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Overview

Influence is a space strategy MMO set in the *Adalia* system's asteroid belt after an ill-fated journey aboard the *Arvad*, a multi-generational ship fleeing a dying Earth. Players compete through multiple avenues: mining, building, trading, researching, and fighting. Influence is rendered in 3D and players interact in third-person through control of their ships and the installations they build. Players can own any of the 250,000 asteroids in the system and can exploit the asteroids' resources to further their goals, either solo or in collaboration with other players.

Influence is for the player that loves the emergent gameplay and vibrant economy of Eve Online, the strategic focus of Stellaris, the sense of scale in the X-Series, and wants to truly own their experience and help shape their universe. It drives the player to answer the question: How will you expand your Influence?

Guiding Principles

Rewarding Gameplay

Grinds are not fun. Influence is a strategy game, and pursues rewarding gameplay rather than time sinks. This frees players to focus on playing their unique strategy and gives rise to compelling emergent gameplay. Wherever possible, grinds will be allowed to be automated, but players capable of building or using third-party tools should not be advantaged over those who are not. That means that Influence will work to aggressively incorporate or integrate with any third-party tools providing such an advantage. Influence should be rewarding whether it is played for 30 minutes, or 12 hours per day.

Futuristic Realism

Influence is focused on building an immersive world rooted in science fiction, with an emphasis on realism. Travel, resources, manufacturing, research, skill, and combat mechanics should make sense in relation to each other. The emphasis on realism will allow players to draw reasonable conclusions based on currently understood science and have their logical conclusions largely reflected in-game.

Player Ownership

All in-game assets will be on the blockchain and reflected as fungible, non-fungible, or semi-fungible tokens supporting the ERC-20, ERC-721 and ERC-1155 standards. Players will own their assets, and Influence embraces "Play to Earn" principles, in which players earn in-game assets through their gameplay and may trade them in-game or on secondary markets.

Composability

Rather than building a walled-garden, Influence will strive to leverage the existing ecosystem of dapps on Ethereum. Since all in-game assets are on-chain, players should be able to trade non-fungible tokens like asteroids, ships, and buildings via OpenSea, create raw material liquidity pools on Uniswap, or create derivatives on Synthetix. Additionally, Influence will encourage the formation of organizations (corporations, guilds, alliances, etc.) to allow players to leverage each other, and will enable players to do so by supporting existing DAO (decentralized autonomous organization) tooling, such as Aragon and Colony.

Roadmap

Arrival Release

The Arrival release will be launched on the Ethereum main chain (L1) and will include the initial procedural generation of the *Adalia* system, the ability to purchase asteroids as ERC-721 NFTs, the ability to scan owned asteroids for resource bonuses, and the ability to assign a custom name to each asteroid. Additionally, the release includes groundwork to allow for deposits / withdrawals of asteroids to and from layer 2. The game will be presented in-browser and rendered in hardware-accelerated 3D.

System Generation

250,000 asteroids will be procedurally generated on-chain based on seeds derived from the ERC-721 token ID corresponding to each asteroid. The following features will be procedurally generated on-chain: orbital mechanics, spectral type, and size.

Orbital Mechanics

Orbital elements capable of identifying the exact position of each asteroid at any time are generated. This includes the following Keplerian elements:

- Eccentricity
- Semimajor axis
- Inclination
- Longitude of ascending node
- Argument of periapsis
- Mean anomaly

Time within Influence is accelerated at 24x such that one real-world hour equals one in-game day. Orbits and the asteroid's positions reflect the in-game time and, as such, each asteroid completes an orbit around *Adalia* in the range of 10 to 120 real-world days.

Spectral Type

Each asteroid has a spectral type generated and made up of four primary types: C, S, M, I. There are a total of 11 possible spectral types including combinations. They include: C, Cm, Ci, Cs, Cms, Cis, S, Sm, Si, M, and I.

Size

The radius in meters of each asteroid. Asteroid sizes are distributed based on a power law such that the *n*th asteroid has a radius in meters of: (*n*^-0.475) * 375,142m.

Purchase Development Rights

Players will be able to acquire development rights (purchase the underlying NFT) using a MetaMask or WalletConnect compatible wallet. Additionally, OpenSea is integrated with informative card images and links directly from the game to allow for buying a currently owned asteroid or selling / auctioning one that a player owns.

Scan Asteroid Surface

Players will be able to scan the surface of any asteroid they own to identify any possible resource bonuses. Each of the five overall resource categories will have corresponding bonuses in addition to a general bonus that applies to all resource categories.

- General Yield: +0%, +3%, +6%, +15%
- Volatile Yield: +0%, +10%, +20%, +50%
- Metal Yield: +0%, +10%, +20%, +50%
- Organic Yield: +0%, +10%, +20%, +50%
- Rare Earth Yield: +0%, +30%
- Fissile Yield: +0%, +30%

Rarity for individual asteroids will be computed based on the scanned bonuses and displayed in-game and on NFT card images in the following (progressively rarer) categories: Common, Uncommon, Rare, Superior, Exceptional, Incomparable.

Name Asteroids

Players will be able to add a custom, unique name to any asteroid they own. This will be reflected in-game as well as within the NFT metadata, and the NFT card displayed in marketplaces like OpenSea.

Exploitation Release

The Exploitation release introduces the first portion of the economy focused around allowing players to reach, and begin exploiting, the asteroids on which they acquired development rights in

the Arrival release. Every asteroid will have a number of lots available for exploitation which scales linearly with asteroid surface area. Each lot can be interacted with from the 3D view of the asteroid, and can be utilized for either mining or building. Mines and buildings will display in 3D in-game and can be interacted with directly via context menus. Mining, and the buildings available at release, are focused on supporting the building of transport ships and shuttles, fuel, mining equipment, refineries, and manufacturing installations.

Extracting Resources

Each asteroid has a truly unique composition defined by a hierarchy of:

1. Spectral types - each asteroid is composed of between one and three of the four primary spectral types. Their ratios in relation to each other are normally distributed such that, for example, one Cms-type asteroid may be composed of relatively more M-type material than another.
2. Resource categories - each spectral type contains one or more of the six primary resource categories, which include:
    a. Non-economic
    b. Volatile
    c. Organic
    d. Metal
    e. Rare Earth
    f. Fissile
3. Resources - individual minerals and ices that make up each resource category. For example: Kamacite is an iron-nickel bearing mineral that is part of the “Metals” category, and Graphite is a carbon source found in the “Organic” category.

Layered on top of this variation is the first step in resource extraction for players: core sampling. Core samples are taken on a specific lot from the 3D asteroid view, remain tied to that lot, and return a composition. While core samples aren’t required to mine, an installation mining without one will suffer substantial penalties to extraction speed and will extract a random set of materials that may be sub-optimal. Core sample results are stored as NFTs on-chain, and can actually be traded, opening up the potential for a “prospecting” profession, as well as allowing owners to make an investment in their asteroid lots potentially making them more attractive to lease.

Asteroid resources are not exhausted, however mining efficiency for each core sample will diminish over time leading to lower yields, and motivating the player to take additional core samples to identify new, more productive, deposits. Asteroid bonuses, building modifiers, and (at Discovery release) skill levels will all stack on top of the composition defined by the core sample and can result in some extremely productive sites.

Storage

Raw, extracted materials, as well as subsequently refined and manufactured materials, may be stored in several ways. First, each building contains a limited amount of storage. When that storage reaches capacity, producing buildings will halt until their storage space becomes available again. To increase available storage, warehouses (of various types) can be built on free lots. Any compatible storage building on the same asteroid can be utilized as an output from the producing building. Finally, materials can be stored on ships, transferred from producing or storage buildings.

Refining & Manufacturing

Refining and manufacturing buildings can be built on asteroid lots and require a set of input materials and modules to be in storage on the asteroid (and owned by the builder). These buildings are responsible for processing raw extracted materials into refined materials, and subsequently into modules that are inputs to other buildings and ships. Each building allows the selection of a certain set of processes that generate specific outputs based on assigned inputs. For example, the process to produce Deuterium, a fuel for reactors and ship thrusters, is called the Girdler sulfide process, and requires water ice (a raw material), and hydrogen sulfide (a refined material) as inputs.

These processes can be automated such that hydrogen sulfide can be refined in one building, and automatically utilized in the Girdler sulfide process to produce Deuterium in another building, as long as they are on the same asteroid. Linking these buildings is performed from the 3D view of the asteroid by selecting input & output buildings. All processes are modified by the building tier, potential upgrade modules, and (with the release of Discovery) the skills of the owner.

Market Trading

Materials must be stored within a building or docked ship on an asteroid to be trade-able. Additionally, a market building must have been built on an asteroid lot which enables trading to take place, and enables the owner to charge a configurable per-transaction market fee. From a technical standpoint, making materials tradeable “unlocks” the ERC-20 transfer and approval methods allowing it to be transacted freely across any ERC-20 compatible infrastructure. Importantly, trading does not move the resources themselves, only switches ownership of them. Attention must be paid to the resource’s location and the effort and cost required to ship the resource if necessary. Initially, upon release of Exploitation, a market will be available on Adalia Prime.

Traveling the Belt

Travel in Influence is modeled around the “torch ship” concept in which ships take a direct, straight-line route from origin to destination. This is achieved by accelerating for the first half of the journey, then flipping around, and decelerating for the second half of the journey. Players will have the option to modify how long the ship burns its engines during the journey to adjust the total

fuel cost, and total trip time. Doing so will, for example, allow players to keep fuel costs low when shipping large amounts of ore while sacrificing time, or prioritize speed when needing to respond to rapidly changing market conditions at the price of high fuel consumption.

Travel requires fuel, and players must plan in advance to ensure they will not become stranded. Although all ships will feature small on-board fuel refineries which can take advantage of trace volatiles on any asteroid, this is a slow process which limits ships to minimal thrust and results in long travel times.

Space is big, really big, and even with the 24x time acceleration, traveling across the belt will not be a trivial time or fuel commitment. While traveling between neighboring asteroids may only take 15 minutes, traveling across the entire system will take real-world days.

Asteroid Access

Asteroid owners will have the ability to define “open”, “limited”, and “blocked” access to their asteroids, either as a whole, or by lot. Initially all asteroids will default to “open” in which any player can land, prospect (take core samples), mine, or build. This protects gameplay from the “absentee landlord” issue and further encourages active participation from asteroid owners. Squatters present on an asteroid when an owner modifies access rights will be afforded one month at previous access levels.

“Limited” access allows owners to lease lots on their asteroids to other players by defining the lot, term, and price. Any player may accept the contract and thereby gain access to that lot for the entire duration. Additionally, renewal options can be included in the contract if the owner wishes to allow the renter to renew automatically (without issuing a new contract). Players leasing space will have all of the entitlements defined by the owner, but must consider the risk of development on a site which they don’t control indefinitely, and evaluate the cost of dismantling their installations and shipping them back off-asteroid.

Finally, “blocked” prevents any activity by a non-owner, or non-whitelisted address.

Ethereum Layer 2 Bridge

Exploitation will be the first release that launches on Ethereum layer 2 (as will all subsequent releases). This will necessitate the presence of a bridge to allow for the deposit and withdrawal of Asteroid Tokens to and from layer 2. Additional bridges to support other NFTs and fungible tokens will be added based on player demand to be able to withdraw them to layer 1.

Discovery Release

The Discovery release focuses on a significant expansion of the economy via the addition of research buildings, and new advanced buildings, ships and modules unlocked by gaining

technology levels. Additionally, skill trees allow players to specialize into various roles (i.e. miner, merchant, scientist, builder, etc.) and gain unique role-related bonuses.

Technology

Gaining technology levels will require the building of research installations (which can be built on an asteroid lot). Players may direct research into "fields" (i.e. nuclear physics, organic chemistry, propulsion, etc.) but their specific discoveries cannot be pre-defined. Furthermore, research & technology are partially shared system-wide in Influence. As technologies are discovered, the overall technology level advances allowing newer players to advance more quickly, while still reserving cutting edge technology for the players investing appropriately in research.

Invention

Once players have achieved higher technology levels, they still must procure designs for the items they wish to build. They can do that in one of two ways, by either buying the designs on the market, or utilizing research facilities for invention. Players focus invention on an existing module, building, or ship, and after a period of time, invention will generate a new item with procedurally generated specifications at a higher tier. These designs can then be used to build and can be copied and sold on the market as semi-fungible tokens.

Skills

Skills in Influence are acquired through two methods: actions and learning. Skill levels will increase based on actions performed by the player over time. For example, if a player wished to specialize and advance along the extraction skill tree, they will need to actively mine. Alternatively, highly skilled players can share (or sell) their expertise while present at special purpose educational installations. Skill level will, however, advance substantially faster when gained via taking in-game actions.

Conflict Release

The Conflict release will, for the first time, introduce PvP combat between players. Largely limited by blockchain scaling progress, combat will initially be focused on turn-based tactics, and will take place in the context of third-person, player-controlled ships in immediate proximity to an asteroid. A significant expansion of the economy to support offensive and defensive modules (i.e. weapons, armor, shields) will roll out in line with advancing technology. Defensive modules designed for installation on and around asteroids will be first, followed by offensive and defensive modules geared towards ships.

On a grander scale, combat in Influence will be highly strategic. Given that there "ain't no stealth in space", there will be near perfect knowledge of where other players are (although not necessarily what they're flying), and where they're moving. Given the travel times, it will be imperative for players to ensure that they, and their allies are well positioned to respond to threats.