Obviously, avatars are best suited for battle inside the cybernet mainframe - but they can also be used outside it, in the physical world. There are much stricter limitations in this state, of course.

IN THE REAL WORLD:
How does it work?

Put simply, no one's completely sure what the machinations behind physically manifesting an avatar *are*. They simply know that it can be done by individuals with a strong force of will - whether it's incidental, mechanical, supernatural or magical is unknown.

Whatever the case, individuals with both a strong will and at least one EDL installed are able to forcibly manifest their avatars in the nondigital world. This manifestation is, for all intents and purposes, an actual being - one can interact with it, fight against it, touch, feel, etc.

It isn't a holoprojection, like people once thought. It's more appropriate to call it a "force", something malleable but strong. In fact, even in weak-bodied individuals they can have quite strong avatars, and so it's thought that the manifestation is based on mental strength and state.

How *well* does it work?

This varies a lot. An avatar's worth outside of the cybernet is dependent on what *kind* of avatar it is - and the mental strength of its manifester. For example, someone with a strong mind and will, equipped with an avatar meant for actual battle, can manifest something suited to real-world fighting with ease.

In contrast, an individual with a weak mind, or a strong mind but an avatar based in data retrieval, or any other skillset revolving more around data/cyberprotocol than battle, will naturally be weaker. In the case of a nonpreferential skillset, the avatar may retain those skills - but since they're working in the real world, not in a malleable state like the cybernet, whatever skills used for subterfuge/distraction are often hampered.

But why bother, then?

Usually, physically manifesting an avatar is for demonstration purposes, or spur-of-the-moment protection. An individual who couldn't protect themselves otherwise might summon forth their avatar to avoid worse damage, and to fight back.

It's a double-edged sword, though. In exchange for the physical security, manifesting is very taxing on an individual's mind, and damage is shared between avatar and user as normal - but at a higher rate (in the cybernet, damage is taken on a roughly 1:10 scale from avatar->body, closer to 1:6 when damage is taken in the real world. This is largely because of the added strain of manifesting). Additionally, because the individual has to focus their will to manifest it, they're left somewhat defenseless should another enemy arrive - completely defenseless in some cases. Think of it as a last resort and you're at your safest.

IN THE DIGITAL WORLD:
Exactly what's going on here?

Within the cybernet mainframe, avatars are more or less a virtual creation. Their skillsets can be written, or the data uploaded, and each type has its own specifications of look - much

like a human would be affected by its aesthetics, so too are avatars, to a lesser degree. As an example, large, bulky avatars still can't manage the pinpoint, precision movements of smaller, lithe ones, though small, lithe avatars can wield large weapons without issue. This is because avatar strength can be built through the reinforcements in the avatar's framework, whereas mobility hinges on the ability to quickly and smoothly move and maneuver.

HOWEVER, smaller avatars are much more costly when designed this way - they have a limited area that can be reinforced and built on, whereas larger avatars can simply be built up with little added cost. "Cost" is more or less an analogy to the amount of fatigue a user suffers when using the avatar, since they're not built from physical materials. Because of this, users typically emphasize one skillset over the other - physical or cyberdata - unless they're in possession of an incredibly strong mind.

So how does it actually work?

Avatar users who want to work *directly* in the cybernet, within their avatar's view and with the least amount of lagtime between input/output, MUST have an EDL installed. Without this, avatars can certainly be created - they're just virtual programs with a higher amount of control than the average. Entradermalinks work similarly to transplants, in that they're attached directly to the circulatory system via seamless connections of tubes to veins and arteries, and grafted to the skin to be held in place.

Avatar data is encoded in an EDL's databanks (the size and scope of which vary greatly based on location/creator's skill/labour cost and materials), which allows a user to 'move' their consciousness from the real world to their avatar directly, either in part or in full. The EDL also serves as the monitor for an avatar's condition in this state - synchronising its condition with its user's condition. This is the cause of the 1:10 damage ratio, as the EDL's monitoring system serves as a buffer between the two bodies.

It's worth noting that the 1:10 ratio refers only to *physical* damage sustained by the user. Mental damage is also a concern, but its ratio is difficult at best to pinpoint and appears to vary from user to user.

Naturally, synchronising with an avatar allows a user unparalleled movement capabilities - particularly if the user also Immerses to shut out physical distractions. In this state, the ping-time between the two is practically zero, and a user can make full use of the capabilities of an avatar. This is, of course, the draw to EDL/Avatar interaction - most basic encryption and protection is either automated, or performed via standard cyberlink connections.

How well does it work?

"Well" is definitely a subjective matter. Of course, users who are technologically strong tend to find it easier to slide into fully-immersed Avatar use without much trouble; others, whose normal way to be is brute force or who don't resonate as well with technology, can have a world of trouble trying to use an avatar to its full capabilities. The simplest answer is it works very well - when the user's personal ability is removed from the equation, the actual lag-time *is* next to nothing. Mechanically speaking, there's basically nothing that works at a more ideal level than a synchronised avatar and its user.

OTHER LITTLE CURIOSITIES:
When and *why* did EDLs and Avatars even come about?

Avatars have been in existence for a long time now - at least, the concept of an avatar has. Originally, they were nothing more than what we think of them as here - a collection of pixels/polygons/programming that make up a "body" that a user wants/likes. MMORPGs were originally the largest prevailers of avatars, alongside interactive chat interfaces.

After Tales of the Veil's beginnings, though, avatars and how people thought of them began to change. The more intricate Tales' virtual worlds became, the more technology that was created in the unveiling of the WorldNet, the more people began to experiment with avatar technology. It was a fluke combination of cybernetics and virtual world programming that originally brought about research on EDLs.

In their beginnings, EDLs were primitive and incredibly dangerous - with the large number of people who died or got sick using them, it was ruled that they should be created by companies holding to high standards, and these companies were given funding to research and develop the EDLs used today. Subjects in these months of development willingly signed agreements saying they understood the risks. When all was said and done, EDLs had been designed as a hyper-responsive computer, of sorts, which allowed an average user to code and create with unprecedented speed and control.

Following their finalisation, EDLs were then tested in conjunction with avatars - mostly by individuals, not corporations - and when it was realised that they could 'link' with their avatar by storing its data in their EDL, there was a sharp spike in cybercrime. After all, corporations were all designed with traditional hackers in mind - their defenses were simply unable to keep up with the reduced lag-time of a linked avatar. It was this spike that brought about the Network Filtration Act, forcing most data to push through the network and therefore be less intriguing to cyberterrorists.

Naturally, corporations started to utilise EDL+Avatar interactions as a way to protect their more sensitive data - it was at this point that the damage ratio from a linked avatar came to be known. At that time, it was also assumed to be only physical damage, and it wasn't until Synaptic Absolution started to happen and doctors pieced together its cause that failsafes were added to EDLs intended for avatar use, to forcibly jack out a user after too much damage had been taken.

Why keep EDL Avatars legal?

Basically, because it's difficult to stop without completely outlawing avatars. Even if you can prove that someone has both an EDL and an avatar, unless you catch them in the act or see the signs of use, there's almost no way to prove anything's been done. Additionally, leaving avatars legal has proven better in keeping companies more honest - and in developing failsafes and protections against dishonest actions involving them.