

G1-N2 "Geist" Advanced Interfacing Implant 2.0

The Geist 2.0 is a second-generation model of the original [Geist](#). It provides a HUD and remote device/vehicle operation capabilities.

The new model Geist has also been designed to improve the link between an individual and an [BW-E-2 Anima System](#).

It is normal to call the new model simply the "Geist", without the version number, although some users like to make a big deal about it. This article, however, refers to both versions, and as such will use the version number to distinguish the two.

Designer:	New Dusk Conclave, Black Wing Enterprises
Nomenclature:	G1-N2
Manufacturer:	Black Wing Enterprises
Fielded by:	Civilians and Military Forces within the New Dusk Conclave

History

The original [Geist](#) was an implant designed for use by special forces, specifically [Section 6](#). As the [NDC](#) expanded and the number of its soldiers increased, the Geist became an increasingly important aspect of how the [Duskerian Legion](#) operated. Even the soldiers' daily lives were enhanced by the use of the Geist.

All of this, however, came at a cost - the implantation process for a Geist is extremely painful, labor intensive, and can only be performed on an individual that is fully aware. For the doctors working to keep up with the NDC's new citizenry, the continued use of the Geist threatened to reduce their ability to treat patients in need.

As these issues were slowly coming to a boil, the NDC's [Anima Project](#) was in the works. The project was intended to create a more advanced version of the Geist that would allow a broader user base to 'Possess' vehicles and other equipment at a deeper level than what the average Geist user could accomplish. Ultimately, the project realized that it needed to move in a different direction to achieve its goals. This did not, however, invalidate the work they had done so far on the Geist itself.

A new Geist Project was spun out of the Anima Project's research. This project's goals were to use the newly designed improvements in size and capability, while also making the 'installation' of the Geist a simpler, less painful process.

The result is a model designed to meet the needs of the NDC's military forces *and* civilian sector.

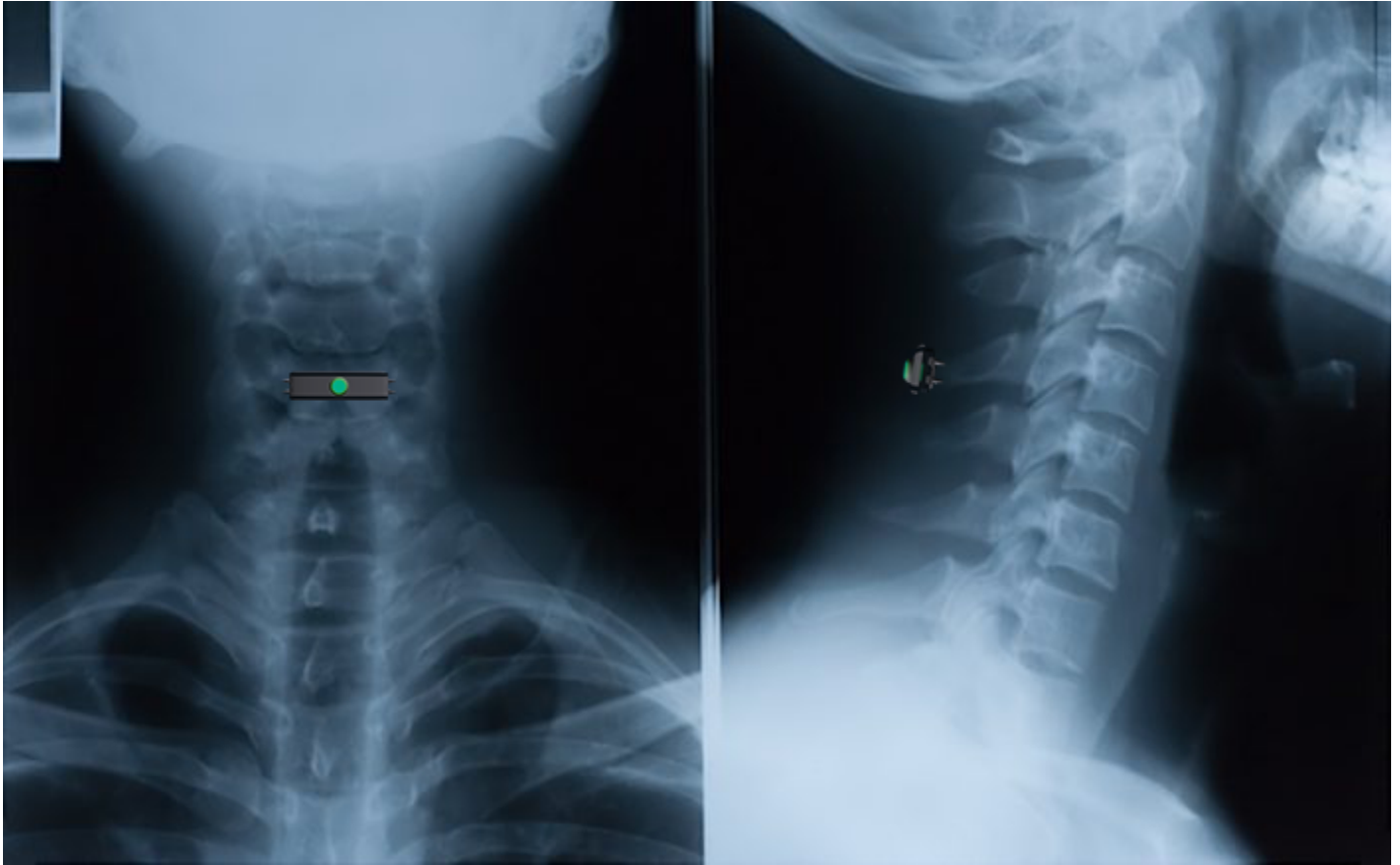
Function and Design

As with the initial model, the [functions](#), the Geist 2.0 is a mind-machine interface. It uses nanites spread throughout the user's nervous and sensory systems to create a HUD, provide communication features, and allow the remote operation of technology.

For military users, the feature set of the Geist 2.0 is largely unchanged compared to the original model, although it is easier to use and install. The new model was specifically designed to expand the [Geist's](#) usage in the NDC's civilian population. A number of changes were implemented to make this expansion safe and easy.

The first change is the significantly improved installation process. To install, the Geist 2.0 is placed against the back of a user's neck. It emits a brief, near-freezing gust of air around its rim, nullifying the pain of it attaching itself to the user's skin. Over the course of the next few days, the Geist's external shell, made primarily of [Madite](#), a titanium alloy, and a bottom layer of a [bioglass](#)-like material, sinks into the user's skin and makes contact with the [bone](#) underneath. Over time, the user's body will naturally meld the 'bottom' portion of the device into the [C4 vertebrae](#) along the user's spine, securing it in place. Care has been taken to ensure that the device will attach only to the desired vertebrae. After healing, a penny-sized indicator light will remain exposed through the user's skin.

While the device is being integrated, it releases and coordinates with nanites in the user's blood to begin the assimilation process. Compared to the original Geist, this is a gradual process. Instead of extreme pain, the user will periodically experience mild pain, visual artifacts, and dizziness. The total installation time is approximately a week, but only a few minutes of that time require a medical professional to ensure that the Geist is attached in the correct location and to provide a supplemental dose of nanites.



The second major change was the addition of a civilian setting. Any Geist 2.0 user who is not on active military duty, or lacking the appropriate clearances, has their Geist's functions notably reduced. This primarily manifests for remote vehicle/equipment operation, which now require a software 'key' to connect to. This ensures that the civilian populace can't use their Geists to steal cars, interfere with others personal property, and generally cause havoc. Some devices maintain an open key for anyone to make use of.

The civilian mode still retains the Geist's display functions, though these have been stripped of their various military-specific functions. In practical application, users can pull up messages, watch videos, check directions, record video feeds, translate text, and so forth, in a similar manner to the modern smart phone. These appear as overlays of the user's vision and can be interacted with by conscious thought. The Geist 2.0's OS has been hardened against external attack, including those of an advertising nature.

The third major change is a built-in compatibility with the Anima System. Leveraging the nanites in the user's brain to establish entanglement, a user can connect into an Anima System-equipped machine and operate it as though they sat in a full Anima System setup. This system is bound by the same restrictions for civilians as the Geist's normal ability to control machines.

This functions only within the Geist 2.0's effective range. Control from further distances, despite the quantum nature of the connection, over-strains the user's Geist. This strain can lead to severe pain for the user, a shorting out of the Geist itself, or a forced desynchronization which could even result in the user's death. Using a purpose-built Anima control system negates this concern.

The last major change is a simple range enhancement, using the user's body as a ground plane for the

implant's signal. The new model can reach to ~23 meters (75 feet), a 50% increase over the original's ~15 meter (50 foot) range.

Non-civilian functions, with the exception of the addition of the Anima System compatibility, are largely unchanged.

An Always-On Connection

As the Geist 2.0 needs access to the local intranet, it is constantly checking in with the NDC's Geist support servers to receive updates and share diagnostic information. These servers are heavily hardened against external attack, both digital and physical, and guarded by some of the NDC's most advanced Machine Intelligences.

The majority of a user's identity-related information is obfuscated during the transmission process. While messages, video conferences, etc, are exchanged using a fixed, unique ID, the user's location, history, and so on are all tied to frequently-changing request IDs.

This can present a challenge for local law enforcement, who would like to be able to actively track criminals. A request can be made to the Geist Administration Office, GAO, to temporarily 'fix' a given user's request IDs to enable this, but the approval process is not an easy one, as the NDC values individuals' rights to privacy.

Appearance

While the original model Geist was angular and spiky, intended to forcefully clamp onto the user's spine, the new model is sleek and simple in appearance. Small slits along its sides allow it to expel nanites. In the center of its 'outward-facing' side is an indicator light, approximately the size of a penny, that protrudes from the surface somewhat. The entire unit, when installed, is just 50mm wide and 20mm tall.

When fully implanted, the Geist 2.0 is barely noticeable for the user. Only a light on the back of the user's neck reveals its installation. This light changes color depending on whether the implant is active or inactive, as well as diagnostic information. When active, the light is a soft green. When inactive, the light is off.



When a user is incapacitated or the Geist unit is malfunctioning, the indicator light will blink red. The

number of blinks, and time between the blinks, acts as a diagnostic tool for the user and implant both. Training on how to read the indicator is a standard part of military and EMT training. This is a supplemental feature to the Geist's normally available diagnostic data.

In addition to the Geist's 'active' indicator, the implant has retained the glowing ring around the iris that the [original device](#) possessed while the device is in use.

During military operations, the activity lights on the unit can be disabled at will for stealth purposes.

Interfacing using the Geist 2.0

The Geist is a sophisticated mind-machine interface device that, among other things, can connect its user to nearby technology. Once connected, the user has a number of ways that they can 'talk' to the machine.

The first is a simple command-and-request system that uses whatever protocol is appropriate for the device in question. This allows the user to easily turn on the lights in a room, request the day's news, and issue other simple commands. The result is something that is similar in result to a TV remote or smartphone, but controlled by thought. This method is a very safe way for the user to interact on a daily basis and exposes the user to little risk from outside influences.

The second is a more cerebral interface, called "Digital Diving", where the user can move their consciousness into a VR space that allows them to interact with available devices and data feeds in a more tangible way. The Geist translates the users thoughts and commands into tangible action within the space, greatly simplifying the process of manipulating data and issuing commands. "Diving" comes with increased risks, however, as it is necessary to "open up" more of the user's mind into the virtual space. Users are cautioned to take extreme care when utilizing this method in hostile systems, as significant harm can be rendered onto their mind.

The last method of interfacing is the most intense - full Possession of a device. In this state, the user's mind is wholly dedicated to the operation of the device, granting the user unparalleled control of the device, but at a greatly heightened risk to the user. This is typically only possible for Anima System-compatible devices, though some exceptionally talented users can use the Geist's Digital Diving ability to replicate the Anima System's effects - and risks. The [Anima System's technical specifications](#) cover these risks and other important details for users attempting to replicate its capabilities.

In all cases, the Geist must be able to make a network connection to the device that the user wishes to control. Geist and Anima System-compatible devices have special protocols to facilitate this process, while avoiding undesirable connections. Devices that do not have a wireless connection cannot be interfaced with at all.

The Geist Collar

More like a bangle than a complete collar, the Geist Collar is a thin, yet sturdy, band of metal that encircles the sides and back of the user's neck. It is similar in look to a modern [wireless throat headset](#),

although a tighter fit. It attaches snugly to the user's skin through static forces to ensure that it does not fall off during normal or strenuous activity. Much like the implant, the collar features a prominent light on the back of the user's neck.

The Geist Collar has been designed to provide basic Geist functions to users who are not compatible with the normal Geist implant. It lacks the normal system's nanites and neural interface. As such, a user must also wear a set of paired contact lenses that handle the unit's display functions.

The Geist Collar **can not** be used for Possessing vehicles or other equipment, either through the Geist or Anima System. It can allow the user to issue basic commands, such as those commonly used during everyday life in the NDC. These users must use a full Anima System setup if they wish to Possess a machine.

Availability

The Geist 2.0 is automatically implanted into all clones created by the NDC. Conclave citizens can request a Geist installation for free.

The Geist 2.0 periodically checks in with the NDC's registrar systems. If a user is not detected within the citizenry list, it disables itself with no physical harm to the user. Over time, the Geist will attempt to expel itself and its nanites from the user's body. Attempts by non-authorized personnel to interfere with the operation of the Geist, such as opening it to make modifications, will cause it to fry its own circuitry.

OOO Notes

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