

D.O.W.N.

DESIGN DOCUMENT

Team Vertically Profound

Personal Entertainment Wing (PEW)

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OVERVIEW

<Section Summary>

BACKGROUND STORY

➤ <TBD>

GAME PLAY

- Scrolling Shooter
 - Player at top of screen, shooting “down”
- Player becomes progressively more powerful
 - Upgrades

IMPORTANT RULES

- Essentially no penalty for death
 - Must restart level, but no irreparable losses, etc.

ART DESIGN

- Semi-realistic
- “Simulation”

TECHNICAL PLATFORM

- Game Maker (DirectX 9.0c powered .exe)

GAME SPECIFICATION

<Section Summary>

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RULES AND MECHANICS

<Sub-section Summary>

MOVEMENT

- Forms
 - Lateral (Primary)
 - Vertical (Secondary)
- Style
 - Smooth Movement
 - ◆ Acceleration rate
 - ◆ Automated de-acceleration rate
 - ◆ Mass effects movement speed (inertia)
- Constraints
 - Maximum Speeds
 - ◆ Different between lateral and vertical
 - Moveable Area
 - ◆ Player can't move their craft outside of the visible play area
 - ◆ Player can't move their craft further than half-way down the screen

WEAPONS

<Sub-sub-section Overview>

General Features

<Mini summary>

- Weapon Types (Energy Based)
 - ◆ Direct-Fire (beam)
 - Pulse
 - Constant
 - ◆ Energy Shell (bullet)

- Single
- Burst
- Automatic
- ◆ Guided Charge (missile)
 - Single
 - Burst
 - Automatic
 - Projectile can be destroyed by other projectiles
- Key Values
 - ◆ Cycle Rate
 - How long must be waited between shots, regardless of “Heat”
 - Regardless of firing method, cannot fire until weapon has fully “cycled”
 - ◆ Cool-down
 - Maximum “Heat”
 - How “hot” the weapon can get
 - Ceases firing when point is reached (overheated), and cannot fire again until FULLY cooled down
 - Overheating does not stop entire weapon group from firing, only specific weapon
 - Heat per-shot
 - How much the weapon’s heat increase per firing (or frame of firing in “Constant” firing weapons)
 - Cool-down Speed
 - How quickly heat dissipates from a weapon
 - ◆ Aim Variance
 - Value that determines (in degrees) how much an individual projectile may vary from its intended launch vector
 - ◆ Defense-Penetration Values
 - Piercing

- Additional value used in calculating projectile absorption
- Ability to pierce through Armor absorbcency
- Heat
 - Additional value used in calculating projectile deflection
 - Ability to pierce through Armor deflection
- ◆ Firing Methods
 - Pulse
 - Fires for short period of time per click (does not continually fire if mouse button held)
 - "Pulse Length" value
 - "Cycles" after each "burst"
 - Constant
 - Fires until click released
 - "Cycles" upon release
 - Single
 - Fires one bullet per click (does not continually fire if mouse button held)
 - "Cycles" after each shot
 - Burst
 - Fires several bullets in one instant per click (does not continually fire if mouse button held)
 - "Number of Bullets" value
 - "Cycles" after each burst
 - Automatic
 - Fires one or more bullets per click or frame that mouse button is held down
 - "Cycles" after each shot/burst
- Various Sizes
 - ◆ Small

- ◆ Medium
- ◆ Large
- Mounted Weapons
 - ◆ Weapons can be individually destroyed
 - ◆ Can only be mounted a “node” of the same or larger size
 - ◆ Mount Types
 - Pivot (turret) Mounts
 - Aimed by player
 - Stationary Mounts
 - Always aimed in same direction

Player Weapon Features

<Mini summary>

- Control Types
 - ◆ Automated
 - Only small-sizes available
 - Weaker
 - Shorter Range
 - Pivot (turret) or Stationary mounted
 - Not assigned to firing groups
 - ◆ Manual
 - Larger sizes available
 - Stronger
 - Longer Range
 - Pivot (turret) or Stationary mounted
 - Must be assigned to firing groups

Enemy Weapon Features

<Mini summary>

- Small Ships/Craft
 - ◆ Integrated Weapons
 - Destroyed with Ship/Craft
 - Aimed by Craft orientation
- Large Ships/Craft
 - ◆ Integrated Weapons
 - ◆ Individual (destroyable) Node-mounted Weapons
- Firing
 - ◆ Automated
 - ◆ Limited advanced mechanics
 - Cycle Rate
 - Firing Methods

DAMAGE CALCULATION/HANDLING

- Shield
 - Absorbs (disintegrates) physical (non-energy) threats
 - ◆ Designed to stop debris while traveling at high speeds
 - ◆ Energy weapons pass directly through
 - ◆ Essentially unlimited charge (does not take “damage”)
 - Absorbed mass placed into matter banks
 - ◆ Can be used to repair armor/buy upgrades
 - ◆ Matter teleported back to home banks for storage
 - ◆ Anything destroyed on the projecting craft will re-absorbed by the shield (meaning no loss of matter)
 - Can even disintegrate enemy ships
 - ◆ Can be used as “melee” weapon
 - ◆ Ship must be smaller than generating craft
 - Otherwise like crashing into each-other

- Unexpected Situations
 - ◆ In atmosphere, would absorb any colliding air particles
 - ◆ In water, would absorb the water around it
 - ◆ Once matter banks are full, bleed off extra mass as plasma
 - ◆ Key point: solids act as a single “object,” while gases/liquid act on a molecular level
- Cannot be activated during warp-jumps
 - ◆ Creates time-space anomaly that disintegrates generator ship
- Projects like a “skin” over the ship
 - ◆ Can be expanded to “bubble”
 - ◆ Bumps off of other shields
- Armor
 - Absorbs (potentially deflects) energy (non-physical) threats
 - ◆ Given travel speed, physical objects would pierce straight through or deal catastrophic damage
 - ◆ Armor Value
 - The Amount of Armor still present on the craft (depleted by damage, increased to a maximum by Nano-machine Repair)
 - Base value for calculating Absorbance/Deflection value (Armor Value * Threshold Coefficient = Absorbable/Deflectable projectile strength)
 - ◆ Absorbance threshold
 - Decimal coefficient
 - Weapons of insignificant strength deal NO damage (proportional to Armor value)
 - ◆ Deflection threshold
 - Decimal coefficient
 - Weapons of insignificant strength can have their projectiles deflected (proportional to Armor value)
 - Repairable via Nano-Machines
 - ◆ Requires matter from matter banks

- ◆ Will always use any available matter to repair, as armor/hull integrity is regarded as maximally important
- Upgrades Available
 - ◆ More Armor, Absorbency, and Deflection
- Damage
 - Energy Weapons
 - ◆ Damage Armor and Weapons
 - Physical Weapons
 - ◆ Destroyed by Shields
 - ◆ Can potentially contain energy charges that will pass through shields
 - Damage Value stored/calculated by projectile
 - ◆ Depending on weapon, may dissipate over range
 - Actual damage received ultimately calculated by target
 - ◆ May be nullified by absorbance and/or deflective threshold (see Armor)

ENEMIES

- Sizes
 - Small
 - ◆ Light fighter-craft
 - <Specs>
 - ◆ Drones
 - <Specs>
 - ◆ Small Satellites
 - <Specs>
 - Medium-Small
 - ◆ Heavy fighter-craft
 - <Specs>
 - ◆ Super-Drones

- <Specs>
- ◆ Heavy Satellites
 - <Specs>
- Medium
 - ◆ Bombers
 - <Specs>
 - ◆ Gunboats
 - <Specs>
- Medium-Heavy
 - ◆ Heavy Bombers
 - <Specs>
 - ◆ Super-Gunboats
 - <Specs>
 - ◆ Drone Launchers
 - <Specs>
- Heavy
 - ◆ Frigates
 - <Specs>
 - ◆ Light Carriers
 - <Specs>
 - ◆ Annihilator Satellites
 - <Specs>
- Ultra-Heavy
 - ◆ Carriers
 - <Specs>
 - ◆ Destroyers
 - <Specs>

- ◆ Experimental Craft
 - <Specs>
- Behavior
 - General
 - ◆ “Fearless”
 - No retreat, regardless of damage
 - No fear of death
 - ◆ Single-Minded
 - Only focus on killing pod
 - Minimally “co-operative” tactics
 - Intelligence-Type Specific
 - ◆ AI
 - Shoots
 - No-Dodge Attempts
 - Pre-designated flight pattern
 - ◆ Piloted
 - Shoots
 - Attempts to dodge
 - Actively-changing flight pattern

UPGRADE MECHANICS

- Purchasing
 - Resource Types
 - ◆ Matter Pool
 - Limited Resource Pool (deplete-able)
 - Can be earned by absorbing physical objects
 - Personal “share” expanded as number of pods “alive” decreases
 - ◆ Security Clearance

- Awarded by necessity (distance to target, special circumstances, etc.)
- No “Return” value penalty
- Utilize “Upgrade Screen” between levels
- Cannot go into debt
- Armor
 - Additional Plating
 - ◆ +Maximum Armor
 - ◆ Requires Sufficient Hull-Size
 - Improved Absorbency
 - ◆ +Absorbency Threshold
 - Improved Deflection Power
 - ◆ +Deflection Threshold
- Shields
 - Expanded Field
 - ◆ +Shield Size
 - ◆ Requires Sufficient Hull-Size
- Weapons
 - Weapons purchased individually
 - Upgraded on individual-basis
 - Once a weapon is available, all of its upgrades are available as well
- Nano-Machines
 - Deeper Bank
 - ◆ +Armor Repair Rate
 - ◆ Requires Sufficient Hull-Size
- Hull
 - Larger Hull
 - ◆ +Additional Nodes

- ◆ Makes other Upgrades available
- ◆ Increase mass, decreasing maneuverability
- Thrusters
 - Improved Thrusters
 - ◆ +Acceleration/Deceleration Speed
 - ◆ Requires Sufficient Hull-Size

SAVING/LOADING

- Save Points
 - Saved at “end” of previous level (thus sending player to upgrade screen)
 - Saved at “leaving” upgrade screen/entering next level
 - Upon “Loading,” Player is always given option to enter upgrades menu or to proceed straight to the next level
- Data Fields
 - Current Level
 - Resources
 - ◆ Matter Pool
 - Saved in a “post repair” status
 - ◆ Requisition
 - ◆ Security Clearance
 - Ship Status
 - ◆ Weapons in which nodes
 - ◆ Firing Groups
 - ◆ Upgrades
 - Misc. Info
 - ◆ Total Kills
 - ◆ Shots fired
 - ◆ Shots hit

- ◆ Enemies rammed
- ◆ Total matter collected
- ◆ Debris Matter “missed”
- ◆ Number of Deaths
- ◆ Weapons lost

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ARTWORK/USER INTERFACE

<Sub-section Summary>

OVERALL STYLE

- In-Game Interface
 - Main Screen
 - ◆ Designed to look like you're viewing a screen
 - ◆ Semi-transparent "HUD" Information
 - Distance to target
 - Off-screen enemy trackers
 - Various bogus telemetry artifacts
 - Two side-bars of "extraneous" information
 - ◆ Designed to make for more vertical play area
 - ◆ Styled to appear as actual "instrument" panels flanking the main screen
 - Contain some actual in-game options (turn off sections of HUD, etc.)
 - Main Menu
 - New Game
 - ◆ Starts a new game, saving over any existing level progress
 - ◆ Does not reset "data unlock" progress
 - ◆ Choose difficulty (pop-up)
 - Continue (if Applicable)
 - ◆ Only appears if a "continue" file exists in game directory
 - ◆ Starts from beginning of level
 - Data Archive
 - ◆ List of topics
 - Each topic has a visual and textual description
 - Main discuss several things in one topic (to properly fill screen-real-estate)

- Exit Game
 - ◆ Request if sure (pop-up)
- Upgrade Menu
 - Resource Panel
 - ◆ Matter Pool
 - ◆ Requisition
 - ◆ Security Clearance Level
 - Ship Diagram
 - ◆ Wireframe
 - ◆ Nodes
 - Click node to select
 - Ctrl/Shift click to select multiple nodes
 - Nodes are numbered
 - Nodes containing a weapon feature weapon information and “Upgrade” button (if applicable)
 - Nodes can be “locked” so that player cannot modify them
 - Available Weapons Panel
 - ◆ List of Weapons
 - Click to select weapon
 - ◆ “Allocate” Arrow
 - Click to apply selected weapon to selected node(s)
 - Available Upgrades
 - ◆ Click “Buy” button to buy upgrade
 - Firing-Group Allocation Panel
 - ◆ Panel Slides out
 - ◆ 0-9 Rows
 - ◆ Column for each node
 - ◆ Primary/Secondary Associations

- Left Click to toggle node allocation to particular group as primary
- Right Click toggle node allocation to particular group as secondary
- Weapon can be assigned to both primary and secondary
- Modifies “color” and shape of indicator
 - Left-Half Green (with a P) = Primary
 - Right-Half Green (with an S) = Secondary
 - Square = just primary
 - Circle = just secondary
 - Rounded Square = both
- ◆ Does not enforce “rules”
 - Player can opt to never apply a weapon to group if they want
 - Can apply to automated weapons to group (will not affect their firing though; will note this in UI)
- Proceed Button
 - ◆ Reminds player to make sure they allocated weapons and asks if they still wish to proceed
- Graphics
 - ◆ Style (2-Dimensional)
 - Perspective-less “Side View”
 - Semi-realistic, but also styled to be nostalgically reminiscent of older, 2-d graphic
 - Allied Ships (Pod)
 - Smooth, soft curves
 - Bright, shiny style
 - Enemy Ships
 - No soft curves or shiny white/chrome plating
 - Use hard, geometric styles and non-aero-dynamic shapes (irrelevant for space-only craft)
 - ◆ Immersive Purpose

- “Supposed” to be a computer generated simulation based on sensor data
- Lack of realism is therefore understandable
- Transmission quality can falter when damaged (screen static, etc.)
- ◆ Functional Purpose
 - 2-d Space significantly reduces calculations
 - Easier for team to wrap heads around
 - Creates nostalgia value
 - Can still provide quality experience

SAMPLES

- Pod Expansion
 - <Image Coming Soon>
- Weapons
 - <Image Coming Soon>
- Enemy Ships
 - <Image Coming Soon>
- Interface
 - <Image Coming Soon>
- Sample Screenshot
 - <Image Coming Soon>

GAMEPLAY AND BALANCE

<Sub-section Summary>

CONTROLS

- Menus
 - Mouse Clicks
- Gameplay
 - Movement

- ◆ WASD or Arrow Keys (both work at all times)
- Aiming
 - ◆ Mouse
- Firing
 - ◆ Left Click
 - Current firing group Primary Weapons
 - ◆ Right Click
 - Current firing group Secondary Weapons
- Weapon (Firing) Groups
 - ◆ Keys 0-9
 - ◆ Mouse Wheel
 - Up = higher number
 - Down = lower number
 - “Wraps”

DIFFICULTY

- Levels
 - Easy
 - Medium
 - Hard
- Effects
 - Enemy damage
 - ◆ Easy - 1x Damage
 - ◆ Normal - 2x Damage
 - ◆ Hard - 3x Damage
 - ◆ Does not affect piercing/heat values
 - Would otherwise render upgrades useless

MUSIC/SOUND

<Sub-section Summary>

WHERE MUSIC WILL COME FROM

- Team Member Dan Morgan will develop music
- May be deliberately inspired by existing music

IMPORTANT SOUND EFFECTS

- Weapon Sounds
 - Firing
 - Overheat
 - Weapon Hit
 - Explosions
- Interface Sounds
 - Click
 - Bleeps'n'bloops
 - Com Channel
 - ◆ Message In
 - ◆ Message Out
- Environment Sounds
 - Subtle Engine Noise
 - "Whoosh" of objects zooming past
 - Sizzle of objects being absorbed by shield
- Voice-Overs

BACKGROUND STORY

<Sub-section Summary>

MISSION OBJECTIVE

- Get just one Deployment pod to surface of planet to deploy the only MDB
- Deploying hundreds of pods to increase odds of one reaching surface
- If the bomb was sent in a missile, it would undoubtedly just be destroyed by defenses

DEPLOYMENT PODS

- Basic Equipment:
 - Teleportation Gate
 - Basic Thrusters
 - Small Nano-Machine Bank
 - Small Matter Bank
- Two Waves
 - Alternate between taking the “brunt” of each defense layer, to give other wave more time to repair etc.
- Teleportation Gate
 - Two-way gate
 - Cannot teleport to random “location;” must go between gates
- Nano-Machines
 - Miniature robots capable to self-replication, as well as construction of anything with a standard template and sufficient mass

MOLECULAR DISRUPTION BOMB

- We only have ONE
- Creates a cascading reaction where molecules caught in the blast field are no longer able to maintain chemical bonds. Each disrupted molecule expands the size of the field, while the field itself dissipates over time given insufficient molecules

ENERGY WEAPONS

- Magnetically project highly-energized particles (essentially raw electrons)
- Particles can be ionized to allow more remote magnetic guidance
- Can create a “beam” of particles by firing many in close time and spatial proximity
- Process generates heat

LIMITED RESOURCE POOL

- The fleet has only a limited amount of matter available, and thus cannot afford to turn every pod into a fortress “projectile”
- Sending a single, uber pod would likely result in failure, as enemy forces would be able to converge on single ship and destroy it
- Having multiple (but progressively fewer, and yet more powerful) pods forces enemy to disperse their forces

WHY NOT USE AN AI?

- Enemy forces etc. unknown, and thus we must rely on biological intuition and reasoning to adapt to ever-changing conditions

PHILOTIC PARALLAX INSTANTANEOUS COMMUNICATOR

- Allows for remote control of pod with 0 lag from light-years away
- Can be used for any form of digital or analogue communication, as long as it can be formatted to be transmitted and received

PLAYER'S “FACTION” (<NAME>)

- Aliens with a sort of cute, funny look
- Player unaware that they are an alien until end of game, after they blow up Earth

CHARACTERS

<Sub-section Summary>

OTHER POD PILOTS

- Wave I
 - Leader: Tantalus
 - ◆ All business
 - ◆ Distant
 - ◆ Authoritative
 - Omicron Drop Squadron
 - ◆ Leader: Henoeh

- Intelligent
- Mildly Comedic
- Serious
- Squad Mate 1: Doros
 - ◆ Gruff
 - ◆ Dark sense of humor
 - ◆ Confrontational
- Squad Mate 2: Eber
 - ◆ Squad Joker
 - ◆ Jovial and un-concerned
 - ◆ Playful rivalry with Doros
- Squad Mate 3: Phrix
 - ◆ Noob-ish
 - ◆ Asks lots of questions
 - Draws out answers to explain potential player questions, and thus clarify plot
 - ◆ Looks up to Henoch as example
- (Fourth Member is Player)

SUPPORT AI (<NAME>)

- Provides warning messages etc. to player
- Has little “icon” in a dedicated view screen
 - Icon is a face that changes depending on what happens

“COMMANDER”

- No name given
- Congratulates player for destroying Earth at end of game

LEVELS

<Sub-section Summary>

CONTROLS TUTORIAL

- Skip-able
- Series of on-screen commands/AI voice-overs
- Mechanics Taught
 - Movement
 - Aiming
 - Interface Buttons

RECON SATELLITE FIELD

- Wave I lead
- Pod is un-armed
 - No upgrades allowed to remain “invisible” due to small size for as long as possible
- Player must simply dodge the few satellites patrolling the outer sector

OUTER PATROLS

- Wave II lead
- Upgrades
 - Next Hull Size
 - Small Weapons
- Enemy ships have not fully accelerated to match player speed
 - Enemies pass by quickly
- Enemies
 - Small
 - Boss
 - Single, large carrier craft
 - Player could not possibly destroy enemy ship

- Deploys fighters and fires turret weapons
- Must simply “survive” until passes large enemy ship

DEFENSE SPHERE BLOCKADE PRIMORIS

- Wave I lead
- Upgrades
 - Next Hull Size
 - Medium Weapons
 - Additional Small Weapons
 - Armor Upgrades
 - ◆ +Armor
- Enemy ships from now on have matched player speed and thus can remain “on-screen” indefinitely
- Enemies
 - Small -> Medium-Small
 - Boss
 - ◆ Pair of Medium-Heavy ships
 - ◆ One on each side of the screen
 - ◆ Player can potentially get enemies to shoot each-other

DEFENSE SPHERE BLOCKADE SECUNDUS

- Wave II lead
- Upgrades
 - Next Hull Size
 - Additional Medium Weapons
 - Thruster Upgrades
 - ◆ +Thrusters
 - Nano-Machine Upgrades
 - ◆ +Bank Size

- Enemies
 - Small -> Medium-Small
 - Boss
 - ◆ Wave of Gunboats

DEFENSE SPHERE BLOCKADE TERTIUS

- Wave I lead
- Upgrades
 - Next Hull Size
 - Large Weapons
 - Additional Small Weapons
 - Additional Armor Upgrades
 - ◆ +Absorb
 - ◆ +Deflect
- Enemies
 - Small -> Medium
 - Boss
 - ◆ Wave of Drone Launchers

DEFENSE SPHERE BLOCKADE QUARTUS

- Wave II Lead
- Upgrades
 - Next Hull Size
 - Additional Large Weapons
 - Additional Armor Upgrades
 - ◆ +Armor
 - Additional Nano-Machine Upgrades
 - ◆ +Bank Size

- Additional Thruster Upgrades
 - ◆ +Thrusters
- Shield Upgrade
 - ◆ +Shield
- Enemies
 - Small -> Medium
 - Boss
 - ◆ Heavy Satellite Gauntlet

DEFENSE SPHERE BLOCKADE PENTUS

- Wave I Lead
- Upgrades
 - Next Hull Size
 - Additional Large Weapons
 - Additional Armor Upgrades
 - ◆ +Armor(Last)
 - ◆ +Absorb
 - ◆ +Deflect
 - Additional Shield Upgrade
 - ◆ +Shield
 - Additional Thruster Upgrade
 - ◆ +Thrusters(Last)
- Enemies
 - Small -> Medium-Heavy
 - Boss
 - ◆ Pair of Carriers (same type as Outer Patrols carrier)
 - ◆ Again, player may be able to get enemies to shoot each other

DEFENSE SPHERE BLOCKADE ULTIMUS

- Wave II Lead (Destroyed)
- Upgrades
 - Next Hull Size
 - Additional Shield Upgrade
 - ◆ +Shield(Last)
 - Additional Armor Upgrade
 - ◆ Absorb(Last)
 - ◆ Deflect(Last)
 - Additional Nano-Machine Upgrade
 - ◆ +Bank Size(Last)
- Enemies
 - Small-> Medium-Heavy
 - Boss
 - ◆ Destroyer

PLANETARY DEFENSE GRID

- Wave I Lead (Mostly Destroyed)
- Upgrades
 - Next Hull Size (Last)
 - Additional Small Weapons(Last)
 - Additional Medium Weapons (Last)
 - Additional Large Weapons (Last)
- Enemies
 - Small-Heavy
 - Boss
 - ◆ Experimental Craft
 - Makes you only pod left

- Physical-Blockade
 - ◆ Enemies try to stack as much mass between you and planet as possible
 - ◆ Get top-level security clearance and receive “Devastator Beam” to blast a hole straight through the mass

ATMOSPHERE

- Last Pod Remaining
- No Upgrades
 - Still visit screen to show security clearance level and “Devastator Beam”
- “Devastator Beam” constantly fires
- Smaller Enemy craft constantly getting crushed under pod/air is absorbed by shield
 - Matter banks reach full
 - Excess matter is bled off as plasma, making ship essentially invulnerable due to becoming a literal “falling star”
- Level is short
 - More for player to enjoy the show
 - Heavy dialogue with other pilots to reveal more of story

SCRIPTS

<Sub-section Summary>

VOICE ACTING

- <TBD>

TEXT-BASED INFO SCRIPTS

- <TBD>

CUT SCENES

<Sub-section Summary>

INTRO (LAUNCH) SEQUENCE

- After tutorial, before first level
- Happens during “blank” screen
- Series of voice communications/orders

FINAL (EXPLOSION) SEQUENCE

- Occurs after “Atmosphere” level
- Screen simulation of Earth exploding
- Commander/other Pilots congratulate you for destroying Earth and the “filthy” Human enemies

TECHNICAL SPECS

<Section Summary>

PROGRAMMING LANGUAGES

- GML (Game Maker Language)
- Game Maker 7.0

LIBRARIES

- None

CODE/ENGINES

- Game Maker Engine

TARGET HARDWARE/OS

- Windows XP+
- 1024x768+
- Requires DirectX9.0c+

DATA STRUCTURES/INTERFACES

- <TBD>

ALGORITHMS (LIKE AI ALGORITHMS)

- <TBD>

BACK-UP/VERSION CONTROL PLAN

- <TBD>

SCHEDULE AND PERSONNEL

<Section Summary>

GENERAL TEAM MEMBER RESPONSIBILITIES

- <TBD>

WHAT WORK EACH TEAM MEMBER WILL HAVE DONE

- Deliverables for Friday, Oct. 13
- Deliverables for Wednesday, Dec. 2
- Deliverables for Wednesday, Dec. 9