

PRESENTATION

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S.O.S.

MBA PROJECT

Strategy for Inmarsat GMDSS

for Inmarsat Directors:

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ABSTRACTS

STRATEGY

FOR

INMARSAT

SAFETY & RESCUE

COMMUNICATIONS SERVICES

The intention of this project was to identify areas of strategic and operational concern to the Inmarsat organization and to propose feasible solutions in the most sensitive domain of maritime mobile communications market.

THE PROJECT PROPOSES THAT IN COOPERATION WITH VOLUNTARY SEARCH AND RESCUE AGENCIES INMARSAT MIGHT CONSOLIDATE ITS GLOBAL ADVANTAGE AND IMPROVE ITS COMPETITIVE EDGE!

THE STRATEGY SHOULD INCLUDE DEVELOPMENT, IMPLEMENTATION AND MANAGEMENT OF THE INTERNATIONAL MARITIME SAFETY AND RESCUE NETWORK INMAR SAR TO PROMOTE HIGHER THAN GMDSS PERFORMANCE STANDARDS, PROVIDE AN ADEQUATE RETURN OF THE INITIAL INVESTMENTS AND BOOST ITS MISSION:

*Inmar SAR -
IS YOUR SAFETY !*



S.O.S.

*SAFETY -
IS OUR MASTER !*

ABSTRACTS

One of the primary needs for management in the 1990s is to deal with an increasingly uncertain environment exposing competitive pressure which matures as new technologies and global competition are leading to shorter product life cycles, tough trade-offs, and the need for more focus. In this project I wanted, *inter alia*, to provide material with which managers can build up a solid foundation to cope with the challenges of the 1990s.

HOW DO WE RESPONSE TO THE GLOBAL BUSINESS ENVIRONMENT ?

Chapter two of the project, on the basis of carefully selected data, explores the Inmarsat business environment. The chapter identifies the responsiveness of the present position of the Inmarsat and its competitors to the environment and forecasts emerging of companies with a position extended into three-dimensional environment (more than one type of systems, stronger ability to invest, greater spectrum and orbit capacity). To retain competitive global advantage Inmarsat should improve the complexity of the system and *ability to provide services direct to the system end users*. Strategic move in a way of improving direct liaison with the end user might be to establish and operate Inmarsat safety and rescue network (InmarSAR) proposed by the project.

WHERE DO WE STAY IN THE MARITIME WORLD?

Chapter three examines historic data of the user base development and presents world-wide overview of the availability and status of telecommunications services and supporting electronics industry. The ideas of the MBA courses 'Corporate Strategy', 'Marketing' and 'International Business' and others have been employed. The concepts of the global competitive advantage of Porter, M. (1990) have been applied to the structural analysis of the business, its positioning, have been effectively employed to identify sources and scope of the competitive advantage and eventually to formulate a proposed competitive strategy.

The chapter addresses the need for realism in presenting the likely scenario of the Inmarsat business environment after 1991. The environment seems to change to a less friendly user base, more challenging new entrants, more nationalistic electronics suppliers and services providers, with a stronger threat of substitution, all leading to a split of the maritime user base by national and regional markets, provided Inmarsat continues present strategy for GMDSS. *The natural role of the GMDSS is to consolidate the user base, services providers and manufacturers on an international base. The Inmarsat is already given a natural role of a global operator.* Our strategic move should merge these both qualities and enjoy unbeatable competitive edge.

WHAT DO WE KNOW ABOUT GMDSS COMMUNICATIONS SECTOR ?

Chapter four of the project introduces results of the research and analytical work done to the produced and selected forecasts of GMDSS market sector and the developed GMDSS evaluation model. The chapter suggests that, although the global GMDSS market sector seems to be mainly in its embryonic status at the moment, it contains strong explosive user base, which can be triggered and driven by strong international regulations. The commercially-driven user behaviour will be strongly affected by the GMDSS explosion. *Through the GMDSS regulated market there will be a thread to the commercially-driven users.* The work of the chapter justifies that the development of the GMDSS market sector by Inmarsat will consolidate efforts of different players on the market and direct them to the mutual benefit of the Inmarsat global advantage. The computations made by the model suggest that the GMDSS market, taken through the InmarSAR, will return initial investments.

CAN I PROPOSE A STRATEGY FOR GMDSS ?

Chapter five addresses practical aspects of implementing the strategy on the developed principles and discusses the operational plan for the Inmarsat safety and rescue communications network InmarSAR.

Four annexes contain valuable details of the proposed and implemented tools to justify the statements and conclusions of the project.

The ideas would have been only a dream if I could not have acquired new knowledge on the MBA course. I would like to thank Mr David Sagar, MBA Course Director and the tutor of the project; Mr Noel Isotta, Inmarsat Director General's Deputy, and Captain Jim L. Fear, Manager, Maritime Services Operations, for their continuous encouragement and support generously given to me during my long years on the course.

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MBA PROJECT

Strategy for Inmarsat GMDSS

INMARSAT VS GLOBAL BUSINESS ENVIRONMENT

INMARSAT AND THE MARITIME WORLD

GMDSS COMMUNICATIONS SECTOR

CAN INMARSAT HAVE A GMDSS STRATEGY ?

*InmarSAR –
IS YOUR SAFETY !*



*SAFETY –
IS OUR MASTER !*

Business-user service liaison

Carrier - value added - end user

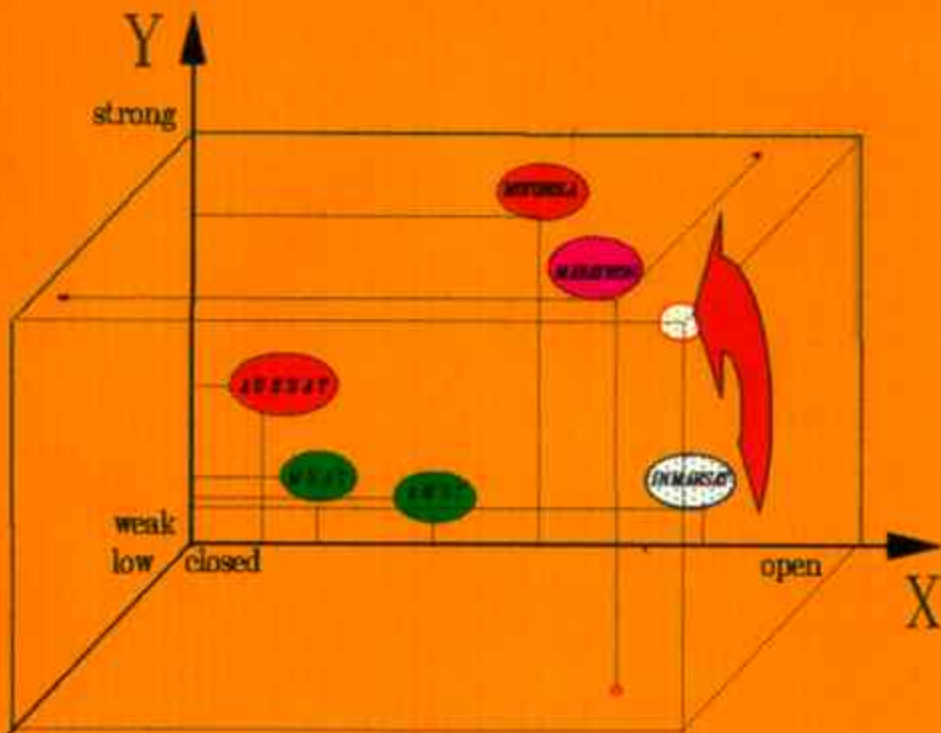
system complexity/cost

single LEO/GEO/FIBRE - combinations

low - high capacity of allocated band/orbit

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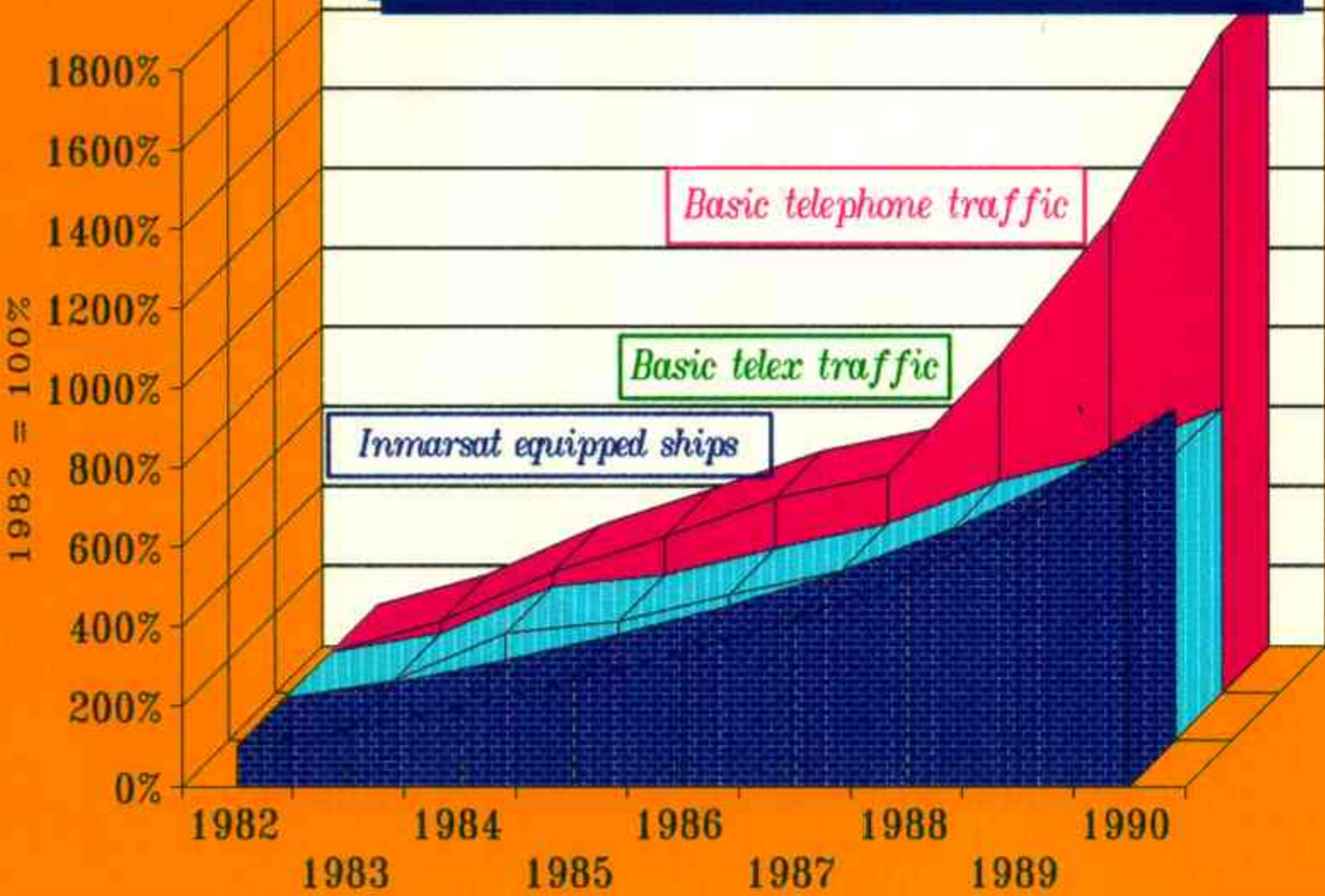
high

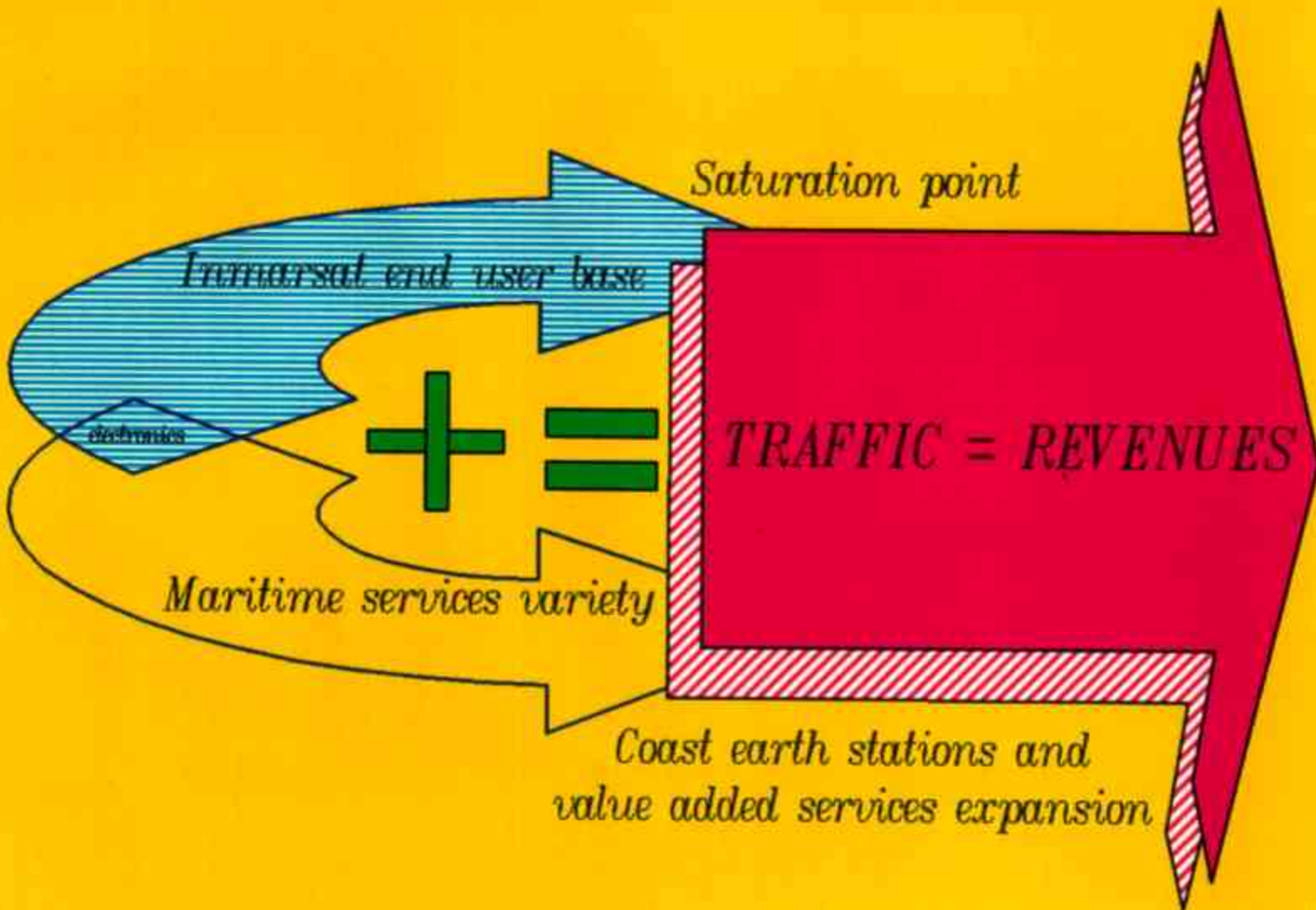


confines - openness

Technology transfer: closed - restricted - open
Standards: national - regional - international
Deregulation: national - regional - international
Culture: national - multinational - international
Operating area: local - state - region - globe

TRAFFIC GENERATED BY THE INMARSAT USER BASE





Saturation point

Universal end user base

electronics

+ **=**

Maritime services variety

TRAFFIC = REVENUES

*Coast earth stations and
value added services expansion*

BEFORE 1991

POTENTIAL ENTRANTS

Serious economic barriers to entry

SERVICES PROVIDERS

Rapid growth in number
Strong power

EQUIPMENT PROVIDERS

Stable, dominating companies,
global competition

INDUSTRY COMPETITIVENESS
TOP in global world
TOP in national sectors
TOP in expanding

Rapidly growing base,
strong power

END USERS of equipment and services

Little threat of substitution

SUBSTITUTES

AFTER 1991

POTENTIAL ENTRANTS

More attractive to new entrants

INDUSTRY
COMPETITIVENESS
TOP in global world
TOP in national sectors
TOP in expanding

Bargaining power up, Split by national sectors

END
USERS
of
equipment
and
services

SERVICES
PROVIDERS

EQUIPMENT
PROVIDERS

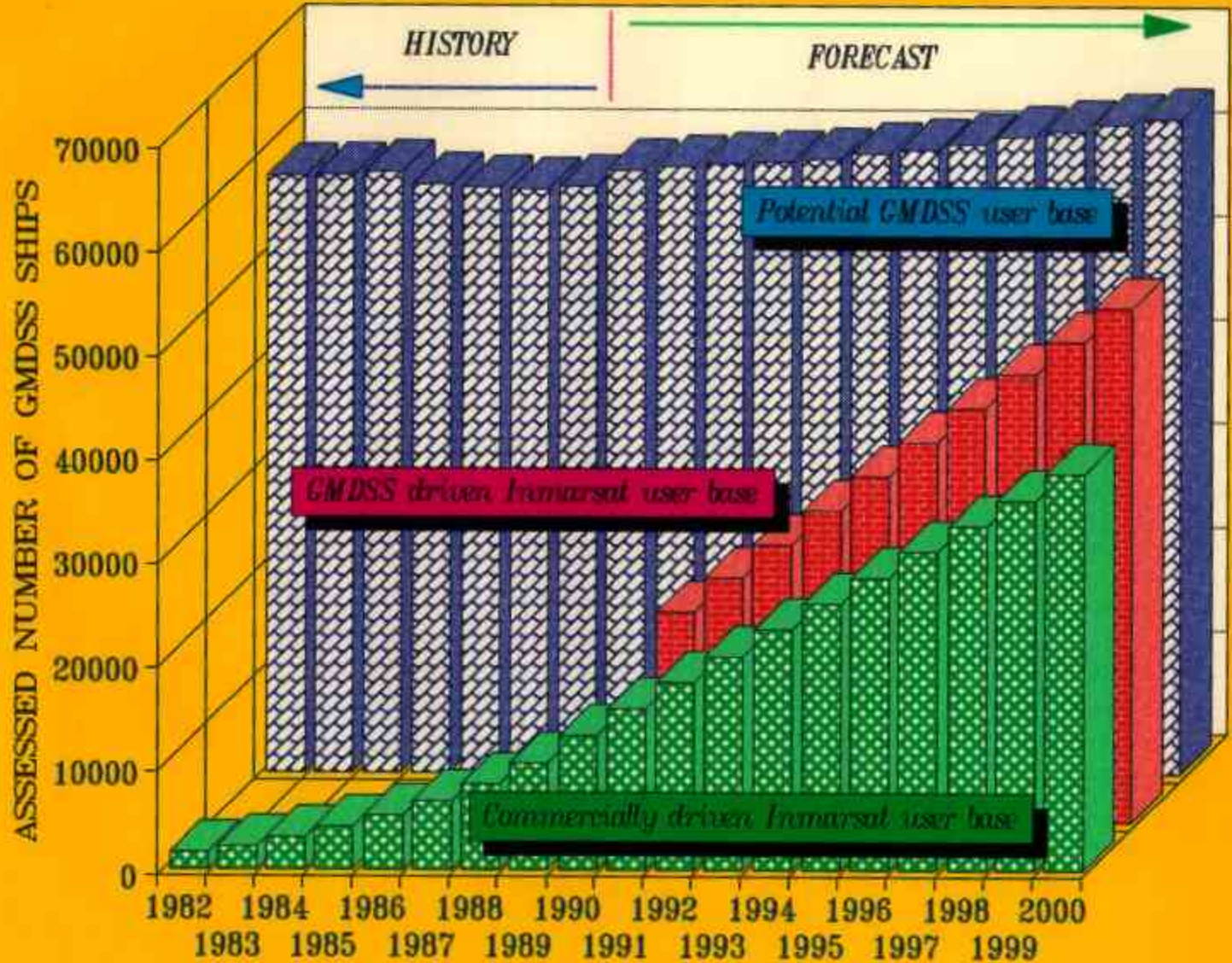
Increased as competes with outside providers

Increased as competes with other manufacturers

Strong threat of substitution

to consolidate services and equipment providers + the Inmarsat user base to undermine the threat of substitutes

G M D S S
SUBSTITUTES



USER
BASE

USER
BEHAVIOUR

MARKET
SPECIFICS

Inmarsat
user
base

GMDSS-driven

dictatorSHIP

COMMERCIALY-driven

COMPETITION

CUMULATIVE ASSESSMENTS

DISTRESS RELATED TRAFFIC: GMDSS functions 1, 2, 3, 4, 5, 6, 9

TRAFFIC VOLUME (UNITS)

TRAFFIC COST (\$US)

Scenario:
test
required

Inmarsat:
NON-Inmarsat:
TOTAL:

219,400
513,600
1,079,100

638,200
284,300
922,500

Scenario:
test
prohibited

Inmarsat:
NON-Inmarsat:
TOTAL:

5,594
13,054
18,648

87,600
32,250
119,850

SAFETY RELATED TRAFFIC: GMDSS function 7

Inmarsat:
NON-Inmarsat:
TOTAL:

18,729,780
42,768,420
61,498,200

56,189,340
21,384,210
77,573,550

CUMULATIVE ASSESSMENTS

MODEL 2: GMDSS services-charges matrix

SAFETY & RESCUE TRAFFIC: GMDSS functions 1, 3, 4, 7

TO ABSORB BY Inmarsat

TO GENERATE EARNINGS

Scenario:
test required

Inmarsat-C system ONLY:
Inmarsat-A system ONLY:

1,600,000
435,000

40,000,000
20,000,000

Scenario:
InmarSAR

Inmarsat-C system ONLY:
Inmarsat-A system ONLY:

NIL
NIL

41,600,000
20,435,000

InmarsAR: PRINCIPLES

InmarsAR network is sponsored by Inmarsat by providing initial investments

InmarsAR is developed, implemented and managed by Inmarsat in cooperation with SAR agencies

InmarsAR Recovery Mechanism performs on a not-for-profit base and due commercial principles

InmarsAR operates a Central Registration Database, DataNetwork and Quality Control System

InmarsAR returns initial investments, maintenance and operating costs via a recovery mechanism

InmarsAR sets up the highest technical, operational and management standards

InmarsAR is open to voluntary participation of end users subject to its Communications Code

InmarsAR contracts the best offers from IT and CES Services Providers and Manufacturer

InmarsAR promotes the best balance of SatCom and IT for Safety Of Life at Sea

InmarSAR: CASH FLOW

REQUIRED INVESTMENTS IN:

CES (8) over 10 years (CMO costs) =====	1, 200, 000
RCC terminal (8) over 10 years (CMO costs) =	400, 000
RCC terminal R&D =====	100, 000
SES 'Black Box' =====	100, 000
Central Database and DATA network =====	1, 500, 000
TOTAL =====	\$3, 3 m

COST RECOVERY MECHANISM:

Inmarsat sponsorship =====	62%
Advertising service =====	15%
World Media Broadcasting ==	10%
Additional MSI on request ==	5%
Additional Tests on requests -	5%
Registration Fee =====	1%
Voluntary Donations =====	1%
'Thank You' Button =====	1%

InmarSAR will generate additional revenues to Inmarsat at around 30% of the present forecast of the maritime earnings per year.

Inmarsat to InmarsAR EVOLUTION PLAN

STAGE I

GMDSS communications function 1.
10 SEC CHANNEL SET-UP, 99.5% AVAILABILITY.
TERMINALS: Inmarsat-A, -B, -C, -E.

STAGE II

GMDSS communications functions 1, 2.
AS AT STAGE I

STAGE III

GMDSS communications functions 1, 2, 3, 4.
AS AT STAGE II + RCC INTEGRATED TERMINAL

STAGE IV

GMDSS communications functions 1, 2, 3, 4, 7.
20 SEC MESSAGE DELIVERY TIME, 99,95% AVAILABILITY.
AS AT STAGE III + Inmarsat GMDSS terminal 'BLACK BOX'.

InmarSAT: ADVANTAGES

*TO
IN
MAR
SAT*

STRENGTH OF INTERNATIONAL IMAGE AS GMDSS GUARANTOR

ACCELERATION OF MARITIME USER BASE GROWTH

ENLARGED USER BASE AT THE COST OF GMDSS-DRIVEN USERS

ENHANCED ABILITY TO CONTROL SYSTEM OPERATIONS

TO SES manufacturers

REDUCTION IN DESIGN, DEVELOPMENT,
TYPE ACCEPTANCE AND PRODUCTION COSTS

*TO SHIP
OWNERS*

LOWER RETAIL AND WHOLE SALE PRICES

REDUCTION IN INSTALLATION, MAINTENANCE AND OPERATIONS COSTS

TO GOVERNMENTS

BETTER GLOBAL CONTROL OVER GMDSS
FUNCTIONS, OPERATIONS AND USE