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## COMPETITION FOR THE PHONE

### The Path From Duopoly to Competition in Telecommunications

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Nevertheless, there are signs that the effectiveness of this dose of competition is wearing off. Thus while much has been achieved since November 1983, a

great deal remains to be done if the UK is to have a truly competitive telecoms sector.

Next steps. The duopoly policy has brought the UK to the point at which it can now genuinely contemplate the way forward to a truly competitive

## 1. INTRODUCTION

November 1990 marks a watershed in the development of telecommunications services in the UK. For seven years until then, full competition in telecommunications will have been restricted to two players -- British Telecom and Mercury -- under a policy which has become known as the duopoly. The aim of this policy, laid out in a statement in November 1983 by the then Secretary of State for Trade and Industry, Kenneth Baker, was to start a process of transformation of UK telecommunications from a traditional state-run monopoly to a market-led telecommunications sector. As this transitional period comes to an end, the Government will be assessing the effectiveness of the duopoly policy in encouraging the development of competition, and reviewing the options for the future.

### The opportunity for competition

A more competitive telecoms sector is vital to ensure that both consumers and industry benefit from the rapid advances in technology which are taking place, and that British firms have access to the modern and efficient telecommunications services which will provide the foundation for improved national competitiveness in the 1990s and beyond. The duopoly review is, therefore, of the first importance in ensuring the continued progress towards a more competitive economy.

In approaching the decisions that have to be made in the forthcoming duopoly review, this paper argues that the UK should adopt the same approach that it has to other industries as they move towards more effective competition. The reduction in intervention, and the increased opportunity for market forces to shape companies throughout British industry, have transformed many under-performing sectors. They will be no less effective in the telecommunications sector.

**Success so far.** Has the duopoly policy been a success? In helping British Telecom make the transition from a nationalised industry to being a company in a competitive market place, and in protecting Mercury during the early stages of its development, it has been. It introduced the notion of choice to the customer; it posed the threat, and in some areas the fact, of competition to BT; but above all it showed that competition was possible -- something doubted by many at the beginning of the 1980s. The limited competition posed by Mercury to a (largely) privatised BT acted as a more effective spur to British Telecom's efforts to improve efficiency than years of exhortation by ministers under the old nationalised industry regime.

Nevertheless, there are signs that the effectiveness of this dose of competition is wearing off. Thus while much has been achieved since November 1983, a

great deal remains to be done if the UK is to have a truly competitive telecoms sector.

**Next steps.** The duopoly policy has brought the UK to the point at which it can now genuinely contemplate the way forward to a truly competitive telecoms industry. However successful that transition period has been, it is now time to move on. In doing so, we will need to adopt a different approach to that in framing the duopoly policy. Instead of trying to determine the exact number of competitors which should be allowed, who they should be, and their roles in the telecommunications sector, legislators and officials should step back and concentrate on writing the rules within which that competition will develop. The companies in this dynamic industry will do the rest.

### **Science, special pleading, and sense**

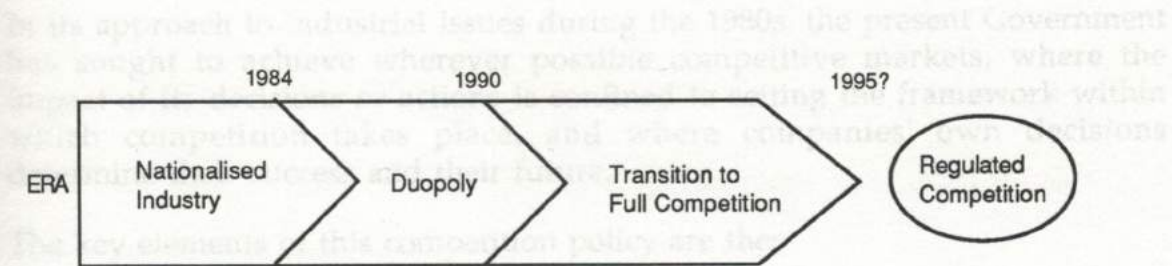
Discussion of telecommunications policy is frequently approached from the technical direction. While the issues are necessarily technical, a debate dominated by engineers rather than business managers will tend to undervalue the interests of the customer, and the way in which competition drives companies to become more efficient. This report approaches the issues from the customer perspective, and seeks to draw out the implications of applying today's competition policy to the telecommunications sector. It does not, therefore, deal with the technical issues, these being adequately covered elsewhere.

Sometimes the debate is conducted in terms of, or influenced by, the trading off of the interests of industry participants. This is inevitable in a sector where investments are large, the pace of change fast, and the impact of Government decisions still great. However, these arguments underrate the extent to which competition can bring about innovation, growth in the overall market size, and changes in the relative strength of participants. Companies will pursue their self-interest -- that is after all the source of the competitive dynamic -- and the Government and those seen as able to influence the duopoly review decisions have been the subject of intensive lobbying.

While much of the posturing is predictable, it can lead to a rather confused debate, and allow misconceptions to gain widespread currency. The Government's reluctance to indicate the process, nature, and scope of the review has left the field open. DTI ministers can clear some of the confusion by laying down a clear ground rules for the review, which begins formally in November. In essence, these would lay down that the need for more competition is axiomatic, and that the review centres on how this is to be achieved.

# EVOLUTION OF THE UK TELECOMMUNICATIONS SECTOR

## 2. THE AIM OF MAXIMISING COMPETITION



- Monopoly PTT
- Producer-driven
- Managed introduction of competition
- Piecemeal liberalisation (BSGL, SSSO's, resale, etc)
- Continue liberalisation measures
- Remove barriers to entry
- Promote new entry
- Restrain BT until competitor market shares grow
- Maximum choice for customers and operators
- Application of technology driven by customer needs
- Regulation with a 'light touch' to police the rules

Task of duopoly review is to embark on a transition to competition, keeping in mind a clear vision of the telecoms environment of the future

## 2. THE AIM OF MAXIMISING COMPETITION

In its approach to industrial issues during the 1980s, the present Government has sought to achieve wherever possible competitive markets, where the impact of its decisions or actions is confined to setting the framework within which competition takes place, and where companies' own decisions determine their success and their future.

The key elements of this competition policy are the:

- ◆ removal, or rendering explicit, of public subsidies;
- ◆ avoidance of monopoly abuse;
- ◆ removal of Government restrictions on or impediments (such as excessive regulation) to entry and exit from the sector; and the
- ◆ opening up of markets to competitive pressures, whether from domestic or foreign competitors.

The overall aim has been to allow customer choice in competitive markets to determine the allocation of resources and product innovation, as free as possible from political influence. Where the Government has chosen for policy reasons to subsidise an activity, or certain customers, then it has sought to make those subsidies explicit in order that the true cost of the activity is not disguised. Disguised subsidies distort financial and operational decisions, and render the discussion of public and social policy issues more difficult.

These same basic principles should underpin the duopoly review.

The avoidance of abuse of a monopoly position will need careful consideration in the review. In considering monopoly questions, the MMC commonly takes as a yardstick a 25% market share as the point where dominant market position can begin to act against the consumers' interest. The only reason that the 95% market share held by BT is tolerated is that the sector started from a complete state monopoly. History should not prevent the application of the principles of competition policy to a sector that is crying out for more competition.

Before considering what needs to be done to ensure that competition develops, it should be made clear why a competitive telecoms sector is important.

Global market. A competitive telecoms sector in the UK will ultimately ensure that British telecommunications companies, whether network operators or equipment suppliers, are able to compete effectively in world markets. History shows that protectionism provides short term comfort, but leaves companies vulnerable to the long term to international competition.

## Why we need a competitive telecommunications sector

A competitive telecommunications sector is important for the following reasons:

- ◆ to provide an essential underpinning of a competitive economy;
- ◆ to ensure that customers benefit from advances in technology; and
- ◆ to ensure that British telecoms companies, by being exposed to international competitive pressure, themselves remain competitive in the global market place.

Each of these is considered in turn.

**A competitive economy.** A competitive telecoms sector is widely recognised as fundamental to a competitive economy. This is because all businesses are telecommunications customers, and new services, higher quality services, or cheaper services open up new opportunities for them in their own business sector. This linkage between telecommunications and the effectiveness of other businesses is likely to increase as advances in technology allow telecommunications companies to offer new products and services. A more competitive telecoms sector will lead to lower costs for users and improved services, providing British industry with a springboard for international competition. The diversity and choice introduced by competition induces suppliers of telecoms services to be more customer oriented, and allows companies to choose the most cost-effective solution for their needs.

**Technological opportunities.** It is being recognised around the world that state-run monopoly telephone administrations, or PTTs, are ineffective in responding to the increasing diversity of users' needs and the demands for increased quality of service. By contrast, it seems clear that a competitive telecoms sector will ensure that consumers, whether companies or individuals, benefit from advances in technology.

The lesson of other industries, such as personal computers or motor cars, is that competition encourages a rapid commercial exploitation of technological advances. The removal of artificial protection for Rover encouraged the company to seek a partnership with the Japanese in order to benefit from their knowledge of modern manufacturing techniques. Similarly, increased competition in industries as diverse as bus services, opticians, and mortgages, has led to increased consumer choice and faster product and service innovation. In the telecoms sector, too, it is competition in the world market that is driving Cable and Wireless to encircle the globe with fibre optic cable.

**Global market.** A competitive telecoms sector in the UK will ultimately ensure that British telecommunications companies, whether network operators or equipment suppliers, are able to compete effectively in world markets. History shows that protectionism provides short term comfort, but leaves companies vulnerable in the long term to international competition.



The best preparation that our telecommunications companies could have for the intensified global competition that few deny is around the corner, is that they have to compete and win in their home market. The tendency to become unfit for international competition when afforded too much protection at home is not confined to nationalised industries or former nationalised industries. Cossetted private companies get lazy too.

Britain's industrial history affords rich examples of well intentioned, but fundamentally misguided, attempts to bolster companies at home. Policy-makers should bear these lessons in mind when considering the duopoly review decisions. In order to compete and win in world markets, BT needs to be an efficient and competitive company in UK markets. That is not the same as simply being big at home.

### Progress so far

Given the scale of the adjustment required to steer BT into the private sector, the approach of 'managed competition' which was adopted in 1983 was sensible. The sudden liberalisation of an old industry which has not been subject to competitive pressures can lead to catastrophic changes, since some firms may be unable to adjust their cost base as quickly as prices change to reflect the underlying economics of the business. Having said that, the duopoly policy has given BT seven years of protection from radical increase in competition during which to make the manpower reductions that everyone in the industry knows are needed. The chart below illustrates BT's over manning, which translates into higher costs to the user than need be the case. Increased competition is likely to lead to more rapid reduction in BT staff levels. While differences in the range of activities undertaken by different operators complicate such a comparison, it gives an indication of the relatively poor performance of British Telecom.

Despite the apparently limited competitive pressure from the formal duopoly policy, significant liberalisation has been achieved in areas not restricted by the Secretary of State's statement of November 1983, such as certain satellite services, private networks on leased lines (the Business Systems General Licence), and resale. Nevertheless, the duopoly policy introduced BT to competition, and there is little doubt that the threat from Mercury led to improvements in BT services to business customers, and in the marketing of those services. There has been a noticeable shift in BT's attitude to its customers -- indeed the very fact that it now talks of customers rather than subscribers is significant -- and marketing considerations are now given much greater weight in what was the archetypical engineer-driven organisation. Equally, pressure from a pragmatic Oftel seeking to mimic competition led to very visible improvements in public payphone reliability. Finally, Value Added Network Services and Value Added Data Services have developed rapidly following liberalisation.

## Comparison of local exchange lines per telephone company employee



\* In the case of Japan and the USA comparisons are complicated by differences in scope of the operators. For the USA, the average of Regional Holding Companies is shown, and hence AT&T long distance and international services are not included. For Japan, the figure relates to NTT, and KDD international services are excluded. Most other countries on a broadly similar basis to that for BT. Even if BT figure amended to exclude Directory Enquiries and international services, BT rises only to tenth place, with 133 lines per employee.

Source: USA data and BT amended figure from Shearson, Lehman, Hutton: 'British Telecommunications', 1990; all other data from ITU.

Above all, the duopoly period has demonstrated that competition is possible in telecoms, and that it produces beneficial effects. The significance of this cannot be overstated, since telecoms had widely been held to be a natural monopoly until the 1980s. The evidence is that even a very small market share player can have a disproportionate effect on a dominant player. So, far from providing token competition, Mercury has been an effective and positive stimulus to the adaptation of BT to a more competitive environment. Despite these successful products of the duopoly policy, the competitive pressure introduced in basic network services was limited.

### Continuing the momentum towards liberalisation

Thus while the duopoly policy provided a limited competitive spur to BT, the

process of liberalisation should be continued to address the following points:

- ◆ the duopoly policy has failed to apply competitive pressure to some areas of telecoms services, notably services to residential and small business customers, and local and international services;
- ◆ the effectiveness of the competitive pressure it did introduce may be wearing off in those areas that have seen improvements;
- ◆ while there may be as many as nine mobile telecommunications operators in the 1990s, further liberalisation of the market for fixed links will be needed to ensure those mobile services can develop effectively; and
- ◆ to capture the benefit of the gains made so far, the UK must aim to continue to maintain the lead in telecommunications liberalisation it has established in the 1980s over its European neighbours.

These points are considered in turn.

**Spreading the competitive effect.** Despite some successes, the duopoly policy failed to exert pressure on some key areas of telecommunications services. While direct connection to Mercury's services is available for customers near a node, or junction of their network, there is still no meaningful competition in local services for the vast majority of customers. This restricted competition denies choice of local carrier to many customers (especially domestic), as well as other operators who wish to collect traffic from or to deliver traffic to these customers.

Another area where the duopoly has had little impact is in international services. Here, prices remain significantly above cost. The Director General of the Telecommunications Directorate of the EC, Herbert Ungerer, cites in support two points\*. Firstly, intra-EC state calls are two and a half times more expensive on average than the average of the longest domestic long distance calls. Secondly, While cheap rate discounts are as high as 76% on domestic calls, the highest discount on international calls is around 36%. Five states have no cheap rate discount for international calls at all.

The degree of competition on international telecoms routes is very limited, being heavily constrained by international and bilateral agreements similar to those operating in the airline industry. As the UK and its EC partners approach airline deregulation in 1993, it is timely to pursue parallel measures in the field of telecommunications. Against this difficult background the UK has been successful in helping Mercury gain access to a number of international routes. Increasing the degree of competition in international services would bring the cost of international calls down significantly, and be of great benefit to business and residential customers. As a stimulus to the

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\* In an address to the Financial Times conference 'Telecommunications and the European Business Market', 11th July 1990.

development of greater competition, Oftel should require reductions in international call charges. It would probably not be appropriate to include them in the basket to which the current RPI minus X formula is applied, since the reduction necessary is far greater, and a separate and larger "X" may need to be applied. Oftel should determine what the appropriate target real price reduction should be, and whether an initial once-off price reduction should be required to get the ball rolling.

**Restoring vitality.** Taking the second point above, there are some indications that the effects of duopoly competition may be wearing off. Would BT have put back the completion date for digitalisation if Mercury were a large scale competitor, or it were worried that it would take market share? Would international call prices still be as far above cost as they are if there were aggressive competition on these routes? Why has BT not introduced itemised billing for residential customers in all areas with a digital exchange (said to be over 70% of residential customers), when Mercury provides this service to its customers? The fact that these questions remain does not imply that the duopoly approach was flawed, perhaps merely that the period chosen may have been slightly too long.

**Fixed links.** Failure to liberalise further the market for fixed links in the UK would lead to an imbalance between the markets for fixed and mobile links. This is important because the providers of mobile telecoms services use fixed links extensively in their networks. While the customer access to the network may be mobile, the network will consist of a backbone built up of fixed links. Currently there are only two providers of such links, BT and Mercury. In reality, in many parts of the country there is only one provider -- BT. This renders the providers of mobile services vulnerable, and will inhibit the degree to which they can provide competitive services. By the mid-1990s the UK should have a market environment for mobile communications which is as competitive as any in the world. Failure to continue the process of liberalisation of fixed link networks will inhibit the emerging mobile telephony companies from competing effectively. Mobile operators should be allowed to lease fixed links from alternative suppliers such as British Rail, or cable TV companies, as well as being allowed to build their own links.

BT's stake in one of the two established cellular telephone companies, Cellnet, complicates the matter. BT may be tempted to favour Cellnet, in terms of line provision and service level. While there is little to suggest from the impressive performance of Vodafone that this happening currently, the successful launch of the Personal Communications Networks in the mid-1990's will depend on even-handed treatment of all radio-based telephony operators by BT. One way to remove the temptation, and to reassure other mobile operators, would be to limit BT's share in Cellnet. This should be at such level such that the advantage to be had by favouring Cellnet is small compared with the total market. Oftel will have to be vigilant to possible abuse by BT of its relationship with one of the cellular radio operators, and in the event that it occurs, consider requiring a reduction in BT's share holding

in Cellnet. It is unlikely, however, that complete divestiture would be required.

**The EC market.** Taking the third point, there is a need to maintain the momentum and lead in telecommunications liberalisation that Britain established over other EC countries in the 1980s. While the benefits of telecoms liberalisation in the UK are clear, other EC countries are starting down the same road, some because they realise the potential benefits, some because they are being pushed by Brussels. Whatever the reason, telecommunications liberalisation measures are being pursued in Germany, Holland, and a number of other countries.

Having started the ball rolling, the UK should continue to show the way forward, for the decisions of the duopoly review will influence the future direction of telecoms in the EC. As Herbert Ungerer, head of the EC Directorate dealing with telecommunications, put it at a recent Financial Times conference on European telecoms, the UK duopoly review 'will have an importance going beyond this country'.

The failure to reach agreement on the liberalisation of voice telephony at European level places even greater importance on the outcome of the duopoly review. Voice telephony is still regarded as the preserve of the state PTTs in France, Italy, and Spain. The duopoly review can ensure that the UK has a dynamic and competitive market for voice telephony, which provides a demonstration to those in Europe who doubt that such a thing is possible. The governments which drag their feet will feel the pressure from their large and international companies, which will want to have the benefits which competition offers at home as well as in foreign markets.

For the above reasons, the telecoms sector in the UK and more widely will benefit if we give a spur to increased competition, and do not let the useful momentum of liberalisation that has been established in the duopoly period dissipate. However, this will require some changes in the approach of the Government and Oftel. As liberalisation proceeds and competition develops further, so the Government can take a less directive approach to telecoms policy, and Oftel can adapt its regulatory approach to take a more open, policing role. The duopoly review provides a valuable opportunity to keep up the liberalisation momentum and and it would be wise to seize it enthusiastically.

Maximum choice would be available to customers, and to operators. Operators should be free to interconnect with any other operator they choose, or to provide the service of just other operators themselves. They should in other words be allowed to make the 'make or buy' decision common in competitive industries, and which is important in ensuring a balance of power between suppliers and their business customers. They should also be free to choose the technology, or combination of technologies, best able to serve their customer needs.

### 3. KEEPING OPEN THE COMPETITION OPTIONS

The ending of the duopoly period in November 1990 marks the beginning of a new era in UK telecoms, in which it stands on the threshold of competition. The seven year period of duopoly has been a transition period between a state-directed sector to one in which market forces will have greater impact in shaping the future structure and scope of our telecommunications. It is not, however, at the point where what is sometimes derogatively called 'free for all' competition is possible, mainly because of the severe imbalance of market shares in UK telecoms. In approaching the decisions of the duopoly review, legislators will therefore have to have a clear vision of the kind of telecoms market environment that should evolve in the longer term, in order to be able to guide our progress systematically towards it.

#### 3.1 A vision of the future UK telecoms market environment

In developing a vision of the future telecommunications market environment sufficiently clear to be able to make decisions on how we get there, we do not need to attempt to predict how many operators there will be, of what type, and doing what. Our vision should identify the fundamental characteristics of the market and the framework within which operators compete.

Such a vision will necessarily involve diversity. It is precisely because there is no single ideal solution to meet the great variety of customer needs that market forces should be allowed to play a greater part. State provision of goods and services so often tends to seek to force-fit a single solution; markets cater much better for diversity in customer needs. One only has to look at the range of services and way in which these are marketed (or not) to customers in the typical state-monopoly PTT environment which still maintains in much of the world, to see the superiority of a market-driven telecoms environment. Those in doubt should ask the telecoms managers of any large company.

Thus the vision of the future that ministers should have in mind as they approach the duopoly review should not be predictive or prescriptive, but rather a permissive framework. Taking the lessons of the success of the Government's competition policy from other industries, the future telecoms environment would have the following characteristics.

- ◆ **Maximum choice** would be available to customers, and to operators. Operators should be free to interconnect with any other operator they choose, or to provide the service of that other operator themselves. They should in other words be allowed to make the 'make or buy' decision common in competitive industries, and which is important in ensuring a balance of power between suppliers and their business customers. They should also be free to choose the technology, or combination of technologies, best able to serve their customer needs.

- ◆ **Government would step back** from influencing the scope of operators, their activities, and the technology or technologies they use. These would no longer be governed by restrictive licences. In essence, the Government should adopt an 'operator neutral' as well as a 'technology neutral' stance. Greater stability in the telecoms business environment would be provided by the permissive rather than prescriptive nature of telecoms policy. Such a permissive policy stance would not only have the advantage of reducing the distortions that arise from intervention, but would also be more predictable by market participants and would-be participants, so facilitating their investment decisions.
- ◆ **The market would decide whether companies succeed or fail.** The financial success of telecommunications companies, whether network operators, value-added service providers, or equipment suppliers, would depend on the quality of their management and the demand for their particular products or services. Operators which failed to win share in the market would fail, which in practice probably means the management team would be replaced, and the company's system and most of its employees would be combined with another operator -- provided, of course, that such redeployment did not lead to an unacceptable concentration of market power. Oftel, and through it the MMC, would deal with unacceptable concentration of power in the same way such issues are dealt with in other industries.
- ◆ **Subsidies to or cross-subsidies within operators would be minimised.** Cross-subsidies cause distortion which hinders the working of competition, and these would be eliminated wherever possible. Social considerations such as financial assistance for low-income families or elderly people, if thought desirable, would be addressed directly through the social benefits system.
- ◆ **Regulation would be objective,** consisting of policing clearly stated rules. Regulation would aim to achieve maximise the parity of treatment between operators, consistent with regulatory prevention of abuse of dominant market positions. The principles and information on which regulatory decisions are made would be freely available and open to challenge by customers or other operators.

### 3.2 Steps to a competitive telecoms environment

In order to ensure that competition can develop, a number of supporting actions will have to be taken:

- ◆ the Government should not seek to predetermine the number of PTOs;
- ◆ new entrants should be encouraged;
- ◆ subsidies and cross-subsidies should be minimised and made explicit to allow economic competition to take place over the widest range of services possible;

- ◆ restrictions on existing non-BT telecom operators should be relaxed to allow them to compete more effectively; and
- ◆ a combination of restrictions and extra obligations should be placed on BT to ensure that its dominant market share does not inhibit the development of competition.

These are considered in turn.

### The number of public telephony operators (PTOs)

In the run up to the duopoly review, the question is often asked 'should another PTO be licenced?' In many ways this is the wrong question to be asking. It assumes that extra competition is provided by a fully integrated telecommunications company which carries obligations and possesses rights similar to those enjoyed by BT and Mercury.

Yet even Mercury, which has enjoyed PTO status and protection from further competitive entry during the seven years of the duopoly period, is unable to meet the objectives of 'universal service'. In other words it is not able to satisfy the obligation to connect any household in the country that demands service. Indeed, it could only satisfy the connection obligation for a tiny minority of the UK's households. For the foreseeable future, until alternative network providers can provide access to telecommunications services to a significant proportion of homes, at least within certain regions or areas, only BT can realistically bear the universal service obligation.

This is hardly surprising, given the scale of investment implied by the universal service obligation. Telecoms networks are so expensive that new entrants are almost certain to focus on certain limited areas, defined by type of traffic or customers. That sort of small-scale focus is no disadvantage, nor any limit on the growth of future competition. On the contrary, in most industries this is the way that new entrants get started.

**Market foothold.** The development of competition is most likely to come about by enabling the many different operators that currently exist (or for which licences are issued) to attempt to find a market foothold, while at the same time facilitating the entry of new operators. The telecoms environment would consist of a 'network of networks', with operators differing considerably in scope as well as scale. There will be no one model of vertical or horizontal integration.

Discussion about whether there should be a predetermined number of new entrants is sometimes clouded by the fact that licences are mistakenly seen as a right to make money. In fact a licence is a right to compete, and the Government is not, or should not, be giving away monopoly rents. Companies have to decide for themselves how much they wish to invest and whether they can compete successfully. It is not the Government's job to try to ensure them a certain rate of return, merely to ensure that the markets work and that the efficient are rewarded. It is by no means certain that three



PCN, four CT2, and two cellular operators will all make handsome returns. Those awarded licences will no doubt be doing their sums.

The practice of issuing a fixed number of licences also exposes ministers to potential embarrassment if some fail to be taken up. It is not only ludicrous for ministers to suffer from the decisions of companies far beyond their control, but has a more serious disadvantage. This is that ministers will tend to err on the side of issuing too few, rather than too many, licences precisely to increase the chance of the process 'succeeding'. It is also inconsistent, since there are many industries with high capital costs where there is free competitive entry, such as Aerospace, pharmaceuticals, and computers.

Therefore, the most promising policy is not to decide on a fixed number of new licences to be awarded following the duopoly review. It is to concentrate on allowing entry by any operator wishing to do so which meets basic quality, technical, and financial criteria, and maximising the competitive impact of current players.

### **Encouraging new entrants**

For markets with few players to remain competitive there needs to be a continuous threat of market entry. The threat of new service providers coming in to take a lucrative share of the business is a very effective competitive spur. But it needs to be credible. Provided the threat of new competition is taken seriously, many of the benefits of competition occur, even in the case of an incumbent monopolist or near-monopolist.

Consequently, the number of PTOs should not be fixed. Those asking whether there should be a third PTO are asking the wrong question, not only because the possibility of new entry should be left open, but also because it prejudices the nature and scope of such new competitors.

**Finding the opportunities.** New entrants will necessarily enter the market at what they judge to be the most attractive point. Thus Mercury has concentrated to date on large business customers in city locations. Recently there are signs that they are beginning to develop other segments of the market, even extending to domestic services. Certainly, Mercury's advertising is now targetted at domestic consumers, stressing the potential cost advantages for long distance and international calls.

The charge of 'cherry picking' or 'cream skimming' is often levelled at those adopting this market entry approach, but this charge does not stand up. The fact that there are such opportunities, whether defined by geography, customer, or service, merely indicates that there are areas where prices are significantly out of line with costs. Competition is desirable precisely because it seeks out these imbalances more effectively than any amount of well-intentioned regulation. What must be ensured, however, is that the new entrants compete aggressively with the incumbent, and don't use the excessive price of the incumbent as a shelter. For this reason, until there are a

significant number of operators at all levels of the network, there will remain a role for price-cap incentive regulation, of the 'RPI minus X' variety.

**Some potential players.** Potential new entrants exist in the form of the telecoms networks operated, and in many cases owned, by the utilities and nationalised industries. While there is now nothing to stop the privatised water companies, the electricity companies, or British Gas, from developing the commercial potential of their networks, the largest network owned by a nationalised industry is that of British Rail.

BR operates a network of over 17,000 kilometers of fibre optic cable. It has experience as an operator from managing its own telecoms traffic, and of facilities provision through its contract to rent 'dark fibre' to Mercury (under which BR rents whole cables for which it has borne the capital cost, while Mercury configures and maintains the fibre and repeater stations). A significant element of competition could be introduced in the short term if a way were found to allow BR to exploit the commercial potential of this extensive telecoms network. BR could either develop as a provider of long distance links to operators of Personal Communications Networks (the next generation of mobile telephones), or as a full-scale telecoms operator, by linking up with cable companies or others capable of providing the local customer connection. The recent establishment of the Commercial Telecommunications Unit of BR as a separate cost centre (and, hopefully, profit centre) is an encouraging step. The main obstacles now probably lie within the Treasury or the Department of Transport.

A case can be made for BR to keep at least a proportion of the telecoms revenues it generates, since both passenger movement by train and the handling of telecoms traffic by cable laid alongside the track involve the commercial exploitation of BR's most valuable asset -- its wayleaves. Since BR's ability to offer telecoms services is inextricably bound up with its possession of wayleaves, it may not be economically sensible to privatise the telecoms activities separately from British Rail as a whole. The inclusion of what could be a business with considerable revenue potential would certainly help to make the privatisation of BR financially viable.

For the purposes of considering competitive entry to the local loop, Mercury can be regarded as a new entrant. Under the duopoly policy, in return for a limitation on further network competitors, Mercury had to meet a number of network build requirements (expressed as the requirement to establish a network connection point in a certain group of cities by a certain date). When the protection provided by the duopoly policy expires in November, there will be no reason to continue to apply countervailing obligations. Mercury should then no longer be subject to network build requirements, or other unique obligations. It should be subject to the same regulatory requirements as other non-BT operators, or would-be operators, and be free to make its decisions on its future development entirely on commercial grounds.

**Cost information.** New entry should be economically sensible. Although incumbent companies in other industries are not required to make available

information on costs to new entrants, other than in a highly aggregated form in their annual report and accounts, there are two main reasons for doing so in telecoms.

Firstly, it is one way to reduce the advantage that BT enjoys from its very large market share. Secondly, it would help to reduce the risk of excessive investment which could occur if new entrants overestimate BT's costs. Costing the different elements of a network, or the services that are offered over it, is notoriously difficult and many assumptions on traffic patterns have to be made. Nevertheless, to reduce the risk facing companies contemplating the very substantial investments needed to enter the market for telecoms network services, information should be made available on the cost of the local, long distance, and international elements of BT's network. BT should be required to give this information to Oftel, which should then make it available to the public. The generation of such information would be facilitated if BT were required to keep separate accounts for local transmission, and local switching, as well as long distance transmission and long distance switching.

**Stable policy environment.** In order that companies can realistically plan in an environment where there is business risk, they will need some assurance on the likely continuity of policy. To minimise risk of stranded investment, companies need to make judgements on predictable parameters. There are two main sources of uncertainty which will have an influence on the investment decisions of companies considering entry into UK telecoms: that arising from the rapid development in appropriate technology, and that from possible changes in Government policy. The Government could reduce the uncertainty from the second source, at least, if it were to indicate that the framework would remain substantially unchanged so long as it remained in office.

Firms will also require an assurance that the Government will continue its 'hands off' policy, leaving BT to make its own investment and management decisions, despite the Government's continuing 49% shareholding. The best way to give them that assurance would be to privatise the remaining share holding. Clearly, given the demands on the capital market that will be made by electricity privatisation, it would not be possible to float all the remaining share holding before mid-1991. However, the sale of perhaps 10% to 15% would be sufficient to reassure potential competitors any political interference through the Government's share holding powers would no longer be a serious threat to the stability of the telecoms market.

New entrants will also need assurances that the regulator will monitor closely the behaviour of BT to ensure that it does not abuse the market power deriving from its very large market share. Potential new entrants will look closely for signs that the regulator has been 'captured' by the current industry participants. The provision of information on BT's costs, referred to above, will go some way to giving this reassurance. A more open style would also help to convince those companies and members of the public that are

sceptical that Oftel is indeed fighting for effective competition and championing the cause of the consumer.

**Risk of failure.** Competitive markets also require the risk of failure to be present. Policy-makers should not worry unduly about the prospect of failure of operators. With many and diverse operators, alternatives will be available to customers. The failed company would be acquired or merged with another operator. With common interconnection standards between the networks, or network elements, of competitors, it would be a simple matter for the lines of failed companies to be integrated into another network.

Thus, provided the transition is well managed, there is no reason for the service to the customer to be interrupted. It would be possible to create a safety net analogous to the Federal Deposit Insurance Corporation in the US, which assures that, in the event of the failure of a bank, depositors are protected. Often the ownership of the bank and its assets are transferred to another bank, so that it reopens the next day as the branch of a different bank, with the customers' assets intact and their service uninterrupted. Another parallel would be the ABTA provisions which ensure that holiday makers do not suffer from the failure of a particular travel agent or tour operator.

Such schemes are versions of a compulsory industry insurance, and are designed to help service users who may have large amounts of money at risk. The problems for individual users in telecoms are probably much less, but options these remain available.

In the next phase of UK telecoms, new entrants will play a vital role. Some of these have already been awarded a licence, such as the PCNs; others are as yet unknown. The duopoly period proved that competition in telecoms can be real. New entrants will be better judges of where the opportunities lie, than even the best informed and best intentioned regulator or minister. Those who have to put their money on the table will be the best judge of feasibility. They should be allowed to come forward, with the minimum of restriction or constraint.

#### ◆ low users (mainly elderly people and those on low income) are

### **Minimising subsidies and cross-subsidies**

**The problem of cross-subsidies.** Subsidies, if hidden or not equally available to all potential suppliers of the subsidised service, cause distortions which can result in those operators which might be able to offer the service more efficiently and economically being unable to do so. This is because the recipient of the subsidy may quote artificially low prices which those companies not in receipt of the subsidy cannot match, even though they may be more efficient firms with a lower true cost than the other company. As a result the service may place an unnecessary extra burden on the taxpayer, the customer, or other operators, depending on the mechanism chosen for paying for the cost of the subsidy. In addition, the lack of competitive pressure can

lead to management complacency, as a result of which the actual quality of the socially desired service may suffer.

It is important that any subsidised provider of a socially desirable service be subject to pressure for managerial efficiency, and in quality of service provision: where subsidies are thought appropriate for social policy reasons, these should be made explicit and operators should compete for what would effectively be a franchise to provide the service. The operator seeking the minimum subsidy to operate the service would win the contract, along the lines of the rural route bus subsidy.

Unless transparency of costs and subsidies is achieved the full benefits of privatising regulated industries such as telecommunications will not be realised. For without such transparency, the performance of competing companies' management teams will not be exposed clearly to competition, and their impact on the business will be obscured.

As well as deterring what would be economic entry in their absence, cross-subsidies can also lead to uneconomic entry. If prices are artificially high in order to raise a subsidy for application elsewhere in the network, this can give excess headroom for a new entrant whose costs are above those of the incumbent operator. In a competitive environment, where prices in the long run reflect costs (including the cost of capital), such uneconomic entry would not occur. This phenomenon is known as uneconomic bypass of the incumbent operator.

**The sources of cross-subsidies.** The main cross-subsidies which are typical of non-competitive telecommunications environments are listed below. Some progress has been made in reducing these in the UK, though little public information is available on their current extent:

- ◆ local calls are subsidised by long distance and international calls;
- ◆ Line charges are subsidised by call charges. Thus access to the network is subsidised by use of the network;
- ◆ low users (mainly elderly people and those on low income) are subsidised by high users;
- ◆ rural customers are subsidised by urban customers, due to standardised connection charges; and
- ◆ Residential and small business customers are subsidised by larger, high volume customers.

In considering the wisdom of continuing or introducing a particular subsidy, the distinction between the desired and undesired effects should be borne clearly in mind. The main effect of the subsidy may be seen as socially sensible (such as perhaps the subsidy of the elderly), or a valid business strategy (such as the subsidy of connection to the network by call charges, analogous to the giving away of credit cards in the 1970s to build user and

shop acceptability), or simply a pragmatic solution to an otherwise complicated if theoretically correct approach (such as the rural subsidy, avoiding as it does the need for different calling rates for every town and village). However, consideration of the appropriateness of the subsidy should also examine the unwanted or unintended effects. As described above, the most serious of these may prevent efficient firms from competing effectively.

While the tariff rebalancing that has taken place in recent years has reduced a number of the above cross-subsidies, notably the first two, there are still significantly elements of cross-subsidy. While competition itself will encourage the elimination of some elements of subsidy, the introduction of competition into a market environment with such distortions will lead to some economically undesirable results. The existence of subsidies can inhibit the development of the very competition that the Government desires.

**Subsidy of local calls.** Although probably not large in magnitude, the elimination of this subsidy is particularly important for the development of competition. However, while it is easy to set the objective of eliminating the remaining subsidy in the local loop, there is little consensus on the actual costs of local calls. The determination of such costs is theoretically and practically complex. In the past BT has had little need or incentive to refine its knowledge of this cost data. In an increasingly competitive telecoms environment BT has a strong incentive to improve its understanding of local call costs, but little commercial interest in making the information public.

Oftel has clearly decided to develop its own views on BT local loop costs, and has commissioned management consultants to help it. While this may be sensible in the run-up to the duopoly review, it is only a first stab at the issue and is likely to lead to much haggling over the numbers. For the longer term it would be more satisfactory for Oftel to set in place more exhaustive procedures whereby BT has to supply it with information on costs, together with the necessary powers of audit and, if need be, search, to ensure compliance. If BT were required to make available even half of the information the US telephone companies are required to give to their regulator, it would be tantamount to an information revolution. While such an approach may appear heavy handed, it is necessary to gather much more information for new competition to develop.

If new entrants are ever to be able to offer competition to BT in local telephony, whether they be Mercury, the cable companies, or others, they will need to be able to do so on an equal footing. This will require not only the reduction or elimination of the local subsidy, but also the availability of much more detailed cost information on BT.

**Subsidised access to and basic use of the network.** The subsidy of line charges by call revenues acts as a subsidy to access to the network. While this may be thought socially desirable, it should be done in such a way that does not inhibit or distort the development of competition.

This can be achieved in a number of ways. The purest economically would be to apply the subsidy through the social security system, perhaps by adding an element to Family Credit or Income Support payments. An alternative would be to give people on low incomes, or those in receipt only of the minimum state pension, a voucher to cover the handset, the line charge and perhaps a certain number of free or subsidised calls.

Perhaps simpler would be to adopt the approach taken in some states in the United States. They have instituted, often at the suggestion of the regulatory authorities, a 'lifeline' package which gives a line, handset, and a number of free calls to those who can demonstrate need. The criteria for qualification are not stringent. Those on lifeline service pay the normal rate for calls above the minimum provided free.

**Rural subsidy.** The undertaking to connect any household in the country to the network at virtually a standard cost acts as a subsidy to those living in more remote areas. Clearly, the cost to the operator of connecting a house in the Highlands of Scotland or in the depths of the English countryside greatly exceed those of connecting a household in an urban area. The existence of this subsidy will deter entry to telephony in rural areas by alternative service providers. While cable would not be economic in such low population density areas, CT2 (Telepoint), and by the mid-1990s Personal Communications Networks (PCNs) as well as (potentially) satellite and microwave could all provide competition in rural areas. They may only be able to do so if connection and line charges to those living in these areas are based on costs.

There are clearly difficult social and sensitive political issues involved here. It is clear that economic pricing would allow the commercial exploitation of technologies highly suited to remote areas, such as satellite, and would almost certainly lead to improved quality and range of services. It would, of course, also imply significant increases in charges for some users. It may be argued that people choosing to live in one part of the country rather than another weigh up the relative economics, including the cost of housing and other costs of living, and set them against local pay rates; compared to the differential in house prices across the country, the range of telephone installation charges would be minor.

However, the large majority of households are not mobile, their location being governed by family ties and regional or local identity. So some people will argue on grounds of equity that consumers throughout the country should pay substantially the same for connection to telecoms services. As with the mail service, it is politics rather than economics that will probably decide the rural subsidy issue. There remains little theoretical argument in favour of it, and there are even some potential benefits for consumers that would result from its elimination.

If the elimination of the rural subsidy is judged politically too controversial, or administratively complex and costly, then one alternative would be to

allow operators competing with BT in rural areas to share infrastructure costs. While this is clearly far from the ideal situation, it would be a means of getting competition going in rural areas. Another alternative would be to auction franchises for service in rural areas, with those seeking the least subsidy gaining the right to offer services. This would be analogous to the rural route subsidy, which has helped to rejuvenate rural bus services.

**Subsidy from large to small customers.** Such subsidies arise from the failure of prices charged to high call volume customers to reflect the reduced cost of serving them. These lower costs derive from scale in marketing, billing, and other managerial areas, in addition to the more obvious lower unit cost of connection for the given volume of call revenue. Such large users are increasingly asking why they have to subsidise small business and residential customers, and are pressing for volume discounts. Given the intense market pressure, such discounts, which would move prices charged to users closer to the costs of serving them, are inevitable in the next few years.

### **Easing the restrictions on existing non-BT telecom operators**

The key here is interoperability. All telecoms operators should be allowed to interconnect with other operators, to create a seamless telecoms environment. This is because the benefits of any network are maximised when customers can access any other person or company they wish, whether or not that person or company is a subscriber to the same service as the caller. Similarly, they will want to be accessible to as many others as possible, whether or not subscribers to the same network. It will thus be in the commercial interest of networks to maximise the interoperability of their network with others, and regulation should not impede what is both in the commercial interest of operators, and in the interest of consumers wanting better service.

**Easier interconnection.** While agreements between non-BT operators may be able to be market-determined, those involving BT will need regulatory encouragement and surveillance. While BT still maintains a massive lead in scale it should be required to provide access to its network for other operators. Market determined interconnection is not feasible while there is such an imbalance in size, and this right of access to the BT network will have to be cost-based.

In addition, Oftel will have to ensure that interconnection is provided promptly and effectively. The experience of 'equal access' in the United States may provide some useful lessons for the UK. The Bell operating companies are required to supply the state Public Utilities Commission with detailed cost information, and the PUC requires them to offer cost-related tariffs for interconnection. These tariffs are available to all on the same terms. In most States detailed procedures are laid down for such interconnection arrangements, and the local regulator -- the Public Utilities Commission -- will ensure prompt compliance.



The choice of interconnect partners available to operators should be maximised, at all levels of the network and in all services. This is in order to reduce their dependence on BT, or Mercury for that matter. For this to operate effectively, some restrictions on certain types of licence will need to be relaxed. Some of these are listed below.

#### To encourage competition in the local loop:

- ◆ **Cable companies** should be allowed to undertake telephony in adjacent franchise areas, as well as within their own franchise area. The franchise size chosen to suit the economics of cable TV, around 100,000 inhabitants, may not be economic for voice telephony. While a BT local exchange is considerably smaller than this, a larger area may be needed to cover administrative costs or achieve a credible market presence. Without the possibility of achieving this degree of scale, the cable companies are unlikely to accept the extra cost of configuring and equipping their networks for two-way telephony rather than broadcast only. They will also be less likely to lay down fibre optic cable, as opposed to co-axial cable. If any encouragement is given to the cable industry to undertake telephony, it should seek in the longer term to promote the adoption of integrated broadcasting and telephony on fibre optic cables, rather than twisted copper pairs laid alongside co-axial cables.

- ◆ **Cable companies** should be freed from Condition 15 of the cable licence which requires them to get the approval of BT or Mercury if they wish to offer telephony services. The approval function should be carried out by Oftel, and should not be restrictive.

- ◆ **Mobile operators** should be allowed to build and operate their own fixed links, or free to lease them from any other operator. PCN, like the current cellular communications competitors Vodafone and Cellnet, will use extensive fixed links in the backbone network. The right to build their own fixed links would significantly increase their negotiating power with other providers of fixed links.

#### To encourage long distance competition:

- ◆ **Users of private networks**, whether based on leased lines, own network, or a mixture, should be able to offer services to anyone. They should be allowed to build their own microwave or VSAT links. Companies with heavy data communications needs, such as banks, may want to use privately owned facilities to ensure availability, security, and technical requirements. They may have periods when they have spare capacity, and the right to be able to sell this spare capacity to unconnected third parties would provide an additional source of competition, much as those owning electricity generators will be able to sell their spare capacity to the distribution grid in the restructured electricity industry.

- ◆ **The telecommunications infrastructure of British Rail** is particularly extensive, and could provide relatively quickly the basis of a new competitor. If it were not possible to privatise these activities, a way would have to be found within the framework of Treasury financial rules to allow BR Telecoms to retain at least a proportion of its revenues.

To encourage international call competition:

- ◆ **Resale of international leased lines** should be permitted.
- ◆ **Specialised Satellite Service Operators (SSSOs)** should be allowed two-way communications. The only reason the six SSSOs are prevented from doing so within the UK is the limitation imposed upon them in the duopoly policy. This should be removed, and the operators allowed to pursue opportunities for international traffic as well as domestic traffic. They would be likely to target large business customers with heavy telecoms call volumes, or point-to-multipoint call patterns.

#### **BT's dominant market share**

The issue of BT market dominance will need to be addressed. New entrants as well as other existing operators which may be considering an expanded role will need assurances that BT will be restrained and prevented from abusing its dominant market share.

**Radical reform?** Allowing an almost private company to maintain such a dominant position appears to be at odds with the Government's normal approach to competition. So should we be seeking a more radical restructuring of the market?

The answer is probably not. While a directly interventionist approach to restructuring, as adopted in the US with AT&T, would achieve a rapid rebalancing of market shares, it is probably not appropriate in the context of the UK. Instead, encouraging the development of competition alongside BT seems the best way forward for a number of reasons.

Firstly, rapid traffic growth provides space for others to grow alongside. This was the experience of the United States. Given the current rate of growth of the telecommunications market in the UK, there is every reason to believe that the same would happen here. Secondly, it is not clear that a restructuring of BT could be achieved which would lead to competition at all levels of the network. Even the break-up of 'Ma Bell' did not achieve significant competition at local level in the US, and it is the emergence of alternative network routings rather than a rearrangement of the management of BT's network that will produce the choice that will underpin competition in the future.

**Other counterbalances.** If the strong market power of BT is not addressed directly, as in an AT&T-style break up, then it will have to be counterbalanced in other ways. It is important to note that even though break-up may not be the appropriate path to take, the emergence of new players alongside BT will need certain encouragement, and require close regulatory surveillance of their impact on BT's activities.

Some people argue that if these new entrants need support then that is proof that the investment they make is uneconomic. If we were starting from a market with many players, and over time these had concentrated into one dominant player, that may indicate that there are strong economies of scale, and hence that encouraging new entrants may lead to 'excessive' investment. If that were the whole story it would be an argument for monopoly provision of telecommunications services. But it is far from the whole story. Unfortunately, monopoly status encourages management laxity and the abuse of market power in seeking excessive prices for minimised service. Private monopolies are probably no worse, but probably not much better, than public monopolies in that regard. Thus, whichever we face, the public interest may be better served by encouraging new players, even if large economies of scale do exist.

In the case of telecoms we are not talking about a concentration of market power which emerged from competition, but the early stages of a transition from state-owned monopoly. As a result, BT's dominant position can be taken as a sign neither of its success in a competitive market, nor of the inevitability of concentration. Furthermore, the gains from increased management efficiency resulting from competitive pressure would be likely to outweigh the loss of scale economies. In the long term, the only way to find out if management gains outweigh the diseconomies of scale is to allow those who wish to compete a chance to do so.

Some argue that BT should be subjected to 'fair' competition, with a commensurate reduction in regulation. However, in a market with a 95% market-share player, smaller market share players are unlikely to be able to develop. It is wisest, therefore, ignore these innocent sounding pleas for 'fair competition'. To ensure that smaller players can develop they will need certain encouragements and there will need to be a number of restrictions, and additional obligations, on BT.

**New obligations.** Under such a strategy, BT would be subject to a number of restraints and required to fulfil a number of obligations:

- ◆ BT should be obliged to provide prompt and efficient interconnection to all operators wishing it;
- ◆ BT should be restrained from broadcasting services for a certain period;
- ◆ BT alone should bear the cost of the universal service obligation until a better balance of market shares exists;

- ◆ BT should not retain ownership of the numbering system;
- ◆ the information in the Directory Enquiry service should be available, at cost, to other operators; and
- ◆ BT should continue to be subject to price cap regulation, of the 'RPI minus X' variety.

Each of these is considered in turn.

**Right of access to BT's network.** There will need to be procedures to ensure operators prompt and efficient access to BT's network, under terms which lay down minimum standards of quality and responsiveness, and maximum cost. Oftel should oversee the process, and ensure that BT is not being discriminatory. Providing a 'right of access' to BT's network would ensure that its scale advantages are shared to some extent. Far from having to obtain BT's (or Mercury's) permission to offer telephony, BT should be obliged to connect cable companies to do so, providing they meet minimum financial, operating, and technical standards. Such conditions should be laid down and controlled by Oftel, since there can be a clear conflict of interest for BT to have that role.

**BT should be restrained from broadcasting.** For various reasons (including over-regulation) cable has been slow to develop in the UK, in stark contrast to the US experience. The ability to undertake voice telephony offers cable operators an additional stream of revenues which, when offset against the incremental costs of providing facilities, may make the total cable proposition more attractive. They are unlikely, however, to put in the extra investment to provide telephony if BT is allowed to undertake video broadcasting. It is of course impossible to prove that, and this must be a question of judgement. Although the Bishop's Stortford trial has not yet concluded, integrated telephony and broadcasting is likely to be commercially available within a few years. The very existence of this trial is causing some cable operators to think twice about making the significant incremental investment to undertake telephony.

Thus while some restraint of BT may be needed to get cable telephony off the ground, the restraint applied should be in proportion to the potential contribution of cable to UK telephony, and of a limited duration. The objective should not be to ensure the success of the cable TV/telecoms industry per se, but to try to prevent BT developments snuffing out a nascent source of telecoms competition. At first most cable companies would seek to provide telephony by putting down a twisted copper pair alongside a co-axial cable carrying TV programmes. Since the encouragement of cable telephony described above would involve the use of old wire technology, the existence of these restraints for too long a period could unduly inhibit the adoption of newer technologies, notably fibre optic cables. Additionally, cable is likely to be able to provide local loop competition only in relatively densely populated areas. Although limited in impact it will play a part in establishing a network

of networks, and it has been described by Sir Bryan Carsberg as 'a part of the patchwork quilt'. It would provide one of the few short term options for increased local loop competition.

In sum, BT should be restrained from offering video broadcasts over its network for a specified period, perhaps five years, in order to encourage the development of cable telephony. In the longer term, BT should not be barred or deterred from exploiting commercially the potential of broad band fibre. Eventually, we might see the transfer of television broadcasts from their current wasteful use of the electromagnetic spectrum to a fibre network which integrates telephony, both voice and data, and video signal programmes. That in turn would free up valuable spectrum for the development of mobile communications. The key point to bear in mind is that in the longer term, a more competitive environment must provide BT, as well as other operators, with more opportunities. It would be artificial to maintain a broadcasting restraint on BT for long, and it could hinder the commercial exploitation of fibre-based services. This has to be a pragmatic judgement, in much the same way that the original duopoly policy limited competition in order to provide a degree of shelter to a fledgling Mercury.

**BT should bear the cost of universal service.** When the universal service obligation can credibly be met by other operators they should share the obligation and the cost. Until then efforts should be made to make explicit the costs of the obligation, and greater transparency introduced to minimise the distortions introduced by cross-subsidy.

**BT should not retain ownership of the numbering system.** The existing numbering system has widespread familiarity and is inextricably linked with customer software such as letterhead and databases. This gives BT significant advantage over new entrants, the customers of which may have to dial extra digits to get access to their networks, and may be reluctant to publicise telephone numbers which are unfamiliar to their customers. It will be particularly difficult under these circumstances for a new competitor to gain share of incoming calls, as opposed to outgoing calls.

The imbalance between BT and new competitors should be addressed by some arrangement which gives greater equality of numbering access. It may be most sensible for Oftel be the issuing authority for new numbers. A study commissioned by Oftel advised on a range of options for existing numbers. In the long run, with the advent of personal communications, as envisaged with the three PCN licences, the most sensible option is probably the personal and portable number. In choosing the option for numbering, the primary consideration should be how to achieve the greatest parity of marketing and engineering advantage deriving from the numbering system. Personal numbers would put all operators on the same basis.

**Directory Enquiry information should be available to other operators.** This is clearly linked with the numbering issue. While BT retains control of the directory enquiry service and the published telephone books, it has a considerable advantage over Mercury and other operators. Consideration

could be given to separating the Directory service from BT, or obliging it to provide all numbers used by a customer, whether a BT number or that supplied by any other operator.

**BT should continue to be subject to price cap regulation**, of the 'RPI minus X' variety. So long as the risk of monopoly pricing exists, and that is probably the case while any single competitor has more than around 40 to 50%, there will need to be regulatory control of prices. This will not only discourage monopoly pricing, but also the use of such prices as a 'price umbrella' by other competitors. For these reasons, BT's international call charges should either be included in the 'RPI minus X' basket or subject to a separate formula with a faster required rate of real cost reduction.

#### A new approach by Government

Instead of deciding the number of players and what their moves will be, the Government should adopt policies which facilitate market entry. There should be no more beauty contests for a limited number of licenses. The practice of awarding licenses to a chosen few is reminiscent of the former Government practice of 'picking winners', which turned out so often to be cossetting losers. It undermines the very objective of liberalisation, which is that it is the market place which determines which companies succeed. Furthermore, companies seeking to establish a toe-hold in the telecoms market are more likely to identify and respond to consumer needs than even well-intentioned Government.

Nor should the Government dominate the game by occupying the centre of the board as a major player. In addition to its rule-making role, a commitment should be made as soon as possible for the sale of the remaining Government share holding in BT. However diligent the Government is in not exercising the power that a 49% share holding in BT implies, this is a major source of discouragement to potential investors in the telecommunications sector in the UK. Until the remaining share holding is sold, BT will not behave, nor be seen as, a fully competitive private company whose success depends on satisfying customer needs better than others.

**International competition.** The UK should support the telecoms and the competition directorates of the European Commission in applying pressure for liberalisation in the telecommunications sector within Europe, and press them to go further on international traffic. However, greater openness in the

#### 4. A POLICY APPROACH FOR THE 1990s

The competition which has developed to date has done so within the constraints of a closely managed approach, where the Government has issued a number of licences for strictly defined roles. Such an approach would not only be inappropriate in the next phase of development as described above, but would be unworkable in a regulatory sense. This is because of the increasing diversity of telecoms technology and the rapid pace of its development, and the large number of potential players.

The Government should thus concentrate on maximising the competitive impact of current players, and allowing entry by any wishing to do so who meet basic quality, technical, and financial adequacy criteria. In effect the Government should maintain its 'technology neutral' stance, and adopt an equivalent 'operator neutral' approach. Government's job should thus be to concentrate on setting the framework within which telecoms competition will develop into the next century, leaving the market sort out the detail -- to set the rules of the game. Not to decide who should be invited to play or to direct the particular moves and strategies of each player. This has implications not only for the duopoly review decisions, but also for the longer term role of the Government and Oftel.

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**International competition.** The UK should support the telecoms and the competition directorates of the European Commission in applying pressure for liberalisation in the telecommunications sector within Europe, and press them to go further on international traffic. However, greater openness in the

UK telecoms sector should not be abused by subsidised, state-owned European PTTs. Acquisition, or partial acquisition, of UK telecoms companies by such bodies should be discouraged: while there are good reasons for the Government to sell a further stake on BT, it should retain the powers of the 'golden share'.

We should welcome international market pressure which is competitive. In particular, the United States Regional Bell Operating Companies (or RBOCs) and AT&T should be welcomed. These organisations have undergone a competitive revolution just as large as that we are contemplating in the UK, although the starting points and current industry structure are different in many ways. Nevertheless, there are lessons we can learn from the American experience.

As far as the international trade policy context is concerned, the issues are very similar to those in the airline sector, and UK Government should urge consistency in the treatment of the two sectors.

### **Different regulatory approach**

For the foreseeable future there will need to be regulation in the telecommunications market. In the next phase of the development of a liberalised market for telecommunications services in the UK, the regulator will have to adopt a more open, consistent, and rational approach to that which has been the case during the duopoly period. Sir Bryan Carsberg's pragmatic approach has played an important part in making a success of the duopoly period. Accordingly, his encouragement, cajoling, rebuking, and rewarding (as appropriate) has helped Mercury establish a strong position in its David and Goliath match with BT. It is an approach that has advantages when the regulatory task consists in large part of banging two heads together, but it would not work easily with more than two players.

**Role as an umpire.** It will probably not be possible for interconnection between telecoms operators' networks to be market determined for some time, certainly for those involving BT. In general this is because there are too few possible suppliers at any one level or area of the network and, in the case of interconnection agreements involving BT, because of the imbalance in market shares between the parties. Thus some clear rules governing interconnection will be needed, and it will fall to Oftel to devise, implement, and police them. This will require a change of modus operandi at Oftel, from attempting to second guess what a competitive market would do, mimicking competition, to role more akin to an umpire. Increased competition will mean more rather than less regulation, but regulation of a different type.

Greater emphasis should be put by Oftel on avoiding abuse, or unwanted effects, of dominant market share. The Director General should consider more active use of his power of reference to the Monopolies and Mergers Commission. Similarly, Oftel should remain vigilant for the unintended and unwanted effects of those subsidies that remain.



As has been argued earlier in this report, facilitating access to BT's network will require greater openness on the part of Oftel. It should have powers to access more detailed information on BT's network configuration and costs, and be required to make these available to those seeking to compete. As network competition develops, Oftel will be able to make greater use of comparative performance data.

**The context of regulation.** Until competition is more developed, price cap regulation, with its incentive element to encourage BT to continue reducing costs in real terms, should be retained. The pressure brought to bear on BT to reduce manning levels nearer to those typical of the US RBOCs should be increased. That there is room to apply a greater 'X factor' in the 'RPI minus X' price cap formula is clear from BT's recent announcements about record profits and intended manpower reductions. Having said that, much of the coverage of BT's profit figures displays an ignorance of the size of its business, and of the uses to which that profit is put, namely in large part research and development. It will not help the development of economic competition if such a debate is conducted in hysterical or ill-informed terms. Oftel can help by putting such results in context. While we do not have a formal rate of return approach to regulation in this country, clearly the rate of return is considered, and properly so, among other factors in setting the 'X'.

Finally, while Oftel's role to date has centred on achieving accommodations between current market participants, in the future it should place greater emphasis on the encouragement of economic entry.

In a recent announcement in the House of Commons, the Government indicated that it will issue a consultative paper in November seeking the views of interested parties on a number of options, and indicating its own preferences. In finishing the consultative paper, and when weighing the submissions on these options, the Government would do well to step back from the technical complexities of the telecoms sector, and take its cue from the success that has been seen in applying sound economic and market competitive principles to other increasingly complex industries.

## 5. IMPLICATIONS FOR DUOPOLY REVIEW DECISIONS

The outcome of the duopoly review will be seen as a test of the Government's continuing commitment to the pro-competitive policies which have helped to dynamise other sectors of the British economy. To reap the effect of that competitive energy in the telecoms sector too, the Government should ignore the lobbies for the status quo, and follow its basic beliefs about the power of markets, applying them to the decisions that have to be made in the context of the duopoly review. It would indeed be an irony if it were to draw back from the chance to lead the world telecoms liberalisation wave, just at a moment when East European countries are discussing ways to allow the market to play a greater role in their economies. Indeed there are signs that some of these East European countries may short circuit the process of development of competition that the UK has experienced.

What should the output of the duopoly review look like? To the extent that it concerns the ending of a restriction, it could be low key. The Government could simply announce in November (the duopoly review is officially due to begin in mid-November) that the restrictions introduced by the duopoly policy no longer applied, and that the Government was willing to consider on their merits applications from any operator wishing to play a role in the UK.

It could then subsequently announce a package of liberalisation measures, to free up telecoms operators which are restricted to certain defined activities by a class licence.

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### Steps to a Competitive Telecoms Environment

Ministers should not attempt to predict how many operators there will be, of what type, and doing what. Instead they should develop a vision of the future telecoms environment, identifying the fundamental characteristics of the market and the framework within which operators compete. To ensure that competition can develop, a number of supporting actions will have to be taken, as follows:

- The Government should not seek to predetermine the number of PTOs. It should concentrate on allowing entry by any operator wishing

## 6. SUMMARY

### The need for competitive telecoms

Britain needs a competitive telecoms sector:

- ◆ to provide an essential underpinning of a competitive economy;
- ◆ to ensure that customers benefit from advances in technology; and
- ◆ to ensure that British telecoms companies, by being exposed to international competitive pressure, themselves remain competitive in the global market place.

The UK should apply in its telecoms sector the same principles of competition policy that it has to other sectors, namely:

- ◆ the removal, or rendering explicit, of public subsidies;
- ◆ the avoidance of monopoly abuse;
- ◆ the removal of Government restrictions on or impediments (such as excessive regulation) to entry and exit from the sector; and
- ◆ the opening up of markets to competitive pressures, whether from domestic or foreign competitors.

The process of liberalisation should to address the following points:

- ◆ the duopoly policy has failed to apply competitive pressure to some areas of telecoms services, notably services to residential and small business customers, and local and international services;
- ◆ the effectiveness of the competitive pressure it did introduce may be wearing off in those areas that have seen improvements; and
- ◆ further liberalisation of the market for fixed links will be needed to reduce mobile operators' dependence on BT, and ensure mobile services can develop effectively.

### Steps to a Competitive Telecoms Environment

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- ◆ The Government should not seek to predetermine the number of PTOs. It should concentrate on allowing entry by any operator wishing

to do so which meets basic quality, technical, and financial criteria, and maximising the competitive impact of current players.

- ◆ **New entrants should be encouraged.** For markets with few players to remain competitive there needs to be continuous, and credible, threat of market entry. Mercury has fulfilled that role, but is probably not now seen by BT as a major threat.

New entrants will need assurances that BT will not unfairly cross-subsidise some of its activities to reduce artificially the economic returns available, and that Government will continue its 'hands off' policy with regard to BT's business decisions. To give the latter assurance, the remaining share holding in BT should be sold.

- ◆ **Subsidies and cross-subsidies should be minimised** and made explicit to allow economic competition to take place over the widest range of services possible. Where subsidies are thought appropriate for social policy reasons, these should be made explicit and operators should compete for what would effectively be a franchise to provide the service.
- ◆ **Restrictions on existing non-BT telecom operators should be relaxed** to allow them to compete more effectively. Regulation should not impede what is both in the commercial interest of operators, and in the interest of consumers wanting better service.
- ◆ **Local competition should be encouraged** by the following measures.
  - Cable companies should be allowed to undertake telephony in adjacent franchise areas, as well as within their franchise area.
  - Cable companies should be freed from Condition 15 of the cable licence which requires them to get the approval of BT or Mercury if they wish to offer telephony services.
  - Mobile operators should be allowed to build and operate their own fixed links, or free to lease them from any other operator.
- ◆ **Long distance competition should be encouraged** by the following measures.
  - Users of private networks, whether based on leased lines, own network, or a mixture, should be able to offer services to anyone.
  - Users of private networks should be allowed to build their own microwave or VSAT links.
  - The telecommunications infrastructure of British Rail is particularly extensive, and could provide relatively quickly the basis of a new competitor.

◆ **International call competition should be encouraged by the following measures.**

The optimal policy would be to announce in November that the restrictions introduced by the current system will be relaxed. Any operators that would like to play a role in the UK will be considered.

This should be done as part of liberalisation measures, to free up telecoms operators which are restricted to certain defined activities by the system.

◆ **BT's dominant market share must not be allowed to inhibit the development of competition, requiring a combination of restrictions and extra obligations on BT. If the strong market power of BT is not addressed directly, as in an AT&T-style break up, then it will have to be counterbalanced in other ways:**

- BT should be obliged to provide prompt and efficient interconnection to all operators wishing it. Oftel will need to ensure that BT complies and is not being discriminatory;
- BT should be restrained from broadcasting services for a certain period to allow cable telephony to get established;
- BT alone should bear the cost of the universal service obligation until a better balance of market shares exists;
- control of the numbering system gives BT a significant marketing advantage, and this should pass to Oftel;
- the information in the Directory Enquiry service should be available, at cost, to other operators; and
- BT's international call charges should be subject to a price cap.

### **New regulatory approach**

Telecoms policy should facilitate market entry. There should be no more beauty contests for a limited number of licences. The UK should support the telecoms and the competition directorates of the European Commission in applying pressure for liberalisation in the telecommunications sector within Europe, and press them to go further on international traffic.

Oftel will have to adopt a more open, consistent, and rational approach. Oftel will have to devise, implement, and police clear rules governing interconnection between operators. BT should be required to provide Oftel with detailed information on its network configuration and costs, and Oftel should make this information available to those seeking to compete. As network competition develops, Oftel will be able to make greater use of comparative performance data.

### **Policy for the future**

The optimal policy would be to announce in November that the restrictions introduced by the duopoly policy no longer apply, and that applications from any operators that would like to play a role in the UK will be considered.

This should be followed by a package of liberalisation measures, to free up telecoms operators which are restricted to certain defined activities by the system of class licences, and promote competitive entry.