



International Mobile Satellite Organization

ADVISORY COMMITTEE

Twentieth Session

11 to 13 December 2007

Agenda item 6

IMSO/AC/20/6.2

Origin: Director

Date: 28 November 2007

LONG RANGE IDENTIFICATION AND TRACKING OF SHIPS (LRIT)

CHARGING FOR LRIT AUDIT AND REVIEW

Executive Summary:	this document provides the Director's proposals for charging for LRIT Data Centre Audit and Review.
Action to be taken:	to consider the basis on which the Director should establish the IMSO Charges for LRIT Audit and Review as well as the Director's proposals for consequential preliminary Fee levels for 2009, and to advise the Director accordingly.
Related documents:	

1 BACKGROUND

1.1 The Advisory Committee, at its Nineteenth Session (4-5 July 2007), noted document AC/19.6.1 "... which contained IMSO's contribution to IMO MSC 83 "Analysis as to How IMSO Intends to Undertake the Role of LRIT Co-ordinator, Based on the Performance Standard, Technical Specifications and other Published Requirements of IMO"; in particular:

(a)-(f) ...

(g) *IMSO charging policies, and in particular:*

(i) *IMSO will charge participating IDC, IDE and ASP in accordance with an LRIT Service Contract. These charges would be based on the volume of traffic/messages/ships through each of those*

elements, or a combination of fixed fees plus additional charges based on volume/messages/ships;

- (ii) IMSO will charge fixed fees for services relating to evaluation and testing of new and modified elements of the LRIT system; and*
- (iii) payments of fees and charges for which LRIT elements become liable have to be paid in full before any service is provided by IMSO.*

1.2 The Advisory Committee, at its Nineteenth Session "... also noted that the Director will prepare details of the IMSO charges and fees taking into account the principles and decisions to be taken at the Eighty-Third Session of the IMO MSC in October 2007." (AC19 Report, paragraphs 6.1.1 and 6.1.3).

2 CHARGING PRINCIPLES

2.1 The general principles that should govern the development of a detailed charging regime were also discussed by the Advisory Committee at its nineteenth session, which noted the IMSO submission to MSC 83 concerning these issues (MSC 83/6/7), and paragraphs 23 and 24 of that document in particular, as follows:

"23 IMO has accepted that the LRIT Co-ordinator should be able to recover its costs for the LRIT services it provides. In this context, the IMSO Member States have required the Director to ensure that all such costs are in fact recovered. The Director has therefore decided to adopt the following general charging policies:

.1 As a general principle, IMSO will charge participating Data Centres (DCs) and the International Data Exchange (IDE), on an annual basis, in advance, 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 Service Contract;

.2 Additionally, IMSO will charge Application Service Providers (ASPs) providing services to the International Data Centre an Administration Charge, on an annual basis, in advance, for the costs incurred in providing certification and annual review, at the beginning of

each year, in accordance with the Performance Standard and the requirements of the IMSO LRIT Service Contract;

24 In addition to the charges for oversight and audit described above, IMSO will be required to undertake a number of "one-off" functions relating to the evaluation and testing of new and modified elements in the International LRIT System. IMSO intends to charge fixed fees for these services."

2.2 MSC 83 noted the IMSO submission on, *inter alia*, charging policies (MSC 83/6/7) and additional information on estimated budgetary requirements (MSC 83/6/13), but did not take any substantive decisions in this regard.

2.3 In addition, MSC 83 did not decide to establish an International Data Centre at this time. Therefore it will not be possible for IMSO to charge ASPs providing services to the International Data Centre for the costs incurred in providing certification and annual review unless and until an IDC is established. In addition, it is not yet clear what precise role IMSO will play in the evaluation and testing of new and modified elements in the International LRIT System and it is not therefore possible to estimate what financial contribution might be obtained from charging for such evaluation and testing.

2.4 The Director therefore intends to base his cost-recovery proposals for the first and immediately succeeding years of LRIT operation entirely on charges for participating Data Centres and the International Data Exchange.

3 BASIS FOR ESTABLISHING CHARGES

3.1 Article 4 of the IMSO Convention establishes that the functions and/or duties of IMSO as LRIT Co-ordinator have to be at no cost to IMSO Parties. Therefore, the Advisory Committee has already noted that the different elements that will participate in the LRIT system should contribute to the IMSO LRIT budget on the basis of the volume of traffic/messages/ships through each of those elements (a *volume*-based system), or a combination of fixed fees plus additional charges based on volume/messages/ships (a *composite* system) and these ideas were put forward in IMSO's document submitted to MSC 83 (MSC/83/6/13 paragraph 10).

3.2 This policy was proposed and has been noted by the Advisory Committee on the basis of fair and equal costs for Data Centres of all sizes, following extensive

consultations with probable Data Centre operator countries from all parts of the world.

3.3 However, the Directorate has been following the evolution of the LRIT system at the Maritime Safety Committee and in various expert and other Groups, and in discussion, some countries which intend to establish a Regional or Co-operative Data Centre have indicated that they would prefer IMSO to adopt a different method of charging, based on the amount of effort expended by IMSO in performing the relevant audit or review. This is essentially an *effort*-based system.

3.4 There are, therefore, three possible basic models for developing IMSO's charging regime for LRIT audit and review:

- .1 a system based loosely on the *volume* of reports audited;
- .2 a system based on the amount of *effort* taken to complete the audit; or
- .3 a *composite* system, which takes account of both the volume of reports and the effort taken to audit them.

4 DISCUSSION

4.1 Some features of the three systems include:

- .1 the volume of traffic/messages/ships could be seen as one way of measuring effort, on the basis that the audit or review will take up resources relative to the volume of work to be done;
- .2 a volume-based system takes some account of the ability of a Data Centre to pay the charges for audit and review;
- .3 the volume of traffic/messages/ships follows the principles already noted by the Advisory Committee as being the most appropriate way to establish equitable charges for LRIT audit and review;
- .4 it should be possible to estimate the number of ships and resulting volume of messages with a reasonable degree of accuracy before the beginning of LRIT operations, so that charges can be set in a transparent and supportable way *before* any work is undertaken;

.5 the effort-based system could take account of the number and grades of personnel employed on audit duties, their salaries and other direct costs, plus any travel they undertake and the physical resources they use. It can only be applied to charges that are established *after* the work has been undertaken, which is not in accordance with the requirement that IMSO should receive payment before any work is undertaken;

.6 the effort-based system does not allow any significant consideration of the relative size of different Data Centres;

.7 whilst it is possible for IMSO to estimate the total number of ships that will participate in the system in any given year, with some degree of accuracy, and therefore establish charges per ship or group of ships accordingly, IMSO cannot know the number data centres that will participate in the LRIT system in the early years, and could not therefore establish a charge based on the number of days work to be undertaken;

4.2 It is clear that the risks associated with an effort-based system are considerably greater than with a volume-based system. These arise from two principal sources: uncertainty over the number of days that will be sold during early years; and lack of certainty that IMSO will be paid, within a reasonable time or at all, if it bills Data Centres *after* the work has been done. The first uncertainty would lead IMSO to set a daily rate that assumes that only a small number of days will be sold in the first and subsequent early years, whilst the lack of certainty over payment renders a pure effort-based scheme unacceptable to the Director because IMSO may not accept *any* risk that it will not be paid.

4.3 The composite system has some elements of both regimes. It includes a fixed fee, which can be set to cover fixed costs (travel, salaries, office resources, etc) plus an effort-related element that could take into account some measure of the actual effort expended by IMSO in undertaking the audit/review.

4.4 Taking account of discussions between the Directorate and some Member States and other interested parties during and since MSC 83 (3-12 October 2007), in which some countries preferred one solution and other countries preferred another, the Director proposes a composite charging scheme designed to fit the needs of the maximum number of Contracting Governments.

5 A COMPOSITE CHARGING SCHEME FOR LRIT AUDIT AND REVIEW

5.1 The Director therefore proposes to establish charges for LRIT Audit and Review on the following basis:

.1 the total fee for annual audit or review of any Data Centre or the International Data Exchange will consist of two elements:

- .1 a *Fixed Fee* set to cover [80%] of IMSO's total LRIT budget; and
- .2 an *Effort-related Fee* to apportion the remaining [20%] of IMSO's LRIT costs according to the actual effort expended by IMSO.

.2 the Fixed Fee will be set to recover [80%] of IMSO's agreed LRIT budget for completing the audit/review. The figure will be the same for every Data Centre and the International Data Exchange. The level of Fixed Fee will be set by the Director each year, in the Autumn of the previous year, after the Advisory Committee has agreed the budget for that year.

.3 the Effort-related Fee will also be set or revised on an annual basis, following agreement of the LRIT Budget for that year. It will be established as a Daily Rate, charged according the number of days that IMSO has worked on the audit/review. The daily rate will be established each year by dividing [20%] of the budget costs for LRIT by the number of days that the Director estimates will be worked by the Organization on LRIT audit and review.

.4 the Advisory Committee will be asked to consider the proposed actual fee levels for each year, following agreement of the LRIT budget each Autumn, and advise the Director accordingly.

5.2 Given the low level of response to the Director's invitation to Contracting Governments to provide start-up funding for IMSO's LRIT work, the Organization does not have enough money deposited for this purpose to cover the cost of audit and review until retrospective invoices have been paid. The Director must therefore require that the Fixed Fee element is paid in advance, but believes it may be acceptable to invoice the Effort-related Fee on completion of the Audit/review.

5.3 An estimate of the number of days it could take to complete an annual audit or review for a typical data centre is made in Annex 1. It is unlikely to be possible to

carry out a 100% audit of every transaction in most Data Centres, and a representative sample audit will be provided. In order to match total effort to resources in the first years of operation, the Director therefore intends to limit the effort given to any one audit to five (5) days, until experience indicates otherwise.

5.4 The Director believes it will be prudent to take a conservative view of the number of audits that will be undertaken in the first year of LRIT operation (2009), bearing in mind that the number of data centres in operation during that year is unknown at this stage in the development of the system. However, any fees paid to IMSO during 2009 that exceed the amount needed for simple cost recovery will be carried forward to the next year and used to reduce the fee levels in that year. This principle will be applied throughout the life of the LRIT business of the Organization.

6 CHARGES FOR EVALUATION AND TESTING OF NEW AND MODIFIED ELEMENTS IN THE INTERNATIONAL LRIT SYSTEM

6.1 Some calculations of actual possible fee levels for 2009 are given in Annex 2. A formal proposal on fees for 2009 will be provided to the Advisory Committee after the decision on principles has been finalised.

6.2 There is a number of "one-off" services that IMSO, as the LRIT Co-ordinator, is charged with providing under the terms of the IMO Performance Standard (Resolution MSC 211(81)). It is proposed that the charge for these services shall be set at [twice] the daily rate calculated for the effort-related Fee for Audit and Review, and that travel and other expenses shall be charged in addition for these particular services.

6.3 All Fees will be recalculated for 2010 and subsequent years in the light of actual experience of the LRIT system.

7 ACTIONS REQUESTED OF THE ADVISORY COMMITTEE

7.1 The Advisory Committee is invited:

- .1 to consider the basis on which the Director should establish the IMSO Charges for LRIT Audit and Review, taking account of the discussion above; and

.2 to review the Director's proposals for consequential preliminary Fee levels for 2009 (annex 2); and

.3 to advise the Director accordingly.

ESTIMATE OF THE TIME TAKEN FOR A REPRESENTATIVE LRIT AUDIT

It is anticipated that a routine annual LRIT Audit may consist of:

- 1 Audit Letter and Questionnaire - to be sent to the Data Centre concerned by the Director six (6) weeks before the date of the Audit. The letter will notify the Data Centre of the Audit and request completion of the Questionnaire, which will be designed to collect all the basic information and statements of compliance required to allow IMSO to understand the level of compliance with the Regulation, Performance Standard and any other requirements established by IMO. The letter will also advise what digital files are to be transmitted to IMSO, means of transmission, security requirements in transit and date they should be received by IMSO.
 - 2 Questionnaire received in IMSO and assessed. Clarification and follow-up if required.
 - 3 Digital records checked automatically for exceptions/non-compliance. Large records may take many days of (partially supervised) computer time: small records may take only one or two days.
 - 4 IMSO requests confirmation from client Data Centres that information requested has been received. Any non-conformities resolved and recorded.
 - 5 IMSO drafts Audit Report in standard format.
 - 6 IMSO visits the Data Centre to meet key personnel, inspect the premises and facilities, and discuss the draft Audit Report with senior management.
 - 7 IMSO finalises the Audit Report and submits it to IMO and the Data Centre concerned.
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CALCULATION OF POSSIBLE LRIT FEES FOR 2008/2009

General Assumptions

1 The implementation schedule for LRIT identifies 2008 as a period for testing and integration. The first ships are required to begin participating immediately after their first radio safety survey following 31 December 2008. The system therefore effectively begins at the start of 2009 and the first annual audits, for which IMSO can charge, will take place probably in the final quarter of 2009.

2 Therefore there will be no Audit and Review Fees payable until the fourth quarter of 2009, at the earliest.

3 The LRIT portion of the total IMSO budget for 2009 amounts to £692,755. Three quarters of this sum (£519,566) will be needed during the months of January to September 2009, before any Fees are earned. The amount to be recovered in 2009 from Audit and Recovery Fees is therefore one quarter of the total LRIT budget figure: £173,189.

4 There is a general expectation that there will eventually be a maximum of 40-50 Data Centres, and that initially there is more likely to be around 20-30.

5 The Director assumes that IMSO will be able to begin annual Audit and Review of the first Data Centres to participate in the scheme before the end of 2009, starting with those Data Centres that have started their operations during the second half of 2008 (the integration and testing period). This will allow IMSO to spread its work over a whole year, as more Data Centres begin to provide LRIT services. The Director therefore assumes that there will be 20 Data Centres operating in the LRIT system by mid-2009.

6 If Audit and Review work starts in the fourth quarter of 2009, there will be 11 working weeks, or 55 working days, before the end of the year. The Director assumes that, given the uncertainties that may prevail during the start-up period, IMSO may be able to undertake 8 annual Data Centre audits during the fourth quarter of 2009. For planning purposes, the Director also assumes that a typical annual Audit will require five (5) days work.

Fixed element of the Fee

7 For illustrative purposes, the fixed portion of the fee can therefore be calculated as:

$$(\pounds 173,189 \times 80\%) \div 8 \text{ centres} = \pounds 17,319$$

or

$$(\pounds 173,189 \times 80\%) \div 20 \text{ centres} = \pounds 6,928$$

or

$$(\pounds 173,189 \times 80\%) \div 50 \text{ centres} = \pounds 2,771$$

Effort-related element of the Fee

8 This leaves a figure of $\pounds 34,638$, representing 20% of the total LRIT budget for fourth quarter 2009, to be recovered from daily fees. The Director assumes that, during the period October to December 2009, IMSO will undertake 8 audits lasting, on average, 5 days each. This gives a total 40 days audit work in 2009.

9 The Daily Rate for Audit and Review services in 2009 can therefore be calculated as:

$$\pounds 34,638 \div 40 = \pounds 866$$

And the *average* cost to any Data Centre in Daily (effort-related) Fees would therefore be of the order of $\pounds 4,330$ for five days work.

Prudent Business Practice

10 The figures calculated in paragraphs 7 and 9 above make no allowance for the considerable uncertainties which are inherent in this particular project. At this early stage in the implementation of this new concept, the Director cannot be definite in his assumptions relating to the number of Data Centres or the number of days it may take to complete an audit. Additionally, the Director cannot accept any significant level of risk that IMSO will run out of money at any time. It will therefore be prudent to set Fee levels on the basis of conservative expectations in this regard, and the Director is currently considering establishing 2009 Fee levels at:

- Fixed Fee = $\pounds 20,000$, payable *in advance* of any work being undertaken; and
- Daily (effort-related) Fee = $\pounds 1000$, payable *after* the audit has been completed but before the report is published.

These fees would include all travel and subsistence charges, so as to make no differentiation between Data Centres on the basis of geographical location.

Fees for "One-off" services

11 Using a multiplier of 2 x Audit daily rate, the fee for "one-off" services would be set at £2,000 in 2009. Travel and other expenses would be charged in addition to this Fee.
