Organoid Natural Intelligence

The Iromakuanhe, like many spacefaring species have developed their own informations technologies, both in response to the demands placed on them as an advanced, multi-planetary society, and to make the use of their Organoid technologies easier.

The NI, or Natural Intelligence, is a data construct of animal-like sapience levels, and an advanced organic computer system with capabilities comparable to any sophisticated military supercomputer. It relies on a combination of advanced cultured neurological systems that have been structured as a means to emulate both animal and computerized processors. This allows it to grow intellectually and emotionally without requiring super-sophisticated software, and can amass immense amounts of data without the strains that would be felt by the mind of an ordinary sapient species. Because it operates in two separate, but parallel thought channels, it is comparatively resilient to digital assault and would require unconventional expertise in its unique heuristic systems.

Personnel can interact with the NI via voice command, neural interfaced or through analog display and interface systems, depending on the nature of the system. Like a well-trained animal, the NI is absolutely loyal and very good at preprogrammed functions, and despite potentially massive databanks, actually relatively crude in terms actual intelligence. However, it possesses the same fault tolerance and adaptability a more intellectually advanced species has, and has the ability to learn and grow with time. Some units are specifically constructed into fully-fledged sapient and sentient entities, while others may grow and progress into new levels of understanding. They will age with time, though OMNI generally keep their persona young for the sake of vanity, and tend to have the same general lifespans as the pilots and operators they work with. While the effects of aging on their minds are rarely felt until their last few years, tissues cannot be preserved indefinitely, but they will gradually atrophy entirely by their 140th year. For the sake of keeping the NI from suffering, euthanasia and biomass recycling of the matter is carried out before that happens.

To prevent an NI from going rogue or berserk, hundreds of physical and digital failsafes have been placed inside the system, almost to the point where it is more reliant on the Iromakuanhe that use it than they are on it. Autorepair symbiotes similar to those found in Prajna inhibit the development of irregularities in the brain, while the underlying chemistry is partially regulated to prevent NI from becoming emotionally unstable due to tampering or incident. Genetic memories are set so that NI will respond to specific safe word relevant to their role which will immediately reverse and remove all the data acquired since the last time the vessel they are housed in was docked and subjected to maintenance, which can be altered or disabled only when the unit is docked into a functional Birthyard or by the careful tinkering of a skillful geneticist. In the case of ANIOS or higher, their internal network connections are also inherently incomplete, requiring the mind of an Operator to access all of the functions normally available to them.

Operations Master NI

Operations Master NI are the top-tier intelligences in the Astral Vanguard and nearly all Iromakuanhe Astral Commonwealth starships, and lower the amount of labor required to manage large-scale coordination of matters of high importance, including fleet intelligence, information traffic, as well as the

management of important resources, including [organoid](#) craft production and terraforming/ecological viability operations.

OMNI tend to be sentient and partially sapient, though not of the same capacity as high-class AIs found in other nations. Most young constructs lack much more than their basic capabilities and certain common personality traits, such as loyalty, determination and curiosity, that have been inputed for their usefulness. They are the only NI that have free will, and as such, are one of the few that can deny access of any resources available to their own volition, so long as it is to protect the citizens of the [Astral Commonwealth](#) and allied nations. The eldest OMNI and one of the first created, Lakshmi, is approximately 90 years old and has a fully developed personality and set of mannerisms.

Standard Capabilities

- Deciphering and ordering massive amounts of gathered and received data.
- Assisting in the composition of plans by providing semi-accurate data simulations.
- Coordinating the flow of information in large military and governmental bodies.
- Can automate multiple thought processes at once, even while interacting.
- Large-scale regulation and observation of automated resources.
- Voice interface with custom persona that can be projected on most publicly networked display devices.

Limitations

- Requires connection to operator for all non-essential functions. (Except for projection.)

Fleet Intelligence OMNI

Fleet Intelligence OMNI constructs, or FIOMNI, are NI specifically constructed to assist in the large-scale coordination of fleet and fleet resources, and act as intelligence hubs and liaisons for [Astral Vanguard](#) commanders. Fleet Intelligence OMNI are characterized by patient, professional personalities and very conservative habits, though they tend to pick up on certain traits from the officers they serve under.

All vessels traveling in groups larger than 2 have at least one active FIOMNI, though the chain of command for these intelligences is based on ship class and the rank of the officer commanding it. Officers that have reached the rank of [Lanranr](#) or higher, or serving in special positions are assigned a unit to assist them in their duties, which is transferred over as the officer is moved to different positions.

Informations Control OMNI

Informations Control OMNI are constructs that govern and maintain the main information hubs in the [Astral Commonwealth](#), restricting malicious access of the global data networks and providing FIOMNI and LCOMNI with reliable and accurate data. ICOMNI are characterized by curious, highly sociable and slightly quirky personalities. The large communications nodes they are situated in also grant them the highest

processing power among all NI constructs.

The NI Lakshmi is of this subtype.

Life Culture OMNI

Unlike the tried and tested FIOMNI and ICOMNI construct subtypes, the Life Culture NI, or LCOMNI is still technically in the prototypical phase and has yet to be implemented outside of a few test projects. As they expand out from the [Iruotl System](), the [Iromakuanhe]() knew they would need to establish large permanent shipyards and engage in large-scale terraforming of the worlds they will encounter, most of which will likely be lifeless and rocky.

Built from the existing OMNI constructs, Life Culture units would do both and ensure the continued existence of the [Iromakuanhe](). They are characterized by introspective, but motherly personalities, and have the least erratic and mutable minds among other constructs. Because they operate on large facilities such as space stations, they also have the higher processing power than FIOMNI.

Assist NI Operating Systems

Assist NI Operating Systems, or ANIOS, are standardized craft processors that are more limited in functionality and intelligence than upper-class OMNI systems, but tend to be highly specialized for ship and craft control. ANIOS possess primitive digital intelligences with limited interactive capabilities, but highly tuned data processing and action-assist programs that can improve the capabilities of a pilot. As they progress, some ANIOS can eventually progress into fully aware entities, but restrictions on their hardware mean that they must be placed into OMNI processor units to have the same capabilities.

ANIOS tend to have vocal systems that allow them to communicate with the pilot with a selectable persona, as a means to make them more personable. This includes voice gender, pitch, accent and intonation. While they do have the ability to communicate, it is not for much more than informing the pilot of important matters, such as incoming weapons fire, new objectives or specific signatures that have been detected by sensors.

Standard Capabilities

- Deciphering and ordering gathered and received data.
- Voice interface with selectable persona.
- Maneuvering assistance and coordination.
- Weapons system assistance and coordination.
- Semi-automated subsystem management.

Limitations

- Requires connection to pilot for all non-essential functions.

- Subservient to OMNI systems.
- Sub-sapient intelligence.
- Cannot automate all functions.

Starship Control ANIOS

Starship Control ANIOS are advanced assist NI that are designed to interact with the operator of their respective starship, greatly improving the general effectiveness of maneuvers and allowing them to be aware and compensate for effects an unassisted Iromakuanhe would be unable to. As starships have astronomical numbers of subsystems and operating system subroutines, the construct is essential in the effective operation of most Astral Vanguard vessels without the implementation of larger numbers of crewmen.

VANDR Control ANIOS

VANDR Control ANIOS are advanced battle NI that were created to assist the use of Astral Vanguard VANDR, allowing them to regulate the large number of advanced subsystems that would be difficult to handle effectively for a normal pilot. They will provide the pilot with up-to-date and highly accurate battle data and greatly improve the general effectiveness of maneuvers, while allowing them to be aware and compensate for effects an unassisted Iromakuanhe would be unable to.

Shuttle Control ANIOS

Significantly less sophisticated than Starship or VANDR-based constructs, the Shuttle Control ANIOS has a far less combat-oriented role in mind. It possesses the same automated functionality, but does so with less skill and accuracy as it is not usually deployed in dangerous combat zones.

Civiltech ANIOS

Civiltech ANIOS are not actually true NI, but rather AI built along the same parameters, using inorganic components. They are found exclusively in the civilian designs produced by Ahmida Civiltech, primarily land vehicles and aircraft. They allow the pilot to experience a smoother ride and can automatically assist less experienced personnel, and compensate for certain conditions when it is beyond their abilities.

Autofunction NI Entity

Autofunction NI Entities, or ANIE, are digital constructs purpose built to operate certain automated functions, particularly in roles that cannot be effectively filled by Iromakuanhe personnel for extended periods of time. They have extremely limited minds, even in comparison to ANIOS, but still possess certain learning and the data processing capabilities that are essential to NI systems.

In rare cases, ANIEs deployed on long term scouting operations, for years at a time, may begin to develop slightly unusual personalities, with strong tendencies towards eccentric, curious or erratic behavior. This is believed to be caused by extensive seclusion and isolation, and the repetitive nature of their actions.

Standard Capabilities

- May carry out automated functions established by OMNI and ANIOS.
- Advanced coordination abilities with higher systems and other ANIE.

Limitations

- Simplistic minds prone to haphazard development.
- Limited autonomy and adaption.
- Dependant on higher classed NI for purpose.

Drone ANIE

Drone ANIE are general-purpose military autofunction constructs fitted into organoid units that are not intended to be piloted, and carry out automated functions for higher ranked OMNI and ANIOS. Roles vary from operating a ship's CIWS, controlling drone weapons pods, or even extended scouting operations.

Seeder ANIE

While Drone ANIE are deployed in more military settings, the Seeder ANIE was geared to control the subsystems of large scale endeavors that involve the protection and creation of life. They are used by Life Culture OMNI units to perform actions that are too delicate to automate, but not requiring an Iromakuanhe operator.