



Imagine being able to send a message, or some data to someone and have them receive it instantaneously on the other side of the universe. Our system (concept) utilizes quantum entanglement to transmit messages across a limitless distance, all without the need for an internet connection, or any physical medium. It all works by exploiting the rules of quantum mechanics.

Quantum entanglement is one of the most mind-boggling theories in physics. It allows objects/particles to be intertwined across time and space, even if they're on opposite ends of the universe. The distance between the two intertwined particles does not matter, as the particles would be linked even across an infinite distance.

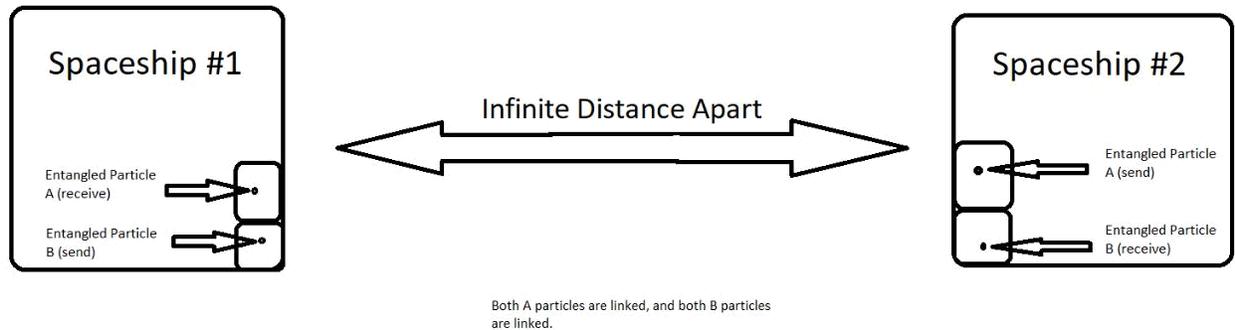
In 2012, two researchers proved that entanglement happens not just in individual particles but also in large ensembles of particles. This means that entanglement could occur at the macro-scale, making it easier for cameras and sensors to detect changes in an entangled object. Why does this matter, you ask?

Our concept consists of two spaceships with two pairs of two unique particles. Each ship has one particle for receiving information, and one particle for sending information. The opposites (sending and receiving) are quantum entangled, meaning they reflect each other's changes.

A morse-code-like system would be utilized for transmitting information. The state, or, a specific property of the particle would be altered back and forth for specific periods of time to define what is being sent. The computer on the receiving end would map the pattern to a letter. For example, if you wanted to just send the letter A (capitalized), you could change a property of the particle from X to Y for 2 seconds, then back to X. The computer on the receiving spaceship would recognize this pattern (via sensors or extremely advanced cameras monitoring the receiving particle) and would determine that the pattern signifies "A". Different patterns would obviously be used for different

letters & other characters, and, if you use the right pattern for each character, you can send a message (via your computer) saying “hello, how are you doing today?” instantly.

Here's a simple diagram



As you can see, each ship has an entangled particle for both sending and receiving information. “Send” and “Receive” are the two terms that we’re using for simplicity, but nothing is actually ever sent or received. When you have two entangled particles, and one changes, the other one immediately reflects those changes, with zero delay, regardless of distance.

In the future, when technology advances significantly, there’s a good chance that this morse-code-like system, utilizing quantum entanglement, could be used for real-time voice and video calls/communication by transmitting the audio and video bits extremely fast, but that would probably be incredibly difficult, as we would need to have quantum computers by then.