<u>**Vibrant I Schedule:**</u>

Overview:
Milestone 0: Create in depth architecture of the engine. This defines the ways that the different systems interact with one another and their level of access to other systems.
Milestone 1: Implement all header files complete with full doxygen documentation. At this point, we have an API design.
Milestone 2: Implement all C++ files with complete C++ comments documentation. At this point, we have a working engine.
Milestone 3: Design the Vibrant Editor with fake screenshots of every menu, screen, etc. At this point, we have an editor design.
Milestone 4: Implement the Vibrant Editor. At this point, we have a fully functional editor.
Milestone 5: Design a tech demo that demonstrates the engine's capabilities and features. At this point, we have a design.
Milestone 6: Implement the tech demo. At this point, we have a working tech demo to post on the website.
After Milestone 6: Implement Fel'Nara. At this point, we are happy.

Note: These milestones are not intended to be completed entirely in order. For example, networking for the engine may not be implemented until after some of the Editor has been designed and implemented.

Other Mini-Projects:
- These will be done through completion of the milestones.
Note that VInput, VTimer, VProfiler need to be implemented and used for all of these (for general input and framerate/profiling information.)
- A demo program demonstrating loading of a model.
- A demo program demonstrating editable shaders (model with UI elements to adjust shader properties).
- A demo program demonstrating continuous level of detail (model with a detail slider).
- A demo program demonstrating terrain CLOD and paging.
- A demo program demonstrating item creation and editing (basically the item editor).
- A demo program demonstrating particle systems.
- A demo program demonstrating billboards.
- A demo program demonstrating a viewer for the scene graph.
- A demo program demonstrating the different texture and Xmap effects (i.e. bumpmap, darkmap)
- A demo program demonstrating keyframe controllers.
- A demo program demonstrating armature controllers.
- A demo program demonstrating IK controllers (if we ever use these).
- A demo program demonstrating bounds, collision detection (using bounds), and picking.
- A demo program demonstrating the camera's various functions.
- A demo program demonstrating shadows, self-shadowing.
- A demo program demonstrating reflections and environment mapping.
- A demo program demonstrating the model editor (edit the model's textures, controllers, and various effects (textures, shaders, etc.)
- A demo program demonstrating the unit editor (edit which model is associated with the unit as well as the unit's abilities and statistics).
- A demo program demonstrating the fully moddable GUI system (a program with all possible GUI elements.)
- A demo program demonstrating the console (in game testing without having to change code and restart)
- A demo program demonstrating the portal system

Testing:
- Create automated testing and unit testing suites

Detail:

Milestone 0:

-Math	40%	- lack of detail in the architectural design doesn't affect
-Object	25%	- the engine significantly for these two systems (Math and Object)
-Video	90%	
-Audio	90%	

-Input	90%
-Network	90%
-Time	70%
-GUI	90%
-AI	0%
-Physics	0%
-Application	70%

Milestone 1:
Total: 7 of 108 (6.5%) COMPLETE

-Math

Class	Scheduled Completion:	Actual Completion:
VMath	04/20/2007	
VVector	04/20/2007	
VMatrix	04/20/2007	
VQuaternion	04/20/2007	
VLine	04/20/2007	
VPlane	04/20/2007	

-Object

Class	Scheduled Completion:	Actual Completion:
VObject	03/10/2007	03/09/2007
VRTTI	03/10/2007	03/06/3007
VStream	03/10/2007	03/09/2007
VController	03/10/2007	03/09/2007
VPointer	03/10/2007	03/08/2007

-Video

Class	Scheduled Completion:	Actual Completion:
VVideo	03/24/2007	
VMesh	03/24/2007	
VVGFLoader	03/24/2007	
VNode	03/24/2007	03/11/2007
V3DNode	03/24/2007	03/11/2007
VModel	03/24/2007	
VTransformation	03/24/2007	
VRenderer	03/24/2007	
VCamera	03/24/2007	
VParticle	03/24/2007	
VParticleSystem	03/24/2007	
VBounds	03/24/2007	
VPolypoint		
VPolyline		
VTriangleMesh	03/31/2007	
VGlobalState	03/31/2007	
VLight	03/31/2007	
VTexture	03/31/2007	

Class	Scheduled Completion:	Actual Completion:
VBillboard	03/31/2007	
VCLODMesh	04/06/2007	
VCLODVertex	04/06/2007	
VCLODEdge	04/06/2007	
VCLODTriangle	04/06/2007	
VCLODCollapseRecord	04/06/2007	
VBSPNode		
VPortal		
VRegion		
VCurve		
VSurface		
VCurveMesh		
VSurfaceMesh		
VCLODTerrainVertex	04/06/2007	
VCLODTerrainBlock	04/06/2007	
VCLODTerrainPage	04/06/2007	
VCLODTerrain	04/06/2007	
VKeyframeController	04/13/2007	
VMorphController	04/13/2007	
VArmatureController	04/13/2007	
VIKController	04/13/2007	
VEffect	04/13/2007	
VVertexColorEffect	04/13/2007	
VTextureEffect	04/13/2007	
VDarkMapEffect	04/13/2007	
VLightMapEffect	04/13/2007	
VGlossMapEffect	04/13/2007	
VBumpMapEffect	04/13/2007	
VEnvironmentMapEffect	04/13/2007	
VProjectedTextureEffect	04/13/2007	
VPlanarShadowEffect	04/13/2007	
VPlanarReflectionEffect	04/13/2007	
VShaderEffect	04/13/2007	
VShader	04/13/2007	
VVertexShader	04/13/2007	
VPixelShader	04/13/2007	

-Audio

Class	Scheduled Completion:	Actual Completion:
VAudio		
V3DSound		
VMusic		

-Input

Class	Scheduled Completion:	Actual Completion:
VInput	04/27/2007	

-Network

Class	Scheduled Completion:	Actual Completion:
VServer	04/27/2007	
VClient	04/27/2007	

-Time

Class	Scheduled Completion:	Actual Completion:
VTimer	04/27/2007	
VProfiler	04/27/2007	

-GUI

Class	Scheduled Completion:	Actual Completion:
VGUI		
VScreen		
VForm		
VButton		
VTextEdit		
VComboBox		
VMessageBox		

-AI

Class	Scheduled Completion:	Actual Completion:
VAI		

-Physics

Class	Scheduled Completion:	Actual Completion:
VPhysics		
VCollisionDetection		
VCollisionGroup		
VCollisionReaction		
VDESolver		
VDEEulerSolver		
VDEMidpointSolver		
VDERungeKuttaSolver		
VMassSpringCurve		
VMassSpringSurface		
VMassSpringVolume		
VRigidBody		
VDeformableBody		

-Application

Class	Scheduled Completion:	Actual Completion:
VApplication	04/27/2007	
VUnit		
VUnitAbility		

Class	Scheduled Completion:	Actual Completion:
VUnitStat		
VItem		
VItemSpecification		
VItemDatabase		
VMap		
VVMFLoader		
VSavedGame		
VVSGLoader		

Exceptions:

Class	Scheduled Completion:	Actual Completion:
VNullPointerException	04/27/2007	
VIndexOutOfBoundsException	04/27/2007	
VIllegalArgumentException	04/27/2007	

Milestone 2:
Total: 0 of 108 (0.0%) COMPLETE

-Math

Class	Scheduled Completion:	Actual Completion:
VMath	05/26/2007	
VVector	05/26/2007	
VMatrix	05/26/2007	
VQuaternion	05/26/2007	
VLine	05/26/2007	
VPlane	05/26/2007	

-Object

Class	Scheduled Completion:	Actual Completion:
VObject	05/15/2007	
VRTTI	05/15/2007	
VStream	05/15/2007	
VController	05/15/2007	
VPointer	05/15/2007	

-Video

Class	Scheduled Completion:	Actual Completion:
VVideo	06/02/2007	
VMesh	06/02/2007	
VVGFLoader	08/31/2007	
VNode	06/02/2007	
V3DNode	06/02/2007	
VModel	06/09/2007	
VTransformation	06/09/2007	
VRenderer	06/09/2007	
VCamera	06/09/2007	

Class	Scheduled Completion:	Actual Completion:
VParticle		
VParticleSystem		
VBounds	06/09/2007	
VPolypoint		
VPolyline		
VTriangleMesh	06/30/2007	
VGlobalState	06/30/2007	
VLight	06/30/2007	
VTexture	06/30/2007	
VBillboard		
VCLODMesh	09/22/2007	
VCLODVertex	09/22/2007	
VCLODEdge	08/25/07	
VCLODTriangle	08/25/07	
VCLODCollapseRecord	08/25/07	
VBSPNode		
VPortal		
VRegion		
VCurve		
VSurface		
VCurveMesh		
VSurfaceMesh		
VCLODTerrainVertex		
VCLODTerrainBlock		
VCLODTerrainPage		
VCLODTerrain		
VKeyframeController	07/14/2007	
VMorphController		
VArmatureController	07/14/2007	
VIKController		
VEffect	07/14/2007	
VVertexColorEffect	07/14/2007	
VTextureEffect	07/14/2007	
VDarkMapEffect		
VLightMapEffect		
VGlossMapEffect		
VBumpMapEffect		
VEnvironmentMapEffect		
VProjectedTextureEffect		
VPlanarShadowEffect		
VPlanarReflectionEffect		
VShaderEffect	07/28/2007	
VShader	07/28/2007	
VVertexShader	07/28/2007	

Class	Scheduled Completion:	Actual Completion:
VPixelShader	07/28/2007	

-Audio

Class	Scheduled Completion:	Actual Completion:
VAudio		
V3DSound		
VMusic		

-Input

Class	Scheduled Completion:	Actual Completion:
VInput	08/18/07	

-Network

Class	Scheduled Completion:	Actual Completion:
VServer		
VClient		

-Time

Class	Scheduled Completion:	Actual Completion:
VTimer	08/18/07	
VProfiler		

-GUI

Class	Scheduled Completion:	Actual Completion:
VGUI		
VScreen		
VForm		
VButton		
VTextEdit		
VComboBox		
VMessageBox		

-AI

Class	Scheduled Completion:	Actual Completion:
VAI		

-Physics

Class	Scheduled Completion:	Actual Completion:
VPhysics		
VCollisionDetection		
VCollisionGroup		
VCollisionReaction		
VDESolver		
VDEEulerSolver		
VDEMidpointSolver		
VDERungeKuttaSolver		
VMassSpringCurve		

Class	Scheduled Completion:	Actual Completion:
VMassSpringSurface		
VMassSpringVolume		
VRigidBody		
VDeformableBody		

-Application

Class	Scheduled Completion:	Actual Completion:
VApplication	08/18/07	
VUnit		
VUnitAbility		
VUnitStat		
VItem		
VItemSpecification		
VItemDatabase		
VMap		
VVMFLoader		
VSavedGame		
VVSGLoader		

Exceptions:

Class	Scheduled Completion:	Actual Completion:
VNullPointerException		
VIndexOutOfBoundsException		
VIllegalArgumentException		

Milestone 3:

Editor	Scheduled Completion:	Actual Completion:
Item		
Unit (with Unit Ability and Statistic Editors)		
Model		
Interface		
Map		
Vibrant (encapsulates all of the above)		

Milestone 4:

Editor	Scheduled Completion:	Actual Completion:
Item		
Unit (with Unit Ability and Statistic Editors)		
Model		
Interface		
Map		
Vibrant (encapsulates all of the above)		