

INFORMATION TECHNOLOGY

INTRODUCTION

Information systems and communications systems of our “real world” should not be compared to that of the Star Wars universe. There are large differences in technologies and vast differences in the cultural systems that molded the Star Wars communication networks.

COMLINKS



Comlinks are the equivalent of radios and cell phones in the Star Wars universe. They are common and like real world devices, use radio waves. Comlinks are used for local, planetary communications.

Radio waves can transmit large amounts of data along its wavelengths, but does so only at the speed of light. Only? At the speed of light, interplanetary communications can take several minutes to hours. Communications between star systems would take years for the closest systems, millennia for others.

Thus, comlinks are only used for short ranged local (planetary) communications. This includes everything from simple audio calls to local high quality holographic broadcasts allowed by the high bandwidth of radio communications.

HYPER- TRANSCIVERS

Subspace hypertransceivers are, in the most important ways, the opposite of radio comlinks. Comlinks are high bandwidth but slow while hypertransceivers are low bandwidth but fast. Thus, hypertransceivers are used for long-distant planet-planet and system-system communications.

Hypertransceivers, or transceivers for short, use hyperspace technology to send very small packets of data at hyperspace speeds. Thus, they are used for long distance communications, but what they can send is very limited. Both audio and holographic messages using transceivers are of very low quality.

The low bandwidth of transceivers results in any large amount of data that needs to take a long trip being hand carried aboard starships instead of transmitted. Imagine attempting to transmit a movie of DVD quality using less than a 56k modem? Thus, the Death Star plans are carried upon starships instead of just transmitted.



SLICING



In the Star Wars movies, arguably each time a computer is accessed, it is done so with a physical connection. Why is wireless computer access not prevalent in Star Wars? Long distance communication is very low bandwidth (see above), but short ranged radio communication should be wifi capable. The answer lies in a fear of security breaches.

Computers in Star Wars don't have modems due to security fears. Communications devices are rarely, if ever, connected directly to computers since doing so opens up the computer to wireless hacking, or "slicing". This galaxy-wide constraint is rooted in numerous historical incidents in which wireless access to computers or droids was used to cause panic and near disaster. An ancient version of the Holonet was once nearly destroyed by a computer virus which was easily spread through comlinks mated within computers. The Great Droid Revolution of 4,000 years ago saw an AI droid taking control of other droids using wireless access. More recently, a reliance on wireless direction of a Trade Federation droid army led to their defeat during the *Battle of Naboo*.

THE HOLONET

Used with permission of member KnasserII of the Fantasy Flight Games community:

Star Wars is not an Information Society. The real-world Internet was designed to be a highly resilient system that could withstand devastating force (nuclear attack) and still enable all members of it to be able to reach all other members.

The Holonet is not that and never was. It's a military fascist state run communications system

and its primary aims are security and top-down control. It doesn't have the goal of withstanding a massive and devastating external attack by a party of equal power, because there is no party of equal power to the Empire. Where the Internet is decentralized, the Holonet has control centers. Where the Internet tries to enable party A to get their message to party B via any path available, the Holonet tries to make sure communications from party A get routed up to the local control stations and then routed down to party B after identities have been confirmed. Where the Internet allows anyone to connect and start serving up a webpage, the Holonet checks with C&C and looks to see if your systems have been properly registered in triplicate before they are allocated a communications channel.

COMMUNICATION DEVICES

Comlinks use light speed radio transmissions. Radio transmissions are high bandwidth capable, but very slow when compared to the scale of the Galaxy. Due to their nature, comlink transmissions may "skip" by bouncing off of atmospheres or other large objects.

Comlink: Hand held and extremely common. Can reach across a short distance across a planet or to near orbit. On civilized worlds, may reach further across a planet using relay nodes.



Long-Ranged Comlink: Larger hand held comlinks used by the military, law enforcement, and explorers. Range may reach other planets within the star system, but delay in responses can range from a few minutes to a few hours. Even without relay towers this comlink has enough strength to



bounce off an atmosphere (only if there is one and requires an action) to speak to those on the other side.

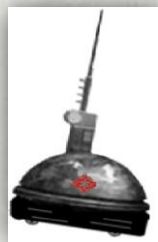
Comlink Relay: Radio wave towers or satellites used to catch, boost, and forward comlink transmissions. These are most common on a planet or within a star system to allow easy comlink communication across it. While relay nodes can be spread throughout a star system to relay comlink messages, this is typically not done since transceivers can do this much more quickly and cheaply.

Transceivers are subspace faster-than-light (no lag), very low bandwidth, but do have a maximum range even if it is measured in light years. These hyperspace transmissions, like hyperspace travel, are direct link only – they are blocked by large objects and can't "skip".



Transceiver: Found in all starships, some large expensive vehicles, and a backpack version is available. They can communicate across light years of space with no lag. They can still be blocked by planetary objects and can't skip like comlinks.

Like all transceivers, they may use an in-system relay to communicate out-of-system and perhaps across the Galaxy. Smaller transceivers have a range in 10's of light years while larger models can reach 100's or even 1000's of light years.



Transceiver Relay:

Hyperspace transceiver towers or satellites that any transceiver may use to boost and relay messages. For example, Holonet relays (a transceiver relay network) are spread across the

Galaxy, so if you can reach a Holonet Relay and have access, you may reach any civilized world. Most highly populated worlds will have ground towers, orbital satellites, or both.

During the Imperial era, all known holonet relays are owned and controlled by the Empire. There are other transceiver relay networks available in very civilized systems, but their range is limited to sector distance by the Empire and most are limited to subsector or less. Highly illegal underground relays may exist and brave hackers with enough skills can hijack an Imperial relay to send a message.

