



International Mobile Satellite Organization

ADVISORY COMMITTEE

Twenty-First Session
27 – 29 February 2008
Agenda item 6

IMSO/AC/21/6.1
Origin: Director
Date: 8 February 2008

LRIT BUSINESS PLAN

<i>Executive Summary:</i>	this document provides the LRIT Business Plan developed by the Director
<i>Action to be taken:</i>	to comment and advise the Director on the LRIT Business Plan
<i>Related documents:</i>	AC/21/6.3 LRIT Budget for 2008

1 BACKGROUND

At its Twentieth Session, the Committee noted document AC/20/6.1, which provided information on the outcome of IMO MSC 83, the LRIT Strategic Plan and Business Plan, and contractual arrangements with the IDE and DCs.

The Committee requested the Director to draft a business/project plan, as appropriate, for the next session of the Committee, based on discussions at this session.

The Committee also noted document AC/20/6.2 “LRIT: Charging for LRIT Audit and Review”, and requested the Director:

- (a) to develop a model, containing the elements of fixed costs, usage and effort, taking into account the discussions during this Session, particularly relating to the need that the mechanism should be simple, predictable, easy to understand, fair, equitable, at no risk to IMSO, and internationally acceptable; and

- (b) to develop a short term interim simple solution start up model (cost divided by number of DCs), followed by a detailed, more sophisticated model that could be developed and applied when the system has been in operation for some time and the number of DCs and ships and usage of the system is known with some accuracy.

The Committee agreed to keep the Charging Mechanism under review and to refine the mechanism in the light of experience, with a view to introducing a more sophisticated charging model from 2011 onwards, if necessary. The Committee also recalled that development of the charging regime is a matter for IMSO and that the Director will inform IMO when the initial charges have been decided.

2 LRIT BUSINESS PLAN

The Director has developed the attached LRIT Business Plan, based on the above discussions as well as relevant discussions at the IMSO Assembly and Advisory Committee and IMO Reports and Resolutions (as listed in the "References" section of the Business Plan).

3 ACTION REQUIRED

The Committee is invited to consider the LRIT Business Plan, including options 1 and 2 relating to cost recovery models, and advise the Director accordingly.



**LONG RANGE IDENTIFICATION AND TRACKING
(LRIT) PROJECT**

IMSO LRIT BUSINESS PLAN

5 June 2007

LONG RANGE IDENTIFICATION AND TRACKING (LRIT)
DRAFT IMSO BUSINESS PLAN

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- 1 Procedures for the Approval of the IMSO Budget
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References:

This paper should be read in conjunction with the following reference documents:

1. IMSO ASSEMBLY/19/8 Record of Decisions of the Nineteenth (Extraordinary) Session of the Assembly
2. IMSO ASSEMBLY/18/11.1/Rev Staff, administrative and budgetary implications of extending the Organization's mandate
3. IMSO AC/18/Report Report of the Eighteenth Session of the Advisory Committee
4. IMSO AC/20/Report Report of the Twentieth Session of the Advisory Committee
5. IMO MSC 82/24 & 82/24/Add.2 Report of the eighty-second session of the Maritime Safety Committee (MSC)
6. IMO MSC 83/28 & 83/28/Add.2 Report of the eighty-third session of the Maritime Safety Committee (MSC)
7. IMO MSC resolution 202(81) Adoption of amendments to the International Convention for the Safety of Life at Sea, 1974, as amended
8. IMO MSC resolution 210(81) Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships
9. IMO MSC resolution 211(81) Arrangements for the Timely Establishment of the Long-Range Identification and Tracking System
10. IMO MSC resolution 254(83) Amendments to the Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships
11. IMO MSC resolution 242(83) Use of the Long-Range Identification and Tracking Information for Maritime Safety and Environment Protection Purposes
12. IMO MSC resolution 243(83) Establishment of the International LRIT Data Exchange on an Interim Basis

1 Introduction

Description of the International LRIT System

1.1 LRIT is the new international system for the Long Range Identification and Tracking of Ships. It is being developed by the Maritime Safety Committee (MSC) of the International Maritime Organization (IMO) and is due to become operational for the first participating ships on, or soon after 31 December 2008. The basic elements of the international LRIT system, as decided by IMO, are shown in figure 1.

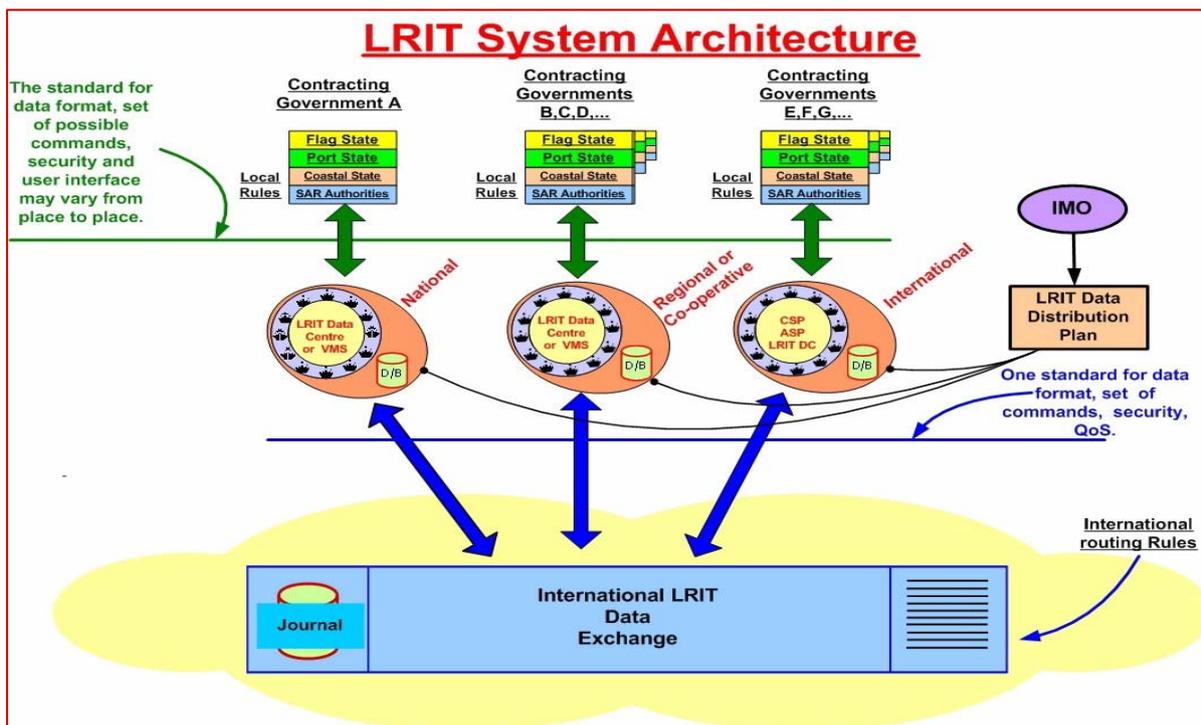


Figure 1: LRIT System Architecture (IMO MSC Resolution 210(81), annex)

The Role of the LRIT Co-ordinator

1.2 Certain aspects of the performance of the International LRIT System are to be overseen, reviewed and audited by the LRIT Co-ordinator, appointed by IMO to act on behalf of all SOLAS Contracting Governments (IMO MSC Resolution 210(81), annex, paragraph 1.2).

1.3 The MSC, at its eighty-second session (Istanbul, December 2006), appointed IMSO to be the LRIT Co-ordinator. In taking this decision, MSC 82 "invited IMSO to take whatever action it could in order to ensure the timely implementation of the LRIT system." (MSC 82/24 paragraph 8.49).

1.4 The IMSO Assembly, at its Nineteenth (Extraordinary) Session (London, March 2007), decided "... that the Organization may assume the functions and duties of the LRIT Co-ordinator with effect from 7 March 2007, at no cost to Parties, in accordance with decisions of IMO, where Article 4 of the amended Convention will be applied on a provisional basis." (ASSEMBLY/19/8, paragraph 7.8)

1.5 The IMO Terms of Reference for the LRIT Co-ordinator are given in section 14 of IMO resolution MSC 210(81): *Performance Standards and Functional Requirements*

for the *Long-Range Identification and Tracking of Ships*, as amended. Other key reference material is included in IMO resolution MSC 202(81): *Adoption of amendments to the International Convention for the Safety of Life at Sea, 1974, as amended*, and IMO resolution MSC 211(81): *Arrangements for the Timely Establishment of the Long-Range Identification and Tracking System*.

2 IMSO LRIT Implementation Plan

2.1 IMO has developed a Road Map for the implementation of LRIT (MSC 82/24/Add.2 Annex 16) which provides information on some of the key actions and decisions that need to be taken before a smooth and complete introduction of the international LRIT system can be achieved. Taking this in conjunction with the key implementation dates given in new SOLAS Regulation V/19 (IMO MSC resolution 202(81)), IMSO has developed a draft Implementation Plan showing key actions and dates for successful implementation. The IMSO Implementation Plan is an organic document that evolves as the project itself evolves.

2.2 The major milestones (dates) are summarised in the following table:

2008	31 December	LRIT System OPERATIONAL	
	1 Jul–31 Dec	pre-operational testing phase	
	7-16 May	MSC 84 finalises technical specs and financial model	
	1 Jan–30 Jun	System development phase	
	1 January	LRIT amendment to SOLAS enters into force	Complete
2007	November	IMSO/IMO sign contracts for IDE + IDC	Not yet
	3-12 October	MSC 83 decides contractor for IDE + IDC	Part complete
	July	IMSO evaluates IDE + IDC proposals	Complete
	April	IMSO sends out RFP for IDE + IDC	Complete
	?	IMSO receives first start-up funds	
	7 March	IMSO Convention amendments implemented	Complete

Table 1: LRIT Implementation – Key Milestones

3 Establishing the IMSO Budget for LRIT

Budgetary and Accounting Procedures

3.1 The procedures for development and approval of the budget of IMSO were approved by the Assembly at its sixteenth session (Assembly 16/15 – Report, paragraph 9.1.2). They provide, in general, for the Director of IMSO to develop the budget and the Advisory Committee to agree it, on an annual basis. The annual budget is therefore subject to review by the Advisory Committee before it is implemented. These procedures require amendment to incorporate the LRIT elements of the budget, which are not subject to agreement by Inmarsat, and therefore they are under review by the Advisory Committee.

3.2 It has been a fundamental and continuing policy in the Director's development of these proposals, fully endorsed by the Advisory Committee, that all costs, capital and revenues relating to LRIT should be kept completely separate from those relating to GMDSS and other legacy responsibilities, which are funded on a different basis. The Director, with the assistance of the Accountant, has established accounting systems and procedures that will allow complete financial separation of these two business streams on a daily basis within the Organization's audited accounts.

LRIT-related Personnel Costs

3.3 In developing proposals for implementing the role of LRIT Co-ordinator within the Organization, the Director has provided the Assembly with information on his proposals for enhancing the staff of the Organization so as to be able to undertake its newly expanded role (Assembly 18/11.1). The Director intends to keep the number of additional staff to the minimum consistent with efficient and effective performance of the LRIT-related work. In addition to the existing members of staff, the Director expects to establish a maximum of three new posts, principally to handle LRIT-related work, as detailed in document Assembly 18/11.1 and shown in figure 2.

3.4 The Functions of the IMSO Director and the Directorate, as decided by the Assembly at its thirteenth session and subsequently amended, and proposed Terms of Reference for each of the other staff members in this organizational scheme were given in document ASSEMBLY/18/11.1.

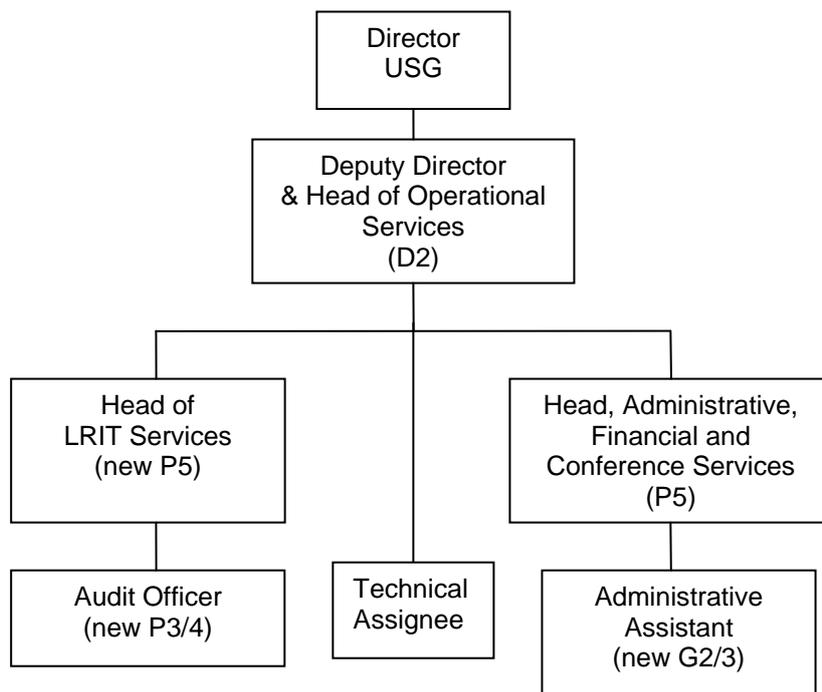


Figure 2: Proposed Directorate Staff Structure
 Note: Posts are graded in accordance with the UN Common System

3.5 The Director has decided, and the Advisory Committee has agreed, that the pay, allowances and benefits for all staff shall be aligned with the recommendations of the International Civil Service Commission (ICSC). This has been reflected in the contract for the Director (from 15 April 2007) and will be applied to the contracts for

any new staff retained in the future. The contracts for the two existing staff members have been reviewed to bring them into line with ICSC rules, so far as is possible without placing the individuals concerned at a disadvantage relative to their current terms and conditions (AC/19/Report paragraph 4.1).

3.6 In view of the limited availability of start-up funding, and taking into account the generous provision of a temporary Technical Assignee by the Government of Turkey, the Director has delayed the recruitment of the proposed additional staff beyond the dates originally planned. The Director anticipates that, subject to progress with the international preparations for implementing LRIT and the availability of LRIT start-up funding, the LRIT Audit Officer will now start work in mid 2008, Head of LRIT in September 2008 and the Administrative Assistant in December 2008.

3.7 Some members of the Directorate staff will work on both LRIT and GMDSS/legacy business; others will work exclusively on LRIT business. As noted by the Advisory Committee at its eighteenth session (AC/18/Report paragraph 3.3.4), the effort, and therefore the costs, of each post will be apportioned between the business streams, as follows:

	GMDSS/Legacy	LRIT
Director	50%	50%
Deputy Director	70%	30%
Head, Admin, Finance etc	50%	50%
Head, LRIT	0%	100%
LRIT Audit Officer	0%	100%
Admin Assistant	50%	50%
Technical Assignee	50%	50%

*Table 2: Apportionment of staff effort
 (Note: most costs for the Technical Assignee are borne by the Government of Turkey)*

Office space and services

3.8 As the staff of the Directorate increases in number from 3 to 7, so the office space occupied by the Organization will need to increase. Arrangements have been made with Inmarsat to allow for this increase, in the timescales dictated by the need to hire new staff members. Precise floor areas, and the consequent actual rent, are not yet available – they will depend on the outcome of direct negotiations with the current Landlord. For budgetary purposes, an allowance has been made for a doubling of the rent as the floor area expands to accommodate a doubling of the staff. It has been assumed that, for practical reasons, all the new floor space will be taken on at the same time, even though some of it may not be occupied by new staff for some months.

3.9 A similar increase in budgetary provision has been allowed for in the cost of services paid for by the Organization (heat, light, electricity, telephones, computer network, etc).

Other costs

3.10 The costs of travel and hospitality have been worked from scratch to reflect the actual expected cost of those elements of the budget, under both GMDSS/Legacy and LRIT business headings.

Tax

3.11 Under the terms of Article 7(1) of the Headquarters Agreement between IMSO and the Government of the United Kingdom, the Organization its property and income are "*exempt from all direct taxes*" levied by the Government of the United Kingdom. The Organization therefore will not charge UK Value Added Tax on LRIT transactions.

4 Estimated Budgetary Requirements – 2008-2010

4.1 On the basis of these plans and assumptions, the Advisory Committee has agreed in principle an LRIT budget for 2008, and illustrative budgets for the years 2009 and 2010 (AC/20/Report). The headline figures for the LRIT-specific elements of these illustrative budgets are as follows:

2008	£555,732	(some staff hired during the year)
2009	£701,845	
2010	£795,442	

4.2 The total cost of IMSO's LRIT operations will therefore be approximately £2.1 million over the full 3 year period. At the start of this period (throughout 2008 and 2009) the organization's costs will have to be paid more-or-less entirely out of start-up capital. During the second half of the period, beginning in either the final quarter of 2009 or the first quarter 2010, the Organization can expect to receive revenue from LRIT Audit and Review Fees.

4.3 The assumptions on which the illustrative budgetary projections for the years 2008 to 2010 have been developed were noted by the Advisory Committee at its eighteenth and twentieth sessions and are included in the Reports of those sessions (AC/18/Report and AC/20/Report).

5 IMSO Charging Policies

5.1 IMO has accepted that the LRIT Co-ordinator should be entitled to recover its costs for the LRIT services it provides (IMO resolution MSC 210(81) paragraph 14.7). In this context, the IMO Member States have required the Director to ensure that all such costs are in fact recovered.

5.2 The Advisory Committee, at its twentieth session (11-13 December 2007):

"6.2.7 In relation to the basis on which IMSO Charges for LRIT Audit and Review should be established, ... requested the Director to develop a model, containing the elements of fixed costs, usage and effort, taking into account the discussions during this Session, particularly relating to the need that the mechanism should be simple, predictable, easy to understand, fair, equitable, at no risk to IMSO, and internationally acceptable.

6.2.8 *In this regard, the Committee advised the Director that the "volume-related" element of the model used for establishing Data Centre charges should be based on the actual measured number of messages each Data Centre exchanges through the International Data Exchange (IDE). In developing the model, the Director was requested to take into account the need to avoid "double counting" of messages, and ensure that each message only attracts a single charge each time it is requested and passed through the IDE.*

6.2.9 *The Committee also expressed concern that the model should take into account the need to ensure that some Data Centres do not delay their entry into the LRIT system specifically in order to avoid high charges for audit and review during the start-up period of the system, when there is likely to be only a small number of Data Centres in operation.*

6.2.10 *The Committee also requested the Director to develop a short term interim simple solution start up model (cost divided by number of DCs), followed by a detailed, more sophisticated model that could be developed and applied when the system has been in operation for some time and the number of DCs and ships and usage of the system is known with some accuracy.*

6.2.11 *The Committee agreed that the Committee will keep the Charging Mechanism under review and will refine the mechanism in the light of experience, with a view to introducing a more sophisticated charging model from 2011 onwards, if necessary." (AC/20/Report)*

5.3 Taking into account the advice he has received from the Advisory Committee and the functions of the LRIT Co-ordinator set out in section 14 of the IMO Performance Standard (IMO resolution MSC 210(81)), the Director has therefore decided to adopt the following general charging policies:

.1 IMSO will charge:

.1 all participating Data Centres (DCs), for the oversight and audit services they require for continuing participation in the international LRIT system, in accordance with the Performance Standard and the requirements of the IMSO LRIT Data Centre Service Contract;

.2 the International Data Exchange (IDE), for the oversight and audit services it requires for continuing participation in the international LRIT system, in accordance with the Performance Standard and the requirements of the IMSO LRIT Data Exchange Service Contract;

.3 those Application Service Providers (ASPs) who provide services to the International Data Centre (whenever it may be established) for the provision of their annual performance review and subsequent report, in accordance with the Performance Standard and the requirements of the IMSO LRIT Application Service Provider Service Contract; and

.4 Data Centres and/or any other involved entity, for any other specific services IMSO is requested to provide under articles 14.3.1 (investigation etc of disputes); and 14.3.2 (integration testing for new Data Centres) of the Performance Standard.

.2 Basis of the Charges

.1 Data Centres, the International Data Exchange and Application Service Providers will be charged an LRIT Audit/Review Fee. Fees will be charged annually and will be payable in advance, before any services are provided, as follows:

- Data Centres - fee payable on demand before the Audit takes place.
- International Data Exchange - fee payable on demand before the audit takes place, subject to appropriate contractual arrangements between the IDE Operator and IMSO.
- Application Service Providers - fee payable on demand before the Review takes place.

.2 Two options are presented for the distribution of IMSO LRIT budgetary costs on this basis:

Either:

Option 1

Data Centres will pay a single annual fee, regardless of the number of Flags or ships they serve, calculated according to the formula given below.

Or:

Option 2

Data Centres will pay a separate Fee for each Flag using that Data Centre (referred to below as a (Flag x Data Centre) unit). This meets the request of the Advisory Committee at its twentieth session that the Director should develop a model that "... *should be simple, predictable, easy to understand, fair, equitable, at no risk to IMSO, and internationally acceptable.*" It offers fairness and transparency for all Data Centres, including those that provide services for more than one flag or those dealing with a very small number of ships. In addition, it will allow IMSO to audit each Flag within the Data Centre separately, which will assist in

the oversight and audit of the transmission of LRIT data between Flags in the same Data Centre.

Option 1 follows directly the request of the Advisory Committee at its twentieth session (AC/20/Report paragraph 6.2.10). Option 2 illustrates the effect of distributing the cost to Data Centres and ASPs on the basis of Flag.

.3 The International Data Exchange does not charge for the services it provides, and the IDE Audit Fee will be set annually to reflect only the expected effort in auditing the IDE plus a figure to cover travel and other direct expenses .

.4 ASPs will pay an ASP Review Fee calculated on the same basis (eg: Option 1:(Flag x ASP) unit or Option 2: per ASP) and set at the same level as the Data Centres.

.3 Setting the level of Fee

.1 The **LRIT Audit/Review Fee** will be set annually by the Director, in consultation with the Advisory Committee, according to the following general formula:

$$\text{Fixed Costs (\%a) + Usage (\%b) + Effort (\%c) + Travel = Audit/Review Fee}$$

where:

.1 Fixed Costs represents the fixed costs to IMSO in undertaking LRIT work only, including: Salaries, premises, meetings and general LRIT-related travel etc.

.2 Usage is based on the actual measured number of messages each Data Centre or ASP exchanges through the International Data Exchange (IDE);

.3 Effort is a measure of the actual effort expended by IMSO (eg days undertaking each audit/review);

.4 Travel is a fixed amount, to cover the *average* cost of travel for conducting an Audit/Review, so as to ensure that there will be no difference in travel charges resulting from the geographical location of the DC/ASP;

and:

.5 the actual percentages (a), (b) and (c) may be adjusted to reflect the relative importance of each of the three elements at any particular time.

.2 The International Data Exchange Audit Fee will be set annually to reflect the expected level of effort taken to conduct the IDE Audit, according to the following general formula:

(Daily Rate x No. of Days Effort) + Travel Allowance = IDE Audit Fee

Note: A fixed amount (Travel Allowance) will be charged to cover all travel costs incurred by IMSO in conducting the IDE Audit.

.3 The charges for Data Centres and/or any other involved entity, for any other specific services IMSO is requested to provide, will be established as a **Daily Rate**, to be charged *in addition to actual expenses*, for the specific service provided. The Daily Rate will be set annually by the Director, in consultation with the Advisory Committee according to the following general formula:

$$\frac{\text{Total Agreed LRIT Budget}}{200 \text{ Working Days}} = \text{Daily Rate}$$

The Daily Rate will be charged for every day or part day that IMSO staff work on the project, including travelling time.

.3 The actual values of the LRIT Audit/Review Fee and the Daily Rate for each year will be decided by the Director, in consultation with the Advisory Committee, in the fourth quarter of the preceding calendar year, as part of the budget development, review and agreement process. The LRIT Audit/Review Fee will not be less than the total LRIT agreed budget divided by the number of (Flag x Data Centre) and (Flag x ASP) units to be audited during the year, and will normally be more, by a small amount calculated to provide the necessary margin to ensure the Organization does not make a loss on its LRIT business.

.4 Taking account of the fact that IMSO's predictable LRIT-related income will be derived entirely from Audit/Review Fees, the level of LRIT Audit/Review Fee for each year will be set to ensure that the Organization cannot make a loss, but at no higher level than is required to achieve this (the so-called "not-for-profit" basis). Any "one-off" fees (of the type normally charged at a daily rate) may lead to the accumulation of a small profit for the trading year. It is anticipated, therefore, that the Director will take into account any profit made in one year when deciding the level of fee to be charged in the following year, so that any profits do not accumulate to an unacceptable extent.

.4 Reporting and Oversight of Fee Levels

Information relating to the level of fee will be reported periodically to every regular session of the IMSO Assembly and included in the annual report the Organization will make to IMO. IMSO Member States and IMO will therefore have regular opportunities to comment on the appropriateness of the fees charged by IMSO.

6 **Terms of Business**

6.1 Terms of Business will be established, and included in the service contract signed with IMSO by each participating ASP, Data Centre and the International Data Exchange. Because IMSO does not receive significant funding for its LRIT business from any other source, the Terms of Business will be designed to ensure, *inter alia*, that payment is received in full by IMSO *before* any oversight and audit services are provided by the Organization.

6.2 The Director will establish the Terms of Business from time to time, in consultation with the Advisory Committee. These Terms of Business will be annexed to and form an integral part of the LRIT Service Contract signed between IMSO and each participating Data Centre, ASP and the International Data Exchange.

6.3 The Terms of Business will include at least the following provisions:

.1 Payment of all invoiced sums will be required to be cleared into the Organization's account within 30 days of the date of Invoice;

.2 Any sums not cleared into IMSO's account within 30 days of the date of invoice will attract interest at the rate of current Bank of England Base Rate + [5%] on all sums outstanding from that day until payment is received;

.3 No Credit will be given to any Data Centre or the International Data Exchange;

.4 The Organization will accept payment only in Pounds Sterling, with all exchange costs being paid by the payee;

.5 The Fee will cover the provision of oversight and audit services for the year, from the actual date of the audit to which the fee relates, until the date of the next annual audit;

.6 Under Option 2:

.1 No refunds will be given to a Data Centre in respect of any reduction in the number of Flags with which it is contracted during the year;

.2 A surcharge (supplementary fee) will become payable by any Data Centre if the number of Flags contracted by that Data Centre increases during any year in which the Fee includes a positive value for the Usage element;

.7 A range of Penalties, including suspension from the International LRIT System, for any Data Centre or ASP that fails to perform in accordance with the requirements of IMO as expressed through the Service Contract with IMSO, or remains in default of payment beyond the due payment date; given legal force through the LRIT Service Contract between IMSO and the Data Centre. Suspension will be enforced by denial of access to Data Centres in the International LRIT System through the IDE via a barring mechanism to be agreed by the Maritime Safety Committee;

7 Risk Control

7.1 The charging policies and basic fee structure described above are grounded directly on the agreed budget for the Organization in any year; they therefore reflect precisely the financial needs of the Organization in relation to LRIT. Whilst it is never possible to eliminate every potential risk in any business proposition, the fee structure has been designed to avoid a number of identifiable potential risks to the Organization and its Member States. In particular by:

.1 insisting on payment before services are delivered, it reduces to an acceptably low level the risk that IMSO Member States might have to provide funding to rescue the Organization from financial difficulty;

.2 establishing the actual fees before the beginning of each year, it provides certainty to the Organization in planning its expenditure during the following twelve months, and to the Data Centres, International Data Exchange and ASPs in their own business planning processes;

.3 basing the charges on a flexible formula that can be adjusted to take account of different factors, it limits the Organization's exposure to the risk that the charging regime will fail to reflect the ability of the overall LRIT system to pay for IMSO's involvement as LRIT Co-ordinator; and

.4 allowing for a review of the amount of retained profit during the budget-setting process, it provides a mechanism to control price levels and the unacceptable accumulation of profit by IMSO.

7.2 Measures will also be taken to limit the Organization's exposure to risks arising from the costs of monetary exchange and fluctuations in exchange rates. Such measures will include limiting the currencies in which payment is accepted. Instead, these risks will be carried by the Data Centres and Data Exchange.

7.3 In addition, the proposed fee structure is designed to protect the Organization from wide variations in the volume of traffic (number of reports) and from any risk that ship reports may be received into the system but not sold to any end user State. These risks will also be carried by the Data Centres and Data Exchange.

7.4 It has been assumed throughout the LRIT planning in IMSO that the number of ships that will eventually participate in the International LRIT System will be 40,000 ± 4,000. Although this figure is widely accepted by many experts, confidence in its precision is not High. However, the number of ships that will eventually participate in the LRIT system is likely to fairly stable, and there can be a fairly high degree of certainty that it will not fall below a certain level. The rate at which ships join the system is much less easy to predict, and it therefore represents a significant risk during the start-up period.

7.5 By setting the "Fixed" element of the charging formula to 100% for the initial year(s) of operation, IMSO is able to protect itself from uncertainties in the number of

participating ships and the "Volume" element of the formula can be kept at 0% until the actual number of participating ships is known.

8 Revenue Expectations

8.1 For the purposes of this business plan, the following assumptions have been made:

.1 Regional and Co-operative Data Centres, Application Service Providers, and the International Data Centre (if established), will pay Fees on a "per Flag" basis (for example: a Regional Data Centre with 20 participating Flags, will pay a Fee for each Flag rather than one single Fee only);

.2 there will be an average of 100 Flags providing LRIT information to 35 Data Centres of all types during 2009; a further 40 Flags will join the system at the beginning of 2010;

.3 the International Data Centre (IDC) will not be established until 2010;

.4 there will be five Application Service Providers operating throughout 2009, and two additional ASPs throughout 2010 (the number of ASPs has not been projected beyond 2010 because there is likely to be some rationalisation of ASP provision after then);

.5 ships in the system are not distributed equally between participating DCs;

.6 all ships use an ASP but ships in the system are not distributed equally between all participating ASPs;

.7 the Audit/Review Fee for each year will be set before the beginning of that year and will not be changed during the year; and

.8 the Audit/Review Fee for 2009 and 2010 will be based entirely on the Fixed Costs of the Organization in accordance with the request of the Advisory Committee at its twentieth session (paragraphs 5.2 and 7.5 above);

.9 the Fixed Costs will be based on the assumption that each Audit or Review will take on average six working days of effort, from all IMSO staff in the proportions shown in paragraph 3.7 above; and

.10 Start-up capital funding will be available to cover the expected shortfalls in LRIT revenue during 2008 and 2009.

8.2 Fees in the Start-up Period

On the basis of these assumptions:

either

Option 1

.1 Calendar Year 2008

.1 during 2008 IMSO will provide all LRIT services as "other specific services" charged at a Daily Rate plus Expenses (paragraph 5.3.3.3 above). It is not expected that there will be more than 24 days chargeable on this basis during the year (4 pre-integration advisory consultancies = (2 days travel plus 2 days site visit plus 2 days in office)) and the remainder of the LRIT budget will have to be found from alternative sources, including start-up capital.

.2 the Daily Rate for 2008 may be set at £3000 based on the calculation:

$$£555,732/200 \text{ days} = £2778$$

.3 Total predicted LRIT revenue for 2008 therefore =

$$(6 \text{ days} \times £3000) \times 4 = \underline{£72,000}$$

.4 Actual travel costs will be charged for each visit.

.5 The remainder of IMSO's LRIT budget will have to be met from other sources, including voluntary contributions from entities involved in promoting the international LRIT system.

.2 Calendar Year 2009 (illustrative)

.1 during the first three quarters of 2009 it is expected that all LRIT revenue will also come from "other specific service" and general consultancy work setting up the LRIT system. It is extremely difficult to judge how this work may develop but, for the purposes of forward planning, it may be expected that the level of consultancy work will continue at the same approximate level as during 2008 with 24 days being chargeable during the year.

.2 the Daily Rate for 2009 may be estimated at £4000 based on the calculation:

$$£701,845/200 \text{ days} = £3509$$

.3 Total predicted LRIT revenue from consultancy services for 2009 therefore =

$$(6 \times £4000) \times 4 = \underline{£96,000}$$

.4 In order to ensure that its routine LRIT work will be spread evenly over the year IMSO intends to begin annual Audit/Review of those DCs and ASPs that have been early entrants into the International LRIT system during the final quarter of 2009. IMSO therefore expects to begin receiving Audit/Review Fees during that quarter. It is possible that 10 DCs and 5 ASPs may be actively using the LRIT system by the end of 2008 and will therefore be eligible for Audit/Review by the end of 2009.

.5 The calculation of the Audit/Review Fee for 2009 is therefore:

Fixed Costs (100%) + Usage (0%) + Effort (0%) + Travel = Audit/Review Fee
Number of DC + ASP

where:

$$.1 \quad \frac{\text{Fixed Costs}}{\text{Number of DC + ASP}} = \frac{\text{£701,845}}{10 + 5} = \text{£46,790}$$

and:

.2 Travel = average cost of (Flights + Terminal Expenses + Hotel + Subsistence) for a two-day site visit. For 2009 this is estimated as £3,000.

note:

.3 Salary and other employment costs during the site visit are included in the Fixed Costs.

Even if the possible consultancy revenue were to be taken into account, this figure is quite high and could lead to unacceptable financial burdens being placed on participating DCs and ASPs during the start-up period. It is therefore necessary to supplement the revenue with other sources of funding, including voluntary contributions from entities involved in promoting the international LRIT system.

If the Audit/Review Fee was to be arbitrarily set, for example, using 50% of the calculated value for 2009, that is: £23,395, the total fee would be £27,000 and it could raise a total of perhaps £405,000. This would leave approximately £296,845 to be found from other sources, including voluntary contributions and consultancy services.

It is therefore proposed that the annual Audit/Review Fee for 2009 be provisionally set at the level of £27,000 per DC or ASP.

.3 Calendar Year 2010 (speculative)

.1 the Daily Rate for 2010 may be held at £4000 based on the calculation:

$$\text{£795,442/200 days} = \text{£3977}$$

.3 There is no logical basis on which to estimate the number of days consultancy that might arise during the normal operation of the LRIT system from 2010 onwards. However, it is likely that fewer days will be needed than during the start-up period. For the purposes of this business plan it will be assumed that only one six-day consultancy will be undertaken during a normal operational year.

Total predicted LRIT revenue from consultancy services for 2010 therefore =

$$(6 \times \text{£4000}) \times 1 = \text{£24,000}$$

.6 Similar calculations using: the illustrative budget for 2010, the predicted number of DCs and ASPs operating in 2009, revenue from consultancy and the same figure for travel expenses, are as follows:

$$.1 \quad \frac{\text{Fixed Costs}}{\text{Number of DC + ASP}} = \frac{\text{£795,442}}{40 + 7} = \text{£16,924}$$

and:

.2 Travel = average cost of (Flights + Terminal Expenses + Hotel + Subsistence) for a two-day site visit. For 2010 this is estimated as £3,250.

As for the previous year, if the Audit/Review Fee was to be arbitrarily set, for example, using 50% of the calculated value for 2010, that is: £8,462, the total fee would be £12,000 and it could raise a total of perhaps £564,000. This would leave approximately £231,442 to be found from other sources, including voluntary contributions and consultancy services.

It is therefore proposed that the annual Audit/Review Fee for 2010 be provisionally set at the level of £12,000 per DC or ASP. This illustrates the degree to which annual fees can reduce as the number of Data Centres and ASPs increases.

or

Option 2

.1 Calendar Year 2008 (as for Option 1)

.1 during 2008 IMSO will provide all LRIT services as "other specific services" charged at a Daily Rate plus Expenses (paragraph 5.3.3.3 above). It is not expected that there will be more than 24 days chargeable on this basis during the year (4 pre-integration advisory consultancies = (2 days travel plus 2 days site visit plus 2 days in office)) and the remainder of the LRIT budget will have to be found from alternative sources, including start-up capital.

.2 the Daily Rate for 2008 may be set at £3000 based on the calculation:

$$\text{£555,732}/200 \text{ days} = \text{£2778}$$

.3 Total predicted LRIT revenue for 2008 therefore =

$$(6 \text{ days} \times \text{£3000}) \times 4 = \text{£72,000}$$

.4 Actual travel costs will be charged for each visit.

.5 The remainder of IMSO's LRIT budget will have to be met from other sources, including voluntary contributions from entities involved in promoting the international LRIT system.

.2 Calendar Year 2009 (illustrative)

.1 during the first three quarters of 2009 it is expected that all LRIT revenue will also come from "other specific service" and general consultancy work setting up the LRIT system. It is extremely difficult to judge how this work may develop but, for the purposes of forward planning, it may be expected that the level of consultancy work will continue at the same approximate level as during 2008 with 24 days being chargeable during the year.

.2 the Daily Rate for 2009 may be estimated at £4000 based on the calculation:

$$£701,845/200 \text{ days} = £3509$$

.3 Total predicted LRIT revenue from consultancy services for 2009 therefore =

$$(6 \times £4000) \times 4 = \underline{£96,000}$$

.4 In order to ensure that its routine LRIT work will be spread evenly over the year IMSO intends to begin annual Audit/Review of those DCs and ASPs that have been early entrants into the International LRIT system during the final quarter of 2009. IMSO therefore expects to begin receiving Audit/Review Fees during that quarter. It is possible that 40 Flags may be actively using the LRIT system by the end of 2008 and will therefore be eligible for Audit/Review by the end of 2009.

.5 The calculation of the Audit/Review Fee for 2009 is therefore:

$$\frac{\text{Fixed Costs (100\%)} + \text{Usage (0\%)} + \text{Effort (0\%)} + \text{Travel}}{\text{DC Flag Units} + \text{ASP Flag Units}} = \text{Audit/Review Fee}$$

where:

$$.1 \quad \frac{\text{Fixed Costs}}{\text{DC Flag units} + \text{ASP Flag units}} = \frac{£701,845}{40 + 40} = £8,773$$

and:

.2 Travel = average cost of (Flights + Terminal Expenses + Hotel + Subsistence) for a two-day site visit. For 2009 this is estimated as £3,000.

note:

.3 Salary and other employment costs during the site visit are included in the Fixed Costs.

It is therefore proposed that the annual Audit/Review Fee for 2009 be provisionally set at the level of £12,000 per DC or ASP Flag unit.

This may be reduced to £11,000 if the expected consultancy revenue of £96,000 is taken into account.

.3 Calendar Year 2010 (speculative)

.1 the Daily Rate for 2009 may be held at £4000 based on the calculation:

$$£795,442/200 \text{ days} = £3977$$

.3 There is no logical basis on which to estimate the number of days consultancy that might arise during the normal operation of the LRIT system from 2010 onwards. However, it is likely that fewer days will be needed than during the start-up period. For the purposes of this business plan it will be assumed that only one six-day consultancy will be undertaken during a normal operational year.

Total predicted LRIT revenue from consultancy services for 2010 therefore =

$$(6 \text{ days} \times £4000) \times 1 = \underline{£24,000}$$

.6 Similar calculations using the illustrative budget for 2010, the predicted revenue from consultancy and the same figure for travel expenses are as follows:

$$.1 \quad \frac{\text{Fixed Costs}}{\text{DC Flag units} + \text{ASP Flag units}} = \frac{£795,442}{100 + 100} = £3,977$$

and:

.2 Travel = average cost of (Flights + Terminal Expenses + Hotel + Subsistence) for a two-day site visit. For 2010 this is estimated as £3,250.

It is therefore proposed that the annual Audit/Review Fee for 2010 be provisionally set at the level of £7,500 per DC or ASP Flag unit.

This may be reduced to £7,250 if the expected consultancy revenue of £24,000 is taken into account.

9 Conclusions

9.1 If the Fees calculated in section 8 Option 1 above are accepted and the actual number of participating DCs and ASPs is as expected, then the proposed levels of Fee in Option 1 could be acceptable to participating DCs and ASPs, particularly from 2010 onwards. Therefore, voluntary contributions would be necessary only to support IMSO during the start-up years of 2008 to 2010. If the fees proposed for 2009 are considered to be too high, then further voluntary contributions will be required to make up the shortfall.

9.2 For comparison, Option 2 is an illustration of what could be the position if charges for DCs and ASPs were based on the number of Flags contracted to use each of them. It has certain advantages in terms of distribution of costs according to effort and volume, and would be simpler to calculate and administer than applying the formula in paragraph 5.3.3 directly.

9.3 Assuming that Option 1 is preferred during the initial start-up period, as indicated by the Advisory Committee at its twentieth session, the following Table

summarises the fees, voluntary contribution requirement and estimated cost per message of the IMSO Audit and Review budget for the years 2008, 2009 and 2010.

	2008	2009	2010
LRIT Budget (£)	555,732	701,845	795,442
Proposed Fee Option 1	-	27,000	12,000
Total Audit Fee Revenue	0	405,000	564,000
Possible Consultancy Fees	72,000	96,000	24,000
Voluntary Contributions Required	483,732	200,845	207,442
Number of Ships	0	36,000	44,000
Estimated Cost per Message	-	£0.008	£0.009

Table 3: Summary of Proposed Fees, Revenues and Cost per Message

9.4 It must be assumed that there will not be any voluntary contributions beyond the year 2010, so that the entire IMSO LRIT budget will need to be recovered from Audit/Review fees from 2011 onwards.

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