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*In this first newsletter re-print Searl covers the details issued by NATIONAL AERONAUTICS AND SPACE ADMINISTRATION NASA SP-139 basic details which he released as Doc-MFD-MM-FP-R-1. on the 7<sup>th</sup> July 1968.*

*SWALLOW COMMAND space activities worldwide shall be conducted so as to contribute to the expansion of human knowledge of phenomena in the atmosphere and space when the Project Wanderer commences operations.*

*Prof. Searl shall be acting as the administration shall provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof. He has been doing this since 1968 as newsletters and books. Today all data goes on his websites for all to see.*

*SWALLOW COMMAND gains from such information from NASA in technology sense that saves millions on repeating what they have achieved. Progress in space relates to co-operation, not individual operation, therefore both NASA and Russia has much data to share with SWALLOW COMMAND that will reduce the cost of the research and development of the Inverse-Gravity-Vehicle (I-G-V) Explorer, if no co-operation then SWALLOW COMMAND becomes an worldwide individual organisation not sharing its findings with either of these companies.*

*Searl has always had an open door to all inventors, but time has shown the lack of interest of inventors to co-operate as one. Now the door closes and only real companies have that option to unit and make it happen or remain out in the cold.*

*The first company in the States has started to co-operate, and in Thailand a new setup will start to work with the USA in the research and development that will now start up in the States and things should soon speed up.*



*Mariner-Mars 1964 spacecraft, to my understanding.*

**STAR SHIP EXPLORER** will not have any such appearance as seen here, but this confirms the USA first ever to send a man made craft to MARS based upon assumptions for success and, in this case NASA won. It is an event in mans achievements to beat the forces of nature for his knowledge base gains.

That is precisely the operation of **SWALLOW COMMAND** to gain knowledge by which Planet Earth can better be prepared for the future: but economics will control that rate of learning as always, not the technology that is why we have to find the best options in technology to win and given time we shall win.

**MARINER-MARS 1964 FINAL PROJECT REPORT.**

*In November 1962, the National Aeronautics and Space Administration established the Mariner-Mars 1964 project as the first phase of U.S. unmanned exploration of Mars. Mariner IV, developed under that project, joined the growing list of U.S. space accomplishments when, on July 15<sup>th</sup> 1965, it flew within approximately 9800 km = 6100 statute mile of the planet. A television instrument photographed Mars but no aliens waved to them, but did obtain significant data about its surface; particles and electromagnetic fields experiments yielded a vast storehouse of scientific information about the near-Earth and near-Mars environments and interplanetary space; and, by measuring changes in the characteristics of radio signals as Mariner IV passed behind Mars – as viewed from the Earth - , information about the atmosphere of the planet was obtained.*

**SEARL NOTE:**

*This set of documents presents the story of the Mariner-Mars 1964 project from the time of its inception until October 1<sup>st</sup> 1965, when two way communications with the spacecraft were interrupted – but not by aliens.*

*By this date, the objectives of the Mariner-Mars 1964 project had been completed. This is quite different to SWALLOW COMMAND Project Wanderer which will continue indefinite. However, since that time when communication on a two way with Mariner-Mars stopped, that spacecraft continued to function properly and a follow on project, called Mariner IV, was established to continue operations with the spacecraft through 1966 and 1967. Plans for tracking Mariner IV in its path around the Sun and for obtaining additional telemetry data, as Searl discussed within these documents, were successfully culminated during this follow on project, Mariner IV continued to function properly during 1966 and most of 1967, and the results of this portion of its flight will be included in a subsequent report. Unfortunate Searl never received that report.*

*Mariner IV was launched on November 28<sup>th</sup> 1964 on a trajectory which would have taken it within approximately 242,960 km = 151,000 statute miles of Mars. By a single, successful midcourse manoeuvre on December 5<sup>th</sup> 1964 its flight path was altered to enable the close flyby. The total flight time was approximately 7½ months – whereby Star Ship Explorer target is to achieve it in two months – but the story of Mariner IV actually began 2 years prior to its launch and it extends beyond the July 15<sup>th</sup> close approach to Mars with chapters yet untold.*

*This document the first of a set presents that story from the time the idea for the mission was conceived until October 1<sup>st</sup> 1965, when two way communications with the spacecraft were terminated not by aliens but by Earthlings. Plans for tracking Mariner IV as it continues in its path around the Sun and for attempting to obtain telemetry data during a future close approach of Mariner IV to the Earth are also discussed.*

*Actually, the Mariner-Mars 1964 story involves more than the recorded facts and figures included herein. The portion of the story which cannot be told on paper is the human aspect: a story of a team whose members combined their skills and talents toward one common goal. That is the issue which I have hammered my teams but they cannot understand this reason why everything should be on film record as text on its own cannot possible expose the whole truth of those who made it happen, this has applied to the present day, even in Thailand proper film records appear not to been filed. What I have been able to release as proof is minute in detail.*

*The Mariner-Mars 1964 project was an extremely complex undertaking, and, as such, required an enormous effort by many people. The success of Mariner IV is a tribute to their efforts: by a man who understands what it actually takes to create from nothing to something that shows when people come together as one they can move mountains; but you think that one man can do the same as all of those did from a pension, how sad the world is. But I still carry on regardless in the effort to succeed.*

Searl accepts that from the U.S.A. point of view it is also a tribute to this country's economic strength and resources that a mission such as Mariner IV could evolve from an idea to reality in a little over 2 years. Searl appreciates that such a rapid progress is made possible by a fast moving intricate mechanism which Searl has never had available to him of many functioning parts. In reference to the economic strength Searl had to balance what he observed at that time the mass of people who needed help and not getting it represents a picture of fork tongue situation that image a economic situation that was not so strong in reality, as projected.

Searl understands that for Mariner-Mars 1964, the functioning parts included the engineers, scientists, administrators, and many other individuals who played a direct role in the project and also, of equal importance, the support of the entire country sharing our commitment to meet the challenges of space exploration. Searl appreciates that there were those who resented such massive expenditure having to donate money towards that success. Agree Searl knows that there are those who actually think NASA went to Mars on Tesco credit card looking at the crap one sees on the web.

In reality it was a combination of the new concepts, methods, and techniques developed under the Mariner-Mars 1964 project and those already proved by Mariner IV's predecessors in space – *such as the Ranger flights to the Moon and the Mariner II flight past Venus* – was indeed a winning combination for our first attempt at Mars exploration. Searl accepts as was true with Mariner IV, the invaluable information gathered will be used in future space projects involving unmanned spacecraft which will orbit the planets, soft land on them, and explore their surface.

As far as I can recall this information was released by W. H. Pickering, Director, Jet Propulsion Laboratory, California Institute of Technology, and I brought it from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 I paid \$2.50 for the paper version. The library of Congress Catalog Card Number 67-60049 year 1967; there Flowerbower you know where to stick that don't you that is correct right up your bum as far as it will go then smoke it you will enjoy that rich fragrance that you like to spread around YouTube.

Searl has most of the time carried on the work by himself, with odd times a team was formed which in the end spoilt success by bad behaviour; but Searl never gives up, and shortly he hopes that work will at last start up in the U.S.A. but this time from a company and not just local people filling in spare time, the new team has at this date 6<sup>th</sup> January 2010 been selected in two groups one in Thailand and the other in the USA, each has a precise task to undertake, similar to the manufacture of Concorde, that worked and I see no reason why this should not work likewise.

To make the *S.E.G* in 1946 was just children's pocket money in relation to making it today. The *Inverse-Gravity-Vehicle (I-G-V)* is an advanced *S.E.G* of a massive size and no credit card would cover such cost of either class today. That has been a hold up issue including lack of space of late, that is going change this year and my team includes top officials, engineers and scientists and funds that truly get's us moving in the right direction called the marketplace.

The work setup will take a few weeks, but the key issues have been implemented and are being put in place for my arrival, it looks like that I shall recover from the 2003 robbery and the robbery of 1968 when I was at the top of the hill in this development. The site to start up in the States is perfect for the job: bit like 1946: I shall be in the right place at the right time; let us hope that I am right upon this option, so far it appears to be better than anything before.

I may not yet have the world behind me, and all the top companies helping me, or the massive cash flow like NASA had to achieve their success, but somehow I shall win it take more time then NASA but I shall get there just the same.

Economics call for good IT today that is how business is run and I trust that my IT efforts are worth your time to study them.

The planet Mars was named by the Romans for their ancient sanguinary god of war because of its vermilion colour. With the traditional belief that it may support life, Mars has overshadowed its far more brilliant Olympian sister, Venus, in public interest. Since it is the planet in our solar system thought to be most like Earth, scientists, philosophers, and writers have for many years speculated on what this life, if it exists, might be like.

Searl has always stated and written in his books since he was 14 years that no planet in our solar system will have life on it, this includes Mars, after all did not God say I give this planet to you and all others are mine. If you say that god created this universe then he should know where life is, and you claim god made that statement, so he was not surprised as each planet was checked out and no life found that was exactly what he expected them to find.

As our knowledge of Mars has improved as more sophisticated observational techniques have become available over the years, the fabled surface environment of Mars has appeared less and less promising in regard to its ability to support terrestrial life forms. However, Searl accepts because of the amazing adaptability of life on this planet, the possibility of life on Mars cannot be definitely excluded by some people who believe they have met aliens from planet Mars – sad to say that I have never seen one from Mars, in fact to come to think of it I have never seen one from any planet regardless.

Unless they are spirits, and you need a Trans receiver implanted in your brain to tune them in, that is why I do not see any of these great engineers of long distance space travel, they believe NASA and the military have captured them and making them produce their advanced weaponry – what weapons? To me I have seen nothing that is outside of Homo sapiens capabilities so far, where are these flying saucers?

Searl states, in order to answer the question of life on Mars, it will be necessary to land instruments on its surface. Before this can be accomplished, the most desirable location to attempt such a soft landing will have to be selected. However, before either of these feats can become a reality, information concerning the atmospheric and surface conditions of Mars and the environmental characteristics of the space separating Mars from the Earth must be available to designers of the spacecraft, which Searl does not process so he must design a craft to meet all possible conditions, thus his option being the slender disc structure.

Therefore, NASA first step in Mars exploration was a close up – *flyby* – mission from which the necessary planetary and interplanetary information could be derived. *Such a mission was that of Mariner IV.*

The Mariner IV spacecraft was launched on November 28<sup>th</sup> 1964, and encountered Mars on July 15<sup>th</sup> 1965. The mission proved to be of immense scientific and engineering importance. Scientific information is now available on regions of the solar system never before penetrated with instruments. Observations from the vicinity of Mars suggest entirely new concepts about the nature of the planet.

Searl agrees that spacecraft performance has proved our ability to design and construct a remotely operated device of extreme complexity, and its continued operation established an extremely high standard of reliability. Maintaining two way communications over distances up to 304 million km = 190 million miles demonstrates remarkable advances in communications technology not thought possible a decade ago.

Design concepts used in the design of Mariner IV date back to 1959 when the Vega project was begun at the Jet Propulsion Laboratory (*JPL*). From that project evolved the Ranger project, the first phase of U.S. lunar exploration. The Mariner concept itself was formulated when a mission to Venus was planned for the 1962 flight opportunity. This mission was to be accomplished by using a 567 kg class = 1250 lb spacecraft launched by a vehicle consisting of a modified Atlas D first stage and a Centaur liquid hydrogen / liquid oxygen, high energy second stage.

However, when it became evident that the development of the Centaur stage had not progressed sufficiently to make it available for the 1962 Venus launch period, this mission series was cancelled and another formulated. Now you see the problem Searl witnesses he seeks a solution which would not require such a complex construction of risks and he found one that answers all space commitments.

The latter Venus mission series, based on the use of an Atlas D/Agena B launch vehicle and a hybrid spacecraft combining features of the Ranger and Mariner designs, formally became the Mariner-Venus 1962 project. The Mariner II spacecraft, developed under that project, made history on December 14<sup>th</sup> 1962 after 109 days of flight, when on a predetermined trajectory it encountered Venus at a distance of 34,826 km = 21,645 statute miles from the planet. Valuable scientific data on Venus and on interplanetary space were obtained.

The Mariner IV spacecraft was developed under the Mariner-Mars 1964 project, which was established as part of the National Aeronautics and Space Administration (NASA) Planetary-Interplanetary Space Exploration program in November 1962. Primary objectives were to make flyby scientific observations of the planet Mars during the 1964 – 1965 flight opportunity and to transmit the results back to Earth. Secondary objectives were to develop and study equipment and techniques required for such a mission and to perform certain scientific measurements during the trip.

NASA, through its Office of Space Science and Applications (OSSA), assigned the Jet Propulsion Laboratory, California Institute of Technology, at Pasadena, California, the management responsibility for the project under contract NAS7 – 100; the spacecraft system; and tracking; data acquisition, and space flight operations activities.

Responsibility for the overall direction and performance evaluation of the project was assigned to the OSSA Lunar and Planetary Programs Office. Management responsibility for the launch vehicle, an Atlas D/Agena D combination, was assigned to the NASA Lewis Research Centre (LeRC) of Cleveland, Ohio. NASA Goddard Space Flight Centre at Greenbelt, Maryland, was assigned launch operations responsibility for the project.

Searl discussed in these documents are Mariner-Mars 1964 trajectory; space vehicle system design and testing operations; flight history and space vehicle performance; tracking, data acquisition, and space flight operations activities; Mariner IV scientific – planetary and interplanetary – results and conclusions; and project management and organisation. Thus, a comprehensive report is given herein of activities from inception of the project in November 1962 until the end of the Mariner IV mission on October 1<sup>st</sup> 1965.

Future plans involving the Mariner IV spacecraft are also discussed; which includes a brief history of the Mariner-Mars 1964 project will be presented.

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**SWALLOW COMMAND AVIATION** will have to set up its program in a similar fashion, but cost could be greatly reduced if NASA exchanged information of their findings in reference to conditions between Earth and Mars, agree in the past NASA supplied a lot of data to me, which Doris Foster and Family destroyed all the data I had from them while I was in the States lecturing, agree that was not the fault of NASA, but the evil minds of those who wanted this development stopped.

You would think that scientists were educated but today eighth of January 2010 on YouTube is one talking out of his arse showing education is dumb, no allowance to think for themselves that all things of the past was declared as impossible has been proven possible today, and he lacks the education that what was said is true: why goods are not available is because evil minds don't want you to know that they exists even though mass of articles of the past have been released to the world.

Solar, wind, wave and magnetic will become more and more an energy productions system regardless of such stupid statements made by experts as they term themselves. Does one man on a pension worry these experts that he might put them out of business, maybe they do: that is why they try to knock me down to make sure I do not put them out of business. Good Luck to ye, but I am still coming to put you out of business, and I guess that will be sooner than later. Time will always prove what is real and what is not. You experts remember be careful what you say it may prove you to be a nutcase.

### *SUMMARY OF SCIENTIFIC AND ENGINEERING RESULTS:*

The Mariner IV spacecraft, the first man made probe to travel to Mars, was far more than a technological experiment; it was an extremely complex instrument designed to perform multiple scientific experiments to extend man's knowledge of his own planet, interplanetary space, and the planet Mars.

In addition, the development of this spacecraft contributed a vast amount of engineering knowledge to space technology which is essential to the design of future planetary and interplanetary space probes. Strange how some experts know all's, have no idea what is involved in my work, talk as they know everything and what shocks me more is how many people enjoy such crap as reality.

Regarding the engineering evolution and technical development of the spacecraft, the following list highlights only a small fraction of the many technological demands placed on, and operational first required of, Mariner IV, which Searl understands and appreciates from his own experiences in the *Inverse-Gravity-Vehicle (I-G-V)*:

- 1. The Mariner IV mission was the first to require 9 months of successful spacecraft operation to achieve mission success.*

*Now Star Ship Explorer object is to take only 2 months to reach its objective, then 2 years or more of exploring the planet before returning, that is a major task to plan and implement.*

- 2. The spacecraft was required to be fully automatic; it had to be capable of completing its entire mission without ground based intervention, except for trajectory correction manoeuvres and, of course, tracking and data acquisition.*

*Now Star Ship Explorer has three control systems for flight operations:*

- a. Sensors for automatic flight control of the ship;*
- b. Ground control if some urgent change is required;*
- c. Manual control by a crew.*

*Star Ship Explorer can be program for automatic operation to a precise point in space, or Ground control can control it in the event that no response is obtain from the flight crew and manual control when needed.*

*Somewhat a major difference between NASA successes to what Searl is targeting to achieve, and these idiots that claim to be experts try hard to stop such progress being achieved, showing that they fail to have the intelligence to understand that if Searl succeeds the whole of space exploration would take off in the same manner as conventional aircraft has achieved.*

- 3. The design of the spacecraft required at least two independent means of initiating every specific function or event critical to the success of the mission.*

*Star ship Explorer will carry a mass of components to be able to carry out maintenance of any malfunction component, over the years Searl has been testing components and so far to date none of what Searl has approved has ever malfunction, so far Searl see no problem in reference to component failure in a five year mission.*

*A commercial space operation must be based upon the economics of such a program by which you can claim success – just going to Mars planting the flag and sing the national anthem is not economics and would not pass Searl standards of operations in space.*

4. *The complexity of its assigned tasks required that the spacecraft contain 138,000 parts, as compared with 54,000 parts in its predecessor, Mariner II, with only a 61 kg = 135 lb increase in spacecraft weight.*

*Star Ship Explorer has in its power unit alone three plates each containing six different components that is 18 components, to this there will be a number of roller sets, each set will contain 48 components each that means that if there were only 66 roller sets in use that would entail 3,168 component parts, but in reality the number of roller sets will be many more depending upon the diameter of the ship.*

*As Star Ship Explorer power train depends entirely upon mass time's velocity for generation of energy to power the ship as a superconductivity state has to be reached within the power train.*

5. *The spacecraft was required to communicate with Earth over extreme distances: at least 2½ times greater than those of previous missions. The Mariner IV involved the first use of the S-band communications system.*

*Indeed Star Ship Explorer has to be able to communication with Earth base stations, regardless where its position is during any mission.*

6. *Since it was travelling away from the Sun during its journey to Mars, Mariner IV had to withstand a widely varying range of thermal conditions and require twice the solar panel area of Mariner II.*

*Star Ship Explorer requires no solar panels a major issue solved, of cause it will be travelling away from the Sun just the same, of cause it will be travelling most of the time in a constant thermal conditions created by its functions.*

7. *The solar pressure vanes at the ends of Mariner IV's solar panels were unique in utilizing solar pressure effects – about a millionth of a pound per vane – to assist in maintaining stable orientation of the spacecraft toward the Sun.*

*As you know that the Star Ship Explorer flight path is control by flight cells, 64 of them functioning under gyro control effects.*

8. *Whereas previous spacecraft used the Earth for roll axis stabilisation, Mariner IV was the first successful spacecraft to use a star – Canopus – for this purpose. The Earth could not be use since, during much of the flight, the Earth appeared as a relatively dim crescent as it moved across the face of the Sun.*

*Searl agrees that would had been the same problem with the Star Ship Explorer and the option available as a marker then would had been the star Canopus, as the flight path would had to been assessed so that the I-G-V was ahead of planet Mars and Mars catch up with it, within seconds on reaching the target point.*

9. *In case more than one trajectory correction was necessary, the Mariner IV trajectory correction propulsion system was design to be restartable. This was the first time such a dual capability was available.*

*Star Ship Explorer does not have this problem as corrections can be made at any moment in time regardless where.*

10. *The spacecraft was required to store the data it acquired at Mars on magnetic tape for transmission to Earth at a later time.*

*From an economics issue this is required that all data collected on route and on the surface by Star Ship Explorer be stored for transmission to the Earth base when possible.*

11. *The Mariner IV mission was the first in which coherent radio transmission was used to probe conditions on another planet – the first in which an occultation experiment was conducted.*

*Star Ship Explorer is fully manned on all missions, with scientists from all sections of science and technology including astrophysics and medical domains. In, which case no problems should occur in reference to communications.*

In order for NASA to meet the unique and more stringent requirements of the mission to Mars, every effort to insure proper operation of the spacecraft had to be made. Rigorous testing programs were carried out, as were very demanding parts screening and quality assurance activities. Backup designs were accomplished in several critical areas.

*You think that this effort does not apply to Star Ship Explorer, let me assure you that it does apply, through the years Searl has tested components over years for possible malfunctions to happen, as seen certain parts are now been updated and has been tested for two years constant without any malfunctions occurring.*

Every effort was thoroughly documented so that all areas connected with the mission would be as well informed and coordinated as possible. As it turned out, these activities were well worth the effort involved, for the Mariner IV spacecraft was truly a milestone in engineering technological accomplishment, which Searl agrees that it was.

Searl agrees also that in addition, the scientific results of the mission greatly enhanced the level of our knowledge concerning planetary and interplanetary conditions. During the Mariner IV journey to Mars, approximately 23 million scientific measurements were made. During the early part of the trip as it passed through the region of space influenced by the Earth, Mariner IV measured with great precision the Van Allen radiation belts, the terrestrial magnetic field which holds them and the interface between the solar plasma – *ionised gas* – in space and the Earth's magnetic field.

The spacecraft measured the rise and fall of solar activity throughout its journey, and, although the mission took place during a period of decreased solar activity, over 20 solar flare events were detected. Solar wind velocities varied widely during the flight, and magnetic fields fluctuated concurrently. About 235 micrometeorite – cosmic dust – impacts on the cosmic dust detector were recorded.

As it flew by Mars, Mariner IV proved conclusively that Mars has a very small magnetic dipole moment compared with that of the Earth – *less than 0.1 percent the value of the Earth* -, if it has one at all. This measurement was supported by the fact that no radiation belts were detected in the vicinity of the planet.

Without a magnetic field to deflect energetic particles, Mars then is directly exposed to bombardment by cosmic rays and solar plasma. The absence of a magnetic field also implies that some feature of the Earth's internal structure is missing in Mars: presumably a liquid core. Searl says that it can thus be concluded that, without such a core, Mars probably lacks much of the internal activity that results in changes in the topography of the Earth – such as mountain building.

Measurements by the instrument which detected the presence of cosmic dust throughout the flight indicated no concentration of solid matter in the vicinity of Mars. In fact, the measurements seem to indicate that Mars has swept a dust free path in its orbit around the Sun and has thus reduced the quantity of matter in that region.

The atmosphere on Mars was found to be extremely thin compared with that on the Earth. Mar's daytime ionosphere appears to be approximately equivalent to that of the Earth at night. Since Mars has a surface pressure measuring between 0.5 and 1 percent that of the Earth, thus providing little aerodynamic braking assistance to facilitate a soft landing, it will be much more difficult than was expected to design capsules capable of landing on the Martian surface. However, the discovery that the density decreases quite rapidly in Mar's upper atmosphere indicates that it may be possible to orbit at lower altitudes than were previously thought feasible.

The most surprising discovery of Mariner IV was that the surface of Mars closely resembles that of the Moon. The existence of craters seems to indicate that the surface may be 2 to 5 billion years old and very well preserved, since none of the erosive effects encountered on Earth would be encountered on Mars.

The close flyby of the Mariner IV spacecraft past Mars and the accurate tracking of the spacecraft on its trajectory allowed improvements in the calculation of the planet's mass. A new value, with significantly improved accuracy, for the ratio of Mar's mass to that of the Sun was obtained.

If Mariner IV is still operating during its close approach to the Earth in September 1967, even more data from the spacecraft will be received. These data will be valuable since:

- 1. The measurements will come from a region of space, some 16 million km = 10 million statute miles – above the orbital plane of the Earth, at a time of increased solar activity;*
- 2. The measurements will be made simultaneously with those of the Pioneer and other spacecraft from different regions of space about the Sun.*

All evidence obtained to date indicates that the spacecraft is continuing to operate quite well and that it will be possible to obtain these data in 1967.

That now completes the update of the first newsletter upon this subject, and I trust that you now have a better picture of Space Ship Explorer expected capabilities.

This document released by authority of:



It is now expected that the first real laboratory in United States of America may shortly become reality after all these years of trying to set up there.

It might even go to cover the re-development of the I-G-V beside the S.E.G which will be the first priority to tackle, but if it does this is what you will see.



*Prof. John Roy Robert Searl head of R&D Human Studies.*

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