Prelude: The events leading up to the establishment of Alpha Control are well known to anyone who lived in the 1980's. This decade was one of prosperity and affluence in the United States, particularly after the recession era of the decade that had preceded it. Because of this prosperity and the tide of conservatism that had grown within the population, another "baby boom" similar to that of the post-World War II era had come about, resulting in a huge increase in the U.S. population.

Further complicating matters was the worst drought in this country's history. In 1986, the southern half of the United States lost up to 90% of its expected crop production, and had a 40% loss of livestock, because of the severe water shortage. The effects were immediate and profound, and the most optimistic estimates predicted that it would take ten to fifteen years to fully recover the loss in food production.

Between the drastic reduction in food supplies and the rapidly increasing population, the country found itself in a near state of chaos. For the first time in their lives, many people were now going hungry, and outraged citizens everywhere were demanding a solution to the problem. One proposal put forward by an Ohio senator was the possible colonization of other planets, with a specific recommendation of sending a ship to a recently-discovered planet orbiting the Alpha Centauri star system.[1] Recent technological advances lent credence to the proposal, and enough public support was garnered to put the proposal into action.

## THE ESTABLISHMENT AND DEVELOPMENT OF ALPHA CONTROL

An act of Congress approved the creation of Alpha Control on November 15, 1986, and provided a budget to research and develop the technology essential to produce a vessel capable of interstellar travel. Congress wisely settled on the creation of a new organization for this great purpose. NASA was deemed to be too large to foster the required creativity necessary to overcome the many technical challenges that lay ahead. Also, quick decision making would be needed to meet aggressive timing requirements. It was thought that a smaller organization would be more able to quickly respond.

In order to clearly delineate responsibilities, NASA was restricted to space flights within the solar system, including all related research and testing. Alpha Control was given authority over interstellar travel, and the mission to determine if another planet suitable for colonization could be identified and reached. At the same time, there would still be a considerable amount of cooperation and sharingof research data between the two organizations. Many of the critical systems and subsystems designed by Alpha Control scientists and contractors were tested in NASA vehicles and satellites.

## THE UNITED STATES SPACE CORPS

Another new institution created was the United States Space Corps. This organization was established to provide the necessary personnel to man the Alpha Control facilities. Both officers and enlisted men could transfer from the regular military forces, but only after rigorous testing and examination. Only the very best were allowed into this elite group, and very high standards were maintained to achieve the goals allocated to Alpha Control. Many nonmilitary personnel also worked for the organization, but all personnel held an equivalent military rank, similar to the system used by the federal government for its employees. Working with Alpha Control and NASA, the USSC began to train potential pilots for interstellar space flight.

## HISTORICAL PERSPECTIVE OF IMPORTANT TECHNICAL DEVELOPMENTS

Much of the experience gained since the early inception of the space program in the 1950's undoubtedly proved to be invaluable. Without the breakthrough in nuclear fusion engine engineering, however, interstellar travel would not have been practical. The advanced deutronium annihilation engine design, developed by General Dynamics at the Lewis Research Center, successfully completed initial feasibility test firings in 1980. While technical details of the engine design are still classified at this time, it is known that the magnitude of acceleration provided is substantially higher than that afforded by conventional chemically-powered rockets. Compact size and weight are two other key features of the design.

The engine was revised and tested in NASA's Nuclear Engine Research Vehicle (NERV) series. These were small, one-man vehicles capable of travelling over a considerable range. Each ship was boosted into space aboard a space shuttle, where it was dispatched under the power of its own deutronium annihilation engine. NERV 1 and Commander Matthew Delviny lifted off on March 12, 1982. He proceeded to Mars in only 72 minutes, without the use of full power. NERV 1 proved so successful that only minor improvements were made to NERV 2. Piloted by Colonel James Hapgood, it left Earth on June 18, 1982, for a Saturn landing. At the time it was not known why all communications with Hapgood ceased by the end of the second day of the mission. Hapgood was never heard from again, and many people critical of the space program speculated that a major disaster had occurred. After the investigation into Hapgood's disappearance, the NERV series were continued. However, only two more flights, in 1984 and 1985, occurred before the drought occurred. All evidence available at the time indicated that the nuclear engines performed properly on all flights (see Table I).

In October of 1983, another breakthrough was made by astrobiologists at the University of New Mexico. At the acclaimed school, a cryogenic suspended animation technology was developed to allow astronauts on long term space flights to "hibernate". Astronauts placed in a state of suspended animation would a have greatly reduced metabolic process. Once they arrived at the intended destination, the crew would be revived.

Right on schedule, NASA sent the first of four capsules up into earth orbit in February of 1985, to verify survival while in suspended animation under flight conditions ranging from the tremendous acceleration during launch to the weightlessness of space. Dogs were used for these tests and medical telemeters confirmed that metabolic processes were behaving as predicted. Three capsules were successfully recovered in ocean landings, while the fourth capsule malfunctioned when the final ascent stage refused to shut down at the preprogrammed time. The capsule attained escape velocity and was swept out of the solar system by a meteor storm.

## NEW ORGANIZATION PLANS

Alpha Control was faced with two major tasks that required simultaneous solutions: to further develop the deutronium annihilation engine into a reliable power plant for a working starship and to conclusively identify a suitable planet for colonization within an attainable distance. In January, 1987, Alpha Control's technical Steering Committee approved the sequence of missions designed to fulfill the goals of the organization (see Table II).

## REACHING OUT TO OTHER WORLDS

Technical refinements began to mount and Alpha Control came closer to finalizing the design for the first spacecraft capable of taking human passengers to another star system. Meanwhile, speculation continued on whether
any of the four planets orbiting Alpha Centauri could support human life. A series of five vessels (Deep Thrust Telescopic Probes, DTTP #1 - 5) were constructed to go to alien star systems and report on the conditions of the planets therein.

All five ships were launched in December, 1987, with two going to Alpha Centauri. In the remote possibility that none of the four planets in the Alpha Centauri system would prove acceptable, three of the five ships would be sent to other promising locations: These included Proxima Centauri, Barnard's Star, and Wolf 359.

The ships would travel at nearly the speed of light, and reach their goals within five to eight years. Upon arrival they would examine the atmosphere, soil composition, and other related matters. After compiling the data, the information would then be radioed back to Earth, as this would be quicker than having the probes actually return to their home planet. Their mission having been fulfilled, the probes would be left at their destinations, and future travelers would be able to use the equipment and supplies carried on the vessels once they reached one of the four solar systems. The flights proved to be a resounding success, with all five ships radioing back the essential information.

## THE EARLY 1990'S

Research, planning, and testing continued at a breakneck pace into the new decade.

The search for a crew had begun some two years earlier, and ten families were in the final stages of competition for the highly desired position as the first family in space. The choice of pilots had been narrowed down as well, and a young New Yorker by the name of Donald West appeared to be the likely person to pilot the controls of Earth's first colonization vessel.

A technical subcommittee proposed that new facilities be built to properly track the Gemini spacecraft, and later, the Intergalactic