THOUGHT Software Package

The THOUGHT Software Package is a suite of software programs which are developed as part of Project THOUGHT. Some of the programs included are evolutions of existing systems already developed by Kage Yaichiro, but they've been converted fully into software elements running within the Integrated Electronics System (IES). Programs included are the THOUGHT CSI (part of which was developed from the Comfort Bed), the Emergency Soul Savior (developed from the system of the same name in the Star Army Escape Pod, Type 30), the Tactical Analyzer (a new program), and the Profile Executor. AIES can be installed as a virtual machine within CIES installations or higher, to provide the Power Armor software normally seen in AIES systems while still having access to CIES and higher functions.

The Profile Executor is also part of this suite, but is only intended for unmanned systems working in conjunction with Project THOUGHT systems.

History

With the development and design goals of Project THOUGHT, various different and enhanced systems required software to operate to maximum effect. Yaichiro drew from his years of experience to use either new systems, or adapt that which was tried and true toward Project THOUGHT. Some were adapted and rewritten from non-combat and even civilian efforts, some from military technologies in escape and weapons pods. Each, however, resulted in increased functionality in assorted ways.

Yaichiro started writing the code in YE 30, initially developing what would become the THOUGHT CSI, but other systems to improve survivability and even aid the pilot in bettering their own skills would eventually appear, as two years of programming and testing led to the collective suite of programs.

Sub-Systems and Functions

These programs are intended to meet the various needs of Project THOUGHT, both by handling independent functions and working with the other programs in the suite, running in parallel within the IES. There were numerous design goals for these programs, around which they were programmed.

THOUGHT Control and Sensory Interface (CSI)

The THOUGHT Control and Sensory Interface, or THOUGHT CSI, is a large part of the software program. It grew from the Comfort Bed's ability to read the occupant's mind and provide feedback both in the form of sensory information and the manipulation of physical hardware in response (specifically the insert). This technology was later improved upon and used in a crude form in the LAMIA Agura, with its Remote Control.

This allowed the pilot to control the unit as if it were their own body, and the system later evolved to add

personal preferences to how the system operated and store them by pilot. Some are directly and consciously adjustable by the pilot, such as the pain felt by the pilot when the Mecha or Starfighter takes damage. These are known as Static Profile options. As the system evolved, however, research into letting the machine tie certain thought processes to specific techniques allowed the creation of Dynamic Profiles. This, however, is handled by the Tactical Analyzer.

This program also allows simulations to be loaded or made on the fly, allowing Power Armor, Starfighter, or Mecha simulations to be run without actually fielding the units. This can be used by the CO to hone their pilots' skills, even in situations where actual practice is not possible or is ill-advised.

- Reads the thoughts of digital-brained pilots and forwards them to the IES as explicit commands
- Allows finer interaction with the IES by translating reflexive or vague thought into implicit commands
- Can translate those intents and commands into movement via the IES with minimal response time
- Gives the pilot the impression and sensation that the Mecha is their body
- Static Profiles can be saved and loaded for specific pilots
- Allows simulations to be run in the cockpit for practice

Emergency Soul Savior

Emergency Soul Savior System (ESS System) has been re-engineered as an additional program running within the CIES, and a sibling program to the THOUGHT CSI. As such, they use the same mental transceivers and hardware, saving valuable space and resources.

The ESS allows the creation of ST files from those mentally linked to the IES via SPINE or via mental transceivers which monitor the status of those in stasis. What it does is make an ST backup of the user as soon as they enter stasis. Throughout the operational life of the unit, it tries to initiate contact with PANTHEON via the IES it runs within, and if it manages to do so, it not only gives location data and a distress call, but also transmits the ST data, the Mission Data, Static Profile, and Dynamic Profile information to an ESS Database. This database is highly protected and can only be read from by those of high rank and specifically set PANTHEON access levels. Should the unit be in an area too dangerous to be recovered or be discovered by enemies, it can be remotely destroyed, and the personnel resurrected with all memories to the time they went under stasis. Due to the sensitive data being transmitted, the unit will briefly increase power and send the data in a maximum level of encryption.

It also typically does not back up the entirety of the pilot's memories, but by default searches back to when they last did a backup and does an *incremental* backup from there. This is to protect from the enemy having access to a full ST backup of an active soldier should the worst happen.

- Operates entirely within the IES and uses same SPINE or transceivers as THOUGHT CSI
- Makes ST backup when pilot enters stasis
- Contacts PANTHEON repeatedly to send ST Data, Mission Data, Static Profile, and Dynamic profile to ESS Database
- Allows remote destruction of system by high ranking personnel with permissions
- Heavily Encrypted
- Tamper Resistant (Will delete Soul Savior Data if tampered with)

Tactical Analyzer

The Tactical Analyzer is a program that works with the THOUGHT CSI to determine the strengths and weaknesses of the pilot by analyzing tactics and actions preferred by the pilot in specific situations, and the train of thought, mindset, or reflexes that the pilot exhibits as part of these techniques. By having the suit "learn" how the pilot thinks and fights over time, and store this data as the Dynamic Profile, the suit can eventually predict the most likely actions of the pilot will take by detecting familiar thought processes. While it won't engage the process right away, it will divert power and prime the systems for the most likely maneuvers, for the sake of minimal response time.

The second function of the Tactical Analyzer it to analyze the Dynamic Profile to determine the strengths and weaknesses of the pilot, and feed this data to the IES and the THOUGHT CSI. When this is done, it is possible for the THOUGHT CSI to form simulations specifically designed to strengthen the pilot's weaknesses.

This system is a less common add-on, reserved for temporary execution on a THOUGHT-compatible system by running on the ship's IES, or for ace and test units. It is possible to store Dynamic Profiles in a host ship's IES.

- Dynamic Profiles can be saved and loaded for specific pilots
- Dynamic Profiles can be analyzed for strengths and weaknesses
- Simulations specifically designed to resolve weaknesses with training can be formed with the data
- Less common usually installed on a ship for temporary loading or on special units
- Dynamic Profiles can be saved to a host ship's IES

Profile Executor

This is an independent light program not found on any manned craft, but acts as a loader for unmanned Weapons Pods. Dynamic Profiles stored in the ship's AI can be temporarily loaded into Weapon Pods and be run by the Executor as an AI – to mimic the most effective movements of a specific pilot. One can switch Dynamic Profiles mid-flight, but doing so at a bad time can cause the pod to be destroyed by the enemy. It should be noted that this data does not accurately reflect every pilot perfectly in every situation, merely forming a somewhat reasonable facsimile – depending on the pilot's experience in similar situations as to those encountered by the Pod. Though there are many obvious reasons for this upgrade, the major reason is to better combat other mass-attack automated systems, such as the Mishhuvurthyar's nmx_battlepod_type_30a and nmx_bomber_pod_type_31a

This program can also be easily used with the Vector Randomization Module's Dynamic (Randomized) Mode and Control (Specified) Mode.

- Installed only on unmanned systems such as Weapon Pods
- Allows ships to control Weapons Pods using Dynamic Profiles to emulate a pilot's capabilities and tactics to an extent
- Can function with the Vector Randomization Module
- Designed to counter Mishhu Type 30A Battle Pods and Type 31A Bomber Pods

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AIES Virtual Machine

This is an installation of Armor Integrated Electronics System (AIES) installed in all IES versions CIES and higher. This is to provide the standard Power Armor-based software when a more powerful IES is used – as Project THOUGHT machines typically bridge the gap between Power Armors and ship-level IES. This IES within an IES, also known as a virtual machine, needn't be installed when the host IES is already AIES.

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