

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 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.

Therefore, the 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 28th, 1965, and encountered Mars on July 15th, 1965.

I understand that 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 concept about the nature of the planet.

Spacecraft performance has proved our ability to design and construct a remotely operated device of extreme complexity, and continued operation established an extremely high standard of reliability.

Maintaining a two way communications over distances up to 304 million km (190 million miles demonstrate remarkable advances in communications technology not thought possible a decade ago.

The 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, to my understanding, 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 was formulated.

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 because the Mariner – Venus 1962 project.

The Mariner II spacecraft, developed under that project, made history on December 14th, 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 was obtained.

To my knowledge that 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 observation 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 for such a mission and to perform certain scientific measurements during the trip.

In respect to that statement that today I am still studying equipment for our success, within the same light as the Mariner IV was achieved.

NASA, through its Office of Space Science and Applications (OSSA); which S.I.S.R.C. and SWALLOW COMMAND objectives are similar in functions and operational requirements 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 evaluations 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 Center (LeRC) of Cleveland, Ohio

NASA Goddard Space Flight Center at Greenbelt, Maryland, was assigned launch operations responsibility for the project.

Discussed in this document are the 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.

Reason to discuss these issues: as both systems have common reference points that are related.

Thus, a comprehensive report is given herein of activities from the inception of the project in November 1962 until end of the Mariner IV mission on October 1st, 1965.

Future plans involving the Mariner IV spacecraft are also discuss, because there are similarities which Searl International Space Research Consortium must in the end meet.

Somewhere in this document a brief history of the Mariner – Mars 1964 project will be given and any abbreviations used in this book will be defined at the end of each section thereof.

A reference should be made clear here that the reason that the Searl International Space Research Consortium in 1968 stated that it would create a manned Flight Division to study the problems of a commercial space business based upon the failures of the rocket system to meet the requirements of a Commercial Space Operations.

It had no relationship to the success of the Mariner – Mars 1964 project which represents another success story of man's achievements over natural forces.

243: Though my work is basically the same targets it will end up with similar results; only achieved via the opposite domain to that of the rocket.

But at this date the rocket domain is active and that is what is being studied here for solutions for the Inverse-Gravity-Vehicle program, therefore, all those who have been or are actually at this time and those yet to come within the rocket domain are actually also helping the I-G-V project.

244: ***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.

Searl International Space Research Consortium objectives are not interested in being involved with space probes systems, only actual crew missions.

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 certifies: that if funds were there; the skill is also there to be obtained for any space project regardless.

- 1) The Mariner IV mission was the first to require nine months of successful spacecraft operation to achieve mission success.
- 2) The spacecraft was required to be fully automatic; i.e., it had to be capable of completing its entire mission without ground base intervention, except for trajectory correction manoeuvres and, of course, tracking and data acquisition.

- 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.
- 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 61 kg (135 lb) increase in spacecraft weight.
- 5) The spacecraft was required to communicate with Earth over extreme distance: at least 2 1/2 times greater than those of previous missions.
- 6) The Mariner IV mission involved the first use of the S-band communication system.
- 7) 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 required twice the solar panel area of Mariner II.
- 8) The solar pressure vane at the ends of Mariner IV's solar panels were unique in utilising solar pressure effects (about a millionth of a pound per vane) to assist in maintaining stable orientation of the spacecraft toward the Sun.
- 9) 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 used since, during much of the flight, the Earth appeared as a relatively dim crescent as it moved across the face of the Sun.

- 10) In case more than one trajectory correction was necessary, the Mariner IV trajectory-correction propulsion system was designed to be restartable.

This was the first time such a dual capability was available.

The Inverse-Gravity-Vehicle employs 64 trajectory correction propulsion systems; which are termed Flight Cells.

- 11) The spacecraft was required to store the data it acquired at Mars on magnetic tape for transmission to Earth at a later time.
- 12) The Mariner IV mission was the first in which coherent radio transmission was used to probe conditions on another planet (i.e., the first in which an occultation experiment was conducted).

245: In order 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.

Every effort was thoroughly documented (***that is the most important part of research***) so that all areas connected with the mission would be as well informed and coordinated as possible.

As it turned out, their activities were well worth the effort involved, for the Mariner IV spacecraft was truly a milestone in engineering technological accomplishment.

In addition, the scientific results of the mission greatly enhanced the level of our knowledge concerning planetary and interplanetary conditions.

During Mariner IV journey to Mars, approximately 25 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 winds velocities varied widely during the flight, and magnetic fields fluctuated concurrently.

About 35 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 Earth (less than 0.1% the value of the Earth), if it has one at all.

This measurement was supported by that fact 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; and that is one major problem that I see in reference to rocket transportation system.

The absence of a magnetic field also implies that some feature of the Earth's internal structure is missing in Mars: presumably a liquid one.

It can thus be concluded that, without such 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 instruments which detected which detected the presence of cosmic dust through out 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 thus has reduced the quantity of matter in that region.

The atmosphere on Mars was found to be extremely thin compared with that of on the Earth.

Mar's daytime ionosphere appears to be approximately equivalent to that of the Earth at night.

Since Mar's 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 density decreases quite rapidly in Mar's upper atmosphere indicates that it may be possible to orbit at a lower latitudes 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 Earth in September 1967, even more data from the spacecraft will be received.

These data will be valuable since:

- 1; The measurement 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 region 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.

- 246: Over the next few years Mars will become an issue on how we can arrive there to search the history of that planet, since man discovered it, much details from the domain of fantasy has appeared in the media and books, etc, but in the world of reality I do not expect that we shall find any evidence as we understand it ever existed there.

Even if we are so lucky to find some form of bacteria there, it might not be like anything to which we know off - but I doubt if such bacteria will be found.

Of course I am keen also to know the absolute truth about Mars and how could it benefit Earth, certainly not as mass Homo sapiens living quarters, it will be tough going for those who go to dig and search there.

All these films about we going to Mars or at least tries to impress you that we shall all be transferring to Mars on our first stage of finding a new home, is nothing more than acute case of diarrhoea – we are not going to be that lucky – or insane.

Landing on other moons or planets from my respective is the sheer excitement as to what is there that would better mankind and planet Earth as a whole; which does not include football pitches or boxing rings, or horse / dog racing.

If we found any signs of life no matter if it was just bacteria, would to my mind be interesting as to why and how did it form there.



Yes I guess as the time gets near to 2012, so more races will be encouraged to force the development of such vehicles to take a handful of homos to Mars can be expected.

247: This document has been released to the general public by the authority of:



Prof. John Roy Robert Searl: Head of Research and Development, Manned Flight Division.

To be or not be that is the question we all want to know?

The answers are: that at this time it is not quite here – but it is certainly on its way.

203. There is in Egypt, Said Critias, at the head of the delta, where the Nile divides, a district called the Saitic.

The chief city of the district, from which King Amasis came, is called Sais.

The goddess of the inhabitants is called in Egyptian Neith, in Greek (according to them) Athena; and they are very friendly to the Athenians and claim some relationship to them.

Solon came there on his travels and was highly honoured by them, and in the course of making inquiries from those priests who were most knowledgeable on the subject found that both he and all his countrymen were almost entirely ignorant about antiquity.

Even today from where I sit the same appears to be true, how strange after so many years have passed us by.

And wishing to lead them on to talk about early times, he embarked on an account of the earliest events known here, telling them about Phoroneus, said to be the first man, and Niobe, and how Deucalion and Pyrrha survived the flood and who were their descendants, and trying by reckoning up the generations to calculate how long ago the events in question had taken place.

And a very old priest said to him, Oh Solon, Solon, you Greeks are all children, and there's no such thing as an old Greek

Is what I witness to day is no different to that statement?

What do you mean by that? Inquired Solon.

You are all young in mind, came the reply: you have no belief rooted in old tradition and no knowledge hoary with age

And the reason is this.

There have been and will be many different calamities to destroy mankind, the greatest of them by fire and water, lesser ones by countless other means – how true for that is still the same to day things have not changed.

Your own story of how Phaethon, child of the Sun, harnessed his father's chariot, but was unable to guide it along his father's course and so burnt up things on the Earth and was himself destroyed by a thunderbolt, it is a mythical version of the truth that there is a long intervals a variation in the course of the heavenly bodies and a consequent widespread destruction by fire of things on the earth.

On such occasions those who live in the mountains or in high and dry places suffer more than those living by rivers or by the sea; as for us, the Nile, our own regular saviour, is freed to preserve us in this emergency.

When on the other hand the Gods purge the Earth with a deluge, the herdsmen and shepherds in the mountains escape, but those living in the cities in your part of the world are swept into the sea by the rivers; here water never falls on the land from above either then or at any other time, but rises up naturally from below.

This is the reason why our traditions here are the oldest preserved; though it is true that in all places where excessive cold or heat does not prevent it human beings are always to be found in larger or smaller numbers.

But in our temples we have preserved from earliest times a written record of any great or splendid achievement or notable event which has come to our ears whether it occurred in you part

of the world or here or anywhere else; whereas with you and others, writing and the other necessities of civilisation have only just been developed when the periodic scourge of the deluge descends, so that you have to begin again like children, in complete ignorance of what happened in our part of the world or in yours in early times.

So these genealogies of your own people which you were just accounting are little more than children's stories.

You remember only one deluge, though there have been many, and you do not know that the finest and best race of men that ever existed lived in your country; you and your fellow citizens are descended from the few survivors that remained, but you know nothing about it because so many succeeding generations left no record in writing.

How absolutely true even today there are similarities across the spectrum in science and technology, even in my work such information had been burnt by evil minds to stop the masses getting the facts, but they have already lost out, things are now being again recorded for future generations shall know their past, and how the world was change for the better by a few dedicated people, who gave their time freely and what ever funds they could raise they also gave freely.

To them; the world owes them much in gratitude, but unfortunate they are not yet educated as free thinkers; therefore the word gratitude has no value to them.

204:

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EDITION: First.***



LONDON – ENGLAND.

***LOCATION : Headquarters – London – England.
DIVISION : Manned Flight.
SUBJECT : Idea to marketplace – An introduction to UK technology law.
AUTHOR : Prof. John Roy Robert Searl.
STATUS : Head of Research and Development.***

Every day technology rights are created, traded and litigated.

Occasionally these activities have spectacular results, let me remind you that Kodak's withdrawal from the instant film and camera market following Polaroid's successful United States patent infringement lawsuit.

This is only one case of thousands court cases which I know off.

Cases such as this illustrate the value of property secure technology rights.

In the same way that there are property rights that protect the ownership of assets such as land, buildings and motor vehicles, so property rights such as patents and copyright can protect the ownership of inventions and industrial designs.

From where I sit, these protections have failed me and indirectly became a treat instead a help. I have to work from the reality which I have come face to face with.

In fact the most valuable assets of high technology business, which Searl International Space Research Consortium domain operates, may be its inventions, such as the Searl Effect generator (S-E-G) or the Inverse-Gravity-Vehicle (I-G-V) is its know how and designs.

For such a business it is particularly important to pay proper attention to securing its rights in this intellectual property; and any business, large or small, involved in manufacturing, buying or selling technology is likely to benefit from ensuring that its intellectual property is protected.

Yes it will cost you an arm and a leg, believing you will be protected – that may not be so, over the years I have found the advice given to me by patent office in 1963 to have protected me all these years and this year 2008 the patent office still claims that not taking a patent out is still my best option, and these years which have passed me by supports their statement.

Once technology rights have been secure, many further points have to be considered when financing and commercialising a technology venture and marketing the resulting products.

This is what this book is about proof from both sides of the coin, what the experts say and the reality that I have found from hands on experience.

At the stage of commercialising and marketing, the business may be subjected to external constraints that limit (or sometimes enlarge) its freedom of action in exploiting its technology rights.

These constraints range from UK and EEC competition law, through statutory regulation (sometimes directed to specific industries) to technology rights owned by competitors.

I hope that through this book I shall outline the main considerations in these areas, dealing in particular with computers, telecommunications, and biotechnology.

Because: these three components are key subjects of the Searl International Space Research Consortium technology.

The financing of a technology venture rises yet further considerations.

This book outlines possible sources of finance, the conditions that investors are likely to require and some of the points that a potential investor should consider before investing in a technology based company such as Searl International Space Research Consortium.

Finally, this book sets out some of the steps that can be taken in the courts to enforce technology rights.

This is most likely to arise once a product or process has become successful in the marketplace, which the evidence of many cases that came before the courts have proven to me; to be true.

205: ***PROTECTING THE IDEA:***

SECURING TECHNOLOGY RIGHTS:

IN THE UK:

Intellectual property is the general name given to a number of quite different legal rights (all with different rules as to their creation and exercise) with which commercial ideas and technology can be protected.

These are primarily, in relation to technology, patents and copyright.

Of the other rights, that of confidential information can be significant in the context of protecting trade secrets.

The other major intellectual property right, trade marks, does not directly protect ideas and technology and is discussed in the section dealing with commercialising technology.

The rights in the various different types of intellectual property vary considerably.

Intellectual property generally only provides a right to stop others doing something it does not give the owner a positive right to do something that he / she could not otherwise do.

The scope of these negative rights depends to some extent on whether or not official registration is required.

If registration is necessary the law tends to confer a limited monopoly on the owner which means that no one is entitled to exploit the subject matter of the rights, not even someone who develops the same invention or design independently of the registered owner of the rights.

If registration is not necessary the only protection is against copying, when the existence of any link between the third party and the originator of authorised user of the rights becomes important.

The government has recently indicated that it intends to promote certain reforms of the intellectual property law.

These will probably become law in 1988 and are likely to include a revision of the entire law of copyright.

To the extent that such legislation may affect the position this is stated in the text.

206: ***PATENTS:***

PATENTS – SCOPE:

Patents are intended to cover new processes and devices which are of practical commercial utility, which it appears that, the S-E-G- or the I-G-V don't belong to.

They are granted for inventions made in most fields, although there are certain areas where patents cannot be obtained – such as mathematical rules and inventions relating to surgery.

The basic idea of the patent system is that in exchange for the inventors publishing details of his / her invention and how to make it work he / she obtains from the state a limited monopoly over his / her invention, for a period of 20 years.

Thereafter the invention is available for the public to use freely.

That is the major issue – this is a technology that can either create or destroy, depending on the mind of those who know how to make it – a major problem with the forever increasing insanity on this planet today; which you call terrorist; and I call it a deadly cancer and if those in power don't carry out the necessary surgery to clear it out; then all the good things left on this planet will be destroyed by it.

A patent can be used to prevent third parties from making patented articles or using a patented process, irrespective of whether the third party has deliberately copied the patentee or has done his / her own design or research work in total ignorance of the patent.

A granted patent has a number of statements at the end called claims, which define the area of the monopoly and that could be very dangerous; for it would present possible opens for the criminal mind to create weapons from the fact that they now have the secrets which I have kept for so long.

If a competitor's product falls within the scope of any of these claims then, on the face of it, this is an infringement of the patent.

Now let's face reality – thousands of patents are being broken every day – and they can't be stopped – if someone wants to steal your product they will use every means to do so, and if you could bring them to court, what they make per hour on this technology would not worry them about court finds which would be equal to children's pocket money in relation to the whole, just another major issue is that the cost to bring them to court is not covered by the court award, thus you are out of pocket and they are smiling all the way to the bank; which is far too often the case.

However, the possession of granted patent duly examined and issued by the Patent Office does not guarantee that it is a valid patent as it is open to third parties to say that the patent is invalid, for example because the invention is not new.

207: ***PATENTS – OWNERSHIP:***

If an inventor makes an invention then it is he / she who are primarily entitled to apply for a patent.

However if he / she is employed in the making of the invention was part of his / her job; then his / hers employers are automatically entitled to the invention and to make the application.

If the invention is later determined to be of outstanding benefit he / she may claim compensation.

However employees who are not employed to invent, or who are working well outside their normal remit may well own the invention themselves, irrespective of any provision in their contracts of employment to the contrary.

It should also be recognised that a director is not necessarily an employee of his company although he may hold any patent that ensues on trust for the company; all these points I must evaluate for the safety of the technology; as I have so often experienced the results of peoples greed.

208: ***PATENTS – PROCEDURES:***

An application for a patent must include a detailed specification describing the invention and explaining in sufficient detail how it can be carried out and also containing the claims.

The drafting of such a specification and claims is a specialised task undertaken by registered patent agents, most of whom are members of the Chartered Institute of Patent Agents.

They will also attend to the subsequent prosecution of the patent.

The filing of a patent does not give the applicant any protection as such.

The application has to be formally examined by the Patent Office (to see that it appears to be novel and involves some inventive step) and it is only after meeting any objection raised by the Examiner and after the grant of the patent that any monopoly is acquired.

The initial application (and any corresponding foreign applications, which have to be filed within 12 months) remains secret until published by the Patent Office, normally 18 months from the filing date.

I feel that this is enough to show that I do understand about patents and why I reject such an idea for this technology; to give the world the secrets is like handing an H-bomb to a terrorists to use.

This document has been released to the general public by the authority of:



Prof. John Roy Robert Searl: Head of Research and Development Tomorrow's Energy and Transportation Systems.

I must agree that since I gave the ok to release details about this technology the impact has been surprising,

How strange it is when people see the amount of equipment being purchase for this work, think that they can make that S-E-G at home, for some unnatural reasons for just a dollar or so, by buying magnets at their local shop – what has happen to our education at schools?

Don't they teach basics any longer; or is it only how to use a computer and play computer games these days – I am shocked with what I read – agree I never learnt anything at school – but there was a medical reasons as to why which no one cared about to find out what was wrong.

Just on everything I know was self taught, with just three courses taken through a university late in life.

In my case the medical world let me down, they did not try to find out why I was having fits, or if my hearing was suddenly lost – I guess there are others who have been in the same boat as I and can appreciate what my life has been like medically.

Unfortunate time wait for no man, and so much of the past has now been destroyed.

But I can from memory show what I studied and understood back there in time from which this technology grew.

For the benefits of those young men and women who shortly will move up into universities, this document will show you what I actually studied which played a great part in the electronics of this work.

209:

DOC-SISRC-DC-E-1.
DATE: 17th February 1956.
EDITION; First.



MORTIMER – READING – BERKSHIRE – ENGLAND.

LOCATION : Headquarters – Mortimer – Berkshire – England.
DIVISION : Manned Flight.
SUBJECT : D. C. Electronics.
AUTHOR : John Roy Robert Searl.
STATUS : Superintend of Documents UK.

COMPOSITION OF MATTER:

Controlling the behaviour of electrons is what electronics is all about.

This includes: the Searl Effect generator and the Inverse-Gravity-Vehicle

Therefore, an understanding of the electrons is vitally important to an understanding of electronic fundamentals; which I must admit appears to be greatly missing in much of the e mails that I receive, sadly to state.

Electrons are tiny particles which carry the energy to light out homes, cook our food, and do much of our work; which in my childhood days we never had at the Chestnuts, Thorndon, Suffolk, such energy system for help, you youngest have no idea what life was like, you would not want to experience such living today. You take energy for granted, beware that may yet change.

To understand what an electron is, I must investigate the make-up of matter.

Matter is generally described as anything which has weight and occupies space.

Thus, the Earth and everything on it is classified as matter; that includes you and me regardless in the domain of reality.

As I have stated before: that matter exists in three different forms which the law of the squares states.

- 1) *Solid.*
- 2) *Liquid.*
- 3) *Gas.*

Examples of solid matter are Gold Au 79, sand and wood.

Some liquid examples are water, milk and gasoline.

Helium He 2, Hydrogen H 1, and Oxygen o 8 are samples of gas forms of matters.

This is precisely what the law of the squares informed me turns out precisely correct.

The law of the squares also states that there are two states in matter – does that also hold true?

210: ***ELEMENTS AND COMPOUNDS:***

The basic building materials from which all matter is constructed including you and me are called elements.

Hence, all matter is composed of elements.

Some examples of elements are Iron Fe 26, Carbon C 6, Hydrogen H 1, and Gold Au 79, just over one hundred elements are presently known.

Of these, only 92 occur in nature.

These are called natural elements.

Figure 18.1A lists the names of the 92 natural elements.

In addition, there are about a dozen man-made elements.

These are shown in Figure 16.1B, on the next page.

Remember that we are looking at 1956 time block, not 2008 time block.

Also remember that I am teaching myself this data, not at a night school or even a day school.

As I look around you, it becomes obvious that there are many more types of matter, like you and me then there are elements.

For example, substances like salt, steel, water, and protein do not appear in the list of elements.

The reason for this is that these substances are not elements.

Instead, they are called compounds.

A compound is a substance which is composed of two or more elements; thus the law of the squares is correct again.

THE NATURAL ELEMENTS

Atomic Number	Name	Symbol	Atomic Number	Name	Symbol	Atomic Number	Name	Symbol
1	Hydrogen	H	32	Germanium	Ge	63	Europium	Eu
2	Helium	He	33	Arsenic	As	64	Gadolinium	Gd
3	Lithium	Li	34	Selenium	Se	65	Terbium	Tb
4	Beryllium	Be	35	Bromine	Br	66	Dysprosium	Dy
5	Boron	B	36	Krypton	Kr	67	Holmium	Ho
6	Carbon	C	37	Rubidium	Rb	68	Erbium	Er
7	Nitrogen	N	38	Strontium	Sr	69	Thulium	Tm
8	Oxygen	O	39	Yttrium	Y	70	Ytterbium	Yb
9	Fluorine	F	40	Zirconium	Zr	71	Lutetium	Lu
10	Neon	Ne	41	Niobium	Nb	72	Hafnium	Hf
11	Sodium	Na	42	Molybdenum	Mo	73	Tantalum	Ta
12	Magnesium	Mg	43	Technetium	Tc	74	Tungsten	W
13	Aluminum	Al	44	Ruthenium	Ru	75	Rhenium	Re
14	Silicon	Si	45	Rhodium	Rh	76	Osmium	Os
15	Phosphorus	P	46	Palladium	Pd	77	Iridium	Ir
16	Sulfur	S	47	Silver	Ag	78	Platinum	Pt
17	Chlorine	Cl	48	Cadmium	Cd	79	Gold	Au
18	Argon	Ar	49	Indium	In	80	Mercury	Hg
19	Potassium	K	50	Tin	Sn	81	Thallium	Tl
20	Calcium	Ca	51	Antimony	Sb	82	Lead	Pb
21	Scandium	Sc	52	Tellurium	Te	83	Bismuth	Bi
22	Titanium	Ti	53	Iodine	I	84	Polonium	Po
23	Vanadium	V	54	Xenon	Xe	85	Astatine	At
24	Chromium	Cr	55	Cesium	Cs	86	Radon	Rn
25	Manganese	Mn	56	Barium	Ba	87	Francium	Fr
26	Iron	Fe	57	Lanthanum	La	88	Radium	Ra
27	Cobalt	Co	58	Cerium	Ce	89	Actinium	Ac
28	Nickel	Ni	59	Praseodymium	Pr	90	Thorium	Th
29	Copper	Cu	60	Neodymium	Nd	91	Protactinium	Pa
30	Zinc	Zn	61	Promethium	Pm	92	Uranium	U
31	Gallium	Ga	62	Samarium	Sm			

A

THE ARTIFICIAL ELEMENTS

Atomic Number	Name	Symbol	Atomic Number	Name	Symbol	Atomic Number	Name	Symbol
93	Neptunium	Np	97	Berkelium	Bk	101	Mendelevium	Mv
94	Plutonium	Pu	98	Californium	Cf	102	Nobelium	No
95	Americium	Am	99	Einsteinium	Es	103	Lawrencium	Lr
96	Curium	Cm	100	Fermium	Fm	104	Rutherfordium	Rf

B

Figure 16-1A + 1B: SHOWS THE LIST AS I UNDERSTOOD THEM, SO LONG AGO.

Just as letters of the alphabet can be arranged in various combinations to form millions of different words, the elements can be arranged in various combinations to form millions of different compounds.

Like you and me; indirectly no different than the ground upon which we stand, I know that you want to think that you are something special, that is true in a way regardless of the reality.

For example, water is a compound which is made up of the elements hydrogen H 1, and oxygen O 8.

On the other hand, sugar is composed of hydrogen H. 1. Carbon C. 6, and oxygen O. 8 while salt is composed of sodium Na. 11 and chlorine Cl. 17.

211: To better understanding how the compound is related to its elements.

Let me investigate the structure of a compound with which we are all familiar called water.

Let's suppose that I divide a drop of water into two parts.

Next, supposed that I divide each part again.

After a few dozen divisions, I have a drop so small that it can be seen only with a microscope.

If I could divide it even further into smaller and smaller particles, I would eventually get a particle so small that it could not be divided further and still is water.

This smallest particle of water which still retains the characteristics of water is called a molecule.

The water molecule can be broken into still smaller pieces but the pieces will not be water.

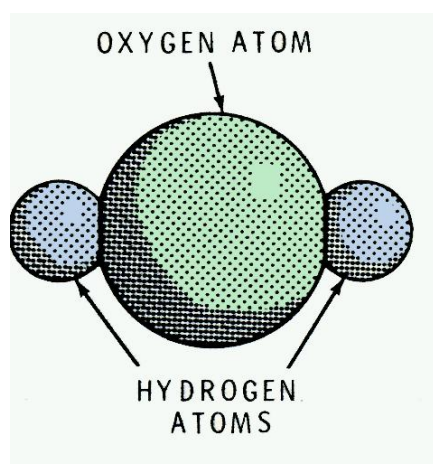
Thus, if I break up the water molecule, I find that the pieces are the elements termed Hydrogen H 1 and Oxygen O 8.

212: **ATOMS:**

The smallest particle to which an element can be reduced is called an Atom.

Molecules are made up of atoms which are bound together.

The water Molecule is shown in Figure 16.2 as three atoms.



The two smaller atoms represent hydrogen while the large one represents Oxygen.

Therefore, a molecule of water consists of two atoms of Hydrogen (H.1) and one atom of Oxygen (O.8).

This is the reasons that the chemical formula for water is H₂O.

Figure 16.2: The water molecule.

Strange, that two elements which burns so easy, can actually be use to drink, by all living things regardless of what design; if this is possible, and believe me we all know that it is possible as we do it all the time; then who has the rights to state that the S.E.G. is impossible?

213: **ELECTRONS, PROTONS AND NEUTRONS:**

As small as the atom is, it can be broken up into even smaller particles.

If I investigate the structure of the atom, I find that it is composed of three elementary particles; again the law of the squares is confirmed as precise.

These particles are called *electrons, protons*, and *neutrons*.

These are the three basic building blocks which make up all the atoms and, therefore, all matter, including the Searl effect generator and the Inverse-Gravity-Vehicle.

Electrons, Protons, and *Neutrons* have very different characteristics.

However, as far as it is known to me, all *Electrons* are exactly alike.

By the same token, all *Protons* are exactly alike.

And finally, all *Neutrons* are exactly alike.

214: **BOHR MODEL OF THE ATOM:**

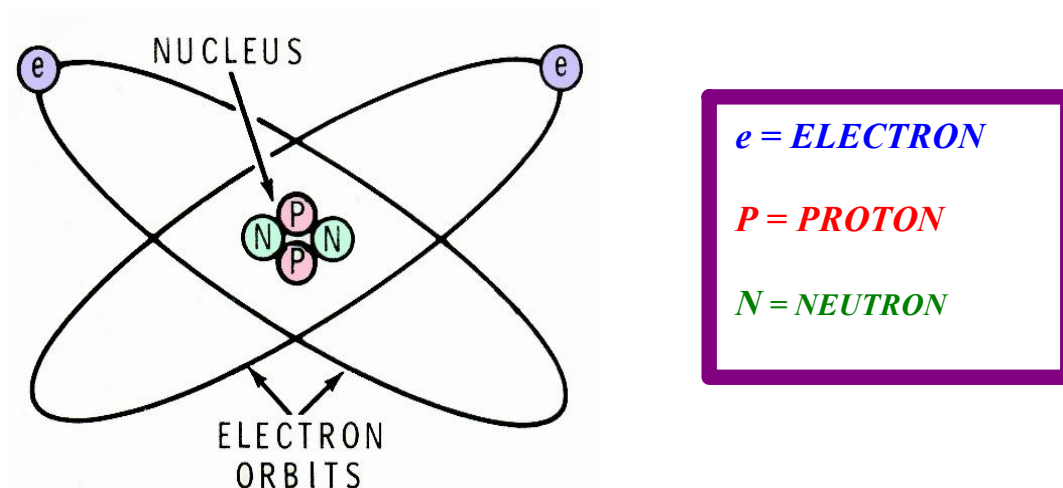


FIGURE 16.3 Bohr model of the Helium He.2. Atom.

Figure 16.3 shows how *electrons, protons*, and *neutrons* are combined to form an atom.

This particular one is a helium He.2. Atom.

Two *protons* and two *neutrons* are bunched together near the center of the atom.

The center part of the atom which is composed of *protons* and *neutrons* is called the *nucleus*.

Depending on the type of atom, the *nucleus* will contain from one to about 100 *protons*.

Also, in all atoms except hydrogen (H.1), the *nucleus* contains *neutrons*.

The *neutrons* and *protons* have approximately the same weight and size.

The overall weight of the atom is determined primarily by the number of **protons** and **neutrons** in the **nucleus**.

215: Rotating around the **nucleus** are the **electrons**.

Notice that the helium (He 2) atom has two **electrons**.

The **electrons** are extremely light and they travel at fantastic speeds.

The atom can be compared to the solar system with the **nucleus** representing the Sun and the **electrons** representing the planets.

It is interesting to note that to my knowledge no one has ever seen an atom because of its small size.

Thus, any picture of the atom must be based on assumptions rather than actual observation.

Figure 16.3 represents a very simple picture of the atom based on these assumptions.

Today, much more complex models of the atom have been proposed.

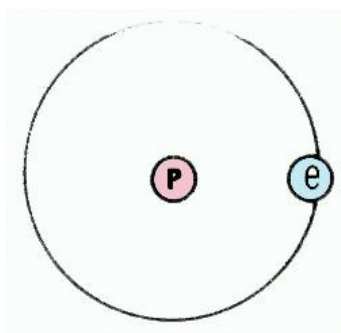
However, all these models have several things in common.

Just like the Searl Effect generator (S-E-G), they all assume that the basic structure is that **electrons** are orbiting about a **nucleus** which is composed largely of **protons** and **neutrons**, like roller sets acting like **electrons** orbiting the plate being its **nucleus**.

Thus, the model shown in Figure 16.3 is adequate for my purposes even though it may be somewhat simplified.

This model of the atom is called the Bohr model after the man who proposed it.

216: **DIFFERENCE BETWEEN ELEMENTS:**



This first is Hydrogen (H.1). It consists of a single **electron** orbiting a **nucleus** which is composed of a single **proton**.

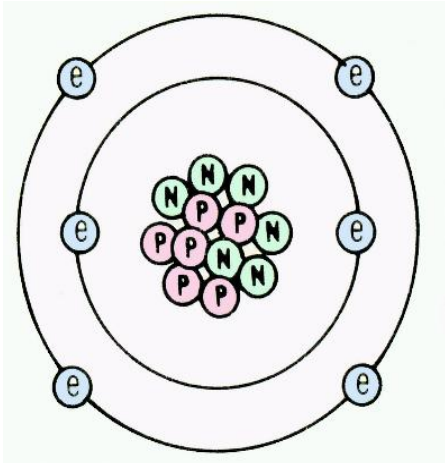
This is the only atom which does not contain a **neutron**. Because of the simple structure of its atom, hydrogen (H.1) is the lightest of all elements.

Figure 16.4 shows the Bohr model of three different atoms.

HYDROGEN ATOM (H.1): (ONE **ELECTRON** ONE **PROTON**).

Impossible for anyone to even think of inventing an S-E-G: unless you have some input from which one can evaluate changes to its structure to improve its usefulness to this planet as a whole.

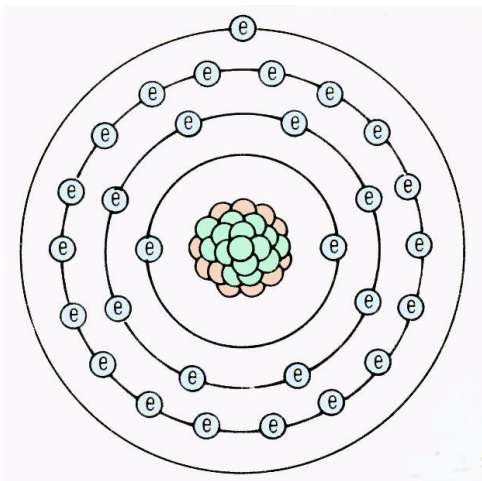
Change often comes when the mind instead of the eyes see things which could improve what you now use and advance its capabilities to a higher level.



This is the Bohr model of the carbon (C.6) atom.

It contains 6 *electrons* orbiting a *nucleus* of 6 *protons* and 6 *neutrons*.

Figure 16.4 Carbon (C.6) Atom: 6 *electrons* – 6 *protons* – 6 *neutrons*



Finally the Copper (Cu.29) atom is shown.

It contains 29 *electrons* and a *nucleus* composed of 29 *protons* and 35 *neutrons*.

The difference between atoms is the number of *electrons*, *protons*, and *neutrons* that they have.

Figure 16.4. Copper (Cu.29) atom: (29 *electrons* – 29 *protons* – 35 *neutrons*).

Although I have not shown it here in Figure 16.4, to my knowledge the most complex atom found in nature is the uranium (U.92) atom.

It consists of 92 *electrons*, 92 *protons* and 146 *neutrons*.

As you may have guessed; the differences between the various elements is that each is made up of atoms which contain a unique number of *electrons*, *protons*, and *neutrons*.

Since there are only 92 natural elements on planet Earth to my understanding, there are only 92 different types of atoms found in nature; that relates to planet Earth at this moment in time.

The simplest is Hydrogen (H.1) with a single *proton*; the most complex is uranium with 92 *protons*.

217: **THE BALANCED ATOM:**

In the examples shown in this book, you may have noticed that the number of *electrons* is always equal to the number of *protons*.

This is normally true of any atom.

When this is the case, the atom is said to be in its normal, balance, or neutral state.

As I shall show you later, that this state can be upset by an external force.

However, for the time being I shall normally think of the atom is containing equal number of *electrons* and *protons*, and when it don't you got yourself an S-E-G.

Take notice that somewhere in this part I shall present for you some questions to answer, so read what I state carefully, so that you understand what is being said, and then you will have no problem in answering those questions.

This document has been release to the general public by the authority of:



***Prof. John Roy Robert Searl: Head of research and Development.
Division: Tomorrows energy and transportation systems.***

218: Today, Tuesday February 26th 2008; I received notice that Bill Sherwood had passed away, sadly to say that a very good friend indeed, who in the pass gave me so mush time and effort with his wife Rhoda to help me in the 60s with the copying of my newsletters and posting them out to 2,000 members and help to raise funds to help me with the demo one project.



To my right is Bill and to my left is Rhoda at their home – gone but never forgotten.

To my understanding of their objectives in life was that their devotion was to prove the truth and assist those who were trying to help the planet to recover.

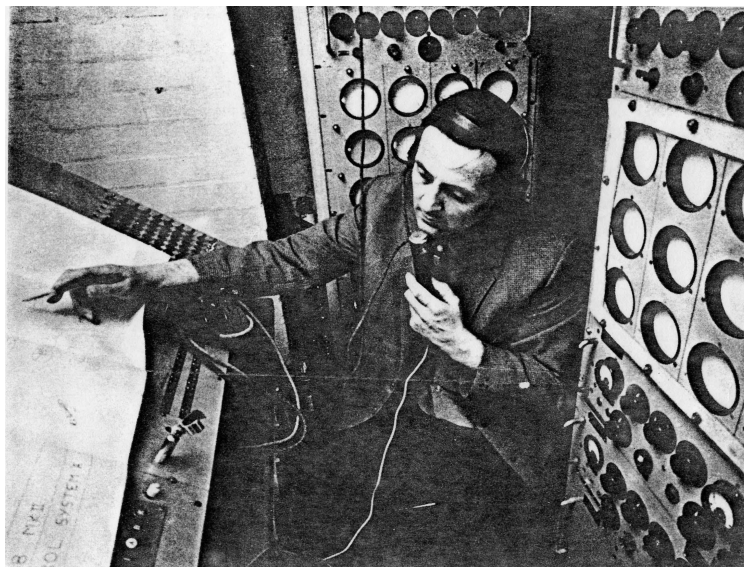
Bill gave money to Rev. George Nicholson to see that I brought some shoes as he knew if he gave me that money it would go on the project, and not on my self, as he noticed that my shoes did not have any bottoms in them and were tied on with string.

He also gave Rev George Nicholson money for the wife to have a hair prem. They also brought gifts for the children – that was the kind of people they were, *human beings*, you never ask them for help but they gave without question; they never want to take or own but to give; the type that you cannot forget.

They will be greatly missed by many who they helped over the years.

219:

*DOC-SISRC-MFD-FD-1.
DATE: October 26th 1968.
EDITION: First.*



MORTIMER – READING-BERKSHIRE-ENGLAND.

LOACATION** : **Headquarters – Mortimer – Berkshire – England.
DIVISION** : **Manned Flight.
SUBJECT** : **Civil flight operations of I-G-V.
AUTHOR** : **John Roy Robert Searl
STATUS** : **Head of research and development.

At the board meeting, I presented my plans as to which cities should be covered in a commercial operation of the Inverse-Gravity-Vehicle as a passenger or freight service.

In this first block I shall cover the letter A to which these cities will be known by a three letter code as follows:

A.
AAA Anaa: Tuamotu Island.
AAB Arrabury: Queensland, Australia.
AAC Al Arish: Egypt.
223.

AAE	Annaba,	Algeria
AAK	Aranuka,	Kiribati
AAL	Aalborg,	Denmark
AAO	Anaco,	Venezuela
AAR	Aarhus,	Denmark
AAU	Asau,	Samoa
AAV	Alah,	Philippines
AAZ	Al Ghaydah,	Dem Rep Yemen

ABE	Allentown,	Pennsylvania, USA
ABF	Abaiang,	Kiribati
ABH	Alpha,	Queensland, Australia
ABI	Abilene-Municipal Apt.	Texas, USA
ABJ	Abidjan,	Ivory Coast
ABK	Kabri Dar,	Ethiopia
ABL	Ambler,	Alaska, USA
ABM	Bamaga,	Queensland, Australia
ABQ	Albuquerque,	New Mexico, USA
ABR	Aberdeen,	South Dakota, USA
ABS	Abu Simbel,	Egypt
ABT	Al-Baha,	Saudi Arabia
ABU	Atambua,	Indonesia
ABV	Abuja,	Nigeria
ABX	Albury,	New South Wales, Australia
ABY	Albany-Dougherty co. APT.	Georgia, USA
ABZ	Aberdeen,	Scotland, UK

ACA	Acapulco,	Mexico
ACC	Accra,	Ghana
ACD	Acandi,	Colombia
ACE	Lanzarote,	Canary Island
ACI	Alderney,	UK
ACK	Nantucket,	Massachusetts, USA
ACT	Waco-Municipal Apt.	Texas, USA
ACV	Arcata,	California, USA
ACY	Atlantic City-Pomona Fd.	New Jersey, USA

ADA	Adana,	Turkey
ADD	Addis Ababa,	Ethiopia
ADE	Aden,	Dem Rep Yemen
ADK	Adak Island,	Alaska, USA
ADL	Adelaide,	South Australia
ADQ	Kodiak-kodiak Apt.	Alaska, USA
ADZ	San Andres Island,	Colombia

AEA	Abemama Atoll,	Kiribati
AEH	Abecher,	Chad
AEO	Aioun Atrouss,	Mauritania
AEP	Buenos Aires-J Newbery.	
AER	Sochi,	USSR
AES	Aalesund,	Norway
AEY	Akureyri,	Iceland

AFA	San Rafael,	Argentina
AGA	Agadir,	Morocco
AGE	Wangerooge,	GFR
AGF	Agen,	France
AGG	Angoram,	Papua New Guinea
AGH	Helsingborg-Angelholm,	Sweden
AGJ	Aguni,	Japan
AGL	Wanigela,	Papua New Guinea
AGN	Angoon,	Alaska, USA
AGP	Malaga,	Spain
AGR	Agra,	India
AGS	Augusta-Bush,	Georgia, USA
AGU	Aguascalientes,	Mexico
AGV	Acarigua,	Venezuela
AGZ	Aggeneys,	South Africa.
AHB	Abha,	Saudi Arabia
AHI	Amahai,	Indonesia
AHN	Athens,	Georgia, USA
AHO	Alghero,	Italy
AHU	Al Hoceima,	Morocco
AIA	Alliance,	Nebraska, USA
AIE	Alome,	Papua New Guinea
AIN	Wainwright,	Alaska, USA
AIS	Arorae Island,	Kiribati
AIT	Aitutaki,	Cook Island
AIU	Atiu Island,	Cook Island
AIY	Atlantic City-Bader Fld	New Jersey, USA
AIZ	Kaiser/l Ozark,	Missouri. USA
AJA	Ajaccio,	France
AJF	Al-jouf,	Saudi Arabia
AJN	Anjouan,	Comoros
AJO	Aljouf,	Yemen
AJU	Aracaju,	South East Brazil
AJY	Agades,	Niger
AKA	Ankang,	P. R. China
AKE	Akieni,	Gabon
AKF	Kufrah,	Libya
AKG	Anguanak,	Papua New Guinea
AKJ	Asahikawa,	Japan
AKK	Akhiok,	Alaska, USA
AKL	Auckland International APT.	New Zealand
AKN	King Salmon,	Alaska, USA
AKP	Anaktuvuk Pass,	Alaska, USA
AKS	Auki,	Solomon Island
AKU	Aksu,	P. R. China
AKY	Akyab,	Burma

ALA	Alma Ata,	USSR
ALB	Albany,	New York, USA
ALC	Alicante,	Spain
ALF	Alta,	Norway
ALG	Algiers,	Algeria
ALH	Albany,	Western Australia
ALJ	Alexander Bay,	South Africa
ALK	Asela,	Ethiopia
ALM	Alamogordo-Municipal AP,	New Mexico USA
ALO	Waterloo,	Lowa, USA
ALP	Aleppo,	Syrian Arab Rep
ALR	Alexandra,	New Zealand
ALS	Alamosa,	Colorado, USA
ALU	Alula,	Somalia
ALV	Andorra La Vella,	AD
ALW	Walla Walla,	Washington, USA
ALY	Alexandria,	Egypt
ALZ	Alitak,	Alaska, USA
AMA	Amarillo-Amarillo APT,	Texas, USA
AMD	Ahmedabad,	India
AMG	Amboin,	Papua New Guinea
AMH	Arba Mintch,	Ethiopia
AMI	Mataram,	Indonesia
AMM	Amman-Queen Alia International,	Jordan
AMP	Ampanihy,	Madagascar
AMQ	Ambon,	Indonesia
AMS	Amsterdam,	Netherlands
AMU	Amanab,	Papua New Guinea
AMY	Ambatomainty,	MG

ANB	Anniston-Municipal,	Alabama, USA
ANC	Anchorage International APT,	Alaska, USA
AND	Anderson,	South Carolina, USA
ANF	Antofagasta,	Chile
ANG	Angouleme,	France
ANH	Anuha Island	Solomon Island
ANI	Aniak,	Alaska, USA
ANJ	Zanaga,	Congo
ANM	Antalaha,	Magagascar
ANR	Antwerp,	Belgium
ANU	Antigua,	Leeward Island
ANV	Anvik,	Alaska, USA
ANX	Andenes,	Norway

AOI	Ancona,	Italy
AOJ	Aomori,	Japan
AOK	Karpathos,	Greece
AOL	Paso De Los Libres,	ARG
AOO	Altoona,	Pennsylvania, USA
AOR	Alor Setar,	Malaysia
AOS	Amook,	Alaska, USA

APF	Naples,	Florida, USA
APK	Apataki,	Tuamotu Island
APL	Nampula,	Mozambique
APN	Alpena,	Michigan, USA
APO	Apartado,	Colombia
APW	Apia-Faleolo APT.	Samoa
APZ	Zapala,	Argentina

AQI	Qaisumah,	Saudi Arabia
AQJ	Aqaba,	Jordan
AQP	Arequipa,	Peru

ARC	Arctic Village.	Alaska, USA
ARD	Alor Island,	Indonesia
ARI	Arica,	Chile
ARM	Armidale,	New South Wales
ARN	Stockholm-Arlanda APT.	Sweden
ARP	Aragip,	Papua New Guinea
ARR	Alto Rio Senguerr,	AR.
ARS	Aragarcas,	Goiás, Brazil
ART	Watertown,	New York, USA
ARW	Arad,	Romania
ARZ	N'Zeto,	Angola

ASA	Assab,	Ethiopia
ASB	Ashkhabad,	USSR
ASD	Andros Town,	Bahamas
ASE	Aspen,	Colorado, USA
ASG	Ashburton,	New Zealand
ASJ	Amami o Shima,	Japan
ASK	Yamoussoukro,	IC
ASM	Asmara,	Ethiopia
ASO	Asosa,	Ethiopia
ASP	Alice Springs,	Northern Territory, Australia
ASR	Kayseri,	Turkey
ASU	Asuncion,	Paraguay
ASW	Aswan,	Egypt
ASX	Ashland,	Wisconsin, USA

ATB	Atbara,	Sudan
ATC	Arthur's Town,	Bahamas
ATD	Atoifi,	Solomon Island
ATE	Antlers,	Oklahoma, USA
ATH	Athens,	Greece
ATI	Artigas,	Uruguay
ATJ	Antsirabe,	Madagascar
ATK	Atoasuk,	Alaska, USA
ATL	Atlanta-w Hartsfield,	Georgia, USA
ATM	Altamira,	Pará, Brazil
ATN	Namatanai,	Papua N. G.
ATP	Aitape-Airstrip,	Papua NG

ATQ	Amritsar,	India
ART	Atar,	Mauritania
ATT	Atmautluak,	Alaska, USA
ATW	Appleton,	Wisconsin, USA
ATY	Watertown,	South Dakota, USA

AUA	Aruba,	Neth Antilles
AUC	Arauca,	Colombia.
AUG	Augusta,	Maine, USA
AUH	Abu Dhabi,	United Arab Emirates
AUI	Aua Island,	Papua New Guinea
AUJ	Ambunti,	Papua New Guinea
AUK	Alakanuk,	Alaska, USA
AUO	Auburn,	Alabama, USA
AUP	Agaun,	Papua New Guinea
AUQ	Atuona,	Marquesas Island
AUR	Aurillac,	France
AUS	Austin-R M Municipal,	Texas, USA
AUU	Aurukun Mission,	Queensland, Australia
AUY	Aneityum,	Vanuatu

AVL	Asheville,	North Carolina, USA
AVN	Avignon,	France
AVP	Wilkes-B-Scranton INT,	Pennsylvania, USA
AVU	Avu Avu,	Solomon Island
AVW	Tucson-Avar Valley,	Arizona, USA
AVX	Catalina Island	Avalon Bay, California, USA

AWA	Awassa,	Ethiopia
AWD	Aniwa,	Vanuatu
AWN	Alton Downs,	South Australia, Australia

AXA	Anguilla,	Leeward Island
AXD	Alexandroupolis,	GR
AXK	Ataq,	Dem. Rep. Yemen
AXM	Armenia,	Colombia.
AXN	Alexandria,	Minnesota, USA
AXP	Spring Point,	Bahamas
AXR	Arutua,	Tuamotu Island
AXS	Altus-Municipal PT,	Oklahoma, USA
AXT	Akita,	Japan
AXU	Axum,	Ethiopia

AYP	Ayacucho,	Peru
AYQ	Ayers Rock,	Northern Territory, Australia
AYT	Antalya,	Turkey
AYW	Ayawasl,	Indonesia

AZB	Amazon Bay,	Papua N Guinea
AZD	Yazd,	Iran
AZO	Kalamazoo,	Michigan, USA
AZR	Adrar,	Algeria.

Agree that was a long time ago yet still remains the same today, some places now may no longer exists and by the time the I-G-V comes into service many more places will be under water.

This Document was release to the general public by the authority of:



Prof. John Roy Robert Searl. Head of research and development Manned Flight Division.

220: I have not forgotten all you square lovers, just for you I will attempt to Present Square 12 in the space mode option:

14	132	25	119	96	50	73	71	48	98	11	133
143	1	108	38	61	83	60	86	109	35	122	24
3	141	40	106	59	85	88	58	33	111	136	10
130	16	117	27	74	72	69	75	100	46	21	123
18	128	29	115	66	80	55	89	44	102	7	137
139	5	104	42	91	53	78	68	113	31	126	20
125	19	114	32	77	67	92	54	103	41	140	6
8	138	43	101	56	90	65	79	30	116	17	127
22	124	99	45	70	76	51	93	118	28	129	15
135	9	34	112	87	57	82	64	39	105	4	142
121	23	110	36	81	63	62	84	107	37	144	2
12	134	47	97	52	94	95	49	26	120	13	131

Square = 12

Mode = Space Frame

Total Construction = 144 blocks

Base value = 870

Frequency = 10,440

Group = 2

Level = 2

Shells = 6

Construction:

Shell 1 = 4 blocks

Shell 2 = 12 blocks

Shell 3 = 20 blocks

Shell 4 = 28 blocks

Shell 5 = 36 blocks

Shell 6 = 44 blocks

Corner values:

Shell 1 = 290

Shell 2 = 290

Shell 3 = 290

Shell 4 = 290

Shell 5 = 290

Shell 6 = 290

Shell values:

Shell 1 = 290

Shell 2 = square 1 x 3 = 870

Difference = 580

Shell 3 = Square 1 x 5 = 1450

Difference = 580

Shell 4 = Square 1 x 7 = 2030

Difference = 580

Shell 5 = Square 1 x 9 = 2610

Difference = 580

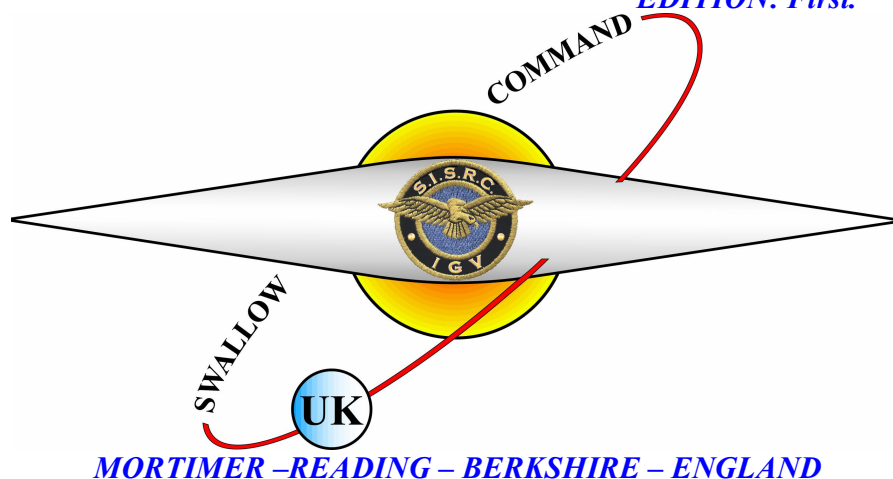
Shell 6 = Square 1 x 11 = 3190

Difference = 580

229.

221:

DOCUMENT-SISRC-ANS-CIF-1
DATE: November 1970.
EDITION: First.



LOCATION : *Headquarters – Mortimer – Berkshire.*
DEPARTMENT : *Animal Studies.*
SUBJECT : *Copper in farming.*
AUTHOR : *John Roy Robert Searl.*
STATUS : *Research in Homo sapiens food chain.*

To meet the food requirements of flight crews and mission staff on long haul missions; food standards shall have to be improved; and whatever it takes to reach such standards must be implemented.

Yes, I bet you never even gave one minute attention to such details as food requirements and liquid which would be needed per mission.

222: ***COPPER IN FARMING:***

ANIMAL NUTRITION:

Copper is an indispensable constituent of all living tissues.

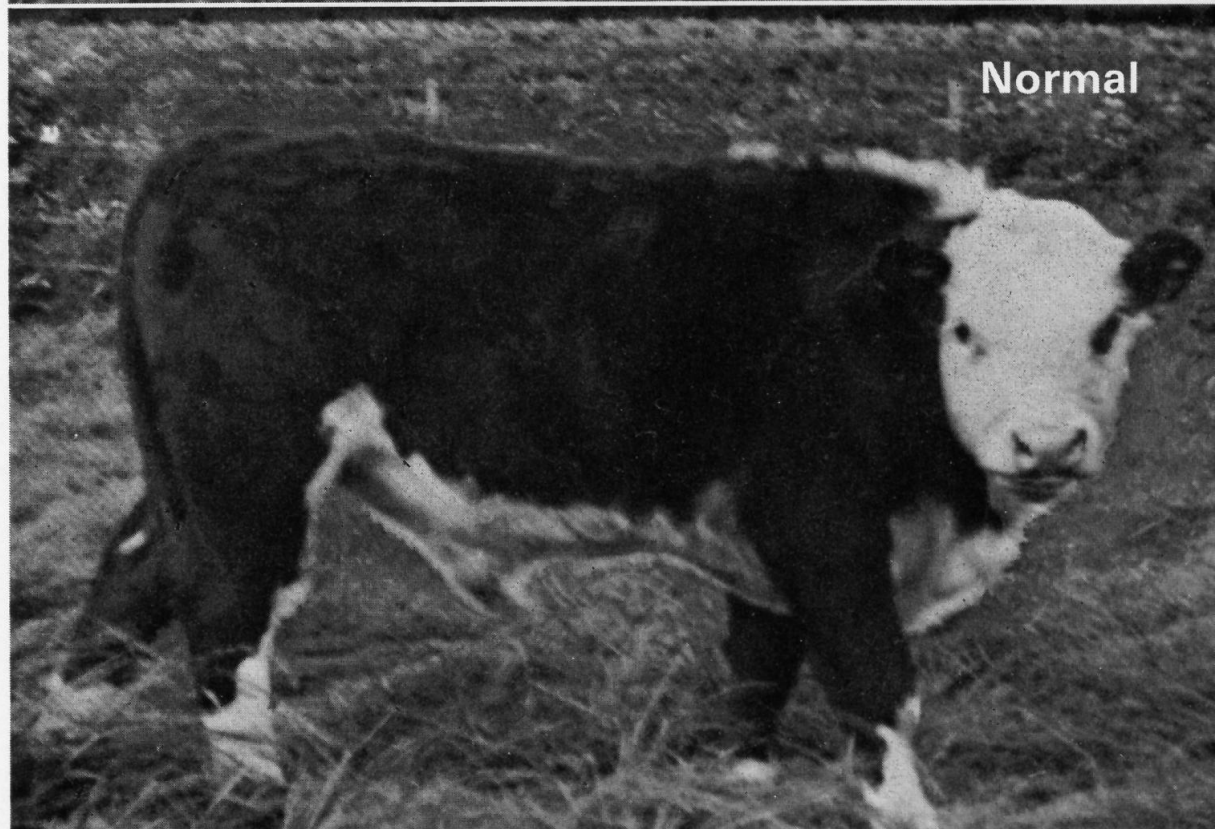
It is one of the many elements, found in the cells of plants and animals, which in trace amounts are essential for their normal growth and well being.

In animals it plays a part in the utilization of iron for haemoglobin formation.

An insufficiency of copper in an animal's tissues can occur in two ways; amazing how the law of the squares pop up out of the blue, without warning.

It can be a simple straightforward copper deficiency, brought about by an actual deficiency of the element in the folder, or it can be of a complex type, in which the diet contains the normal amount of copper but some other factor or factors obstruct in some way its assimilation by the animal.

A good example of this is molybdenum, an excess of which depletes the animal's copper reserves and the animal develops copper deficiency symptoms unless given additional copper. Humans are animals too!



A comparison of calves of similar age: showing the effect of copper deficiency.

My concern is why some animals; which also include us fail to meet a standard of healthy appearance, there are I agree, many problems that could be playing a part in the results which are impressed upon our senses.

223: ***SYMPTOMS OF COPPER DEFICIENCY IN ANIMALS:***

To my knowledge, an inadequate amount of copper in an animal's diet manifests itself in a number of ways.

These include:

- 1) *A general unthriftiness;*
- 2) *Retarded growth;*
- 3) *Loss of appetite;*
- 4) *Anaemia;*
- 5) *Diarrhoea.*

The animal has an unhealthy unkempt appearance.

With sheep I notice that the wool may grow straight and straggly.

With cattle the coat is rough, harsh and lacking in luster; the colour of the hair tends to fade just like mine – in black breeds it assumes a rusty red appearance and there is graying around the face and eyes, while red breeds have a dirty yellowish appearance; there is some shedding of hair particularly around the eyes; milk yields drop.

A lack of copper has an adverse effect on the functioning of the ovaries and much evidence has accumulated which points to the necessity of an adequate intake of copper if a high level of fertility is to be achieved in a dairy herd.

I have good reasons to believe that this also applies to the Homo sapiens, who are normally called earthlings by aliens.

A number of diseases are associated with a deficiency of copper either alone or in combination with some other element, such as a deficiency of cobalt or an excess of molybdenum.

One of the early discoveries of copper deficiency in livestock was observed in Holland in 1933, that's was within my first 12 months on planet Earth, when it was found that administering copper sulphate to cattle grazing on copper deficient reclaimed land prevented a disease known as 'lecksucht' (licking disease).

Similar disorders have been observed in copper deficient pastures in the U.S.A., Australia, New Zealand and Great Britain as it was proudly called then, and known variously as 'salt sickness', 'falling disease', 'coast disease', etc.

Among sheep, 'swayback' in lambs in Britain and a similar affliction in Australia and New Zealand known as 'enzootic ataxia' is the results of an insufficiency of copper in the ewe's diet.

224: ***PREVENTATIVE DIAGNOSIS:***

The liver acts as a storehouse for copper.

When diets are deficient in copper, the copper stored in the liver is used until the liver reserves are exhausted to the extent that the liver can no longer provide the blood with all the copper it needs to keep the animal functioning properly, and copper deficiency symptoms appear.

To my understanding: that these symptoms usually begin to appear when liver copper drops below 20 parts per million (ppm).

Copper deficiency can thus be diagnosed by estimating the copper content of either the blood or the liver.

It is now a comparatively simple matter for a veterinary surgeon to take portions of the liver from living animals without causing them undue distress.

The advantage of the liver analysis method of diagnosis is that copper deficiency can be detected long before any change in the blood takes place.

225: ***CORRECTING COPPER DEFICIENCY:***

Among the methods of correcting a copper deficiency in livestock is firstly to rectify a soil deficiency by spraying or spreading copper sulphate or other copper compounds.

To my knowledge: in copper deficiency trials in England calves, from a pasture sprayed during the summer with 5 kilograms of copper sulphate in 1000 litres of water per hectare, had an average weight of 573 kilograms at 30 months compared with an average of only 433 kilograms by the group of calves on the untreated copper deficient pasture.

To my knowledge: in Australia and New Zealand 'swayback' in lambs is being prevented by top dressing copper deficiency pastures, with 5 to 10 kilograms of copper sulphate per hectare, some time before lambing begins.

Other methods to my understanding which includes treatment of the animal by injecting with an organic copper salt; drenching periodically with copper sulphate; incorporating copper sulphate in salt and other mineral licks; or by what is probably the most general and satisfactory method, incorporating copper sulphate along with other minerals and vitamins in the form of carefully blended supplements in the feeding stuffs.

Today, to my knowledge, concentrates fed to a large percentage of livestock, particularly in the more progressive countries of the world, contain some added copper as an insurance against an insufficiency of the element in animal diets, which should include Homo sapiens as well.

226: ***COPPER AS A GROWTH STIMULANT FOR PIGS:***

As observation in the 1940's to my knowledge by Doctor R. Braude of Reading University which I know well as I have taken a course there myself, that pigs in a newly erected piggery were licking certain copper fittings, led to the important discovery that copper had growth promoting properties.

As I understand it; Braude frequently saw pigs fighting for access to the copper rings, which had been fitted in place of steel to prevent rusting.

After a year no rings were left – they had simply been licked away.

To prove that the pigs actually craved for copper, small plates of six different metals:

1) *Aluminum;*

- 2) *Brass;*
- 3) *Copper;*
- 4) *Magnesium;*
- 5) *Nickel;*
- 6) *Tin.*

All were pained alike, were next placed in the pens.



Pigs thrive on a copper-fortified diet.

The pigs soon uncovered first the copper and then the brass (copper-zinc alloy) plates, leaving others untouched.

Braude next replaced the metal plates with six mineral salts, to which he respectively added copper, cobalt, manganese, nickel and zinc as fine powder, but again the pigs were only interested in the lick containing copper.

Pigs were next given a choice of two identical diets except that one contained added copper sulphate.

Here, yet again, thus it was claimed that the pigs preferred the meal which contained copper sulphate and consumed four times as much of it as of the “no-copper” meal.

Ever since Braude’s discovery that pigs craved for copper, scientists all over the globe have been

experimenting with feeding of copper sulphate to growing pigs.

To my understanding; that there has been a carefully controlled trials in a number of countries over the past two decades have now finally established that the inclusion of 250 ppm copper, i.e.0.1% or 1000 ppm copper sulphate (copper sulphate contains 25.0% copper), in the diet of fattening pigs be expected to produce, on average, an increase growth rate of around 10.0% with an improvement in feed conversion of nearly 8.0%.

Looking at another way 1 kilogram of copper sulphate put into one metric ton of meal can result in pigs reaching bacon weight nearly two weeks earlier, with a saving of approximately 25 kilograms of meal.

To my mind this means that for the expenditure of from £0.05 to £0.10 for 300 grams of copper sulphate, it is possible to save up to £0.75 on the feeding cost of a bacon pig.

Today, many, many millions of pigs all over the world are being fed from weaning to slayghter on copper sulphate fortified diets, and that is a fact!

227: ***HOW DOES COPPER SULPHATE PROMOTE GROWTH?***

As I have already stated that the Astronauts and Cosmonauts of Swallow Command shall have the best in food that is possible to produce; and I am determine to research every concept of reaching those goals and this is just one of those research studies that I undertook to evaluate.

Although to my knowledge there are several hypotheses which has been advanced, the precise manner in which copper stimulates growth in pigs has not yet fully been established.

It is of course known that copper has a role in haemoglobin formation and is essential for the proper functioning of certain enzymes but the copper requirements for these purposes are thought not to be much in excess of 10 ppm copper in the diet.

As I understand it, that one explanation, for the growth promoting effects of feeding high levels of copper to pigs, is that it is due to the anthelmintic properties of copper and I am aware that its been suggested that growth is stimulated simply by the copper sulphate, which has long been known as a most efficient vermifuge, controlling the round worms.

I am aware of another explanation which is that the response to copper is due to the action of copper sulphate on the micro-flora in the digestive tract, in a manner similar to antibiotics.

Yes, there is yet another explanation which is that the copper sulphate reacts with the toxic hydrogen sulphide produced in the intestines by certain micro-organisms, thereby promoting growth by removing the poison as insoluble copper sulphide.

To my mind that at this time it does not matter to me whether the real explanation is a combination of all the above prognoses or whether there is a totally different mode of action, the fact appears to suggest that the feeding of high levels of copper sulphate stimulates appetite and results in faster growth and better feed conversion.

228: ***COPPER SULPHATE VERUS ANTIBIOTICS:***

To my knowledge; that in recent year's many trials has been conducted to compare the separate

effects of copper and antibiotics as growth promoters for pigs.

The results in the large majority of trials have shown as I understand it, that copper sulphate to give by far the better response, such results are vital in the effort to get my sums right in such a major objectives as I have in mind.

This coupled with the fact that the cost of copper supplementation is only a fraction of that of antibiotics, has made copper sulphate the more favoured choice as growth promoter by Searl International Space Research Consortium, Swallow Command Division.

Consideration must also be given to possible long term effects, on health, of feeding antibiotics.

229: ***FEED LEVELS FOR PIGS:***

Copper sulphate has over the years shown, by its consistent effect on growth rate gain and feed conversion, that it is a most reliable growth promoter for pigs when fed at the rate of around 1 kilogram per 1000 kilograms of meal.

To my understanding several levels of copper sulphate feeding have been tried, the concentrations varying from 125 ppm copper to 500 ppm copper and higher.

At the 125 ppm copper level the response obtained has only been about half that obtained at the 250 ppm copper level.

To my understanding that at the 375 ppm level the response has, on the whole, been a little lower than the 250 ppm copper level, which is now universally accepted as the best concentration to employ having regard to safety and other factors.

I am aware that hundreds of trials have been done with copper sulphate at the 250 ppm copper level over the past 20 years and many million of pigs have been fed with it since, with considerable economic benefit to the farmer.

Nevertheless, I also question a major issue that by forcing growth; if certain taste ingredients are lost by not having enough time to develop them.

Based upon my studies of vegetables from market places such food do not have much or if any taste to them because they have been picked far too soon, same with plums – the real goodness is missing from them.

Of course the growers want to get to marketplace before others do to make a profit quick. But Searl International Space Research Consortium is not about beating others to the marketplace; it's about quality, perfection in its operations and without doubt that the food chain needed to power the space crews are of the highest standards possible to obtain, and that means vegetables must have time to complete perfection in taste and looks, the task of preventing insect attacks will be an on going research program, there is an answer, that answer must be found.

230: ***SAFETY PRECAUTIONS;***

As I understand it; that only when the pig's diet is very low in iron and zinc and very high in calcium, is there any danger of copper toxicity developing.

A high level of calcium in the basal diet will induce zinc deficiency, which in turn, along with a deficiency of iron, favours the development of copper toxicity.

Where this occurs, correcting these factors will greatly extend the safety of copper supplementation.

Based upon my knowledge upon experiments at the Royal Research Institute, Aberdeen, have shown that, while in the absence of iron and zinc supplements 425 ppm copper produced copper toxicity symptoms, the simultaneous addition of iron and zinc eliminated all signs of toxicity.

As I understand it that under normal conditions, toxic symptoms generally only begin manifesting themselves at levels of around 500 ppm copper.

I agree that there is thus a fairly wide margin for errors, to meet most mixing conditions.

Further, copper sulphate has a bitter taste and pigs will tend to refuse a meal containing a toxic dose.

It appears to my mind that copper sulphate has thus a sort of automatic safety device against gross overdosing through errors in mixing.

Because this document covers many issues which are related to Searl International Space Research Consortium requirements of research and development in relation to long term missions in space exploration; of the requirements that the flight crews obtain the best in food; which contains the minimum of bad bacteria and, including as much type 3 fat that is possible to generate within the food chain; is in itself a major task to fulfill.

There has to be an answer to all problems, unfortunately some require much more time to solve than others do.

As I have stated so often that today the conveyor hereinafter termed the Inverse-Gravity-Vehicle is no longer the problem – the problem arrives once we place the Homo sapiens into the equation, and much more so when it's a mix crew.

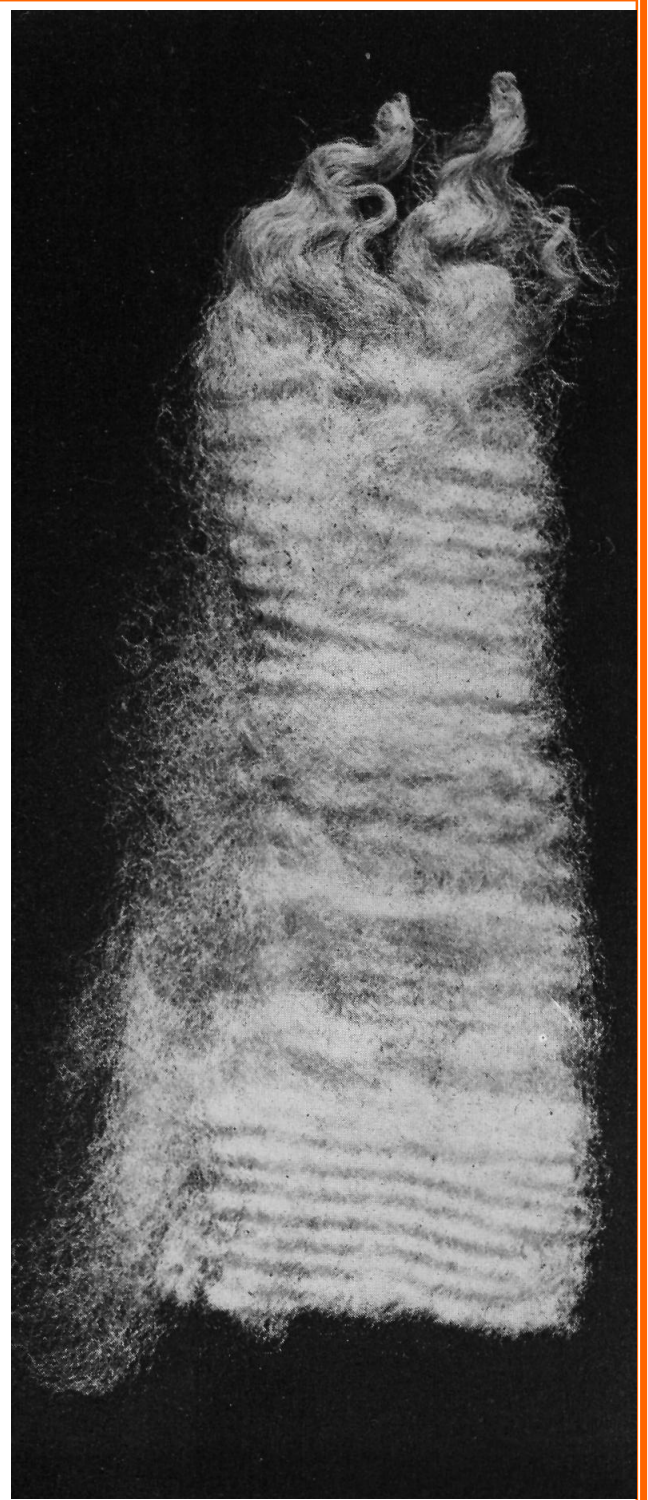
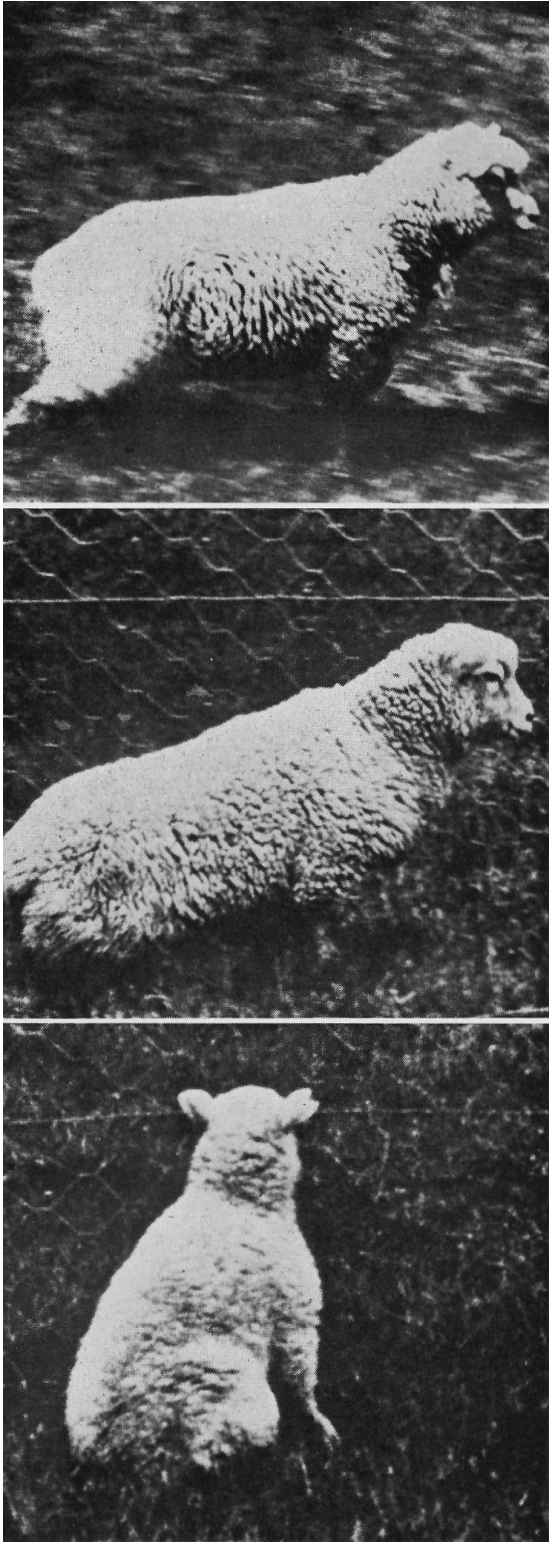
Short term missions: reduces the problems greatly: but Searl International Space Research Consortium objectives are aimed at long term exploration of space for commercial operations – here is where real problems appear.

We all know that Mars has become an interested target for various groups on planet Earth, and I admit so it does for Searl International Space Research Consortium as a first target to aim for to test that the space ship operates perfect under all conditions as I have predicted so many times throughout my books.

Mars contain ancient history which man has no knowledge of, such knowledge is vital to man's future on planet Earth.

Clearly from Searl International Space Research Consortium objectives; the food chain is vital there are no food chains on planet Mars, the mission crews have to take it with them, and that issue alone sets the time factor of any mission, it's not the only factor but alas it is a major one.

There are just a couple of photos I wish to include in this part of the document, before closing it.



Copper deficiency in sheep.

Left: Swayback (enzootic ataxia) in a copper deficient lamb.

Right: Straight "steely" wool from a copper deficient sheep.

Now I trust you are beginning to understand why I am not interested in sport, clearly there is no time for sport interest – saving this planet is far more important to me, as I wish to live.

I will break at this point of this document as it's so long in structure detail.

This document has been released to the general public on the authority of:



***Prof. John Roy Robert Searl: Head of research and development.
Manned Flight Division.***

231: Today, Tuesday 11th March 2008 mission STS-123 Shuttle Endeavour lifted off at NASA Kennedy Space Center, Cape Canaveral, Florida, U,S,A, Crew members were:

- 1: ***Rick Linneham;***
- 2: ***Takao Doi;***
- 3: ***Robert Behnken;***
- 4: ***Mike Foreman;***
- 5: ***Gregory H. Johnson;***
- 6: ***Garrett Reisman;***
- 7: ***Dominic Gorie;***



The Searl International Space Research Consortium wishes them all the success in their program and a safe return home again.

What you readers do not appreciate is the fact that everything that NASA does actually help me in

the long run, saving me millions to undertake similar work. Unfortunate NASA does not now release data direct to people as they did well back upon their operations including maps and slides as I once received from them – the agent who now does the release material has proven to be a disgrace, I have some here to prove it. I must agree they did refund my payment in full.

NASA has done well this year – let hope they will continue to do so throughout the year.

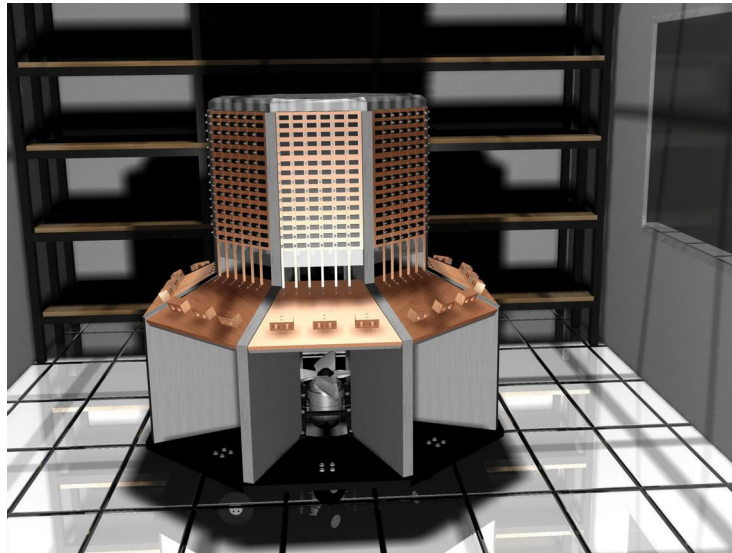
232: Where Searl International Space Research Consortium still struggling to return to full active service, work has reached the point where its has slowed down due to funds being available, and of course here its out of funds and out of space so basically its at full stop, but strange as it may seen each year a slight recovery is achieved from the last robbery.

But what is being recovered are documents of the past which I am releasing on this site for all who never had the chance to see them when they were first released so long ago, to have the chance to see the past as it was.

233:

DOC-SISRC-CA-IF-1
DATE: 1st January 2008.
EDITION: First.





Searl International Space Research Consortium – Thailand.

LOCATION : ***Headquarters – Thailand.***
DIVISION : ***Research and Development.***
PRODUCT : ***Energy and Transportation.***
SUBJECT : ***Comment and Analysis.***
AUTHOR : ***Prof. John Roy Robert Searl.***
STATUS : ***Head of Research and Development.***

Welcome to this report upon the concept and operations of Searl International Space Research Consortium as to its purpose and objectives.

- 234: Searl International Space research consortium is an organization of companies working under Prof. Searl instructions towards a high value, innovative future, which all countries can play a part in the future that is to be, and the sooner they join Searl International Space Research Consortium the lower the cost will be for start up, other wise the cost will increase each year.

Searl International Space Research Consortium main objectives is based on energy and transportation needs, which covers all requirement here on planet Earth and that of commercial space exploration regardless of the mission targets objectives.

The success of this research and development will mean that the energy needed in hospitals can be met and the cost after installation is around zero rated. The results of this success in operation would therefore make more funds available to update its equipment; such as the need to meet the requirements for diagnostic tests.

Rail operations would benefit from the same success power cost after installation would be around zero rate; but would profit by the energy return from all wheels; which are moving can create energy return in the case where wheel based system are in use.

With the present day transportation system massive lost of energy is taking place every minute of the day and what is supposed to be an intelligent educated animal shows absolutely no interest at all in this massive lost.

By keeping on increasing taxes on fuel, is not the intelligent answer to the problem of pollution.

The intelligent answer is simply not to make the pollution, and there is an answer to that problem.

We just need to change our thinking on energy production – that is precisely what the Searl International Space Research Consortium is doing; that is what this book is all about - what we know – how we use what we know; and where our failures are in what we know; which unfortunate is the lack of understanding that which you know – which has proven a dangerous situation which you are now facing; a condition which I have been warning you of since 1946 would occur in my lifetime; unfortunate you knew better than I – but did you?

The evidence is absolute clear that you did not know better than I; for if you did you would not had been in this mess which you are today.

Searl International Space Research Consortium is all about innovative a new future for mankind, one that works with nature and not against nature; one that is peace and love not war and crime.

War and crime is a cancer if not treated will in the end destroy all life on this planet; such disease must be removed by surgery, regardless as to how painful such operations may be – as cancer cannot be tolerated in a human society, that is a fact and if ignore the cost will be extremely high in death rates.

If you really want to kill off millions; let nature do it for you, its far more expert in such actions, and really make a good job of it, unfortunate the remaining ones don't quite appreciate that point.

The slowness of this development has been the space needed, and funding, and of cause today it's still the same problems and regardless of those facts progress still continues in a forward manner to its objective.

The history of the Searl International Space Research Consortium is an interesting one; with its mission to rescue this planet from man made pollution with innovative technology, this company has been doing things its own way for a number of years.

The original company was termed Lunic Enterprises, that was created by 13 pensioners who wanted nothing to do with the tax man, just having fun to see what I could invent – and fun they

were never disappointed in their investment, but as time passed by like water under bridge one by one they died over the years, but my knowledge grew through their support so their efforts were not wasted.

Then the point was reached where the remaining few were not able to support any more research, but my knowledge had reached a point of no return, I had to continue and so I allowed the media to get the news for release to the world, which they sure did at a level to which I had never expected to happen.

Lunic Enterprise wanted to be at the forefront of developing the future technology of flight, and its efforts has continued whenever evil minds allowed it to since.

But perhaps what is more interesting about this company is the way in which it builds its various superlative research and development products organization.

I accept in reality, that Lunic Enterprises was nothing more than a cottage industry that is no disgrace to its function, which proudly I can state exceeded many companies efforts even of today. And NASA is no exception to that statement.

Various groups were set up and Japan played an early support for the work and company name was change by their request from Lunic Enterprises to the present name.

Every state within the USA helped, and help came also from Australia, New Zealand, Germany and the United Kingdom which helped me to reach that high level in 1968, before greed brought that success to an end, and resulted in all help stopped.

Such greed brought to an end my success in 2003 as I was reaching towards the top of the hill, greed this time was unbelievable how it was carried out, and clearly right from the start Martin and Ken had planned it all out, and then they included their backer in the plan to pull it off, then they waited for that moment to stop me and it came in the form of my brother who I had just helped them from having no home by letting him and his wife have a free rent large house which I was working for in this contact while I continue this high rent in this small space, but clearly that house was just a carrot planned by Martin with Balding to get the secret of the magnetizer which you see being developed at the top of the address to this document.

Four times the technology was stopped by greed – and I can understand why people are worried that again that will happen once the new teams know the secret of how to magnetize the materials.

There are no faceless production lines at this moment in time, instead, each product is individually hand crafted through research and development at the new company's facility in Thailand, where a team of people really care about the presentation of their skills and the performance of their products, and shortly to include Israel start up at any moment in time now. Italy I wish them to hang on until the magnetizer is complete and been passed through a massive testing period.

Time and money at this time being: will be our major problem which unfortunate result in the slowing down of progress to the marketplace; do not think it has stopped, no way has it stopped; but I must admit its had to slow down from that massive surge which occurred at the start up.

This is often the case with many new companies, a massive surge forward, then a massive slow down, which idiots think they have won in their efforts to stop the development.

Yes, there are idiots out there who are trying hard to stop this progress, and to some extent have made some in roads sadly to state – but those in roads do not worry us, as progress has now reach a point where the most important part of the technology is almost complete and expected soon to be switch on at a loading of just 50,000 amps as a burn in test, and waveform testing before the full load is applied.

A second magnetizer will be required to be constructed at the cost of \$2million US for the first production line to be assembled – the funds for that progress we see no problems at this time.

As the massive world publicity on the success of the first plate and roller sets will change the thinking of the world about solutions in solving the pollution problem that exists and are increasing rapidly each day – to the Searl Effect Generator as the real solution not a fill gap one.

So what differentiates these products success or failures?

Well to my mind there are two keys to successful manufacture in the world which are on an upward spiral of innovation and manufacturing processes that add value.

The Searl International Space Research Consortium has found its own way to do both; like other

successful companies in other sectors have found their own means to be the same.

So surely we should welcome the rhetoric of the Searl International Space Research Consortium Technology Strategy Board, which is certainly talking the talk of a high value, innovation future for the world manufacture, and indeed putting significant efforts to raise sums of money behind this bluster.

It should be laudable, and I really want to feel like jumping in the air, waving my arms around and shouting “*give the power to the people today*”.

But as I read the comments of the governments of the world I found myself struggling to find substance in their thinking.

It is all very well detailing the problems that all intelligent Homo sapiens understand all too well, but I’d like to hear more than just cryptic hints about the solutions.

To that issue a new company has been formed that only handles the magnetic side of the work, its registration name is Searl Magnetics Ltd. And those who are selected to belong to that section are those who have for years proven their loyalty to me; which at this time are very few members.

This document has been release to the general public by the authority of:



*Prof. John Roy Robert Searl: Head of research and Development.
Tomorrow’s Energy and Transportation Systems.*

This document is one of a number of new reports that will appear in due time.

235: ***DOC-SISRC-CA-IF-1 UPDATE:***

Today March 16th 2008 at 1136 GMT:

I, Prof. John Roy Robert Searl, hereby confirm that the symbol shown below has been given my approval to be employed upon Thailand future fleet of Inverse-Gravity-Vehicles when they go into service.

In it’s appearance upon planet earth shall be accepted as a mark of the success of people who came together in good faith and devoted their time and where possible money as well to bring forth an impossible concept: claim as such by the experts of the day, into the world of reality, not only that but into the world of commercial business in space against all odds.

This project will be an outstanding achievement by the people for the people of planet earth, to that statement there is no alternative option to use – and that will become a fact.

Together we shall succeed and shall over come all our problems of pollution, and survive.



Welcome to Thailand future that is meant to be.

A new window for Thailand is in the conception stage and its birth is progressing extremely well.

Rome was not built in one day, nor did NASA reach the Moon in one day.

The Thai's are intelligent people and can clearly understand that statement that Thai's will not be going to Mars today – but one day they will.

Have faith in all you do and in the end you shall win.

Veni-Vidi-Vici a symbol that Thai's will become proud off in due time.

This ends the update and has been released to the general public by the authority of:

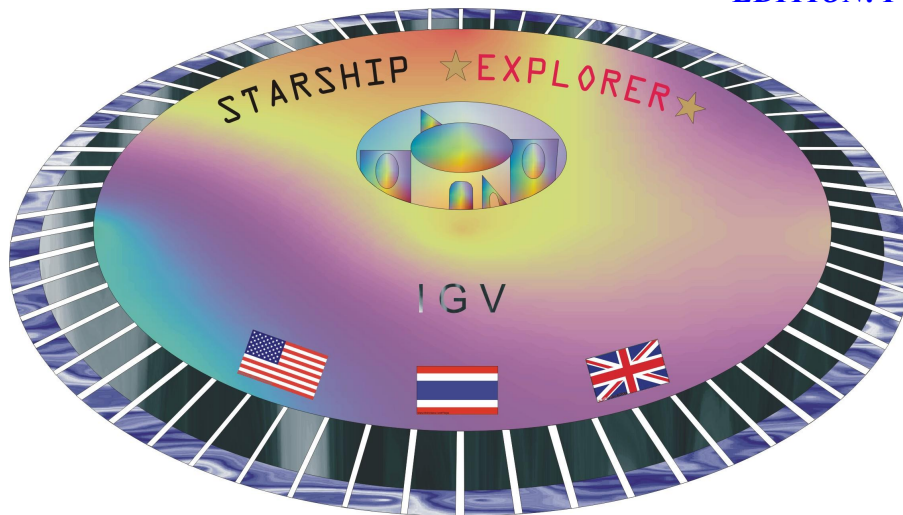


***Prof. John Roy Robert Searl:
Head of the Manned Flight Research and development.***

Please note; that progress continues regardless of evil minds who are trying to stop it; for progress is the tomorrows that are meant to be and cannot be stopped: just delayed but in the end it will become the to-days regardless of the evil ones.

More updates will appear as and when I approve them.

This book shall be something that has never had a match equal to it in facts – in determination and devotion to make changes for the better state of the planet Earth as a whole, that show so much in human efforts to win where others dare not go: and man shall go where no man has ever been that shall become a reality as sure as apples are apples.



GRAHAME PARK ESTATE-LONDON-ENGLAND.

***LOCATION : Headquarters – 13 Blackburn- Grahame Park Estate – London.
DIVISION : Manned Flight Research and Development.
SUBJECT : Diagnostic Tests.
AUTHOR : Prof. John Roy Robert Searl.
STATUS : Head of research and development.***

The Inverse-Gravity-Vehicle is a new concept in flight technology; designed as a carrier for either air or space operations without modification to its structure, in either passenger or freight mode.

In this particular document it relates to the version for deep space penetration research exploration operations.

As such, most missions will be long term programs of years – not days or weeks, and the latest's news that a strain of super bug may be new HIV causes concern about the welfare of the crews on long missions.

To that end, Starship Explorer shall have installed one of the best sick bays and equipment for diagnostic tests requirements that any present day ship has on board,

This document aim is to present in basic form what I feel is vital to have covered on all our mission fleets as they come on active duty cycles.

237: *FOREWARD:*

Nurses who will be part of the flight team on Star Ship Explorer will always play a vital role in providing information to the patient about the diagnostic tests they will be undergoing.

Evidence suggests from my own experience as a nurse on the wards they are the best health care professional best able to explain any procedures that will be involved to any crew member who are taken sick and to provide reassurance to that patient relatives by ship communication system as soon as possible to planet Earth.

Clearly Swallow Command have now entered the age of nurse practitioners, nurse consultants and extended roles.

Nurses are not only providing information and reassurance; they will also be making decisions about which diagnostic tests are appropriate for their patient/s and should be able to carry out many of the test procedures themselves if the doctor/s has been taken sick on flight.

This will reduce the amount of training which Commanders and co-pilots would otherwise need to learn, but they still will need to be able to manage first aide in the event that sickness knocks out a number of the flight team.

All possible conditions must be considered and evaluated as to the best approach to solve such problems in the shortest time factor, bearing in mind that the crews have no other means of help from outside, other then them.

Within this document I shall attempt to present my opinion of the needs which should be considered for S. S. Explorer; by explaining what the:

- 1: Diagnostic test is;**
- 2: Understand when the test is appropriate;**
- 3: Interpret the results against normal values.**

238: **COMPUTERISED TOMOGRAPHY:**

CT SCANNING; WHAT IS IT?

Computerised tomography (CT) uses X-rays to generate an image of parts of the body.

While traditional X-rays use a single X-ray beam, CT scans provide more detail by sending multiple beams from different angles, and using computer to interpret them.

239: **HOW DOES IT WORK?**

CT scanners use electronic sensors to measure the intensity of X-rays reaching them – this depends on the density of tissue they pass through.

They convert these measurements into a two-dimensional cross-section image that can be coloured to enhance its information.

Helical CT acquires the image continuously, giving a three-dimensional image.

This can be manipulated to view tissues from different perspectives.

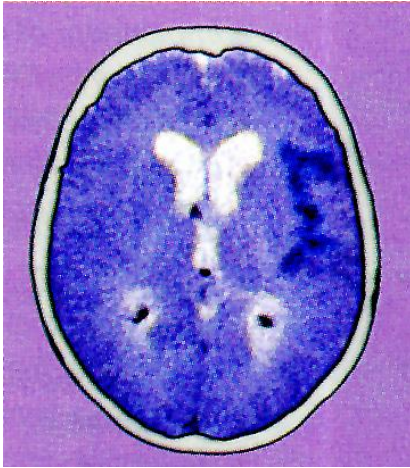
240: **INDICATIONS:**

CT is particularly useful for:

- 1: Internal organs within the abdomen and chest, such as the liver, kidneys, pancreas, intestines and lungs;**
- 2: Bone imaging;**

3: *Brain imaging;*

4: *Vascular imaging to examine blood flow.*



CT is also useful for investigating suspected head injury or suspect neurological signs.

While X-rays show skull fractures.

CT scans can show damage to the functioning tissues of the brain, which may be injured even in the absence of a fracture.

It can also produce images of complex bony structures, such as the spine.

CT can also be used with contrast media – radio – opaque materials such as barium Ba 56, and iodine I 53, that shows up on the scan.

These are administered orally, rectally or intravenously to observe changes in the function of the tissue, rather than just its structure.

For instance, a water-soluble iodine compound will accumulate when the blood-brain barrier has broken down.

Other agents can highlight areas of inflammation or increased vascularity.

Other common uses of CT scans include:

- 1: *Diagnosis and staging of cancers;*
- 2: *Assessing organ and bone damage caused by trauma;*
- 3: *Planning radiotherapy treatment;*
- 4: *Screening for and assessing cardiac disease;*
- 5: *Bone mineral densitometry to assess osteoporosis;*
- 6: *Guiding biopsy procedures for taking tissue samples.*

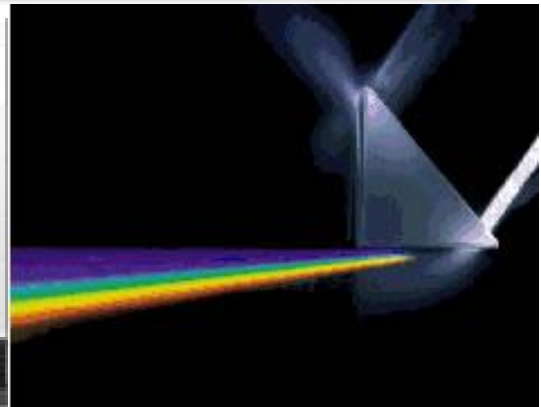
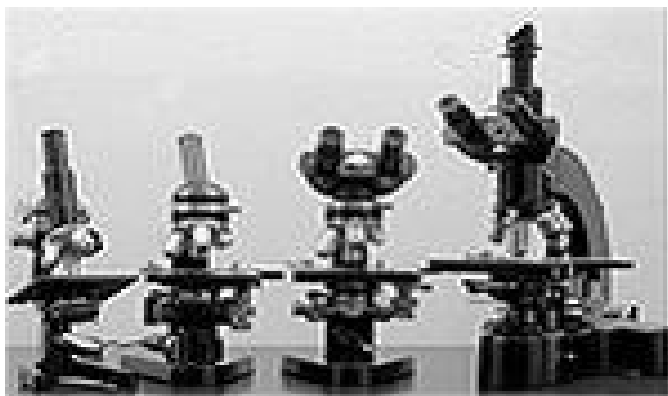
241: Microscopy, culture and sensitivity (MC&S) is the term often used when sending microbiological samples to the laboratory.

242: ***CULTURE AND SENSITIVITY:***

MICROSCOPY:

The sample can be viewed under a microscope within minutes of arrival at the laboratory on Star Ship Explorer.

This enable a quick initial report; such as ‘Gram positive cocci seen’; to be video telephone to the Star Ship Explorer clinician if necessary.



Vital issues to consider as required equipment on board all IGV's on space missions of long term durations. These products will be discussed as the requirements of Star Ship Explorer as its design and construction progress.

COCCUS (kok-ŭs) n **COCCI** pl:

Any spherical bacterium, such as:

- 1: *Gonococcus;*
- 2: *Meningococcus;*
- 3: *Micrococcus;*
- 4: *Pneumococcus;*
- 5: *Staphylococcus;*
- 6: *Streptococcus.*

Combined with an accurate clinical picture this may be enough to initiate targeted treatment.

I have to admit some of the claims of inventors that claim their space craft will get to Mars in half the time of NASA leaves me feeling sorry for them; as clearly they have no idea of the massive task such a project will be.

The base equation is simple: Time domain function versus Distance domain function.

That is the critical factor the less time it takes for the mission to cross that distance barrier, the more time they have to perform functions on Mars, or in fact upon any other planet surface.

The equations which have to be met are massive – just one error in the calculations could create a disaster which could become fatal for that mission.

I cannot tolerate errors in judgment upon such missions that is why the time is now to rethink upon such mission to Mars will require for success.

There are many issues to those needs to be discussed, which will be a part of this book later on.

For now I shall continue with the problem of medical needs on Star Ship Explorer being one of my deep concerns for the crew well being.

243: **COMMON CLINICAL SIGNS OF WOUND INFECTION:**

CARDINAL SIGNS OF INFECTION:

- 1) **Redness;**
- 2) **Heat;**
- 3) **Swelling;**
- 4) **Pain or change in pain;**
- 5) **Impairment of movement.**

Other signs of infection:

- 6) **Presence of pus;**
- 7) **Increased wetness;**
- 8) **Change in appearance;**
- 9) **Bridging;**
- 10) **Odour (offensive);**
- 11) **Cellulitis;**
- 12) **Delayed healing;**
- 13) **Discoloration;**
- 14) **Pocketing;**
- 15) **Wound breakdown;**
- 16) **Abscess formation.**

Culture:

A sample from the original culture is grown to create a pure sample to enable further identification of an organism.

This is of particular value if the organism is unusual, and may confirm or indicate a change to treatment.

Culturing can also enable a bacterial count to be made, which can assist in deciding whether a wound is colonised or infected.

In colonised wounds bacteria multiply but do not elicit to my knowledge a host response; infected wounds contain to my knowledge multiplying bacteria which induce a pathological response.

Numbers of bacteria are expressed as colony forming units (cfu), e.g. 10^4 cfu/ml for a urine sample.

A cfu is a colony arising from a single viable bacterium.

In my world you have to live in the domain of reality; there is no room for fantasy – life is at stake – someone must accept the reality of life as it is; not how you want it to be, that is the domain of fantasy to which I am aware that you have been brainwashed into.

In this book I shall give the facts of reality – no bullshit – Commercial space exploration is no joke - its is an urgent issue to face reality and solve the problems that will be involved, and be prepared for the unexpected to happen, then space exploration will be possible.

Never accept the issue that nothing will go wrong; because it will; if you are not prepared for it.

244: ***SENSITIVITY:***

A pure culture is seeded onto an agar plate containing discs saturated with antibiotics.

If the organism grows up to a disc it is resistant to the antibiotic; if there is a clear zone around the disc it is susceptible.

This can confirm a patient is on the correct treatment or not and can further help with identification, e.g. methicillin-resistant *Staphylococcus aureus* (MRSA).

STAPHYLOCOCCUS (*staf-i-loh-kok-ŭs*) *n.*

A genus of Gram-positive non motile spherical bacteria: occurring in grapelike clusters to my understanding.

Some species are saprophytes; others parasites.

Many species produce exotoxins.

More serious infections that are caused by staphylococci include pneumonia, bacteraemia, osteomyelitis, and enterocolitis.

STAPHYLOCOCCUS AUREUS:

A species: that causes boils and internal abscesses.

STAPHYLOCOCCAL *adj.*

In this section of the book I am keeping the information to a basic level, because the subject is massive in itself.

245: ***SAMPLING:***

Reliable MC&S results are only possible to my knowledge if a good sample is obtained.

Samples should be taken aseptically.

If puss is present it should be sampled, as it is the best indicator of pathogens.

Specimens should be sent as soon as possible, as some organisms will not survive and others will be overgrown by more vigorous strains.

If samples are not sent immediately they must be stored appropriately; some require storage at room temperature and others refrigeration.

246: ***DOCUMENTATION AND RESULTS:***

Clear documentation on the laboratory form is essential and should include patient details, suspected illness / initial diagnosis, site / type of specimen, condition of site if appropriate and any relevant treatment such as antibiotics.

This also applies across the whole spectrum of the Searl International Space Research Consortium; sadly to state that has not been the case – and that has been a major problem which has not only absorbed funds but time as well.

The result should be assessed within the context of the clinical picture:

If a urine sample shows a high bacteria count and the crew member has signs of clinical infection, the two may be linked.

However, as I know from experience that a high count alone may not always indicate infection.

If a wound shows no signs of infection and only its surface is sampled, the result will show only what is colonizing or contaminating its surface.

It is questionable whether such wounds should be sampled.

As contamination and colonization: do not usually compromise healing.

In fact, to my understanding benign bacteria may even help to avoid infection by preventing the ingress of pathological strains.

Samples can be taken for screening, e.g. nasal swab for MRSA – which I feel is vital issue for flight crews.

This should be stated on the form so only these bacteria are tested for and therefore the result will only indicate their presence or absence and sensitivities.

247: ***BACTERIA OFTEN FOUND IN WOUNDS:***

- 1: ***Staphylococcus aureus;***
- 2: ***Lancefield groups A. B. C. and G streptococci;***
- 3: ***Bacteroides species;***
- 4: ***Clostridium species;***
- 5: ***Anaerobic cocci;***
- 6: ***Coagulase – negative staphylococci;***
- 7: ***Corynebacterium species***
- 8: ***Enterobacteriaceae;***
- 9: ***Pseudomonads.***

247: ***ELECTROCARDIOGRAPHY:***

WHAT IS IT?

An electrocardiograph (ECG) measure the heart's electrical activity, checking for dysrhythmias.

It is a non-invasive diagnostic tool used in conjunction with other tests, such as:

- 1: *Coronary angiography;*
- 2: *Cardiac catheterization;*
- 3: *Cardiac enzymes;*
- 4: *Echocardiogram;*
- 5: *Exercise tolerance test.*

248: ***CARDIAC ANATOMY:***

The heart is a four chamber muscular pump which the law of the squares informs me, is actually confirmed in reality to be true; with its own blood supply and an internal conduction system that relays electrical impulses to keep it pumping regularly.

Disturbances in conduction or damage to the heart can adversely affect the blood and oxygen supply to the rest of the body – I can certify that as my heart appears to be training to win the London big race without me – and you sure don't feel very well – my head feels like its about to explode; while my knees feel like that they are about to refuse carrying my weight any longer. And those flash moments: where you feel that you are about to leave planet Earth for good, which makes my life hell.

249: ***THE ELECTROCARDIOGRAM WAVEFORM:***

An ECG depicts the depolarization and repolarisation of the heart's conduction system in a two dimensional form.

The recording is made on graph paper – the horizontal axis represents time, and the vertical axis the intensity of the electrical impulse.

Clearly the use of graph paper makes it easier to detect slight deviations from the norm, which may indicate a problem or potential problem in the heart.

The normal individual waveforms (QRS complexes): on an ECG tracing takes about 0.6 seconds to generate.

250: ***HOW DOES IT WORK?***

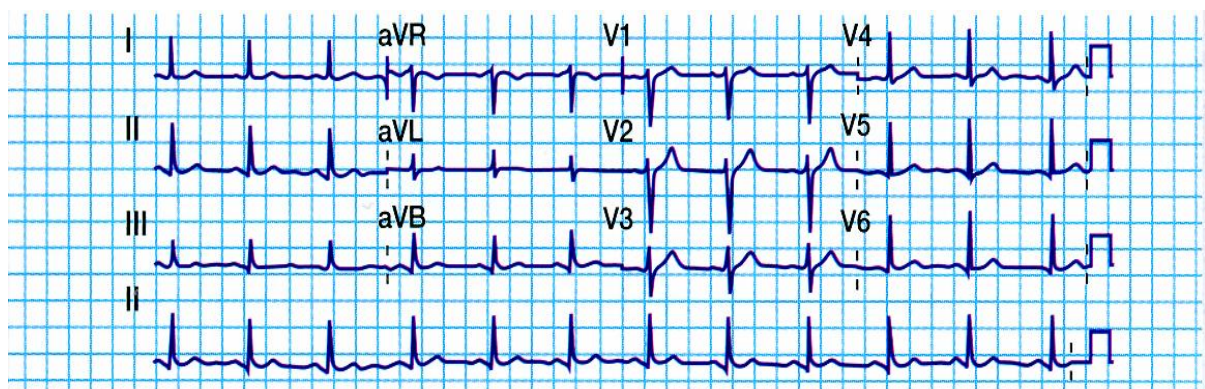
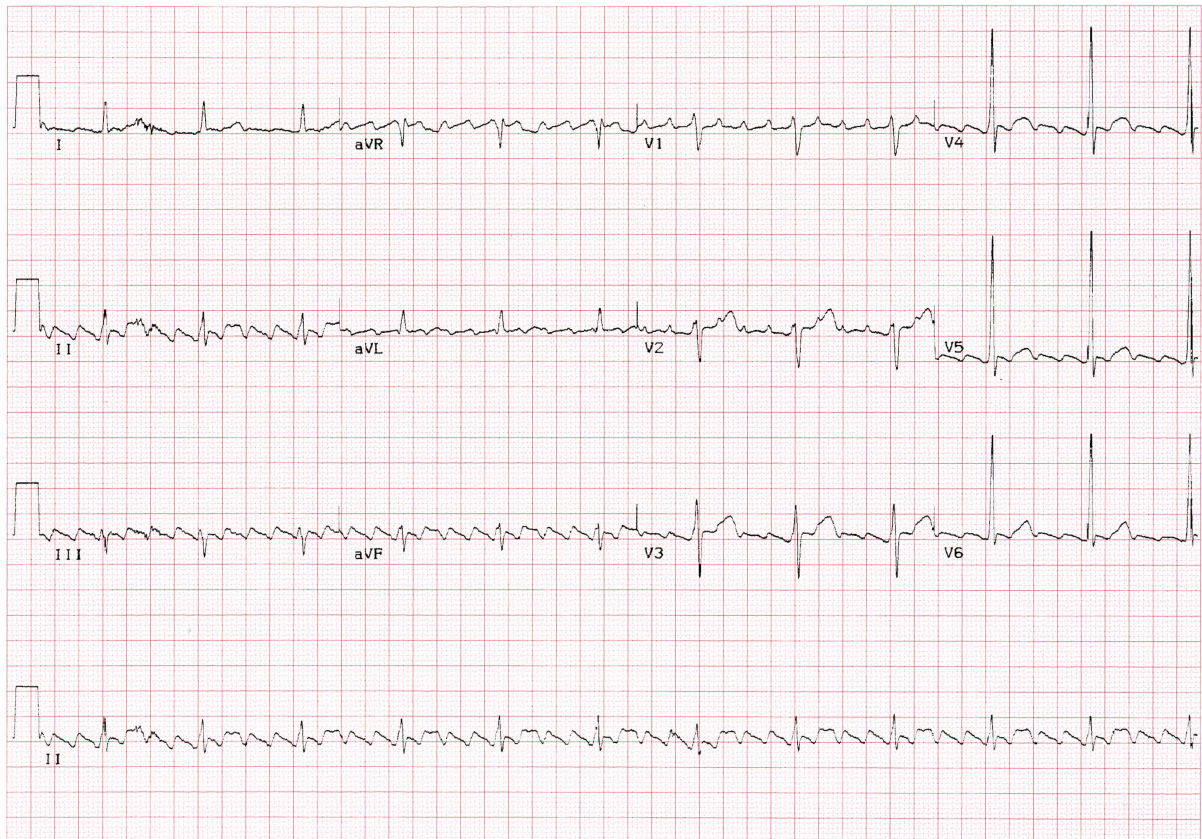


Figure 16.1 ***This is considered as a normal ECG SCAN.***



This is a 55 year old man with hypertension.

Amazing what the Homo sapiens can achieve from the domain of impossible, who with nothing more than faith in what they feel they can see, could be achieve: went forth into the unknown and brought forth that which they could see so that now we all can see this wonderful technology that benefits the world, and yet I doubt if the Homo sapiens even give them a thank you, let alone a dollar towards developing even better equipment.

Three lead recordings are usually used for continuous monitoring with waveforms display on a screen.

Electrodes (leads) are placed on the right arm or infraclavicular space, left arm or infraclavicular space, and left leg or lower left abdomen.

Twelve lead ECGs Figure 16.1 give a more detailed recording.

Only 10 leads are used – six on the chest (Figure 16.2) and one on each limb, but the limb leads produce six view points of the heart along a vertical plane by ‘looking’ at each other.

The chest leads produce six viewpoints on a horizontal plane, giving a total of 12 images.

As an electrical current travels towards an electrode it causes a positive or upward deflection on the ECG; a current flowing away produces a downward deflection.

A current at right angles to the electrode produces an isoelectric waveform.

Now how a person/s could come up with that concept and brought it into reality?

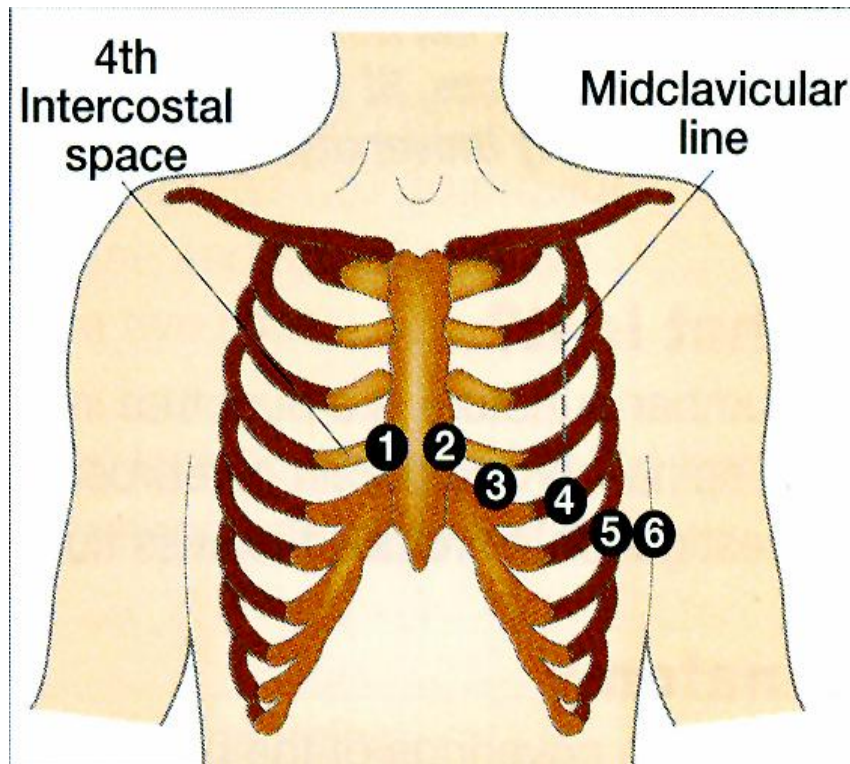


Figure 16.2 The positioning of chest electrodes of a 12 lead ECG.

The QRS complex is normally positive or points upward in lead 1 as the electrical activity is coming towards it.

Lead C1, over the right fourth intercostal space, should have a negative deflection because the current is heading away.

As it heads towards C6 the deflection is positive.

251: ***CONDUCTION ABNORMALITIES OR DYSRHYTHMIAS:***

These occur when damage, illness or external stressors affect the heart's ability to circulate blood.

Areas of the conduction pathway may become irritated, disrupted or blocked, causing atypical waveforms.

For example, after myocardial infarction:

- 1: *Dead (unrecoverable) tissue will produce abnormal Q-waves;*
- 2: *Injured tissue that might be recoverable will cause elevation of the S-T area of the QRS complex;*
- 3: *Ischaemic tissue that is likely to recover will produce T-wave inversion (T-waves will appear U shaped when the QRS complexes are positive).*

252: ***ESCAPE RHYTHMS AND ECTOPICS:***

When another area of the heart takes over as pacemaker, the resulting impulses (escape rhythms) after a P-wave fails to materialize when expected.

*Part 16 of Prof. Searl's online series of
book updates will continue.*