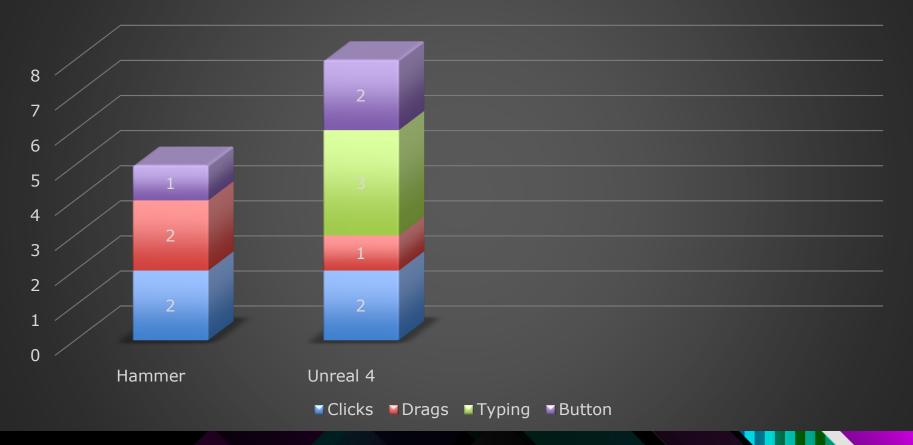
Look at other editors for inspiration



Interesting design comes from iteration and trying things out. If the editor does not facilitate this, then the design of the game will stagnate



Time differences via UX actions



GOC -

Rayman Legends: The Design Process Within the UbiArt Framework

By: Chris McEntee

Chapter Selection

How Is It Done?

What's the Magic Tech?

What is the UbiArt Framework?

Rayman Origins and Legends

Useful Systems and Tools

Gamepaly Geometry: Friezes

Pipe Friezes

Meta Frieze

Bezier Friezes

Whitebox Friezes

Whitebox Prototypes

Whitebox Sketching

LUA Scripting

Sequence Editor

O---



GAME DEVELOPERS CONFERENCE: 2014

MARCH 17-21, 2014 GDCONF.COM

What is the UbiArt Framework?

- 2D game engine
- · Full HD at 60FPS
- Artist friendly



















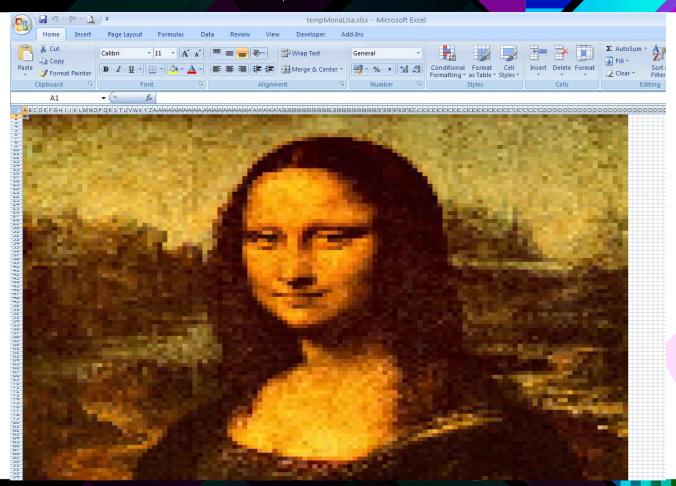
Just because the pipeline is functional

Doesn't mean the pipeline is done

UX and UI matters for games UX and UI matters for editors





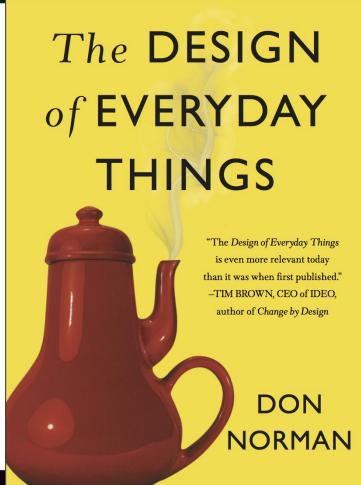




Fatigue happens, when one of these runs out:

- Physical energy Cannot move
- Mental energy Lose creativity
- Psychological energy Cannot work







Getting into the zone

- Create space for creativity and flow
- Remove trivial barriers
- Set up for good quality content

Don't click through 5 tabs



Spiral of good UX

Creative problem solving

Happy developers

Faster development time

Quality Content

Spiral of bad UX

One-way problem solving

Unhappy developers

Slower development time

Inferior Content



Solving a signposting issue

Leveldesigner

- Geometry
- Import assets
- Lighting

Programmers

 New arrow system

Producers

- Find a way for the teams to communicate effectively
- Find a way to scope this within the time limits

Artists

 New arrow model or art

QA

 Test new arrow system



Saying: "A good craftsman never blames his tools!"

is detrimental

Should developers be smart enough to know what tools to pick and what to use for which task? Yes.

Should developers be smart enough to realise when their tools are holding back their games' potential? Yes.



Thank you

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Twitter: @RYStorm



Thanks to

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- Joe Wintergreen
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- Caitlin Goodale
- Christian Kokott
- Brenden Gibbons
- Jennifer Killham
- Matt Hoffman
- Freek Hoekstra

















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Questions?

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