

Mobile network operators' call success rate survey

April – September 2001

Consumers take a number of factors into account when buying and using a mobile phone. The ability to make a successful call is one such factor.

To assist consumers, the four mobile network operators (BT Cellnet, One2One, Orange (see footnote below - 1) and Vodafone), working together with Of tel and consumer groups, have published the results of the individual operators' network surveys of call success rates (see footnote below - 2). The survey measures the percentage of test calls connected and completed successfully, percentages of successfully held calls and successful set-ups, both nationally and regionally. These figures are the results of each mobile network operators' survey of its own network during the period April 2001 – September 2001. The results for this round of surveys were published in November 2001.

Results of operators' call success rate surveys are listed for the following regions:

- National
- East Anglia
- London
- Midlands
- Northern England
- Northern Ireland
- Scotland
- South East England
- South West England
- Wales

The results of earlier rounds of surveys can be found on the Of tel website:

April-June 1999 (http://www.of tel.gov.uk/publications/1999/info_feedback/mble1099.htm)

October 1999-March 2000 (<http://www.of tel.gov.uk/publications/research/mble0500.htm>)

April-September 2000 (<http://www.of tel.gov.uk/publications/research/2001/mble0101.htm>)

For further information contact Chris Smithers 020 7634 8876

(1) Orange has decided not to publish the results of its drive survey, as they do not accurately reflect the performance of the Orange network.

The fixed-line-to-mobile results were affected by localised faults on the fixed network where the test calls were originated, resulting in the failure of a number of test calls to the Orange network. Consequently, the data obtained does not reflect the actual network performance of Orange.

Orange is currently working with the fixed operator to resolve this issue. For the avoidance of doubt the scope of the fault was limited to test calls. The quality of service of customer calls made to and from the Orange network was not impacted by this issue.

(2) Reference to "call success rates" refers to the test equipment's ability to set up and hold a call for two minutes. This measure does not give a figure for the audio quality of the call.

Survey Details

The operators are carrying out their own drive-round surveys making test calls on the basis of a common survey specification. The survey methodology used and the results have been independently audited.

Each operator made at least 21,000 test calls over the six month period. Seventy cities and towns and major A-roads and motorways were tested throughout the UK.

Measurements were made using an agreed set of routes although the same routes were not necessarily driven in the towns and cities. The roads were driven Monday to Friday between the hours of 8 am and 8 pm, excluding Bank Holidays.

In order to cover a wide range of locations, data was compiled using vehicles with roof-mounted aerials and automatic call generation equipment to make test calls. The drivers of the vehicles did not make calls.

Customers should note that the survey results are limited by a number of factors, including the nature and location of the tests employed. Consumers' own experience may differ from the reported level of service depending on factors such as the handset and equipment being used, geographic location and time of day.

Furthermore, when making a purchase decision, consumers should also take into account other factors including price of handset, connection charge, call tariffs, claimed coverage, service features, terms and conditions and indeed any other factors which individuals consider relevant to their needs.

Calls made

Calls were made to and from mobiles connected to the automatic call generating equipment and dedicated fixed test lines: mobile to fixed telephone line and fixed telephone line to mobile, in the ratio of 2:1.

Calls were regarded as successful if held for two minutes.

The figures quoted only reflect the service experienced on the specified routes, at the time of day that the calls were made and the type of handset used.

Technical details

Mobile network operators use different test equipment and different signal frequencies and so adjustments have been made to try to compensate for these differences.

BT Cellnet and Vodafone's dual band capability was tested as part of the survey. For further information about dual band networks please contact BT Cellnet or Vodafone.

Statistical validity

Because the results are based on a sample of calls there is a small margin of error attached to them, given in the 'variance' column in the table. This figure provides a measure of the upper and lower bound of the 95% confidence interval - the range in which it is 95% certain that the true level actually lies. The margin of error attached to each of the operator's results at the national level at 95% confidence is less than 0.5%.

Audit

The results of the surveys have been independently audited. As recommended by the auditor the results have been rounded to one decimal place.

Future developments

The operators, together with Oftel and consumer groups, are currently working to extend the surveys to cover other aspects of quality.

Further information

Consumers wanting further information about the survey should contact the mobile phone network operators directly.

Legal Issues

As indicated above, although the results have been independently audited, the survey was carried out by the four mobile network operators according to their own agreed criteria. Therefore Ofcom accepts no liability in respect of any of the results.

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Call Success Rate Survey - April-September 2001

National (UK)

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	97.0	98.5	98.6	0.2
One2One	95.1	96.9	98.1	0.3
Vodafone	97.4	98.5	98.9	0.2

Orange has decided not to publish the results of its drive survey, as they do not accurately reflect the performance of the Orange network.

The fixed-line-to-mobile results were affected by localised faults on the fixed network where the test calls were originated, resulting in the failure of a number of test calls to the Orange network. Consequently, the data obtained does not reflect the actual network performance of Orange.

Orange is currently working with the fixed operator to resolve this issue. For the avoidance of doubt the scope of the fault was limited to test calls. The quality of service of customer calls made to and from the Orange network was not impacted by this issue.

East Anglia

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	97.8	98.7	99.2	0.0
One2One	96.5	98.2	98.3	1.2
Vodafone	98.8	99.0	99.8	0.7

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London

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	96.8	98.4	98.4	0.5
One2One	97.9	99.1	98.8	0.5
Vodafone	97.2	98.2	99.0	0.5

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Midlands

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	97.1	98.5	98.6	0.5
One2One	96.3	97.6	98.7	0.6
Vodafone	97.8	98.8	99.0	0.5

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Northern England

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	98.3	99.2	99.1	0.4
One2One	96.5	97.5	99.0	0.5
Vodafone	97.5	98.5	98.9	0.5

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Northern Ireland

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	96.7	97.9	98.9	1.2
One2One	93.4	96.0	97.3	1.6
Vodafone	97.6	98.7	98.9	1.0

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Scotland

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	95.4	97.8	97.6	0.9
One2One	90.8	94.0	96.6	1.3
Vodafone	97.1	98.5	98.5	0.8

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South East England

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	96.7	98.4	98.4	0.6
One2One	94.9	97.4	97.5	0.8
Vodafone	98.2	99.0	99.2	0.5

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South West England

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	96.6	98.2	98.4	0.9
One2One	94.9	97.8	97.0	1.1
Vodafone	97.4	98.5	98.9	0.8

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Wales

Company	Calls connected and completed successfully	Successful set-ups	Successfully -held calls	Variance (calls connected and completed)
BT Cellnet	96.1	97.8	98.4	1.1
One2One	82.5	86.6	95.3	2.3
Vodafone	94.1	97.0	97.0	1.4

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