

SCHEDULE

Part 1

LICENCE COMMENCEMENT DATE

The Licence Commencement Date with respect to TACS and GSM 900 is the 16th day of May 1996.

The Licence Commencement Date with respect to GSM 1800 is the 1st day of January 2000.

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Part 2

THE LICENSED MOBILE SERVICES

1 The Licensed Mobile Services

1.1 The Licensed Mobile Services are GSM Mobile and Personal Communications Services having the characteristic of a pan-European, cellular, digital, land based, mobile telephony service:-

- (i) Compatible with the GSM Standard and provided in the 900MHz band (the "GSM900 service") and, from 1 January 2000, in the 1800MHz band (the "GSM1800 service") in accordance with the Wireless Telegraphy Acts 1926 - 1988 and the GSM technical specifications of the European Telecommunications Standards Institute ("ETSI"), as published by the National Standards Authority of Ireland ("NSAI"); and
- (ii) With the international roaming capability referred to in Part 5 of the Schedule.

1.2 The Licensed Mobile Services include a TACS analogue mobile telephony service, being a cellular, land based, mobile telephony service using analogue technology in the 900MHz band conforming with the standard known as the Total Access Communications System Mobile Station - Land Station Compatibility Specification as published by the Cellular Radio Advisory Group Mobile Station Land Station Compatibility Specification Subcommittee from time to time.

2 Additional services

2.1 The Licensee shall be required to provide the following services:-

- (i) Fax and data.
- (ii) Short message service.
- (iii) Voicemail.
- (iv) Call diversion.
- (v) Call waiting.
- (vi) Itemised billing.

2.2 Before December 31, 2000, unless otherwise stated, the Licensee shall introduce the following services, or equivalents thereto:

Fundamental Services:-

- (a) Wireless Application Protocol (“WAP”).
- (b) High Speed Circuit Switched Data (“HSCSD”).
- (c) General Packet Radio Service (“GPRS”).
- (d) Enhanced Data rates for GSM Evolution “EDGE” (EDGE to be introduced by December 2001).

Before the end of the year 2003:

The licensee shall provide value added services that enhance messaging, voicemail and SMS services

The licensee shall provide Information Services and a platform for electronic commerce (e commerce).

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Part 3

ACCESS TO THE EMERGENCY SERVICES

General

The Licensee shall provide ready access for customers through the Licensed Mobile Services to the emergency services (within the meaning this of Part 3 of the Schedule).

Calls to an Emergency Service

In this part an “emergency service” means the Gardá Síochána, the fire brigade services, the ambulance services, the boat and coastal rescue services (including the rescue services provided by the Air Corps) or the mountain and cave rescue services.

Directions by the Director

The Director may give directions in writing to the Licensee in relation to the handling of calls to and from customers relating to an emergency service (“emergency calls”), and the Licensee shall comply with any such directions.

Acceptance of Emergency Calls

Emergency access codes 999 and 112, and any other codes subsequently designated for use as emergency access codes, shall be open to all GSM terminal equipment equipped with a valid SIM Card, where technically necessary, and all valid TACS terminal equipment, exclusively for calls to the emergency services

5. Routing of Emergency Calls

The Licensee shall ensure that an emergency call is routed at the expense of the Licensee, to a collection centre for emergency calls. The Licensee shall provide not less than two routes with physical diversity between each mobile switching centre and a collection centre as described.

6. Emergency Calls Free of Charge

- (a) The Licensee shall not impose a charge on the customer in respect of an emergency call.
- (b) The Licensee shall not list on a customer’s itemised bill any emergency call.

7. Identification of Emergency Calls

When an emergency call is made from terminal equipment of a customer of the Licensee, the Licensee shall, where technically possible, transmit the customer’s

number to a collection centre for emergency calls in the form of a calling line identification message.

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Part 4

SERVICE QUALITY, PERFORMANCE STANDARDS AND OBLIGATIONS

1 General Obligations

1.1 For the purposes of carrying out service quality surveys, the Licensee shall provide, on request, to the Director:-

- (i) Maps showing coverage for, in the case of the GSM900 service, 2 Watt terminals;
- (ii) Maps showing coverage for, in the case of the GSM1800 service, 1 Watt terminals;
- (iii) An up to date list of the locations of the base transceiver stations;
- (iv) A mechanism for identifying the base station that is handling a call at any given time; and
- (v) An adequate number of test numbers.

1.2 Where requested to do so, the Licensee shall provide to members of the public, maps of the other GSM operators with whom it has roaming agreements showing the coverage provided by them.

2 Coverage

2.1 **"Coverage"** means the extent to which the strength of the radio signal is sufficient to provide an adequate service for:-

- a 2 Watt, GSM900 terminal and/or
- a 1 Watt, GSM1800 terminal.

An adequate service is achieved outdoors if the average field strength measured outdoors is at least 46dBuV/m for the GSM 900 service and/or 54dBuV/m for the GSM1800 service at a height of 1.5 metres above ground level.

An adequate service is achieved indoors if the average field strength measured indoors is 56 dBuV/m for the GSM 900 service and/or 64 dBuV/m for the GSM1800 service at a height of 1.5 metres above ground level.

Coverage is expressed as a percentage of geographical area, or as a percentage of population, of the State.

2.2 Measurement Guidelines for coverage

The appropriate figures contained in the latest population census published by the Central Statistics Office will be used for calculating the base figure when calculating national population coverage. Measurements to determine coverage shall be carried out using:

- a 2 Watt, GSM900 terminal; and/or
- a 1 Watt, GSM1800 terminal.

Alternatively, signal strength measuring equipment may be used

2.3 Mandatory Service Standards

2.3.1 The Licensee shall ensure that the national outdoor population coverage shall not fall below:-

- (i) In the case of the combined GSM900/GSM1800 service, 99%; and
- (ii) In the case of the GSM1800 service, 48%,

subject to the provisions of Part 6 of the Schedule.

2.3.2 The licensee shall ensure that national geographic coverage shall not fall below 92%.

2.4 Other Obligations

2.4.1 The Licensee shall publish up to date maps showing coverage for 2 Watt, GSM900 mobile terminals operating outdoors and 1 Watt, GSM1800 terminals operating outdoors.

3 Service Unavailability

3.1 "**Service unavailability**" means the average number of minutes per terminal for any six month period for which the service is not available due to a network disturbance, failure or scheduled unavailability.

3.2 Measurement Guidelines for service unavailability

The calculation of service unavailability is subject to the following weighting factors which take account of traffic load variations:

Service Unavailability, Weighting Factors (divide duration of each network event by weighting factor)			
	Monday to Friday	Saturday	Sunday
For periods between 07.00 and 24.00	1	2	4
For periods between 00.00 and 07.00	4	8	16

3.3 Mandatory Service Standard

The Licensee shall ensure that service unavailability is less than 45 minutes.

3.4 **Other Obligations**

- 3.4.1 The Licensee shall keep a log (the “network log”) for the purposes of recording and tracking all periods of system unavailability. The Licensee shall maintain this network log in a manner that will demonstrate, to the satisfaction of the Director, that such a network log is an adequate means of assessing whether the Licensee is complying with its system availability obligations under this licence.
- 3.4.2 The network log or, as may be appropriate, part thereof shall be made available on request to the Director.
- 3.4.3 The Licensee shall calculate the service unavailability for the Licensed Mobile Services for any period specified by the Director from the information recorded in the network log, and shall upon request and within such time as may be specified by the Director, provide the Director with the results of the calculation.

4. **Grade of Service**

4.1 **Blocking Rates**

4.1.1 **Definitions:**

"Blocking rate" means the percentage of total call attempts made for the traffic case concerned, during the time consistent busy hour and within coverage, which are unsuccessful.

"Time consistent busy hour" means the period of one hour starting at the same time each day for which the average traffic of the Licensee's Mobile and Personal Communications System concerned is greatest over the days under consideration. The time consistent busy hour shall be determined from an analysis of traffic data obtained from the Licensed Mobile Services and shall be subject to the approval of the Director.

4.1.2 **Mandatory Service Standards**

The Licensee shall ensure that the blocking rate shall not exceed the percentages in respect of each of the traffic cases specified in the following Table:-

Maximum Permissible Blocking Rates		
Traffic Case	Blocking rate	
	Average	Worst Case
Terminal equipment (connected to the Licensee's Mobile and Personal Communications System) to Terminal equipment (connected to the Licensee's Mobile and Personal Communications System)	3.47%	10%
Terminal equipment (connected to the Licensee's Mobile and Personal Communications System) to Terminal equipment (connected to the Mobile and Personal Communications System of an Other Licensed Operator)	4%	10%
Terminal equipment (connected to the Licensee's Mobile and Personal Communications System) to Terminal equipment (connected to the Telecommunications Network of an Other Licensed Operator)	2%	8%

4.2 **Dropped Calls**

3.2.1 **"Dropped call rate"**: the percentage of total established calls during any measurement period which are prematurely released by the Licensee's Mobile and Personal Communications System within three minutes.

4.2.2 **Measurement Guidelines**

Measurements will be made:

- 1) In the case of the GSM900 service, with a 2 Watt terminal operating within claimed coverage areas and,
- 2) In the case of the GSM1800 service, with a 1 Watt terminal operating within claimed coverage areas.

4.2.3 **Mandatory Service Standards**

The Licensee shall ensure that the dropped call rate shall not exceed 3% on average or 6% worst case.

4.3 **Transmission Quality**

The Licensee shall ensure that the speech transmission quality complies with the

GSM Technical Specifications of ETSI, and in the case of TACS analogue mobile telephony service, the Total Access Communications System Mobile Station and Station Compatibility Specification Issue 4, Amendment 2, February 1995, as published by Cellular Radio Advisory Group (CRAG) Mobile Station – Land Station Compatibility Specification Sub-Committee in February 1995.

In particular, the Licensee shall ensure that appropriate echo treatment equipment is used in the provision of the Licensed Mobile Services and that it is properly configured.

4.4 **Other Obligations**

The Licensee shall provide to the Director, on request, such grade of service measurement information as the Director considers necessary to determine performance against mandatory service standards as specified to the Licensee.

5. **Billing**

5.1 **Mandatory Service Standards**

In relation to billing, the Licensee shall, unless agreed otherwise with individual customers, comply with the appropriate standard requirements specified in the following Table:-

Billing Aspects	Standard Requirements	Options and Alternatives
Billing Frequency	Monthly	Alternative frequency or flexible frequency subject to agreement with customer
Billing Itemisation	All billable calls and services	Customised bill layouts with or without summary itemisation subject to agreement with customer
Billing Medium	Paper	Delivery of bills on computer media or on-line subject to agreement with customer
Billing Method	Per Second Billing	

An itemised bill shall contain, at least, the following information in respect of each billable call:-

- the date of the call
- the start time of the call
- the number called
- the duration of the call
- the price of the call

5.2 **Billing Accuracy and Fraud Detection**

The Licensee shall incorporate where possible in its billing system and otherwise shall adopt:

- i. measures to ensure that each call record is an accurate record of the actual call and that the correct accumulated call records are applied to generate each customer's bill, and

- ii. measures to detect cases of possible fraud including measures to identify rapidly abnormal calling patterns.

Performance Standards and Objectives

- 6.1 The Director may, by direction in writing given to the Licensee, specify performance standards and obligations with respect to service quality or modify existing performance standards and obligations and the Licensee shall comply with any such directions.

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Part 5

ROAMING

1. The Licensee shall not act on foot of any agreement providing for a national roaming capability made between the Licensee and any other provider of a GSM mobile telephony service in the State unless and until the Director has approved the terms of the agreement.
2. The Licensee shall establish and maintain as part of the Licensed Mobile Services an international roaming capability for its customers that is as wide and comprehensive as is practicable.

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Part 6

SERVICE ROLL-OUT AND REQUIREMENTS

1 Minimum Service Roll-out Requirements

The Licensee shall ensure that coverage (as defined in Part 4) measured in accordance with Part 4 shall be not less than the percentages specified in Table I and Table II before the expiration of the periods specified in those Tables.

Table I: GSM1800 Service

	PHASE 1	PHASE 2	PHASE 3
Completion Date	<i>August 31st 2000</i>	<i>June 30th 2002</i>	<i>June 30th 2006</i>
Objective	<i>Dublin, Cork, Limerick, Galway and Waterford dense traffic areas</i>	<i>For towns listed in Phase 1: Fill-in coverage and concentrated indoor coverage enhancement. More towns covered,</i>	<i>For towns listed in Phase II: Enhance town centre and indoor coverage. More towns covered.</i>
Sites	<i>81</i>	<i>211</i>	<i>393</i>
Cells	<i>243</i>	<i>633</i>	<i>1179</i>
Population Coverage	<i>24%</i>	<i>35%</i>	<i>48%</i>

Table II: Combined GSM900/GSM1800 Service

	PHASE 1	PHASE 2	PHASE 3
Completion Date	<i>May 31st 2000</i>	<i>June 30th 2002</i>	<i>June 30th 2006</i>
Population Coverage Combined GSM900/1800 Network	<i>98%</i>	<i>98%</i>	<i>99%</i>
Geographic Coverage outdoors on combined GSM900/1800 Network	<i>87%</i>	<i>89%</i>	<i>92%</i>

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Part 7

CHARGES TO CUSTOMERS

The licensee shall guarantee to reduce the charges for a benchmark customer by a cumulative average of 5% per annum, in real terms, year on year, for each of the first five years from 1st July 2000 (or date of licence variation, whichever is later)

The Benchmark customer will have the profile set out in Tables 1 through 5.

The proposed benchmark customer will generate 200 minutes of mobile originated traffic per month, in the ratios shown in Table 1

Table 1 - Benchmark Customer Traffic Breakdown (%)

	Peak	Off-peak	Weekend	Total
Local	20%	10%	10%	40%
National	15%	8%	8%	30%
Eircell mobile	8%	4%	4%	15%
Other mobile	8%	4%	4%	15%
Total	50%	25%	25%	100%

In terms of minutes this becomes:

Table 2 - Minutes Per Benchmark Customer Per Month

	Peak	Off-peak	Weekend	Total
Local	40	20	20	80
National	30	15	15	60
Eircell mobile	15	7.5	7.5	30
Other mobile	15	7.5	7.5	30
Total	100	50	50	200

In addition, the customer will transfer 2Mbytes of data per month (all at peak hours and local). At 9600 bit/s this equates to 30 minutes of data usage on today's network.

The most appropriate tariff for this customer today would be Eirtime 100, which for a monthly access charge of £30 (ex vat), has 100 minutes of inclusive calls, and tariffs for minutes above 100 are set out in Table 3 below.

Table 3 - Benchmark Customer Tariffs, Based on Eirtime 100
(All prices shown are exclusive of VAT)

Rates	Peak	Off-peak	Weekend
Data	£0.25		
Local	£0.25	£0.125	£0.10
National	£0.25	£0.125	£0.10
Eircell mobile	£0.10	£0.10	£0.10
Other mobile	£0.25	£0.125	£0.10

The minutes of use above 100 for this customer are shown in Table 4 and the total usage charges are set out in Table 5

Table 4 - Benchmark Customer - Additional Minutes of Use Based on Eirtime 100

Usage	Peak	Off-peak	Weekend	Total
Data	30			30
Local	20	10	10	40
National	15	7.5	7.5	30
Eircell mobile	7.5	3.75	3.75	15
Other mobile	7.5	3.75	3.75	15
Total	80	25	25	130

Table 5 - Benchmark Customer Usage Charges

	Peak	Off-peak	Weekend	Total
Data	£7.50			£7.50
Local	£5.00	£1.25	£1.00	£7.25
National	£3.75	£0.94	£0.75	£5.44
Eircell Mobile	£0.75	£0.38	£0.38	£1.50
Other Mobile	£1.88	£0.47	£0.38	£2.72
Usage Total	£11.38	£3.03	£2.50	£16.91
			Monthly Access Charge	£30.00
			Monthly Total	£46.91

The licensee guarantees that the price for this same pattern of usage will be at or below the levels shown in Table 6, in real terms, on the dates stated

Table 6 - Price Guarantee for Benchmark Customer

(All prices shown are exclusive of VAT: Based on 5% price decrease p.a. in real terms)

	01-Jul-00	01-Jul-01	01-Jul-02	01-Jul-03	01-Jul-04	01-Jul-05
Factor	1	0.95	0.90	0.86	0.81	0.77
Price	£46.91	£44.56	£42.33	£40.22	£38.21	£36.30

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Part 8

SALE OF AIRTIME

1. The Licensee shall, if requested to do so by any mobile telephony service operator licensed under section 111(2) of the Act "the requester", and without prejudice to Condition 2.4 of the Licence, make airtime available to the requester, upon such terms and conditions as may be agreed upon by the Licensee and the requester, for resale by the requester.
2. The Licensee shall use its best endeavours to conclude an agreement referred to in paragraph 1 not later than 12 months after the receipt by it of a request under that paragraph.
3. If an agreement referred to in paragraph 1 has not been concluded within the relevant period of 12 months, the Director may take part in negotiations between the parties concerned for the purpose of facilitating the conclusion of the agreement.
4. If an agreement referred to in paragraph 1 has not been concluded within 18 months of the receipt of the relevant request under that paragraph, such airtime as the Director may determine shall be made available by the Licensee to the requester concerned upon such terms and conditions as may be so determined.
5. Where the Licensee proposes to enter into an agreement referred to in paragraph 1, he shall, before so entering, inform the Director in writing of the terms and conditions of the proposed agreement, and the Licensee shall not enter into the agreement without the prior consent of the Director, which consent shall not be unreasonably withheld.
6. Nothing in this Part 8 shall preclude the Licensee from making airtime available to a person not licensed under S111(2) of the Act but lawfully entitled to resell airtime.
7. In this Part 8 'airtime' means airtime on the Eircell analogue network.

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Part 9

PERFORMANCE GUARANTEES

1. In the event that the Licensee fails to meet any of the performance targets specified in Table 1 below, the amounts guaranteed, as shown in the Table, shall become and be payable on demand to the Director. These performance targets are in respect of the GSM1800 services only, unless otherwise stated.

Table 1: Performance Targets and Financial Guarantees

Performance Target	Financial Guarantees	Maximum Financial Commitment
Coverage: 30% Population coverage before 1 July 2001	A once off single payment of Euro 3,000,000, in the event of non-compliance on the promised date.	Euro 3,000,000
Blocking: A time-consistent busy hour blocking rate for combined GSM900/GSM1800 services of not more than 2%	For each of the first 10 years (from 1 July 2000) A penalty of Euro 1,000,000 per year of non-compliance will apply	Euro 10,000,000
Dropped Calls: Not more than 3% measured in the time consistent busy hour	For each of the first 10 years (from 1 July 2000), a penalty of Euro 1,000,000 per year of non-compliance will apply	Euro 10,000,000

2. Measurements of the Coverage performance target shall make use of Eircell's coverage prediction plots, properly calibrated by means of Eircell field measurements.
3. The population figures are those contained in the latest population census published by the Central Statistics Office.
4. Eircell's measurements of the blocking rate and dropped call rate will be supported by means of statistics provided by Eircell's Operational Support System (OSS).
5. Eircell's measurements of the blocking rate and dropped call rate will be reported monthly, and averaged across a 12 month period, starting from 1 July 2000.
6. In the event that performance targets for blocking rate and dropped call rates are both exceeded in the one year then, the maximum penalty imposed for the combined non-compliance will be Euro 1,333,333 for that year.

7. The Licensee shall, before 1 July 2000, put in place a set of procedures to measure and monitor compliance with the performance targets set out above. These procedures shall include the reporting procedures to the Director and shall be in such form as may be agreed by the Director from time to time.