



Directory Enquiries - From 192 to 118

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Directory Enquiries - From 192 to 118

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John Bourn
Comptroller and Auditor General
National Audit Office

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The National Audit Office study team consisted of:

Richard Baynham, Ed Humpherson
and Simon Reason

This report can be found on the National Audit Office web site at www.nao.org.uk

For further information about the National Audit Office please contact:

National Audit Office
Press Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Tel: 020 7798 7400

Email: enquiries@nao.gsi.gov.uk

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CONTENTS

EXECUTIVE SUMMARY	1
PART 1	
The decision to introduce competition	6
The provision of directory enquiries	7
Oftel's case for liberalisation	8
The collection of further evidence	12
Oftel's decision	13



PART 2

Oftel's management of the liberalisation	14
Oftel's project management	15
Oftel's approach to encouraging competition	17
Consumer confusion	19

PART 3

The benefits for consumers	22
Pre and post liberalisation call accuracy	23
Pricing options	24
The range of available services	29
The regulation of the competitive market	29

APPENDICES

1. Study methodology	31
2. Oxera paper	32
3. Chronology of key events	35
4. Summary of survey responses	37
5. International case studies	39
6. Learning points for liberalisations	42

EXECUTIVE SUMMARY



1 In 2003 the Office of Telecommunications (Of tel), which has since been subsumed into the Office of Communications (Of com), opened the directory enquiries telephone service to competition. The numbers 192 and 153¹ have been replaced by a choice of over 200 different 118 numbers. Of tel’s objectives were to:

- improve the quality of service;
- encourage greater price competition; and
- bring increased innovation and choice.

2 Before 2003 telecommunications network operators provided directory enquiries services as part of their Universal Service Obligation² and callers were directed to the service provided by their network operator. By 2000 a number of firms had expressed their interest to Of tel in entering the £300 million per annum directory enquiries market. There was, however, little scope for new firms to compete whilst the network operators held the advantage of familiar short telephone codes (192 and 153). Of tel decided to encourage competition in the provision of directory enquiries services by introducing a consistent numbering basis using the 118 prefix. This was consistent with Of tel’s statutory obligations under the 1984 Telecommunications Act and its belief that competitive markets benefited consumers.

3 At the end of December 2003 Of com took over the duties and responsibilities of Of tel and four other communication bodies.³ Of com’s aim is to further the interests of citizen-consumers through a regulatory regime which, where appropriate, encourages competition.

4 This report examines Of tel’s management of the liberalisation and whether the introduction of competition has benefited consumers. The report makes a number of recommendations intended to inform Of com’s development of its regulatory approach. Appendix 1 explains our approach and methodology, which included commissioning economic advisers, Oxera, to undertake an economic analysis of the introduction of competition to the directory enquiries market. A summary of its paper is at Appendix 2.

Our findings

The results of liberalisation

Objective i: Improved quality of service

5 In November 2004 Of com’s research⁴ showed that, under the new arrangements, 86 per cent of directory enquiries requests received the correct telephone number. Of the 30 services surveyed, 19 provided the correct information for at least 90 per cent of requests. Success rates in finding residential numbers were lower than business numbers (Figure 1). Of com could not compare the performance of the 118 companies against the previous 192 services as its predecessor, Of tel, had not collected data on the accuracy of the networks operators’ services. This is because, in common with other countries’ experiences of liberalising their directory enquiries markets, Of tel had identified that there were few public concerns about the accuracy of directory services. However, Of tel’s post-liberalisation survey of the performance of new services in October 2003 produced unreliable results as the numbers tested were not wholly representative of directory enquiries call profiles and sample sizes were too small to provide statistically robust results on a service by service basis.

1 Success rates in obtaining the correct telephone number, November 2004

	Residential %	Business %	Combined ¹ %
Average	81	86	86
Best	99	98	98
Worst	71	82	83

Source: Of com and ICSTIS mystery shopping, November 2004

NOTE

¹ Of com and ICSTIS weighted the combined results to reflect the average call profile to directory enquiry services, specifically that 87 per cent of requests are for business numbers.

1 192 was the number used for requests for national telephone numbers; 153 was used for international requests.
 2 A provision in some Telecommunications Act licences requiring the licensee to provide certain services to all specified persons. For example, BT was required to provide basic voice telephony and certain other established telecommunications services to anyone who may reasonably request them.
 3 The following organisations were merged to create Of com: The Office of Telecommunications; The Broadcasting Standards Commission; The Independent Television Commission; The Radiocommunications Agency; and The Radio Authority.
 4 This research was conducted in association with ICSTIS, the Independent Committee for the Supervision of Standards of Telephone Information Services.

Objective ii: Increased price competition

6 The new directory enquiries numbers have a variety of charging structures and the price depends on: the chosen service provider; the network on which the call is placed; and the length of the call, which can be affected by the type of service required. A National Audit Office analysis of prices shows that there is significant variation in prices (Figure 2) and the majority of callers now pay more than they did for 192 requests, although a wider range of services is now available (paragraph 9). Before the liberalisation, BT charged 40 pence for two requests on 192 but, in August 2004, the two numbers with 80 per cent of market share – BT (118 500) and the Number (118 118) - charged 51 pence and 56 pence for requests from a BT phone line.⁵ A wide range of prices was available and around one quarter of services were cheaper than BT’s 192 service. However, in common with some other telecommunications products, customers on most non-BT networks have a restricted choice of 118 numbers.

7 All service providers are required to include price information in their advertisements for 118 numbers⁶ and network operators are required to publish pricing information for all call services, which they often discharge via publication on their websites. Ofcom does not offer price comparisons on its website although it does give a link to an independent price comparison website. But it is not easy for consumers to find the best price, which limits the effectiveness of price competition.

8 Business and public sector bodies have more scope to benefit from price competition by seeking out the best deal. Large users of directory enquiries are able to negotiate contracts with 118 service providers on terms more favourable than the standard public tariff. However, the extent to which business and government bodies have taken advantage of competition in directory enquiries is unclear. The Office of Government Commerce has negotiated telecommunications contracts on behalf of all government departments, but take-up is not compulsory and is inconsistent across the public sector. In 2004 a business survey⁷ also showed that just 17 per cent of businesses considered they had benefited from the competitive directory enquiries market, mainly through reduced costs. 95 per cent of survey respondents indicated difficulties in comparing the cost of competing services.

2 The cost of calling 118 services, as at August 2004

	Cheapest ¹ £	Most expensive ¹ £	Range %
45 second call²			
Landline	0.27	1.73	540
Mobile	0.25	2.50	900
Five minute call²			
Landline	0.55	4.00	625
Mobile	1.25	12.50	900

Source: National Audit Office analysis

NOTES

1 Represents the cost of a call to a national directory enquiry service.
 2 45 seconds is the average length of a call to a national directory enquiry service. A five minute call has been used to give an indication of the cost of an enquiry which was subsequently connected to the end number.
 3 BT charged 40 pence for requests for two numbers on 192.

Objective iii: The introduction of innovative services

9 Callers now have a much wider choice of directory enquiries services, including the option to connect directly to the requested number; to receive numbers by text; to locate services within a chosen area; cinema listings; and the provision of train times. There are also niche players in the market providing specialist services; for example, the provision of telephone numbers of services recommended by members of the gay community. Ofcom’s research showed a low level of awareness and use of most of the new services and one half of callers using directory enquiries just to find a telephone number.

The liberalisation process

The decision to liberalise

10 In deciding to introduce competition, Ofcom collected evidence from a public consultation, consumer research, a review of other European countries and a cost-benefit analysis of different options. But its analysis did not clearly indicate an optimal approach. In particular:

5 For an enquiry requesting one number and lasting 45 seconds.
 6 The pricing requirements are set out in the ICSTIS Code of Practice governing the provision of directory enquiry services.
 7 Communications Management Association survey 2004.

- the public consultation showed that telecommunications consumer groups and existing providers wanted to retain the existing 192 services, while potential new entrants wanted change;
- consumer research was ambivalent and did not indicate either a strong demand for or objection to change;
- Oftel's review of other European countries indicated evidence of benefits but did not evaluate fully the differences in each market; and
- the cost-benefit analysis showed the case for liberalisation was highly dependent on assumptions about demand for new services which, although subject to some sensitivity analysis, were not tested rigorously.

11 In addition, there was no evidence that existing 192 services were of poor quality and limited evidence that they were over-priced, although Oftel had concerns about the lack of innovation. Because it had not identified a compelling case to retain the existing arrangements, it decided to proceed with the market liberalisation. Before introducing competition, Oftel did not conduct a full economic analysis of how a market with the unique characteristics of directory enquiries would function; or the extent to which a competitive market structure would benefit consumers. For example, a fuller analysis of the impact on consumer behaviour of factors such as advertising and price sensitivity would have provided a better understanding of the likely effect of competition.

Oftel's management of the liberalisation

12 Oftel managed the liberalisation project well. The project team communicated clearly with stakeholders, provided relevant information to interested parties and ensured that the project kept to an industry-agreed plan. In line with good regulatory practice, Oftel used working groups and public consultations to tackle technical issues and, where possible, reach an industry-agreed consensus on the best approach.

13 Oftel's use of a lottery to allocate the new 118 numbers, combined with the existence of memorable number combinations and the opportunity for companies to trade numbers, resulted in one company benefiting from a windfall gain. The company drawn first in the lottery, Leaf Telecom Ltd, chose 118 118 and, without using it themselves, sold it for £2 million. On the basis of

legal advice, Oftel considered it did not have the legal authority to invite companies to make financial bids for attractive numbers or share financially in the subsequent number trading. Outside the context of directory enquiries, it had already recognised that some telephone numbers had a potential commercial value and consulted the Department of Trade and Industry (DTI) on the possibility of including provisions to charge for the allocation of numbers in future primary legislation. The DTI gave assurances that it would legislate at the earliest opportunity. However, there was no firm timetable for including the necessary provision in future legislation at the time Oftel was considering the allocation of 118 numbers. Oftel decided, therefore, not to delay the lottery. The 2003 Communications Act now provides Ofcom with the necessary powers to charge for the allocation of telephone numbers and to share any financial benefit from the transfer of numbers. This Act came into force on 23 July 2003, 14 months after Oftel allocated the 118 numbers.

14 Oftel recognised that replacing the well-known 192 and 153 numbers could confuse consumers. It used press releases and media interviews to raise consumer awareness and implemented a period of parallel running between the old and new services followed by a freephone message on 192 and 153 when they were taken out of service. Oftel judged, following consultation, that the benefits of a national publicity campaign would not justify the costs and, drawing on evidence from other countries, believed that company advertising would be the predominant mechanism of raising consumer awareness of the new numbers. Subsequent market research confirmed that callers were confused after the introduction of 118 services. There is now a higher level of awareness of the introduction of 118 numbers but continuing uncertainty over which services offer the best price.

15 ICSTIS⁸ is responsible for regulating premium rate telephone numbers and has taken on the day-to-day regulation of the advertising, promotion and content of directory enquiries services. It has developed a Code of Practice which sets standards for service providers. As at December 2004, ICSTIS had issued 10 warnings on behaviour and imposed 11 fines totalling £60,000 for breaches of this code, primarily for a failure to provide pricing information in advertisements or before call connection. Ofcom continues to monitor market developments to inform future regulatory decisions.

8 The Independent Committee for the Supervision of Standards in Telephone Information Services.



CONCLUSIONS AND RECOMMENDATIONS

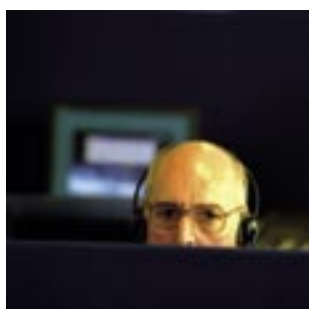
16 After one year of competition, two firms, BT and The Number, had gained 80 per cent of the market and a large number of small companies were serving niche markets. A small minority of residential callers use directory enquiries frequently, but the average residential caller uses the services less than once per month. The average caller is unlikely to be motivated to find the lowest price so the market is not driven by price competition. Market share is influenced more by numbers which are easy to remember and advertising.

17 Ofcom cannot yet demonstrate that, overall, consumers have benefited from liberalisation. Most residential consumers are paying more for directory enquiry services while the absence of reliable accuracy data on the previous services means that it is not possible to show whether accuracy has improved. But callers now have considerable choice and additional services. The market is still evolving and the reduction in the volume of calls to directory enquiry numbers might indicate that consumers are responding rationally by making more use of free alternative sources of directory enquiries information, such as the internet or the phone book. But there is also a risk that callers no longer use the services due to confusion over which number to call and perceptions about the cost of 118 services compared with the cost of the legacy 192 services.

18 The National Audit Office has made a number of recommendations for Ofcom as well as learning points that other regulators should consider in opening a market to competition (Appendix 6). A key issue for Ofcom is the scale and nature of its regulatory role in the directory enquiries market following the introduction of competition.

In any future market liberalisations, Ofcom should:

- a** **Ensure that assumptions used in cost-benefit analyses are tested rigorously.** Any future analyses should appraise a do nothing option; make full use of sensitivity analysis; and present low, base and high cases (paragraphs 1.15 to 1.20).
- b** **Assess the quality of the existing service and evaluate whether the proposed changes will improve the service to consumers.** In this case, Oftel did not undertake sufficient economic analysis of the likely benefits of alternative market structures, including no change, or take account of the unique characteristics of the directory enquiries service (paragraphs 1.21 to 1.25).
- c** **Exploit opportunities for sharing in a financial gain, as a result of the allocation of a scarce resource.** The 2003 Communications Act empowers Ofcom to do this and it should take care to identify suitable opportunities and exploit them (paragraph 2.18).
- d** **Consider how to improve communication to different consumer sub-groups.** Ofcom can learn lessons about identifying consumer concerns and raising consumer awareness amongst different sub-groups, for example the elderly, vulnerable or disadvantaged. Ofcom should consider, as appropriate, the use of a communications plan and draw on all available channels, including its Consumer Panel, to reach these sub-groups (paragraphs 2.20 to 2.25).



In regulating the competitive Directory Enquiries market, Ofcom should:

- e **Ensure consumer guidance and advice on finding the 'best deal' is available.** Ofcom could improve consumer confidence in directory enquiries by facilitating the availability of revised guidance on "shopping around" and the range of services available (paragraph 3.16).
- f **Monitor the effectiveness of competition in the market.** Ofcom should periodically analyse the market to understand its structural features and, where applicable, use available powers to encourage effective competition (paragraphs 16 and 2.25).
- g **Review whether all aspects of the code of practice remain relevant to the directory enquiries market.** ICSTIS adapted its code of practice for premium rate numbers to the directory enquiries market but some service providers believe that it imposes unnecessary restrictions on them. Ofcom and ICSTIS should ensure, in forthcoming consultations, that the provisions in the Code remain appropriate and whether the revised approach to protecting consumers in the use of premium rate numbers is applicable to directory enquiries (paragraphs 3.25 and 3.26).
- h **Continue to ensure equitable and cost-based access to the database of directory enquiry numbers is maintained.** BT owns and maintains the database of core directory enquiry information which is subject to regulation by Ofcom. Ofcom must watch that BT does not abuse its market position, so that a level playing field is maintained for service providers (paragraph 1.3 and Figure 3).

To secure the maximum benefit of competition for business and the public sector, Ofcom should:

- i **Encourage business and the public sector to exploit the opportunities created by the competitive directory enquiries market.** Business and public sector bodies could be more proactive in seeking the best price. In the first instance, government bodies should seek advice from the Office of Government Commerce Buying Solutions Agency on the advantages of centrally negotiated contracts. They should also ensure that their staff are trained in the use of directory enquiry services and are fully aware of the existence of free searches on the internet (paragraphs 3.20 and 3.21).

PART ONE

The decision to introduce competition



1.1 In September 2001 OfTel decided to extend competition in the provision of directory enquiries services. Before changing these arrangements, OfTel collected evidence to analyse existing provision and evaluate the likely benefits for consumers. This Part examines OfTel's approach.

The provision of directory enquiries

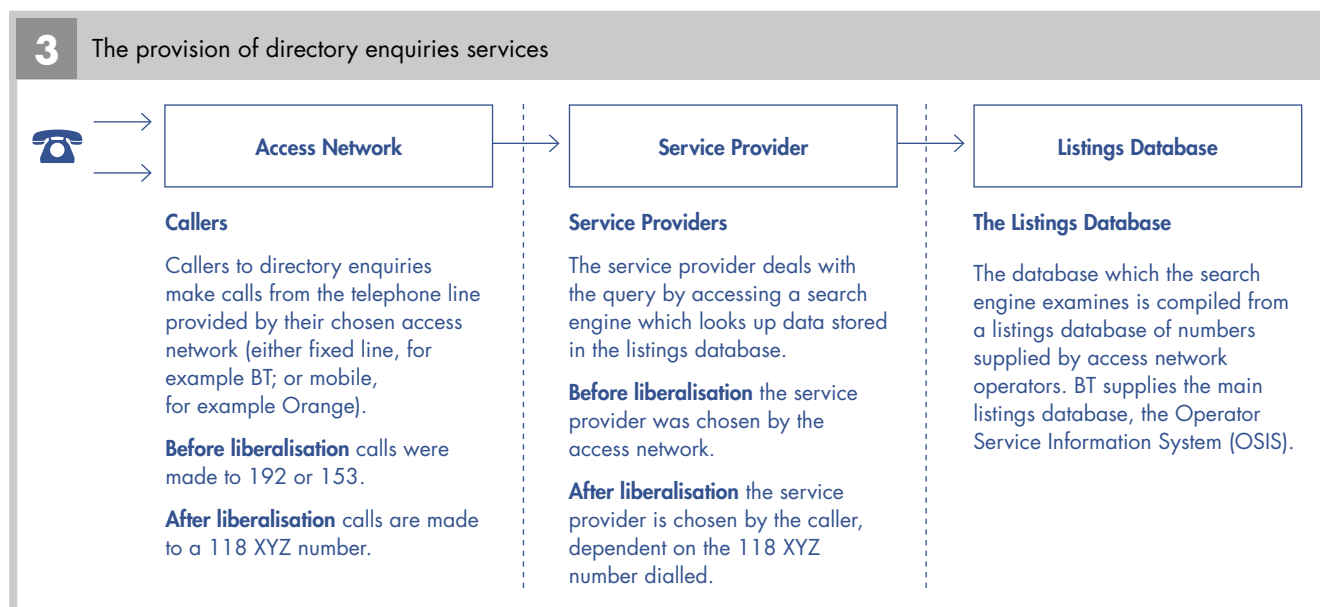
1.2 Before the liberalisation of directory enquiries, network operators were required to provide access to at least one telephone-based service as part of their Universal Service Obligation.⁹ Callers could dial 192 for numbers in the United Kingdom and 153 for international enquiries. There was virtually no competition at the consumer level, with just a few companies offering a business directory service using longer telephone numbers (for example, 0800 600900). This meant that callers were directed to the service offered by their network operator. The provision of directory enquiries services is explained in **Figure 3** and market statistics are in **Figure 4 overleaf**.

1.3 OfTel first considered the introduction of competition in 1997. After a public consultation¹⁰, OfTel altered BT Group Plc's (BT) licence to give all potential suppliers access to the core database of directory listings (Figure 3).

By 2000 five companies, four with experience of operating directory enquiries services overseas, had expressed an interest to OfTel in entering the UK market. But these companies considered that the requirement to use full length telephone numbers (for example, premium rate numbers) to access their services would put them at a disadvantage to network operators, who used the well-known 192 and 153 numbers. OfTel did not have enough three digit telephone codes for use in directory enquiries to overcome this problem and committed to a public consultation to review these numbering issues.

OfTel's statutory duties

1.4 The Telecommunications Act 1984 gave the Director General of Telecommunications, the head of OfTel, the duty to promote the interests of consumers in the provision of telecommunications services (**Figure 5 overleaf**). OfTel's overall goal was to achieve the best deal for consumers in terms of quality, choice and value for money. OfTel considered that to fulfil its duties it would promote competition where opportunities arose, as it believed that effective markets delivered the greatest benefits for consumers. This meant reducing barriers to competition where possible and only intervening where competition was not effective.¹¹ OfTel's intention was to encourage self-regulation in the industry whenever appropriate.



⁹ The network operators (British Telecom, Kingston Communications, cable and mobile operators), were obliged to provide itemised billing, access to the emergency services and directory enquiries services as part of their Universal Service Obligation. BT and Kingston Communications had to provide a telephone line on request and special tariff packages to help those people with special social needs and on low income.

¹⁰ OfTel, Provision of Directory Information Services and Products, September 1997.

¹¹ OfTel Annual Report 2002.

4 Statistics on directory enquiries in 2000

- 630 million calls per year for national numbers from fixed lines (192).
- 70 million calls per year for national numbers from mobiles.
- 25 million calls per year for international numbers (153).
- 60 per cent of all enquiries were from businesses.
- A typical residential consumer used directory enquiries less than once per month.
- The directory enquiries telephony market was worth approximately £300 million per annum.
- Other services included paper directories; internet-based services; and CD-ROM directories.

Source: Access codes for directory enquiry services, OfTel, November 2000

5 OfTel duties under the Telecommunications Act 1984

The Secretary of State and the Director General of Telecommunications shall:

- secure... such telecommunications services that satisfy all reasonable demands for them including, in particular, emergency services, public call box services, directory information services, maritime services and services in rural areas; and
- ... secure that any person by whom any such services fall to be provided is able to finance the provision of those services.

Subject to... the above, the Secretary of State and the Director shall... have a duty to exercise the assigned functions... in the manner which he considers is best calculated to:

- promote the interests of consumers... in respect of the prices charged for, and the quality and variety of, telecommunications services;
- maintain and promote effective competition...;
- promote efficiency and economy...; and
- promote research into and the development and use of new techniques...

NOTE

This is an abridged extract from the Act, focusing on clauses pertinent to directory enquiries.

OfTel’s case for liberalisation

1.5 Decisions on the appropriate regulatory action should be based on an analysis of the existing market and an evaluation of the benefits for consumers. OfTel collected evidence from a wide range of sources in order to inform its decision on whether to extend competition. The four components of its evidence base were: a public consultation; a consumer survey; observations of directory enquiries markets in other European countries; and a cost-benefit analysis.

The public consultation

1.6 OfTel sought to establish whether there was consensus among stakeholders in support of change and, in November 2000, issued a public consultation on the future provision of directory enquiries. The consultation drew on the results of a cost-benefit analysis (paragraph 1.15) and outlined the factors that restricted competition, including network operators’ monopoly of short access codes, and options for removing this obstacle. The consultation set out three options for changing the numbering scheme for directory enquiries:

- Option 1 – to retain 192 as the network operators’ access code, and allocate new entrants a five or six digit number from the 118 XY(Z) range;
- Option 2 – to replace 192 with another memorable default number, and offer new entrants a number from the 118 XY(Z) range; and

- Option 3 – to withdraw 192 and allocate 118 XY(Z) numbers to all operators, whether incumbent or new entrants.

OfTel was also willing to consider the benefits of retaining the existing arrangements and any other options put forward by respondents.

1.7 The consultation results showed strong support for retaining the 192 number. Twice as many respondents favoured retaining 192 compared to those who indicated a preference for its withdrawal. Views varied between stakeholder groups:

- **The majority of representatives of telecommunications consumer groups wished to keep 192.** Some suggested that mobile operators represented sufficient competition for fixed-line network operators. Most observed that directory enquiries were used infrequently by many consumers and that a new range of numbers using different pricing structures would cause confusion.

- **The majority of network operators, who already provided directory enquiry services, preferred to make no change.** Most suggested there was no evidence of consumer detriment with the existing regime or consumer demand which would warrant change. As a consequence they felt intervention was unnecessary.
- **New entrants preferred to remove 192 and introduce the 118 number range.** Potential new entrants argued that the introduction of a consistent numbering range was required to establish an effective competitive market and deliver the benefits of competition to consumers.

1.8 It was inevitable that the liberalisation would result in a range of opinions on the optimal approach, as companies had different vested interests in the outcome. Oftel followed good regulatory practice by consulting widely to establish the views put forward by different groups and evaluating the arguments put forward. It identified a conflict between the views of two groups: the consumers and the network providers, who questioned the rationale for opening the market to competition and raised the potential for confusion; and the prospective new entrants, who provided evidence from other countries to show the benefits of competition.

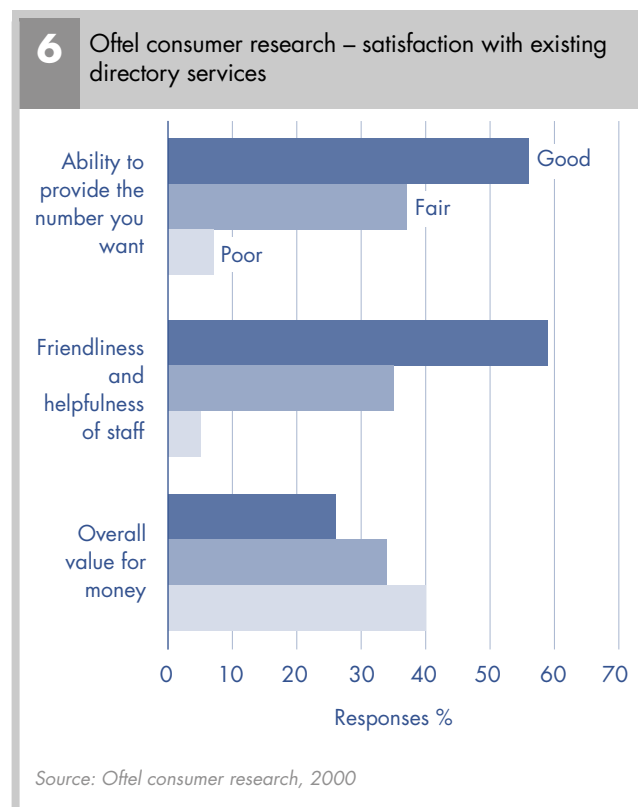
1.9 The results of the consultation reinforced Oftel's belief that the main barrier to competition was the use of 192 and 153 which gave network operators an unfair competitive advantage over new entrants. Our economic consultants, Oxera, supported the view that the numbering system was an important factor in enabling competition and that the advantages of 192 had to be removed from the owner to create a level playing field. Evidence from the French directory enquiries market supported this view as the incumbent, France Telecom, kept its existing short code (12) and subsequently retained 90 per cent of the market despite raising its prices (see Appendix 5).

Consumer research

1.10 As part of its evidence-gathering exercise, Oftel commissioned a survey to establish the views of residential consumers on their satisfaction with the existing provision of directory enquiries and the possible introduction of new services. Oftel stated that if consumers were satisfied, it could not authorise a disruptive process unless there was evidence of clear benefits.

1.11 The research showed that 90 per cent of callers were satisfied with their ability to obtain the number they requested, although 40 per cent felt that directory enquiries offered poor value for money (Figure 6). Half of consumers were unconcerned by the removal of 192 although, of those who indicated a preference, twice as many were dissatisfied as satisfied (Figure 7, question 2, overleaf). The results also indicated an indifference to the prospect of a wider choice of services – less than one in five consumers stated that a greater choice of services was important.

1.12 Oftel concluded that the results of the research were ambiguous and demonstrated ambivalence towards the proposed changes. In particular, Oftel considered that it was difficult to draw conclusions when consumers had no experience of the types of service a liberalised market might offer. Despite this, it did not undertake further analysis of consumer views, for example focus groups, to explore consumer motivation, preferences and priorities in more depth. Furthermore, there was limited dis-aggregation of results between sub-groups, such as the elderly or vulnerable, and no evaluation of the needs of business users. Full research results were published in February 2001. Oftel's announcement to liberalise in September 2001 concluded that consumers would be "satisfied or unconcerned if 192 was withdrawn".¹²



¹² Oftel summary: "The survey results indicate a marked ambiguity in attitude towards 192. When consultees were asked if they would prefer to keep 192 or see a new number range 118XX(X) with alternative services, 59% said they would prefer to keep 192. However, when asked how concerned they would be if 192 was withdrawn, 65% said that they would be either satisfied or unconcerned. Moreover, only 25% of consumers regarded the existing service as providing good value for money."

7 Of tel's consumer research - possible changes to the provision of directory services

Question 1 "Which is more important to you?"

59 per cent said 'keeping the existing 192 number'

18 per cent said 'having a wider choice of services'

23 per cent said 'don't know'.

Question 2 "How would you feel if 192 was removed and replaced with a range of 5 or 6 digit alternatives in order to provide a wider range of directory enquiries services?"

16 per cent said 'satisfied',

35 per cent said 'dissatisfied',

49 per cent said 'don't mind/not bothered'.

Question 3 "If a number of new companies started offering directory enquiries services at different prices, or with different types or levels of service, do you think you would be more likely to start using these, or continue to use the 192 service?"

21 per cent said 'use new services'

56 per cent said 'use 192 service'

24 per cent said 'don't know'.

European comparisons

1.13 Of tel supplemented its consumer and stakeholder analysis with an overview of the results of the introduction of competition in directory enquiries markets in Germany, Sweden and Ireland. The German and Swedish markets were liberalised in 1999, and the Irish in 2000 (Appendix 5). Two companies seeking to enter the UK directory enquiries market provided Of tel with evidence of the caller benefits that had resulted from competition in Germany and Ireland. Of tel sought to augment this evidence by requesting further information from international regulators and operators in Germany and Ireland.

1.14 Of tel concluded that restructuring had led to significant competition in Germany and Ireland, which had led to a wider choice of higher quality services and a corresponding increase in value for money. Implementing these changes had not proved problematic for callers or industry. But there are questions over the direct comparability of the German and Irish markets to the United Kingdom. OVUM, Of tel's consultants, observed that there were significant differences between the directory enquiries services offered by the incumbents in Germany and Ireland, and BT in the UK. Specifically BT's unit cost of provision was significantly lower, quality of service much higher and waiting times shorter. Despite these observations, Of tel did not analyse the differences in more detail, nor did it explore the likely impact of these differences.

The cost-benefit analysis

1.15 To inform its consultation (paragraph 1.6), Of tel commissioned Ovum, an economic consultancy, to undertake a cost benefit analysis to evaluate whether the economic benefits of introducing competition outweighed the costs. Ovum's objectives were to:

- identify options for changing the numbers which callers used to access directory enquiries; and
- use cost-benefit analysis to evaluate the options and to see, from the perspective of the UK economy, whether change was required.

1.16 Ovum evaluated three options for introducing alternative arrangements for phoning directory enquiries (paragraph 1.6). The economic analysis showed that the benefits outweighed the costs for all three options (Figure 8). Option 3 – to remove the 192 access code and introduce new 118 numbers – offered the highest net benefits to callers, with a net present value of £35 million.

1.17 Figure 8 shows that the main economic benefits arise from greater competition in the directory enquiries market. Ovum's analysis was based on the assumption that competition would lead to price reductions, increased demand for directory enquiry services and an increase in general telephone calls. The impact of call stimulation is stronger in Options 2 and 3 but there are also higher transition costs stemming from the need to establish new systems and promote the new services. Ovum's assessment of the likely outcomes was based on data available in 1999. A number of the assumptions used were significantly different to the out-turn, in particular, the expected call volumes and the predicted number of new 118 service providers.

1.18 The results of the cost-benefit analysis were highly dependent on the assumptions of demand for directory enquires services. Ovum's baseline scenario was based on the existing trend of a five per cent per annum decline in call volume. Ovum considered two alternatives to this scenario: firstly, that the introduction of competition would stimulate growth; and secondly, that consumer confusion and the increasing use of text-based services would increase the rate of market decline. Ovum reflected these scenarios by varying demand against its baseline by plus or minus three per cent per year. These changes had a significant impact on the preferred option, ranging from a negative present value of -£136 million for a higher rate of decline to a positive present value of £207 million for a smaller rate of decline (Figure 9).

8 Results of the cost-benefit analysis

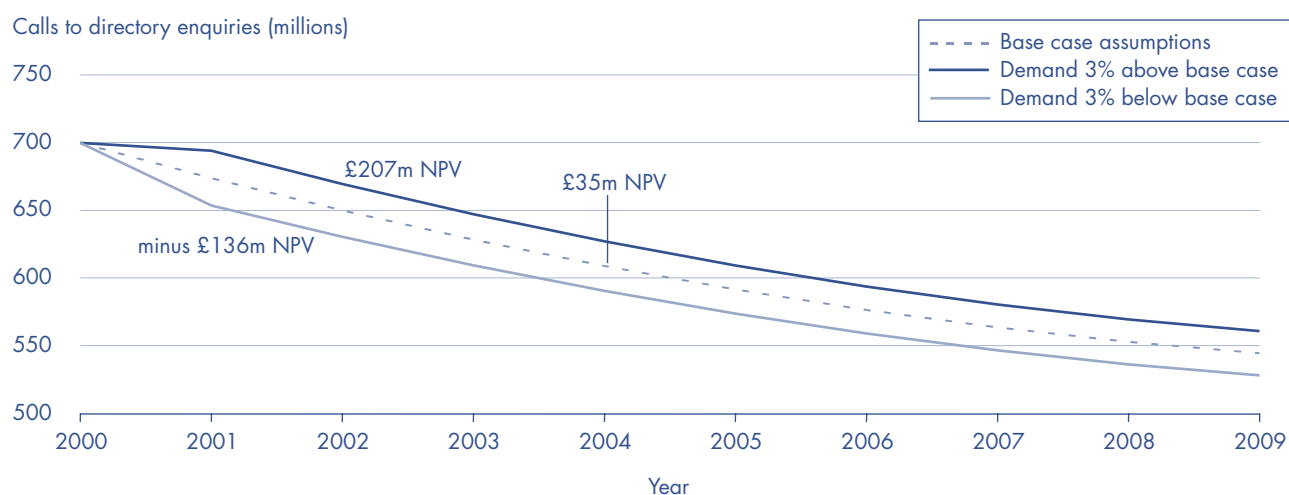
	Option 1: retain 192 and allocate 118 numbers to new entrants	Option 2: replace 192 with another short number and offer new entrants a 118 number	Option 3 - Preferred; withdraw 192 and allocate 118 numbers to all operators
	£ million	£ million	£ million
Net present benefits			
Benefits from price competition	22	54	98
Release of 192 code	-	4	4
Increased competition in supply of database	-	-	6
Total	22	58	108
Net present costs			
Dialling extra digits	(1)	(20)	(22)
Network and system changes	(1)	(6)	(9)
Misdials	-	(13)	(26)
Promotion of services	-	-	(16)
Total	(2)	(39)	(73)
Overall net present value	19¹	19	35

Source: Ovum cost-benefit analysis, 1999

NOTE

¹ This figure does not cast correctly due to rounding.

9 The impact of different demand assumptions on net present value



Source: National Audit Office

1.19 In cost-benefit analysis, sensitivity analysis can demonstrate how the outcome of each option changes as the input assumptions are varied. Ovum’s sensitivity analysis showed that varying the assumptions led to some significant changes in the net present values of each option. Option 3 represented the extremes of potential economic benefits, offering the greatest risk but also the highest potential benefits (Figure 10). Option 1 remained positive under all scenarios and represented the highest net present value in many cases where assumptions were varied. Ovum’s sensitivity analysis was based on testing changes to only one variable at a time. There was scope to enhance the analysis by conducting a multivariate analysis, where more than one sensitivity at a time is altered, to test further the variations in the assumptions used and their effect on the outcomes.

1.20 The cost benefit analysis did not include a pure ‘do nothing’ option, which would have considered allowing network operators to continue to use the 192 and 153 numbers and requiring new entrants to use premium rate or other full length telephone numbers. All three of Ovum’s options included opening a 118 number range for new companies entering the market.

The collection of further evidence

The level of service pre-liberalisation

1.21 Pre-liberalisation, Oftel monitored the price of directory enquiries services provided by network operators. It sought to ensure callers received good value for money by comparing prices on different networks with international markets, and ensuring prices were cost-reflective. Oftel also monitored the fees charged by BT for access to its database of telephone numbers. On the basis of this analysis, Oftel was satisfied that callers were not being over-charged for directory enquiries, although it did believe that there was scope for greater price competition.

1.22 Oftel did not monitor the quality of directory enquiries services provided by the network operators, other than the requirement to answer 70 per cent of calls within 15 seconds – which was being met. It had not received a significant volume of consumer complaints about the accuracy of 192 and 153 services and, therefore did not have concerns over the accuracy of the service provided. This was consistent with other European countries, which also had few public concerns about the accuracy of directory services before liberalisation. In the absence of any obvious consumer detriment, Oftel did not set accuracy targets and, consequently, did not evaluate the accuracy of existing directory enquiry services.

10 Cost-benefit analysis – sensitivity analysis

	Net present value (£million)		
	Low	Base	High
Option 1: retain 192 and allocate 118 numbers to new entrants	9	19	30
Option 2: replace 192 with another short number and offer new entrants a 118 number	-8	19	45
Option 3 - withdraw 192 and allocate Preferred: 118 numbers to all operators	-50	35	121

Source: Ovum cost-benefit analysis

1.23 Oftel had, however, identified concerns over the range of directory enquiries services offered, especially by the fixed line network operators. Prior to liberalisation, a greater range of directory enquiries services was available to callers from mobile phones. For example, mobile operators offered services such as call connect, where the caller is directly connected to the number they have requested; text back, where the requested number is texted to the mobile handset; and a business location services. Oftel therefore concluded that fixed-line network operators were not innovating and set the expansion of consumer choice as one of the objectives for liberalisation.

Analysis of a competitive directory enquiries market

1.24 Our economic consultants, Oxera, observed that opening a market to competition does not necessarily lead to a competitive market (see Appendix 2). In establishing the rationale for and approach to liberalisation, it is important for the regulator to understand the key characteristics and potential limitations of alternative market structures. Although the economic appraisal evaluated the costs and benefits of different scenarios, Oftel did not conduct a full economic analysis into how a market with the unique characteristics of directory enquiries would function, or how far a competitive market would deliver the expected benefits for callers. Rather, its understanding of the characteristics of a competitive market was drawn from a combination of the cost-benefit analysis and the evidence of liberalisations in other European countries (paragraphs 1.13 and 1.14).

1.25 The outcome in a competitive market is likely to depend on the extent to which different consumer groups are influenced by advertising, price and other factors. A fuller analysis of the determinants of consumer behaviour would have provided a better understanding of its effect on competition. For directory enquiries, the main factors include:

- price sensitivity influences the extent to which effective price competition is achievable. The low level of annual spend on directory enquiries makes it unlikely that most residential callers will be motivated to find the best price. This has implications for the regulator in determining the objectives of liberalisation, providing price information and its future regulation of the competitive market;
- another unusual feature of the market is the inability to price discriminate between individual service users. This can act as a counter-weight to price insensitivity and means that all callers can benefit if companies lower their prices to attract those callers who are more price sensitive;
- number memorability can be beneficial for callers but research shows that demand for directory enquiries services is influenced by advertising rather than price or value for money.¹³ If consumers are more responsive to advertising, the incentive to offer value for money may be limited. As a counter-balance, ICSTIS's code of practice requires all advertisements for 118 services to include pricing information (paragraph 3.14); and
- 'golden numbers' can distort competition by giving some suppliers an inherent competitive advantage. This is particularly important in a market which is price insensitive and influenced strongly by advertising. In such circumstances, golden numbers are likely to have a commercial value.

Oftel's decision

1.26 On the basis of its evaluation of the evidence, Oftel concluded that there was not a compelling case to retain the existing market structure and that regulatory action was justified to stimulate competition. In September 2001, the Director General of Telecommunications announced the decision to open the market to competition. Oftel believed competition would deliver:

- improved quality of service (accuracy, time taken to answer and helpfulness);
- greater price competition; and
- increased innovation and choice.

1.27 Oftel concluded that the network operators' monopoly of the 192 and 153 numbers should be removed in order to enable new entrants to compete effectively. Oftel therefore decided to introduce a consistent numbering range for all operators. It believed that the other options would not exert the necessary competitive pressure on network operators.

1.28 Our economic consultants, Oxera, observed that there is scope for conflict between what consumers want and the process of establishing a competitive market. Oftel considered the views of the industry and consumer groups but also took account of evidence from the cost-benefit analysis and, particularly, the outcome of liberalisations in Germany and Ireland.¹⁴ Faced with conflicting interests, Oftel followed its regulatory principles of promoting competition (paragraph 1.4) and concluded that callers would gain most from the creation of a competitive market and that the potential benefits outweighed the risk of confusion. One year after making this decision, a European Commission Directive subsequently required Member States to abolish all exclusive and special rights with regard to the provision of directory enquiry services.¹⁵

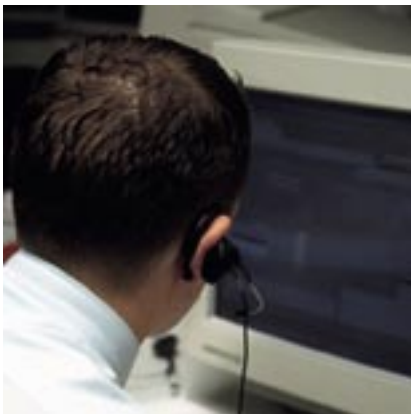
¹³ Research conducted by Ofcom and ICSTIS in November 2004 sought the views of over 2000 people on their rationale for choosing a 118 provider. 24% cited advertising recall, 18% said the ease of remembering the number. Only 5% said because it was 'cheap' and 2% because it was 'accurate'.

¹⁴ Oftel found that British consumers were not benefiting from the same wide range of services and price competition as consumers in other countries.

¹⁵ European Commission Directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services.

PART TWO

OfTel's management of the liberalisation



2.1 Between September 2001 and August 2003 Oftel managed the project of opening the directory enquiries market to competition. Implementing a change from a monopoly to competitive market is a complex task, requiring the management of conflicting interests. This Part evaluates Oftel's approach to managing the project and creating the conditions in which competition could flourish.

Oftel's project management

2.2 Oftel set out the liberalisation objectives and expected outcomes in published documents. Potential entrants were also kept informed of the objectives and project timetable via an automatic email notification. Our supplier survey showed that at least three quarters of respondents were aware of the objectives and expected outcomes.

2.3 **Figure 11** shows the main stages in the liberalisation project up to August 2003, when the 192 and 153 directory enquiries services were withdrawn. Oftel agreed its project plan with stakeholders and updated it on a monthly basis. It set milestones and identified, scheduled and monitored activities. Internally, the project team reported to the Oftel Policy Group at least once a quarter and more frequently when it made important decisions or important policy issues arose.

11 A chronology of the liberalisation project

September 2001	Oftel announced decision to liberalise the market
October 2001	Implementation Working Group convened
November 2001	First meetings of the Numbering sub group and Billing and Interconnect sub group
December 2001	Oftel consulted on allocation of access codes
January 2002	ICSTIS involvement began
February 2002	First meeting of the Consumers sub group
May 2002	Oftel held a lottery to allocate new 118 XYZ numbers
December 2002	New 118 numbers introduced and run in parallel with 192/153
August 2003	192/153 directory enquires services were withdrawn A message was placed on 192 advising consumers of the change

NOTE

Main milestones are in bold.

2.4 Oftel managed the project well, which ensured that it kept to the timetable and, importantly, met the planned withdrawal of 192 / 153 in August 2003. The August bank-holiday was chosen as, historically, bank holiday weekends have had low directory enquiries call volumes and thus provide an opportune time to minimise disruption to callers. Despite pressure to delay the withdrawal of 192 and 153 to enable BT to build the new numbers onto its network,¹⁶ Oftel managed to reach agreement on key decisions to meet this date. An agreed turn-off date was of critical importance to the industry as it provided entrants with certainty in setting up their businesses; for example, organising advertising campaigns and recruiting staff.

A light touch regulatory approach

2.5 In opening a market to competition, a regulator faces a number of challenges. First, all potential entrants must be provided with sufficient and relevant data on market and technical issues. Second, new entrants do not have the same information as incumbents. And third, there is inevitably a tension between incumbents and new entrants. To create an effective market, the regulator must address these issues and manage conflicting interests.

2.6 To respond to these challenges Oftel sought the views of the telecommunications industry and stakeholders throughout the liberalisation process, both formally and informally. The main mechanism was a high level working group, which was open to all members of the industry and consisted of around 30 representatives, to oversee and progress the implementation of new arrangements for directory enquiries. Sub-groups on numbering, billing and inter-connection and consumer issues were also established to consider specific and technical issues. In addition, Oftel issued two further public consultations to seek wider stakeholder views on its proposed approach and key decisions. The consultation documents set out the main issues, the views of the working group members, and Oftel's proposals.

2.7 Oftel's use of working groups was consistent with its objective of "light touch regulation". Their use was supported by the industry - only three per cent of respondents to our survey believed that the working groups were ineffective. The advantages were that they facilitated the dissemination of knowledge and information, provided a forum for considering technical issues and promoted industry participation and commitment. But there were also risks, to which Oftel responded in the following ways:

- the risk that the agenda and proposed approach was dominated by companies with a vested interest in the outcomes. In response, Oftel chaired the Implementation Working Group, hosted meetings and checked meeting minutes. Industry representatives were appointed to chair the sub-groups and Oftel participated in all meetings to monitor impartiality.
- the risk that incumbent operators were not willing to disseminate relevant technical information to new entrants. Although there was no formal obligation on them, network operators agreed to provide presentations on technical issues.

2.8 These initiatives enabled Oftel to communicate effectively its decisions and approach. Our survey showed that 85 per cent of companies had sufficient information to contribute fully to the consultation process and three quarters thought Oftel had communicated decisions clearly (see Appendix 4). In introducing market change, it is inevitable that there will be a divergence of views between potential market entrants and incumbents. A regulator has to manage these tensions. Oftel sought to establish a consensus where possible and adopted a direct regulatory approach when participants' views were opposed. In these instances, Oftel drew on its available evidence and regulatory principles, and sought specialist professional advice to determine the best approach.

¹⁶ Telecommunications network providers must activate numbers on their network to enable calls to be carried to that number; this usually consists of software changes to their network switches, a process known as 'data building'.

2.9 Oftel included consumer bodies in the decision-making process, formally by establishing a Consumer sub-group and through its public consultations and, informally, through ad-hoc meetings with relevant organisations. A range of consumer bodies and the telecommunications advisory committees participated in the Consumer sub-group, and represented the interests of England, Northern Ireland, Scotland and Wales; vulnerable groups; and business.¹⁷ These bodies told us, however, that they felt marginalised in the decision-making process and their views were not considered fully. In setting up the Consumer sub-group Oftel invited representatives from telecommunications consumer organisations which are usually staffed by volunteers and are geographically widely spread. Oftel sought to keep group participants fully briefed by copying all documentation from the main group to consumer representatives and by distributing a consumer issues list to track progress. Oftel also considered the issues raised, such as the potential for confusion, along with evidence collected from other sources and took action to mitigate the consequences (paragraphs 2.20 to 2.24).

The role of ICSTIS

2.10 Directory enquiries services fall under the regulatory definition of ‘controlled premium rate services’. These services are regulated by an independent industry regulator called the Independent Committee for the Supervision of Standards of Telephone Information Service (ICSTIS) using a Code of Practice, which is recognised by Ofcom under powers set down in the Communications Act 2003. The Committee enforces its Code in relation to directory enquiries services by responding to public complaints; and proactive monitoring to ensure that promotional material includes consumer information and the abuse of 118 XYZ numbers is prevented, for example services which are not consistent with directory enquiries or Ofcom’s numbering policy. ICSTIS’ involvement has been widely supported by the industry and provides callers with a high level of protection, equivalent to other premium rate services, and a clear channel for complaint.

Oftel’s approach to encouraging competition

The entry requirements

2.11 In setting technical specifications that potential service providers were required to meet (**Figure 12**), Oftel was keen not to deter potential entrants. For example, the specifications enabled companies with no telecommunications infrastructure to obtain a new directory enquiries number via sub-allocation from an existing supplier.¹⁸ The entry requirements were lower than those set by regulators in other countries which had liberalised their directory enquiries markets (Appendix 5).

12 The main entry requirements

The following were eligible to be allocated a directory enquiries number:

- operators providing publicly available telecommunications services; and
- companies running a telecommunications system under a 1984 Telecommunications Act licence, whether this was an individual licence or a class licence, containing a Numbering Arrangements Condition.

Those not eligible to apply directly for a 118 number were permitted to compete to provide directory enquiries by seeking a sub-allocation from an eligible operator. This included organisations that were Systemless Service Providers (no call centre, network, switches, systems etc.) or those in the process of setting up the required systems.

¹⁷ Consumer Communications for England; Northern Ireland Advisory Committee on Telecommunications; Scottish Advisory Committee on Telecommunications; Welsh Advisory Committee on Telecommunications; Advisory Committee on Telecommunications for Disabled and Elderly people; Telecoms Users Association; Communications Management Association; British Airports Authority; and Communications for Business.

¹⁸ This was consistent at the time with the approach to non-geographic number allocation for other services offered over the telephone.

2.12 A number of existing service providers questioned whether Of tel should have set higher entry requirements which would have forced potential entrants to demonstrate the seriousness of their intention to provide a directory enquiries service. Suggestions included:

- paying a bond before being allocated a number – figures of £100,000 and £200,000 were mentioned; or
- requiring a commitment to launch a service, with penalties for failing to do so.

On the basis of legal advice, Of tel concluded that there was no provision in the 1984 Telecommunications Act that enabled them to impose a bond, or set arbitrary entry requirements. Of tel also believed that the imposition of additional entry requirements could have had the potential to be discriminatory and, consequently, dissuade new entrants.

The allocation of numbers

2.13 Of tel decided to introduce a consistent numbering basis to promote a competitive market and remove the barrier to competition created by network operators' use of 192 and 153 (paragraph 1.27). The designated number range for new directory enquiries services was 118 (XYZ), in line with a recommendation of the European Committee for Telecommunications Regulatory Affairs to provide a harmonised directory enquiries services across Europe.¹⁹ Following a survey of members of the industry, Of tel adopted a six digit numbering convention (118 XYZ) to meet anticipated demand for new numbers.

2.14 All numbering ranges have potential 'golden numbers' as some combinations are intrinsically easier to remember. This is important in the directory enquiries context as golden numbers give the suppliers who hold them a competitive advantage. Of tel recognised that some combinations were commercially more advantageous than others, but decided not to set aside golden numbers because the method of allocation gave all operators equal opportunity to acquire them and their use offered callers the benefit of numbers that are easy to remember.

2.15 Of tel's objective was to ensure that the new directory enquiries numbers were allocated to operators on a fair and transparent basis. Of tel decided to use a lottery as it gave all potential entrants an equal opportunity for first choice. Following consultation, Of tel removed codes from the lottery that it considered to be potentially confusing, for example 118 999, or had a historic significance, such as 118 192.

2.16 There was no restriction on the number of directory enquiries codes that eligible companies could apply for but Of tel imposed a number of safeguards to ensure that no company gained an unfair advantage in the lottery and consumers were protected. For example, Of tel did not accept applications from related companies in the same round of the lottery; required companies who requested more than one number to differentiate between their services; allocated each company just one number in each round of the lottery; and required suppliers to declare any interests in each other. In addition, the main purpose of the service provided on a 118 number had to be a full national or international directory enquiries service. This was based on the experience in Germany where 118 numbers were used as an alternative to longer premium rate numbers to offer adult entertainment services.

Trading of numbers

2.17 88 companies entered the lottery and some 300 new directory enquiries numbers were allocated. The company drawn out first, Leaf Telecom Ltd, chose the number 118 118 and subsequently sold it for £2 million, without opening a service. Of tel's standard working procedures allowed for telephone numbers in general to be transferred between operators, subject to notification of the regulator. Licence conditions²⁰ prevented service providers from selling a number to a network operator, for example BT; but Of tel's legal advice concluded that the sale of coveted numbers between service providers was permissible. Of tel believed that the subsequent number trading benefited callers as memorable numbers could be acquired by service providers most likely to provide a service. The alternative was to take unused numbers out of service.

¹⁹ The European Committee for Telecommunications Regulatory Affairs recommended that 118 was the preferred directory enquiries access code across Europe to enable competition and enable harmonised cross-European services. Of tel did not regard the recommendations as binding and not all European countries followed this (e.g. Spain and France).

²⁰ Class Licence to run branch systems, Of tel, 1st November 2000.

2.18 Oftel was not able to secure a financial benefit from the trading of 118 numbers. In other cases, such as the sale of the radio spectrum for 3rd Generation mobile phone licences²¹, the Government has used auctions to allocate scarce resources and Oftel considered the possibility of charging to allocate telephone numbers. Its legal advice, based on general number ranges, concluded that the 1984 Telecommunications Act allowed for the recovery of administrative costs for making available and allocating numbers but primary legislation would be required to introduce charging for more than cost. Oftel's interpretation of this advice was that legislation did not permit it to use an auction to allocate the new numbers or to share in the windfall gain, for example by using clawback provisions. Oftel had consulted the Department of Trade and Industry on the possibility of including the necessary provisions in future primary legislation. The DTI gave assurances that it would legislate at the earliest opportunity. However, there was no firm timetable for including the necessary provision in future legislation at the time Oftel was considering the allocation of 118 numbers. Oftel decided, therefore, not to delay the lottery. The 2003 Communications Act, which came into force 14 months after the 118 numbers were allocated, contains the necessary provisions to enable Ofcom to charge for the allocation of telephone numbers and share in the trading of numbers. Other countries that have liberalised directory enquiries have not permitted number trading (Appendix 5).

2.19 The existence of a golden number, low entry requirements, the use of a lottery and the ability to transfer numbers combined to create the conditions for a windfall gain for the company drawn out first in the lottery. There were few risks and a low level of financial commitment for new entrants, but potentially high returns. The low barriers to entry and potential rewards attracted an unexpectedly large number of companies to apply for a 118 number and approximately 100 numbers allocated in the lottery were subsequently not used to provide directory enquiries services.²² Our supplier survey and interviews also indicated that some companies entered the lottery with the sole aim of acquiring the golden number. The low barriers to entry did, however, encourage many new entrants into the market.

Consumer confusion

Oftel's initiatives to raise awareness

2.20 An important issue for regulators is the extent to which consumers are well-informed about choices in their markets. Consumer confusion can create risks, including unacceptably high charges and economically inefficient behaviour by users. Appropriate consumer information is also important in influencing perception of the changes. Oftel acknowledged the potential for confusion prior to liberalisation but believed it would be limited in time and extent, and outweighed by the benefits that would flow from competition.

2.21 Oftel, and the telecommunications industry, recognised that the introduction of a new number range would require callers to change their behaviour. Oftel therefore used a range of measures to raise awareness, including press releases; TV and radio interviews; and a consumer guide. It also assisted the industry to establish an independent website and a leaflet in the BT phonebook, both of which contained price information. Oftel believed that company advertising would be the main mechanism to raise awareness of individual 118 numbers and decided the benefits of a co-ordinated national publicity campaign did not justify the cost. In particular, Oftel identified difficulties in ensuring that a national publicity campaign would be non-discriminatory and doubted the extent to which it would add value to company advertising. Furthermore, there was little support from industry or consumer groups for a national publicity campaign nor from industry to fund such a campaign. Oftel also established a period of parallel running to help raise awareness. The 118 numbers were launched in December 2002 and ran in parallel to the 192/153 services until August 2003.

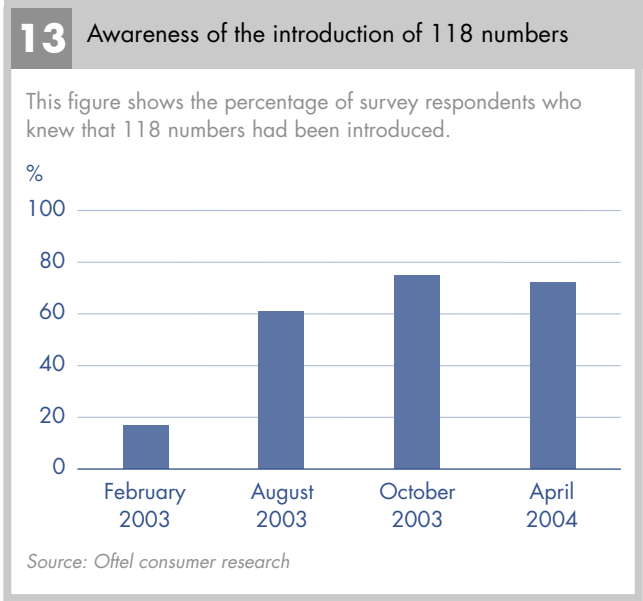
21 The NAO report, Radiocommunications Agency: The Auction of Radio Spectrum for the Third Generation of Mobile Telephones (HC 233 2001-2002) analyses the sale of the Third Generation licences.

22 Oftel allocated 282 numbers in the lottery plus a further 20 uncontested numbers to 88 companies; BT carries 217 directory enquiry numbers. Oftel made clear to all applicants that any number not used within six months of issue to offer a directory enquiries service would be withdrawn. Ofcom has subsequently taken steps to withdraw unused 118 numbers.

2.22 Drawing on information on dialling patterns following other number changes, Oftel recognised that consumer information was needed on the 192 and 153 numbers after directory enquiries services were withdrawn. Following a public consultation, the industry established a freephone recorded announcement to be played on the old numbers from August 2003. Callers heard a pre-recorded message advising that 192 and 153 numbers had been replaced by the new 118 numbers and were given a freephone number to call if they wished to find a 118 XYZ number. The provision of this information, which involved a number of telecommunication companies setting up a not for profit company to operate the system on a fair and equitable basis, was a good example of self regulation and required minimal Oftel input after initial consultation on the required regulatory framework. Other countries, for example the Republic of Ireland, did not make similar arrangements (Appendix 5). Following an analysis of dialling patterns and consumer awareness, Ofcom required that the freephone message be switched-off in June 2004.

The extent of consumer confusion

2.23 Oftel commissioned and published research on an on-going basis to monitor the new market and evolving consumer awareness. This showed a low level of awareness following the introduction of the 118 directory enquiries services. In February 2003, two months after the launch of the new 118 services and whilst 192 and 153 were still available, 17 per cent of consumers knew that the new numbers had been introduced (Figure 13). Oftel’s initiatives and advertising campaigns by new service providers led to an improvement in awareness, which had increased to 61 per cent when directory services on 192 and 153 were withdrawn in August 2003. This levelled out at approximately 75 per cent in October 2003 and April 2004. However, despite the increased awareness of the introduction of 118 numbers, in November 2004 just over half of UK adults could not spontaneously recall a single 118 number, although 7 in 10 could when prompted.



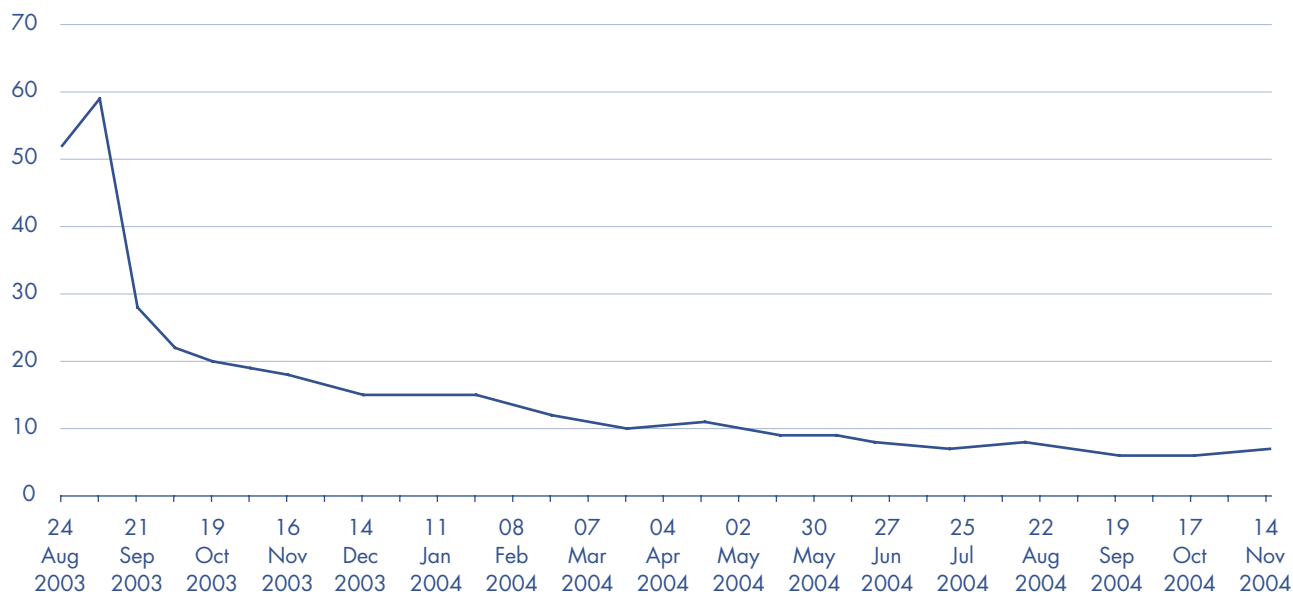
2.24 Awareness of the new directory enquiries services can also be measured by the trend in calls to the legacy numbers (192 and 153). Figure 14 shows that, immediately following the withdrawal of 192, some 50 per cent of directory enquiries calls were still made to the old number. The mis-dial rate fell quickly to 28 per cent of all 118 calls by September 2003 and then declined steadily to 7 per cent in November 2004.²³

2.25 The voice directory enquiries market has reduced in size since liberalisation and Ofcom’s November 2004 research showed that the fall in usage may be accelerating (Figure 15). 35 per cent of survey respondents said that they used voice directory enquiries less often. This may indicate a degree of confusion and a reaction to hostile press coverage but, equally, may demonstrate rational consumer behaviour as a result of greater awareness of the actual cost of the new 118 services and the availability of alternative, free, sources of directory enquiries information, such as the internet or phonebook. Our analysis of Ofcom’s research also showed a significant difference in the use of directory enquiries services by age, with a higher proportion of over-55 year olds using directory enquiries services less frequently or not at all.

23 These dialling statistics refer to calls originating on BT’s network.

14 The proportion of mis-dials to the old 192 services

Percentage of mis-dials



Source: Ofcom analysis

15 Use of directory enquiries services by individuals

	October 2003 %	April 2004 %	November 2004 %
At least monthly	23	17	14
Less often than monthly	46	39	34
Never	31	44	51

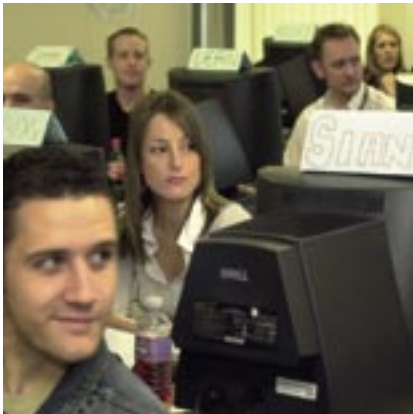
Source: Ofcom and Ofcom market research

NOTE

This figure does not cast correctly due to rounding.

PART THREE

The benefits for consumers



3.1 In December 2002 the new range of 118 directory enquiries services was introduced. They ran in parallel to existing services until 24 August 2003, when directory services on 192 and 153 were withdrawn. Since then, callers have accessed directory enquiries using 118 numbers. Oftel expected increased competition to bring benefits for consumers of improved quality of service; increased price competition; and a greater choice of services. This Part assesses the extent to which these benefits have occurred.

Pre and post liberalisation call accuracy

3.2 Before liberalisation, network operators offered directory enquiries services as part of their universal service obligation. Oftel collected limited quality of service data on their performance and, as a result, did not establish a benchmark of the accuracy of the 192 and 153 services (paragraph 1.22). This meant that Oftel, and now Ofcom, have been unable to assess whether the quality of directory enquiries services has improved since liberalisation.

3.3 Post-liberalisation, Oftel and then Ofcom, in conjunction with ICSTIS, have commissioned three pieces of research to assess the accuracy of the new services and the views of consumers. The first piece of research was conducted following liberalisation October 2003 and was followed-up in April and November 2004. The three pieces of research were based on a series of mystery shopper calls to around 30²⁴ 118 service providers requesting information typical of the enquiries made by callers.

3.4 Oftel's first piece of research had a number of weaknesses which meant that the quality of service results were not a reliable measure of the performance of individual suppliers, or the market as a whole. In particular:

- although Oftel did make some checks to ensure requested numbers would be available, it did not confirm that the numbers in the mystery shopping exercise were in the database of numbers used by 118 service providers;

- suppliers argued that the type of requests made to their services was not representative of the type of calls they received, and as such, the results did not reflect the average consumer's experience of directory enquiries. The research over-represented requests for residential numbers, which make up just 10 per cent of requests and are more difficult to provide than enquiries for business numbers; and
- the number of requests made to each operator was too small to yield statistically robust results in relation to individual services.²⁵ Oftel's first piece of research was based on samples of approximately 21 requests for information per service, with one sample as low as 16 requests. This meant that accuracy results for each number were subject to a range of plus or minus 20 per cent of the true value.

3.5 Oftel and ICSTIS published the results of the first piece of research in November 2003 but did not highlight the statistical range of the results. The results were published widely in the press, and focused on the unrepresentative market average of a 62 per cent success rate in finding the correct number. This was provided as evidence of poor service in the newly liberalised market. The hostile media coverage and the results of Oftel's survey caused a significant amount of dissatisfaction amongst service providers, who felt that Oftel had damaged the reputation of the market. Prior to Oftel's research, a number of publications also conducted their own small scale surveys and published unrepresentative results, thereby contributing to the negative consumer perception of directory enquiry services. One operator, THUS plc, withdrew its 118 service as a result of its poor performance in the Oftel survey.

3.6 Ofcom sought feedback from the industry on the shortcomings of the research and the National Audit Office offered advice to Ofcom. Accordingly, the following pieces of market research were methodologically more robust than the first and addressed all of the issues highlighted above. Ofcom improved the methodology by confirming that the numbers it requested were in the directory information database; by increasing sample sizes;²⁶ and ensuring that the profile of the requested numbers reflected the call profiles of service providers. As a result, two-thirds of the suppliers that we surveyed considered that the second mystery shopping exercise was an improvement on the first.

24 The first piece of research tested 30 domestic and 10 international directory enquiries numbers; the second and third pieces of research tested 30 domestic directory enquiries numbers.

25 Statistical samples should be as large as possible to approximate the population, given constraints such as cost and time. Larger sample sizes increase the confidence that the sample is representative of the whole population.

26 The mystery shopping exercise included 100 requests for residential numbers and 100 requests for business numbers from each 118 number.

3.7 The mystery shopping exercise in November 2004 showed that overall, when weighted by the market shares of each of the 118 service providers, 86 per cent of requests resulted in the provision of the correct number. For national services, accuracy rates were 81 per cent for residential numbers and 86 per cent for business numbers. 19 out of 30 services achieved accuracy levels of 90 per cent or more (**Figure 16**). The accuracy rates of individual service providers ranged from 83 per cent to 98 per cent.

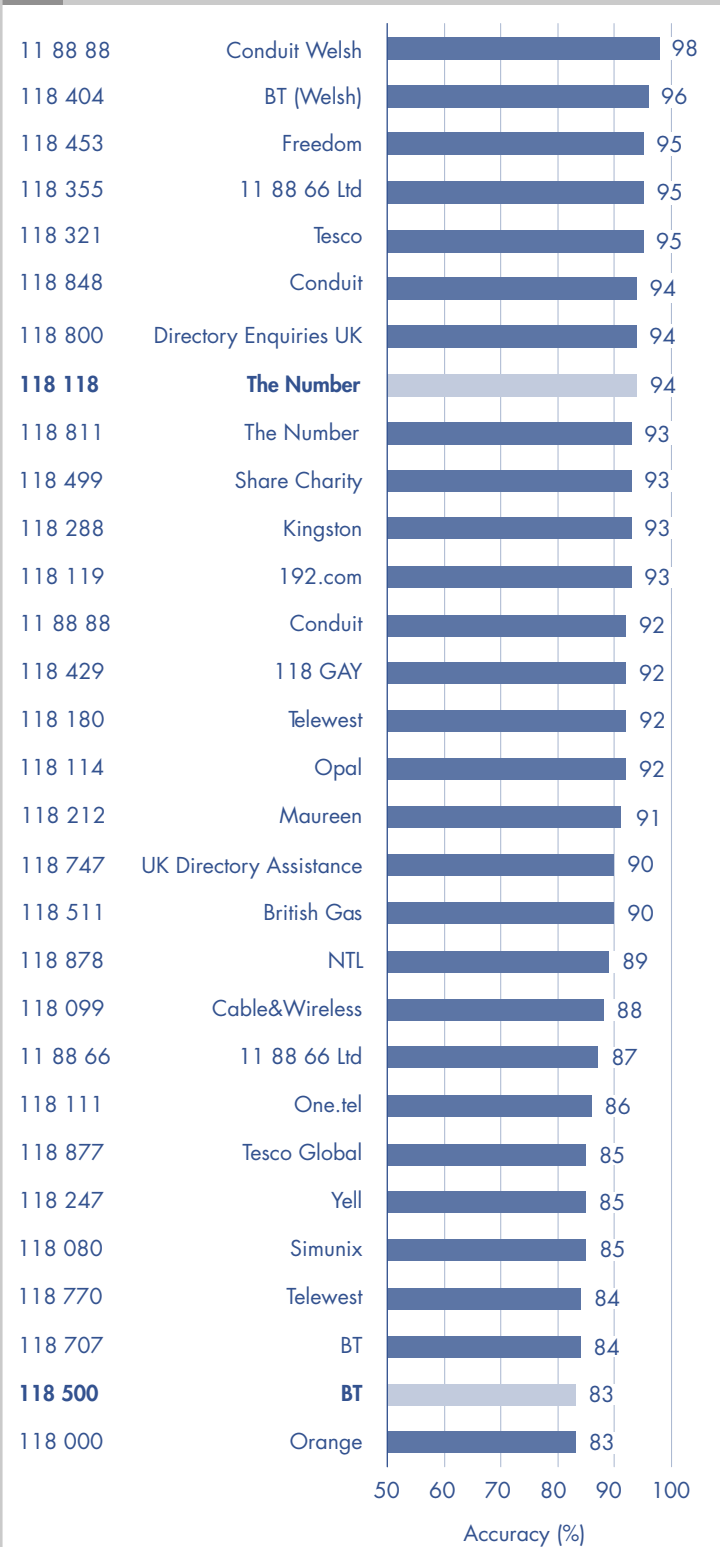
3.8 Ofcom’s research in April and November 2004 showed that there was not a statistically significant change in cross-market accuracy. Of the 30 numbers surveyed, five had improved their accuracy, 24 numbers had performed about the same and one number performed less well. The number which performed less well was BT’s 118 500. In April 2004 it provided the correct information to 93 per cent of requests but in November this fell to 83 per cent.²⁷ Given its relatively large market share this affected the results for the market as a whole and, had 118 500 maintained its earlier performance, the overall level of accuracy would have improved.

Pricing options

3.9 Before liberalisation, most fixed line network operators charged a flat rate for standard directory enquiries services. BT charged its fixed line customers 40 pence to request one or two telephone numbers. Mobile service providers offered call connection, and charged callers based on the length of the subsequent connected call. 118 service providers now charge callers in one of four ways:

- a fixed fee for whole call regardless of length;
- an initial connection charge (which includes the first minute of the call) followed by a pence per minute charge for the remainder of call (charged per second);
- an initial connection charge (which does not include the first minute of call) followed by a pence per minute charge for the whole call (charged per second); and
- no connection charge and a pence per minute charge for whole call (charged per second).

16 Accuracy of provision of directory enquiry numbers, by service provider – November 2004



Source: Ofcom mystery shopping research, November 2004

27 BT told us that it was not aware of any reason for the difference between the two results as no fundamental change had occurred in its service.

3.10 In November 2004 there were 217 directory enquiries services on BT's network. The National Audit Office analysed the pricing information available on service providers' websites and the prices of a sample of services are shown in **Figure 17**. Based on the average length of an enquiry,²⁸ the cost of using directory enquiries services to find a national number ranged from 27 pence to £1.73 for calls made from fixed line networks; and 25 pence to £2.50 to calls made across mobile networks. The cost of directory enquiries services also varies widely across individual networks; for example the cost of the same enquiry varied by almost 540 per cent from a BT landline and 700 per cent on the O2 network. This shows that the price of directory enquiries depends on a number of variables, including the choice of 118 number, the network on which the call is placed; and the length of the call, which is affected by the type of service required.

3.11 Some service providers offer different types of directory enquiries services on different 118 numbers. For example, BT and The Number offer premium services, with a range of value-added options such as call connection, and a number only service. The prices of the 'number only' services were 29 pence and 30 pence, compared with 51 pence and 56 pence for the premium service.²⁹ In addition, some network operators have included 118 services within their telecommunications packages. For example, One Tel offers its customers free directory enquiries services, and others have used them as part of their broader marketing strategy; NTL's service of two numbers for 40 pence is the same as pre-liberalisation and Kingston Communications offers its customers three searches for 35 pence.

17 The cost of a range of 118 numbers from different networks at August 2004

Number	Price (£) of an average length call on the main networks							Most		
	BT	NTL	Telewest	Vodafone	O2	T-Mobile	Orange	Cheapest £	Expensive £	Spread %
118000	0.49	n/a	n/a	0.75	0.65	1.00	0.59	0.49	1.00	104
118080	0.50	n/a	n/a	1.80	0.65	n/a	n/a	0.50	1.80	260
118118	0.56	0.56	0.56	0.85	0.65	0.75	0.64	0.56	0.85	52
118247	0.30	n/a	n/a	0.45	0.65	0.65	0.45	0.30	0.65	117
118437	1.73	n/a	n/a	0.70	0.65	n/a	n/a	0.65	1.73	165
118468	1.20	n/a	n/a	N/A	2.00	2.50	n/a	1.20	2.50	108
118499	0.48	n/a	n/a	0.70	0.65	0.65	n/a	0.48	0.70	47
118500	0.51	0.51	n/a	0.70	0.49	n/a	0.64	0.49	0.70	44
118707	0.29	0.29	n/a	0.70	0.65	0.65	n/a	0.29	0.70	141
118811	0.30	0.30	0.30	0.85	0.25	0.65	n/a	0.25	0.85	240
118848	0.27	0.30	n/a	0.55	0.25	n/a	n/a	0.25	0.55	120
118888	0.46	0.37	0.35	0.60	0.65	0.65	0.45	0.35	0.65	86
Cheapest (£)	0.27	0.29	0.30	0.45	0.25	0.65	0.45			
Most Expensive (£)	1.73	0.56	0.56	1.80	2.00	2.50	0.64			
Spread (%)	539	92	86	300	700	285	42			

Source: National Audit Office analysis

NOTE

The table shows the price of requesting a single number from a sample of 118 numbers, including the most frequently called numbers and those at the extremes of the prices available. N/A means that the number is not carried by that network. Pricing information was correct at August 2004 to show prices one year after liberalisation. Prices change continuously, so this table should not be used as a current price guide.

28 In the April 2004 mystery shopping exercise Ofcom calculated the average directory enquiries call to last around 45 seconds - 47 seconds for a residential number and 40 seconds for a business number.

29 For an average length call and a request for a national number from a BT landline.

3.12 There is now a greater range of prices in the directory enquiries market, but average prices have increased relative to those available immediately after liberalisation. In August 2003 two 118 companies offered a single number search for 20 pence but have both since increased their prices. **Figure 18** shows that the lowest price had increased by 4 pence, or 17 per cent, between October 2003 and November 2004. In addition, the National Audit Office’s analysis of prices showed that, in August 2004, the cost of the two 118 numbers with some 80 per cent of the market share was 51 pence and 56 pence for an average length call,³⁰ which was 28 per cent and 40 per cent higher than the pre-liberalisation cost of BT’s 192 service. But it was also possible to find cheaper services as around one quarter of the new 118 numbers charged less than BT’s old price of 40 pence.

3.13 Many 118 service providers offer call connection - which enables the caller to be connected directly to the number they have requested without ending the call and redialling. This is a convenient way for callers to connect to the number of their choice. Although there is no additional cost for the call connection itself, the entire duration of the call is charged at the directory enquiry service provider’s published rate, which is higher than the rate for a local or national call.³¹ The National Audit Office’s analysis showed that, in August 2004, the cost of a five minute call varied between 55 pence and £4 using a landline, and £1.25 and £12.50 from a mobile.

3.14 The impact of differing pricing structures on the cost of call connection is illustrated in **Figure 19** and shows that the cheapest 118 number is dependent on the length of the call. By requiring suppliers to give pricing information before call connection occurs, the ICSTIS Code of Practice should ensure that the caller is aware of the costs associated with call connection. In the early stages of liberalisation, these pricing announcements were not always made and were the subject of complaints to ICSTIS (paragraph 3.27). Ofcom’s November 2004 research also showed that some service providers do not always provide callers with call connection prices before connecting a call.

The availability of price information

3.15 One of Ofel’s objectives was increased price competition. The extent to which a competitive market produces effective price competition is influenced by a number of factors, including the availability of price information. Our economic consultants, Oxera, observed that the effectiveness of price competition is likely to be limited if callers are unable to or are not motivated to identify price differences easily or find the best deal. Residential customers use directory enquiries services, on average, less than once per month and, as a proportion of household expenditure, the cost of these services is insignificant. This is evident in the directory enquiries market, in which the companies with the highest market shares are neither the lowest cost nor most accurate providers. But, as set out in paragraph 1.25, price competition in telecommunications markets may be assisted by the inability to easily price discriminate between telephone callers.

18 The cost of directory enquiries service

	Lowest price pence	Highest price pence
October 2003	23	64
November 2004	27	64

Source: Ofel and Ofcom research

NOTE

This table relates to calls made from a BT land line requesting residential information.

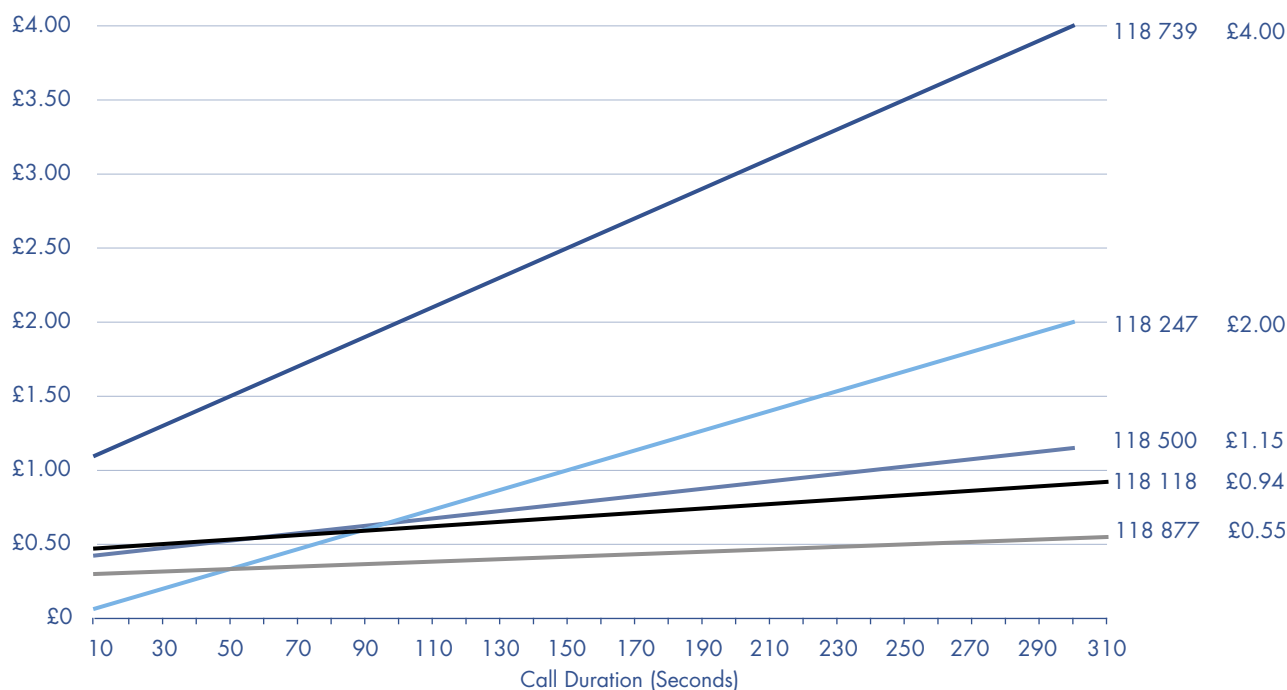
30 For calls made on a BT landline.

31 One service provider offers a lower tariff for calls connected to numbers in North America.

19 The costs of a connected call, August 2004

Using call connect, price per call is heavily dependent on the charging mechanism of the service provider

Price for calls made from a BT line



Source: National Audit Office analysis of service providers' published tariffs

3.16 Ofcom's research in May and November 2004 showed consumer confusion over the cost of 118 services (**Figure 20**). The ICSTIS Code of Practice requires all adverts for directory enquiries services to carry prominent pricing information for the service being advertised. Service providers also publish the tariff rates for each 118 service. Ofcom, and subsequently Ofcom, chose not to establish a price comparison tool on its website³² and there is currently no comprehensive directory enquiry call cost calculator. Ofcom did establish links to network operators' websites - but it can be difficult to find pricing information, and in some cases, it is not presented in a user-friendly format. Since liberalisation, the price of a range of 118 numbers has been published on the independent price comparison website, uswitch.com.

20 Research results on consumer awareness of prices

Only 17% of people surveyed by Ofcom knew that, compared to 192, 'some 118 numbers are cheaper, some were the same, and some were more expensive'. 34% did not know how 118 number prices compared to 192. – November 2004

25% of respondents who use 118 118 'don't know' approximately how much it costs. – April 2004

When asked how the new directory enquiries numbers compared to the old, 45% thought they were 'all more expensive'. – November 2004

41% of fixed line directory enquiries users do not know how much their chosen supplier charges to obtain a single telephone number, and 20% of fixed line users thought 192 was free. – November 2004

89% of callers do not realise that the 'text-back'³³ service is free. – November 2004

³² Ofcom felt that the way directory calls were priced was dependent on a variety of factors which are, in part, unknown before the call is placed. To date, Ofcom has chosen not to produce a tool whilst it develops its consumer strategy.

³³ This is when the number the caller requires is texted to their mobile telephone.

Accessing 118 services

3.17 Customers cannot dial all 118 numbers from all networks (Figure 17). BT and Kingston Communications are, as part of their Universal Service Obligation, obliged to allow their customers to call any number on any network. This obligation is not extended to any other network operator unless Ofcom decides that a designation of that network operator as Universal Service Provider is appropriate.³⁴ The designation is based on a number of criteria, including the size of the network operator, its commercial and technical capabilities and the likely cost of complying with any Universal Service Obligations. Using these criteria, Ofcom has designated only BT and Kingston as Universal Service Providers and therefore it does not have powers of compulsion over other service providers beyond the general requirement that they offer at least one directory enquiries service on their network.

3.18 Some networks carry calls to few 118 numbers; for example in November 2004 Telewest carried just six national and three international directory enquiries numbers, although this still represents greater choice than that available pre-liberalisation. Customers attempting to call a 118 number which is not carried on their network will receive an unobtainable signal. 118 service providers are required to negotiate with network operators to carry their number. From a commercial perspective it is understandable that networks do not wish to carry all 118 numbers. They incur costs in building new numbers into their systems and, in many cases, the number of calls to the 118 service will not repay this investment. In addition, the network operators act as billing representatives for the 118 service and bear the risk of bad debts, and are the first point of contact for complaints on poor service, which adds to their costs.

3.19 While the commercial approach of network providers is understandable, and Ofcom is unable to address this issue, the benefits of competition could be restricted. 70 per cent of service providers we surveyed believed that their business was affected by networks not carrying calls to their 118 number, citing

particular problems with marketing. Suppliers believed that this led to consumer confusion and annoyance. The Telecommunications Regulators of Sweden have legislative powers designed to ensure all network operators interconnect with each other, which allows them to insist that all networks carry all directory enquiries numbers. Conversely, the situation in Germany is the same as the UK and only the incumbent operator is compelled to carry all numbers on all networks.

The scope for business and government to benefit from competition

3.20 Some businesses and public sector bodies have achieved lower prices by negotiating contracts with service providers at more favourable terms than those offered to individual callers. For example, Hammersmith Hospital Trust negotiated a 40 per cent reduction in the price of its directory enquiries calls. The Office of Government Commerce Buying Solutions Agency has negotiated a range of framework contracts which include a fixed line telecommunications package available to eligible public sector organisations, enabling them to make substantial savings on their telecoms use. Included in the package is a directory service offering one enquiry for a fixed price of 29 pence. Despite promoting this package widely, take up by public sector bodies is low, although some organisations may have agreed deals directly with service providers.

3.21 It is not clear how many business and public sector organisations have taken advantage of the opportunities created by competition. A survey of members published by the Communications Management Association³⁵ found that 95 per cent of business respondents did not find it easy to compare the cost of the competing 118 services due to a lack of comparison data, differing pricing structures and the uncertainty of call length. As a result, less than one in five of the surveyed businesses believed that they had benefited from the introduction of competition.

³⁴ An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.

³⁵ The Communications Management Association represents those individuals who have responsibility for or manage private communications systems in commerce, industry and the public sector. Its members spend some £11 billion per year on Information and Communication Technology.

The range of available services

3.22 By promoting competition Oftel expected to see the introduction of a wide range of innovative new services, including:

- call connection so that a caller can be connected directly to the number requested;
- combined classified and standard services behind one number, so that a caller can ask for the numbers of all relevant businesses; and
- services in a range of languages for tourists and minority ethnic communities.

3.23 A wide range of services has become available, including call connection; number text; services locator; television listings; directions; charitable donations included in the call cost; and, most recently, train timetables. In addition, there are niche players providing specialist services, such as 118 GAY which, in addition to providing a standard number search facility, provides telephone numbers of local services, such as bars and clubs, recommended by members of the gay community. The marketing of these services is the service providers' responsibility.

3.24 Oftel and Ofcom have undertaken research into consumer awareness. In April 2004 there was a relatively low level of awareness and use of value-added directory enquiries services. One half of respondents used directory enquiries for a standard service only – to find a telephone number – and thirty per cent of respondents could not name a single 'value-added' service. By November 2004, just under half of United Kingdom adults were aware that service providers offered 'value-added' services. There was greatest awareness of 'text back' and 'call connection', which were known by around one quarter of callers. 16 per cent of UK adults had used at least one of these services. Awareness and use of other services remained very low.

The regulation of the competitive market

3.25 Ofcom is responsible for setting the policy for the directory enquiries market and ICSTIS undertakes day-to-day regulation of the advertising, content and promotion of directory enquiries services. ICSTIS responds to public complaints and monitors the services to ensure compliance with its Code of Practice. Under the Code:

- service providers must seek "prior permission" from ICSTIS before operating a directory enquiries service. This allows ICSTIS to review the suitability of the proposed service and any submitted promotional material before it is launched;
- service providers must make price announcements before call connection and adhere to a range of advertising rules consistent with the British Code of Advertising. Advertisements must also comply with the Advertising Standards Authority. These rules are in addition to Ofcom's regulation of the telecommunications market; and
- ICSTIS is able to fine service providers for a breach of the Code and has other powers, including the ability to bar services in extreme circumstances.

3.26 The Code of Practice requires companies to give clear pricing information on advertisements and places limitations on the type of service that can be offered over a 118 number. For example, in Germany, when 118 services were launched some premium rate operators were using the 118 number to offer adult entertainment behind a directory enquiries service. If this occurred in the UK it would breach the ICSTIS Code of Practice enabling sanctions against the company involved. The Code was already being applied to controlled premium rate services and was extended to directory enquiries as 118 XYZ numbers fall under the premium rate definition. ICSTIS did not have time before market liberalisation to institute rules specific to directory enquiries and, therefore, adapted its existing Code. Some suppliers felt that it was inappropriate to regulate directory enquiries services under the premium rate definition and that the Code placed unnecessary restrictions on their activities; for example, the type of promotional activity they could undertake.

3.27 Callers wishing to complain about a directory enquiries service can call the 118 service provider again, the network operator, Ofcom or ICSTIS. If a service provider issues a caller with an incorrect number that is otherwise available on the database, ICSTIS's Code of Practice insists it must offer a refund for both the original call and the call made to lodge the complaint. Between December 2002 and June 2004, ICSTIS received 413 complaints about directory enquiries from customers and suppliers, peaking around the introduction of the new services (**Figure 21**). The top three categories of complaint were:

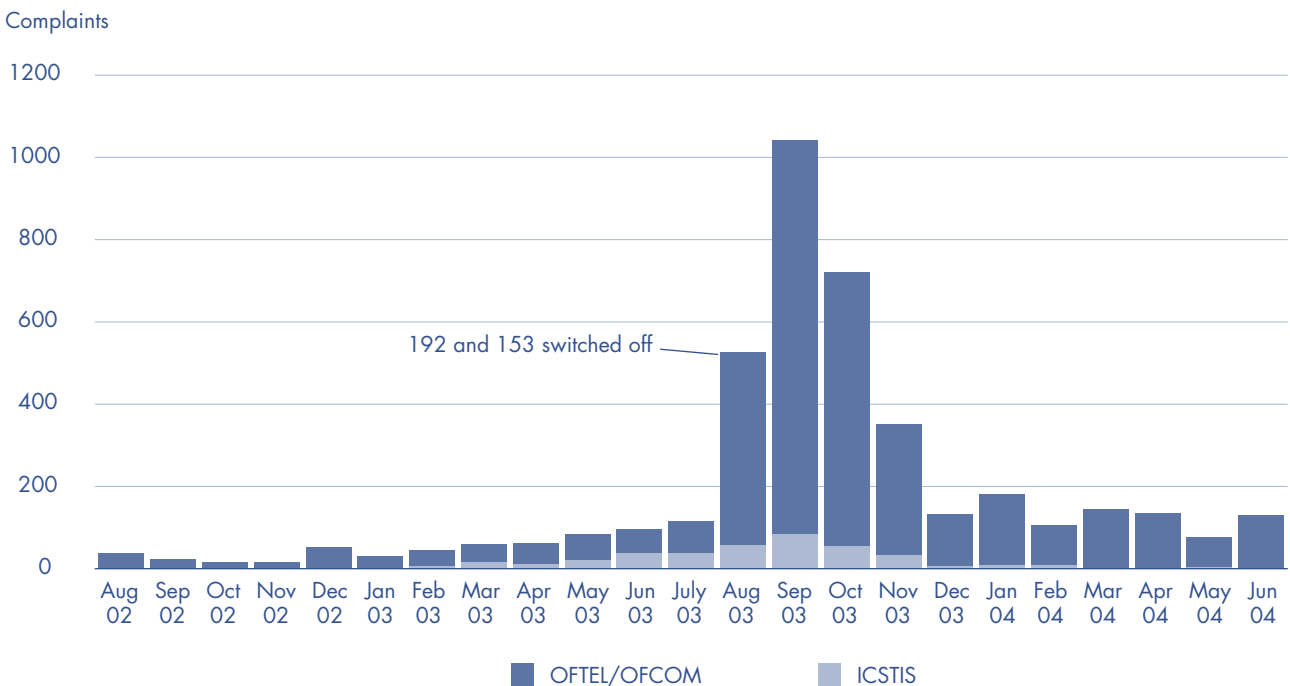
- the caller received the wrong information/wrong number;
- a lack of pricing in promotional material; and
- pricing information was not given prior to call completion.

3.28 Ofcom also receives complaints about directory enquiries. In 2002, before the market was liberalised, Oftel received an average of 25 complaints per month. This rose to 55 calls per month during the period of parallel running and peaked at over 1000 calls in the month after the removal of 192 and during the period of adverse press coverage (**Figure 21**). The number of complaints has since fallen back to approximately 130 per month.

3.29 Where breaches of the Code of Practice have occurred, ICSTIS can impose fines of up to £100,000. It has issued 10 warnings on behaviour and 11 fines totalling almost £60,000. The fines have primarily been for failure to provide pricing information, either in advertisements or in transferral of calls.

21 The profile of directories enquiries complaints

Complaints about Directory Enquiries to Oftel, Ofcom and ICSTIS peaked in the months following August 2003



Source: Oftel and ICSTIS

APPENDIX 1

Study Methodology

The National Audit Office publishes 60 value for money reports each year, of which typically three focus on the work of the UK's regulators. The Office's value for money work on regulation covers sectoral regulation undertaken by regulators such as the Office of Gas and Electricity Markets, the Postal Services Commission and the Office of Communications. In recent years, studies have examined a broad range of topics, including a focus on initiatives to open markets to competition (including Opening the Post (HC 521 2001-2002), Giving Domestic Customers a Choice of Electricity Supplier (HC 85 2000-2001) and The New Electricity Trading Arrangements in England and Wales (HC 624 2002-03)) and issues relating to the consumer experience of regulated industries (for example, Energywatch and Postwatch: Helping and protecting consumers (HC1076, 2003-04) and Ofgem: Social Action Plan and Household Energy Efficiency (HC878, 2003-04). This report on the liberalisation of Directory Enquiries reflects both the focus on opening markets to competition and on consumer experiences.

We designed our study to address two key issues:

- whether Ofcom managed the liberalisation of the directory enquiries market effectively; and
- whether the expected benefits of liberalisation have occurred in practice for the consumers.

The key elements of our study methodology are set out below.

Review of Ofcom's documents (held by Ofcom)

We reviewed Ofcom's documents on the directory enquiries market from 1997. This included internal communications, consultations and research data files.

The National Audit Office offered advice to Ofcom to improve the methodology of the first piece of research, conducted by Ofcom. We also conducted an in-depth analysis of the two pieces of mystery shopping research and consumer surveys outlined in Part 3.

Analysis of directory enquiry service providers' tariff data

We collected and analysed information on the prices of a number of service providers across a range of telecommunications networks. This demonstrated the variation in prices for a call requesting a single number, and a call requesting a value added service (onward call connection). The results of this analysis are in Figure 18.

International Benchmarking

As part of our fieldwork we compared the directory enquiries market in the United Kingdom with those of overseas markets. We focussed our research on Ireland, Germany, France and Sweden, holding discussions with the National Regulatory Authority and market participants where appropriate.

Seeking the views of stakeholders

We sent a questionnaire to 100 companies involved in the provision of directory enquiries services in the United Kingdom and received responses from 32. The companies who responded represented over 98 per cent by volume of the directory enquiries market in the UK. Respondents included the full cross-section of market participants: network providers, both mobile and fixed; new entrants, some with experience overseas and some with no previous experience, and; some companies allocated numbers who did not subsequently open them. We followed-up the survey responses with in-depth interviews with ten companies.

We held semi structured meetings with stakeholders involved in the Ofcom working groups to discuss their views on the liberalisation of the directory enquiries market. These stakeholders included, Advisory Committees on Telecommunications, trade groups and consumer groups.

Economic advice

We commissioned economic consultants, Oxera, to provide a background overview paper on the economic issues surrounding the opening up of the directory enquiry market in the UK. An executive summary of this paper is reproduced in Appendix 2.

APPENDIX 2

Oxera paper

Executive Summary

1 The process of liberalisation is necessarily one that begins with a market structure of monopoly provision of a product/service. Changes are then made – through intervention by regulatory authorities or as a result of technical developments – which open up the market to competitive supply and the market subsequently takes on a different form. The final outcome will depend on both the specific process of market liberalisation and the underlying economic characteristics - in this case, of the provision of directory enquiry (DQ) services. This report considers primarily the latter and provides the NAO with a description of the economic issues that are likely to be relevant in analysing the evolution of the structure of the DQ services market. Rather than evaluating the Oftel/Ofcom liberalisation process itself, the report presents the background against which the specific liberalisation process undertaken by Oftel in the UK could be evaluated.

2 In August 2003, around 15 companies were capable of providing DQ services; by mid-2004, this had increased to more than 30.³⁶ However, the market is relatively concentrated, with 118 118 (The Number) serving around 40–50% of DQ calls, and BT (118 500) between 30% and 40%.³⁷

3 There are several factors that might explain the current situation. The provision of the final retail DQ service relies on a production chain with several different intermediate products and services, including the directory information, the database on which DQ services are run, the database search engine, and the call centres. These intermediate products and services exhibit a wide variety of economic characteristics, some of which may be problematic in terms of competitive market structures and market outcomes. Moreover, the characteristics of the DQ product itself, the way it is priced, and the drivers of its demand might also affect the retail market structure.

4 The processes up to the creation of the comprehensive database are unlikely to be able to be competitively supplied and are therefore likely to require regulation. Databases are relatively expensive to create and maintain, but cheap to reproduce, while, as monopoly suppliers of information, the network access providers (or at least large ones) have market power with respect to the database compiler. In fact, Oftel/Ofcom regulates the provision of directory information by BT and the other network providers to the database compiler(s), and access to the core directory information database (i.e. OSIS).

5 The creation of a comprehensive DQ database is likely to require standardisation of the information held in relation to each data subject. Moreover, the way in which an enquiry is handled can also be relatively standard as a result of the use of agency call centres.

6 Consequently, directory information can be a relatively homogeneous product. One of the ways in which firms can try to differentiate themselves is by making consumers aware of their number. Depending on the importance of number memorability, demand might be driven by advertising rather than price, convenience or value for money. Numbers (i.e. 118 XYZ) may have intrinsically different memorability characteristics, and thus ‘golden numbers’ may distort competition by giving some suppliers an in-built advantage.

36 See www.118tracker.com. It is not completely clear how many different suppliers of DQ services are available, as some service suppliers have sub-contracted their services to the same wholesale DQ service supplier. Oftel/Ofcom research in 2003 and 2004 tested 30 different suppliers—see Ofcom and ICSTIS (2004), ‘Evaluation of Directory Enquiries Services’, May.

37 There appears to be no market research in the public domain that measures the market shares of different DQ providers. This information comes from the following: White, D. (2004), ‘BT Raises Directory Enquiry Cost by 60%’, *The Daily Telegraph*, February 28th; Budden R. (2004), ‘Telegate Hangs Up on Directory Merger Talks’, *Financial Times*, February 5th; and ‘Conduit Calls the Number for Directory Enquiries Help’, October 13th 2003, www.118tracker.com.

- 7 If demand is driven by advertising, advertising spend is likely to determine an operator's success in the retail market. Firms that spend a little more on advertising than their competitors may gain considerably more business (in contrast to a price-sensitive competitive market, in which firms with slightly lower prices gain considerably more business). This will tend to give advertising spend some of the characteristic of sunk costs, and markets will tend to be more concentrated, the more responsive consumers are to advertising, as the competitive constraint to offer value for money may be limited.
- 8 Therefore, in evaluating the specific liberalisation process carried out by Oftel/Ofcom, these characteristics and potential limitations need to be fully established, understood and taken into account when relevant. In particular, the following should be noted.
- Based on the monopoly structure of the databases market (and possibly the search engine), the other main element required for the provision of DQ services – call handling – might be able to be competitively supplied. Some pricing flexibility is available, albeit on an agency basis from the call origination supplier.
 - The economics of call centres might constrain the number of DQ service providers that the market can efficiently support. Call centres are likely to be characterised by economies of scope and scale, and therefore it might be in their interest to serve as many DQ providers as possible. It is important to analyse the possible constraints that DQ providers of different sizes have for accessing call centre services at competitive prices.
 - The DQ services market is likely to be constrained by the lack of transparency of pricing information³⁸ (particularly at point of sale) and the homogeneity of the basic product (i.e. the right telephone number).
 - The final outcome in the retail market is likely to depend on the degree to which different customer types are influenced by advertising, price or other factors. For example, a company deciding on what DQ service provider to programme into its switchboard is likely to have a different attitude to the costs of searching for the provider that gives best value for money compared with a domestic customer wanting the number of a local taxi company. Therefore, it might be possible to have an overall market structure in which there is a restricted number of large players serving advertising-sensitive consumers and a (relatively) large number of small, fringe, operators supplying the service to consumers prepared to search for value for money.
 - Further analysis of the determinants of consumer behaviour would be needed to establish the limits of price sensitivity of consumers, the existence of different customer groups and their relative sizes.
- 9 Given the short time since full liberalisation of DQ services, the final market structure may not yet have emerged. However, given the characteristics of the market – particularly the lack of pricing transparency and the need to enable potential customers to remember one number at the expense of another – it is clearly possible that the market could be highly concentrated, perhaps with a large number of small suppliers targeting the niche, non-advertising-influenced and price-sensitive segment of the market.

38 In accordance with the Code of Practice which ICSTIS use to regulate the directory enquiries market, all service providers are required to include pricing information in all advertisements.

State of International Market Liberalisation in 2002: Selected EU Member States

Country	Date of liberalisation	Characteristics of the market in 2002
Austria	2002	Three companies provide the national directory enquiry service (Telekom, CLC and Conduit)
Finland	2002	There are several market players; the most important are Fonecta (50 per cent market share) and Eniro (30 per cent market share)
France	n/a	There are at least four market players
Germany	1998	At its highest point, between 10 and 15 service providers were active in the liberalised German market, although this number has now dropped to around six, of which only two are large players. Deutsche Telekom claims to have 80 per cent market share
Ireland	2000	Only two companies, Eircom (the incumbent) and Conduit are providing services through their own call centres. MMO2, Esat and Vodafone provide services using their own numbers, but through Eircom or Conduit's call centres
Luxembourg	2002	Incumbent is the only provider
The Netherlands		System not introduced
Norway	2002	Five providers, including the incumbent (Telenor)
Portugal	2002	The incumbent provides directory services through its number 118. Short codes 18XY provided to 13 other telecoms operators. Many of them do not yet provide any directories services
Spain	2002	There are at least 3 directory enquiries providers

Source: 'Study on Regulatory Framework and Market Developments Concerning Directory Services in EU and EEA Member States: Annexes on Country Profiles', Analysis Consulting, September 2002.

NOTE

The numbering conventions adopted by these countries include: two countries using 118 XYZ, five using 118 XY, one using 18 XY and one using 32 XY.

10 It is important to note that the reference point for any analysis of the impact of changes in the DQ market may not be the DQ calls market itself, but the broader directory information market that includes phonebooks, the Internet and CD-ROMs, as well as the DQ service. The availability of these alternatives could constrain the behaviour of DQ suppliers. Further information would be needed to determine the extent of substitutability.

11 Finally, in any evaluation of the past process of liberalisation, there are a number of related, but different, issues that could be addressed, which include evaluations of:

- whether the current, short-run outcome has been worthwhile;
- the specific regulatory decisions that were taken – were they the right ones?
- the regulatory processes that were used – were they best practice?
- whether further intervention or deregulation would improve the current situation.

12 Each of these requires different analytical techniques and has different informational requirements that are necessary to meet in order to make an adequate evaluation of liberalisation.

APPENDIX 3

Chronology of Key Events

1997

September Oftel issues a consultation on “The Provision of Directory Information Services and Products” – to seek stakeholder views on competition in the directory enquiries market and the possible introduction of a 118 XY(Z) numbering range

1998

July The European Committee for Telecommunications Regulatory Affairs (ECTRA) recommends that all member countries use 118 to access to voice directory enquiry services

September Oftel outlines its intention to publish a consultation to “level completely the playing field for competing directory enquiry providers” by introducing dialling parity (Statement on The Provision of Directory Information Services and Products)

December Ireland issues 118 numbers and liberalises the Irish directory enquiries market

1999

January Germany issues 118 numbers. Germany’s market had been open to competition since 1997

April Sweden issues 118 XYZ numbers. Sweden’s market had been open to competition since 1994

2000

November Oftel offers stakeholders three options for the future access codes to directory enquiries in its Consultation on “Access Codes for Directory Enquiries Services”. The document contains a cost benefit analysis, and information on overseas liberalisations

Oftel undertakes a consumer survey to gauge public opinion on various features of the directory enquiries market

2001

- September Oftel announces the decision to liberalise the directory enquiries market (Statement on Access Codes for Directory Enquiries Services)
- December Oftel seeks stakeholder views on the method of allocating 118 numbers in its consultation on “Allocating Access Codes for Directory Enquiry Services”

2002

- January The Independent Committee for the Supervision of Standards of Telephone Information Services (ICSTIS) undertakes the day-to-day monitoring of the directory enquiries market
- May Oftel holds a lottery to allocate the new 118 numbers
- December New 118 services were launched and run in parallel with 192/153

2003

- March Oftel sought stakeholder views on the timing of the end of parallel running and the future use of 192 and 153 in its Consultation on “Future Use of Legacy Directory Enquiry Numbers”
- August Directory enquiries services on 192/153 numbers are replaced with a neutral message explaining the introduction of 118 numbers and referring to a freephone number for callers who need assistance in obtaining a number
- November Oftel and ICSTIS publish the results of their first mystery shopping exercise and consumer research
- December Oftel are replaced by Ofcom as the regulators for the telecommunications market

2004

- May Ofcom and ICSTIS publish the results of their second mystery shopping exercise and consumer research
- June Message referring to the freephone ‘carousel’ removed from 192 and 153
- November Ofcom and ICSTIS conduct their third mystery shopping exercise and consumer research

APPENDIX 4

Summary of survey responses

The following data are a selection of responses to the quantitative questions in our supplier survey. Where appropriate these were followed by a qualitative question to allow respondents to expand their answers. The qualitative responses were used as the basis for our semi-structured interviews and our findings are used throughout the main body of this report. All percentages shown exclude respondents who did not answer a particular question.

Before Liberalisation

Did Oftel's November 2000 consultation document and any other information supplied by Oftel provide you with sufficient information to allow you to contribute fully to this consultation process?

	Responses	Percentage
Yes	22	85
No	4	15
Blank	6	
Total	32	100

In your view did Oftel consider fairly all the viewpoints raised during the consultation exercise?

	Responses	Percentage
Yes	16	64
No	9	36
Blank	7	
Total	32	100

As a result of considering all the viewpoints, do you feel that the formulation of the liberalisation process reflected these fully?

	Responses	Percentage
Yes	12	48
No	9	36
Don't know	4	16
Blank	7	
Total	32	100

At each stage of the consultative process, did Oftel communicate clearly the reason for its decisions?

	Responses	Percentage
Yes	18	72
No	7	28
Blank	7	
Total	32	100

As a result of the actions taken by Oftel, when liberalising the DQ market, do you believe that all companies were given equal opportunity to compete?

	Responses	Percentage
Yes	18	62
No	11	38
Blank	3	
Total	32	100

During Liberalisation

In general, how effective were the working groups as a key driver for implementation?

	Responses	Percentage
Effective	12	40
Neither effective nor ineffective	10	33
Ineffective	1	3
Don't know	7	23
Blank	2	
Total	32	100

Do you think that the 118 XYZ numbers were allocated fairly?

	Responses	Percentage
Yes	24	83
No	5	17
Blank	3	
Total	32	100

Do you think that the automated message referring to the freephone telephone numbers, was the right approach in dealing with the DQ legacy numbers?

	Responses	Percentage
Yes	15	48
No	16	52
Blank	1	
Total	32	100

If some network operators do not carry your calls, do you feel that this affects your business?

	Responses	Percentage
Yes	21	70
No	9	30
Blank	2	
Total	32	100

At the time of liberalisation, was it appropriate for an independent body (ICSTIS) to regulate the content and promotion of DQ services?

	Responses	Percentage
Yes	24	77
No	7	23
Blank	1	
Total	32	100

After Liberalisation

How would you rate the methodology of the second mystery shopping exercise compared to the first?

	Responses	Percentage
Better	14	61
The same	7	30
Worse	1	4
Don't know	1	4
Blank	9	
Total	32	100

Are there any services you feel you cannot offer at the moment due to the way in which Ofcom and ICSTIS are regulating the market?

	Responses	Percentage
Yes	3	10
No	26	90
Blank	3	
Total	32	100

Current Regulation

Are you content with the way that Ofcom and ICSTIS are regulating the DQ market?

	Responses	Percentage
Yes	17	68
No	8	32
Blank	7	
Total	32	100

Note: Columns may not cast correctly due to rounding.

APPENDIX 5

International case studies

Germany

Introduction of 118 Numbering	1998, of the format 118 XY
Number of competitors	Around 40 companies. Two dominate, including the incumbent, Deutsche Telekom, which still has more than 60 per cent market share.
Price of incumbent	This has risen since liberalisation. Deutsche Telekom, the incumbent, was subsidising the directories market using income from the long distance calls market. The price of long distance calls has fallen since liberalisation of the directories market.
Choice	Call connect and text back are the two most common value added services, with reverse search, the ability to give a telephone number to the service provider and receive address details, available from October 2004. Calls can be connected to 'premium rate' style numbers and 118 is now being used to market adult services.
Number Allocation Method	Companies could apply for up to five numbers. A lottery was used to establish the sequence in which companies could chose a number. A fee was charged for allocated numbers.
Number trading	Not permitted, numbers must be returned to the regulator.
Minimum entry requirements	Number applicants were asked to prove their intention to offer a service by submitting a business plan to the regulator, including technical information and company ownership details. Since 2002 the regulator requires proof that a new entrant has access to comprehensive subscriber data before they are issued a 118 number.
Other	All network providers must make their subscriber data available to those who reasonably require it. This has led to the creation of two subscriber databases being developed by the two largest companies. Only Deutsche Telekom is compelled to carry all numbers to all networks.

France

Introduction of 118 Numbering	France are yet to move to the 118 XYZ numbering scheme, although in 2000 the market became competitive. New fixed line entrants were offered, by the regulator, a short four digit code from the range 32XY, or a 10 digit long code. New mobile entrants offer services on a three digit number range of their choice which is not issued by the regulator. France Telecom, the incumbent, was allowed to maintain its short code of 12, consequently it has in excess of 90 per cent of the market.
Number of competitors	Four companies plus an electronic service called Minitel. Mobile service providers account for 40 per cent of the total market.
Incumbent market share	95 per cent of the fixed line market.
Price of incumbent (Prices at August 2004)	France Telecom offers 2 searches for around £2. A competitor charges 46p connection and 24p per minute during the day. Minitel can be used for free for up to three minutes per day.
Choice	A wide variety of value added services are available in France.
Number Allocation Method	Not applicable. The 32 XY range were allocated on a first come, first served basis.
Number trading	Not permitted, numbers must be returned to the regulator.
Minimum entry requirements	Only those ready to offer directory enquiries services can be allocated a number.
Other	There is no single subscriber database. New entrants must apply to network operators for their subscriber data. There is no requirement for all networks to carry all 32 XY numbers.

Sweden

Introduction of 118 Numbering	1999, although the market was opened to competition in 1994. Number format used was 118 XYZ.
Number of competitors	There are around five companies offering directory enquiries services.
Incumbent market share	The market is dominated by two companies, with the incumbent having the majority of the market.
Price of incumbent (Prices at August 2004)	The incumbent operator now charges 33p upon connection plus 88p per minute for day time enquiries. In the evening, the connection rate rises to 57p. One operator offers a flat rate service priced at 88p.
Choice	There is a wide choice of service type and service delivery mechanism, for example automated services, mobile internet and text message.
Number Allocation methods	Issued on a first come, first served basis with the incumbent receiving 118 118. The regulator would have preferred to auction the numbers but did not have the legislative power.
Number trading	Not permitted, numbers must be returned to the regulator.
Minimum entry requirements	Existing telecommunications licensees only.
Other	The regulator publishes pricing data on its website for all services; 60 per cent of visitors to the website view the pricing data. And as part of the general conditions of the Swedish telecommunications market, all networks must interconnect with each other, meaning that all 118 numbers are available from all networks.

Ireland

Introduction of 118 Numbering	1999, of the format 118 XY.
Number of competitors	3 companies
Incumbent market share	Unknown
Price of incumbent	As at August 2004 calls to Eircom cost 46p for 1 enquiry plus 27 pence per minute if call connected. Conduit charge 29p connection plus 29 pence per minute. As a result of liberalisation prices in Ireland rose: In April 2000 Eircom put up its prices from Eur 0.36 (25p) to Eur 0.48 per minute (34p).
Choice	Value added services are limited: the Irish Regulator, during consultation, stressed that the 118 short codes were to be used for basic directory calls.
Number Allocation method	Applicants could apply for one number if operating a national service and two numbers if they also wished to operate an international service. If two or more companies applied for the same code they were allocated by lottery. No charge was levied for codes.
Number trading	Not permitted, numbers must be returned to the regulator.
Minimum entry requirements	Applicants had to submit a business case and evidence of technical capability to offer a service.
Other	The regulator chose not to use a carousel announcement as the costs of confusion outweighed the benefits of the information provided. There was a 12 month period of parallel running. And there is no requirement for all networks to carry all 118 XY numbers.

APPENDIX 6

Learning points for liberalisations

Drawing on Oftel's approach to liberalising the directory enquiries market, we have established learning points for regulators to consider in future market liberalisations. In many areas, the recommended good practice draws on Oftel's methodology; in other areas, there are lessons to be learned from Oftel's activities.

Establish the barriers to entry

- Evaluate the supply chain to understand fully the delivery of services. Identify parts of the chain in which there is monopoly provision and the potential for competition.
- Consider whether monopoly provision is the most appropriate structure (for example, high infrastructure costs).
- Identify the factors preventing effective competition. Consider the need for equivalence between incumbents and potential market entrants.

Collect and evaluate evidence from a wide range of sources

- Evaluate the quality of service and price of services in the existing market. Assess whether the existing market structure is restricting consumer choice.
- Collect a wide range of evidence to inform the decision to implement regulatory change, including:
 - stakeholder consultation on the proposed changes, including industry, government and consumer groups;
 - consumer research – of satisfaction with the provision of existing services and views on possible changes. Consider the needs of different consumer sub-groups;
 - international comparisons – conduct empirical research and consider the differences between countries;
 - economic analysis of the proposed options - including appropriate testing of assumptions and use of sensitivity analysis.
- Evaluate how alternative market structures will deliver benefits for consumers. Establish the specific determinants of consumer behaviour and the likely impact on the effectiveness of competition. Consider the needs of sub-groups.
- Consider alternative regulatory options; for example, direct regulatory action such as price capping or stricter price controls, and doing nothing.
- Summarise evidence in a Regulatory Impact Assessment (RIA), which should include: a risk assessment; cost benefit analysis; small firm's impact test; competition assessment; enforcement and sanction summary; and a full consultation.

Use the evidence to determine the appropriate regulatory action

- Consider objectively the evidence collected. Evaluate the benefits and the likelihood of their occurrence.
- Identify the action required to mitigate risks.
- Determine the most appropriate approach to liberalisation on the basis of an understanding of likely consumer behaviour and the steps required to create effective competition.

Project management

- Establish a project plan. This should include key decisions, milestones and resources required.
- Identify activities on the critical path.
- Gain broad industry agreement to the plan.
- Regularly review progress against the plan.

Involve stakeholders throughout the project

- Consider the use of working groups to discuss and resolve key issues with stakeholders. Oftel's approach addressed many of the risks inherent in this approach.
- Consider the need for sub-groups to address technical issues.
- Consider how to address the asymmetry of information between incumbent operators and potential market entrants.
- As necessary, seek views through consultations.

Create a level playing field

- Consider the appropriate level of entry requirements. Assess the need to impose a minimum entry level.

Investigate the opportunities to benefit from the allocation of scarce resources

- The regulatory body should, in liberalising a market, consider whether liberalisation is creating the conditions in which the ownership or use of a scarce resource is being transferred from public to private hands. If this is the case the regulatory body should, where possible, ensure that they, or the public purse, benefit financially from this transfer.
- Ensure scarce resources are allocated in a fair and equitable manner.

Consider the need to educate consumers of the changes

- Prepare a communications plan to consider how to educate consumers of the changes in the most cost-effective manner. Consider the needs of different sub-groups.
- Monitor the extent of consumer confusion.

Consider research to measure change against a benchmark

- If appropriate objectives have been set, there should be a benchmark against which to measure success. There are many types of research that would allow the evaluation of objectives.
- Before commencing research, ensure the methodology is robust and agree the approach with industry to ensure they will accept the results.