*Antelope Consulting*

European policy and regulation for convergence

Robert Milne

rem@antelope.org.uk

www.antelope.org.uk

June 2007

Agenda

- **Introduction**
- **Case study 1: Audiovisual media**
- **Case study 2: Publicly available telephone services**
- **Case study 3: Next generation networks**
- **Conclusion**

fixed
mobile

telephony
internet

telecommunications
broadcasting

Antelope Consulting
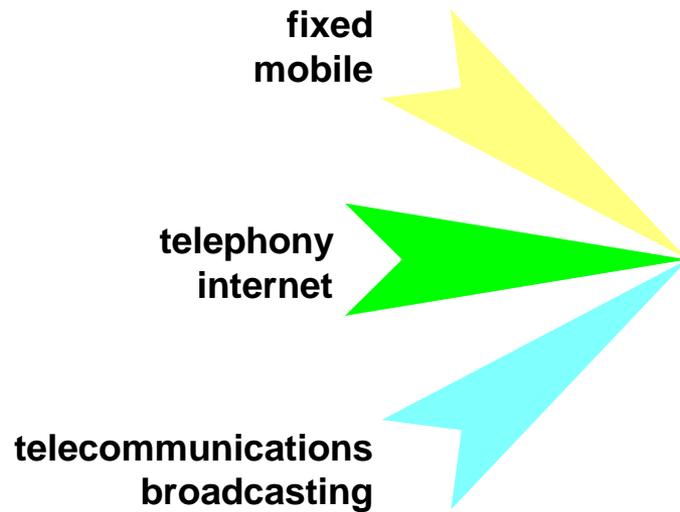
Enlargement of the European Union (EU)

**1951: 6 countries**   **1973: 9 countries**   **1981: 10 countries**   **1986: 12 countries**   **1995: 15 countries**
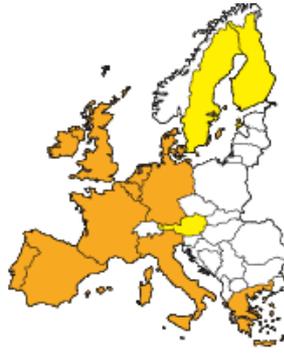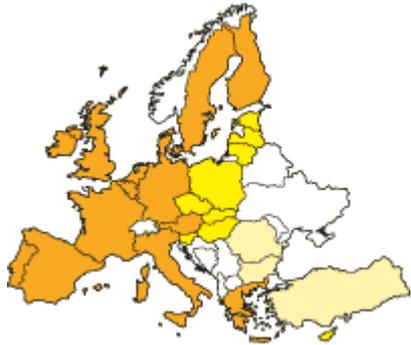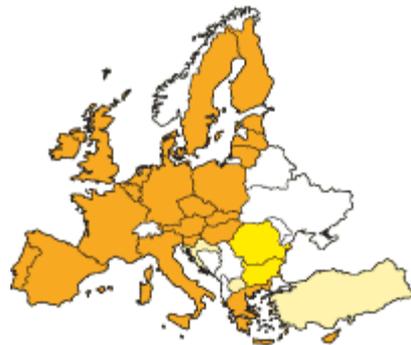
2004: 25 countries   **2007: 27 countries**

3 other countries also participate officially in the internal market
(involving freedom of movement of goods, persons, services and capital).

Antelope Consulting

Simple chronology of telecommunications liberalisation

- **The first EU proposals for telecommunications liberalisation were put forward in 1987.**

- **The European Telecommunications Standards Institute (ETSI) was established in 1988.**

- **There were successive measures under the Open Network Provision (ONP) policy to make markets competitive for:**
  - **Telecommunications equipment in 1988.**
  - **Value added services and data networks in 1990.**
  - **Private networks in 1993.**
  - **Satellite communications and cable television networks in 1994.**
  - **Mobile public voice telephony and leased lines in 1996.**
  - **Fixed public voice telephony (and all telecommunications services) in 1998.**

- **The New Regulatory Framework (NRF) or Electronic Communications Framework (ECF) policy was adopted in 2002.**

Major developments take many years.

Antelope Consulting

Legislative timescales

- **Typically, the adoption of EU Directives is:**
  - **Preceded by at least two years of consultation, drafting and revision.**
  - **Followed by at least two years of implementation in the countries.**
- **For example, with the NRF of 2002:**
  - **Primary legislation had been completed in 7 countries by the end of 2003, (the completion date required by the EU), 20 countries by the end of 2004, 24 countries by the end of 2005 and 25 countries by the end of 2006.**
  - **Secondary legislation was not in place in some countries at the end of 2006.**
  - **The review began in 2005.**
  - **The revisions will be proposed formally in 2007.**
  - **The revisions will come into force in 2010.**
- **Also, with the ONP of 1998:**
  - **Some countries were allowed to delay implementation.**
  - **Other countries liberalised several years early.**

Countries act at different speeds and in different ways.

Antelope Consulting

The NRF measures

- **Main measures in the NRF:**
  - – **Framework Directive.**
  - – **Access Directive.**
  - – **Authorisation Directive.**
  - – **Universal Service Directive.**
  - – **Privacy and Electronic Communications Directive.**
  - – **Recommendation on Relevant Markets.**
  - – **Guidelines on Market Analysis and the Assessment of Significant Market Power.**
  - – **Radio Spectrum Decision.**

- **Other measures relevant to the NRF:**
  - – **Competition Directive.**
  - – **Radio and Telecommunications Terminal Equipment Directive.**
  - – **Data Protection Directive.**
  - – **Regulation on Unbundled Access to the Local Loop.**
  - – **Recommendation on Article 7 Notifications.**
  - – **Recommendation on Caller Location Information for Emergency Services.**
  - – **Decision on the Establishment of the European Regulators Group.**
  - – **Decision on the Minimum Set of Leased Lines.**

Some tasks can be burdensome in small countries.

Antelope Consulting

Most important measures currently in force

- The **Framework Directive** sets out principles, objectives and procedures for regulating electronic communications services and networks.

- The **Access Directive** lays down principles and procedures for imposing obligations about access to and interconnection of networks.

- The **Authorisation Directive** introduces general authorisations, instead of individual and class licences.

- The **Universal Service Directive** lays down rights for users of electronic communications services, including availability and affordability.

- The **Privacy and Electronic Communications Directive** sets out rules for protecting privacy and personal data relating to communications. The **Recommendation on Relevant Markets** defines markets to be examined by regulators.

- The **Guidelines on Market Analysis and the Assessment of Significant Market Power** outlines a method for the regulators doing these things.

- The **Radio Spectrum Decision** lays down principles and procedures for developing and implementing a radio spectrum policy.

Antelope Consulting

Development from the ONP to the NRF

- **Similar treatments of universal service, leased lines, local loop unbundling, carrier selection, number portability and interconnection.**
- **Extra flexibility in market development:**
  - **General and specific authorisations instead of licences.**
  - **Significant Market Power (SMP) as in competition law.**
  - **Market definitions and SMP determinations according to market state.**
  - **Treatment of competition failure using the least intrusive remedies.**
  - **Remedies *ex post* (after), not *ex ante* (before), failures except SMP operators.**
- **Emphasis on harmonisation between countries:**
  - **Formalised co-operation of regulators with the European Commission (EC).**
  - **EC veto on decisions on market definition and determination of SMP.**
  - **EC comment on remedies for failure of competition.**
  - **EC infringement procedures against countries.**
- **Generalisation to handle convergence:**
  - **Application to all transmission (including broadcasting).**
  - **Neutrality between technologies for delivering services.**

Antelope Consulting

The need for and nature of possible remedies

- **A market may need *ex ante* regulation if and only if:**
  - **There are substantial and persistent barriers to entry.**
  - **There is no effective competition behind the barriers to entry.**
  - **Competition law is unable to cure the competition failures.**
- **The *ex ante* regulation relates to:**
  - **Interconnection.**
  - **Access to the last mile.**
  - **Price control for several wholesale and some retail products.**
  - **Transparency (with wholesale reference offers).**
  - **Carrier selection.**
  - **Number portability.**
  - **Separate accounting.**
  - **Equivalence of access.**

Many remedies are similar in different countries.

Antelope Consulting

Some of the EC proposals in or after the review of the NRF

- **More effective consolidation of the single market:**
  - EC veto on remedies for competition failures.
  - Enhancement of the European Regulators Group (ERG) to help EC decisions.
  - Single authorisations for providers of cross-border services across the EU.
- **More rapid liberalisation of radio spectrum management:**
  - Neutrality between technologies and between services.
  - Traded and unlicensed spectrum instead of centrally allocated spectrum.
  - Co-ordinated refarming for traded and unlicensed spectrum across the EU.
- **Simplification of competition policy:**
  - Streamlined market definition and SMP determination.
  - Reduction in the number of markets for definition.
  - Inhibition of the suspension of remedies during appeals against regulators.
  - Potential imposition of functional separation on local loop SMP operators.
- **Modification of consumer policy:**
  - Removal of out-of-date provisions (such as those on leased lines).
  - Change in telephony user rights (to carrier selection and number portability).
  - Strengthening the monitoring and prevention of security breaches.

Antelope Consulting

Regulatory structure

- **Until recently:**
  - Telecommunications regulation = network economics (approximately).
  - Broadcasting regulation = programme content (approximately).
- **Some communication regulators in the EU have not fully converged:**
  - At least 12 did not have full authority over spectrum management in 2005.
  - At least 2 did not have powers over transmission to broadcasters in 2006.
- **Some regulators cover other matters besides communication services and networks:**

	Germany	UK
Content.	no	yes
Posts.	yes	no
Utilities.	yes	no
Railways.	yes	no

Responsibilities of the communication regulator

Antelope Consulting

Agenda

- **Introduction**
- **Case study 1: Audiovisual media**
- **Case study 2: Publicly available telephone services**
- **Case study 3: Next generation networks**
- **Conclusion**

Antelope Consulting
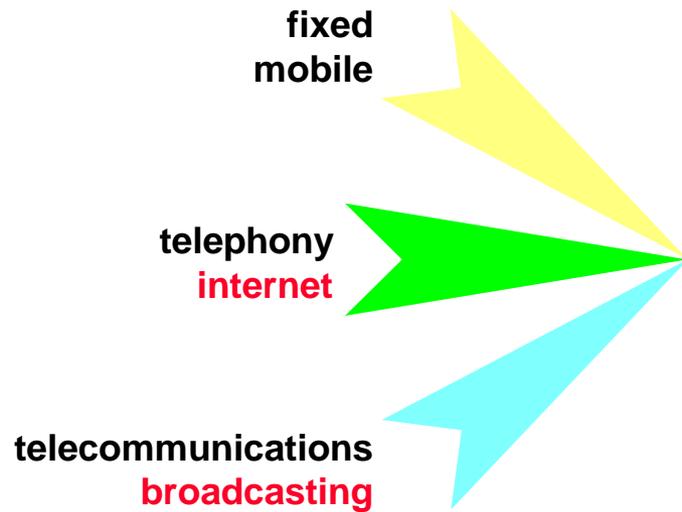
Some partial market movements

- **From:**
  - **Collective acceptance of programmes.**
  - **Provider-to-customer delivery.**
  - **Subscription funding.**
  - **National reach.**

- **To:**
  - **Personal scheduling and generation of content.**
  - **Peer-to-peer delivery.**
  - **Advertising funding.**
  - **Regional reach.**

Implications of convergence for audiovisual media

- **Transmission, broadcasting and spectrum use are not tied together.**
- **Public service broadcasting changes if users schedule content.**
- **Content providers cannot be licensed if users generate content.**
- **Web site regulation (taking down illegal content) is *ex post*, not *ex ante*.**
- **IP TeleVision (IPTV) can take many forms.**
- **Television broadcasting is not like new services, such as:**
  - **Audio, video and SMS feeds.**
  - **Online games.**
  - **Virtual worlds.**

Antelope Consulting

Current content regulation in the EU

- **The NRF deals with communication services and networks but not with content.**

- **The Electronic Commerce Directive deals with commercial aspects of of "information society services" (including online services involving selling, advertising, information and entertainment).**

- **The Television Without Frontiers Directive deals with the content of "television broadcasting services".**

Future content regulation in the EU

- **The EC revision to the Television Without Frontiers Directive (proposed in 2005 after consultations started in 2002):**
  - Covered audiovisual media services for public information, entertainment or education over electronic communication networks.
  - Had for 'linear' [scheduled] services rules (for advertising and product placement, say) simplifying and clarifying those for television broadcasts.
  - Had for both 'linear' and 'non-linear' [non-scheduled] services rules about protecting minors, preventing incitement to religious and racial hatred, limiting alcohol and tobacco advertising, and fostering cultural diversity.
  - Was attacked widely for having an imprecisely defined set of services, overlapping with other directives and covering user-generated content.
- **The EC revision accepted by the European Parliament (EP) in 2007:**
  - Covered only mass media 'linear' television broadcasts and 'non-linear' on-demand programmes having forms and contents comparable with those of television broadcasts.
  - Was still criticised, on the grounds that more business models would flourish if the rules (for advertising, say) were abolished.

Antelope Consulting

Agenda

- **Introduction**
- **Case study 1: Audiovisual media**
- **Case study 2: Publicly available telephone services**
- **Case study 3: Next generation networks**
- **Conclusion**

Antelope Consulting
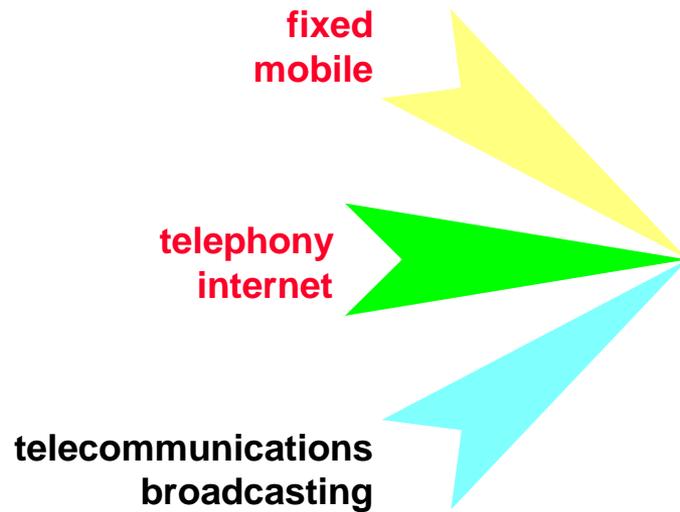
Publicly available telephone services in the EU

- **"'publicly available telephone service [PATS]' means a service available to the public for making and receiving national and international calls and for access to emergency organisations through a number or numbers in a national or international telephone numbering plan, and in addition may, where relevant, include one or more of the following services: the provision of operator assistance, directory enquiry services, directories, provision of public pay phones, provision of service under special terms, provision of special facilities for customers with disabilities or with special social needs and/or the provision of non-geographic services".**

Source: Universal Service Directive, European Commission, 2002.

- ## A service provider offering a PATS has obligations for:
  - **Number portability.**
  - **Emergency calls.**
  - **Universal service.**
  - **Resilience (especially for PATS "at fixed locations").**
  - **Directory enquiries, pricing information and itemised bills.**
- ## A service provider offering a PATS has rights to:
  - **Number portability.**
  - **Directory entries.**

Antelope Consulting

Differences between conventional fixed telephony and VOIP

- **Conventional fixed telephony:**
  - **Is delivered to a fixed location.**
  - **Uses a well established identification (numbering).**
  - **Is largely concerned with voice (except for fax and dialup internet).**
  - **Provides constant quality (except for some cheap services).**
  - **Has relatively greater costs for the core networks.**
  - **Is standardised.**
  - **Is regulated.**

- **Voice Over IP (VOIP):**
  - **Is delivered to variable locations.**
  - **Uses other partly established identifications also (SIP, Skype, …).**
  - **Is possibly integrated with video and text in conversations and messages.**
  - **Provides variable quality (at least over the public internet).**
  - **Has relatively greater costs for the access networks.**
 - **Is not yet fully standardised.**
  - **Is not yet clearly regulated.**

Existing obligations are not always well suited to VOIP.

Antelope Consulting

VOIP as seen by the EU

- **If a VOIP service is a PATS then it has also to meet the obligations for:**
  - **Number portability.**
  - **Emergency calls.**
  - **Universal service.**
  - **Resilience (especially for PATS "at fixed locations").**
  - **Directory enquiries, pricing information and itemised bills.**
- **In particular:**
  - **The service provider might have to ensure that there was caller location information in emergency calls, even though the service was nomadic.**
  - **The service provider might have to ensure that the networks on which the service was offered were resilient, even though they were not controlled by the service provider.**
- **Nonetheless the EC advocates 'light touch' regulation of VOIP.**
- **Typically this needs to be achieved by having obligations to take 'all reasonable' steps and to tell customers about limitations in the steps.**

Antelope Consulting

Agenda

- **Introduction**
- **Case study 1: Audiovisual media**
- **Case study 2: Publicly available telephone services**
- **Case study 3: Next generation networks**
- **Conclusion**

fixed
mobile

telephony
internet

telecommunications
broadcasting

Antelope Consulting
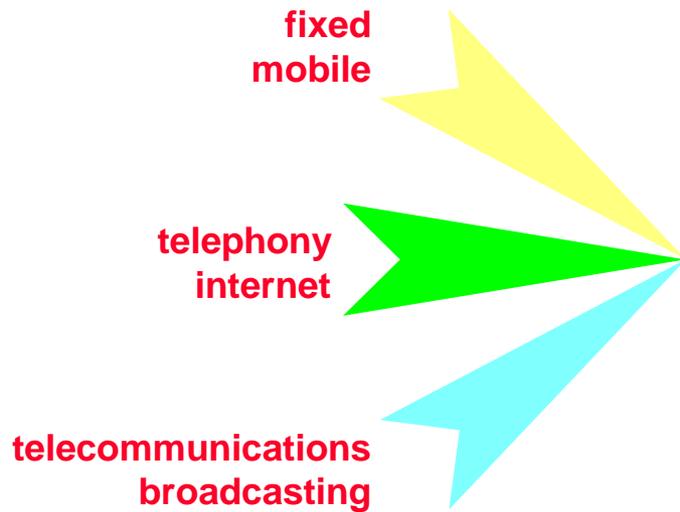
Moving from current networks to next generation networks

- **"Next Generation Network (NGN): A packet-based network able to provide Telecommunication Services to users and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent of the underlying transport-related technologies. It enables unfettered access for users to networks and to competing service providers and services of their choice. It supports generalised mobility which will allow consistent and ubiquitous provision of services to users."**

Source: Recommendation Y.2001, International Telecommunication Union, 2004.
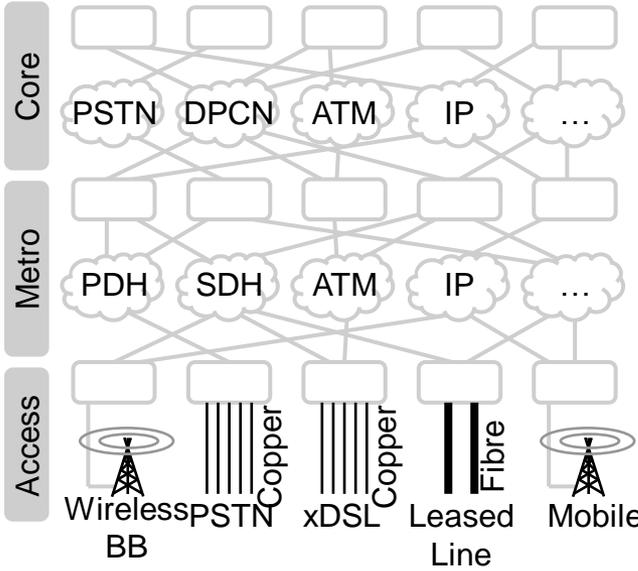
Single IP-based core network handling an operator's full range of communications services

Support for multiple access network technologies

Seamless interworking with legacy networks

Distributed rather than centralised switching, routing and network intelligence
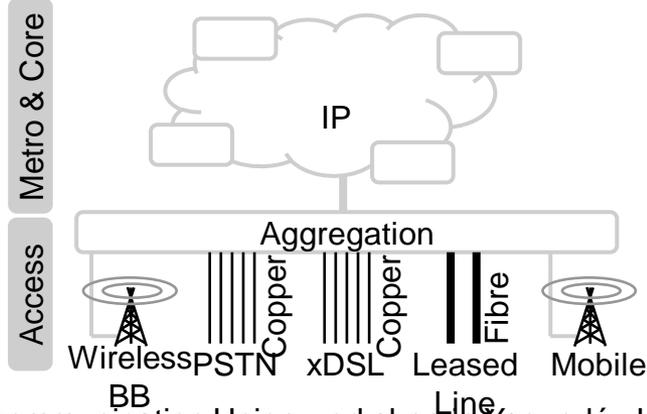
Source: Vince Affleck, "NGN regulation: UK experience", International Telecommunication Union workshop in Yaoundé, June 2006.

Antelope Consulting

Some partial market movements

- **From:**
  - **"Single play" offers (fixed, mobile, telephony, broadband or television).**
  - **Markets differentiated by network technologies.**
  - **"Vertical" markets of single services for each network.**
  - **Intelligence at the network centre.**
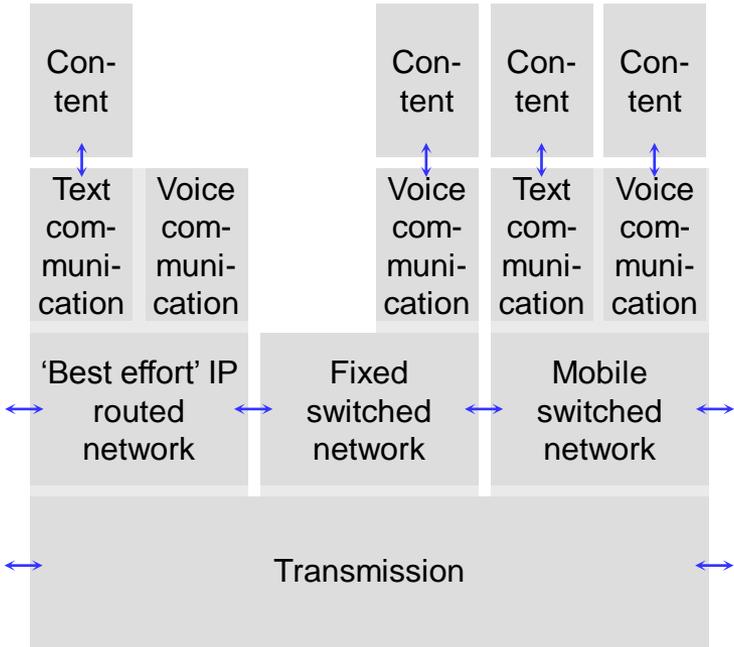
- **To:**
  - **"Quadruple play" offers (fixed, mobile, telephony, broadband and television).**
  - **Markets differentiated by consumer attitudes.**
  - **"Horizontal" markets with all services over one network.**
 - **Intelligence at the network edge.**
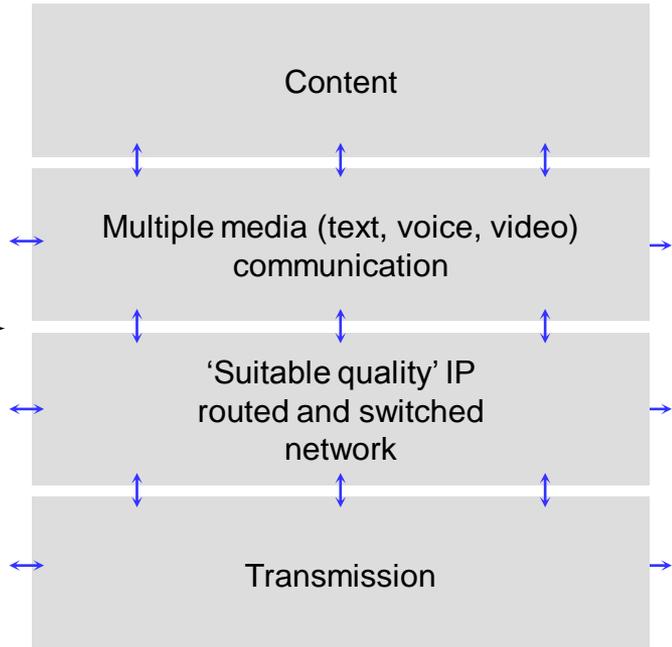
Next generation networks in the EU

- "… emerging markets, where de facto the market leader is likely to have a substantial market share, should not be subject to inappropriate ex-ante regulation. This is because premature imposition of ex-ante regulation may unduly influence the competitive conditions taking shape within a new and emerging market. At the same time, foreclosure of such emerging markets by the leading undertaking should be prevented."

Source: Guidelines on Market Analysis and the Assessment of Significant Market Power, European Commission, 2002.

- **When NGNs replace current networks of incumbent operators, non-discriminatory wholesale services are usually required (in France, the Netherlands and the UK, for example).**

- **However, in Germany:**
  - **A recent law grants the incumbent operator a "regulatory holiday" to remove the requirement for non-discriminatory wholesale services.**
  - **The NGN will support retail services that might be claimed to be in emerging markets (though the EC has not defined what they are).**
  - **The EC considers that the NGN will compete directly with existing networks, so it is in an existing market where the incumbent operator is required to offer non-discriminatory wholesale services.**
  - **The EC has started infringement proceedings against Germany.**

Antelope Consulting

Agenda

- **Introduction**
- **Case study 1: Audiovisual media**
- **Case study 2: Publicly available telephone services**
- **Case study 3: Next generation networks**
- **Conclusion**

Antelope Consulting
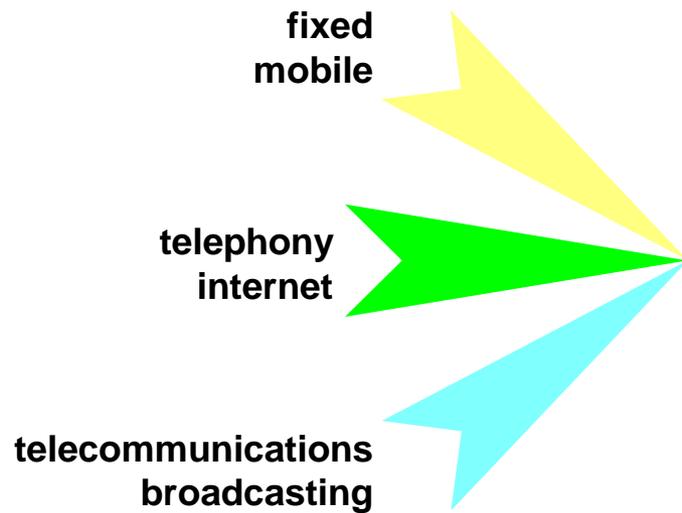
Areas of policy and regulation affected by convergence

- **Numbering.**
- **Quality of service.**
- **Universal service.**
- **Emergency calls.**
- **Pricing.**
- **Interconnection.**
- **Cross-subsidy.**
- **Regulatory organisation.**
- **Openness of access.**
- **Privacy.**
- **Acceptability of content.**

Potential user rights to broadband access.
Reduced funding from conventional fixed telephony.
Revised remit for public service broadcasting.

Separation of network, service and content prices.
Shift towards 'sender keeps all' pricing.

Locations, functions and prices of access to IP networks.
Possible disappearance of carrier selection and wholesale line rental.

Purchase of content by incumbents with cash flows from networks.
Use of market power in regulated and non-regulated service bundles.

Availability of multiple sources of important content.
Continued provision and pricing of legacy services.
Provision of non-discriminatory wholesale access.

Some aspects of regulation not considered further in these talks

Antelope Consulting

General comments

- **Regional integration:**
  - **Takes a long time.**
  - **Requires a central organisation.**
- **Convergence:**
  - **Is always ahead of regulation.**
  - **Requires formulating policies, laws and regulations carefully.**
  - **Suggests abolishing some restrictions.**

Antelope Consulting