RISE@ZERO

Rise@ZERO (Rise at zero)
Game design for a Survival Apocalypse
F2P for Linux (and bootable usb to virtually run anywhere)

DRAFT 0.0.1 (20 JUNE 2018)

FortoJ

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OVERVIEW

Rise at Zero is the ultimate, battle royale scale, co-op arena (**Survival Apocalypse** genre) where a massive number of players try to survive combining their efforts against swarms of piranha-like insects, while frequent earthquakes shatter the ground (reducing available ground) while a merciless apocalypse its taking act.

Endure the disaster **crafting shelters**, **scavenger resources**, protect, **heal and collaborate** with your other fellow player in a hopeless scenario then, finally the light at the end of the tunnel: a spaceship will crash on ground, a possible way to escape the impending disaster, but then all resources will need to be spent in the repair it. Will the players endure, repair the ship, ride aboard and fly towards salvation will require unprecedented coordinate effort by all players.

LORE

"It's a scifi apocalypse, so there ARE zombies, right?"

There are Zombies, but that's not how we call them: their name is regulata. Also, they are the player's avatar and **our heroes**.

Lore wise, **regulata** are the mortal remains of deceased people (future singularity), just the brain to be exact; brain power **android like humanoid** who, then, are used as **servant in human extraterrestrial mining colonies**. The regulata serve for about four/five generations as handy aid for human colonists; regulata service ends after centuries: after many years of intensive mining turned the planet in a time bomb and colonists migrate to other stars. Travel across stars it's quite expensive, and *goods of low value* (such as the regulata themselves) are not considered weight-worth the price of seat for salvation. Regulata, like many other material belongings, are left on the planet to meet their fate.

After the exodus, when no other human being can be found on planet surface (consistent post-apocalyptic look&feel), in the final hours before planet collapse all **security system are powered down**... which include the **regulata's safety inhibitor**: unexpected (and unknown) by everyone else, after centuries of robotic servitude, without the *safety inhibitor system* in act the regulata **discover**, for the **very first time** in their existence, that **they are actually self conscious...**

...then the apocalypse begin.

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FEATURES

- Apocalyptic and pre-apocalyptic scenario on solid lore basis. Landscape mutates from verdant and idyllic alien landscape, progressively turning into a reddish nightmare as the planet slowly shatter, around the arena, as the apocalypse get in act act at full force.

- Collaborate... or not: but protection of your fellow player is necessity. **Each time a regulata dies** (disconnect from the mining grid supercomputer cause de-power the antiseismic framework) **difficult scale up** as earthquakes increase its ratio (which may end in a domino effect to pre-emptive failure)

- Victory is not mandatory. Difficulty is intentionally unfair, it may be possible to achieve the final goal only with a near perfect playthorugh. **Egoistical players, lack of collaboration, ignoring lost newbies** (leaving them alone, feeding them into their fate) are usual landmark of **failure**. In between goals such as find blueprint treasures, linked to player account for customization are intended to be source of engagement.

- **Super powered androids**. Unbridled by any security protocols, regulata can **run faster, jump higher, lift object bigger than themselves**, if they lose non vital limbs a medic regulata can 3D print it back. In addition, **special tools** (acquired by spending credits earned on field) boost with **additional skills such as run as fast as a car**, build temporary bridge to climb, repair-heal your friend quicker etc.

- Battle Royale scale map arena to be explored by detail, to find credits and resources, and macro with constant need to reach shelters build by other player or find safe spot to build own.

- Intriguing **lot and store system**: player scavenger hashkeys (which give access to planet's cryptocurrency) in the personal belongings left behind by exodus; credits obtained by hashkeys can be spent to buy essential items. Bought goods will **not simply spawn on ground**, instead, they will literally **shot from the space** (where a network of satellite factories 3D print everything for you) in fashionable *loot-chest-rockets*.

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LOOK & FEEL

Building the mood

In the first minutes the player is welcome in an almost idyllic landscape where can walk and run freely with no apparence of immediate menace. The skybox surrounding the area will give the first hints of the ongoing: a planet wide, apocalypse.

Distant echoes of planet's crust crackling, volcanic eruption and other audio clues will render a wide sense of distance; Skybox will shown the blue sky turning black as continental sized portion of planet's atmosphere is sucked away in the space, mountain sized pieces of the planet are hurl out of atmosphere (apparently very slowly: it takes more than two minutes for a vehicle fast as space shuttle to reach the space). Ambient light shader colors and skybox art will change during the gameplay reflecting the dramatic evolution of the apocalypse.

An optimistic, and seemingly aware, female announcer apathetically inform the player about the doomsday progression, as well *suggesting* most impending needs (build and take shelter, enable mining station safety measures against earthquakes etc). The announcer will tightly follow the player (giving, through small hints, the correct interpretation of the events, such as planet's atmosphere leakage as crust shatter etc) but only if the player stick with the instruction (we suppose its a new player).

Musical experiment

A field that will explored (may or may not be included in the final product) it's the "dynamic score system" where each single musical scores have one alternative "shadow" version:
• original version: simple, mildly dramatic, ambient tune
• shadow version: which is the basic exact music, but with blend instrumental that will give an "angered" tune feeling.

The two version are played at the same time where one of the two is silenced: the music will switch between the two modes to reflect the two main state machine for each player: version B is played when player is chased or engaged with the swarm, version A during the rest of time.

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ASSETS AND MODEL DESIGN

Scenery

Scenery assets will reflect the look around a small scifi mining station surrounded by lush forest and abandoned small settlements; few tall building will account for most profitable and risky area to scavenger. Visual clue for hashkey wallets (which is a simple string of code acquired by sight, so there are no specific need as for 3d model assets) are personal belonging of the now gone exodus: suitcases, jackets, car's trunk/glove compartment etc.

Obtained hashkey gives random amount of credits (with most dangerous place giving more) which can be spent anytime connecting with orbital an unseen orbital 3D printing factory (again, no asset model are required for the store but a simple and intuitive UI). Once player made up its mind on the number of goods needed, it is asked to point a free spot on the ground where the satellite will *shoot* a rocket on ground: the arrival of the delivery will take some time, an holographic count down projected onto ground (where the player has marked lootbox arrival). The resulting lootbox will have a standard size (despite the number of tools bought) of a dumpster (with a more pleasing look) and two variations:

- The basic **medium sized lootbox chest** (with soldered with two rockets on each side) for items, regulata mods, tools and other gadget. All player will be able to access to the lootbox at the same time. Collaboration and coordination to whom obtain items must be agreed between players
- A **larger one which will "contain" a building structure** (it wouldn't actually contain the structure, but a 3D printer which "will project" the structure onto ground) such as shelter, tesla coil (keep swarm away) etc.

Player customization

Regulata androids were manufactured as utility, work or leisure servant: everything in their look can be customized but arms and hands; no matter how strange and funny they may look. Arms and hands (only piece that can't be customized) define their class and active skill (white arms, red cross tatooed and holding a medi/repair kit it's and easy guess). Regulata visual customization can also bought for real money which are intended to sustain the f2p economic model.

Earthquakes will not just represent an audible feedback for the apocalypse, each earthquake will have a physical, dramatic, appearance. A massive mountain will be instanced in place of the earthquake (resembling a huge fracture with an inaccessible crater in the middle). Player is not supposed to be able to walk onto (or even get nearby) so it doesn't need to be very detailed detailed. **All static assets** in the area where the mountain instanced are **hidden or removed** from the game. FX such as dark cloud and mist (as well damage and instant kills for players too nearby during this event) will help to the model to blend with the rest of the ground

Over the sky fast paced black clouds hover around, **The swarm** is a ellipsoid made by a multitude of small indistinguishable alien insects (particles). They are extremely angered, as earthquakes are destroying their underground apiares, and will target anything humanoid-like. Players need to stay away from their gaze otherwise the swarm will attack. Sound FX are also important to set the right feel of terror: when attacking his/her regulata the player will ear creepy munching sound (as well usual visual feedback when player is getting damage) and disturbing dull sounds of several, painful, hits.

GAME BY PROGRESSION

The rest of this document will expose the designed content contextualized, by steps and elements, during the evolution of a single gameplay

Step I - Introduction to the arena

Game begin as all regulata-players stand, aligned (as they were all stored) inside a big hangar with shut doors. The server then wait that all players have completed to load the map and each other player mesh/customization. Player who are already loaded and aligned to the server are free to move around. Crackling sounds echoes distantly as the hangar shut gates cushioned them. Sometime can be ear the sound of spaceships leaving the planet. Once everting is load and synchronized, an unexpected and unanticipated female announcer begin an asynchronous countdown from 5 to 1; then, after, say something like "*Chances for survival are now Zero*".
Hangar doors open so players are free to flood out.

Step II - Meet and run with the Swarm

Inside the Hangar lights turn off, the female announcer voice jitter incoherent words as some sort of breakup or short circuit; then lights back on. Female announcer voice seems to be restored and, as it had reset; she then gives generic information about the climate, temperature... and current status of the apocalypse. From now on, the announcer can be ear inside and around the hangar. The announcer will continue to give some basic info to players still around the hangar:

- Acquire resources to build shelters
- Don't get detected by the swarm
- Don't crowd togheter with other regulata, as this trigger the swarm even more

Players flooding out will discover that the hangar has been spawned at random in the map; experienced regulata-player will certainly run away from the hangar looking to scavenger for most profitable places, while newbie are expected to follow the announcer instructions. We will follow the step of these first inexperienced regulata-players.
Regulata-player that will stay around the hangar will be able to use the hangar as first shelter. Shelters are the most common and cheapest way to escape from swarm's attack. Usually the shelters are damaged each time a player hide inside (each shelter has a max number of time to withstand swarm's attack, once destroyed they will be useless), but the hangar is indestructible during this phase (hangar destruction is scripted at the end of this phase).
Around the hangar player will find very low value hashkeys: these hashkey loot are mostly intended for newbie player who need to get familiarity with game mechanics. Regulata are free to run and jump anywhere, but each action taken under swarm's sight may trigger attack. In this phase the swarms is less frequent and less prone to attack, but things will change as the game progress. At the end of Step II the hangar will be destroyed by a scripted event, and all regulata-players will be by their own.

Elements of Step II

The Hangar - Mesh looking aside, the Hangar is a scripted square box that works as alone and only *spawn area* (as per BattleRoyale/Arma genre, there are no re-spawn: other regulata may only be healed or *resurrected* with special item, just once) were the player can't be harmed. Player chased by the swarm can run in the hangar to stay safe; but then a small swarm will hover around the hangar, possibly annoy other players. At the very first earthquake the hangar's alarm goes off, in this scripted event a multitude of angered swarms will attack the hangar completely destroying it. This event ends the Step II (which began with hangar opening its doors) and will initiate the Step III (the hangar in ruins)

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The Swarm (server side) - The swarm is simple spherical collision shape that hover in the sky and randomly cast detection rays at nearby regulata: if the raycast doesn't report any collision (terrain or objects; regulata itself doesn't count as colliding item), the server assume that regulata is on plain sight and is targeted, but targetting don't trigger immediately the swam to attack: the raycast is fixes on target and increase the value of the own [integer: ANGER] and regulata [integer: PROVOCATION] (these value are slowly depleted when no one is targeted) by delta time. In the instant swarm's [ANGER] and regulata's [PROVOCATION] are at trigger level, the swarm initiate the attack (swarm chase regulata). If the regulata mesh collide with the swarm-sphere, the regulata gets continuously harmed. The swarm-sphere can't be stopped, but colliding object can slow it: player running away form a swarm may want to avoid open fields and running through obstacles as hole in the walls, trees etc... Swarm lose interest into chase if the target is too distant (or another regulata trigger the swarm away from him/her)

The Swarm (client side) - The Swarm will look exactly as its name suggest: a spherical dark cloud made of many particles (which render the frame of the sphere almost shapeless) resembling tons of tiny, carnivorous, insects. This swarm of piranha like insect can devour a single regulata in very short time: player has to feel terror when realize one of this death cloud is on their tail. Visual and audio feedback (such as munching sound fx, nervously shaking camera are used to empathize each hit) will teach new player to be afraid of this entity; seasoned players, familiar with the Swarm simple pattern, would be able to deal with less fear possibly show off their skill while saving newbie from certain death (with the right tool, a regulata can intentionally trigger a swarm over him/herself).

The most common audio clue for the swarm is its distinctive buzz; with three variations:
- Norma buzzl: when the swarm is unaware of any player presence.
- Angered buzz: this audio buzz is the clue for the player when is on sight of a swarm... player is advised to localize and get out of its sight ASAP.
- Attacking buzz: this very nervous and extremely angered buzz is the mark of a swarm on the hunt for prey

Step III - Scavenger

Players scavenge hashkeys. **Hashkeys are small string of code** that can be found on exodus forgotten belonging. The visual hint for possible source of hashkeys are common personal items such as suitcase, pile of documents and alike. Once found, hashkeys are **instantly converted into planet's cryptocurrency** (which are the financial base of the all the colonies) and refill regulata's digital wallet. Cryptocurrencies **are used to buy goods and structures** at the remote store who's still active and orbiting around the planet. Hashkey loots are shattered all around the map, but the actual value of each HK will be determined by the location (wealthy area will have less frequent, high value, high risk loot than other places). Player will be able to access to the store network anytime and issue order for any kind of product (with given founds)

The Store - The store itself don't need ingame appearance, all interactions are go through a simple e-commerce graphical interface. While the order can be issued anytime, the actual shipment will take some time before "reaching the ground", player will be required to point a clear spot on the ground where the rocket-lootbox will land; other regulata players could be nearby; since anyone could access to said lootbox it's important to let them know which tools you do absolutely need... and what's in for others (sharing is caring: but you need your tools). There are two kind of lootboxes (shipment can be only one or the other way). The two kind of lootboxes that can be ordered were already discussed in the *ASSETS AND MODELS* chapter.

Scavenger – (or *distribution of wealth*) - Hashkeys loot are evenly distributed across the whole map but the value of each hashkey (which equal to the opening of a digital wallet) its determined by its location: safe places like the woods (where it's easier to hide from swarm) will have lowest value of credits (also difficult to spot), hashkeys obtained in open field and nearby town will have mid tier value (its easier to be spot by the Swarm), and ultimately the highest pay, highest stake risk, haskeys are located inside tall buildings (its difficult to climb down quickly a tall buildings because fall damage is present)

Step IV – Earthquakes

While actually present from the Step II, although sporadically, **earthquakes menace become exponentially effective** during this phase; each earthquake **will occupy a considerable amount of ground**, creating spot of untraversable area and thus making difficult to travel on straight line. **Each player death increase the frequency ratio** in which earthquakes are generated, by design this makes urgent for expert players to led and protect inexperienced players: as more regulata actually dies, more ground breakage will cluttered the land. **Shelters don't provide** any kind of **protection against earthquakes**, so destruction of one, or many, shelters is another factor to take in account. **Other** indirect and direct **malus coming from earthquakes is the reduction available hashkeys** loots and **increase of number of swarms hovering around** (swarm's hive hide underground and they presume the current detruction is caused by humanoids... which, indirectly its true).

Elements of Step IV

The first manifestation of **Earthquake** is a unique, easily distinguishable (not echoed as per ambient FX) underground cracklings: direction of sound will give the first clue of its actual location (important for preventive evacuation) . This is considered as bonus timing were expertise player can gain from this extra time and plan a escape route beforehand... and possibly warn inexperienced. After a brief time of silence, the earthquake will actually show off. Mist will emerge in a circular area giving the final graphical clue of the area involved, after a some more time the mist will become more dense and players still colliding with the contained ground will get progressive damage (slow at first) as well getting reduced

field of view as well with jitter and shaky camera: audio clue for players directly involved in this stance (taking damage) will be the crackling sound directly under their feet and regulata own pain exclamation. The final phase is direct kill of any character still in the assigned area. Now, with the ground *clean*, a new mesh mountain will emerge (instanced) from ground. No player alive should be on top of it "riding"; while other player around will get additional clue to stay away from the mountain as it emerges. Mist surrounding the area is intended to give the most seamless feeling about land's shatters and ground (mist cover the not perfect seams between the freshly instanced object: the mountain itself).

Each instanced mountain will stay on map, reducing the viable ground as well placing a corrosive-poisonous range of mist, this mist is intend to further reduce the playable area, but it will be still walkable at the cost of health-points (can be bought equipment to increase resistance to corrosive mist). The center of the mountain is hollow, vulcan-like; again, istant-killing dark mist in the middle is intended to cover things up. Once finally emerged, the mountain top will stop instant killing players (except the middle vulcan-like mouth), making it an unexpected extra walkable area... but difficult to get in (corrosive/poisonous mist still surround the place) and get out. The very bottom, narrow ring around the mountain (dark mist) will always instantkill, more external ring (sparse mist) will instead damage progressively.

Step V - Proposal for aggravation and ease of problem

The fifth step is not actually a step planned for gameplay, but a proposal of several adjustment that may, or may not, be necessary to balance the difficulty as few exponential factors may make difficult to predict a typical playthrough. For example: its unpredictable the quantity of available ground (depending on how many regulata did actually died), and so its difficult to determine how much scavenger area will be still available during this phase (and how many credits players can still farm and such and such).

The first possible development is to free the player from the actual need to scavanger:

- Option 1) Random lootboxes are thrown on ground due the machine being (crazy). Acquire of resources become evenly random, and easily predictable by the server (its up to players own skill to reach lootboxes and return to home ground as quick possible)
- Option 2) (heavily reliant on player foresight ability). Straight from initial Steps (from Step II and go on) player will be able to acquire and build cryptocurrency mining machines. Unexperienced player may not understand the urgency of build such devices on ground (they may favour shelter). Based on this only rule, a game with only unexperienced player will deem doomed (since later in game will be nearly impossible to build anything with few access to resources
- Option 3) Other source of haskeys are somewhat fenerated on the available ground (planet wise cyber security sistem are shut down, so players can now scavenger the same exact places as before for more (risky) hashkey loots

[this section will be updated with more proposals]

Undisclosed... resources are sending unexpected aid. One of the spaceship the colonist were using is defective and unsuitable for human space travel. The human crew has been reallocated on another place and the broken spaceship is left to crash on ground (as many other valuable things, like the regulata themselves). Incidently the spaceship crash in the arena. Spaceship navigator AI, on behalf of the owner: *Dexmac Technologies* (a portmanteau for DeusExMachina) proposes a deal: if the ship is repaired they will be allowed aboard. This is the momentum where the final clock for the apocalypse start tickling.

All the resources must be directed towards the spaceship: all credits earned must be spent for ship repair (satellite factories will shoot the parts the ship need; this is all automatized between the satellite and the ship itself). This is the only phase in the game there's an actual timer and the urgency is a constant reminder. Once the startship is repaired, players can get aboard and fly across the stars (game end)