SILVER Type Android

Designed by the Lorath Matriarchy after extensive legal debate with their allies and affiliates, the SILVER, or “Synthetic Intelligence Law Valid Engineered Robot”, has been designed as a potential substitute for slave labor in civilian and government markets.

Information

Statistics

Product Information

Developed By: Lorath Matriarchy

Produced By: Lorath Matriarchy

Production Scale: Mass Production

Available To: Lorath Matriarchy and affiliates

Contributors: Stalwart Defender, Velor “Tomoe” Tur'lista, SILVER Design Team

Production Date: Developed in YE 30, Activated YE 31

Nomenclature: LM-AN-S-001-30.1[1)]

Processor Architecture: 3rd Generation ARIA Type S Processor

Product Cost: 2500 HS

Technical Information

Processing System

Information

Adhering to the requirements of the SILVER project, the product android has been designed to have a processing and data handling system which is unable to achieve genuine independent thought or awareness without user support and input. Due to the limitation imposed by the hardware configuration, the SILVER type android is unable to be classified as truly sentient or alive, thus preventing the model from falling under current humanitarian guidelines regarding the treatment of sentient beings.

Along with the service to legal obligations, the SILVER unit's non-sentient computing system allows for an extensive degree of customization by production facilities and users in regard to individual unit personality. This degree of customization is mainly available due to the requirement for a user to apply a personality program for the unit to function as an interactive device and not a mere computing platform. Users are able to apply various 'home brew' personality profiles, or order personality profiles from the manufacturer.

ARIA Type Processor

SILVER type units have been granted a 3rd generation ARIA type processor in a modified 'S' type configuration.

Neural Processor Packs

Added to supplement the low-capability ARIA processor, the SILVER production of android has been given Neural Processor Pack units to be used for memory storage, and supplemental developmental data processing.

SILVER Unit Personality Routine System

Personalities for the SILVER product line are strictly granted by users, and not purely by individual unit development. Personalities are developed for the SILVER product by using neurological data gathered from a contributing neural data donor population[2)]. Gathered neural data is processed by the SILVER unit developer team. Processed neural data has been specially coded to remove any prior context of personality or emotional context which would be related to the neural data donor source, this provides a 'pure and untainted' personality routine, meaning that the personality is free of memories, independent intelligence, or sentience.

After memory installation, SILVER units are unable to develop their personality beyond the bounds of the system without additional software and hardware modification. This limitation prevents the SILVER type android from having thoughts beyond the scope of the installed personality routine, this prevents the android from being classified as a living creature.

Beyond the scope of the legal boundaries and customer service, the SILVER development team placed top priority on isolating data patterns which may result in a behavior malfunction such as those which the early-model ARIA encountered. Thanks to extensive research, the SILVER team has been able to install a series of hardware and software safeguards which are capable of recognizing malicious synthetic neurological behavior, and halting the data process before any malicious behavior can be carried out by the unit which goes beyond the boundaries of its programming.

Interface & Input Systems

During the design of the SILVER android series, the development team for the SILVER recognized the importance of granting the SILVER a wide range of sensory abilities to allow for the unit to deliver a wide range of function without after-market customization. Issues such as sight, scent, touch, sound, and other forms of sensory input were addressed in a practical sense. Practicality called for the SILVER to be able to sense more than what the humanoid owner of the unit could, so the SILVER unit could anticipate the user's requirements long before the user may realize the need for the SILVER's services. This design feature has produced a capability in the SILVER which may be confused with anticipation, however, it is merely the observation of data beyond the scope of the average observer.

Uses of the SILVER unit's enhanced sensory package include mundane features such as the unit being able to smell when an object which is cooking is becoming overdone, or the more important function such as being able to hear the sound of a user suffering from heart or lung congestion during strenuous activity, thus allowing for the SILVER unit to discontinue any sort of activity which may harm the user, or to engage a pre-programmed emergency procedure if the unit is programmed to do so. Uses of the enhanced sensory system are purely up to the user and manufacturer which are required to program in response functions to sensory information.

Optical System

Optics for the SILVER android series are handled through the use of a specialized photo-sensitive version of the neural-processor material found in common Lorath computing systems. This neural-processor material has had photo-sensitive material suspended within the neural-gel structure, the photo-sensitive material produces a series of electrical impulses which are transmitted through the neural-gel material, and to the data processing center of the SILVER unit. Standard production SILVER units are capable of visual sensory in the one-gigapixel range.

SILVER units can also be outfitted with an optical system which includes Peeper Sensor Monocle functionality.

Aural System

Audio data input for the SILVER model android is handled by a multi-diaphragm vibration sensor system which monitors air vibrations for audio stimuli, an additional audio sensor is also included which uses a liquid-based monitoring system which can monitor high and low frequency audio input.

SILVER units are capable of audio recognition between 5 Hz to 150,000 Hz, however, they can be programmed to discard audio data beyond a certain frequency range.

Olfactory System

SILVER units are equipped with synthetically grown nerve receptors which are capable of analyzing odor molecules and processing the sensory data into electronic information. Typically, SILVER units are equipped with enough sensory receptors to provide olfacation roughly equivalent to twice that of a typical humanoid.

Tactile System

Throughout the interior and exterior of SILVER units are picoscopic tactile data receiver units which provide the SILVER unit the capability to detect tactile pressure, heat, moisture, and other such stimuli. Tactile sensor monitoring is also enhanced when the SILVER unit has an epidermal layer installed which includes a liquid-pressure monitoring system which allows for precision data handling, which is further enhanced with the presence of synthetic hair follicles.

Gustatory System

SILVER units have the option of being equipped with molecule structure and pH analyzers within the unit's oral cavity. These analyzers are capable of interpreting the properties of materials inserted into the oral cavity, to determine what the inserted material tastes like.

Empathic System

Using a system developed by the Lorath Matriarchy's sciences division, the SILVER development team has included an empathic sensor system with limited capability. This system simply allows for the SILVER unit to detect brainwaves which are indicative of the user's general mood. This system has been installed to allow the SILVER unit to react to emotional behaviors from the user in a manner comparable to most humanoids. This function allows for the SILVER to relate in a realistic manner which promotes user-unit relations.

Intensive Sensory Processing

For the purpose of being used in activities which require extensive stimuli monitoring and response, the SILVER has been equipped with a programmable sensory data processor which is capable of producing programmed personality responses to stimuli. This system allows for the android to be able to produce life-like responses to stimuli such as pain, pleasure, excessive heat, cold, or other stimuli which reach beyond the standard scope of the unit's primary sensory data processing software and hardware. Certain input however does produce a data buffer overflow, this issue has been addressed by the developer team and has been incorporated into many programmed response algorithms to provide a response appropriate for the cause of the buffer overflow.

Internal System Monitoring

SILVER androids are equipped with a series of internal system monitoring devices which are capable of detecting malfunctioning hardware components. Upon detection, data is sent to the primary data processor to evaluate the sensory data. Once the data is processed, the android is then capable of addressing any malfunction or abnormality, and is capable of informing the user of the irregularity.

Electronic Data Transceiver

Implanted into every SILVER type android is a data receiver and transmitter which is intended to provide the capability for electronic communications to be conducted with the android unit. This transceiver allows for functions which range from interfacing with equipment to providing real-time data transfer. Transceivers in SILVER units are specially designed to incorporate a quantum encryption mechanism and signal source verification package which prevents the data channel from being tapped into by an unauthorized source. To prevent harmful damage being done to the unit, the electronic data transceiver includes a data-buffer which is capable of analyzing incoming data for malicious code which would damage the unit.

Hardwire Connection

SILVER type androids are equipped with hardwire connection ports which allow for the android to interface or be interfaced with through a physical connection medium. This data connection port allows for data to be relayed to and from the android without open-air transmission interference. Often these data ports can be found upon the SILVER unit's neck, and the unit's navel. Hardwire connection ports also include a data analysis buffer which is designed to detect malicious data prior to the data being integrated into the unit's hardware and software programming, and also prevents unauthorized data access.

Audio Output System

Typical issue SILVER androids include an audio output system which is embedded in the cranial structure of the unit. This system has been designed to use a series of polymers which function through a combination of recirculated air-pressure induced vibrations, magnetic pulse vibrations, and electrical current reactive polymer tension reactions. These systems allow for an audio output which can include a wide range of digital sounds, or the simulation of humanoid-style vocalizations.

Structural Components

During the development of the SILVER series of android, the development team for the SILVER product determined that a wide range of structural components be developed for use in the SILVER android product line. Reasoning behind this conclusion was primarily from the marketing perspective which led the SILVER development team to produce a range of designs which would better promote relations between the user and the android, or to enhance the android's functionality.

Structural components range from the seemingly standard components such as hands, feet, arms, and legs to the more unusual components which may be ordered by users to be incorporated into their ordered SILVER android unit. The following list indicates a number of structural components which are standard or common place in SILVER android units.

Cranial Structure

Due to the swappable nature of SILVER unit physical components, the development team concluded that the cranial structure be utilized as the housing for the bulk of the unit's data processing systems. This solution was chosen to allow for the user to be able to simply swap the head of the unit when the user desired to transplant their personal unit's functions and personality to a new body for any sort of reason.

SILVER units are usually designed to incorporate a humanoid-type head, in this design the cranial structure is comprised of a multi-layer skeletal structure which has an exterior comprised of a Nerimium laminated Durandium Alloy wafer structure. To reduce weight, the nerimium is applied in a ten micrometer lamination over the almost foam-like wafer of durandium material. Inner structural components of the cranium are comprised of carbon polymers with boron-carbide insulation to protect radiation sensitive components. Access points to the interior of the cranial structure are pre-designated and formed during the structure generation process. Within the skull-like housing, processing components are installed along with other cranial hardware packages. A gel suspension is also included within the cranial cavity to serve as a shock absorbing medium to prevent cranial component damage. A Stone Thread laminate is placed over the structure, and is extended beyond the base of the skull structure. An additional weave of hardened “Stone Thread” material is woven through the laminate material which extends beyond the base of the cranial structure to form a neck for the head of the android. Movement and stabilization systems are located within the neck which is capped off by a connection assembly which serves as a seal for the cranial unit, and provides a hard-point for connecting the cranial unit to the android's torso.

Hot-Swappable Joint System

SILVER android units have been designed to include a 'ball joint' style structural component connection system by default. This joint system allows for appendages and components to be rapidly swapped out while the unit is in operation. Activating the swapping procedure through any sort of user issued command by default disengages the android's tactile processing for the appendage which is to be disengaged, thus sparing the unit the requirement to process a tactile response for a disconnection procedure. Dermal layers are automatically separated to avoid tearing during the component separation procedure, and are reconnected upon component installation through the use of an electrical current sensitive organic gel structure which binds and unbinds when specific levels of electrical current are introduced.

Alternate joint systems can be installed upon consumer requests.

Limbs & Appendages

Limbs and appendages of the SILVER system are designed to be swappable by the user or even by the android itself while in operation or in a stand-by mode. By default, the SILVER unit is available in a humanoid bipedal configuration with two arms. Alternate configurations are available at request.

External Covering Layers

An extensive range of organic and synthetic coverings are available for SILVER type android units. Covering layers are intended to serve as an outer layer for the android which is equivalent to skin and is intended to provide a user-friendly interaction surface, as well as protecting the android's components from being contaminated by dust and other debris

Coverings include the following varieties.

- Cultured organic tissues
- Latex based covers
- Silicone based covers
- Stone Thread enhanced silicone or latex covers
- Pre-Programmed Pico-Jelly cover with adaptive features
- SILVER-Project developed hybrid synthetic-organic covering

Skeletal Chassis

Just as with organic organisms, the skeletal chassis of the SILVER type android serves as a structural support for the unit. Skeletal chassis construction includes impact dampening components, fracture reduction structural composition, and a Pico-Jelly based temporary repair system. Skeletal chassis come in a variety of compositions which can be requested by consumers, however, the default chassis is comprised of a titanium alloy to reduce weight.

Tissue Structures

SILVER type androids are designed to use both synthetic and organic tissues which mimic cartilage, muscles, skin layers, fat layers, and other structural components. Users have the option to select the texture, durability, and features of the tissue structures involved in forming the components of the android's structure. Often included in the tissues of standard issue SILVER androids is an infusion of Pico-Jelly material intended to allow for the tissues of the android to behave more like living flesh, and to allow for damaged tissues to 'mend' simply by having the pico-jelly weave the material together on the picoscopic, nanoscopic, and microscopic level. Pico-jelly has also been included to allow for users to have a degree of customization available in regard to the android's tissue structures.

Optical System Case

To protect the optical system of the SILVER type android, optical units are often encased within a transparent durandium casing which serves to protect the optical components from a majority of physical damage. A photo-sensitive material laminate has also been applied to the optical system case which is

designed to automatically turn the surface of the optical case opaque temporarily, to prevent the optical unit from receiving damage in the event of exposure to optical component damaging light levels.

Decorative & Functional Hair Follicles

Consumers can choose to have their SILVER android outfitted with various quantities of hair follicles for both functional and decorative reasons. Functional follicles can be installed which serve to provide the unit with additional tactile data input, or to provide a thermal layer when placed in larger quantities. Hair follicles are available in a wide range of colors, or even with pigment changing additives.

Simulated Reproductive Structures

SILVER type androids have been designed to include reproductive structure components which can be ordered to specification by the consumer. These components are interchangeable by the user, and are designed to imitate form and function of their natural counterparts. However, consumers can order 'exotic' varieties of components.

Custom Component Information

Additional components can be fabricated and shipped to order by the consumer's request. Custom components can range from simple covering alterations, to entire skeletal structure customization. All structural aspects of the SILVER series android have been designed to be able to be customized to order for the individual consumer's preferences.

Essential Organs & Hardware

Bacterial Power Supply Packs

By default, SILVER type androids are equipped with Bacterial Charge Pack systems. This power source was selected due to the long lasting nature of the system, and the ease of which it can be refueled for continued operation. Two power supply packs come into use with most androids, one unit housed in the cranial cavity to provide sustained power for the processing system, and a larger more powerful system in the torso used to power most other systems.

Optional QNC Power Supply

Optionally the consumer can order their SILVER unit with a QNC power system load-out. These systems are often requested when users desire to customize their android with numerous non-essential systems.

Mobility System

Mobility for the SILVER series android is provided by a series of reactive-polymer fibers placed throughout the structure of the android, and a series of electrically stimulated cultured muscle tissues. Through the use of precision electrical discharges, these two systems work in tandem to provide a full range of motion for the android. Joint components are often controlled through the use of precision magnetic connections which use rapidly reconfiguring electromagnetic fields to cause the ball joint to be moved into the desired position.

Precision Motor Control System

Precision motor control systems such as those involved in the behavior of the android's fingers, toes, jaw, tongue, and other components is handled through the use of a combination of cultured muscle tissues and pico-jelly material.

Pico-Jelly Reservoirs

Contained within the cranium and torso of SILVER androids is a Pico-Jelly container system which serves to hold the android's surplus pico-jelly reserves when they are not in use. Often androids carry the organic, plastic, and metallic jelly varieties to provide a wide range of capabilities in regard to self-repair and improved function.

Temperature Regulation System

A series of thermoelectric temperature regulator systems have been incorporated into the android to allow for the unit to maintain a stable operating temperature at all times, or to selectively increase or decrease the unit's temperature to correspond with operational needs or user requirements. Additional temperature regulation systems include basic heating elements, liquid-based external cooling systems, and respiration based air-cooling.

Synthetic and Organic Material Processing

Ingested materials such as foodstuffs and formulated fueling compounds are routed to the material processing system of the android. This system uses a series of selectively administered chemicals to leech out essential compounds from ingested materials to be routed to organic and inorganic components through an internal circulatory system to sustain components for long terms without maintenance. Surplus materials which could not be processed are often routed to the android's bacterial power system to be digested by the unit for electrical power. Left over byproducts are reduced to a liquid and passed through the liquid processing system, or released through a waste port.

Liquid Processing

Fluids which are of no direct use to the android are processed through a structure which is designed to function like the SDI Water Filtration Device to remove impurities from the fluid, before routing the purified fluid to various internal systems which require hydration such as organic tissue components, or aesthetic components such as simulated tear ducts or saliva production systems.

Fluids are also routed throughout the android to provide a means of transferring materials from one portion of the android to another, to regulate temperature, and to maintain a number of other functions.

Waste Handling

Due to the high efficiency of the SILVER series android in regard to material processing, the android rarely requires waste extraction service. However, when quantities of unusable material are accumulated, the material is routed into an internal holding chamber where it is compressed, then pumped into a removable and replaceable containment receptacle which can be removed and emptied by the android, or by the user.

Material Production and Recombination

Due to the range of various materials found within the SILVER series android, the android has been equipped with an internal organ which uses basic femtoscopic manipulation technology to recombine a range of compatible matter into materials required by the android to repair structural components, or to fuel the android's system functions. This organ is often fueled by material ingested by the android, and lacks the ability to manipulate strong structures such as tempered and forged metals, dense mineral composites, and hard plastics thus limiting the android to ingesting common-place foods, or specially formulated android intended foodstuffs.

Damage Countermeasure System

In the event of the android sustaining damage, a range of reactions can be carried out by the android to counter the given source of damage to prevent extensive damage to the unit which would extend beyond the scope of repairs which would be practical for the unit. Responses to damages are as follows;

- Liquid material build-up and flushing; this function is utilized in the event of burn damages, corrosive material exposure, prolonged pressure against tissues, pathogen introduction, and foreign material contamination.
- Tissue hardening and expulsion; In the event of the presence of foreign material, pathogens, or damaged components a tissue layer or pico-jelly layer can be formed around the offending material, and can be expelled through the covering layer.
- Circulated nanomachines; SILVER type androids include a quantity of nanomachines in their tissues

which are used to reconstruct damaged structures and maintain components.

- Pico-Jelly secretion; In the event of physical damage such as external cover rips, fractures, and severe burns, pico-jelly can be secreted to provide a temporary structural component until the android can replace the damaged component, or until proper materials can be processed and placed to repair the material.
- Electric-heating system; In the event of exposure to severe cold, or if a pathogen must be eliminated through internal heating the android includes a series of heating elements which allow for the heating of the android's circulated fluid materials which can elevate the android's temperature to 160 degrees Fahrenheit or 71 degrees Celsius. Insulated components are unable to be heated to this temperature, such components include the sensory components of the unit, and the processor component of the unit.

Non-Essential Organs & Hardware

Gravity System

An optional gravity manipulation system can be installed into the SILVER type android which can allow the unit to reduce its weight, levitate, or reduce the weight of carried materials. Gravity manipulation is limited to reduce the weight of mass equivalent to twice that of the android's own mass.

Surface Sensors

An additional array of photo-sensitive materials can be placed on various points of the android to allow the unit to have the capability to see from various points other than the primary optical sensors of the unit.

OLED Infused Surfaces

Exterior surfaces of the android can be treated with OLED material to allow the android to project a wide number of images upon the surface of the unit, thus allowing the unit to be used as a monitor device, a light source, or it can also allow the unit to blend in with its surroundings by projecting an image of what is behind the unit.

Data Reading System

SILVER series androids can have a data medium reading system installed into their structure, this data reading system can read storage devices, money credit cards, and various other digital mediums. This system has mainly been installed to allow for software upgrade transactions to be carried out upon the unit when the user is unable to access a proper data terminal.

Nutrient Production System

SILVER edition androids can be outfitted with a material handling system which is capable of restructuring various forms of matter into proteins and starches which are digestible by humanoids. This allows for a properly equipped android to secrete a protein rich substance from a dispenser port to be consumed by an organic individual for sustenance.

Non-Standard Component Note

Additional components can be developed and installed based upon user requirements and desires and shipped to the user by the SILVER development team. Third party components can be independently developed for use with the SILVER android system by individual manufacturers.

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Lorath Matriarchy – Android – Synthetic – 001 – Year 30+

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