INTERCONNECTION PRINCIPLES

Paper by OFTEL, UK

1. **Background - Liberalisation of telecomms**

The purpose of liberalisation of telecomms is to provide competition in the provision of telephony services leading to greater choice for customers of suppliers, services, price and quality.

Liberalisation should promote competition in all parts of the value chain leading to cost orientated interconnection charges and cost orientated retail prices. Liberalisation is intended to bring the benefits of competition to **all** customers not just big business and high spending customers and not confined, for example, to just national and international services. For many smaller spending residential customers competition in the provision of local calls is very important.

Liberalisation is about market opening but that alone is not enough. The incumbent operator is likely to have many advantages over new operators. Its operations are vertically integrated, it is ubiquitous, probably has access to substantial capital, and is ‘well known’ to customers There needs to be a number of measures to ensure that new operators can compete on an even playing field. These can be economic - that is eg. to ensure that the incumbent operator allows new operators access to services at fair prices or competition based that is , eg controls on anti-competitive behaviour.

2. **Interconnection : General**

New operators will rely heavily on using the incumbent’s network for delivery of services to its customers, to transit calls to the customers of other operators and to allow the incumbent access to its own customers. The arrangements for interconnection with the incumbent are therefore of vital importance in establishing a competitive environment.

In particular, interconnect charges are likely to form a large proportion of the other operator’s costs. New operators need to know that these charges are fair, properly derived from underlying costs and that the incumbent is facing the same charges. They also need confidence that these things can be verified independently.

Interconnection policy is therefore at the heart of the competitive framework in telecomms. The Regulator, who must be independent of Government and Operators, needs to have a central role in determining and implementing interconnection policies.

3. **Major principles**

Incumbent obliged to interconnect with other network operators and to provide access to service providers
Regulator to specify where interconnection must be provided in disputed cases
Incumbent to offer range of services and to be required to offer any other services reasonably required on reasonable terms
Interconnect charges to be cost orientated built up from the cost of unbundled elements - the basis of these costs should be transparent and the costs audited
Incumbent not allowed to unduly prefer own operations - pay same charges, receive same quality of service, receive same information- and this should be verifiable.
Access deficit costs/ charges to be separately identified and not part of interconnection charge
Incumbent not allowed to cross subsidise network or retail operations
Proper enforcement measures to be in place to police compliance with above
Incumbent to provide detailed information on its network and future plans to develop network to the regulator and other operators
Dispute resolution mechanism to be in place
Removal of any artificial barriers to entry and consideration of any market opening measures
Fair trading provisions to police any other unfair trading practices, eg denigration of competitors
Regulator to act transparently.

4. **Rights to Interconnect**

The basic purpose of interconnection should be that any customer can successfully complete a call to another customer or a service regardless of whose network the end customer is on.

All network operators should be obliged to interconnect with other operators.

Interconnection should be allowed any point of the network which is technically and practical to do so. In practice, this means locations where traffic is switched, ie local switches, tandem switches, international switches. Interconnection direct to the access network (ie "copper interconnect" or "line-side unbundling") is not considered appropriate as it takes away the incentive for new operators to build alternative direct links to the customer.

Interconnection should be bought as a service made up of different network components. New operators should be able to request new services made up of different combination of the network components and should be able to buy only those elements of the incumbent's network they require.

New operators should be able to obtain private circuits from the incumbent. If circuits are available at wholesale cost orientated rates, this may perversely discourage network build, so it is preferable not to require this but to allow the incumbent to price at retail minus to give the right incentive to operators to build their own infrastructure.

The incumbent operator should notify other operators of details of new services it is launching before launch and in adequate time so that they can launch the service at the same time if they so require. Where changes to the system or new technology are required this notification may be required up to 18 months before launch. The industry and regulator need to agree detailed rules on interoperability particularly in relation to the launch of new services. In default of agreement, regulator should act.

5. **Accounting Separation**

Where the incumbent is vertically integrated and operating in nearly all sectors of the market, it should be required to produce separate accounts for its:

Network business
Access business and
Various retail businesses.

The purpose of accounting separation is to :

ensure interconnection charges are fairly derived and demonstrate that the network business is charging the same to new operators as to its retail businesses and

To prevent unfair cross subsidies and undue discrimination.

These accounts should be independently audited to tight audit standards and reconciled to statutory annual accounts to give confidence in them.

In the UK's experience, tightly supervised accounting separation is sufficient. In other environments it may be necessary to insist on busines separation.

Interconnection charges should comprise both relevant network costs, common costs and a return on capital employed. Charges should be built up from long run average incremental costs as this reflects the level at which commercial investment decisions are made.

6. Competition Safeguards

The incumbent should be required to provide to new operators the same the range of services, the same level of charges for use of network components and same the same quality of service as it does to itself.

The negotiation of interconnection arrangements is primarily a commercial responsibility but in order to demonstrate that there is no preferential or discriminatory treatment, the incumbent should publish a standard contract and a list of standard services with standard charges. Such transparency is not necessary for operators who do not have market power. Additionally, all interconnect agreements with the incumbent should be published and the incumbent should publish its Regulatory Financial Statements for its Separated Businesses.

The Regulator must have the power to intervene where the incumbent and new operators cannot agree on terms and conditions of interconnect.
The Regulator should also be in a position to intervene where he becomes aware, either through a complaint or otherwise, that the incumbent is behaving anti-competitively. Effective powers are required to stop the anti-competitive behaviour immediately before

terminal damage is done to a new entrant and to recompense the injured party.

7. **Barriers to entry**

There should be no restriction on the numbers of licences to be offered (except where resources may be scarce eg spectrum). Licensing criteria should be made public.

New operators should have the flexibility to offer a range of services to customers, including indirect access to the incumbent’s customers and resale of the incumbent’s services. Dialling parity for these indirect access services should not be mandatory because it reduces the incentives on operators to build their own access networks and hence reduces choice of networks to end customers.

Control over the issue of numbers should lie with the Regulator or other independent body. Customers should be able to take their numbers with them when they change operators (ie. There should be number portability of both geographic and non-geographic numbers).

The incumbent operator should ensure that the phone numbers of the customers of other operators appear in their phone books and that other operators’ customers can access their Directory Enquiry service. The incumbent should also provide part phone books containing lists of customers and their phone numbers so that the new operators can provide customised directories should they so wish.

8. **Conclusion**

Fair and efficient interconnect arrangements are necessary for new operators to take full advantage of liberalised markets. The ideal interconnect environment allows new operators to offer services to all types of customer, both small and medium residential customers who mainly require local traffic and larger residential and business customers who require national calls , international calls and advanced services. The best way of achieving this is to ensure that there are proper incentives for new operators to build alternative networks to the dominant operator.

Fair competition also requires that there are safeguards to protect new operators from anti-competitive behaviour and other measures, such as number portability, to ensure an even playing field.

Finally, regulation is a poor but necessary substitute for competition. Regulation should promote and enhance competition but be withdrawn as competition develops.

OFTEL
August 1997