

# Report and assessment of ST technology as used on Senti personnel, plus detailing of version 2 Senti body

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## Forward

Since the Second Elysian War, ST or Soul Transfer technology has been used to preserve the minds, experience, and lives of Yamatai Star Empire soldiers and civilians. While the technology is still too new to truly understand the cultural and economic impact of transference based immortality, several limitations and concerns have been already noted and presented. Please keep in mind that this article is based entirely on the advice and expertise of the team of doctors and engineers responsible for this advance and the writer(s) apologize for the simplification and any minutiae lost in such a simplification and briefing.

In general, ST technology relies on a three step process, with safeguards to prevent “alpha fork” instances wherein two of (effectively) the same person are present in the same area at the same time. Please keep in mind some steps may be skipped or changed based on situation. These are as follows:

## Copying/digitization

The original mind, emotions, muscle memory, etc. must be copied and converted into a digital model that can be used, compressed, or otherwise manipulated in a digital environment. This can be achieved in several methods, all of which essentially achieve the same end goal of a high resolution scan, including every neural pathway, structure, and chemical marker at the moment of the scan, the theory being that “A high enough resolution image of a structure can be used to recreate that structure,” applied to the chemoelectric computing apparatus of a sapient brain. Each method has strengths and weaknesses which will be notated.

- Helmet method is the most common, using a high energy scan across the brain and main portions of the central nervous system to produce a data shadows image of the mind during the scan. This often severely damages or destroys the brain in the process, even if the mind and neurology can be immediately reinstalled.
- Passive scan beds use frequent, low energy monitoring scans to produce the same impressions by long exposure, often while the subject is asleep and their brain is in a low energy state, resulting in high fidelity scans, though vulnerable to material interference or shared beds causing bleed through of partners' scans.
- Implant systems use direct connection to the central nervous system to develop a mirror of the

mind in a purely digital environment, or to constantly update an existing model with new information and experiences, though cannot accurately map the individual neurons or brain structures.

Prevention of alpha fork instances is mostly based on operator judgement, availability of “spare” bodies, and confirmation of death before the scans are utilized.

## **Compiling/preparation**

Once the scan has accurately modeled the subject brain and current state of memory and sensation comes a preparatory stage. This is most often when things go wrong, and is also the most heavily restricted step by laws, ethics, and morality.

Awareness of injury may be modified or deleted depending on the availability and condition of spare bodies. This is primarily to prevent the occurrences of psychosemantic pain or dysmorphia caused by the sudden change in health or physical status. Typically this is achieved by replacing portions of the model neurology with baseline neuron groupings that indicate a lack of awareness of relevant injuries on a subconscious level. For example, restoration of the atrophied sections of the motor cortex of a former paraplegic patient when placed into a body with operational limbs. This is especially important when dealing with species transference and the difference in capabilities between species.

This is also typically when the new body (if applicable) is prepared for the incoming mind, whether by cloning and fresh preparation, or by modifying the ST file for implementation as an informorphic or datamorphic life form.

## **Implementation/activation**

This step takes the ST models and scans that have been completed and imprints them on the final media. Most often this is done in a modified version of the helmet scan method, where the tissue and chemicals of the brain are forced into place by high energy flashes to assemble the media into the proper neural configuration, and to flash the memory into the individual bit segments or neurons as appropriate, often in a single step. Though not every ST or similar technology does this the same way.

When this segment is complete, the patient will usually wake up as though from a coma or deep sleep. Though some times, if there is an unusual structure or modification to the neurology, the brain must be “synchronized” between neurology, stimuli, and memory. This can most often be done via some powerful, familiar stimulus that elicits an instinctive and conscious simultaneous response. The common joke being “true love's kiss”, though the presence of a family member, a familiar scent, or some personal artifact may also be used.

## **Challenges and adaptation**

Human derived species, and the technology's originator species share in common the use of a hemispherical brain wherein the brain is a bilaterally symmetrical structure with a single main division

between left and right, called hemispheres. Also common among traditional ST compatible species is a layered series of the central nervous system, from life support and sensation at the spine, instinct and food response at the stem, then the “lizard brain”, into the “mammal brain” and finally into the “sapient brain” as compounding layers.

Senti do not share this brain plan, as several other species in the Kikyo Sector are known to be so different, most notably Hedoro, and some other unnamed oddities. However, where the Hedoro stores memory in the “core” and most of the mind of the entity is in the combined gelatinous musculoneural cellular matrix of the “slime”, allows near infinite neuroplasticity and preservation of knowledge, skill, and instinct even with the loss of up to 98% of the outer tissue assuming no damage to the core.

Senti, however, utilize a trintsphere based brain, where the upper spinal column and stem reach to the forward section of the rear trintspheres. These rear trintspheres are, in essence, a complete and functional hemispherical brain with its own frontal cortex and latent telepathic ability that can operate completely independently of the forward trintsphere, which is devoted almost entirely to higher reason, abstraction, and function. This required dozens of high resolution nondestructive scans. However, this number increased significantly when material interference from the crystalline steel skull common of Senti personnel was accounted for.

The blood symbiote also posed a significant challenge for DNA extraction and sequencing, as Senti feature a bloodborne symbiotic bacterium that grew aggressively and consumed the complex proteins that made up most nanomachines. This usually caused immediate contamination and destruction of any hemosynth used. Genetic experimentation and traditional genetic guidance methods were successful in producing a variant of the symbiote that was capable of identifying and ignoring Star Army protein markers alongside the markers of Senti hormones and protein signals. Please contact Sacre Ven Sansinnia for further information on how this was done in precision. However, skin surface, cheek swab, and other sampling methods proved effective in the collection of requisite DNA and microbial ecosystem selection for the version 2 body.

In this effort, one body and a few components were cloned. The components included a complete central nervous system and various sensory components for the purpose of destructive scans and testing. This allowed a baseline model for later scans and imaging of the patient brain. The body was modified from genetic baseline over the course of several weeks by use of nanosurgical techniques.

## Implementation

The Senti 2.0 body currently in use by Aliset Koun features various improvements in health and base genetics over her original body, notably repairing damages from her pre military and SARA testing division career. It should be noted that Senti genetics is highly optimized, with evolutionary remnants of a caste system in their ethnic groups. Most caste genes are dominant and exclusive, leading to single presentation at or shortly after birth. A more diverse genetic group will be necessary for further development and paleontology.

- Telepathy

Originally, Aliset was injected with a neurosurgical nanomachine dose directly into the base of the brain to produce telepathic capabilities and format an encryption and translation device. This was done under

the mistaken assumption that the brain was an immune privileged site. Unfortunately, Alidet's brain was damaged in this attempt by the immune response, resulting in overpowered and uncontrollable telepathic ability, forcing the use of a damping implant or collar for the safety of herself and those around her.

The 2.0 body was equipped with the telepathic augments before the addition of the symbiote, with modelling scans modified to allow proper implementation of the ST, giving Star Army standard telepathic capabilities to the new body, which includes computer interfacing and data stream translation and encryption. This organ is based on the NDC Geist augment in both form and function.

- SPINE augment

The SPINE augment allows direct central nervous system interfacing with computer hardware by a series of ports in the upper back alongside an neural transcriber assembly to directly link the nervous system of equipped personnel into the sensors and controls of a vessel. This allows high level control and access, and is heavily regulated.

Traditionally, the augment was performed using a series of nanomachine injections to form the necessary organs based on viral molecular circuitry. This allowed for a test of the improved symbiote by traditional installation.

- Muscular density

Senti genetics, especially of the Skydasir ethnicity, have a high proportion of fast twitch muscle fibers that allow most Senti to perform great feats of strength, with very little endurance. This allows them to move their mass with casual ease, or even perform impressive physical feats once or twice, especially given the low density fat sleeving that prevents muscles from snagging or knotting.

The new body increases blood flow in the area whilst increasing the number of slow twitch fibers by about 18% on average, shortening gravity acclimation time and improving endurance to near human levels.

- Skeletal reconstruction

Alidet's original body had several examples of massive crush injury dents that posed a direct effect on her health and mobility. These were corrected.

- Eye health

Alidet had suffered several severe traumas in her time both before and after her entry into the Star Army, and with the Senti body utilizing mood stabilizers and antidepressants in portions of the adrenal system, this caused a rust buildup on her irises and retinas, which limited her ability to see. No modification to the body was necessary, as the damage had never occurred.

- Oral and digestive health

Years of poor diet had caused portions of Alidet's digestive system to switch towards geophagia, including the enlargement of her upper cuspid group and widening of her molars to produce a jaw more useful for piercing flesh and breaking rocks than for a normal diet. Dietary changes have been made, and

the new body does not need the recovery time of the original.

- Symbiotes and microbe ecosystem

Like most species, Senti use a complex endomicrobial ecosystem to assist in regulating their health, digesting food, and fighting various secondary infections.

A new, genetically modified microbial ecosystem has been inoculated into the body, improving safety of medical personnel in dealing with Aliset, and also improving Aliset's base health, whilst simultaneously making her compatible with Star Army medical technology. This has been noted as a great relief.

- Cosmetic modifications

Attempts were made to bring the new body as close to Aliset's original form as possible, with fatty deposits in the hips, butt, and bust, alongside a softening of the definition of her musculature. This should lower chances of dysmorphia and dangers of a failed ST by psychological trauma.

Standard markings were also made across the left thigh.

## Post procedure notes

[i]Transcribed from dictation, Shuristan and Yamataigo[/i]

"My name is Aliset of Koun, who flew for Tokyo of Yamatai and Soren of Shurista. After over a year of stillness and minimal progress, the Senti ST project has made a significant breakthrough. While there are still growing pains, the completion of the first ST transfer of my species will, within a year, allow all currently serving Senti to respawn. Please be aware that I do not expect this to be a default. Culturally speaking, my people prefer to avoid life extension and immortality due to the importance of our burial steel, the material made from our own cremated remains. My species normally believes that our living are the mortal first stage of life in an infinitely massive amalgamate life form called Infinity. She is every intact soul, every memory, and every person who dies and is melted down to join her. We believe this is possible by the belief that our soul is trapped in the body after death, conscious and aware. That it remains in the steel and the dead support our descendants through Infinity's material aspect, the burial steel. That said.

My experience with ST, being the first of my species to undergo this procedure, was not expected to be normal. The sensation of being ripped out of my body was interesting. I felt a shock and a flash of light, I was disconnected from my own memories and sensations, and found myself... Honestly I don't know where I was. It was dark. But not light. Cold, like ice on my skin, but I was warm. Contemplating nothingness is not an easy feat, nor is the realization that I was the self severed from memory. I had wondered about that. It was... I'm not sure how to describe the effect it had on me. It was jarring, physically and mentally, and I find myself waking from recurring nightmares about it, now. I expect these to fade with time. What I do know is that I did not lose conscious through the process. I remember every instant, but do not know how long it took. It was like time was passing infinitely fast and I spent an eternity. I do not believe there is a clinical way to put this, and if there is, I do not know it.

It was Sacre's kiss that woke me. Jarred me, I felt her lips on mine, smelled her, there was instinct and sensation like a fire across me, I was burning in a way I never thought possible, like I had fallen in

burning oil or boiling water. But it faded when I felt myself move. I didn't tell her what I had felt. I could tell I had scared her enough.

However, I understand the necessity of temporary immortality in the service of the Star Army. And I was devastated by the first death of a Senti soldier in the service. My husband, Joto Hei Nicol Sanger-Soren. If ST had been available to us then... It would be impossible to state what I would give to hold the only one of my species who saved my life and who never doubted my beauty to him.

I will not be putting Sacre or my daughter, Marigold through that. As of the completion of my involvement in the Senti ST project, I, Aliset Koun, of sound mind, mark my consent to ST and body transfers as necessary, conditional on the life of Sacre Ven Sansinnia. She is opted out of ST. As long as she is alive, I'll consent.

In review of my new body. I am quite impressed! I find myself stronger and faster, with a three point increase in physical fitness standards over the original body. No notable sensory issues, and my balance is better than normal. I believe there were some modifications made to adapt the Senti body to gravity enriched environments. I am not, however, privy to that part of the report. I do note that my senses, all of them, have been heightened to an annoying and sometimes painful degree, even going so far as to wear my psi damping collar to help prevent sensory overload. I believe this is due to the various implants and augments, combined with the lack of chronic pain and sensory damping from the collar.

Over the few days since my ST, I have found acclimation therapy to be helpful. I have also been undergoing physical therapy to regain my balance and accuracy. But the new body is serving me well and I feel amazing. I expect improvement in the coming weeks!

Please forgive the fact that this is my first ST, and I have no idea what I'm expected to say!"

[i]End patient's dictation[/i]

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