Off To Vega Change log

Developed by Zach Lerew

Running hours: **365 Hours 2 Minutes (Up To: March 20th)**

Oct 19th 2013 (05:31)

* Started creating Off To Vega

Oct 24th 2013 (00:59)

* [Changed] Decided to switch development language from VB.net to C#.net
* [Changed] Figured out that GDI+ is no good for drawing images and making a game

Oct 25th 2013 (01:33)

* Researched XNA
* [Added] Drew an image on the screen with XNA

Oct 26th 2013 (06:44)

* [Added] Basic animation system
* [Added] Basic particle emitter system

Oct 30th 2013 (01:41)

* [Added] Basic entity management system

Nov 1st 2013 (03:42)

* [Added] Added properties to entity class templates (rotation, angular velocity, color)
* Researched rendering in XNA

Nov 2nd 2013 (05:19) Version 0.1, Version 0.2, Version 0.3

* (7:46 – 9:38)
  + [Changed] Improved entity deletion
  + [Added] Added rotation, velocity, and angular velocity properties to entity class
* (1:52 – 4:41)
  + [Added] Created a planet image
  + [Changed] Optimizations for image rendering
* (5:32 – 6:41, 7:50 – 11:01)
  + [Added] Created camera module to move “porthole” around a grid of 2500 planets
  + [Fixed] Tester found a bug in camera zooming, fixed it
  + [Added] Added particle color transitions from color A to B

Nov 3rd 2013 (01:55)

* (8:23 – 10:17)
  + [Added] Optimizations
  + [Added] Planets can now be made with left and right click
  + [Added] Debug info listed on HUD
  + [Added] Made a new (and ugly) planet in Photoshop

Nov 4th 2013 (03:59) Version 0.4

* (3:07 – 6:02)
  + [Changed] Camera zoom is now more modular
  + [Added] Shadows added to planet, currently point towards mouse
* (7:30 – 8:34)
  + Mentor Meeting

Nov 5th, 6th, 7th 2013 (07:31) Version 0.5

* (9:11 – 10:19)(5th)
  + [Added] Created a gravity system, behavior is weird and not realistic
* (6:05 – 8:40, 8:45 – 9:33)(6th)
  + Noticed thread performance was bad, first core was under 100% load
  + Researched multithreaded calculations
* (3:38 – 5:30, 8:30 – 9:40)(7th)
  + [Added] Gravity optimized to work slightly better on one core, multithreaded calculation not viable

Nov 8th 2013 (02:55)

* (3:15 – 4:30)
  + [Changed] Reorganized art assets and code modules
  + [Added] Created a sun image
  + [Changed] Cleaned up code
  + [Fixed] Fixed mouse sensitivity issues
* (8:00 – 9:40)
  + [Added] Made debug planet, modified (2) planets to fix visual errors

Nov 9th 2013 (03:10)

* (11:15 – 12:25, 5:20 – 7:20)
  + Re attempted to make the gravity system more efficient
  + Considering using the GPU for gravity calculations, Researched Cudafy

Nov 10th 2013 (05:40)

* (11:20 – 1:00, 2:00 – 6:00)
  + Got Cudafy mounted to the game engine, Researched allocating memory
  + Learning how GPUs work
  + Cudafy and XNA are incompatible, shelving gravity system for the time being

Nov 11th 2013 (05:20)

* (9:00 – 2:20)
  + [Changed] Changed entity creation, entities can now have children and be assigned a parent
  + [Added] Made moon image in Photoshop
  + considering shadows for secondary bodies (moon behind planet from sun)

Nov 12th 2013 (02:45)

* (5:20 – 5:50, 6:30 – 8:45)
  + Researched lighting in 2d games
  + Tried to implement several methods of lighting (including Krypton)

Nov 14th 2013 (03:00)

* (4:50 – 5:00, 7:10 – 8:30, 8:40 – 10:10)
  + [Added] Added offsetting orbits, to allow things like wide swinging comets
  + [Changed] Working on simpler shadow system

Nov 18th, 19th 2013 (07:32) Version 0.6

* (5:15 – 10:15)(18th)
  + Got Krypton lighting working, not exactly as I wanted, it has a weird effect
* (5:24 – 8:06)(19th)
  + Sticking with angle based shadows for sure now, lighting is hard

Nov 21st 2013 (05:15) Version 0.7

* (1:45 – 7:00)
  + [Added] Defined game states to allow GUI to exist
  + [Added] Added pause menu
  + [Added] Created main menu screen logo and background

Nov 22nd 2013 (03:35) Version 0.7.5

* (5:20 – 8:55)(22nd)
  + [Added] a button class to allow for modular buttons
  + [Changed] Pause screen now has buttons (resume, options, exit)

Nov 23rd 2013 (06:54)

* (2:30 – 6:30, 6:50 – 7:44, 8:15 – 10:15)
  + [Added] Added 3 sun images
  + [Added] Added 4 planets (total of 5)

Nov 24th 2013 (06:55) Version 0.7.6

* (6:30 – 9:30, 9:40 – 1:35)
  + [Added] Started random world generation, several small rewrites

Nov 30th 2013 (08:30)

* (7:30 – 9:10)
  + [Changed] Cleaned up buttons class, New game states (NewGameMenu, LoadGameMenu)
* (9:39 – 11:24)
  + [Changed] Adjusted GUI drawing to account for resolution changes
* (7:25 – 12:30)
  + [Added] Started working on textbox element in GUI for keyboard input
  + [Added] Made NewGame and LoadGame pages
  + [Added] Started Saving and Loading

Dec 1st 2013 (00:05) Version 0.8

Dec 3rd 2013 (02:34)

* (6:51 – 7:30)
  + [Fixed] Fixed a couple bugs pointed out by a friend (Save files with same name, rare occurrence of a star system with no star, etc.)
* (8:20 – 10:15)
  + [Fixed] Embarrassingly long time spent on single key press issue

Dec 4th 2013 (01:43)

* (5:39 – 6:20, 7:28 – 8:30)
  + [Fixed] Fixed Input class to correctly return the last key pressed, even if the first key was LeftShift.
  + [Changed] Changed Input class to static, as there should only be one copy of it.
  + [Added] Added a SetGamestate() method to Engine. This cleaned up clutter in GUI that should’ve been done in Engine. Also added GetGamestate().
  + [Changed] Many optimizations and code moving.

Dec 6th 2013 (04:29)

* (10:25 – 10:37, 1:05 – 3:17)
  + [Added] Added code to save all Entity objects.
  + [Added] Allowed it to load textures by adding a lookup table of textures.
* (6:00 – 8:05)
  + [Changed] Modified SaveLoad to load a new class, “SaveFile”. SaveFile contains links to all entities, and will later contain data for spaceships, inventory, etc.
  + Successful loading of N save files.
  + [Changed] Modified camera to reset when a file is loaded.

Dec 7th 2013 (07:56)

* (4:00 – 6:54)
  + [Changed] Rewrote entity hierarchy to allow for N solar systems per save file.
  + [Changed] Changed Main Menu Logo to not stretch.
* (7:00 – 12:02)
  + [Added] Made spiral galaxy in Photoshop.
  + [Added] Map screen displays when M is pressed.
  + [Added] Map contains dots that link to solar systems.

Dec 8th 2013 (03:11) Version 0.9

* (4:13 – 6:31, 6:53 – 7:46)
  + [Changed] Rewrote map system to not suck, efficient and simple.
  + [Fixed] Fixed map dots being offset.
  + [Changed] LoadGame menu now updates during run time, greys out if all saves are deleted.
* (9:21 – 12:51)
  + [Fixed] Fixed resolution scaling issues
  + [Changed] Merged TextButton and Button.
  + [Removed] Removed Resolution class, merged into engine.
  + [Added] Added Checkbox button type.
  + [Added] Added Delete button to LoadGame.
  + [Added] Fixed Emulation keys repeating inputs.

Dec 9th 2013 (04:04) Version 0.9.2

* (10:09 – 12:09)
  + [Fixed] Fixed map dot size (added VerySmall font).
  + [Fixed] Fixed save delete issues in LoadGame.
  + Tried to fix Map to use Mouse dragging instead of WASD keys.
* (2:26 – 3:30)
  + [Changed] Camera Module to be more efficient and modular (not finished)
  + [Added] Added camera smoothing to zoom.
* (7:30 – 8:30)
  + Mentor Meeting.

Dec 14th 2013 (05:08) Version 0.9.4

* (9:42 – 11:04)
  + [Changed] Rewrote map to use click and drag
  + [Changed] Removed Esc key closing map.
* (5:04 – 5:50)
  + [Added] Current solar system’s dot is displayed red in the map
* (6:44 – 8:20)
  + [Added] Added Back Button to Map
  + [Added] Added DebugMode button to Options
  + Attempted to fix Map zooming
* (10:07 – 11:32)
  + [Added] Added ShipManager class
  + [Added] Added Ship class
  + [Changed] SaveLoad now supports saving and loading ships

Dec 15th 2013 (07:31)

* (12:40 – 7:18, 7:48 – 8:41)
  + [Changed] Reorganized SaveLoad to support a separate options file
  + [Added] Total Mass of all entities in Galaxy to Map debug info
  + [Added] Galaxy name in Map
  + [Changed] Modified zoom levels to be spread out in a more linear fashion
  + [Changed] Spaceship faces mouse
  + [Changed] Rewrote Particle classes to support object attachment.
  + [Changed] Particles offset correctly from Emitters.

Dec 23rd 2013 (03:03) Version 0.10

* (7:37 – 10:40)
  + [Changed] Particles now translate and rotate correctly relative to their parent.
  + [Changed] Particle color now transitions evenly no matter the lifetime.
  + [Changed] Particles now have a start and end scale.
  + [Changed] Particle Emitters toggle based on input keys and IsActive from their parent entity.

Dec 31st 2013 (01:22)

* (11:52 – 1:14)
  + [Changed] Ships and Entities now track their parent solar system and are only drawn if their system is the current one.
  + [Added] Camera automatically switches Target if current target is removed (fallback)

Jan 1st 2014 (03:13)

* (5:47 – 9:00)
  + [Added] Active ship is tracked
  + [Fixed] Fixed SaveLoad.cs options Load method from silently failing
  + [Fixed] Fixed Map.cs reloading current solar system when clicking anywhere after one was already loaded

Jan 3rd 2014 (03:11)

* (8:56 – 12:07)
  + [Added] Camera target object added to Engine debug info
  + [Added] Primary management systems clear their data via engine function, particles now clear
  + [Changed] Particle Emitters dependent on host entity’s existence, will self-destruct if host is deleted
  + [Changed] Active ship switches current solar system when a new one is made, or when a new one is selected on the map. This will later be changed to include any warp effects
  + [Changed] Object names now check for repeats, each should now be unique
  + [Changed] SaveFile.cs now stores references by name, rather than object. This removes stack overflows due to circular references

Jan 4th 2014 (04:30)

* (7:04 – 11:34)
  + Researched Component based Entity systems
  + [Added] New Entity management system based on components, currently only renders a BaseEntity object that has a DrawComponent

Jan 7th 2014 (01:00)

* (4:57 – 5:57)
  + [Changed] Entity system is now more similar to the old hierarchy system to avoid the huge amount of effort required to construct a working component system.
* (8:55 – 10:06)
  + [Changed] Entity system uses the generic “BaseEntity” class, but many many many systems still need to be rewritten to support this new kind of entity

Jan 8th 2014 (01:13)

* (5:27 – 6:40)
  + [Fixed] Fixed camera detaching from entities when the pause menu was activated
  + [Fixed] Particles emit again when their ActivationKey is pressed.
* (8:30 – 10:36)
  + [Added] Ships now zero their velocity when X or Y is < 0.01, this stops the ships from floating miniscule amounts for long periods of time, due to really small decimals.
  + [Changed] Further (almost total) conversion of the Ship entity from the previous build to the new component based entity system.
  + [Changed] Started converting Solar System Bodies over to the entity system.

Jan 9th 2014 (03:35)

* (4:23 – 6:08)
  + [Changed] Continued conversion for solar systems. Planets now orbit properly.
  + [Changed] Planet orbit now based on a velocity vector that will keep them in orbit, instead of direct manipulation of the position.
  + [Added] OrbitComponent.cs, controls the orbit of entities.
  + [Changed] SolarSystem instances store links to the names of entities, switching solarsystems means toggling the “IsActive” variable in every entity in the solarsystem’s list. Solarsystems do not store instances of entities.
* (8:10 –10:00)
  + [Added] ParticleComponent.cs, replaces the old ParticleManager class as an optional component.
  + [Changed] Ship size is considerably smaller, but everything is subject to change
  + [Changed] Camera has more zoom levels to allow zooming in closer
  + [Fixed] Particles Emitters are now truly positioned relative to their parents, the old system turned out to be flawed at small scales

Jan 10th 2014 (03:11)

* (6:10 – 8:42)
  + [Changed] Entities now have an Acceleration property, it is modified instead of adding to the velocity manually.
  + Particles are not functioning correctly, velocity is being lost, things are weird.
* (11:30 – 12:09)
  + [Changed] Particles now function correctly, there are two methods of particles, those that stay relative to their parent (jet engine flame), and those that are created and ignored to drift (smoke trail).

Jan 11th 2014 (04:31) Version 0.11

* (6:44 – 11:15)
  + [Changed] SaveLoad is changed to work as it used to with the new entity system.
  + [Fixed] Map Zoom level is now zoomed out to a proper level initially.
  + [Fixed] Ships now belong to solarsystems, and are deactivated properly when the solarsystem is switched
  + [Added] SolarSystem now stores a copy of the camera’s target object. The targetObject is switched to the solarsystem’s reference when that system is loaded.
  + [Added] SolarSystem now stores a copy of the camera’s zoom. When a system is loaded, the previous zoom level is set.
  + [Added] Game Pause menu fades to black from transparency
  + [Added] Quick planet made to replace a placeholder.

Jan 12th 2014 (02:04)

* (2:06 – 4:10)
  + [Changed] Moved all texture definitions and loading into the Engine class after running into a complex and hard to trace error involving Game.Content. It was easier just to load things from Engine.
  + [Added] Planets are now created at a random angle around their star.
  + [Changed] Planet rotation and orbit speeds more reasonable, though still not realistic.
  + [Added] Planets can no longer be created inside of the orbits of other planets.

Jan 16th 2014 (03:37)

* (4:38 – 6:00)
  + [Fixed] Save games now load textures properly (ObjectNotDisposedExpection).
* (7:45 – 10:03)
  + [Added] Started the new GUI system. It’s based on forms and is very modular and generic.
  + [Added] GUI system based on an abstract “dControl” class, other classes will derive it, such as dForm, dButton, etc.

Jan 17th 2014 (04:27)

* (7:11 – 11:38)
  + [Added] Forms now can be created and destroyed, for now they are just rectangles of color.
  + [Changed] Camera zoom level now rounds when it reaches its target (smoothzoom)
  + [Changed] Modified default font (Dolce Vita) to include lower case letters

Jan 19th 2014 (04:52) Version 0.12

* (12:14 – 5:06)
  + [Added] dControl now has a Layer property. This layers forms properly within the GUI based (currently) on creation order, except when the form is the GUI’s Active form. In that case, it is drawn on the top of all other forms.
  + [Added] Mouse Events when within control. Eg: MouseWasReleasedWithin, MouseWasPressedWithin, MouseIsPressedWithin, ContainsMouse.
  + [Added] Form dragging with mouse

Jan 23rd 2014 (02:08)

* (3:46 – 5:06)
  + [Added] dButton control, a GUI element that allows user clicking input.
* (9:32 – 10:20)
  + [Added] Forms cannot be dragged when the mouse has clicked on a child. This means that the window cannot be dragged if the point of clicking was over a button or textbox.
  + [Added] Forms and their children fade in and out on open or close.
  + [Changed] GUI Control specific functions listed in that form element. The form event is tied to that method on its creation.

Jan 25th 2014 (04:22)

* (7:20 – 11:42)
  + [Added] dImage class, the most basic control, a name, position, and image.
  + [Added] MainMenu class, this will bridge the gap between modular GUI components and structured GUI forms.
  + [Added] Options class, replaces old options gamestate as a collection of modular GUI components.
  + [Added] Emulation keys for the new modular buttons.
  + [Added] Debug mode displays bounding boxes for all GUI elements.
  + [Added] Form dragging to main menu forms as a temporary demonstration.

Jan 26th 2014 Version 0.12.5

Jan 27th 2014 (03:55)

* (2:14 – 5:14)
  + [Fixed] Mouse clicks within the GUI system now only occur once.
* (6:11 – 7:57)
  + [Added] Fade effect to all pages.
  + [Added] dTextbox GUI control, allows the input of text and retrieval of that text.
  + [Added] Texture creation for Textboxes.
* (8:00 – 10:09)
  + [Added] Textbox that creates a new game within the NewGame page.
  + [Changed] Recreated NewGame menu, PauseScreen menu,
  + [Added] Buttons can be disabled (greyed out).

Jan 28th 2014 (05:53)

* (2:35 – 5:44)
  + [Added] dListbox, a component that displays a list of children that can be selected.
  + [Fixed] Transitions between pages now no longer show the blue debug background.
  + [Added] File saving now saves camera zoom level and Camera target object.
  + [Changed] GUI pages now derive from a GUIPage class, this makes the whole system standardized
* (6:56 – 10:38)
  + [Added] dCheckbox, that allows a checked value to toggle
  + [Changed] Only the top form may be moved for now.
  + [Added] Resolution changing in Options page.
  + [Added] Full screen checkbox in Options page.
  + [Changed] Modern GUI objects scaled properly for resolution changes.
  + [Added] ListBox now has a scroll limit based on the total height of all children combined.

Jan 30th 2014 (05:14)

* (4:06 – 6:50)
* [Fixed] Resolution scaling now scales objects based on parent size, but only if the parent is a standalone object, not container within a container.
* [Added] Resolution and IsFullscreen are saved in settings file.
* [Fixed] Rapidly saving a settings (or save) file does not crash the application any longer.
* [Added] dGroupbox. A basic container for other objects.
* (7:00 – 9:30)
* [Changed] Now only the active form can have its children clicked on or be moved, the active form has to be changed for other forms to function.

Jan 31st 2014 (03:57)

* (5:13 – 7:40)
  + [Added] Map is now a GUI page rather than a separate game state.
  + [Fixed] GUI pages now lower alpha before closing properly.
* (9:00 – 10:30)
  + [Added] Scale property to GUI components.
  + Worked on map dots (with no success).

Feb 1st 2014 (04:43)

* (4:03 – 8:46)
  + [Added] Map now has Map Dots to represent solar system locations.
  + [Changed] Removed all references to “GameState”.
  + [Fixed] Forms weren’t updating their sizes after resolution change.
  + [Fixed] Emulation keys (which have been broken for a long time without me noticing).

Feb 2nd 2014 (04:00) Version 0.12.7

* (6:20 – 10:20)
  + [Added] Entities are now drawn in layers defined by the entity manager, this stops things from being drawn in the wrong order.
  + [Fixed] GUI page elements now center themselves in their forms properly.
  + [Added] HUD GUI page, shows a list of entities in the current solar system
  + [Added] A ship now “warps” to the selected solar system in the map, if the ship is the camera’s target.
  + [Added] Resolutions list now filters out extras.

Feb 6th 2014 (04:40)

* (2:00 – 5:30)
  + [Added] Ship orbiting and de-orbiting from HUD entity selection menu.
  + Attempted to change how Position, Velocity, and Acceleration work to be more realistic.
* (6:30 – 7:40)
  + Mentor meeting

Feb 8th 2014 (05:16)

* (2:30 – 7:46)
  + [Added] dGroupbox now supports a title and a texture
  + [Changed] DebugMode now has two components, “DebugMode”, and “GUI DebugMode”.
  + [Changed] Debug Entities list on HUD is on the right side of the screen now.
  + [Added] MapBackground image (Hexagon pattern)
  + [Added] HUD controls that open player relevant menus. (Ship navigation, sensors, map, etc).
  + [Added] dMessagebox, small box that displays a message
  + [Added] Textboxes now support multiline text and limit text properly to the bounds of the textbox.

Feb 9th 2014 (03:30)

* (1:00 – 2:30)
  + [Added] LastForm property to GUI pages. When a page is opened, it will track the form that opened it, and return that form to active once it closes.
  + [Added] Navigation page that will soon contain controls for the ship.
  + [Changed] MainMenu background
  + [Added] List of entity images in Navigation page
* (9:10 – 11:10)
  + [Added] Up and down buttons to dListbox.
  + [Added] Improved item selection in dListbox.
  + Attempted to clip controls inside dListbox

Feb 12th 2014 (07:03)

* (7:45 – 9:50)
  + Attempted to clip controls inside dListbox
* (4:00 – 8:38)
  + [Added] Half functional item clipping inside dListbox
  + [Fixed] Changing a listbox’s items now refreshes them properly and resets scroll and object selection
  + [Changed] Ships now use A and D keys to rotate, rather than pointing at the mouse
  + [Changed] Planet orbit speed adjusted
  + [Added] Hover, Press, Release, and original color properties added to base GUI control element.
  + [Changed] Button hover, press, and release colors standardized across the system\
  + [Changed] Map now centers itself in the screen when first opened
  + [Changed] Listboxes now have a “CanScroll” property, to allow lists of things that can’t be touched by the user
  + [Added] Navigation menu now has warnings that indicate a problem
  + [Added] Navigation menu now has a “Set Course” button.
* (10:10 – 11:30)
  + [Added] Set Course button now moves the ship to the selected solar body (currently moves so fast it teleports).
  + [Changed] Dolce Vita font’s lower case letters are now slightly thicker

Feb 14th 2014 (06:45)

* (1:30 – 4:30
* (6:30 – 6:40)
  + [Fixed] Camera now properly attaches to objects without adding velocity to position
* (7:35 – 11:00)
  + More attempts at smooth movement to destination

Feb 15th 2014 (08:28)

* (10:40 – 2:40
* (3:54 – 8:22
  + [Added] New Vector2d struct, uses double variable types for X and Y coordinates, and therefore more precision.
  + [Changed] Every single file that involved use of Vector2 (all of them) to now use Vector2d in cases where it is applicable

Feb 16th 2014 (04:08) Version 0.13

* (1:00 – 3:16)
  + [Fixed] Precision issue fixed, camera is now at the center of the universe, everything else moves around it.
  + [Fixed] Solar systems store target and zoom level properly now.
  + [Fixed] Extra copies of particle emitters showed up in solar systems they shouldn’t have.
  + [Fixed] Orbiting objects no longer jump 2 \* Pi degrees around their parent on the first orbit.
  + [Added] Messagebox now pops up when a user tries to create a save file with a name that is already used.
* (8:00 – 9:52)
  + [Fixed] Spacing issue in dListbox
  + [Fixed] Performance optimizations when large (20,000+) entities were used.
  + [Changed] Navigation between planets now has a “snap” at the end of the trip to ensure that the ship reaches the required position around its new parent planet.

Feb 17th 2014 (05:30)

* (2:10 – 4:50, 6:40 – 9:30)
  + [Changed] Started rewriting solar system generation code to support more options and be more efficient and realistic

Feb 18th 2014 Version 0.13.1

Feb 20th 2014 (03:50)

* (4:30 – 5:00)
  + [Fixed] Listboxes can only have items selected if they are active
* (9:00 – 12:20)
  + [Fixed] The map no longer offsets strangely from the mouse when dragging
  + [Added] Sensors GUI page that displays information about the solar object being orbited.
  + [Changed] Dolce Vita font now has thicker lower case letters that are MUCH easier to read.
  + [Added] De-Orbit button to Navigation menu

Feb 22nd 2014 Version 0.13.3, Version 0.13.4

Feb 23rd 2014 (03:20) Version 0.13.5

* (4:30 – 5:20)
  + [Changed] Added temperature (surface and core) parameters to classifications
  + [Changed] Sensors now say whether the object is a planet or star
* (7:30 – 10:00)
  + [Changed] Rewrote StellarClassifications (star and planet generator) to be MUCH more optimized, and support saving / loading of a “classifications” file. This file includes all of the default classification for stars, planets, and later all other stellar bodies. The file can be modified by the user, and is replaced if it does not exist.

Feb 24th 2014 (02:00)

* (7:30 – 9:30)
  + [Changed] Added orbit parameters to new solar system generation code.
  + [Changed] Added hypothetical core and surface information to stellar classifications.
  + [Changed] Wording for sensor findings is more clear and specific.

March 2nd 2014 (06:50)

* (10:50 – 5:40)
  + [Added] OrbitSpeedMin and Max values to planet classifications
  + [Changed] Font updated so that the capital letter “I” has larger spacing
  + [Added] Warp effect to travel between planets
  + [Changed] Reverted controls from my custom keyboard layout back to the standard QWERTY layout.
  + [Changed] Fixed released keys in Input.cs
  + [Changed] Modified dTextbox to better support word wrapping.
  + [Changed] Modified classifications so that planets and stars have realistic sizes
  + [Changed] Camera zoom levels now zoom out further
  + [Added] Local Map menu that displays the current solar system entities in their order from closest to farthest
  + [Fixed] dListbox clipping issue when scrolling is now SOLVED!
  + [Changed] Galaxy Map now warps ship in the correct direction when a new solar system is chosen.
  + [Fixed] Local map sizes correctly depending on resolution.
  + [Added] dControl object now supports sounds for user interaction.
  + [Added] MouseEnter, MousePress and MouseRelease sounds for the GUI.
  + [Fixed] dListbox selection box texture was stretched.

March 3rd 2014 (00:05) Version 0.13.7

March 11th 2014 (00:05) Version 0.14

March 25th 2014 (00:40)

* (7:30 – 8:10)
  + Final mentor meeting

April 25th 2014 (02:40)

* (8:20 – 11:00)
  + [Added] Entities now support parenting to one other entity. A physics engine will be needed for multiple entity parenting. (Child entities still don’t stay caught up with the parent)

April 27th 2014 (05:00)

* (12:30 – 5:00, 6:00 – 7:30)
  + [Added] Communication system. Messages can be sent from any entity that has an entity with a ShipSystem\_Communication component.

May 5th 2014 (01:00) Version 0.14.5

* (6:00 – 7:00)
  + [Fixed] SaveLoad now works properly if the save directory doesn’t exist (Fixes CTD on launch)
  + [Fixed] Particle emitters now save and load properly without circular references

May 11th 2014 (02:50)

* (3:10 – 6:00)
  + [Fixed] SaveLoad sets the correct solarsystem upon save game load.
  + [Changed] Entity parenting improved slightly

May 24th 2014 (02:30)

* (12:00 – 2:30)
  + [Added] Z parameter to all entities. Allows for sprites to be stacked in an order.
  + [Added] Recreated MSV Marigold in code as a temporary replacement ship.

June 15th 2014 (04:40) Version 0.14.6

* (3:20 – 8:00)
  + [Changed] Upgraded game to Monogame from XNA.
  + [Changed] Updated Vector2d class to support vector \* vector and vector/vector
  + [Added] Acceleration, velocity, and position are now based on the addition of all forces applied to the entity through ApplyForce.

June 17th 2014 (01:00)

* (12:00 – 1:00)
  + [Added] Angular Acceleration is now based on the addition of forces applied to the entity through ApplyOffsetForce.

June 18th 2014 (02:00)

* (11:30 – 1:30)
  + [Changed] Adjustments made to Camera system (OnGoing)

June 22nd 2014 (00:30)

* (12:30 – 1:00)
  + [Changed] Adjustments made to Camera system (OnGoing)

June 23rd 2014 (02:10)

* (11:50 – 2:00)
  + [Changed] Adjustments made to Camera system (OnGoing)

July 4th 2014 (01:30)

* (2:30 – 4:00)
  + [Changed] Adjustments made to Camera system (OnGoing)

July 10th 2014 (04:30)

* (11:00 – 3:00, 11:00 – 11:30)
  + [Changed] Adjustments made to Camera system (OnGoing)

July 14th 2014 (03:30)

* (11:30 – 3:00)
  + [Fixed] Camera now updates properly for parented objects ( :’] )
  + [Changed] Some slight work on Orbit mechanics

July 18th 2014 (04:30)

* (12:30 – 1:30, 4:00 – 5:30, 7:00 – 9:00)
  + [Changed] Removed EntityManager, its few duties are now bestowed upon Galaxy.
  + [Added] Started working on ShipBuilding GUI
  + [Added] dDropdown GUI control
  + [Changed] Rewrote ActivePage code for better functioning

July 19th 2014 (02:30)Version 0.14.7

* (11:30 – 2:00)
  + [Changed] Polishing dDropdown
  + [Added] dGridbox GUI control

July 22nd 2014 (03:00)

* (12:00 – 3:00)
  + [Added] InteractSize to dControl object. Allows for the user interaction rectangle to be different than the rendering rectangle
  + [Added] dGridboxItem, these items hold a dImage and other data and are stored in dGridboxes
  + [Changed] Rendering of items added to dGridbox
  + [Changed] dDropdown now drops down if any of the control is clicked, not just the triangle button.
  + [Changed] All dListbox and dDropdown objects now use the interactSize settings to allow for selection in the entire row the object is on, not just the word itself.

August 2nd 2014 (01:30)

* (4:30 – 6:00)
  + [Changed] dGridbox optimizations
  + [Changed] dDropdown changes

August 29th 2014 (04:00)

* (9:30 – 1:30)
  + [Added] Ship Container (Container\_Ship). Holds ship baseEntities and calculates physical center and center of mass for ships
  + [Changed] Decreased Debug entities list font size.
  + [Changed] Improved selecting on listboxes, selection box works again

October 19th 2014 (02:00)

* (8:30 – 10:30)
  + [Changed] Another attempt to actually move game over to monogame

November 30th 2014 (02:00)

* (9:30 – 11:30)
  + [Changed] Reformatted version numbers. (Major version Alpha/Beta/Release) . (Minor version 1/2/3/…/14) . (Bug fix 1/2/…/124)
  + [Changed] Converted game to monogame engine (first stages).

December 1st 2014 (03:30) Version 0.15 ‘Monogame’

* (10:30 – 1:00)
  + [Changed] More monogame conversion
  + [Changed] Fullscreen (partially) works under monogame
  + [Added] ERROR.png, default error texture in Engine
  + [Changed] SaveLoad, StellarClassifications are now instances accessible in Engine
  + [Changed] Game now runs on other computers that are not running development software. (Due to monogame and shipping with dlls)
* (8:30 – 9:30)
  + [Added] Off To Vega Compiler project (CompileOTV), will automatically ZIP dlls, content, and exe to the google drive versions folder.

December 19th 2014 (01:00)

* (6:00 – 7:00)
  + [Changed] Started using and learning GitHub for Off To Vega. Repo at <https://github.com/CarvellWakeman/OffToVega>

December 20th 2014 (03:05) Version 0.15.1

* (2:00 – 2:50, 5:30 – 6:00, 9:30 – 11:15)
  + [Added] Added Vector2I. A vector using ints.
  + [Fixed] Rewrote resolution and fullscreen changing to work in monogame
  + [Changed] Minimum resolution is now 800x600

December 21st 2014 (05:00) Version 0.15.2 and Version 0.15.3

* (3:00 – 8:00)
  + [Changed] Camera is now an instance-able class. Engine now has gameCamera and other classes are able to make their own camera and reassign what the engine uses to render
  + [Changed] Camera zoom changes, no longer uses indexes
  + [Changed] Menu buttons are no longer based on an image with text in it, but on dLabel
  + [Changed] Changed options menu resolution listbox to grey out if fullscreen is checked.

January 13th 2015 (01:00)

* (7:00 – 8:00)
  + [Changed] Started working on moving GUI to a subscription/register for GUI pages instead of defining them in Engine.cs

January 14th 2015 (04:50) Version 15.4

* (2:00 – 6:50)
  + [Removed] Removed ExitToMainMenu(), “Pause Toggle”, and “GalaxyMap Toggle” from Engine.cs and moved to their respective GUI pages.
  + [Changed] GUI Pages are now managed by GUIManager instead of the Engine.
  + [Changed] Rewrote Active Page management to be much more efficient and work better

January 15th 2015 (05:30) Version 15.5

* (1:00 – 4:30, 5:00 – 7:00)
  + [Changed] Minor tweaks to GUI and fixes from previous version
  + [Changed] Ship objects are now extensions of BaseEntity, and they contain their own list of entities that are contained within them. CenterOfMass and PositionalCenter entities for the ship object are now calculated properly for this changed system as well.

March 19th 2015 (03:30)

* (5:00 – 6:00, 8:00 – 10:30)
  + [Changed] Engine modifications – Rewriting OTV engine to be a separate engine, independent of Off To Vega. Expansion of features and generalization of tasks to follow.
  + [Added] Resources are now loaded dynamically from compiled .xnb files in the Content folder. To access a texture, an object references Engine.GetTexture(<path>). No more hard coded textures or sounds.
  + [Added] Console window is now displayed (change in properties/output type), console window displays load up information.

March 20th 2015 (07:00)

* (8:30 – 10:30, 7:00 – 12:00)
  + [Added] Scripting through C# code compiled at runtime from files in Content\scripts
  + [Added] Scripts are loaded and joined together into a master script that is compiled all at once. If errors occur, each script is compiled again, but separately, and the compiler will show what line in what file is causing the error.
  + [Changed] Scripts are not referenced the same way as textures and other resources, but rather by “namespace.class”.

March 21st 2015 (02:30)

* (11:00 – 1:30)
  + [Added] Scripts can now be reloaded during runtime. Added methods for restarting all running scripts, determining if a script is running, and running a single script.
  + [Changed] Old menus mostly recreated in script form.

March 25th 2015 (05:00)

* (3:30 – 5:00, 6:30 – 10:00)
  + [Changed] All scripting operations moved to separate ScriptManager.cs class.
  + [Added] Entity Manager class. Much more generic than before, handles creation, destruction, and management of BaseEntity objects.
  + [Added] Level Manager class. Handles “levels” (like solarSystems before), but more generic

March 26th 2015 (06:30)

* (8:30 – 3:00)
  + [Changed] Script compiler shows the line the error occurred on and now produced more accurate errors
  + [Changed] Implemented stellarclassifications as a script
  + [Changed] Implemented pauseScreen GUI as script
  + [Added] Engine.Reset() – Resets game state to startup (minus GUI).