SOROTAN DARAT

65

GAGAH SETIA

Pogasa
Southwes
Itu
Sin
Fiery Cross
Spratly Island
Amboyna
Parola
Likas
Baraue Canada
Commodore
Marlveles
Adrasier Bank
Swallow
Reef

MALAYSIA
ONESIA
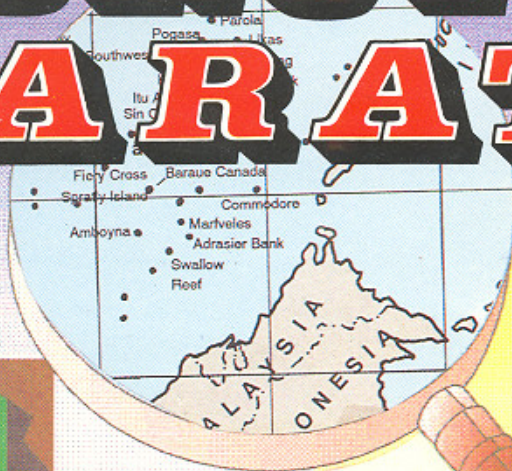
JURNAL TENTERA DARAT MALAYSIA
THE HOUSE JOURNAL OF THE MALAYSIAN ARMY
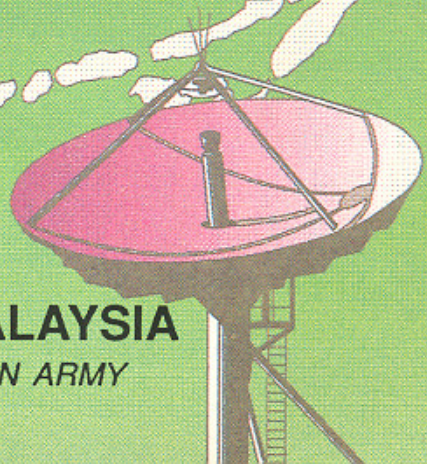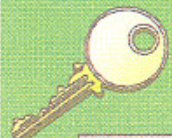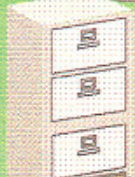
KANDUNGAN
CONTENTS

BANTUAN PERISIKAN DARAT DALAM KONFLIK INTENSITI RENDAH - SATU PERSPEKTIF

Gambar kulit muka disediakan oleh Cwg Perisikan MK TD

Setelah tamat Perang Dunia Kedua, Malaysia (di waktu itu Malaya) telah mula menghadapi ancaman dari Parti Komunis Malaya (PKM). Dalam peperangan ini dari tahun 1948 hingga 1960 Pasukan Tentera Darat (TD) telah memberi tumpuan operasi perang lawan insurgensi (COIN). Selaras dengan operasi atau perang untuk memusnah pengganas komunis (PGK), TD juga dilibatkan dalam usaha peperangan menawan hati dan minda (heart and mind battle). Pasukan-pasukan TD telah dilatih juga untuk melaksanakan keselamatan dan pembangunan (KESBAN). Peranan TD tidak berubah apabila ancaman PGK timbul balik pada 1968 di Semanjung Malaysia dan di Sarawak pada tahun 1964 dari Parti Komunis Kalimantan Utara (PKKU). Dalam masa yang sama Malaysia mengalami satu peperangan gerila dalam konfrontasi dengan Indonesia dan operasi ketenteraman awam dalam rusuhan Mei 13, 1969.

Tatkala timbul persepi ancaman dari utara dalam tahun 1980an TD telah melancarkan satu rancangan permodenan yang dikenali sebagai PERISTA. Langkah ini telah menukar wajah dan peranan TD dari pasukan COIN kepada pasukan konvensional. Akibat perkembangan tersebut organisasi perisikan yang dahulu memenuhi keperluan Angakatan Tentera Malaysia (ATM) secara menyeluruh, telah berkembang kepada bantuan perisikan khas bagi tiap-tiap perkhidmatan di mana Bahagian Staf Perisikan Pertahanan (BSPP) memainkan peranan ulung dari keperluan perisikan menyeluruh bagi ATM dan Cawangan Perisikan Markas Tentera Darat ialah khas untuk memenuhi keperluan Tentera Darat.

PERANG DINGIN

Pada awal 1989, tahap ideologi komunisme telah menurun dengan kejatuhan Republik Soviet Russia (USSR) dan sejurusnya Persekutuan Soviet (Soviet Union) pada tahun 1991. Ekoran dari perkembangan tersebut di rantau ini pula memperlihatkan tamatnya perjuangan militan PKM.

Keadaan di Kampuchea dan perkembangan hubungan Malaysia dengan China pula telah menuju ke arah keamanan dan kestabilan serantau.

Secara menyeluruh dengan lenyapnya Perang Dingin (Cold War), kerajaan Malaysia telah mengarah tumpuan semua pihak kepada Wawasan 2020.

> *"Secara menyeluruh dengan lenyapnya Perang Dingin (Cold War), kerajaan Malaysia telah mengarah tumpuan semua pihak kepada Wawasan 2020. ATM dan khususnya TD diheret juga ke dalam perancangan tersebut".*

ATM dan khususnya TD diheret juga ke dalam perancangan tersebut. Pertukaran hala tersebut telah mengurangkan belanjawan bagi TD dan usaha mestilah dibuat untuk mengekalkan kemampuan TD untuk menjadi satu angkatan tentera yang kecil, mampat serta berkebolehan dan dibantu dengan senjata serta peralatan canggih dan moden. Mencungkil pengalaman konfrantasi yang dialami secara mengejut, TD sedar bahawa keadaan geografi Malaysia memerlukan TD mempertahankan pencerobohan darat dari Utara Semenanjung, pencerobohan darat dari Selatan Semenanjung, pencerobohan darat dari Kalimantan dan Pulau Sebatik dan pencerobohan darat dari kepulauan Filipina. Oleh yang demikian, selaras dengan perkembangan tersebut di atas, TD telah mengorak langkah untuk bersedia untuk Konflik Intensiti Rendah (KIR). Selaras dengankeperluan ini organisasi Perisikan Darat perlulah mempunyai kemampuan untuk memenuhi segala aspek Perisikan Darat yang diperlukan

" Adalah diperingatkan bahawa musuh-musuh yang ditentang dalam KIR mestilah juga secara perangsaraf selain dari kuasa tempur. Oleh itu usaha perisikan perlu dilaksanakan untuk mendapat bahan-bahan geraksaraf dan perangsaraf untuk memberi keyakinan ".

dalam KIR.

KONFLIK INTENSITI RENDAH (KIR)

Dalam KIR, operasi-operasi intensiti rendah terdiri dari tugas-tugas keselamatan dalam negeri, operasi-operasi penjagaan keamanan atau mendamaikan keadaan, operasi-operasi menentang keganasan dan menyelamat sandera. Secara menyeluruh perbezaan perang konvensional dari KIR ialah terdiri dari keadaan berikut:-

● Dimensi politik akan menguasai semua pertimbangan dan kegiatan tentera sehingga lapisan yang rendah. Ini bermakna tiap-tiap soldadu mestilah menyedari bahawa segala tindakannya yang salah atau berlebihan akan menimbulkan implikasi politik.

● Operasi Intensiti Rendah selalu melibatkan pasukan yang kecil iaitu Seksyen hingga Kompeni. Ini kerana dataran dan hutan akan menghadkan kempen KIR. Contohnya jika melibatkan pasukan tempur dari Sekysen hingga Platun, secara menyeluruh bila digempur terhadap pelbagai sasaran, kekuatan menyeluruh akan melibatkan jumlah anggota yang ramai. Dalam kempen darurat dalam tahun 1954, jumlah pasukan Komanwel yang terlibat ialah 25,000 anggota. Perlu diingatkan bahawa KIR di Malaysia akan menitikberatkan kepada kegunaan pasukan infantri dan dibantu oleh secara kecil dari pasukan bantuan tempur yang lain.

● Pencerobohan pasukan musuh ialah secara klandestin. Ini bermakna anggota musuh akan beroperasi di kawasan pendalaman untuk mengelak dikesan oleh TD dengan senang. Di kawssan kota pula akan beroperasi secara "Bawah Tanah"

● Peranan dari segi psikologi amat penting dalam KIR. Pihak musuh akan menggunakan tipu helah untuk memperdayakan masyarakat setempat. Oleh yang demikian TD perlu mempunyai unit geraksaraf/perangsaraf untuk menentang kegiatan psikologi musuh.

● Pihak musuh akan menggunakan pasukan irregular atau perang tidak konvensional untuk melakukan serang hendap gerila, serangan mengejut, pembunuhan, pemusnahan/sabotaj dan menculik. Ini termasuk melakukan rusuhan dan penghijakan.

● Selaras dengan keadaan KIR, sesuatu pasukan konvensional perlu mengubahsuai kepada bentuk organisasi termasuk latihan, pembentukan doktrin taktikal, strategik dan kepakaran-kepakaran khas serta pasukan-pasukannya untuk keadaan KIR. Ke arah matlamat ini, Perisikan Darat perlulah mengubahsuai organisasinya untuk mendokong keperluan perisiskan dalam KIR.

PERANAN PERISIKAN TENTERA DARAT

Badan perisikan yang intim kepada TD perlulah memenuhi semua aspek perisikan yang dikehendaki oleh Markas TD dan formasi-formasinya. Oleh yang demikian peranan perisikan TD ialah seperti berikut:-

● Penghasilan dan penyebaran perisikan kepada formasi-formasi TD

● Memberi gambaran ancaman semasa dan akan datang untuk membantu perancangan pembelian senjata, peralatan dan kenderaan TD.

● Penghasilan perisikan operasi khas kepada pasukan formasi TD yang telah diaturgerak.

● Membekalkan BSPP dengan butiran perisikan darat.

Peranan-peranan tersebut di atas ialah satu fungsi standard bagi semua organisasi perisikan TD di segenap lapisan formasi TD. Sebaliknya sesuatu badan Perisikan Darat yang akan bertanggungjawab untuk perisikan dalam KIR perlulah mempertimbangkan dan mengkaji suasana KIR tersebut. Dalam keadaan perang am, TD akan disokong oleh elemen-elemen kuasa nasional (ekonomi, politik dan penerangan). Sebaliknya keadaan KIR, TD mengambil peranan sebagai alat membantu di mana elemen politik akan memainkan peranan utama. Oleh yang demikian peranan Perisikan Darat akan bertambah.

PERISIKAN DARAT DALAM KIR

Dalam KIR, cara penyelesaian yang tradisional untuk mengatasi sesuatu pertikaian perang tidak boleh dipakai. Ia melibatkan perkara-perkara yang berikut:

● <u>Kawalan dan Perlaksanaan.</u> Dalam peperangan am atau peperangan terhad operasi perisikan adalah dikawal dan dilaksanakan oleh Komander Tempur. Semua aset perisikan dan sistem-sistem pengumpulan perisikan akan bertindak terus kepada Komander Tempur yang aset perisikan dan sistem pengumpulan perisikan diletak bawah perintah atau bantuan perisikan. Pasukan-pasukan perisikan, seperti Unit Perisikan Divisyen (UPD) yang organik kepada pemerintahan komander tersebut akan

> *Oleh itu adalah elok jika satu pertimbangan yang serius dibuat mulai sekarang supaya Perisikan Darat mempunyai kemampuan untuk membantu TD dalam KIR. Sekiranya Perisikan Darat masih ingin menggunakan UPD, tindakan ini akan mengurangkan aset perisikan taktikal sebuah formasi perang TD.*

diaturgerak dan bertindak bersama pasukan-pasukan tempur berkenaan. Sebaliknya dalam KIR, pengumpulan perisikan bukanlah saja untuk kegunaan Komander Tempur yang berkenaan tetapi memenuhi keperluan ketua-ketua politik dan tentera.

● **Analisis Perisikan.** Ancaman yang tidak konvensional yang berbangkit dalam keadaan KIR tidak boleh dianggar dengan penuh atau setepatnya dari segi komposisi pasukan-pasukan tempur, kekuatan tempur, dataran penting, lebuh-lebuh mendekat, kadar mara dan corak doktrin. Tumpuan pengumpulan perisikan dan keperluan operasi mestilah ke atas perkara-perkara yang berikut:

1. Panduan-panduan keadaan bukan konvensional seperti politik, sosial, ekonomi, kebudayaan dan geraksaraf.

2. Punca-punca asas konflik.

3. Paras sokongan rakyat asing/ tempatan terhadap ancaman berkenaan.

4. Strategi ancaman, tujuan, kemampuan dan kelemahan.

5. Kemampuan tindakbalas ke atas ancaman oleh formasi TD di mana ancaman tersebut timbul.

6. Mengenalpasti jenis-jenis tindak-tanduk yang boleh digunakan oleh pasukan khas TD.

● **Operasi Geraksaraf.** Operasi geraksaraf ialah satu faktor mustahak dalam KIR. Ini perlu disatukan/ dikordinasikan dengan opersi tempur

di kawasan KIR untuk menentukan rakyat tempatan tidak mengganggu operasi ketenteraan dalam apa cara pun. Program geraksaraf juga boleh mengenalpasti kelemahan-kelemahan pasukan musuh yang bergantung ke atas ketidakpuashati rakyat terhadap kerajaan sama ada keadaan itu benar atau khayalan. Adalah diperingatkan bahawa musuh-musuh yang ditentang dalam KIR mestilah juga ditentang secara perangsaraf untuk memberi kejayaan kepada usaha operasi geraksaraf/perangsaraf. Usaha-usaha perisikan mestilah ditempat kepada aspek menyeluruh KIR serta mengkaji elemen-elemen sosial, politik, budaya, ekonomi dan khasnya ketenteraan.

Memandangkan keperluan perisikan dalam keadaan KIR, adalah ternyata bahawa Perisikan Darat pada masa ini tidak mampu memenuhi keperluan tersebut kerana ia mempunyai nukleus dasar, perancangan dan staf operasi dan keselamatan sahaja. Di peringkat formasi pula, selain daripada bentuk staf yang sama, formasi-formasi hanya mempunyai UPD sahaja. UPD ini ialah aset formasi dan perlu untuk tugas taktikal biasa. Ini bermakna elemen-elemen perisikan di formasi tidak boleh memenuhi dan melaksanakan tugas-tugas perisikan dalam KIR. Perlu diingatkan bahawa tanpa perisikan yang tepat dan kena pada masanya, operasi KIR tidak dapat dilaksanakan dengan berkesan.

KEPERLUAN KHAS PERISIKAN DARAT

Dewasa ini Perisikan Darat tidak mempunyai unit intim untuk memberi penugasan untuk mendapat perisikan KIR. Sekiranya Perisikan Darat ingin menggunakan UPD, unit ini dari segi

saiz hanya cukup untuk infrastruktur sahaja dan boleh digunakan sebagai landasan untuk satu nukleus sahaja kerana UPD mempunyai kekurangan yang berikut:-

● **Peralatan Perhubungan Radio.** Perhubungan radio yang diperlukan mestilah mempunyai kemampuan untuk perhubungan yang baik dan terus menerus dari kawasan KIR balik ke Cawangan Perisikan Darat.

● **Peralatan Komunikasi Umum.** Peralatan perhubungan khas ini mestilah mampu dimudahlih ke mana-mana tempat sahaja lengkap dengan pembesar suara. Ia mestilah mempunyai ciri-ciri penggunaan dari pesawat terbang, kenderaan darat dan air atau oleh individu.

Latihan. UPD perlu diberi masa untuk berlatih dan menyesuaikan diri dalam bidang keperluan perisikan KIR.

Perlu diingati bahawa KIR amat sukar untuk diramalkan. KIR boleh timbul dengan sertamerta dan di tempat yang tidak disangka-sangka. Ini akan menimbulkan dua masalah seperti berikut:

● Keperluan untuk mendapat maklumat/perisikan kawasan KIR.

● Tandatanya mengenai kekuatan, organisasi dan daya perang musuh tersebut.

Memang benar keperluan tersebut di atas boleh diatasi dengan kajian kawasan dan mengkaji/menganalisis butiran tentera-tentera negara luar. Ini bukan skop UPD kerana organisasi UPD tidak cukup untuk melaksanakan kajian dan analisis. Oleh itu adalah

elok jika satu pertimbangan yang serius dibuat mulai sekarang supaya Perisikan Darat mempunyai kemampuan untuk membantu TD dalam KIR. Sekiranya Perisikan Darat masih ingin menggunakan UPD, tindakan ini akan mengurangkan aset perisikan taktikal sebuah formasi perang TD. Sebaliknya Perisikan Darat perlu mempertimbangkan untuk menubuhkan sebuah Batalion Perisikan yang bertanggungjawab terus kepada Perisikan Darat. Ini akan menentukan kesinambungan pengumpulan perisikan bagi KIR, Konflik Intensiti Medium (KIM) dan Perang Am tanpa mengganggu aset perisikan yang mantap dan tidak jatuh ke dalam perangkap mengharapkan bantuan dari agensi perisikan yang lain yang hanya bergantung kepada Perisikan Manusia (PERMAN-HUMINT) dari segi soalsiasat tetapi bukan mengawasi medan KIR. Batalion Perisikan juga akan menggunakan PERMAN, tetapi PERMAN tersebut akan meninjau bersama di medan KIR.

PENUTUP

Persepsi keperluan perisikan untuk KIR yang dibayangkan dalam kertas ini ialah bertujuan untuk menegaskan bahawa KIR ialah dimensi peperangan yang perlu diberi pertimbangan yang serius. Ia berbentuk perang yang akan datang dirantau ini. TD perlu satu kemampuan perisikan yang efektif. Anggota perisikan pula mestilah faham bentuk ancaman dan boleh menyampaikan maklumat yang sesuai itu kepada pemerintah-pemerintah yang memerlukannya. Ini akan memberi kebolehan TD untuk mengesan, membaca geraktindak musuh dan menggunakan prinsip serang mengejut dengan berkesan.

Penyusunan semula paras kekuatan TD sesuai dengan keperluan Wawasan 2020 tidak mengecualikan Perisikan Darat untuk menyusun semua organisasi juga. Ini tidak semestinya kekuatan Perisikan Darat dikurangkan. Sebaliknya Pasukan Darat perlulah berkembang ke arah tersebut kerana bentuk organisasi perisikan negara membantu (FPDA dan USMC) ialah untuk peperangan di rantau kita ini. Memandangkan negara ini di kawasan konflik, kita mesti mempunyai organisasi sendiri.

Lt Kol Mohd Mushaari Mustaza, 48, kelulusan Maktab Pertahanan AT pada tahun 1988, adalah seorang yang mempunyai pengalaman luas dalam bidang perisikan. Selama 30 tahun, beliau telah menjawat pelbagai jawatan dan kini beliau menjawat jawatan Pegawai Staf 1 Risik di MPMTD. Bergerak cergas dalam kegiatan-kegiatan kesukanan terutamanya 'Jogging' dan bolasepak.

"The political object, as the original motive of war, should be the standard for determining both the aim of the military force and also the amount of effort to be made"

Clausewitz

SPACE LITERATURE

By Maj Jen Dato' Nordin Yusof

DEVELOPMENT OF SPACE LITERATURE

Since time immemorial, Man has dreamed of escaping the Earth and exploring the vast unknown universe. The beginnings of thought about space travel were a mixture of imagination and vague concepts. The earliest record of Man's fascination with space can be traced during the early days of ancient civilisation. It was in the Egyptian city of Alexandria, during the six hundred years beginning around 300 BC that Man, in an important sense began the intellectual adventure that has led us to the shores of space.[1]

This ancient city of Alexandria was founded by none other than Alexander the Great in 332 BC and this city was constructed by his bodyguard. The greatest marvel of Alexandria was its famous library and its associated museum where Man first collected, seriously and systematically, the knowledge of the world.[2] The Library of Alexandria can be regarded as the first true research institute in the history of the world.[3] During this ancient times, the scholars of the library studied about space, and the entire cosmos.[4]

The founding of the Alexandria library around 332 BC may be considered as the starting point of Man's intellectual interest that subsequently led to the development of space literature, among others. This development of space literature can be categorically divided into three historical periods viz: the first period starting from 332 BC until around 420 AD followed by the second period starting from 1500 AD until 1890 AD and the third period from 1895 until the present time.

The first period of recorded history constitutes the development of ancient space literature, the second period, contemporary space literature while the third period can be considered as the era of modern space literature. The stages of development of space literature as viewed from the historical perspective, can be perhaps be arranged in this chronological order.

- From 332 BC to 420 AD	-	Period of ancient space literature.
- From 420 AD to 1500 AD	-	Period of the Dark Ages.
- From 1500 AD to 1900 AD	-	Period of contemporary space literature.
- From 1900 AD to 1990s	-	Period of modern space literature.

As can be observed, the classical period of ancient space literature which lasted for about 1060 years was suddenly terminated with the destruction of the famous Library of Alexandria around 420 AD. This was followed by what is known as the period of the Dark Ages which lasted about 1,000 years or so starting from around 420 AD until 1500 AD. During this period, no books on space literature or any other books for that matter, were ever written. The chronology of the development of space literature is shown in Diagram 1.

The year 1500 AD marked the end of the Dark Ages and this was followed by the renaissance of space literature, contemporary in nature, written by imaginative authors and scientists inspired once again by the mysteries of space. From 1900 onwards a new crop of modern authors spear-headed by H.G. Wells and space scientists picked up the threads of the contemporary writers as the take-off point for a more imaginative and scientifically plausible science fiction stories. It was during this period also that more scientific developments and discoveries had

> ## It is difficult to say what is impossible for the dreams of yesterday is the hope to today and the reality of tomorrow.
>
> ### Robert H.Goddard

taken place which in turn has created an enormous reservoir of literary materials. Subsequently, this scientific phenomena led to the explosion of space literature readily made available to the world at large.

DEVELOPMENT OF ANCIENT SPACE LITERATURE

In ancient history, the birth place of early science discoveries and science literature perhaps began in the

Egyptian city of Alexandria. It was in Alexandria that Heron, invented the gear trains and steam engine and wrote the first book on robots entitled, "Automation" (Automata);[5] Appolonius of Perga, the mathematician who demonstrated the forms of conic sections (forerunner to Johanes Kepler's laws on planetary movements), eclipse, parabola and hyperbola, the curves of orbits of the planets the comets and the stars in space.[6]

It was also in Alexandria that Eratosthene, the first person to accurately measure the size of a planet; astronomer Hipparchus who mapped the constellations and the brightness of the stars;[7] Euclid who brilliantly systemised geometry[8] and last but not least Archimedes the greatest mechanical genius who jumped put of his bath and ran through the street shouting "Eureka" upon discovering his famous principle.[9] As discussed earlier around 340 BC the Philosopher wrote ``On the Heavens'' to convince his readers that the world was round instead of flat piece of real estate.[10]

As early as 300 BC, a famous astronomer Aristarchus of Samosata argued that the Earth is one of the planets which revolves round the Sun and that the stars are enormously far away.[11] Aristarchus had made an inspired guess but he had never presented his theory in   sufficient detail to make it scientifically convincing to his ancient listeners.[12] In 160 BC, part of Cicero's works entitled, "Scipio's Dreams" (Somnuim Scipionis) presented a conception of the entire universe, a realisation of the comparative insignificance of the Earth, and the visualisation of a vast panorama in which appear stars, never seen on Earth.[13]

In 160 AD, Greek writer, Lucian of Samosata wrote what is known as the first known work of science fiction, misleadingly titled, "True History"(Vira Historia).[14] In his story, he fancifully
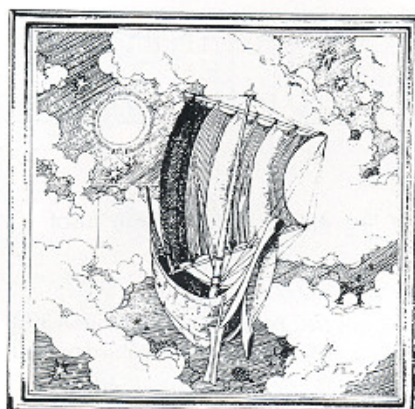
The ancient transportation of reaching the moon by a sailing ship as fictionalised by Lucian of Samosata in 160 AD

imagined that a sailing ship is lifted accidentally into the air by a freak waterspout which carried the ship to the moon. After eight days of space travel, the sailors beached their ship on an island filled with vegetation and inhabitants on the moon. The stranded sailors encountered the lunar denizens called Hippogypi who rode on three-headed vultures.[15]

Lucian's sequel to this strange story concerned a second voyage to the moon which was planned in advance. This time the journey to the moon took only three days. This was approximately the duration the Apollo missions would require to reach the moon some eighteen centuries later.[16]

Lucian also wrote a legendary story about Icarus and the flight of his escape by using birds' wings glued to his arms with wax. Unfortunately, Icarus flew close to the Sun which caused the wax to melt and he came tumbling down to the ground. However, in those days Lucian's stories are characterised more by fertile imagination than scientific plausibility because unknown at that time, there is no air in space and therefore wings would be useless.[17]

However, around 420 AD the classical civilisation that created all these enormous priceless books and scrolls

which were kept in the Alexandrian library, an approximate number of half a million volumes of books,[18] were deliberately destroyed. Only a small fraction of the valuable books from the Alexandrian library survived, along with the study of space, universe and cosmos of ancient history. Thus ended the first period of the development of ancient space literature.

DEVELOPMENT OF CONTEM - PORARY SPACE LITERATURE

During the period of the Dark Ages starting from around 420 AD until 1500 AD, no further stories of space travel appeared. It is only with the renaissance of science and the literary works of such men as Tycho Brahe (1546-1601), Nicolaus Copernicus (1473-1543), Johanes Kepler (1571-1630) and Galileo Gailei (1564-1642) that human minds once again became receptive to the possibility of space travel to other worlds. The development of what can be termed as contemporary space literature starts from year 1500 until 1890 covering a period of nearly half a century.

In 1543, Copernicus wrote a controversial book entitled,"On the Revolution of the Heavenly Bodies" (De Revolutionbus) based on his astronomical observations.[19] He spent many years taking observations and making calculations before he could write his world-shattering conclusion - that the Earth is relegated as one of the planets in the solar system instead of being of the centre of the universe as was previously believed. In his book, Copernicus demonstrated how the moon revolves round the Earth and the Earth and all the planets revolve round the Sun. Although the Copernican theory has revolutionised our conception of the universe, he was wrong in believing that the movements of the planets round the Sun consist entirely of circles or epicycles[20] instead of ellipses as was discovered later.

However, Copernicus's book became the indispensable prologue to the works of Danish astronomer Tycho Brahe followed by Galileo Gailei, Johanes Kepler and later Isaac Newton. Thus, Copernicus's book became the starting point of modern astronomy as well as the beginning of modern science.[21]   In his book, Copernicus demonstrated how the Earth's movement could be used to explain the movements of other heavenly bodies.

In 1634, a book, "Dreams" (Somnium) written by a distinguished astronomer, Johanes Kepler was published four years after his death.[22] For fear of religious and political persecution,in this amazingly imaginative literary work, Kepler wrote his story in a fictional form based on his scientific ideas of the moon. Of course, during the period of the Thirty Years' War (1618-1648)[23] Kepler's science fiction was a new idea. As such, in his book Kepler attempted to explain and popularise science fiction during the Dark Ages of witch-hunting.[24] As such, his storyline was about demons rather than humans who made a journey to the moon by supernatural means.[25]

Prior to this, Kepler wrote three books in Latin namely: "Cosmic Mysteries" (Mysterium Cosmog raphicum - 1596), "New Astronomy" (Astromia Nova - 1609) and "The Harmony of the Universe" (Harmonices Mundi - 1619).[26] With regard to space travel, Kepler believed that one day there would be "celestial ships with sails adapted to the winds of divine filled with explorers", who would not fear the vastness of space"[27]

In his moment of soul-searching, Kepler once wrote:

"I give myself up to divine ecstasy..........My book is written. It will be read either by my contemporaries or by posterity - I care not which. It may well wait a hundred years for a reader, as God has waited 6,000 years for someone to understand his work."[28]

To this effect, Kepler's prediction of a space sailing ship finally materialised some 274 years after he wrote his last book when Russia launched the first of Mankind's ships to hoist a solar sail in space in February 4, 1993.[29] On this historic day, a Progress spacecraft launched from Russian space station Mir unfurled a disc made of aluminised plastic 20 meters (22 yards) in diameter. As it sailed in space, the huge mirror (sail) reflected a beam of light from the Sun on to Earth, a swathe of light with as much brightness as four full moons.[30]

Solar-sailing ship, powered entirely by solar energy is a revolutionary concept of space travel which was originated by Konstantin Tsiolkovsky in the early 1920s.[31] Solar-sailing ship has the potential of developing a tremendous velocity far greater than can be attained by conventionally-powered rocket.[32] Although still in its embryo stage, incredibly as it may seem, solar-sailing has now become a reality as was visualised by not only by Kepler but by ancient writers like Lucian as early as 160 AD.

After Kepler, along came Galileo Gailei a great Italian scientist and astronomer who was probably more responsible for the development of scientific ideas and innovations than any other scientist. In 1623 , he wrote a book, "Dialogue Concerning The Two Chief World Systems"[33] related to Ptolemy's earth-centered theory and Copernicus's sun-centered   hypothesis. Galileo spent about six years compiling and composing his controversial book based on his astronomical observations in support of Copernican heliocentric theory. Galileo's book written in Italian (not Latin) was in the form of a conversation among three philosophers namely, Salviati, Sagredo and Simplicio.

In this story, Salviati played the role as the most brilliant philosopher (to express Galileo's views) while Sagredo played the supporting role as one who is quick to see the truth of Salviati's arguments and Simplico, acting as an Aristotle philosopher brought out all the usual objections to the Copernican system.[34] The whole theme of the "Dialogue" was to point out the absurdity of Ptolemy's earth-centered system as an oblique reference to the Church's belief.

When the book was published, the Catholic Church responded in anger by putting Galileo to trial before the Inquisition in Rome. Galileo was charged for violating the decree of 1616 which forbids him to "hold or defend" the odious Copernicus's heliocentric hypothesis.[35] At this point in time, Ptolemy's earth-centered theory expounded in 200 BC was religiously adopted by the Church as the picture of the universe that was in accordance with Scripture.[36] Nevertheless, Galileo's pioneering contribution for the advancement of science has long been recognised and eventually his book brought to light the validity of Copernican heliocentric cosmology.

After Kepler and Galileo, a string of writers, such as Cyrano de Bergerac (1619-1655), Voltaire (1694 - 1778), Alexander Dumas (1802-1870), Edgar Allan Poe (1809-1849), Edward Everett Hale (1822-1909) and Jules Verne (1828-1905) among others,filled the pages of literature with space travel.
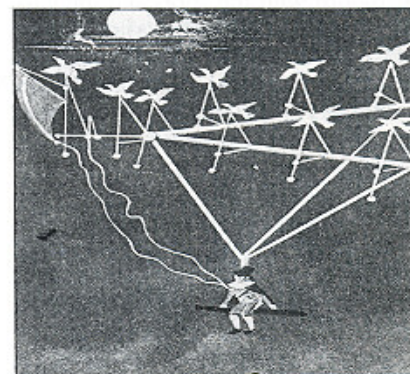

A fanciful journey to the moon on a device powered by a flock of geese as told in Francis Godwin's, "The Man in the Moone" (1638)

In mid-1600, Savinien de Cyrano de Bergerac published a science fantasy called, "Voyage to the Moon". In his attempt to reach the moon, Cyrano attached himself to flasks of dew. As the dew evaporated from the flasks in the heat of the sun, he was carried upwards into space. However, he failed to reach the moon with this dew-powered device. In his second attempt, the journey was made by using tiers of firecrackers which proved to be more successful.[17] By using this rocket-powered device, Cyrano finally landed on the moon and he eventually returned to Earth.

The Bishop of Hereford by the name of Francis Goodwin wrote about a winged flight to the moon in his book entitled,"The Man in the Moone". This book was published posthumously in 1638 under the pen name of Domingo Gonzales, the hero of the story.[38] In this lunar tale, Gonzales marooned on an island trained wild geese to escape the island. To his surprise, the geese carried him on an 11-day journey to the moon. On reaching the moon, Gonzales found it was largely covered with water and populated by large and colourful creatures.[39]

In 1752, a French writer Voltaire produced his famous satire called "Micromégas". In his book, the gigantic hero by the name of Micromégas from the star Sirius[40] travels the universe visiting our own solar system for a sojourn with the supposed inhabitants of Saturn. Finally, Micromégas reaches Earth which was populated by what to him are tiny beings. Voltaire's satire was an attempt to put into perspective Man's insignificance in the cosmos.[41]

Three years later, in 1775 Louis Guillaume de la Folie in his book,"Philosopy without Pretension" *(Le Philosophe Sans Prétension)* came up with another concept of space travel by using flying chariots powered by electricity.[42]
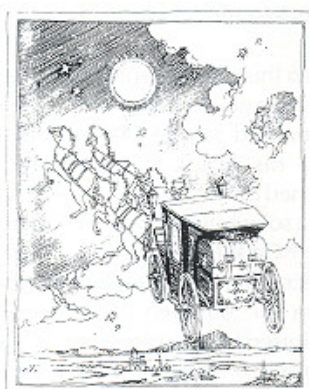
In the early centuries, a fictional way of travelling to the moon was by means of a horse-drawn carriage

In 1705, Daniel Defoe (1660-1731), the famous writer of "Robinson Crusoe" wrote a tale of lunar travel called, "The Consolidator". The Consolidator was itself a spacecraft with wings equipped for space travel to the moon.[43]

The first serious literary work on rocketry was probably written by William Moore who in 1813 wrote a "Treatise on the Motion of Rocketry," which was published by the Royal Military Academy in Woolwich. The treatise gave a mathematical description on rocket trajectories and the motion of rockets in air as well as vacuum based on Newton's Third Law of Motion.[44]

In the book,"Voyage to the Moon" published in 1827 writer Joseph Atterlay describes a journey to the moon in a spaceship complete with padded interior and scientific equipment. In this story, the spaceship is propelled by an antigravity metal called lunarium.[45] The idea of using antigravity material was later adopted by H.G. Wells in one of his science-fiction novels.

Eight years later, in 1835 Edgar Allan Poe wrote a book about a trip to the moon in a home-made balloon. The hero, Hans Pfaal made the lunar trip in a balloon equipped with apparatus to condense the rarefied air he believed existed in space so that his hero Pfaal could breathe. Funny enough, Pfaall made his lunar trip so that he could evade his debts on Earth.

After 17 days of space travel his balloon crash-landed on the moon where he found himself in a lunar city.[46]

In 1835, a newspaper called the New York Sun published a "moon hoax" story of an astronomer who observed lunar inhabitants through his telescope. The newspaper report was so convincing that it was able to fool its readers including a number of learned scientists.[47]

A well-known French author, Jules Verne in 1865 wrote the most celebrated of all space fiction work in his book, "From the Earth to the Moon" *(De la Terre à la Lune).*[48] This was a story of three men and two dogs who made a lunar journey in a space projectile or space train fired from a cannon 270 meters (900 feet) long weighing 9,000 kilograms (20,000 pounds).

Although scientifically, this was not practical, Verne had two uncanny strokes of prescience. First, he located the launching site in not far from the present day Cape Kennedy, Florida, (formerly Cape Canaveral) and second, he had the whole exploit planned by the Gun Club of Baltimore, a city near the Goddard Space Flight Center in Maryland which controls the launching of many modern satellites.[49] Verne also envisioned the "moon train"[50] which resembles the present day multi-staged rocket with conic head.

In 1879 , Verne wrote a spectacular sequel, "Around the Moon" *(Autour de la Lune)* in which the space travellers had their course perturbed by the close passage of an asteroid.[51] Consequently, the original plan to land on the moon was aborted. By firing what is now known as retro-rockets, the space travellers were able to return to Earth where they splashed down in the Pacific Ocean and were subsequently rescued by a naval vessel.[52]

This is yet another prescience by Verne as exemplified by the sensational American Apollo 11 mission which splashed down in the Pacific Ocean after the successful lunar mission in 1969.[53] In this regard, the former

Soviet Union also uses the Pacific Ocean[54] besides the Indian Ocean as its splash[55] down area for recovery of its spacecraft.

American author Edward Everett Hale (1822-1909) wrote a series of articles in the magazine *Atlantic Monthly* about a huge orbiting sphere called "The Brick Moon" in 1869.[56] This is probably the first publication on the conceptual application of an artificial satellite circling the Earth. Hale concocted an artificial satellite made of bricks launched into polar orbit to assist sailors in navigation, forerunner to the present-day navigation satellites. The brick satellite 61.9 meters (200 feet) in diameter was launched by rolling it down a gigantic groove and onto two enormous fast-spinning flywheel which would then fling the sphere upward at great velocity into space. However, in this story the brick satellite slips too soon and is hurled aloft, along with several construction workers and their visiting families, who continue to orbit in their space station.[57]

Man's dream of launching a satellite in space was finally realised about 88 years after Everett published his literary work when the former Soviet Union launched the world's first satellite, Sputnik 1 (Traveller) in 1957.[58]

DEVELOPMENT OF MODERN SPACE LITERATURE

The dawn of modern space literature was perhaps started by the famous English novelist by the name of Herbert George Wells (1866-1946) whose literary works appeared towards the beginning of the twentieth century. H.G. Wells became a modern writer of space literature when he produced two science-fiction classics namely, "The War of the Worlds" in 1897 and "The First Men on the Moon" in 1901.[59]

The book, "The War of the Worlds" deals with a frightening invasion by Martians on Earth. In this story, the Martian invaders who conquered the world were eventually vanquished by terrestrial diseases.[60] Inspired by this book, in 1938 a radio broadcast by actor Orson Wells was so realistically narrated on a fictional invasion of New Jersey by Martians that caused a near mass panic among listeners in eastern United States.[61]

The storyline of his second book, "The First Men on the Moon", is focused on lunar travel, a space ship powered by antigravity material called cavourite to transport the spaceship to the moon.[62] The two Earth lunarnauts found the moon covered with vegetation and inhabited by a subterranean race known as Selenites.[63] During this period, H.G. Wells' two books were well-received as the forerunner to Man's serious attempt at lunar landing and the first insight in the development of space warfare.

After H.G. Wells, the floodgate of modern writers with fertile imagination and space scientists has brought forth famous names like Isaac Asimov, Kurt Vonnegeut, Alex Tolstoi, Arthur C.Clarke,[64] Carl Sagan, James Michener, Stephen W. Hawking and many, many others. The two major contributory factors which resulted in the proliferation of modern science fiction literature are the printing revolution of mass production and the low cost of production which the general public can easily afford.

The chronological perspective in the development of space literature is shown in diagram 1.

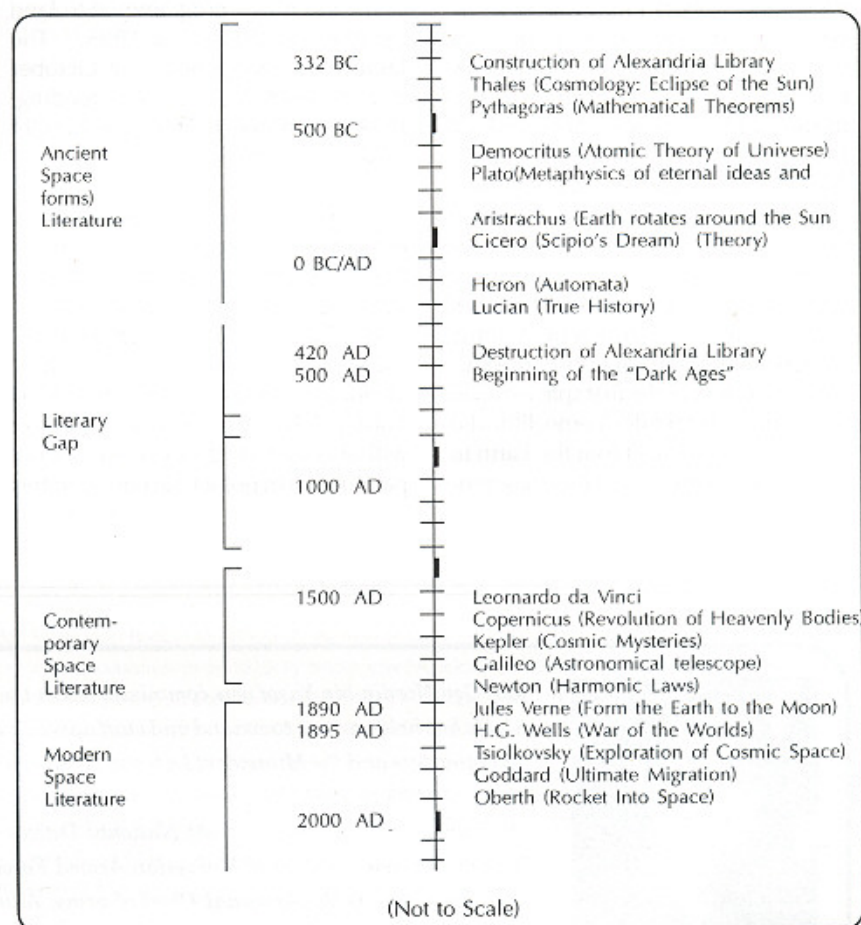|		
Ancient Space forms) Literature	332 BC	Construction of Alexandria Library Thales (Cosmology: Eclipse of the Sun) Pythagoras (Mathematical Theorems)
	500 BC	Democritus (Atomic Theory of Universe) Plato(Metaphysics of eternal ideas and
		Aristrachus (Earth rotates around the Sun Cicero (Scipio's Dream) (Theory)
	0 BC/AD	Heron (Automata) Lucian (True History)
Literary Gap	420 AD 500 AD	Destruction of Alexandria Library Beginning of the "Dark Ages"
	1000 AD	
Contem-porary Space Literature	1500 AD	Leonardo da Vinci Copernicus (Revolution of Heavenly Bodies) Kepler (Cosmic Mysteries) Galileo (Astronomical telescope) Newton (Harmonic Laws)
Modern Space Literature	1890 AD 1895 AD	Jules Verne (Form the Earth to the Moon) H.G. Wells (War of the Worlds) Tsiolkovsky (Exploration of Cosmic Space) Goddard (Ultimate Migration) Oberth (Rocket Into Space)
	2000 AD	

(Not to Scale)

Diagram 1. Development of Space Literature

Adapted from Carl Sagan, "Cosmos, "(New York: Ballantine Books Ltd, 1985), p.280.

Conclusion

In summary, the historical landmarks of space literature which began with the birth and death of the ancient literature in the Alexandrian library, followed by the "blank pages" of the Dark Ages, the renaissance of contemporary space literature and finally, the emergence of modern science fiction writers of the twentieth century has finally inspired Man to take up wings into the bowels of space.

Indeed, among the breed of science fiction writers of the past era, Jules Verne is credited to have been the inspiration of Russian scientist Konstantin Tsiolkovsky,[65] American rocketeer, Robert H. Goddard[66] as well as Russian cosmonaut Yuri Gagarin,[67] to name a few. The American rocket scientist, Goddard was also inspired by the science fiction works of H.G. Wells.[68] Consequently, while Tsiolkovsky laid the foundation of Russian space activities which earned him the title as the "Father of Cosmosnautics,"[69] Goddard became a world famous rocket scientist known as the "Father of Astronautics" in the United States[70] and Gagarin earned his place in history as the first spaceman in the world.[71] As for Jules Verne, little did he realise his book,"From the Earth to the Moon" written in 1865 has provided an impetus for Man to pursue his goal of reaching the moon which was finally fulfilled some 104 years later.

As can be seen, the pioneering works of science fiction writers have fired the imagination of modern scientists and spacemen as a source of inspiration and motivation for Man to pursue the ultimate dream of landing on the moon. Consequently, in recognition of their literary contribution, Russia is planning to launch a spacecraft called Mars 94 which will include an audio-visual compact disc programme recorded with science fiction literature of famous writers. In its original plan, the spacecraft Mars 94 was scheduled for launch in March 1994 and it was programmed to land on Mars in the fall of 1995.[72] The launch was postponed until October 21, 1994 but due to lack of funding, Russia has further delayed the Mars 94 mission to 1996.[73]

This compact disc audio-visual project known as the Vision of Mars for the spacecraft Mars 94 will immortalise selected works of famous science fiction writers like Edgar Rice Burroughs, Isaac Asimov, H. G. Wells, Kurt Vonnegut, Arthur C. Clark and Alexi Tolstoi.[74] The *Vision of Mars* project will also include 25 selected fanciful paintings of hypothetical communities of Mars drawn by artists like Kelly Freas, Frank Paul, Andrei Sokolov and Robert McCall.[75]

This novel idea was first mooted by Carl Sagan, President of the American Planetary Society as a tribute to science fiction writers intended for future human colonisers of Mars.[76] Sagan was previously involved in designing an earthly message carried by of Pioneer 10 and Pioneer 11 launched towards Jupiter in December 1973.[77] Each of the space probes carried a message etched on a plaque with simple engravings, a kind of cosmic greeting card, showing the position of the Earth in the solar system and the drawing of two human beings, a male and a female.[78]

In launching the Vision of Mars project, Sagan addressed a news conference at the Explorer's Club on June 23,1993 when he said inter alia:

"We thought it was time for technology and scientists community to repay our debt to science-fiction (writers). They have not just predicted all this but there is a self-fulfilling prophecy."[79]

Thus, the development of space literature has made an immense contribution towards the conquest of space by Man.

Maj Gen Nordin bin Yusof was commissioned in the Royal Malay Regiment on 9 Dec 61. He has held various command and staff appointments in infantry units, formations headquarters and the Ministry of Defence. He served as the Defence Adviser in Indonesia from 1983 to 1986. He commanded 7 Malaysian Infantry Brigade, Kluang from 1987 until 1989. He attended the National Defence College, India 1990. In 1991 he became the commandant of Malaysian Armed Forces Staff College. In July 1992 he was appointed as the Assistant Chief of army, Administration and later as Deputy Chief of Personnel. On promotion, Maj Gen Nordin was appointed as the Assistant Chief of Staff-Personnel in June 1993.

Endnotes:

1. Carl Sagan, "Cosmos", (New York: Ballantine Book, 1985), p.10.

2. Ibid., p. 11.

3. Ibid., p. 10.

4. Cosmos is the Greek word for the order of the universe.

5. Ibid., p. 11.

6. Ibid.

7. Ibid.

8. Ibid.

9. Ibid., p. 12.

10. Stephen W. Hawking, "A Brief History of Time" (London: Bontam Books, 1989), p.5.

11. Michael H.Hart,"The 100 A Ranking of the Most Influential Persons in History," New York: Hart Publishing Co,Inc, 1978),p.520.

12. Op.cit.,p. 13.

13. Op.cit.,p.156.

14. Sagan,n.1.,p.13.

15. Ian Ridpath, "Encyclopedia of Space". (London: Hamlyn Publishing,1981), p. 32.

16. Ibid.

17. The World book of Space Exploration Space Travel, (Chicago: World Book, Inc,1989),p.12, hereafter referred to as Space Travel.

18. Op.cit.

19. Sagan,n.1., p. 12 and p. 279.

20. Hart,n.10.,p.501.

21. Ibid.

22. Ibid.

23. Ridpath,n.14.,p.33; Space Travel,n.15.,p.12.

24. The Thirty Years' War was the last of the great religious wars of Europe. The conflict began as a civil war between the German Protestants and the German Catholics over their disagreement on the interpretation of the Peace of Augsberg (1555). Before the war was over, most of the nations in Europe were involved and the war become a general struggle for territorial and political power.

25. In 1620, Kepler's mother was arrested on a charge that she was a witch. Kepler devoted a lot .lm8 of time in an eventually successful attempt to have her released without being tortured. See Hart,n.11.,p.504.

26. Ibid., p. 33.

27. See the New Grolier Encyclopedia, Vol ll, (New York, 1970), p. 131.

28. Sagan, n.1.,p. 54.

29. Hart,n.11.,p.503.

30. Kenneth W.Gatland,"Space Diary,"(London:Salamander Books Ltd,1989),p.15; the New Straits Times (Malaysia), February,14,1993, hereafter referred to as the NST. The concept of a solar-sailing was first conceived in the 1970s by NASA's Jet Propulsion Laboratory (JPL) in Pasadena. The solar-sailing ship was originally designed to undertake a scientific mission for a rendezvous with Halley's comet in 1986. The JPL team led by Lou Friedman came up with an elegant concept of a 800-meter long square sail powered by a rocket. Once in orbit, four masts would be deployed to support a sail to harness the Sun's ray as its source of power. Unfortunately, the project was abandoned due to technical and financial reasons. This concept was taken up by the World Space Foundation also based in Pasadena. The World Space Foundation designed a spacecraft with a solar sail that could fly from orbit around the Earth to the moon. The spacecraft weighing 140 kilograms could unfurl a square sail of 55 meters long (3,000 square meters) of mirror made of Kapton fabric by Du Pont. Since this spacecraft can only achieve a speed one tenth of Halley's comet, the project was also abandoned until the Russians successfully made this concept a reality in February 1993.

31. The Economist,Vol 328 No 7792, February 6-12.p.83.

32. Gatland,n.29.,p.15. See also David Langford,"War in 2080 The Future of Military Technology," (London: Sphere Books Ltd, 1981),p.173.

33. Op.Cit.

34. Hart,n.11.,p.102; George O. Abell, David Morrison and Sidney C. Wolff,"Exploration of .lm8 the Universe,"(New York: Saunders College Publishing,1987),p.45, hereafter referred to as Abell.

35. Ibid.

36. Ibid.

37. Hawking, n. 10.,P.8.

38. Ridpath,n.15 p. 33.

39. Ibid., p. 34; Space Travel,n,17.,p.14.

40. Ibid.

41. Abell,n.34,p.419. Sirius is the brightest and the nearest star to Earth besides the Sun. It is located about 8 light years away and it takes 8 years for light to reach Earth as compared to the Sun whose light takes only 8 minutes.

42. Ridpath,n.15.,p.34.

43. Space Travel,n.17.,p.16.

44. Op.cit p.34.

45. Gatland,n.30., p.6.

46. Op.cit.,p.15.

47. Ibid.

48. Space Travel,n.17.,p.14.

49. Ridpath,n.15.,p.24; Gatland, n.30.,p.6.

50. See The World Book Encyclopedia, Vol 18, (USA, 1981). p. 572h.

51. Op.cit.,p.35.

52. Ibid.

53. Ibid.

54. The Apollo 11 after making its historical lunar landing on July 10,1969 splashed down in the Pacific Ocean. See E.John and Nancy De Waard,"History of NASA,"(London:Bison Books Ltd,1984),p.72.

55. Douglas Hart,"The Encyclopedia of Soviet Spacecraft," (London: Bison Books Ltd, 1987), . pp.81-82. For example, the Soviet spacecraft Progress after being used by space station Salyut space station to test its navigation system is de-orbited for re-entry over southern Pacific Ocean.

56. Ibid.,p.159. The Soviet spacecraft Zond 8 launched on October 20,1970 made a night-time landing in the Indian Ocean seven days later.

57. Ridpath,n.15.,p.35; Space Travel,n.17.,p.17.

58. Ibid.

59. Phillip Clark,"The Soviet Manned Space Programme," (London: Salamander Books .lm8 Ltd,1988), p.21.

60. Ridpath,n.15.,p.35.

61. Gatland,n.30.,p.7.

62. See The World Book Encyclopedia, Vol 21, (USA, 1981), p. 159; Space Travel,n.16.,p.19.

63. Op.cit.

64. Ridpath,n.15.,p.35.

65. The literary works of these great science fiction writers are selected by Carl Sagan, President of the American Planetary Society for inclusion in the Vision of Mars programme which will be carried on board Russian space craft Mars 94. See the NST, June 24,1993.

66. Ridpath, n. 15, p. 36.

67. Ibid,p.37.

68. Bill Yenne,"The Astronauts The First 25 Years of Manned Flight," (London: Bison Books .Ltd, 1986),p.6.

69. Op.cit.,p.37.

70. Clark,n.59.,p. 8.

71. Gatland,n.30.,p.7.

72. Hart,n.55.,p.150; Curt Gasteyer,"Searching For World Security,"(New York: St Martin Press, 1985),p.147.

73. Flight International,No 4423 No 145, June 1-7, 1994, p.17.

74. See NST,n.65.

75. Ibid.

76. Ibid.

77. Ridpath,n.15.,p.110.

78. Ibid.,p.131.

79. Ibid.

MALAYSIA'S DEFENCE POLICY PERSPECTIVE

By Dato' Kamaruzzaman bin Shariff

INTRODUCTION

The main goals of any state are to maintain order within the country's boundaries, to structure relations among the people and to manoeuvre within the international system so as to defend the country's territory and population and expand the economy (Skocpol, 1985: 7-8). These goals indicate an interdependence of national objectives, hence its policies. Security interest is considered as an important component of a country's foreign policy. Likewise, the country's defence policy has to be structured based on the fundamental tenets of the country's foreign policy.

Whilst security interest forms an important component in the formulation of Malaysia's foreign policy, the fundamental tenets of her foreign policy on the other hand, dictate the tenor of her defence posture.

DEFENCE POLICY CONSIDERATION - EXTERNAL FACTORS

The Anglo-Malayan Defence Agreement (AMDA).

Prior to 1957 and even in the years after Independence, Malaysia was still dependent on Britain for safeguarding her security. The Anglo-Malayan Defence Agreement (AMDA) signed with Britain in 1957 demonstrated her continuing reliance on a foreign power to protect her from external aggression. Such a reliance was unavoidable since the Malayan Armed Forces then was not in a position in terms of capability to perform the role of defending the country.

Five Power Defence Arrangements (FPDA).

The British announcement of its intention to withdraw defence commitments east of Suez in the early 70s led Malaysia to recognise the need for a more self-reliant posture to safeguard the country's security. The policy of self-reliance in defence declared in 1970 has since been the main objective of defence development. Despite this posture, Malaysia in 1971 became a party to the Five Power Defence Arrangements (FPDA) together with Britain, Australia, New Zealand and Singapore which provide for a consultative mechanism for the defence of Malaysia and Singapore in the event of external threats or aggression. Malaysia does not view her policy of self-reliance and being a signatory to the FPDA as contradictory. The rationale is that whilst AMDA was an Agreement which entrusted Britain for Malaysia's defence, the FPDA on the other hand is an Arrangement which provides the forum for consultative mechanism should the need arises.

Malaysia's Strategic Interest.

Southeast Asia being the natural neighbourhood of Malaysia, has and will inevitably continue to influence directly and indirectly her security and well-being. Because of her central location in Southeast Asia, Malaysia's strategic interest undoubtedly coincide with those of the other countries in the region. Malaysia therefore has to share the responsibility for defence of certain strategic areas namely the Straits of Malacca, Straits of Singapore and the sea lanes in the South China Sea with some of her neighbours.

Given such a geographical scenario, Malaysia's security is quite indivisible with that of the other ASEAN countries. A threat to ASEAN should also be considered as a threat to Malaysia. Any external aggression on a specific ASEAN country should also be regarded as inimical to Malaysia's security because of the possibility of the conflict arising from such a threat having serious spillover effects in terms of military activity, refugee problems and general socio-economic difficulties.

The Formation of ASEAN (Association of South East Asian Nations).

The formation of ASEAN and the importance given to it by Malaysia is in recognition of this fact. It is also in Malaysia's interest that the region, in particular ASEAN, be allowed to develop in peace. It is thus in the interest of ASEAN to have a strong defence network which would assist

in the process of confidence building among the member countries. Although ASEAN states have recognized the need to help one another in the face of external threat, the idea of ASEAN developing into a military grouping has been studiously shunned as it runs counter to the original ideals of the formation of ASEAN and the concept of ZOPFAN (Zone of Peace, Freedon and Neutrality). In line with the regional parameters mentioned above, Malaysia's emphasis in regional defence cooperation is highlighted as follows:

*   Cooperation should be on the basis of existing bilateral security arrangements or other arrangements mutually agreed upon between malaysia and the other ASEAN countries; and

*   The enhancement of the existing border security arrangements with Thailand and Indonesia should allow for increased bilateral defence cooperation. Bilateral arrangements with Singapore and Brunei would also be increased. The strong bilateral arrangements would weave into a strong regional defence network.

The Global Peace.

As Malaysia's economy expands, it is inevitable that she would have more links, particularly trade links, with the rest of the world. The opening of new markets for her products has broadened Malaysia's interests beyond the immediate vicinity and the region. It is therefore, in Malaysia's interest that global peace be maintained. From another perspective, the end of the Cold War indicates the probability of reduction of tension, rivalry or military conflict between the two superpowers. The peace dividend will benefit not just Malaysia but the region as a whole. Malaysia, however, subscribes to the belief that global peace should be exercised through such instruments as the United Nations.

The Structure of Defence Policy.

The structure of Malaysia's defence policy also takes cognizance of the fundamental tenets of Malaysia's foreign policy. Malaysia's membership in the Non-Aligned Movement and commitment to ZOPFAN in Southeast Asia, were the guiding principles in the formulation of her defence policy. Nevertheless, these principles should not be seen as an obstacle for Malaysia to embark upon active efforts in bilateral defence cooperation and in seeking assistance from the Western powers. Besides, Malaysia should not also feel inhibited and constrained in pursuing active military relationship in terms of acquisition of arms and equipment, intelligence gathering and exchange, training facilities and other military activities with countries which could give constant assurance that our ability to withstand any external

threat would be supplemented by readily available external assistance when the need arises.

In view of this, Malaysia should not feel constrained to become closed militarily with countries both within and outside the region. In order to achieve resilience, both national and regional, Malaysia should be able to develop conditions of political stability, economic viability, social equality and strong defence capability to achieve the ideals of ZOPFAN. Such cooperation however should not lead Malaysia to be drawn into a formal institutionalized military grouping.

A factor which merits consideration under the context of external assistance is the Five Power Defence Arrangements (FPDA). FPDA is the only formal defence arrangement which Malaysia has with extra regional powers. Malaysia will continue to uphold its membership with the FPDA despite the fact that the Arrangements only provide the assurance of consultation in the event of external threat to Malaysia and Singapore. Self-reliance is therefore a necessary policy even with the FPDA.

BILATERAL AND MULTILATERAL DEFENCE ACTIVITIES

In line with the principles of regional cooperation and external assistance, Malaysia translates the bilateral and multilateral defence cooperation into several military activities such as training, exercises, visits and exchange of information and personnel.

General Border Committees.

Malaysia conducts her defence relations with ASEAN countries on a bilateral basis. Whilst the scope of the defence activities are more or less similar (with the exception of the Philippines), the forum of the cooperation however, differs. This would be attributed to historical legacy. With regard to Indonesia and Thailand the security relations are carried out through the General Border Committees (GBC). These Committees were set up in the 1970s with the primary aim of combating the communist threat at the border areas shared by both countries. The GBC also carried out socio-economic activities at the border areas in the hope of detering communist influence then on the local population in the areas concerned.

Both the GBCs have come a long way from its primary aim and function since its inception. To date, the GBC of Malaysia - Indonesia and Malaysia - Thailand have even gone beyond their initial scope of concern i.e. the border areas, to include other security issues which are of common interest and benefits. As an example, besides the

main military operations, the other non-operational activities carried out are, exchange programmes, search and rescue activities as well as procedures to facilitate border crossings. On the other hand, the social economic activities undertaken, have helped to promote confidence building and espirit de corp among the people living along these border areas.

The expansion of the scope of the GBC activities has undeniably enabled the three countries to bilaterally cooperate in defence activities on a wider scope and this has further enabled cooperation and understanding. The GBCs have thus proven their worth by playing a domimant role in the general security cooperation. Hence, despite the subdued communist activities, Malaysia wants this cooperation to continue in the future.

Malaysia's bilateral defence relations with Singapore stems from the FPDA. Due to our geographical proximity the defence of both Malaysia and Singapore was considered as indivisble. In fact the formation of FPDA was based on the posture of the defence of both the countries. From a defence perspective, Malaysia and Singapore have a close bilateral relations and have undertaken many activities, i.e. in the form of exercises (air, land and sea), exchange of officers, individual training between and Armed Forces Colleges of Malaysia and Singapore and other social activities such as visits. Malaysia views the existing cooperation with Singapore to be working admirably well without a need for any formal documentation. At this stage, Malaysia is happy with the present situation.

Malaysia's defence relations with Brunei was formalised with the signing of a Memorandum of Understanding (MOU) in Feb 1992. Although the mechanism of the MOU has yet to be activated and operationalised, this has not hampered the existing bilateral defence activities which are mainly in the areas of training, exercises and visits. It is Malaysia's hope that the current activities could be explored further to enhance bilateral cooperation between the two countries.

Malaysia's defence relations with the FPDA offshore partners, i.e. Britain, Australia and New Zealand has started even before her independence. Being part of the Commonwealth Strategic Forces, the Australian and New Zealand forces were deployed to Malaya then to protect her against external aggression. The strong bilateral relations however were further strengthened as a consequence of the FPDA. With Australia for example, the defence activities undertaken include exercise (air, land and sea), training, exchanges and attachment programmes and bilateral projects. Due to the extensive scope of activities, both countries saw a need to formalise and streamline the bilateral

activities under a formal structure i.e. Malaysia - Australia Joint Defence Programme (MAJDP). Malaysia's bilatleral defence activities with New Zealand and Britain are confined to training, attachments and exchanges as well as annual bilateral exercises.

Besides the above mentioned bilateral activities, Malaysia also conduct bilateral relations with countries such as the United States. These bilateral activities are conducted under the Bilateral Training And Consultative Group (BITACG) which was formalised in 1984. However, taking cognizance of Malaysia's foreign policy at that point of time, the defence bilateral activities with the U.S. were conducted on a low-keyed basis. Nevertheless since then, based on the current global and regional strategic scenario, the general bilateral activities have also developed accordingly. The scope of activities has in fact expanded to include areas such as execises, intelligence, logistic and even commercial cooperation under the BITACG. Malaysia is happy with the present development and hopes that the activities under BITACG would continue to strengthen especially in the areas of commercial defence activities.

Malaysia has also formalised its defence bilateral relations with other countries such as PNG and India. Malaysia signed the MOU with PNG in 1991 and with India in 1993 to pave the way for the enhancement of the bilateral relations between the two countries. In addition, Malaysia also carries out bilateral activities in the form of training and exchange of visits with other friendly countries within and without the region.

Meanwhile the FPDA is the only multilateral arrangement to which Malaysia is a signatory. The FPDA activities initially started with the multilateral air exercise focused on the Integrated Air Defence System (IADS). In the 80s, however, the scope was widened to include maritime and land exercises. Another significant achievement lately was the conduct of the Air Defence (ADEX) and Maritime (STARFISH) Exercise on a back-to-back basis. The FPDA would in the future move towards conducting joint and combined exercises. The series of multilateral air, sea and land exercises have indeed provided the Malaysian Armed Forces the opportunity for testing the interoperatability of weapon systems. The exercises, too, have enabled exchange of knowledge and skills among the military personnel of the respective countries which in turn have led to the creation of harmonious relations.

Malaysia is consciously moving towards an era of further strengthening and enhancing its defence bilateral relations with all friendly countries. The benefits of such an approach are obvious and will directly contribute to the betterment of general bilateral relations.

MALAYSIA'S PARTICIPATION IN THE UNITED NATIONS PEACE KEEPING FORCES

Taking cognizance of the current strategic environment both globally and regionally, and as a furtherance to our foreign policy, Malaysia will continue to support the United Nations peace keeping efforts in making available its Armed Forces to the United nations. It is our hope that such involvement would assist in bringing about international peace and stability. Malaysia does not regard its participation in the UN peace keeping operation principally as a military mission but rather as a political effort to bring about the desired peace.

Malaysia's participation in the UN Peace Keeping Forces dated back to 1960 with the despatch of a Malayan special Force under the UNOC (UN Operation in Congo). To date the MAF has sent its forces to UNTAG (United Nations Transitional Authority Group in Namibia) UNOMOZ (UN Operation in Mozambique), UNIMOG (UN Iran-Iraq Military Observer Group), UNIKOM (UN Iraq - Kuwait Observation Mission), UNOSGI (UN Office of the Secretary General in Iraq), UNAVEM II (UN Angola Varification Mission, MINURSO (UN Mission For The Referendum of Western Sahara) and UNTAC (UN Transitional Authority Cambodia). Lately Malaysia has been invited to make available a Peace Keeping Force for UNOSOM II (UN Operation in Somalia).

CONCLUSION

Malaysia subscribes to the principle that diplomacy has and will continue to be her first line of defence. To ensure its fulfillment, it is pertinent that the formulation of her foreign policy should incorporate all aspects inclusive of political, economic, social and security factors. The complementarity of her defence and foreign policies, especially, will facilitate the attainment of the economic prosperity. In this context, defence policy plays a contributary role in achieving the desired peace. It is undeniable that economic prosperity cannot be attained without peace and stability.

Notes

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Dato' Kamaruzzaman bin Shariff menjawat jawatan Ketua Setiausaha Kementerian Pertahanan mulai 11 November 1992. Beliau berkelulusan B.A (Malaya), Diploma Public Administration (Carleton) dan MPA (Syracuse). Seorang Pegawai PTD yang berpengalaman dan telah berkhidmat di beberapa Jabatan Kerajaan yang penting, di antaranya ialah Jabatan Perdana Menteri dari tahun 1980 hingga tahun 1992

'We believe in the notion of comprehensive security. Domestically, Malaysia must be comprehensively developed, in terms of its economy, politics, social cohesion and its military. Everything depends on striking the right balance"

Datuk Sri Mohd Najib bin Tun Abdul Razak

PRINCIPLES OF WAR IN THE FORMULATION OF DEFENCE POLICY

Oleh Lt Kol Ramli Haji Nik

Defence policy can be defined in general terms as the provision, deployment and the use of military resources to protect and defend the national interest. Therefore, the defence policy of a nation-state is designed to protect the political and economic objectives. In pursuit of this policy, military forces become the major means of achieving the aspired objectives by adopting suitable strategic concepts and force structures. In other words, the capability and credibility of the military forces are certainly the foundation of a coherent defence policy.

This essay attempts to analyze whether adequate attention is given to the principles of war in the formulation of defence policy or concept. To begin with, it is essential to stipulate the principles of war which are adopted by the United Kingdom and the United States military forces. These principles are: *objective or selection and maintenance of the aim; morale; concentration of forces; surprise; security; flexibility; economy of effort; cooperation* (unity of command in the American terminology); *offensive action* (manoeuvre); and *administration or organization*. To what extent these principles are considered in the formulation of defence policy, can be analyzed from two major factors: the concept inclusive of the objective; and the means.

THE CONCEPT AND THE OBJECTIVE

In the formulation of defence policy, political decision makers must explicitly state the specific objectives to be attained, in which military resources would be deployed. The application of the principles of war in accomplishing the objectives can be examined from three different perspectives. To illustrate these concepts, I shall examine the defence policies of the United States and United Kingdom.

Firstly, the United States adopted a limited war concept in the early 1950's, which can be defined as war to be limited in terms of its geographical areas, objectives and type of weapons used. Application of this limited war concept is very important to the United States and the United Kingdom because wars are fought in restricted areas of world's surface, like the Second Indo-China War of 1950's and Yom Kippur War of 1973. Equally impressive, the concept of limited war as pursued by the American security policy during the Korean War of June 1950, demonstrated that the political objectives were more far-reaching than destroying the enemy forces. In this case, even though the American forces had maintained the initiative in pursuing the offensive battles against the Chinese People's Liberation Army until the Yalu river, near the Chinese border, General MacArthur, the commander of the United States military forces in Korea, was prevented by President Truman from pursuing the military objective. In short, the President was seeking the political objective of negotiated peace without using the available military forces. Conversely, the political decision makers did not consider the significance of military objectives which contributed toward the accomplishment of the political goals and interest. As emphasised by MacArthur following his dismissal, *"there is no substitute for victory"*(1), indicated that military planning and decisions had been less important in war time.

However, the limited war concept as pursued by Britain's defence policy, attained the specified objectives and was in consonance with the principles of war as demonstrated in the Falklands Campaign in 1982. In this context, the British defence policy clearly stated that protection and defence beyond the NATO area, which included dependent territories such as Hongkong, Falkland, as well as sovereign base areas like Cyprus, were very crucial. (2) Therefore, the objective of this limited war had been established explicitly that is, to recapture the Falkland islands utilising the military resources in terms of air power, naval power and land forces. In this respect, the principles of war in terms of *offensive action* and *unity of command* contributed enormously in attaining the nation-state's political and economic goals.

The Falklands Campaign illustrated clearly how the offensive action was fully coordinated between the three services of armed forces in which there was no restriction on the use of conventional weapons in the conflict. Indeed, the imposition of a 200 miles Exclusion Zone by the British

military forces was promoted by a number of reasons: to deter Argentine's intrusion; to inflict maximum casualties on the Argentine forces; to gain the Command of the zone; and to define clearly the method of defeating Argentine armed forces on the Islands.

Secondly, the formulation of the North Atlantic Treaty Organization (NATO) and the presence of members' military forces in West Germany are part and parcel of defence policy to prevent war and to maintain the stability in Western Europe.

The concept of forward defence adopted by the NATO forces, affirms the three principles of war, in the planning and formulation in terms of **concentration of force, economy of effort** and **unity of command.** For example, General Haig the former commander of Supreme Headquarters of Allied Power in Europe (SHAPE) adopted the three Rs system (Readiness, Reinforcement and Rationalisation) which included the modernisation and handling of command and control mechanism of allied defence system to reduce wasteful duplication of effort. Also, the close integration of forces in Europe, despite their difficulties in the SOPs (Standing Operating Procedures) and method of deployment and level of training, reflected the salient aspect in attaining a coherent defence policy. In short, Unity of command results in unity of effort by coordinating the creation of all forces towards a common objective. Arguably also the NATO forces represented a high water mark of service integration since World War II, "not only in terms of the land, sea and airforces welded together in the largest joint operation in history, but also in terms of result".(3) In essence, it demonstrates the **economy of effort** (force) in terms of balanced deployment of forces and effective concentration at a decisive time and place.

From another perspective, the concept of forward defence or forward presence is well developed by the United States as indicated in the recent deployment during the Gulf War 1991. Though the United States attained victory in the war because of its superiority in the weapons systems, it highlights two principles of war which have not been given sufficient attention. First, the question of logistics and supply system which are part and parcel of administrative aspect of war, was taken lightly by the policy planners. In the case of operations DESERT SHIELD and DESERT STORM, the United States took nearly three months to build up its logistics base in order to maintain the war. The importance of the supply system was well emphasised by Napoleon, ``*the more I see of war, the more I realize how it depends on administration and organization*".(4)Hence, *administration or organization* is clearly an important component of defence policy. Second, the principle of *surprise* is partially attained in order to shift the balance of combat power. In this case, the Iraqi forces knew that the attack was inevitable, but it was a matter of location of attack. Surprise results from striking the enemy at a time or place in a manner for which he is unprepared. Although the attack caught the Iraqi forces unprepared, it may be argued that the Iraqi army had no will to fight owing to low morale and poor supply system. In short, the outcome of the modern wars as demonstrated in the Gulf War, further accentuated that policy makers must give due consideration to the principles of war while formulating defence policy.

THE MEANS OR FORCE STRUCTURE

In formulating defence policy, the means to attain the objective must be explicitly stipulated in terms of force structure. These means can be in the form of conventional forces or nuclear forces. Moreover, the development of modern technology in weapons systems not only has a great impact on the conduct of war but also influences the means to attain the objective. As emphasised by Micheal Howard, "war is conducted in four dimensions: the operational; the logistics; the social; and technological".(5) Though defence policy objectives can be attained by a number means, this essay will analyze the three major means.

Firstly, the acquisition of nuclear weapons constitutes a means of achieving military credibility, which is considered cheap and effective. For example, in the early 1960s the United States possessed 500 operational long-range ballistic missiles which reached the range of 1,700 miles. Similarly, the Strategic Air Command constituted another means of delivering a quick and concentrated attack against adversary. Application of these forces in war attains the following principles of war: offensive action which maintains the freedom of action; security in terms of deployment; and surprise by striking the enemy at the time and place in which he is unprepared. As stated by Brodie, **"What all this means is that overkilling will be cheap and therefore, according to military considerations normally brought to bear, no longer to be shunned"**.(6) In another words, nuclear weapons give massive concentration, but owing to its complexity and devastating effect, it thus lacks flexibility in terms of utilisation.

Secondly, conventional forces contribute a major means to attain the desired policy objectives because of its highly mobile combat readiness. In this respect, conventional forces are much more flexible than nuclear forces as instruments of defence and diplomatic policy. For example, the presence of British forces in West Germany, is the forward defence of Britain and indeed, is a very effective form of strategy. In the case of the United States, in the early 1960s its military forces were tailored to the strategic retaliatory forces, continental

air and missile defence forces, reconnaissance forces and general purpose forces. Hence the principle of flexibility comes into recognition.

Thirdly, air power, with sophisticated weapon system is another component of defence policy. In this case, the adoption of strong air power as demonstrated during the Second World War strategic bombing over Germany established the importance of air power as a means to attain the political objectives in war. This is well emphasised by Air Chief Marshall Arthur Tedder after the Second World War, *".... given centralised control of airforce, this flexibility brings with its an immense power of concentration which is unequalled in any form of warfare"*. (7) On the same basis, the roles played by the air power in the Gulf War 1991, gave the unprecedented victory to the United States. In short, acquisition of nuclear forces, conventional forces capability, and air power not only complements the principles of war but also constitutes important means of defence policy.

The analysis has discussed the importance of military factors and how much emphasis has been given on the principles of war in formulating defence policy. Clearly the emphasis is more

towards achieving the political and economic objectives as indicated by the military forces as the instrument of policy. However, in pursuit of this concept, the policy makers consider only some aspects of the principles of war, particularly in terms of maintenance of the specific objectives and cooperation or unity of command. Arguably also, the economy of effort becomes crucial in terms of force structure and defence expenditure.

Other aspects such as, the political influence and economic strength play an essential part in formulating the defence policy. In the case of forward defence policy, the method of supply system and logistic requirement, is given less emphasis in peace time. However, the central defence organization (Higher Comd) produces strategy and doctrines, which translate into size and force deployment for military operations and directly highlight the three important principles of war: *unity of command; concentration of force; and administration or organization.* Finally, the means to achieve the objectives of defence policy normally are in consonance with the capabilities of the military forces which is determined further by the political and economic interest.

Footnotes:

1. Bordie B Strategy in the Missile Age, Priceton University Press (NJ) 1st Ed 1971 pg 315

2. MOD British Defence Policy 1990 - 1991

3. Lider J "Military Theory", Gower Publication (UK) 1st Ed 1983

4. Dupuy T N "The Evolution Of Weapons And Warfare", Jane's Publication (UK) 1st Ed 1983 pg 108

5. Howard M "British's Defence Policy" in RUSI Sept 1970 pg

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"Diplomacy or War - the aim is still the same"
Genghis Khan

THE BATTLE FOR THE FALKLANDS
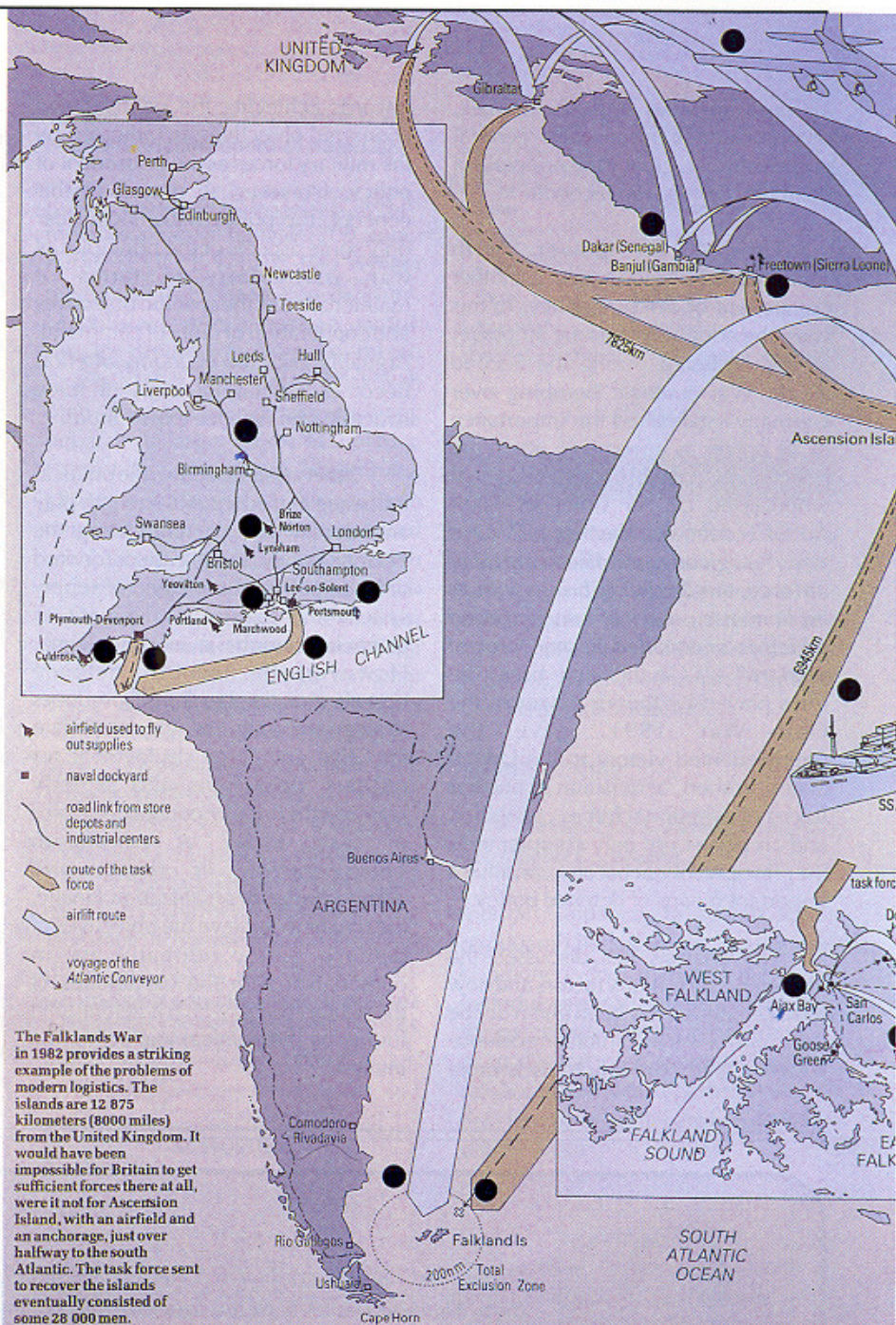
By Lt. Kol Mohd Zain Bin Hamzah

Map legend:

- airfield used to fly out supplies
- naval dockyard
- road link from store depots and industrial centers
- route of the task force
- airlift route
- voyage of the Atlantic Conveyor

The Falklands War in 1982 provides a striking example of the problems of modern logistics. The islands are 12 875 kilometers (8000 miles) from the United Kingdom. It would have been impossible for Britain to get sufficient forces there at all, were it not for Ascension Island, with an airfield and an anchorage, just over halfway to the south Atlantic. The task force sent to recover the islands eventually consisted of some 28 000 men.

SYNOPSIS

This article on the Falklands War will highlight some aspects of responsibilities and decision-making process at national/strategic and operational level of command of the British side during the Falkland crisis. The British chain of command and control of OPS CORPORATE is discussed and comparison made with the ATM command and control organization for joint operations. Both command and control structures are almost the same. The FRANK REPORTS on the Falklands crisis reveals the failure of the British intelligence agencies in providing correct intelligence assessment of the threat to the Falklands before the invasion and the inadequacy of contingency plans for the defence and recapture of the Falklands.

INTRODUCTION

The dispute over the Falklands between Britain and Argentina could be traced back to late 1700s and both countries had not renounced it since. In 1965 the United Nations passed a resolution calling for both Britain and Argentina to find peaceful means of settling their disputes. The negotiations between these two countries dragged on for almost 17 years without any political settlement. The war finally broke out on 2 April 1982 when the Argentina Armed Forces invaded the Falklands and a day later extended their control to South Georgia. Britain responded by sending a Task Force to South Atlantic and repossessed South Georgia on 25 April and the Falklands on 14 June 1982.

Many books and journals had been written after the war describing the way British political and military leaders handled the Falklands crisis. There were pros and cons to the way the British leadership reacted to the Falklands crisis before and during the war. Max Hastings and Simon Jerkins[1] in their book "THE BATTLE FOR THE FALKLANDS" had given an analysis on the political and military intricacies at home in London and in the South Atlantic where the war was fought.

The aim of this paper is to highlight the responsibilities and decision making process of the British political leaders and military commanders at strategic and operational level based on accounts by Hastings and Jerkins.

THE BRITISH DEFENCE POSTURE BEFORE THE FALKLANDS WAR

Britain's reaction to Falklands crisis before the outbreak of war could influenced by her defence posture. Since the 60s Britain's defence policy had changed drastically with the reduction of her defence commitment overseas. From then on priorities were given to the defence of homeland and commitment to the defence of Western Europe under NATO. Most of the fixed-wing aircraft carriers were taken out of service except the HMS HERMES and HMS INVINSIBLE which were retained. These two carriers each carried a limited number of Sea Harriers for countering the Soviet aircraft trying to shadow movements of British Fleets in the Atlantic and Mediterranean. As a result British fleets at sea would have to depend on shore-based aircraft or aircraft from United States carriers for air supports. Besides, most air defence equipment on board war ships were also tailored toward dealing with Soviet missiles launched from air, ships or submarines. In fact the tactical doctrines and training for all services then were geared at meeting the Soviet threats in Western Europe.

When the Argentine Forces invaded the Falklands the British Forces and their equipment were not quite ready for fighting in such a hostile environment in South Atlantic. To make matters worse, there was hardly a specific and comprehensive contingency plan formulated for the recovery of the Falklands because it was considered too difficult and expensive to implement.[2] Because of this the British task Force had experienced enormous logistical and operational problems which contributed to their heavy losses during the war to recapture the Falklands.

COMMAND AND CONTROL

The command and control structure of the British task Force during the crisis had to be discussed to show various personalities responsible for the command and control at strategic, operational and tactical level. This command structure is shown below at Figure 1.
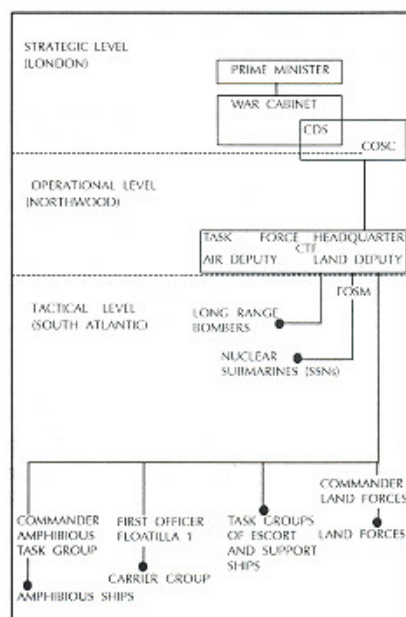

FIGURE 1. BRITISH CHAIN OF COMMAND DURING THE FALKLANDS CRISIS

Higher Command Arrangement At National/Strategic Level. At the outbreak of the Falklands war the Prime Minister, Mrs Thatcher formed a small War Cabinet chaired by her to provide political directions for the conduct of the campaign(3). The Chief of Defence Staff CDS) ADML Terence Lewin though not a full member attended meetings of the War Cabinet by virtue of his additional roles as principal advisor to the Secretary of States for Defence and to the British Government. His responsibilities included the conduct of the joint operations by the British Task Force. At Ministry of Defence, the CDS was the chairman of the Chief of Staff Committee (COSC). He used this committee to obtain opinions and advice from the three Service Chiefs (Army, Air Force and Navy) on matters to be brought before the War Cabinet. At the same time he briefed members of COSC on the War Cabinet proceedings. He had to translate all political directives into military requirement and used this forum to pass operational directives down the chain of command to subordinate commanders at operational level.

The Operational Command Arrangement.

The operation to repossess the Falklands was code-named OPS CORPORATE and the command of the Task Force was given to AML John Fieldhouse, the Commander - In - Chief Fleet (CINC FLEET). He was given two deputies, the Officer Commanding 18 group RAF AM Sir John Curties as the air deputy and Maj Gen Jeremy Moore as land deputy (Moore was later replaced by GOC South East District when he went ashore to establish his HQ on the Falklands on 30 April 1982). Co-located at Northwood was the Flag Officer Submarines (FOSM). The Commander Task Force (CTF) through FOSM retained the command and control of all submarines involved in the war at all time.

Tactical Command Arrangement

The command and control at tactical level operations was given to Flag Officer First Flotilla (FOF 1) RAMD Sandy Woodward. He commanded all units of South of Ascension except ships submarine Nuclear (SSNs) and the operations to repossess South Georgia which were commanded and controlled directly by the CTF at Northwood. As the battle progressed the command of Amphibious Group was given to CDRE Clapps who flew his flag on HMS FEARLESS. He was responsible direct to the CTF once landing area of amphibious forces was established on the Falklands and command within this landing area was solely exercised by him. Similarly when established ashore command and control of land forces was exercised by Maj Gen Jeremy Moore. All these tactical commanders were answerable direct to the CTF at Northwood.

The British chain of command worked extremely well from the beginning to the end of the crisis although lines of communication from London to the Falklands was over 8000

miles. This was made possible due to the clear subdivision of responsibilities and command and control of OPS CORPORATE at strategic, operational and tactical level.

RESPONSIBILITIES AND DECISION MAKING PROCESS

At National/Strategic level

Whenever tension or dispute arises between two countries it is the responsibilities of the respective head of government to negotiate and find ways and means to achieve political settlement. Should negotiations fail the responsibilities whether to resort to the use of national power including military power are also with the head of the Government. In the case of the Falklands crisis Mrs Thatcher and the head of Argentine ruling Junta, General Galtieri were both responsible for the failure to achieve peaceful political settlement and resorting to the use of military forces to gain control of the Falklands.

On the British side the process of decision-making practised by Mrs Thatcher was as expected of a democratic government, based on consensus of opinion of members of the cabinet. Earlier in the crisis, before she formed the War Cabinet, she made political decisions affecting deployment of military forces only after consultation and discussion with relevant ministers and senior officers such as the Secretary of State for Foreign Affairs, Secretary of State of Defence and the First Sea Lord ADML Henry Leach (in the absence of the CDs who was away overseas). This was evident when she decided to send HMS ENDURANCE from Port Stanley, Falklands to South Georgia on 20 March 1982 with 22 Royal Marines personnel on board to protect civilians working at British Atlantic Survey Station at Grytviken.[4] Again on 28 March 1982 when she was informed that invasion by the Argentine Forces was imminent

she discussed with members of the War Cabinet before deciding to despatch three nuclear submarines (SSNs) to South Atlantic.[5] The three submarines HMS SPARTAN, SPLENDID and CONQUERER left for South Atlantic separately and the first submarines HMS SPARTAN arrived at the Falklands on 12 April 1982. Similarly, a major decision to send a Task Force to repossess South Georgia and the Falklands was made on 3 April 1982 after a lengthy debate in Parliament.

Mrs Thatcher as a leader of Conservative Party and Prime Minister emerged from the war as a remarkable war leader. She never flinched from her conviction of the cause of war. She took the risks and won the gamble. Her personality, her single mindedness and belief in the futility of political negotiations drove her to take risks and accept the responsibilities. Britain's success in the campaign had boosted up her image and enhanced her position as a leader of ruling political party and head of British Government.

The CDS, ADM Terence Lewin on returning from an overseas visit got on with the job and attended regular meetings of the War Cabinet. Here he provided military professional advice on behalf of the Service Chiefs and through the COSC passed downward the decisions of the War cabinet to the operational commander. It was due to his ability to translate political directives into the military requirements that made it easy for subordinate commanders to execute the decisions. His greatest asset was his clarity of thought and realism which assisted the politicians in making decisions and providing clear aims. Throughout the campaign he followed strictly to the chain of command and seldom interfered with jobs of subordinate commanders.

At Operational Level

The Commander of Task Force

ADML John Fieldhouse was able to formulate his concept of operations without interference from the top and his operational plan was brought up before the War Cabinet through the CDs. Although the distance from London to Ascension was over 4000 miles he flew to the island and later to HMS HERMES to meet his subordinate commanders. He made them acquainted with his overall thinking and at the same time sought their views. As CINCFLEET there was no doubt that he contributed a great deal in the quick assembling of the Task Force and its subsequent despatch to South Atlantic in short space of time.

WHAT COULD BE LEARNED FROM BRITISH EXPERIENCE

The Argentine Forces surrendered at Port Standley on 14 June 1982. Immediately after regaining control of the Falklands the British Government set up a commission to analyze and report on the crisis. One such report known as 'FRANKS REPORT' was published in January 1983. [6] There were few aspects in this report relevant to Malaysia particularly in dealing with security of territories in east Malaysia with overlapping claims. These aspects were the command and control of joint operations, the intelligence assessment and the contingency plans.

Command and Control

The Malaysian Armed Forces (MAF) has its own higher command and control organization for joint operations. The MAF organization is almost similar to the British command and control organization of the Task Force (Figure 1) except that instead of the War Cabinet we have the National Security Council (NSC/MKN). The Chief of Staff Committee, in the Malaysian context is represented by the Jawatankuasa Panglima Panglima. The command and control organizations at operational and tactical level are flexible depending on categories of

operations whether it is single service or joint operations.

Intelligence Assessment

In the case of the Falklands, there were intelligence assessments made by various intelligence agencies on the threat posed by Argentina. However, none suggested that the invasion would take place except for one assessment made in the morning of 31 March 1982 which merely did not rule out the possibility of Argentina escalating the situation by landing a military force on South Georgia or the Falklands. In spite of this warning many still felt that Argentine Government would not wish to adopt such a forcible measure. In this case they were wrong, the invasion did take place on 2 April 1982 and caught the British by surprise.

Contingency Plans

In 1981 the British prepared civil and military contingency plans providing various options available in response to possible aggression by Argentina. To implement those plans it would cost the Government so much and this had put many political leaders in a dilemma. However when the invasion took place Mrs Thatcher and her War Cabinet succeeded in obtaining overwhelming support from British Parliament to go ahead with the plan to despatch a Task Force to repossess the Falklands. The 'FRANK REPORT' indicated that the British military contingency plans were not comprehensive enough, but due to capable leadership and close cooperation at all levels the Task Force was speedily assembled and set sail to South Atlantic in a short space of time. Malaysia should take note of this and formulate comprehensive contingency plans which include both civil and military options in response to any aggression against our territories. These contingency plans must be coordinated at strategic level because of involvement of both civil and military apparatus.

CONCLUSION

Britain came out as a victor in the Falklands war in spite of heavy odds. This was part of the result of simple politic-military chain of command from the War cabinet down to the tactical level. The political decisions were clear and the decision-making process was based on consensus of opinions. The higher command seemed sensitive to the problem faced by operational and tactical commanders and they were seldom inhibited through lack of political will and decision. The chain of command as practised by the British in the Falklands War and the process of decision-making at each level should serve as a reference to us.

Notes

1.Max Hastings was a war reporter in the Middle and Far East. He sailed with the British Task Force to the Falklands and landed on the island with the first helicopter that touched down. He marched with the leading company of 2 Para to Port Political Editor to 'The Economict'.He wrote his report based on information obtained from Ministry of Defence (whitehall) London and also from Washington. The book THE BATTLE FOR THE FALKLANDS was published in Great Britain in 1985 by Richard Clay Ltd.

2.View given by Naj Gen Carton-Smith (British Army Senior Officer) in his address to JSSC Australia in 1985.

3. Other members of War cabinet:
    a. Deputy Prime Minister/ Home Secretary
    b. Foreign Secretary
    c. Defence Secretary
    d. Permanent Secretary Foreign Office
    e. Head of Cabinet Ofice
    f. Chairman of Consevative Party
    g. The CDS (not a full member)

4. Hastings and Jenkins, The Battle for the Falklands pg 55

5. Ibid pg 60

6. Ibid pg 365 Annex C

Lt Kol Haji Mohd Zain bin Hamzah was commissioned into RAJD in 1964. He held various command and staff oppointments in units, formation headquarters and Engineer Directorate. He was as DS at MTAT from 1983 to 1986 and MA to Defence Minister from 1987 to 1989. He attended Advanced Engr Officers course in USA, MOAR Course at Royal Military College of Science UK and the JSSC in Australia. His current appointment is the Commanding Officer of Markas Jurutera (SP). Previous article by him published in SOROTAN DARAT was on 'MINE STOPPING POWER'.

`When we talk of National Security, we talk of the five basic components eg:

a.   Economic Defence.
b.   Social Defence.
c.   Psychological Defence.
d.   Political Defence.
e.   The Military Defence.

These five Major components must be given equal emphasis in term of development particularly Military Defence, for Military Defence forms the corner stone in our National Defence policy for deterrence'

JenTan Sri Borhan bin Haji Ahmad

Academic excellence alone, does not guarantee a good all round officer. It takes more than that....
Do our officers possess strength of character ?

Do they have the genuine interest in the men under them ?
Do they care for their subordinates ?
Do they elicit from them their performance ?
Do they set high standards of personal example ?
Can they work as members of a team ?

To me, exellence means all of these plus academic qualification.

Jen Dato' Ismail bin Omar.

" Commanders should be counselled, chiefly, by persons of known talent, by those who have made an art of war their particular study, and whose knowledge is derived from experience; from those who are present at the scene of action, who see the country, who see the enemy, who see the advantages that occasions offer, and who, like people embarked in the same ship, are sharers of the danger ". **Lucius Acmilius Paulus, Roman consul who led victorious campaign against the Macedonians**

MISIL BALISTIK DUNIA KETIGA MISIL SCUD

Oleh
Mej Nordin Bin Hj Salleh

PENDAHULUAN

Semenjak bermulanya dari zaman Peperangan Roman lagi manusia telah saling berlumba-lumba untuk mencipta satu sistem persenjataan yang berupaya membawa projektil-projektil kesasaran dan mengurangi risiko kecederaan terhadap pasukan sendiri. Lastik besar dan meriam-meriam telah digunakan untuk melontar bola-bola batu atau besi serta bahan letupan ke arah kubu-kubu untuk meruntuh atau mencederakan penghuninya. Perkembangan sistem persenjataan berjalan seiringan dengan tercetusnya peperangan samada ia peperangan kecil-kecilan di Eropah ataupun Peperangan Dunia. Langkah pembaharuan yang ketara telah dilakukan oleh Tentera Jerman di dalam Peperangan Dunia Kedua, di mana roket-roket telah dicipta untuk tujuan di atas. Ahli pakar reka dan bapa kepada perkembangan roket Jerman adalah Wernher Von Braun dan di era itulah roket-roket seperti V1 dan V2 telah tercipta. Dari zaman itu hingga peperangan terkini seperti Perang Teluk, roket-roket telah menempuhi banyak perubahan dan perkembangan dari segi reka bentuk, jarak, bahan pemusnah yang dibawa serta sistem kawalannya. Ia telah digunakan dengan meluas dan amat berkesan samada untuk kemusnahan fizikal secara menyeluruh ataupun terbatas. Salah satu daripada sistem persenjataan yang telah direka adalah Misil SCUD.

PERGERTIAN

'SCUD' adalah nama yang diberikan oleh North Atlantic Treaty Organization (NATO) terhadap senjata
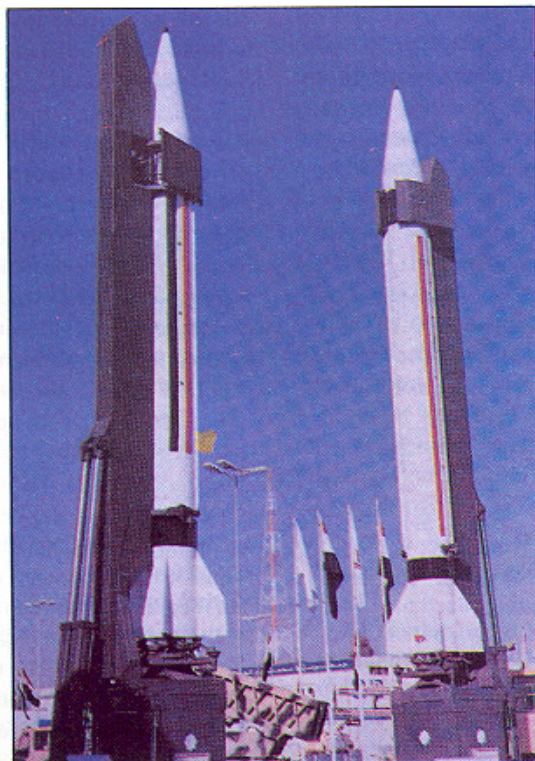
SCUD A	
Ukuran Kaliber	850 mm
Panjang	10.5 m
Berat	4500 kg
Bahan Pembakar	Unsymmetrical Dimethylhy-drazine Nitric Acid
Tahap Pelancaran	Satu Tahap
Kawalan	Gyro Stabilizer
Jarak	150 km
Isian	Nuclear/Conventional
Tiub/Rail	Satu
C.E.P.	450 m
(Circular Error Perpendicular)	

Rajah 1

SCUD B	
Ukuran Kaliber	850mm
Panjang	11.0 m
Berat	6370 kg
Bahan Bakar	Unsymmetrical Dimethylhdrazine Nitric Acid
Tahap Pelancaran	Satu tahap
Kawalan	Inertial
Jarak	280 km
Tiub/Rail	Satu
Isian	Nuclear/Chemical Conventional
C.E.P.	900 m

Rajah 2

misail jarak dekat buatan Union Socialist Soviet Russia (USSR) (USSR bubar pada tahun 1990). Ia pertama kali diperlihatkan kepada umum semasa ujian perlancarannya di State Central Prooving Ground, Kapustin Yar, USSR pada tahun 1957. Nama asal yang diberikan adalah SS-1 dan digelar sebagai 'SCUD A'. Reka bentuknya adalah berdasarkan kepada pembuatan misil model R300 atau R17 yang biasa digunakan oleh Pakatan Warsaw (Pakatan Warsaw bubar pada tahun 1989). Sistem misil SCUD A ini dibawa oleh kenderaan pelancar JS 111, ia mengambil masa kira-kira satu jam sebelum dapat dilancarkan kerana ia memerlukan berita kajicuaca dan pengisian propalen cecair dari tangki yang berasingan. Sistem kawalan adalah dengan kawalan 'radio command' dan gyro stabilizer seperti A-4 CORCOROL dan ia tidak ada kawalan trajektori selepas pelancarannya. Ia beroperasi dengan pasukan roket USSR sehingga tahun 1972. Data Teknik SCUD A adalah seperti di rajah 1.

Di samping menggunakan SCUD A, pembangunan misil tersebut telah terus dilaksanakan dan pada tahun 1962 SCUD B atau SS-1C telah tercipta. Ia adalah lebih panjang dan menjangkau jarak yang lebih jauh. Ia pada mulanya dibawa oleh kenderaan pelancar JS 111 tetapi ia telah diubahsuai dan dibawa oleh kenderaan pacuan 8 roda MZ543. Ia adalah lebih laju dan ringgan jika dibandingkan dengan kenderaan JS 111. Peningkatan juga dibuat terhadap sistem arahan kawalan dalamnya. Ulang bekal misil boleh diperolehi dari kenderaan penarik ZIL - 157 dan ia akan diletakkan ke atas pelancar MAZ 543 oleh URAL - 375 Track Crane Mounted (8T210). Ia juga masih memerlukan data-data kajicuaca untuk pelancarannya. Penggunaan senjata Misil SCUD B ini adalah meluas, ia dipunyai oleh kebanyakan negara-negara bekas sekutu USSR dalam Pakatan Warsaw, negara-negara Timur

Tengah dan Korea Utara. Data Teknik SCUD B adalah seperti di Rajah 2.

Pada tahun 1986 USSR telah membekalkan sebanyak 300 buah misail SCUD B kepada Iraq semasa memuncaknya Perang Iraq dan Iran. Modifikasi pembaharuan untuk meningkatkan keupayaaan misail tersebut telah tidak dapat dilakukan oleh Iraq kerana kepakaran yang terbatas, ia telah meminta bantuan Korea Utara dan Jerman Timur untuk proses peningkatan keupayaan tersebut. Proses penghantaran misail oleh USSR ke Iraq tersebut telah dibantah oleh International Nuclear Force (INF) kerana menyalahi perjanjian yang telah termenterai. Pada tahun 1987 pembaharuan terhadap SCUD B telah dilakukan oleh Iraq dengan memperolehi kelebihan pada jarak dan pengurangan pada isian yang dibawa, modifikasi pertama ini telah menghasilkan misail AL HUSSIEN. Modifikasi kedua telah dilakukan pada tahun 1988 dan ia telah menghasilkan AL ABBAS yang mempunyai jarak yang lebih jauh. Kos perbelanjaan modifikasi ini adalah mahal jika dibandingkan daripada kos pembeliannya. Data-data Teknik AL HUSSEIN dan AL ABBAS adalah seperti di Rajah 3 dan Rajah 4.

AL HUSSIEN	
Panjang	12.2 m
Isian	Nuklear 500 kg
Jarak	650 km
C.E.P.	1600 m ke 3200 m
Berat	7000 Kg
Kawalan	Inertial

Rajah 3

AL ABBAS	
Panjang	13.75 m
Isian	Nuklear 300 kg
Jarak	900 km
C.E.P.	3200 m ke 4800 m
Berat	8000 kg
Kawalan	Intertial

Rajah 4

SISTEM REKABENTUK MISIL

Di dalam rekaan misil SCUD ini terdapat 4 elemen penting bagi tujuan keupayaan operasi sistem tersebut, ia merangkumi elemen-elemen Sistem Arahan (Guidance), Sistem Kawalan (Control), Bahan Pemusnah (Warhead) dan Penggalak (Booster).

Sistem Arahan

Ia berfungsi secara Inertial Guidance atau Radio Command.

Inertial Guidance. Ia adalah sistem panduarah berkomputer. Komponen-komponen akan memberi maklumat kedudukan misail dalam penerbangan selepas dilancarkan. Jarak penerbangan akan disukat oleh Inertial Guidence dan kesalahan akan diperbetulkan oleh accelerometer. Ia di gunakan di dalam sistem Misil SCUD B.

Radio Command. Sistem ini memerlukan bantuan sistem dua transmitter di bumi. Receiver di misil akan menerima isyarat radio yang dihantar dan ia akan mengukur masa dan memberi jarak penerbangannya. Kaedah ini ada di dalam Versi Sistem SCUD A.

Sistem Kawalan

Sistem kawalan bertujuan untuk mengemudi penerbangan misil kesasaran semasa diterajektorinya. Ia

berfungsi untuk menstabilkan penerbangan misil supaya ia tidak akan mengalami pergerakan jawwing, pitching atau rolling. Ia berfungsi terus menerus di dalam melakukan pembetulan. Bagi tujuan itu sistem kawalan Misil SCUD ini mengandungi elemen-elemen seperti Elektrikal, Elektronik, Elektromeknik, Pneumatik dan Hidrolik. Semua elemen telah disusun rapi menjadi satu sistem yang berfungsi sebagai sistem kawalan utama. Di dalam sistem kawalan ini juga terdapat satu sistem sensor yang berfungsi untuk mengesan penyimpangan terhadap pergerakan misil yang telah dijelaskan. Ia dilengkapi dengan peralatan sistem Gyroscope, Altimeter dan Transducer.

Bahan Pemusnah

Perkara pokok terhadap semua pembinaan roket atau misil adalah keupayaannya untuk memusnahkan sasaran. Bahan pemusnah yang berbentuk samada Nuclear, Conventional atau Chemical boleh dibawa oleh sistem ini. Pemilihannya adalah terpulang kepada perkiraan keadaan dan strategi yang perlu dicapai. Bahan Pemusnah ini mencakupi 4 komponen utama iaitu Muatan (Payload), Fius (Fuze), Sistem Keselamatan (Safety Devices) dan Makenisma Tindakan (setting Mechanism). Muatan pula merangkumi komponen-komponen Pemula (Initiator), Penggalak (Booster) dan Cas Utama (Main Charge).

Rekabentuk Pembuatan dan Beban

Pada asasnya rekabentuk senjata tersebut adalah didasarkan kepada masalah kestabilannya semasa penerbangan. Air frame dibentuk supaya rintangan udara yang terjadi adalah terlalu minima agar jarak, kepantasan dan ketepatan dapat dicapai. Air frame itu mestilah ringan dan kuat. Ia perlu kerana beban yang akan dihadapi oleh sesebuah misil atau roket semasa penerbangan adalah merangkumi beban thrust hadapan dan motor beban tujah, beban di setiap bahagian dan permukaan badan semasa percepatan, pengangkatan dari kawalan, kuasa tekanan tempatan permukaan disebabkan oleh pergerakan melalui udara dan beban pengangkutan.

Prinsip-Prinsip Perejangan SCUD

Di dalam sistem misail SCUD ini bahan api yang digunakan bagi propalen adalah campuran Unsymmetrical Dimethydrazine dan Nitric Acid. Bahan api ini akan disalurkan ke dalam ruang pembakaran dan gas yang terhasil akan memancut keluar melalui ekzos pada had laju yang tinggi. Dalam hal ini 3 kaedah terjadi seperti pembuangan jisim (gas ekzos) lebihan booster dan menjadi satu letupan, jumlah momentum diabadikan dalam satu proses letupan dan momentum ke belakang akan menghasilkan satu momentum ke hadapan yang sama magnitudnya. Jisim gas yang terbuang ke belakang akan menghasilkan satu momentum yang amat besar dan menolak objek kehadapan, semakin jauh penerbangan dari bumi pacutan penerbangan misil akan bertambah kerana jisimnya berkurangan, rintangan udara semakin berkurangan dan daya tarikan graviti berkurangan.

KEUPAYAAN DAN KELEMAHAN

Setiap sistem misil samada ia adalah dalam bentuk kawalan yang canggih ataupun kurang canggih mempunyai keupayaan dan kelemahan tersendiri. Keberkesanan tindakan terhadap sasaran adalah tertakluk kepada beberapa faktor balistik dalaman dan luaran

Keupayaan

Kemusnahan.

Pada awal pembinaan senjata SCUD A dahulu USSR telah mengambil Misil LANCE, Amerika Syarikat sebagai perbandingan. Maka ciri-ciri pembuatan seharusnya dapat memenuhi keupayaan seperti keberkesanan kemusnahan, jarak yang jauh hingga mencapai 300 km dan menggunakan propelan cecair yang senang diisi serta dapat membawa perisian bahan pemusnah yang berbilang. Penerbangan dapat dikawal dengan mudah dan stabil serta hanya memerlukan satu tahap pembakaran motor semasa penerbangannya. Berbagai-bagai perisian dapat dibawa oleh SCUD B tergantung kepada keupayaan negara pengguna dan peningkatan teknologinya. Ada dilaporkan bahawa sesebuah SCUD B boleh dimuatkan dengan 40 butir bahan letupan penembus landasan, periuk api anti personel, perisian nuclear ataupun kimia. Purata kejituan terhadap sasaran adalah sekitar 450 C.E.P.

Mobiliti

Sesebuah misil SCUD yang dibawa oleh pelancar yang mobil adalah amat susah dikesan, tidak ada bukti nyata bahawa Tentera Bersekutu telah berupaya memusnahkan senjata SCUD yang ditempatkan di pelancar bergerak Iraq. Sehingga peperangan tamat masih terdapat banyak senjata SCUD yang tersembunyi ditemui oleh pakar-pakar INF semasa pemeriksaan. Ini membuktikan bahawa senjata ini adalah satu aset yang amat berguna dan strategik. Keberkesanannya amat ketara dan nyaris membawa kepada satu peperangan yang mungkin susah diuruskan jika Israel terlibat. Kesan terhadap moral tentera bersekutu adalah amat jelas dengan hanya sebutir dua sahaja misil dilancarkan ia dapat mengakibatkan kesan yang mendalam.

Kelemahan

Teknologi. Tidak dapat dinafikan bahawa misil ini mempunyai sistem teknologi yang agak terkebelakang jika dibandingkan dengan persenjataan Tentera Bersekutu. Beberapa misil telah dapat dipintas dan tidak berupaya mempertahankan diri oleh disebabkan tidak terdapat sistem tindakan balas yang disertakan.

Ketepatan. Ketepatan senjata SCUD ini adalah masih diragui dan perlu peningkatan, daripada sejumlah misil yang telah dilancarkan hanya beberapa buah sahaja yang mengenai sasaran dan mengakibatkan kemusnahan. Ini mungkin disebabkan oleh sistem arahan dan kawalan persenjataan itu di mana ia adalah masih terkebelakang dalam aspek teknologinya.

PENUTUP

Telah dapat dilihat dan dibuktikan oleh Iraq bahawa satu sistem persenjataan yang sederhana canggih dan tidak terlalu kuno dapat mengimbangi kemampuan persenjataan Pasukan Bersekutu. Walaupun ia tewas tetapi dengan adanya sistem Misil SCUD itu dunia telah mengambil langkah-langkah yang drastik untuk mencegah sesebuah negara itu dari mempunyai persenjataan yang berupaya untuk melaksanakan kemusnahan yang besar (weapon of mass destruction). Korea Utara telah ditekan dengan diarah mematuhi perjanjian INF dan harus membenarkan pemeriksaan dilakukan terhadap loji-loji pembuatan senjata di atas. Ini sudah cukup untuk memperlihatkan betapa berkesannya keupayaan pencegahan yang dapat dilakukan jika sesebuah negara itu mempunyai keupayaan tersebut.

Mej Nordin bin Hj Salleh bekas penuntut Putra MTD telah ditauliahkan pada tahun 1979 ke dalam Kor Artileri Di Raja. Beliau telah menjalani kursus 'Officer Gunnery Staff' di Pakistan pada tahun 1984 dan lulus Maktab Turus pada tahun 1992. Beliau kini adalah Jurulatih Kanan Cawangan Meriam Medan di Sekolah Artileri Port Dickson.

"For the modern generation; do not try to run your units as a leader of a business cooperation based on computer design decision. This will destroy military values and traditions. Good business practice can only be applied to the designs and purchases of military hardwares and not to command men....... Here you are dealing with lives and not toys....... but at the same time learn the new.

Mej Jen (B) Dato' Mohd Yusof Din -(extract from Sorotan Darat article 1985)

TRACKS VERSUS WHEELS IN THE MALAYSIAN TERRAIN

By Kapt. Lim Cheng Huat

Synopsis

Following the advent of eight wheelers like the South African ROOIKAT, French Panhard ERB, Italian Centauro B1 and the mowag Shark or even the six wheeled AMX 10RC, the prospects of mounting heavier fire power and better armoured protection on wheeled vehicles seems ever more promising. This paper will address the advantages or vice versa offered by tracked and wheeled armoured vehicle in relation to their employment in Malaysia.

INTRODUCTION

The choice between the tracked and wheeled armo ured vehicle have traditionally been an emotional issue between major armoured vehicle producing consortiums and users alike. This disparity is also prevalent within the Malaysian Armed Forces (MAF) especially when referring to the mobility of such vehicles in the Malaysian terrain. Traditionally, development and technology of track vehicles have been confined within the military while wheeled armoured vehicles have often borrowed know-how from the development of vehicles for commercial use. The emergence of wheeled vehicles like the Cougar, Piranha, Saladin, LAV-25, Ratel and the TH 400 suggests renewed interests and trends towards wheeled armoured vehicles. In this article, the term track layers would be used to denote tracked vehicles and discussions would be focused on the prime factors governing the choice between these two. Thus the scope will include:

❑ Mobility
❑ Survivability
❑ Costs
❑ Verdict
❑ Conclusion

MOBILITY

As applied to armoured vehicles this aspect encompasses three fields:

Strategic Mobility. This involves movement between theatres of war. Such movements may be by air, sea or land and the restrictions imposed are chiefly on dimensional cross section and weight as this involves transportation of vehicles either by sea going surface crafts, aircrafts or land means such as tank transporters, low loaders or by rail. In view of this, the French equipped the Light Armoured Division in the Force d'Action Rapide with the wheeled AMX 10 RC which mounts a 105mm cannon. The vehicle boasts readily available Strategic Mobility - providing the firepower enjoyed by tanks without the hassles of requiring separate transportation. It is believed that for this very reason, Australia acquired the LAV - 25 for rapid reaction to her vast land masses. Contrary to myth, military track layers seldom if ever damage the surfaces of tarmac roads due to rubber padding fitted. At most they leave very light imprints or scarring; the transportation need by track layers is more so to reduce costs from track wear (usually about 1000 km of track life, as opposed to the 20 000 km life of wheels) and to ensure that vehicles on arrival at their intended destination perform effectively.

Tactical Mobility. Movement within a theatre of operation. As mentioned track layers will need to be moved either by rail or on tank transporters if land movement is intended. The edge wheeled Armoured Fighting Vehicles (AFVs) possess over the track counterparts lies with the former as it merely needs to be driven directly to an intended tactical area of operation setting aside other factors. The question of crew efficiency in battle on arrival after a long journey will then be another point to dwell on. In tactical mobility, considerations need to be given to:

○ Bridges -class, weight and dimensions.
○ Roads - width, carriage ways, side lanes, obstacle along the in tended routes (canals, rivers, tun nels and over head barriers).

Battlefield Mobility. This may be interpreted as the agility of armoured vehicle. Agility is also sometimes defined as the state of nimbleness and speed of a vehicle in respond to the driver's control. It is obvious here that the agility of armoured vehicles depends highly on the power train fitted and the running gears design. To help
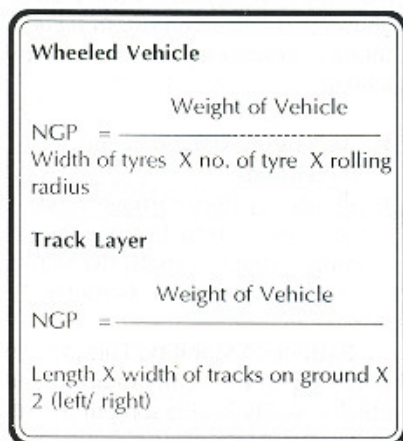
appreciate the problem it may be of interest here to mention that a typical battlefield day of front line armoured vehicles consists of:

- [ ] 20% road travel
- [ ] 40% cross country
- [ ] 40% idling

Net Ground Pressure (NGP)

Based on the facts presented, a tank or even an Infantry Fighting Vehicle (IFV) in Malaysia would be expected to cross paddy fields, move among rubber and oil palm plantations secondary jungles, tracks, rubble and craters caused by destruction to built-up-areas from one fire position to another. In soft and muddy situations a wheeled armoured vehicle may sink or churn up earth, bogging it down. Terrain analysis in Malaysia is fait accompli whilst soil qualities which affects mobility directly would be discussed here due to its complexity. The degree of sinkage of any vehicle is relative to its NGP which is mathematically expressed in Figure 1.[1]

Figure 1

Wheeled Vehicle

$$NGP = \frac{\text{Weight of Vehicle}}{\text{Width of tyres} \times \text{no. of tyre} \times \text{rolling radius}}$$

Track Layer

$$NGP = \frac{\text{Weight of Vehicle}}{\text{Length} \times \text{width of tracks on ground} \times 2 \text{ (left/ right)}}$$

As explained, track layers exert less ground pressure thus yielding better surface tractive effort. Higher weight increases the sink factor proportion

ately to the weight increase. Due to this, wheeled armoured vehicles are very limited by the weight factor. This constraint steadily increases up to about 20 tons of which the sinkage rate deteriorates sharply as derived from tests done in a South East Asian Country (Figure 2). It is from this fact that tanks, by virtue of being heavily armed and well protected are not designed on wheels.

Figure 2
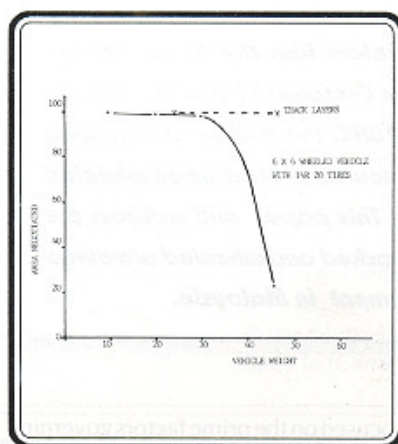
The key here is weight distribution, leading to the introduction of six and eight wheelers as in the French AMX 10 RC (reconnaissance vehicle) and the Italian Centauro (tank destroyer). It may be argued that wheeled vehicles normally deflate their tyre to improve cross country mobility. However this requirement entails messy inflating and deflating not to mention the possibility of a pneumatic pump becoming unserviceable and the reliance on such a device. Even with the increase in the number of wheels, there is still a need to distribute ground pressure evenly among the wheel stations which will then exert mean total weight distribution on the vehicle concern, affecting design directly. The works and findings by Dr. M.G. Bekker clearly demonstrate the performances between both track layers and wheelers (Figure 3).[2]

Figure 3
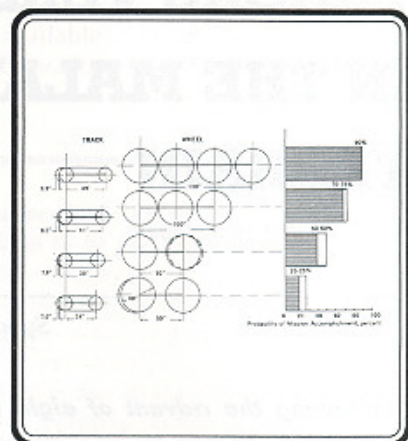
Given a setting of similar soil qualities and slope gradient, the wheel dimensions of wheeled vehicles would need to be far much bigger than those of track layers to accomplish similar tasks. This is linked to the tractive effort weight distribution and ground clearance between the two. A four wheeler like the Rpz Condor when crossing vehicle obstacles stands a high chance of bellying with the obstacles amidst the fore and rear axles. Due to the low area in contact with a relatively soft ground medium, the individually spinning effects of wheels more often end up digging (the ground) instead.

Vehicle Height

Large wheels invariably means high vehicles. A high silhouette results in a high target. High wheels are also essential when considering angles of approach and departures. Weight for weight, an eight wheeler still exerts a higher NGP when compared to a track layer. It is often exaggerated that a light track layer such as the British Scorpion, would put an average 5 feet 2 inches lady, weighing 105 pounds, wearing your normal every day high heels (shoes) to shame if comparisons were to be made on their NGPs. Besides those factors linked to higher designs, the higher centre of gravity (as a result of higher configuration) reduces manoeuvre ability, and hence survivability.

SURVIVABILITY

Hit Versus Kill

Historically the biggest killers of men in the battle field are bullets and schrapnels. It requires no stretch of imagination to see that run flat tyres commonly fitted to wheeled armoured vehicles, when engaged by relatively small calibre weapons are punctured as attested in After Action Review (AARs) by the MALBATT operating Rpz Condors under the United Nations in Somalia (UNOSOM -11 (tracked Armoured Personnel Carriers) used by the Pakistani under similar situations, were only stopped after penetration of the hull by Rocket Propelled Grenade Type 7 (RPG - 7) fire. The prospect of an infantry man inflicting an M Kill (Mobility Kill) to a wheeled armoured vehicle merely by his standard issued rifle is certainly not encouraging at all. Documented immobilisation of tracked armoured vehicles in combat are usually attributed to large calibre weapons or mines damaging transmissions, engines and other parts of the running gears - breaking track pins or severing tracks. Run flat tyre fitted to wheeled vehicles permits emergency rim travel, at a prescribed speed, for repair and recovery at a later time. Never the less track layers can still be recovered if the damages sustained to the running gears are minor enough by short tracking - a self recovery technique involving temporarily joining a shortened track to the last (front or rear) road wheel, bypassing the track tensioner. Track links and road wheels of track layers are relatively small and easily dismantled facilitating stowage in armoured vehicles while the enormous sizes and weights of wheels for wheeled vehicles often present a support problem, requiring separate transportation for the tyre. A standard MAF issued Mercedes Benz 3 tonner can only manage 3 % tyre of either the Rpz Condor or the SIBMAS. Fitting solid tyre to wheeled vehicles may seem the solution here but alas, present technological ad- vances have still yet to overcome the problems of generated heat during motion by solid tyre.

Sensitivity to Terrain

Wheeled vehicles when compared to track layers are highly sensitive to terrain especially so in Malaysia. Other than being prone to sinkage, tyre are extremely vulnerable to sharp jagged ended rocks and tree stumps.

Audio Signature

Noise levels emitted by track layers both outside and inside clearly surpasses that of wheeled armoured vehicles due to the high metal content and friction between parts and the traversed surface.[3] It is here that the comparison favours the wheeled armoured vehicles. Higher audio signature also means higher levels of vibration inevitably affecting crew performances, thus longer periods before crew fatigue in wheeled vehicles.

COST

Wheeled or tracked, the acquisition cost of armoured vehicles of similar size and class is chiefly determined by its sophistication and degree of technological advancement. This is attributed to the fact that both track layers and wheeled vehicles have common parts like the bulkhead, engine, hull and turret. The only marked difference is in the transmission and running gears. If track layers cost more due to the running gears, then what about the complex transmission linkages of a wheeled vehicle? Albeit track layers transmit their engine output to the running gears via the final drives and sprockets. Wheeled vehicles, on the contrary, require a complicated series of propeller shafts, differentials and joints (the number, dependent on the number of axles the vehicle is fitted with) to transmit engine output to the wheels not to mention transmission power loss in the process and other related systems like the brakes and the steering (Figure 4). About half the costs of Armoured Fighting Vehicles are traced to the opstronics (optics and electronics) associated to the gun and turret systems while the other half makes up the hull, running gear, transmission, power train and other auxiliaries.

Figure 4
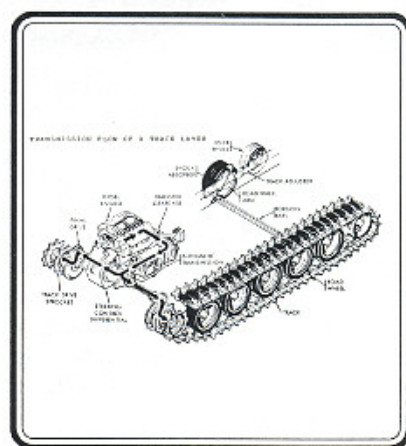
Operational and Maintenance Cost. The real difference in cost between track layers and wheeled armoured vehicles lies with the operating and maintenance cost. Tests conducted at the Aberdeen Proving Grounds, Tank/Automotive Research and Development Command (TARADCOM) indicate that wheeled vehicles surpass track layers by as much as a third in this aspect.[4] This in turn affects the Mean Miles between repairs and failures, in other words better Reliability, Availability and Maintainability (RAM) in favour of wheeled armoured vehicles.

VERDICT

Both track layers and wheeled armoured have their pros and cons. Wheeled vehicles are fast, quiet and rely less on other means of transport for movements over long distances. Their inability to take on heavier armour is made up by their impressive speeds. On the other hand the reliability and
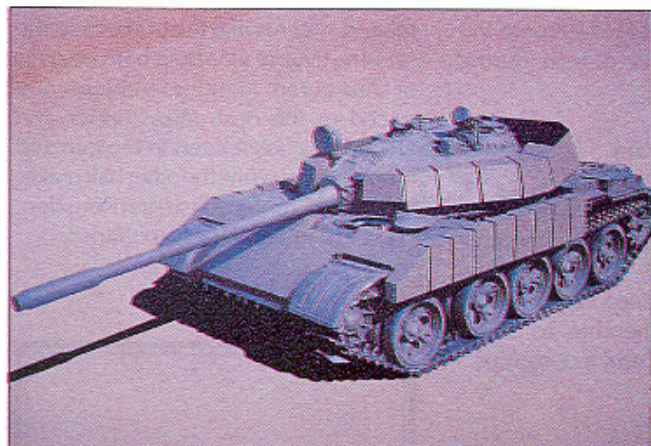
crew fatigue of wheeled vehicles on arrival at the destination is a good point to ponder. The 'in base RAM' levels of wheeled vehicles offer a more attractive choice when considering vehicles for Rapid Deployment Forces. From the cost effective stand point, having a cheap and easy to maintain vehicle is only feasible if it can accomplish its purpose in war.

Though it may be argued that track layers emit audio signature levels, this is only true on dry hard surfaces as experiences in wet soft terrain in Malaysia proves otherwise. With all these taken into consideration, the real problem between tracks and wheels lies not with the running gears but mission profile. Wheeled vehicles, due to their characteristics are ideal for security of air fields and military installations if armoured forces are envisaged to operate in Malaysian terrain.

CONCLUSION

Having establish that it is mission profile that determines the choice between track and wheel we will now relate the current environment to the MAF. The Malaysian Armoured Corps is already operating wheeled armoured vehicles. In efforts to strike a balanced force, there ought to be consideration for acquiring tracked vehicles for the Malaysian Armoured Corps. Though blessed with an extremely good road network, war may not necessarily be confined to roads as seen from WWII events by the Japanese. Moreover a threat force with tracked tanks will out manoeuvre the armoured force, confined mainly to the roads and other more comfortable conditions. After all, countries in SEA region operates track predominant armoured forces.

Endnotes

1. Vehicles and Bridgeing Brassey's Battlefield Weapons Systems and Technology, Vol pg 57

2. Wheels and Tracks - Dr. M.G. Bekker ARMOR May - June 1976 pg 15

3. Wheels versus Tracks - Cliford D. Braley - ARMOR May - June 1981 pg 24

4. Ground Mobility - Lt Col (R) BUrton S. Boudinot ARMOR Jan - Feb 1982 pg 39

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TOTAL QUALITY MANAGEMENT (TQM) AND THE ARMY

By Mej A.R Ramachandran

SYNOPSIS

Total Quality Management (TQM) is a management system that works and the Army has adopted it to meet its quality needs. It is important for us in the service to understand TQM in the Army context and approach its implementation process cautiously. This article attempts to provide some views focusing on the approach to successful implementation of TQM.

INTRODUCTION

From the outset I would like to make it clear that in my opinion the application of TQM in the Army has its inherent limitations. The hierarchical nature of the Army organization in itself presents an impediment to the participative system of management as required by TQM. On the other hand, however, there are many advantages in the Army's ways of doing things that suits the TQM philosophy. A typical example is the application of the appreciation process to solve problems in the most effective and efficient way. Another example in the adherence to lay down standardised drills and procedures which actually typify the any style.

In all honesty we must admit that we still fall short of desired objectives due to a myriad of factors, some of which may include outdated methods, bureaucracy and a stubbornness to it has always been done this way'. Through this article I would like to put forward some of my views on the application of TQM on the Army.

THE FUNDAMENTALS

There is nothing new in the TQM principles that the Army has not known before. Without realising it we have actually accepted the principle that 'All work is a Process'. The Army's approach to work is through set procedures, drills and duties. It has always been a tradition to adhere to Standing Operational Procedures (SOPs) and it has also been a practice to adopt or lay down new procedures if one did not exist for any reason. The only problem here is that we never analyzed our work process - meaning we did not identify, understand, measure and devise means to improve it. Although we set and achieved objectives we never did focus on the work process involved to 'hunt down' wastage of time, labour and effort in order to eliminate the non-value added steps from the process.

As far as quality goes we all know what it is, but the only problem is that we all have different perceptions of it. We tend to fall into the trap of 'comparative-quality' i.e. if we did it better than others then we have better quality. We never really paid attention to what did we actually desire to achieve, or how much more did we achieve beyond expectations.

Teamwork has always been given top priority in the military. In fact the military organisation survives in teamwork and it has been given due emphasis in all facets if training. There is however a subtle difference between the interpretation of teamwork in the TQM philosophy and the military. There seems to be no set limits or barriers in the TQM concept within members of the team to interact and function. The military team is made up of sub-components, each having its own expertise and contributions to the team efforts but seldom crosses each other's boundaries. Both concepts work equally well but the question is which is better for the Army.

CULTURAL CHANGE

The Army thrives on culture and traditions. Any attempt to introduce TQM into this organization should first of all recognise this. There will be resistance to change and it is believed that TQM requires a significant cultural change. Culture in the Army can be interpreted as its beliefs, values and attitudes. It has a profound effect on its perceptions and interpretations of action and events by the organization and its personnel. It influences behaviour and response towards the organization. An underestimation of the degree of change and the time taken to achieve it would be a tragic mistake in the implementation of TQM. Accomplishing this cultural change is a long term process and it is indeed true in this context when it is said that the 'TQM implementation is a marathon race and not a 100 meters dash'. Time and effort are the basic ingredients for a cultural change and the controlling of its impact is achieved by firstly making everyone aware of the changes to be made.

COMMITMENT

TQM should not be treated as a programme or an ongoing event. It is an aspect of practising what one preaches and should be made into a way of life. TQM requires total commitment at all levels; mere paperwork and lip service will surely lead to failure. To a great extent leadership is a foundation of TQM. In the Army there is no question of the capabilities of its leadership towards TQM. Management and leadership are different philosophies which relate to one another but they are not the same. In the context of productivity, managers may reorganise, change schedules etc but leaders are capable of changing the performance of people. Leadership is, therefore, oriented towards people development skills, and management with organization and development of schedules. Leaders need to demonstrate commit-

ment towards TQM. In the Army the key lies in leadership by example. For example the staff of a commander will recognise how he deals with his customers' and will do so likewise. It is therefore important for these 'signals' to be sent up and down the chain of command to develop response or a chain reaction. These reactions eventually develop into a work culture. By doing this the Army actually brings alive quality programmes through daily action. Needless to say there must be trust, teamwork and exchange of information between leaders and staff to evaluate whether the 'customer' has received the best. There are many other ways for leadership to show that it is concerned with improving quality but the bottomline is if top leadership does not show commitment, middle leadership will do likewise and no one will motivate the staff. This factor alone can destroy all efforts to improve quality.

PROBLEMS

While some organizations are steadily achieving success with TQM, many others are experiencing problems with its implementation. After jumping onto the bandwagon of TQM in 1992 it is, I feel, important for the Army to focus inwards and review its TQM philosophy. It is hoped that the following questions will provide and initial checklist to gauge whether we are on the right track:

* Responding to 'customer' pressure are we merely trying to look like we are doing TQM or are we really changing?
* Have we implemented TQM autocratically?

* Have we tied TQM to the organizational objectives that personnel can relate to?

* Are we neglecting the human elements of TQM?

* In implementing TQM have we

demanded short term results?
* Have we established a proper organizational structure for managing quality?

* Is quality training confined to middle management and lower ranking personnel only?

FUTURE CHALLENGES

In the 1990's our Army is undergoing tremendous change both in it's, organizational structure as well as in it's technology. The greatest challenge seems to be the ability of our leadership to manage these changes as well as to keep the focus on quality improvement. The commitment to TQM must be unwavering and the pursuit for excellence relentless. There is always the danger of our TQM efforts stopping dead in its tracks due to improper handling of the implementation process. The continuous improvement process should also apply to our TQM efforts. We must develop the ability to anticipate the needs of the future and continually reach for new techniques of implementation. Awareness education should begin at recruit and officer cadet stages. The work culture developed should be conducive to continue quality improvement efforts. The long term effort should concentrate on improving work processes as a large percentage of quality problems are rooted in faulty work process or procedures. We have continually keep defining and redefining the mission of various work groups. In the Army the broad groups may be Operations, Training, Administration and Logistics. The aim of this department purpose analysis is to determine inputs and outputs of each process, identify customers and their requirements, determine the activities involved and finally identifying improvement opportunities.

CONCLUSION

The Army has decided to adopt the TQM philosophy and there is therefore no question of turning back. Any rethink on this issue alone would have negative influence on the current ongoing efforts. TQM is not a scientific management experiment and all personnel should recognise that it is here to stay. When it fails in an organization the unfortunate normal response is that 'TQM does not work' rather than 'it was not implemented properly'. The Army should display courage to persevere in its efforts and accept positive and sometimes critical feedbacks in order to make TQM work in the service.

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"There is no limit to the pursuit of excellence"

Dato' Seri Dr. Mahathir Mohamad

PROBLEMS OF PEACE KEEPING MILITARY OPERATION - THE CAMBODIAN EXPERIENCE

BY
KOLONEL MOHD ARIS SALIM

INTRODUCTION

The United Nation Transitional Authority in Cambodia (UNTAC) completed its mission in September 1993. When UNTAC was established, it was the biggest United Nations Peace Keeping Operation (PKO) organization ever created and its dissolution marked the successful conduct of the PKO over a period of 18 months. The Cambodian experience has been described as one of the few successful PKOs over the last few years.

The success, however, was not without its problems. There was a time when cynics had a field day writing about UNTAC's apparent inability to get the peace process going. There were also people from within the organization who were sceptical about the ability of UNTAC to carry out the PKO. UNTAC faced many problems during the entire 18 months and this short article will attempt to summarize the problems faced by the military component and the ways adopted by the military to overcome the problems. These problems will be discussed within the context of the military principles of war.

THE SELECTION AND MAINTENANCE OF THE AIM

The aims of UNTAC and the military components were clearly spelt out in the agreements on a comprehensive political settlement of the Cambodian conflict, thereafter referred to as the Agreements[1]. UNTAC was to organise and certify a free and fair elections and the military objectives were to stabilize the security situation and build up confidence among the parties to the conflicts, so as to reinforce the purpose of the Agreements and to prevent the risks of a return to warfare. The military operational plan to cover UNTAC's aim was broken down into five phases, namely:

* The cantonment and demobilization of the factions' troops.
* The creation of a stable environment for the conduct of the election.
* The protection of the election component during the whole duration of the election process.
* The protection of UNTAC assets after the election.
* The withdrawal of UNTAC.

The selection of the military aim for the five phases coincided with the political aim of UNTAC for the entire PKO. The military plan provided the security umbrella for the other components of UNTAC to conduct their activities. Once the military plan was approved by the Force Commander (FC) on 7 June 1992, the implementation of the plan became the responsibility of the Operation Branch working in conjunction with the other branches and cells of the military component. The first major problem that nearly derailed the aim was the reluctance of the Khmer Rouge (KR) to canton their

troops and to open up their areas to UNTAC's supervision.

THE ATTITUDE OF THE KR

The initial attitude of the KR was a stumbling block to the implementation of the PKO. Their reluctance to open up their areas to UNTAC's supervision, their hostile attitude and actions and later their pull-out from Supreme National Council (SNC) affected the smooth running of the military operations. Their initial reluctance to be cantoned and demobilised led many to believe that there was no way the election could take place. There were pressures from outside and also from inside UNTAC that the military should use force to get the KR to comply with the Agreements. One local press suggested that "UNTAC's" mandate has to be modified so that it can protect Cambodians and its own troops and employees. UNTAC needs to be as much as peace enforcer..."[2]

However, the leaders of UNTAC, after much considerations, strongly believed that the answer to the KR problem was not in the use of force but rather to act within the mandate given. The United Nations Secretary General echoed the views of UNTAC's leaders when he told the press that *"I have hither to favour patient diplomacy and I continue to believe that this is the best mean of getting the peace process back on track."*[3] The solution lies in negotiations, psychological warfare and non-violence aggressiveness in the implementation of the Agreements. Negotiations were held at all levels - horizontally and diagonally. At the military level, the Mixed Military Working Group (MMWG)[4] at both the FC's sector level worked extremely hard to diffuse the critical situation. Every attempt was made by the various military commanders to contact elusive KR leaders in order to rationalise with them the purpose of UNTAC's presence and the meaning of peace. At the higher level UNTAC leaders made visits to neighbouring countries who explicitly expressed their support for the PKO thus placing the KR in a difficult political situation. This action by UNTAC paid

dividends. Through regular contacts, the local KR military commanders became "friendly" towards UNTAC military commanders. Relationship developed to such an extent that the KR leaders were prepared to compromise over issues that in previous situations would have been impossible to achieve. The KR leaders were given a message that any untoward action by them against UNTAC or the agreements would only make their position untanable politically in both the domestic and international areas. The KR understood the message.

THE MAINTENANCE OF NEUTRALITY

Implied in PKO duties was the requirement to act neutrally at all times. Although neutrality was well understood at the higher level of the military hierarchy, the same cannot be said at the lower level. As the PKO progressed into its third months, reports were received from faction leaders alleging that UNTAC military personnel were favouring certain faction more then the others. There were also reports about UNTAC assets being used to move individual members of a certain faction and such movement, even if it was done on humanitarian ground, was construed by other factions as "giving military assistance" - an action contravening the Agreements. Such humanitarian action by UNTAC personnel was capitalised by certain factions to discredit UNTAC. The KR in one of its daily broadcasts over their radio accused "some UNTAC leaders of supplying Vietnamese and government forces with money, uniforms and equipment to assist them in plans to seize Pailin"[5].

UNTAC military units, in their enthusiasm to carry on with the job, were also taking action that was more like maintenance of public order rather then PKO. Such action, if left unchecked, could drag UNTAC into a situation from which it would be very difficult to get out. Much effort was made in the early stages of the PKO to drum the idea of neutrality to the troops on the ground. Sector commanders

were made to brief their troops on the importance of neutrality and guidelines on the maintenance of neutrality were issued out through the Force Routine Orders. At the Operations Centre, units' activities were monitored daily to ensure that their actions did not violate the neutrality of UNTAC. The need to maintain neutrality was not only towards the rival factions, but also with the neighbouring states who were at one time supporters of one or more of the rival factions.

THE MAINTENANCE OF MORALE

The troops arrived in Cambodia with very high moral. This was due, firstly, to the fact that they were soldier-ambassadors representing their countries and thus had every reason to put in their best and secondly to the fact that they were going to be paid the UNITED NATIONS PKO allowance which was quite a handsome amount. By about September 1992, morale issues became a concern to the commanders. The first issue was over the payment of the PKO allowance.

For nearly 6 months, contingent troops and military staff were not getting their PKO allowance due to the bureaucratic red-tape between United Nations and the government of the contributing countries. On the other hand, the civilian staff and the military observers, who were living side by side and working in the same environment were getting their US$145.00 per day without fail from the first day they stepped into Cambodia. National Seniors approached their home governments and were told that their governments could not pay out the allowances because the United Nations had reimbursed them with the allowance. Representations were made by UNTAC to the United Nations over the issue of allowance. Within UNTAC rude letters, written by anonymous persons, were being circulated blaming officials of UNTAC over the non-payment of the allowances. The matter, however, was resolved after some effort. The issue of mission subsistence allowance for military staff remained outstanding till the end of the mission. It died a natural death!

There were also unhappiness expressed by certain troops over the amount their government paid to them. It was reported in the local press that troops from a certain country said that their home government "by not giving entitlements disbursed by the United Nations is acting like a mean contractor"[6]. Over such an issue UNTAC had no say because it was considered a domestic matter and UNTAC had no business to get itself involved in domestic matters of other countries.

The lack of welfare amenities began to be felt once the troops had settled down. Cambodia, devastated by years of war, had nothing to offer to the soldiers in terms of recreational facilities and quality entertainment. In places like Stung Treng, Mondolkiri and Preah Vihear troops had to rely on whatever meagre facilities they brought with them to entertain themselves. There were no telephones, television, public utilities and even a coffee shop where one could get a good cup of coffee. For almost 6 months, troops were confined to their camps during weekends and authorised leave. To overcome the problem, a recreational centre was established in Sihanoukville, a place once known for its beautiful beaches and clear waters. This centre was managed by the Welfare Cell of the military component. Under arrangements made by the Welfare Cell, troops were moved by air or road to the centre for up to 14 days of rest and recreation. UNTAC also distributed television and video sets and indoor game facilities to the troops. In addition to all these, battalions were given a one time grant of US$5000.00 to be spent by the battalion commanders strictly on welfare matters.

To promote understanding and integration, the military component organised mini-olympics, mini-marathon, UNTAC Day Parade and a few sporting activities. Such events took out much of the boredom of PKO duties.

A few contributing countries, knowing the hard life of their soldiers were going through, made special arrangement to meet the welfare needs of their soldiers. Malaysia, for example, had welfare flights to Cambodia, about once every two months, bringing in food parcels and logistic needs of the MALBATT. UNTAC, with the cooperation of the Malaysian Ambassador and the Ministry of Defence, planned to fly in the Orkestra Tentera Darat in conjunction with the 1993 UNTAC Day celebration. However, this plan had to be aborted, at UNTAC's request, because of the heavy operational schedule of UNTAC prior to the election.

As the PKO continued into time, UNTAC's casualties increased. There were statements made by certain national leaders about pulling their troops should UNTAC fail to control the security situation. These statements, had very serious repercussion in Cambodia. They put the troops into a negative state of mind - creating uncertainty and apprehension. National commitment to UNTAC's cause became questionable. In order to pacify the situation, the FC spoke to all the national representatives to the SNC and explained to them that the situation in Cambodia was very much under control and was not as bad as the press made it out to be. Admittedly there were attacks by the KR on UNTAC's troops and assets but these were few and only happened in places where the KR could temporarily mobilise their depleted resources. Safety of the troops and all of the UNTAC staff was always foremost in the mind of the military because failure to safeguard this will result in the pulling out of the troops by contributing nations and UNTAC would face certain failure.

OFFENSIVE ACTION

In PKO duties, the word 'offensive action' was a taboo. Yet there were pressures put upon UNTAC to go on the offensive to break the stalemate caused by the non-participation of the KR in the peace process. UNTAC leadership realised that any offensive action would be against the letter and spirit of the Agreements and would only worsen the situation. This view was shared by many. In the words of a well known Indonesian diplomat "the situation in Cambodia called for unending patience".[7]

The reluctance of UNTAC not to go on the offensive did mean that UNTAC troops were not aggressive in the pursuit of the objectives. When fired at, by bullets or by words, UNTAC retaliated back with sufficient force to put a message across to the factions that UNTAC did not tolerate nonsense. Where UNTAC was right, UNTAC stood its ground and where the Agreements gave UNTAC the mandate to act, UNTAC acted taking into consideration the after-effect of such action. What was prime in the minds of UNTAC was that any offensive action taken must be toward the achievement of the objectives. Military patrols were actively carried out and faction leaders were actively sought to bring them to the negotiating table in order to workout compromises that could bring Cambodia to everlasting peace.

The aggressive approach of UNTAC cornered the faction leaders to such an extent that the majority of the faction supporters believed in UNTAC. This was evident during the election when large numbers of the population came out to cast the votes - including large numbers of KR families.

SECURITY

Security was a major problem faced by the military. On the information front, actions by the military were closely watched by the hawking eyes of the international press. Military incidents were reported in the international mass media well before the Military Information Branch could determine the facts of the case. Such action by the press caused unnecessary worry and embarrassment to UNTAC. One good example of such a case was a report by a Malaysian press, quoting an international source, that MALBATT troops were made casualties when a group of unidentified persons attacked an UNTAC post at Sisapon. The fact of the case was that there was not a single MALBATT soldier at the place at that

point of time. During the attack, the unidentified persons attacked an UNTAC civilian police (CIVPOL) post and a Malaysian CIVPOL was very lightly injured. The result of such report was that the Ministry of Defence, MALBATT HQ at Battambang and the office of the Malaysian Ambassador in Phnom Penh were flooded with calls from both worried families and inquisitive public. It took sometime to convince people that the report was false.

It was strongly believed by UNTAC that the press and the factions, including the KR, were monitoring UNTAC radio communication on mobile VHF sets. This could be true because many UNTAC radio sets were stolen or forcefully taken by factions troops and local people. To prevent the leakage of information, troops were briefed on the importance of security and the need to be careful when talking to the press. Radio frequencies on the VHF radio sets were changed and orders were issued out to all sectors that only UNTAC spokesman was authorised to issue out press statement. These actions achieved the desired result.

On the security of UNTAC assets, it was one big headache in all the sectors. With UNTAC assets spread all over the country and troops thinly spread on the ground, it was just impossible to provide good security protection to all. To complicate the matter, there were civilian agencies of UNTAC who were reluctant to work within the security umbrella of the military and chose to go around the country on their own. Due to the unreliablity of the locally recruited staff and the local CIVPOL, thousands of dollars worth of equipment were stolen from UNTAC warehouses. Locally recruited drivers were driving away UNTAC landcruisers and saloon cars, equipped with radio sets, and selling them to eager buyers in and outside Cambodia. Culprits caught by UNTAC CIVPOL and handed to the local

CIVPOL were back in the streets within 24 hours. The local CIVPOL did not have a credible system to enforce the law. As a matter of fact, Cambodia has had no credible legal system for years. Whoever had the gun enforced his own version of the law. A friend of the writer, a Malaysian businessman, was threatened by a young man armed with a pistol and an AK 47 rifle just over a dispute over a car rental payment. The amount in dispute was US$50.00. The wise Malaysian paid the disputed amount!

The problem of security could never be completely solved. However through intensive patrolling day and night, the incidents of looting were reduced. All UNTAC personnel were warned to avoid crowded places, not to wear or carry expensive personnel items and avoid arguments with the locals. All sectors had contingency plans to safeguard UNTAC personnel in case the security situation became too dangerous. These plans were part of UNTAC mission wide security plan prepared in accordance with the guidelines given in the United Nations Field Security handbook. During the period just before the election and during the election, all official movements of UNTAC personnel were coordinated by the various sector commanders. Special flights were arranged by UNTAC to fly in additional defence stores and equipment for the troops, civilian staff and the many international observers who came to observe the conduct of the election. The effectiveness of the security plan was proven to be good when during the entire period of the election no major security problem was encountered.

SURPRISE

UNTAC actions and activities were made known to all the factions and the international press. Representatives of the mass media were given daily briefing by the office of the

spokesman and during the period of the election, briefings were held twice daily. It was not in the nature of PKO to surprise the factions or the world community. National representatives were invited from time-to-time to UNTAC HQ where they were kept informed of the current situation. However, UNTAC were surprised on several occasions by the factions who conducted activities contrary to the Agreements. These surprise actions by factions did not really cause major problems to the military but they did stretch the capability of the limited military resources to its extreme limit. A good example of such surprise was a declaration made by Prince Chararpong on 14 June 1993 making the seven provinces of eastern Cambodia the "Samdech Euv Autonomous Zone"[8] and preventing UNTAC agencies from conducting UNTAC affairs within the area. This action by Prince Chakarapong was a demonstration of his frustration over his party's failure to obtain a convincing victory in the election. UNTAC personnel in the zone were harassed, assets stolen and supply convoys were prevented by armed troops from entering the zone. UNTAC communication towers were damaged. There was fear within UNTAC that the situation could turn into a bloody affair due mainly to the aggressive nature of the faction troops. While military plans were made to counter the necessary threats, the usual conflict resolution process was taking place at the various levels. After much negotiation and with the help from the international community, common sense prevailed. After about a week of autonomy, Prince Chakarapong realised that it was in the interest of Cambodia to accept the result of the election and the seven provinces "rejoined" Cambodia. During the period of the crisis, troops were living on the reverse rations and all civilian staff were staying within the proximity of the military camps. In order to provide continuous VHF radio communication to all UNTAC

components within the zone, M17 UNTAC helicopters took turns flying 24 hours continuously acting as a relay station.

There were also pleasant surprises such as the non-interference by the KR during the entire period of the election and the unexpected large voter turnout during the first day of the election. Such pleasant surprises made one forget the difficulties that one had to go through over the last few months.

CO-OPERATION

On the whole there was unity and co-operation among all the components and individuals of UNTAC. But this spirit of co-operation was not achieved overnight. It was nurtured over a period of time and in some instances co-operation was forced upon certain groups in order to get the job done. There were certain groups of people who would only co-operate if such co-operation met their own group's objective. Such selfish attitude, existed in UNTAC, but fortunately the mechanism within the military chain of command was able to overcome the problem.

There were co-ordination problems brought about by the different understanding and interpretation of the whole peace process. Many components and battalions came to UNTAC with different languages, doctrine, values and work ethics. It took time to understand the standing operating procedure. The lack of understanding of the English Language itself caused a lot of co-ordinating problem within the military component. There were many instances when units situation report did not arrive on time, in a few cases a few days behind time, because the unit did not have enough English-speaking officers to handle all the routine letters and instructions arriving in the unit. During the first few months of UNTAC the civilian component was of the view that they

could carry out their function independent of the military - a view not shared by the military leadership. In the words of the Director of Civil Administration, describing the previous attitude of his component, ".... the pursuit of the process of organizing general elections (among which figures the act of 'neutralization' of the administration) does not depend in the least on the achievement, or on non-achievement, of the objectives assigned to the Military Component." This attitude was later realised to be wrong and was put right quickly. An incident is described here on how the lack of co-ordination led to a near disaster. It happened on a quiet morning in a province north of Phnom Penh on 8 April 1993.

On that morning a Japanese District Electoral Supervisor and his Khmer interpreter, on their way to work were ambushed and fatally wounded by unidentified gunmen. The reaction by the electoral staff, made up mostly of United Nations Volunteers (UNV), was most unexpected. Almost all the UNV's in that particular sector and many others from other sectors, literally put down their tools and made their way back to Phnom Penh. They were of the view that the military was unable to protect them and as such they were not prepared to risk their lives any more unless there was a firm commitment on the part of UNTAC to make necessary arrangement to ensure their safety. There were many accusations made by the UNV's towards the military component in general and towards the sector battalion in particular. A few of the UNV's left the mission area. Such action by the UNV's put UNTAC in a very difficult position because without them the election cannot be conducted as scheduled. These UNV's have been working in the provinces since June 1992 and they were very familiar with the terrain, the people and the election procedures that were to be implemented. The next two weeks was

a period of soul-searching and brain-storming to find a solution to the problem. There was talk about postponing the election and there were UNV's who felt that the military component in the province should be changed. However, UNTAC approach to the problem was to identify the root cause and subsequently formulated a coordinated plan with the electoral component to solve the problem. One important lesson that came out of this particular incident, which was identified by the military component as early as June 1992, was that there must be effective coordination of activities between all components of UNTAC. With very limited resources, the military just cannot provide security cover for everybody everywhere. The international nature of the PKO with its inherent weakness of language incompatibility, different work ethics and values and lack of understanding among individuals and organizations made coordination and cooperation very difficult. However the incident of 8 April , 93 forced the components to talk a common security language. From then on till the end of the election period, the coordination and cooperation were extremely good - with the Military Operation Room acting as the central coordinating centre during the entire election period.

Within the military component, coordination was achieved through regular visits and conferences by the various heads of department. The Operation Branch organised weekly staff visits to sector HQs. These visits were headed by the Chief of Staff and made up of departmental heads from all military branches, including representatives from the civil and police components. Every morning at 0830 hours, the Operations Branch conducted a 30 minutes briefing for all military branches and resolved all operational problems that arose the night before. It was the policy of the FC that all problems encountered during the day, must be identified in the

evening, a solution found in the night and a plan implemented the next day! The FC's briefing was held daily at 1800 hours. The Chief of Staff weekly conference was held on Mondays and Saturdays were reserved for the FC's weekly discussions with the heads of department.

ECONOMY

There was a lot of wastage during the first few months of UNTAC. This was due mainly to the inefficient logistic system. Troops were stuck for weeks in Phnom Penh and in transit camps in Thailand doing nothing because of the lack of logistics either to move them or to equip them for operations.

From the point of view of military effort, there was not much military activity during the cantonment phase. In fact certain officials of the civilian component passed remarks to the effect that the military was idle and was not doing a good job in trying to tame the KR. Such remarks, of course, were said in ignorance of the situation. However, as the security situation became tense it was assessed that the number of battalions given to UNTAC was insufficient to do all the security work required of the military. The Operations Branch was flooded with request for security protection. An assessment made by the Operation Branch revealed that the battalions were spread too thinly on the ground and were unable to function effectively. A review of troops deployment viz-a-viz the election security requirement was made and it was decided that the sector boundaries had to be readjusted, all movement of UNTAC asset must be coordinated and that the priority of siting of polling stations must be in the populated areas. A plan was drawn up to affect the decision and in December 1992 battalions were redeployed into their new sectors.

FLEXIBILITY

Flexibility was the least of the military problem. This must be due to the nature of the military organization, training and value. Eventhough trained for war, the military was just as capable

in maintaining peace. Sector troops, not only provided the security blanket for the whole PKO, but also provided the expertise in civic action programmes conducted all over the country. The battalion's medical centres provided the locals with the much sought after medical treatment and the military patrols went out into the country delivering peace messages to the rival factions and their supporters. To meet the operational requirement, flexibility was enhanced by decentralising assets to various sector commanders and improving the communication network. Air assets were positioned in strategic localities under the operational control of the sector commanders.

CONCENTRATION

The problem of concentration of effort arose when the cantonment phase failed and the KR started their belligerent activities against UNTAC personnel and interest. The military did not have the manpower to man cantonment sites and at the same time to provide the security protection to the electoral component. In order to concentrate on the most important task, the cantonment phase was abandoned and all the cantoned weapons were concentrated at a central place within the sectors. The military then, in conjunction with the electoral component, worked out a security plan that provided the best security protection using the limited military resources available. The military concentration of effort was on the provision of security to the electoral process. Basically the plan was:

* In relatively safe areas security cover was provided in the form of patrols by armed soldiers

* In dangerous areas, the military provide close escort to the polling teams. One point to note here was that the military was restricted to only 1000 meters from the polling stations. This restriction was imposed so as not to provoke the faction troops. Within the 1000 metre zone security

was the responsibility of the UNTAC CIVPOL

* All sectors had at least one platoon as the quick reaction force and this platoon was prepared to move anywhere at any time within the sector. The FC had a reserve of one company at Phnom Penh ready to fly to any part of Cambodia.

Concentration of military effort was generally towards major UNTAC activities in the sensitive areas. In the less sensitive areas security was handled by UNTAC CIVPOL with the military providing the armed troops as and when necessary.

ADMINISTRATION

Administration, particularly logistics, was a major problem for the entire PKO. During the first few months of the PKO, the logistic support system was like an inverted triangle - a very small base supporting a very big top. During the months of May and June 1992, the military logistic staff of less than ten men were trying to arrange and provide logistic support for 12 battalions! Troops were stranded in transit camps for weeks on end because of insufficient transportation means to move them into locations. Military observers were stuck in Phnom Penh unable to be deployed because there were no maps, vehicles and radio sets. The end result of all these logistic inadequacies was that battalions were deployed into their sectors late - one particular battalion was one month behind schedule.

All units came to Cambodia with 60 days of logistic support. It was planned that by about May 1992 UNTAC would have established its logistic bases to provide all the necessary support to the battalions. However, it was not the case. The logistic battalion and the field hospitals were only established well after the arrival of the battalions and once established these establishmens faced the problem of getting stores. The procurement system worked in such a

way that stores arrived when the mission was more than halfway through its mandate. The MALBATT was fortunate in that the Ministry of Defence brought in additional stores to meet the operational needs of the battalion. Many countries who have experienced the logistic support of PKO equipped the battalion well for PKO duties. An officer from the DUTCHBATT once said that it was better to be embarrassed by extra equipment rather than be embarrassed by lack of it. A lot can be written on the administration and logistic inadequacies of UNTAC. Suffice to say in this short article that the administration, particularly the logistic of UNTAC, left much to be desired.

CONCLUSION

The problems encountered by the military component was due mainly to the very short time given to UNTAC to prepare for the PKO. The Agreements were signed on 23 October 1991 and within a period of five months UNTAC was established and expected to function in a country that did not have the basic infrastructure to support a huge influx of troops. The bureaucratic red-tape of the organization contributed to the difficulties. Military staff working together with their civilian components worked extremely hard to overcome the problem. The 18 months of the PKO were just one long period of hard work and dedication. The result of the PKO, however, made the hard work really worthwhile.

Footnotes:

1. This Agreements were signed in Paris on 23 October 1991

2. The Cambodian Times, april 19-25 1993

3. Ibud, November 30 December 6, 1992

4. The MMWG was established by the Agreements to resolve any problems that may arise in the observance of the cease fire.
    However, this organization at times became a forum where the faction leaders and UNTAC exchanged views on many other aspects of the peace process.

5. The Cambodian Times, January 18-24, 1993

6. Ibid, January 11-17, 1993

7. Ibid, November 23-29, 1992

8. It means Father King Automomous Zone. The seven provinces were Prey Veng, Svay Reing, Kompomg Cham, Stung Treng, Ratnakiri, Mondolkiri and Kratie. All these provinces are situated on the east bank of the Mekong River

Kol Mohd Aris bin Salim dari Kor Artileri kini bertugas sebagai Komander divisyen artileri. Beliau telah banyak menghasilkan tulisan-tulisan yang telah diterbitkan di dalam jurnal ini dan artikel beliau didalam Edisi ke 19 telah dipilih sebagai artikel terbaik. Kol Mohd Aris juga telah berkhidmat di bawah PBB di misi United Nations Transitional Authority - Cambodia (UNTAC) pada tahun 1992.

'Never exploit people. What you do is see that their talents and qualities are exploited to the best. People whose talents are not exploited become disenchanted and destructive'

Sir Terrence Conran

THE UNITED NATIONS: ORIGIN, PURPOSES AND PRINCIPLES, STRUCTURE

The name 'United Nations' was devised by President Franklin D. Roosevelt and was first used in the 'Declaration by United Nations' of 1 January 1942, during the Second World War, when representatives of 26 nations pledged their Governments to continue fighting together against the Axis Powers.

The United Nations Charter was drawn up by the representatives of 50 countries at the United Nations Conference on International Organization, which met at San Francisco from 25 April to 26 June 1945. Those delegates deliberated on the basis of proposals worked out by the representatives of China, the Soviet Union, the United Kingdom and the United States at Dumbarton Oaks in August - October 1944. The Charter was signed on 26 June 1945, by the representatives of the 50 countries; Poland, not represented at the Conference, signed it later and became one of the original 51 Member States.

The United Nations officially came into existence on 24 October 1945, when the Charter had been ratified by China, France, the Soviet Union, the United Kingdom and the United States and by a majority of other signatories; 24 October is celebrated each year as United Nations Day.

PURPOSES AND PRINCIPLES

The purposes of the United Nations, as set forth in the Charter, are:

* To maintain international peace and security;

* To develop friendly relations among nations;

* To cooperate internationally in solving international economic, social, cultural and humanitarian problems and in promoting respect for human rights and fundamental freedoms;

* To be a centre for harmonizing the actions of nations in attaining these common ends.

* The United Nations act in accordance with the following principles:

* It is based on the sovereign equality of all its Members.

* All Members are to fulfill in good faith their Charter obligations.

* They are to settle their international disputes by peaceful means and without endangering peace, security and justice.

* They are to refrain in their international relations from the threat or use of force against any other State.

* They are to give the United Nations every assistance in any action it takes in accordance with the Charter, and shall not assist States against which the United Nations is taking preventive or enforcement action.

* The United Nations shall ensure that States which are not Members act in accordance with these principles in so far as it is necessary for the maintenance of international peace and security.

* Nothing in the Charter is to authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any State.

STRUCTURE OF THE ORGANIZATION

The Charter established six principal organs of the United Nations:

GENERAL ASSEMBLY. The General Assembly is the main deliberative organ. It is composed of representatives of all Member States, each of which has one vote. Decisions on important questions, such as recommendations on peace and security, admission of new Members and budgetary matters, require a two-

thirds majority. Decisions on other questions are reached by a simple majority.

Functions and Powers. Under the Charter, the functions and powers of the General Assembly include the following:

* To consider and make recommendations on the principles of cooperation in the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments;

* To discuss any question relating to international peace and security and, except where a dispute or situation is currently being discussed by the Security Council, to make recommendations on it;

* To discuss and, with the same exception, make recommendations on any question within the scope of the Charter or affecting the powers and functions of any organ of the United Nations;

* To initiate studies and make recommendations to promote international political cooperation, the development and codification of international law; the realization of human rights and fundamental freedoms for all, and international collaboration in economic, social, cultural, education and health fields;

* To make recommendations for the peaceful settlement of any situation, regardless of origin, which might impair friendly relations among nations;

* To receive and consider reports from the Security Council and other United Nations organs;

* To consider and approve the United Nations budget and to apportion the contributions among Members.

* To elect the non-permanent members of the Security Council, the members of the Economic and Social Council and those members of the Trusteeship Council that are elected; to elect jointly with the Security Council the Judges of the International Court of Justice; and, on the recommendation of the Security Council, to appoint the Secretary-General.

SECURITY COUNCIL The Security Council has primary responsibility, under the Charter, for the maintenance of international peace and security. The Council has 15 members; five permanent members -

China, France, the Soviet Union, the United Kingdom and the United States - 10 elected by the General Assembly for two year terms.

Each member of the Council has one vote. Decisions on procedural matters are made by an affirmative vote of at least nine of the 15 members. Decisions on substantive matters require nine votes including the concurring votes of all five permanent members. This is the rule of 'great Power unanimity', often referred to as the 'veto' power. All five permanent members have exercised the right of veto at one time or another. If a permanent member does not support a decision but does not wish to block it through a veto, it may abstain.

Under the Charter, all Members of the United Nations agree to accept and carry out the decisions of the Security Council. While other organs of the United Nations make recommendations to Governments, the Council alone has the power to take decisions which Member States are obligated under the Charter to carry out.

Functions and Powers. Under the Charter, the functions and powers of the Security Council are:

* To maintain international peace and security in accordance with the principles and purposes of the United Nations.

* To investigate any dispute or situation which might lead to international friction;

* To recommend methods of adjusting such disputes or the terms of settlement;

* To formulate plans for the establishment of a system to regulate armaments;

* To determine the existence of a threat to the peace or act of aggression and to recommend what action should be taken;

* To call on members to apply economic sanctions and other measures not involving the use of force in order to prevent or stop aggression;

* To take military action against an aggressor.

* To recommend the admission of new Members and the terms on which States may become parties to the Status of the International Court of Justice;

* To exercise the Trusteeship functions of the United Nations in 'strategic areas'.

To recommend to the General Assembly the appointment of the Secretary General and, together with the assembly, to elect the Judges of the International Court.

ECONOMIC AND SOCIAL COUNCIL The Economic and Social Council was established by the Charter as the principle organ to coordinate the economic and social work of the United Nations and the specialized agencies and institutions - known as the 'United Nations family' of organizations.

TRUSTEESHIP COUNCIL Functions and Powers. The Trusteeship Council is authorized to examine and discuss reports from the Administering Authority on the political, economic, social and educational advancement of the peoples of Trust Territories and, in consultation with the Administering Authority, to examine petitions from and undertake periodic and other special missions to Trust Territories.

INTERNATIONAL COURT OF JUSTICE The International Court of Justice is the principal judicial organ of the United Nations. Its Statute is an integral part of the United Nations Charter.

SECRETARIAT The Secretariat services the other organs of the United Nations and administers the programmes and policies laid down by them. At its head is the Secretary General, who is appointed by the General Assembly on the recommendation of the Security Council.

The work of the Secretariat is as varied as the list of problems dealt with by the United Nations. It includes: administering peacekeeping operations; organizing international conferences on problems of world-wide concern; surveying world economic and social trends and problems; preparing studies on such subjects as human rights; disarmament and development; and interpreting speeches, translating documents and supplying the world's communications media with information about the United Nations.

PEACE MAKING AND PEACE KEEPING

Conflict-control measures known as peace-keeping operations have been authorized by the Security Council (or, exceptionally, by the General Assembly), normally with the consent of the parties, in order to enable the United Nations to help bring about the cessation of hostilities, prevent their recurrence and normalize conditions. There have been two types of such operations: United Nations military observer missions and United Nations peace keeping forces.

Military Observer Missions, are composed of unarmed officers made available to the United Nations, on the Secretary General's request, by Member States. The mission's function is to observe and report to the Secretary General (who in turn informs the Security Council) on the maintenance of a cease-fire, to investigate violations and to do what it can to improve the situation.

Peace keeping forces are composed of contingents of armed troops made available by Member States. These forces typically assist in preventing the recurrence of fighting, in restoring and maintaining order and in promoting a return to normal conditions. To this end, peace keeping forces are authorzed as necessary to use negotiation, pursuasion, observation and fact-finding. They run patrols or interpose themselves physically between the opposing parties. They must at all times maintain complete impartiality and avoid any action that might affect the claims or positions of the parties. While they are armed, they are permitted to use their weapons only in self-defence.

(Extract: Basics Facts About the United Nations-United Nations Publications)