Public Wireless Networks – Exemption of User Stations

A consultation document

November 2002

The Radiocommunications Agency is an Executive Agency of the Department of Trade and Industry.

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1. EXECUTIVE SUMMARY

1.1 The Radiocommunications Agency (RA) is seeking views by 21 February 2003 on the regulatory issues surrounding the exemption of fixed user stations.

1.2 Under the Wireless Telegraphy Act 1949, wireless telegraphy apparatus that is not specifically exempted from licensing must be licensed, otherwise its use is illegal. The current Wireless Telegraphy (Exemption) Regulations 1999 (SI 1999/930), hereafter referred to as 'the Exemption Regulations', incorporate earlier legislation introduced to exempt mobile user stations – such as Global System for Mobile communications (GSM) handsets – from the need for individual licensing. However, the Exemption Regulations do not extend to fixed user stations (i.e. those that do not comply with the definition of a mobile station).

1.3 RA is aware of devices, being marketed in the UK, that enable fixed telephone networks to connect directly to mobile networks via a mobile phone radio link; these devices are commonly called 'GSM gateways'. Recent years have also seen the development of various fixed 'mobile' telematic applications such as vending machines and automatic transfer machines (ATMs), which use licensed public networks spectrum to deliver a service. Other fixed devices connecting to data, paging or Public Access Mobile Radio (PAMR) networks may also be inadequately covered; their status under the Exemption Regulations needs to be clarified.

1.4 Leaving aside the question of whether they are fixed or mobile, user stations may – depending on the type of use – also fail Regulation 4(2), which precludes the provision of a telecommunications service via exempted equipment. GSM gateways appear to be used mainly for private commercial use (i.e. gateways installed as extensions to PABX[1] systems, where companies are self-providing services for their staff). However, some service providers wish to use a gateway as a link from their own network to a cellular network to carry third-party traffic and thus provide a telecommunications service. This is a grey area at present, as these service providers cannot be licensed under the Wireless Telegraphy Act 1949 – the cellular radio frequencies are already licensed to UK cellular network operators on a nationally exclusive basis, so cannot be licensed to other commercial users.

1.5 RA has discussed these issues with representatives from the licensed network operators, manufacturers of telephony equipment and individuals. Because of the wide range of views expressed regarding the legality of GSM gateways, RA issued a statement on 23 August 2002 and a website notice on 4 October 2002. This consultation document seeks to address the regulatory issues, identify the options and seek views on proposals to amend the existing Exemption Regulations. The views and requirements of operators, manufacturers and other interested parties are therefore sought, to find a sensible and proportionate way forward.

1.6 All views received by 21 February 2003 will be considered carefully, and RA will publicise whatever decision is taken. If the decision is to proceed with the proposals, a Statutory Instrument will be prepared and laid before Parliament.

[1] Private Automatic Branch eXchange – an automatic telephone switching system for providing access to the public telephone system. A PABX usually serves a single commercial entity and is located on its premises.

2. RESPONSES TO THE CONSULTATION

2.1 Responses to this consultation should arrive no later than **Friday 21 February 2003**. These should be sent to RA and copied to the Department of Trade and Industry at the following addresses:

Richard Young
Public Wireless Networks Unit
Radiocommunications Agency
Wyndham House
189 Marsh Wall
London E14 9SX
Or electronically to richard.young@ra.gsi.gov.uk or userstations@ra.gsi.gov.uk
Or by fax to 020 7211 0117.

Jim Davies
CII Division
Department of Trade and Industry
151 Buckingham Palace Road
London SW1W 9SS
Or electronically to jim.davies@dti.gsi.gov.uk

2.2 This consultation document is also being published on the RA website (www.radio.gov.uk), which contains an electronic form for responses.

2.3 Any comments or complaints about the conduct of this consultation should be addressed to:

Julia Fraser
Information and Publicity Manager
Radiocommunications Agency
Wyndham House
189 Marsh Wall
London E14 9SX
Or electronically to julia.fraser@ra.gsi.gov.uk

Publication of Responses

2.4 Respondents to this consultation should note that, in the interests of open government:

- unless confidentiality is expressly requested, individual responses will be placed in the public domain in printed or electronic format, together with the names and contact details of authors. Respondents are requested to make it very clear if they wish to keep some or all of their response confidential;

- unconditional permission to publish responses will be assumed unless the author expressly states otherwise;

- any copyright attached to responses will be assumed to have been relinquished unless it is expressly reserved; and

- the provisions of the Data Protection Act 1998 will apply to information supplied.

3. INTRODUCTION

3.1 The radio spectrum is a finite resource, and RA is responsible for ensuring that it is used efficiently to meet current and future demand. By managing the spectrum and developing new spectrally efficient technologies, RA can ensure increased efficiency of spectrum use, and users can gain social and economic benefits.

3.2 However, the development of new technology cannot take place in isolation from the regulatory framework and competitive processes. The development of new technology (such as GSM gateway equipment) has technical, regulatory, competitive and economic implications that must be considered before such equipment can be deployed.

3.3 Introducing new technologies and services is likely to affect competition in a range of product and service markets. This will have an impact on the various public organisations, individuals and companies that use radio to provide or receive a service. For example, introducing a new technology like GSM gateways may have the benefit of increasing choice and lowering prices to consumers, but the impact on the integrity and grade of service delivered by the spectrum provider must also be considered.

4. USER STATIONS

4.1 A ‘fixed mobile’ application enables a static device or machine to transmit and receive information through a wireless connection (via a licensed radio network) wherever and whenever the need occurs. The only limitation is the coverage area of the radio network used. Embedding ‘mobile’ radio technology into static (fixed) machines helps them to operate more efficiently, resulting in lower costs and better service. Fixed mobile applications are so called because they communicate via the ‘mobile’ leg of a duplex channel, even if they do not themselves move.

4.2 Applications covered by this description include vending machines, automatic transfer machines (ATMs), credit-card authorisation terminals, closed-circuit television (CCTV) security cameras, remote meters and telematic devices. Through advancements in technology, GSM and other radio technology modules will continue to develop and become ever smaller, eventually becoming compact enough to be integrated into almost any kind of fixed electronic device.

4.3 GSM gateway technology enables a call from a fixed office phone system to be routed directly via a GSM link to a GSM mobile phone. The gateway is effectively a fixed mobile containing the subscriber identity module (SIM) for a number of networks. The gateway recognises a mobile endpoint, selects a SIM to correspond and sets up the call. The call appears to the network to have originated from another mobile of the same network, so it enjoys a cheaper call rate. The purpose of the gateway is, therefore, to avoid the higher charges of fixed-line-to-mobile calls and exploit the lower tariff of mobile-to-mobile calls within the same network.

5. REGULATORY ISSUES

5.1 There are two issues concerning the installation and operation of fixed stations, GSM gateways and other fixed mobile applications under the Exemption Regulations:

(i) fixed stations, fixed mobile terminals and GSM gateways are not covered by the definition of 'user station' in the existing Exemption Regulations; and

(ii) under Regulation 4(2) of the existing Exemption Regulations, user stations may not be used to provide a telecommunications service 'by way of business', i.e. commercially.

Fixed Use

5.2 A 'user station' is defined in Part I of Schedule 3 of the Exemption Regulations, as amended by SI 2000/1012, SI 2001/730 and SI 2002/1590, as a mobile station for wireless telegraphy designed or adapted to be:

(a) connected by wireless telegraphy to one or more relevant networks; and

(b) used solely for the purpose of sending and receiving messages conveyed by a relevant network by means of wireless telegraphy.

5.3 Ordinarily, the term 'mobile station' applies only to equipment that is movable and not fixed. It is therefore difficult to support an interpretation of the term that includes a fixed mobile terminal or GSM gateway equipment (where such equipment is effectively a fixed mobile phone).

5.4 It may be argued that if such equipment is manufactured to the same standards as 'true' mobile user terminals, it will probably cause little or no interference to the networks it uses. There are engineering implications for network operators, as a fixed station within a cell can affect traffic flow and capacity, and therefore has the potential to degrade service to mobile users. However, operators are currently accepting and connecting customers with such equipment, and they might reasonably be expected to provide additional capacity to accommodate the extra traffic. Ultimately, the decision to accept a customer rests with the operator, who may decline connection if the stability of the network is threatened.

5.5 Since there are several instances where network customers will employ fixed data, GSM or other equipment:

Proposal 1: It is proposed that the definition of 'user station' be amended to cover any customer of the network, irrespective of its fixed or mobile status.

Public/Private Use

5.6 Regulation 4(2) of the Exemption Regulations provides that (with the exception of equipment operating in the 2.4 GHz band) the exemption from licensing of 'relevant apparatus' does not apply to apparatus that provides a commercial telecommunications service to another person via a wireless telegraphy link. This prevents commercial users from usurping spectrum designated for deregulated uses

such as low-power devices, cordless telephony and telecommand, as this would be detrimental to the permitted applications in those bands.

5.7 It would therefore appear that equipment such as GSM gateways is permitted (i.e. does not fall within Regulation 4(2)) if it is used to provide a private connection to a public network, as it is not providing a telecommunications service to third parties. However, the use of GSM gateway equipment to provide a public connection to a public network is not permitted (i.e. does fall within Regulation 4(2)) as the link does provide a third-party telecommunications service.

5.8 However, if operators choose to connect customers to the network, does it matter if the traffic carried is a private or a public service? Where large-volume gateway systems might impact on network planning, operators could require users to declare such use before installation to allow for network configuration. In any case, RA believes that relaxing the Exemption Regulations to permit public connections would give the operators a choice, and would also bring potential benefits for consumers in terms of increased competition and reduction of call costs.

Proposal 2: It is proposed that the restriction on the type of service that may be provided via network user stations shall be withdrawn.

6. SUMMARY OF PROPOSALS

6.1 RA welcomes comments and views on all aspects of this consultation, and in particular seeks views on the following two proposals:

Proposal 1: It is proposed that the definition of 'user station' be amended to cover any customer of the network, irrespective of its fixed or mobile status; and

Proposal 2: It is proposed that the restriction on the type of service that may be provided via network user stations shall be withdrawn.

Please find attached at Annex A a reply form.

7. REGULATORY IMPACT ASSESSMENT

7.1 A Regulatory Impact Assessment is not required for this consultation, as the proposals are deregulatory and will not impose any regulatory barriers or additional costs on industry or consumers.

7.2 The deregulation of fixed user stations should encourage greater use of the radio spectrum, and assist the free circulation of radio-based equipment within Europe and beyond. It will benefit UK manufacturers, small businesses, service providers, retailers and consumers by facilitating the use of a new generation of sophisticated telephony terminals. Deregulation – which will affect only user stations, not the provision of the networks to which they are configured – will remove the need for regulatory licensing and fee-paying requirements for UK consumers. Exempting this range of equipment from licensing should provide significant financial benefits to small businesses and the UK economy in general.

7.3 This assessment will be reviewed in the light of comments received, and will be further developed if the proposal is taken forward.

ANNEX A

PUBLIC WIRELESS NETWORKS – EXEMPTION OF USER STATIONS

REPLY FORM

Name .....

Organisation (if applicable) .....

Address .....

.....

.....

..... Postcode .....

Contact details (if different) .....

Please tick the appropriate boxes

Proposal 1: It is proposed that the definition of 'user station' be amended to cover any customer of the network, irrespective of its fixed or mobile status.	
Yes, I agree with the proposal to amend the definition of 'user station' to cover any customer of the network, irrespective of its fixed or mobile status.	
No, I do not agree with this proposal.	
Please give your reasons:	

Proposal 2: It is proposed that the restriction on the type of service that may be provided via network user stations shall be withdrawn.	
Yes, I agree with the proposal that the restriction on the type of service that may be provided via network user stations shall be withdrawn.	
No, I do not agree with this proposal.	
Please give your reasons:	

If you have any concerns about the way this consultation has been consulted, you may send them to Julia Fraser, Radiocomunications Agency, 9Y/14B, Wyndham House, 189 Marsh Wall, London E14 9SX, or by email to julia.fraser@ra.gsi.gov.uk

Please return this form by **Friday 21 February 2003** to:

Richard Young
Radiocommunications Agency
11R/3B
Wyndham House
189 Marsh Wall
London E14 9SX
Tel: 020 7211 0239
Fax: 020 7211 0117

Or email userstations@ra.gsi.gov.uk

ANNEX B

PUBLIC WIRELESS NETWORKS – EXEMPTION OF USER STATIONS

THE CONSULTATION CRITERIA

1. Timing of consultation should be built into the planning process for a policy (including legislation) or service from the start, so that it has the best prospect of improving the proposals concerned, and so that sufficient time is left for it at each stage.

2. It should be clear who is being consulted, about what questions, in what timescale and for what purpose.

3. A consultation document should be as simple and concise as possible. It should include a summary, in two pages at most, of the main questions it seeks views on. It should make it as easy as possible for readers to respond, make contact or complain.

4. Documents should be made widely available, with the fullest use of electronic means (though not to the exclusion of others), and effectively drawn to the attention of all interested groups and individuals.

5. Sufficient time should be allowed for considered responses from all groups with an interest. Twelve weeks should be the standard minimum period for a consultation.

6. Responses should be carefully and open-mindedly analysed, and the results made widely available, with an account of the views expressed, and reasons for decisions finally taken.

7. Departments should monitor and evaluate consultations, designating a consultation co-ordinator who will ensure the lessons are disseminated.