



Office of the Director of
**Telecommunications
Regulation**

RESPONSE TO CONSULTATION

New Opportunities in the radio
communications market:
Public Mobile Data and
Automatic Vehicle Location/Tracking

Document No: ODTR 01/71

Date: August 2001

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Contents

Foreword.....	3
1 INTRODUCTION.....	4
2 CONTENT OF THE RESPONSE DOCUMENT.....	4
3 LIST OF RESPONDENTS	4
4 CONSULTATION TOPICS	5
4.1 MARKET FOR PUBLIC MOBILE DATA AND AUTOMATIC VEHICLE LOCATION (QUESTION 1)	5
4.1.1 Summary of the Consultation Topic	5
4.1.2 Views of Respondents.....	5
4.1.3 Position of the Director	5
4.2 DELIVERY OF PUBLIC MOBILE DATA AND AVL SERVICES (QUESTION 2)	6
4.2.1 Summary of the Consultation Topic	6
4.2.2 Views of Respondents.....	6
4.2.3 Position of the Director	6
4.3 RADIO SPECTRUM FOR PUBLIC MOBILE DATA AND AVL NETWORKS (QUESTION 3).....	6
4.3.1 Summary of the Consultation Topic	6
4.3.2 Views of Respondents.....	6
4.3.3 Position of the Director	7
4.4 NUMBER OF PUBLIC MOBILE DATA/AVL SERVICES TO BE LICENSED AND EXPRESSIONS OF INTEREST IN THE PROVISION OF SERVICES (QUESTIONS 4 & 5).....	7
4.4.1 Summary of the Consultation Topic	7
4.4.2 Views of Respondents.....	7
4.4.3 Position of the Director	8
4.5 LICENCE CONDITIONS FOR NATIONAL PUBLIC MOBILE DATA AND AVL NETWORK (QUESTION 6)	8
4.5.1 Summary of the Consultation Topic	8
4.5.2 Views of Respondents.....	8
4.5.3 Position of the Director	8
4.6 PARAMETERS THAT SHOULD BE USED IN A COMPARATIVE EVALUATION PROCESS FOR A NATIONAL PUBLIC MOBILE DATA/AVL NETWORK (QUESTION 7).....	9
4.6.1 Summary of the Consultation Topic	9
4.6.2 Views of Respondents.....	9
4.6.3 Position of the Director	9
5 CONCLUSIONS AND PROPOSALS FOR FURTHER ACTION	10

Foreword

Thank you to all those who responded to the consultation on new opportunities in the radio communications market for public mobile data and automatic vehicle location/tracking. My Office received four responses, including two specific expressions of interest in the provision of the services outlined in the consultation document. This paper summarises the responses to each of the issues and proposals raised in the Consultation and outlines the actions we now propose to take, including the introduction of a licensing process for public mobile data / AVL services on a first come, first served basis.

Etain Doyle,
Director of Telecommunications Regulation.

1 INTRODUCTION

This paper is the ODTR's response to the consultation document addressing new opportunities in the radio communications market for public mobile data and automatic vehicle location/tracking (ODTR document 01/44 of June 2001). The purpose of the consultation was to ascertain the level of interest in the provision of such services in Ireland and to invite firm expressions of interest from potential licensees.

2 CONTENT OF THE RESPONSE DOCUMENT

This response document contains the following further sections:

- a list of respondents to the consultation
- summaries of the consultation topics, the views of respondents and the Director's position for each of the main themes addressed in the consultation paper;
- Conclusions and summary of proposed actions following the consultation.

3 LIST OF RESPONDENTS

The four respondents to the consultation were:

- Electricity Supply Board Telecoms
- Inquam (UK) Ltd
- ntl Radiocommunications (Ireland) Ltd
- Siemens Datatrak Location and Information Systems Ltd

The Director wishes to express her thanks to everyone who contributed to the consultation. With the exception of material marked confidential, the written comments of respondents are available for inspection at the ODTR's office in Dublin.

4 CONSULTATION TOPICS

4.1 Market for public mobile data and automatic vehicle location (question 1)

4.1.1 Summary of the Consultation Topic

The consultation document sought views on the likely market for Public Mobile Data and Automatic Vehicle Location services in Ireland

4.1.2 Views of Respondents

Three of the respondents were of the opinion that there was a demand for further mobile data services in Ireland. Of these, one cited market research which indicated a potential market in excess of 20,000 users, with the emphasis on vehicle tracking and telemetry services. Another respondent observed that demand for AVL and short messaging services is already being met by combining Global Positioning by Satellite (GPS) technology with PMR or GSM services, but that there was growing demand among commercial users for a service that combined these facilities with fleet management.

A third respondent did not believe that there was a viable long-term future for narrowband mobile data systems, but that there was a market for a national, wideband data platform offering high speed mobile data applications. The fourth respondent saw little evidence of widespread pent-up demand for public mobile data and AVL services and considered that the market opportunity for these services in Ireland was relatively small.

4.1.3 Position of the Director

On the basis of the responses and consideration of the market in other European countries, the Director is satisfied that she make spectrum available for narrow band mobile data services providing tracking and short messaging facilities. She considers that such specialist services, tailored to the needs of particular types of user, would complement the broader service offerings of GSM and, in the future, 3G mobile networks and serve to increase choice in the mobile communications market. The Director acknowledges that there may also be a demand for high speed mobile data services but considers that these will be best served by the introduction of enhanced GSM data services, which is already underway, and the licensing of 3G mobile services. Both of these initiatives are being undertaken in a co-ordinated fashion throughout Europe, using common frequency bands with sufficient capacity for several competing

operators and providing benefits such as international roaming and the ability to switch between networks without having to purchase new terminal equipment.

4.2 Delivery of public mobile data and AVL services (question 2)

4.2.1 Summary of the Consultation Topic

The consultation document invited views on how public mobile data and AVL services should be delivered, including the most appropriate radio spectrum and the extent to which such services might be delivered by existing platforms such as GSM cellular and the global positioning by satellite (GPS) system.

4.2.2 Views of Respondents

Two of the respondents suggested that there would be benefits in licensing specialist public mobile data networks, although one of these argued that a narrow band platform would not be viable. The third respondent expressed concern about the viability of a data-only network and the threat from competing GSM and emerging 3G mobile platforms, while the fourth argued that GSM and GPS systems had served the needs of this market adequately to date.

4.2.3 Position of the Director

As indicated above, the Director believes that availability of specialist public mobile data/ AVL networks would complement existing, non-specialised public mobile services and further enhance choice in the mobile communications market.

4.3 Radio spectrum for public mobile data and AVL networks (question 3)

4.3.1 Summary of the Consultation Topic

Views were sought on whether radio spectrum in the UHF PMR bands should be used for dedicated public mobile data / AVL services.

4.3.2 Views of Respondents

Two of the respondents supported the use of UHF PMR bands for these services, although one of these suggested that there should be sufficient spectrum for wideband services, ideally of the region of 2 x 5 MHz. One respondent suggested the allocation of VHF frequencies might be preferable to reduce the number of sites required and the fourth respondent did not express a view on the suitability of the bands but was concerned about potential interference to other radio services using the bands.

4.3.3 *Position of the Director*

The Director has considered the responses and the availability of spectrum in the UHF and VHF mid-band PMR bands and is satisfied that channels could be made available in either of these bands to accommodate narrow band public mobile data / AVL services. While the Director also agrees that there may be a demand for wideband mobile data services, she is currently of the view that these will be served most effectively by the adoption of harmonised international standards and spectrum allocations such as those designated for digital trunked radio or 3G mobile. The UHF bands are already heavily used in Ireland by PMR, community repeater and analogue trunked radio services, and have been designated within Europe as harmonised bands for the introduction of digital trunked radio systems. A recent consultation on trunked mobile radio indicated that there is interest in the provision of such services in Ireland. There is therefore insufficient spectrum available in this band to support the introduction of proprietary broadband mobile data services requiring several MHz of spectrum in the foreseeable future.

4.4 Number of public mobile data/AVL services to be licensed and expressions of interest in the provision of services (questions 4 & 5)

4.4.1 *Summary of the Consultation Topic*

Views were sought on the minimum number of public mobile data / AVL services that should be licensed, subject to availability of suitable radio spectrum. Respondents were asked whether they wished to submit an expression of interest in the provision of a national Public Mobile Data / AVL network, and if so to provide in a separate attachment details of the type(s) of service that would be provided, proposed extent of coverage, how the service would be funded, proposed end-user tariffs, the radio spectrum requirement, any requirements for connection to the PSTN and any other information considered relevant.

4.4.2 *Views of Respondents*

Only two respondents expressed a view on the number of competing services. Both were of the view that the number would be limited by the size of the market, the cost associated with rolling out networks and the likely competition from other mobile data platforms such as GPRS and 3G mobile. One of the respondents suggested up to two networks should be licensed, while the other felt that a single network would be appropriate but that capacity could be made available to third party re-sellers.

Two expressions of interest were received in the provision of public mobile data / AVL network of the type described in the consultation document, namely from ntl Radiocommunications (Ireland) Ltd and Siemens Datatrak Location and Information Systems Ltd. A further expression of interest was received in the provision of national public mobile data and public access mobile radio services using 2 x 4.3 MHz of spectrum in the 410 – 430 MHz band.

4.4.3 Position of the Director

The Director is keen to promote innovation and choice in the provision of mobile data services and feels that this objective would be best served by the licensing of competing platforms. Since only two expressions of interest were received, and there is not currently a scarcity of spectrum for narrow band mobile services in most areas of Ireland, the Director is minded to invite applications for wireless telegraphy licences on a first come, first served basis. Specific frequencies for use at specific base station locations will be licensed on a demonstrable need basis and subject to the local availability of radio spectrum. Public mobile data / AVL services may also require either a Basic or General Telecommunications licence, in accordance with section 111 of the Telecommunications Act.

4.5 Licence conditions for national public mobile data and AVL network (question 6)

4.5.1 Summary of the Consultation Topic

Views were sought on the minimum licence conditions that should apply to the operator of a national public mobile data / AVL network.

4.5.2 Views of Respondents

Three respondents expressed a view on licence conditions. Two were in favour of coverage / roll out obligations; one of these also suggested that open access to the network should be a condition and the other suggested that there should be a guaranteed minimum product set. The third respondent thought that prevention of interference into other systems should be a licence condition, and that the cost of preventing such interference should be borne by the incoming operator.

4.5.3 Position of the Director

Taking into account that only two expressions of interest have been received, the Director does not consider currently that there is a scarcity of spectrum for narrow band mobile data / AVL services. She is therefore minded to proceed with licensing these services on a first come, first served approach, in a similar fashion to trunked mobile

radio systems. The licensing process will require applicants to provide details of their proposed system including written justification for the number of channels requested, along with details of specific base station locations. Licensed networks will be required, as a minimum, to be capable of determining the location of a vehicle or other asset to an accuracy of within ± 50 metres and to send and receive short messages (up to 160 characters).

Regulations will be drawn up under the Wireless Telegraphy Acts 1926 –1988 to enable the licensing of public mobile data / AVL services; these will include a requirement not to cause harmful interference to other radio services. These regulations will be subject to the consent of the Minister for Public Enterprise. An application form will also be drafted.

4.6 Parameters that should be used in a comparative evaluation process for a national public mobile data/AVL network (question 7)

4.6.1 Summary of the Consultation Topic

Views were sought on the parameters that should be used in a comparative evaluation process, in the event that the number of expressions of interest exceeds the number of licences that can be accommodated in the available spectrum.

4.6.2 Views of Respondents

Three respondents expressed views on the parameters that should be used. One respondent suggested using the same parameters as had previously been proposed for the national digital trunked radio licence and another respondent suggested efficiency of use of the UHF radio channels should be the significant parameter in any contest. The third respondent proposed three specific criteria, namely the validity of the business case, range of services offered and the rollout commitments offered.

4.6.3 Position of the Director

Since only two expressions of interest have been received, the Director does not consider it necessary to hold a comparative selection process for the licensing of public mobile data / AVL services. Applications to provide public mobile data / AVL services will be dealt with on a first come, first served basis.

5 CONCLUSIONS AND PROPOSALS FOR FURTHER ACTION

Having considered the responses to this consultation, the current availability of mobile data and AVL services in Ireland, the availability of such services elsewhere in Europe, and the current availability of spectrum for these services in Ireland, the Director has decided to proceed with a licensing process for narrowband public mobile data / AVL network. Radio frequency channels comprising up to 2 x 12.5 kHz each will be assigned for use at specified base station locations in either the PMR mid-band (138 – 153 MHz) or the UHF high-band (450 – 470 MHz), on the basis of demonstrable need. Up to two LF radio channels will also be assigned on a demonstrable need basis and subject to spectrum availability and international co-ordination.

Operators will be required to provide, as a minimum, the ability to locate a vehicle or other asset to an accuracy of within ± 50 metres and to send and receive short messages (up to 160 characters). Licences will be awarded on a first come, first served basis, subject to local availability of spectrum. Operators should pay careful attention to site engineering including adherence to the guidelines in ETSI Technical Report TR 100 053, "Radio Site Engineering for Radio Equipment and Systems in the Mobile Service", to minimise the risk of interference between co-sited systems or interference to other radio services.

Public mobile data / AVL operators will require a licence under the Wireless Telegraphy Acts 1926 - 1988 to operate radio apparatus, and may require a licence under the Telecommunications Act 1983 (WT Acts), as amended, if connection to the PSTN is involved. Licences issued under the WT Acts are subject to annual renewal and payment of an annual licence fee. The Director intends to apply a fee consistent with the fee applied to trunked mobile radio systems using similar radio spectrum. This fee will be set initially at a level of €625 per VHF, UHF or LF channel (up to 2 x 12.5 kHz) per base station in the first year, rising to €1,000 per annum thereafter. Licences issued under the Telecommunications Act are subject to a licence fee of €5,000, payable every five years. All fees are subject to periodic review.

This response paper does not constitute legal, commercial, or technical advice. The Director is not bound by it. The response is without prejudice to the legal position of the Director or her rights and duties under relevant legislation.