



Republic of Ghana
Ministry of Communications

**National Telecommunications
Policy**

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I. Vision and Objectives

Vision

The Republic of Ghana has been at the forefront of the information and communications revolution in Africa for more than a decade. As one of the first countries to introduce widespread liberalisation in basic telecommunications services, in August 1994, Ghana took an important step forward in embracing the potential of competitive markets to generate growth and innovation in the sector. By authorising four different mobile operators, Ghana has also created a robust and aggressive market for the exploding wireless telecommunications industry, whose growth has been strong and spreading throughout the country in recent years. The role of the Internet in Ghana has also been growing dramatically, allowing businesses, citizens, students, and Government to join in the global information economy while increasing development opportunities and social cohesion at home.

The Government now intends to build upon the foundation that has been created by these advances, to bring Ghana further toward the realisation of a true Information Society, which includes all citizens and provides the greatest opportunity for economic growth, social participation, and personal expression.

The Government acknowledges, consistent with its ICT policy, the need to integrate Ghana with the new emerging economic order wherein information and knowledge are fundamental to achieving competitiveness, investment, development of human capacity and improved governance, leading to wealth creation and national prosperity, through the appropriate use of information and communication technologies in an entrepreneurial, open, participating and facilitating environment. The development of the national telecommunications infrastructure, and promotion of an open, competitive, and innovative telecommunications industry throughout Ghana, is a vital priority for achieving these goals.

Telecommunications is also one aspect of a wider trend of technological and market convergence, which encompasses such fields as broadcasting, information technology, and electronic commerce, and the Government, recognises the need to harmonise its policies in all of these areas. Accordingly, the Government intends to undertake further policy and legislative reviews before the end of 2005, including review of the NCA Act, introduction of a new Telecommunications Act, and legislation regarding Radio communications, Electromagnetic Spectrum, Broadcasting, and Electronic Commerce.

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Objectives

Consistent with this vision, it is the Government's objective that every citizen and resident of the Republic of Ghana shall have available, high quality, and affordable access to information and communication services, to help transform Ghana into a knowledge-based society and technology-driven economy. This objective recognises the primacy of integrating and growing the wealth of indigenous social and technical knowledge to inform, enhance and sustain the development of a Ghana as a distinct and productive player in the global information society.

The purpose of this National Telecommunications Policy is to define the framework within which the Ghana telecommunications sector will evolve toward this vision. Specific objectives that this Policy aims to promote include:

- Universal access for all communities and population groups in Ghana to telephone, Internet, and multimedia services by the year 2010;
- National penetration of universal telecommunications service to reach 25% of the population, including at least 10% in rural areas, by the year 2010;
- Connection of all schools, medical clinics, and Government offices and public and community broadcasting stations to advanced telecommunications services;
- Fully open, private, and competitive markets for all telecommunications services;
- Streamlined, efficient, and effective regulation of the telecommunications industry on a fully transparent, technologically neutral, and competitively balanced basis;
- Affordable prices for telecommunications services, particularly for low income citizens;
- Profitable investment opportunities for businesses in all segments of the market;
- Ghana shall be seen as a first-class hub for international telecommunications and information industry investment, jobs, and development, and a leader in the transformation of Africa toward a full participation in the Information Society.

II. Market Structure, Liberalisation, and Competition

The evolution of the telecommunications industry over the past several years has yielded a wide array of dramatic changes in the technology of human communication, and the role that advanced electronic telecommunications play in all aspects of society and the economy. Among the most important developments, aside from technological innovation and newness, has been the transformation of the global and domestic telecommunications industry from a largely monopolised, state-owned model to a broadly competitive, private, and open market model. Ghana has been among the leading countries in Africa in promoting these developments; Ghana first opened its basic telecommunications industry to private competition more than a decade ago, and Ghana continues to be a leader among African nations in the expansion of market entry, the development of new services and business arrangements, and the growth of the telecommunications sector generally. Ghana has also committed, through the World Trade Organisation, to further market liberalisation, and has to date exceeded those commitments.

This Policy intends to move Ghana yet further forward, by promoting still broader opening of all telecommunications market segments to private, competitive market forces. The Government is convinced that the interests of consumers and businesses in Ghana to achieve optimum access to the best quality and most cost-effective telecommunications services will be accomplished through the wisdom and incentives of the competitive market. To this end, this Policy seeks to establish conditions that will be most favourable to encouraging further sector growth, and reorientation of the overall market structure, through affirmative liberalisation and competition policies. The provisions of this Section set forth the terms under which the continued leadership of Ghana in these areas will be fulfilled.

2.1 Principles of Competitive Market Development

The development of telecommunications in the Republic of Ghana shall be based upon principles of open markets and fair competition. To the greatest extent possible, the Government shall encourage telecommunications growth through the initiative and innovation of the private, competitive marketplace at all levels, with particular emphasis on promoting local entrepreneurship and socially responsible investment, including firms that encourage equal employment opportunities and gender equality.

Regulation of entry and operation in the Ghana telecommunications market shall be governed by principles of fair competition, equitable treatment of all players, and practical oversight of operators with significant market power. Licensing and regulation shall be technologically neutral, to encourage economically efficient and innovative market development. Ultimately, the interests of consumers in obtaining high quality, accessible, and affordable telecommunications services shall be the primary objective of all policy and regulatory decisions.

2.2 Telecommunications Market Structure

The Government recognises that the technology and markets of telecommunications have been changing rapidly, and will continue to evolve in unpredictable directions in the future. The traditional market structure for telecommunications in Ghana must evolve with these changes, to allow for robust and flexible development of new services, marketing options, and customer choices. At the same time, it is not practical to overhaul the entire present structure of the telecommunications market immediately. The goal of this Policy is to establish a fundamental vision for the eventual market structures that will be most beneficial to Ghana's citizens and businesses, and to set in motion the procedures and incentives that will encourage the market to evolve toward that vision.

This section identifies the main elements of the current and emerging market structure for telecommunications services in Ghana. The section following then describes the manner in which this Policy seeks to guide the further transformation of that market structure.

International telecommunications segment

The international market segment consists of telecommunications facilities and services which carry communications signals across Ghana's international borders. These include the following elements:

Licensed gateway operators

- Operators with official authorisation to maintain physical gateway connections to international destinations.
- Until the lapse of their exclusivity clauses, there were two such licensed gateway operators in Ghana, Ghana Telecom and Westel; current policy since the lapse of the exclusivity periods places no limitation on such gateway licenses.

SAT-3 access

- Ghana Telecom's consortium relationship with the SAT-3 cable ownership, and the international transit capacity this provides.

Private licensed VSAT systems

- Licensed for private user access to international data networks via VSAT technology.

Unlicensed international bypass services

- Unauthorised service providers utilising new technologies to connect international voice calls to the local public network, bypassing the gateway facilities and charges of the licensed international operators.

Domestic public telephone services

The market segment for domestic public telephone services includes all facilities and services that connect telephone calls between users within Ghana. This segment consists of the following components:

Fixed wireline networks

- Traditional, wireline telephone networks, connecting fixed locations via permanent terrestrial links.
- Two major such networks are currently licensed (as of June 2004) to offer basic telephone services throughout Ghana.

Wireless mobile networks

- Telephone networks which connect calls via wireless radio technologies, traditionally utilising cellular mobile technology and frequencies as defined by international (ITU) standards.
- Operation of these networks requires both formal authorisations to utilise a designated frequency band, as well as a license to provide public (mobile) telephone service.
- As of June 2004, there are currently five licensed wireless mobile network operators in Ghana, four of which actively provide mobile telephone services.

Public telephones and tele-centres

- These services consist of public access locations that allow consumers to place telephone calls for a one-time charge.
- Traditionally public pay telephones have been owned and operated by licensed telephone network operators, but informal and unofficial arrangements exist whereby private businesses operate tele-centres which resell telephone calls to the public.

Dedicated transmission networks

This market segment includes all forms of point-to-point transmission networks, which connect two or more dedicated locations. They can be used to provide wholesale capacity for use by other public network operators, for private, closed-user-group communication services, or for public signal distribution, as classified in the following categories:

Wholesale capacity

- “Backbone” transmission networks providing transmission capacity between fixed locations on a wholesale basis, for use by licensed retail operators
- Can include both domestic and international connections, including Internet data transmission access
- Voltacom, the public fibre network, is capable of serving as a national backbone provider, pending resolution of its status.

Private networks

- Closed user group voice and data network services provided to private users at two or more fixed locations.

Public distribution networks (cable TV, DSL, etc.)

- Dedicated transmission facilities connected to customer locations, typically for the purpose of enabling broadband, high speed data connectivity.
- Connections may be utilised to distribute cable television, and/or for broadband Internet access, in each case requiring that the distribution network be connected with the appropriate service provider.

Internet Services

This category consists of services that link end users to the Internet and its various applications (e-mail, Web, etc.). Internet services do not, by themselves, involve installation of physical telecommunications networks, but typically rely upon use of other existing networks, through either dial-up or dedicated connections.

Internet Service Providers (ISPs)

- Service providers that offer Internet access via leased, dial-up, or private telephone facilities and networks.

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- Services consist of web and e-mail servers, web hosting, TCP/IP connectivity.
- May include subscription-based and usage-based service arrangements.

Internet Backbone connectivity

- High capacity transmission links to national and international Internet connection points.
- May include national or regional Internet Exchange Points (IXPs), collective arrangements among multiple ISPs to maximise efficiency of domestic and international Internet transmissions.

Internet Cafés and public access points

- Publicly available Internet access services, provided by private or public organisations to local users.

Broadcasting Systems

- Public radio and television stations, i.e. those operated by a publicly-owned statutory body, which may be wholly or partially state-funded, and which are in all cases accountable to all strata of the people as represented by an independent board, and that serve the overall public interest, avoiding one-sided reporting and programming in regard to religion, political belief, culture, race and gender.
- Commercial radio and television stations, i.e. those that are privately owned and operated for profit and controlled privately by independent commercial groups or individuals.
- Community radio and television stations, i.e., those that are about, for, by and of a specific marginalised community, whose ownership and management is representative of the community, which pursues a participatory social development agenda, and which is non-profit, non-sectarian and non-partisan.

2.3 Liberalisation and Licensing Regime

Under this Policy, further expansion of the telecommunications market will be encouraged through a process of active, phased liberalisation of market segments, and a licensing regime that facilitates widespread entry into the marketplace. This section identifies the target objectives for liberalisation and licensing options within each market segment. Responsibilities for further elaborating and implementing the licensing processes are defined in Section 3.

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For all liberalisation and licensing decisions, the NCA shall conduct public consultation proceedings, inviting input from the industry, the Ministry, consumers, and other interested parties as to the course of action that will be in the best interests of the development of the country and the objectives of this policy.

International telecommunications

- There shall be a phased process of allowing up to three additional facilities-based international gateway licenses, to be made available initially to qualified licensed telecommunications operators in Ghana;
- Where existing negotiated commitments have been made by the Government and NCA, the license for international gateway operation shall be given effect immediately. For other prospective licensees, the NCA shall establish, within no more than 90 days following the adoption of this policy, the specific qualifying criteria that operators must meet to be awarded an international gateway license; such criteria shall be transparent and competitively neutral, and all licenses shall carry similar obligations for all licensees;
- The NCA shall conduct a further review of market competition in the international segment before the end of 2006, to determine the effectiveness and adequacy of competition. Based upon NCA's determination of the public interest, additional gateway licenses may be made available following this review.
- The NCA shall also establish, within nine months of the adoption of this policy, standards and procedures for issuing a limited number of Class Authorisations to non-facilities-based terminating international telephone service providers. Such authorisations will permit the authorised service provider to utilise any technology to terminate international communications over facility-based networks, subject to cost-based and economically compensatory interconnection charges, and such other reasonable fees and charges as the NCA shall determine. Operators which seek to offer such services without proper authorisation shall be deemed illegal, and subject to appropriate termination of access, fines, and other remedies to be determined by NCA.
- The NCA shall initiate a proceeding, within twelve months of the adoption of this policy, to consider options for liberalising and regulating the provision of outgoing international telephone calling by non-facilities-based service providers, including authorised Internet service providers and registered Internet cafés and tele-centres. This proceeding shall take into account the interests of end users in obtaining affordable, reliable service, the interests of the industry in generating sufficient revenues to support infrastructure development, as well as the impact the rollout and sustainability of Internet cafés and rural Internet access points.
- Private users may continue to obtain and operate access facilities to serve their internal international telecommunications requirements without limitation, subject only to obtaining authorisation from NCA. Fees for obtaining such authorisations

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shall be determined based upon the nature of the organisation utilising the facility. Non-profit, rural, educational, and research and development organisations may be granted waivers or substantial reductions in such fees; small business enterprises may be charged graduated fees based upon their revenues.

- The present arrangement by which Ghana Telecom owns and operates access to the SAT-3 international cable represents an important bottleneck resource over which Ghana Telecom holds Significant Market Power (SMP), as described in Section 4.3 below. Accordingly, NCA shall exercise regulatory authority over access to and pricing of SAT-3 transmission links provided by Ghana Telecom to other operators, in the interests of promoting fair competition and cost-effective development of the telecommunications sector.

Domestic public telephone services

- The NCA shall establish, within one year of the adoption of this policy, a licensing process for domestic telephone networks and services that encourages economically beneficial new entry into this market, to promote expansion of infrastructure and service availability in rural and under-served areas.
- In issuing licenses for domestic telephone services, NCA shall apply technology-neutral standards, allowing licensed operators to deploy any combination of technologies that they choose to serve their customers, subject only to requirements for frequency authorisation (see below), and appropriate network interoperability, quality of service, and customer service standards.
- New and existing domestic telephone operators may be permitted to introduce services in designated regions or nationally, subject to license conditions governing obligations for interconnection, basic service tariffs, universal service contributions, quality of service and other provisions to be determined by NCA. Such requirements must be competitively neutral.
- NCA may also establish special rules and incentives to encourage operators to construct and operate telephone facilities in rural and other underserved areas. (See Section V.)

Frequency authorisations

- Any domestic telephone operator that seeks to provide service partially or entirely via wireless radio transmission must obtain a formal authorisation for use of a designated band of the frequency spectrum. Once such a frequency assignment has been granted, the operator shall have unrestricted rights to utilise that spectrum for any form of public telephone service, consistent with the terms of its license. However, frequency holders must abide by strict service and signal quality obligations, and prevent undue interference of their transmissions with those of other licensed frequency holders.

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- In particular, there shall be no arbitrary restrictions on the use of authorised radio transmission frequencies to provide any combination of mobile and fixed telephone services that an operator and its customers may choose. Authorised “mobile” operators may also install and operate “fixed” telephone services, utilising their assigned radio frequencies and/or wireline connections, without undue limitations, subject only to competitively neutral license obligations.
- The NCA may assign frequency bands on a national or a regional geographic basis, to ensure the most efficient utilisation of the spectrum and development of services. Geographically narrow assignments of unused frequency bands may be made available to smaller, local operators in remote areas to promote cost effective development of local networks and services. Such assignments must not interfere with nationwide or regional authorisations for mobile or other wireless telecommunications applications.
- NCA shall designate certain frequency ranges as “unlicensed”, and open for unrestricted public use (on a low power basis) consistent with international norms and practices.
- Notwithstanding the above, the number of mobile telephony license authorisations shall not be expanded within a period of at least two years following adoption of this policy. Additional mobile licenses shall be made available only upon a finding by the NCA that additional full-service mobile telephony licenses, in current or newly available frequency bands, would be in the public interest. When considering granting licenses to offer next generation mobile services, NCA may grant preference to existing mobile license holders; however it shall conduct a market review to determine whether some licenses should be exclusively offered only to such existing licensees.

Dedicated transmission networks

- There shall be no undue restrictions on construction and operation of dedicated networks for private line, and/or public distribution purposes.
- NCA shall initiate, within six months of the adoption of this policy, a public consultation proceeding to determine the licensing and liberalisation regime to apply to wholesale dedicated backbone network services. This proceeding shall specifically examine the market position and role of Voltacom, Ghana Telecom, and other existing backbone transmission networks, and shall consider the benefits of further opening of this market, as well as the need to ensure maximum availability of transmission capacity to all portions of Ghana on a cost-effective basis.
- Dedicated transmission networks shall be subject to class license authorisations, which may include related obligations such as GIFTEL contributions, facility sharing, competitive neutrality, and transparent terms and conditions for access to and use of network capacity.

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- Where construction of such dedicated networks depend upon access to public rights of way, any operator obtaining such rights of way must share access with any additional network providers, under competitively neutral and economically compensatory terms and conditions, to be negotiated between the operators under NCA guidance.
- Where dedicated transmission networks are intended to provide for public distribution services such as Cable TV, the NCA may establish additional responsibilities and criteria for the operation of such services, as appropriate.

Internet services

- There shall be no limitations on entry and operation in the market to provide ISP services.
- ISPs shall require authorisation via class licenses only, subject to minimal obligations and regulatory oversight. ISPs that obtain such authorisations must introduce and provide public Internet access services within 90 days of receiving authorisation, and must demonstrate continued public operation in order to retain the authorisation.
- ISP authorisations may include obligations for ISPs to contribute to GIFTEL and/or other universal access responsibilities
- There shall be no regulation of ISP pricing to customers.
- Public Internet access points, such as Internet “cafés” and tele-centres, must register with NCA for a class authorisation; however, such registration shall not require payment of fees. Such authorisation may be revoked by NCA for violations of required standards of service, or unauthorised provision of bypass services. Public Internet providers may be subject to inspection to verify compliance.
- NCA shall establish quality of service standards for ISP services, and shall conduct periodic surveys of ISP service quality. ISPs and other Internet access providers must issue service level agreements to all subscribers which identify their commitments to minimum service quality standards, and shall be responsible to rectify and/or compensate any sustained degradation of service below such standards. NCA shall be empowered to inspect and review the service quality of ISPs to verify compliance with these standards.
- ISPs integrated with dominant licensed telephone and backbone network operators must be established as separate subsidiaries or affiliates, may not be cross-subsidised directly or indirectly by dominant telephone service revenues, and must conform to all competitive safeguards that NCA shall establish. (See Section 4.3.)

Resale of network capacity and services

- NCA shall initiate, within nine months of the adoption of this policy, a public consultation proceeding to determine the appropriate treatment of network and service resale, including obligations for operators with Significant Market Power to

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offer services and facilities on a wholesale basis to resellers. These obligations shall take into account the objectives of promoting competitive development throughout the industry, as well as the economic position and responsibilities of existing operators.

- Interconnection charges for telephone service resale providers may be established at levels that ensure competitive equity and adequate contributions to national development goals, including universal access.

Broadcasting

- The Government intends to undertake a comprehensive review of current broadcasting policy and legislation in Ghana, with the objective of further expanding access to broadcast radio and television media for all citizens, providing for the greatest diversity of voices and languages and promoting the preservation and ongoing creation of indigenous content.
- The NCA shall, within six months of the adoption of this policy, expedite review of all outstanding applications for community radio station frequency authorisations, with a presumption that such applications shall be granted and in the public interest.

III. Roles of Government Institutions

The Government of the Republic of Ghana shall play a vital role in actively promoting the effective development of the telecommunications sector, even as the industry moves closer to a fully private, competitive model. This section identifies the roles that different Government institutions are responsible for in the elaboration and implementation of telecommunications policy in Ghana.

3.1 Ministry of Communications

- The Ministry is primarily responsible for the definition and elaboration of Government policy regarding telecommunications. In this role, the Ministry shall periodically review the effectiveness and success of the present policy, and consider amendments and updates as appropriate.
- The Ministry shall participate in a consultative capacity in all NCA public regulatory proceedings in an open and transparent manner.
- The Ministry has primary responsibility to represent the Government of the Republic of Ghana in all international negotiations and proceedings relating to the country's telecommunications policies. This includes participation in regional harmonisation of telecommunications policy within the ECOWAS region. For international forums and activities that primarily relate to examination or development of regulatory issues and mechanisms, the Ministry may designate NCA as the appropriate representative of Ghana.
- The Ministry shall also be responsible for monitoring development of the telecommunications sector, and progress toward achieving the objectives of this Policy. The Ministry shall issue an Annual Report on telecommunications development in Ghana which identifies trends, issues, and concerns in relation to sector goals.

3.2 National Communications Authority

The NCA shall have primary responsibility for regulating the telecommunications sector and implementing the terms of this Policy. Details of the regulatory functions and responsibilities are described in Section IV. Among these roles are:

- Issuing of licenses, establishing terms and conditions
- Regulation of competition, including interconnection
- Allocation of scarce resources, including management of the frequency spectrum
- Implementation of Universal Access policy
- Tariff regulation consistent with Ministry policies
- Consumer protection

- Technical standards, quality of service oversight
- Monitoring of operator activity, performance, and compliance

3.3 State Ownership of Infrastructure and Operators

- The long term objective of the Government is to promote greater private sector ownership and control of public telecommunications facilities and services in Ghana.
- Toward that end, the Government intends to pursue, in an appropriate time frame and through procedures that protect and serve the public interest, divestment of public holdings in Ghana Telecom, Westel, and the Voltacom telecommunications network. The exact timing, terms, and conditions of this divestment and privatisation will be determined by the Government, with direct participation by the Ministry of Communications, the Ministry of Finance, and such other Ministries and public agencies as shall have a legal and fiduciary interest in the disposition of these public investments.
- Any transfer or sale of state-owned shares in telecommunications operators shall ensure that the net effect of such transfer will be of direct benefit to the consumers of telecommunications services, and to the national economy as a whole.

3.4 Public Services and Networks

Government agencies and offices require the most advanced telecommunications facilities and services possible, and efficient Government operations will depend upon the networking of offices throughout the country. Consequently, the public sector has a strong stake in the successful development of the telecommunications industry in Ghana. In planning for and procuring such public networks and services, the Government shall adhere to the following policy principles:

- The Government shall procure telecommunications services from the private market, in a competitively neutral manner, while encouraging, through its purchasing power, the cost-effective extension of infrastructure and services throughout the country.
- Government agencies shall seek to aggregate their demand for telecommunications services to the greatest extent possible, to avoid duplication of costs and facilities, and to maximise the value of public sector demand to the market.
- In procuring new networks or services, the Government shall not seek to obtain permanent ownership of telecommunications facilities, but shall lease or purchase from private operators. Such operators shall be free to utilise networks developed for Government use to provide services to other users as well, subject to adequate protections against unauthorised access to sensitive data or transmissions.
- Telecommunications networks and services that are directly involved in providing communications for national security purposes may be fully segregated from other, non-security related networks.

IV. Regulation of the Telecommunications Market

Regulation of the telecommunications market is an essential component of public policy to ensure effective competition and broad, equitable development, consistent with the goals and objectives set out in this Policy. As identified above, regulation is the primary responsibility of the National Communications Authority, with guidance from the Ministry, and advice from any interested parties, including the industry, the private sector, consumers, civil society, and the Government in its capacity as a user. This section sets forth the main components of NCA's regulatory responsibilities, and the principles under which it should carry out those responsibilities.

4.1 Principles of Transparent Regulation

The NCA shall conduct all of its regulatory functions in a transparent, open, and non-discriminatory manner. NCA shall promote public participation in and awareness of its activities and ensure that the public has adequate access to sector information. NCA's regulatory proceedings shall be open to the public and all interested parties, including the Ministry of Communications, regulated operators, and consumers shall be allowed to participate in the process, to offer comments and to review evidence and proposed decisions. All decisions shall be arrived at in an impartial, objective manner, and the evidentiary and legal basis for these decisions shall be provided at the time the decisions are issued. Both the Ministry, through its Annual Report, and the NCA are responsible to publish up-to-date industry information (based on operator reports and ongoing monitoring activities) and make available these available for public review. NCA shall also prepare a Strategic Plan which sets forth its objectives, priorities, and organisational plans, at least once every three years.

4.2 Licensing

In order to encourage maximum participation in the sector, the NCA's licensing and authorisation regime shall be simple, open, non-discriminatory, and transparent. There will be two types of authorisations to provide telecommunication services and to establish and operate telecommunications networks:

- (1) Individual Operator Licenses for international and domestic facilities-based public telephone networks and services, and for certain dedicated transmission networks providing public signal distribution, such as cable television systems; and
- (2) Class Licenses or Authorisations for non-facilities-based telecommunications services, including domestic and international resale services; and for private networks and facilities dedicated to closed user groups.

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In general, there shall be no limitations on the number of class licenses and authorisations issued by NCA for services subject to such authorisations. NCA may in certain instances introduce limits if it determines, consistent with this policy that additional licenses would not be in the public interest, as long as any such limitations are non-discriminatory vis-à-vis current operators in the market. Regarding individual licenses, the NCA shall determine, in consultation with the Ministry, the extent to which the number of licenses may be limited, subject to the provisions of this Policy in Section 2 above. Where use of scarce resources would be required, NCA shall exercise its regulatory authority over the allocation of such resources in connection with the issuance of licenses (see below).

The NCA shall, in consultation with the Ministry, determine the application criteria, procedures, and terms and conditions associated with each form of license or authorisation, consistent with the provisions of this policy. Conditions attached to licenses and authorisations may include the following:

- requirements related to the effective and efficient use of scarce resources such as radio frequencies, numbers and rights-of-way
- universal service obligations
- obligations related to interconnection of networks and interoperability of services;
- obligation to provide leased lines
- obligation to maintain network integrity, interoperability of services, data protection, and avoidance of harmful interference
- obligation to provide certain information to the regulator for regulatory and statistical purposes, and to make public certain non-proprietary information
- measures to prevent anti-competitive behaviour
- obligations related to consumer protection (such as billing, disputes settlement, change of access, tariffs, and other conditions)
- quality of service standards
- restrictions for customer privacy protection and fraud prevention
- obligations to provide customer data base information for a universal directory;
- provision of emergency services
- special arrangements for disabled persons
- social responsibilities of operators, such as commitment to equal opportunity employment and gender equality, and support for user training and public awareness campaigns.

NCA shall have the authority to monitor and enforce operator compliance with license conditions, and to issue such penalties as may be appropriate for non-compliance, including fines, non-renewal, and revocation of licenses for repeated non-compliance. In general, licensees shall be provided with a presumption of renewal upon termination of the duration of the original license, in the absence of non-compliance or other compelling reasons to deny renewal.

License fees

Where licenses are required, the NCA may establish license acquisition fees that are reasonable in relation to the cost of administration and regulation of the licensed services. A portion of license fees shall be retained directly by NCA to pay its reasonable operating costs, as determined by the Government upon submission and approval of the NCA budget.

In the case of licenses for mobile telephone service, which permit use of the scarce national resources of the electromagnetic spectrum, such fees may also take into account the value of such resources in the market and to the people of Ghana. For such licenses, a portion of the fees shall be allocated directly to support further development of the telecommunications sector, through contribution to GIFTEL or such other investment as NCA and the Ministry may deem appropriate. All fees will be published.

In general, the NCA shall not impose unreasonably high license fees that may deter market entry or limit operators' ability to invest in the rapid development of services. To ensure fair treatment of companies that have already been awarded licenses relative to new entrants that may pay much lower fees, the NCA may establish interim measures that provide temporary benefits or advantages to existing license holders, but only to the extent of compensating for the differential cost of market entry due to the license fees. For this purpose, the NCA shall consider the competitive advantage of earlier entry as a condition of potential compensation.

The NCA shall consider waiving or imposing only nominal license fees for specialised operators serving rural and low income communities, for non-profit organisations including community radio operators, and for service providers directly supporting educational, research and development activities, and for other initiatives, including national Internet Exchange Points, which will directly promote national development objectives consistent with this policy.

The processes and other specific terms and conditions of licensing and regulations shall be defined by NCA in formal Licensing Regulations and will include timelines for the processing of applications for license of both information and communication services, and broadcasting services, which should not exceed 90 days.

4.3 Competition Policy

The objective of competition policy is the establishment of a fair, transparent, and non-discriminatory telecommunications market environment. This section describes the

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general framework for the functions and responsibilities of the NCA, and of licensed operators, in achieving effective competition. Based on this policy framework, the NCA has the authority to define specific procedures, rules, regulations and administrative structure to ensure that competition policy is effective.

The first principle of this policy is to ensure an open provision and access to bottleneck network resources through a comprehensive interconnection and equal access regime that will guarantee access to all service providers and end users. The second principle is the determination of Significant Market Power (SMP) that will form the basis for competition regulation to ensure that operators with SMP provide non-discriminatory interconnection to bottleneck and scarce resources and that NCA has the jurisdiction and authority to mediate, resolve disputes and arbitrate as required.

The NCA will have the authority to determine the human and financial resources required in the effective application of this competition policy.

Interconnection

Companies licensed to operate public telecommunications networks and to provide public telecommunication services are obligated to provide interconnection, subject to negotiated commercial agreements. Such interconnection must be of adequate quality for purposes of transmitting traffic between subscribers of different networks. The NCA shall establish and administer an interconnection regime, which will be non-discriminatory and transparent, and will promote fair and effective competition for all operators, including cost-oriented charges for interconnection services. Operators may be free to negotiate interconnection agreements among themselves on such terms and conditions as they may choose, so long as such terms are non-discriminatory to other market participants, and consistent with the principles of this Policy. The NCA shall facilitate such negotiations, and encourage operators to achieve agreement in a timely manner.

In cases where parties are unable to reach satisfactory interconnection agreements through negotiations, the NCA shall intervene to determine interconnection terms, either through mediation or specific interconnection rulings. The NCA will establish general terms, conditions, and methodologies that it will apply in reviewing interconnection proposals, including the basis for determining interconnection charges. Such charges must be cost-oriented, and based upon the unbundled costs of network elements required for interconnection.

Operators with Significant Market Power in given telecommunications market segments are required to publish a Reference Interconnection Offer (RIO), indicating all conditions (price, technical, administrative, etc) of interconnection to their networks, which will be

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available to all potential interconnecting operators. Similarly situated operators must be provided interconnection on the same terms and conditions. This Reference Interconnection Offer must be approved by NCA, following review of its provisions. Other conditions and procedures for ensuring fair interconnection will be provided by NCA through formal Interconnection Regulations.

All interconnection arrangements shall include formal service level agreements between the parties which identify minimum quality of service standards that each party is obligated to meet in the provision of interconnection services, and the remedies and compensation terms for failure to meet such standards.

Equal Access

To the greatest extent possible, customers shall be afforded equal access to all competing service providers in a market, meaning that any customer should have the opportunity to choose among the services of all competing providers, without cost penalties or unduly burdensome technical barriers. Operators of dominant or bottleneck networks will be required to facilitate such equal access by any technical modifications that may be necessary. The costs of providing equal access will be shared on a non-discriminatory basis by all competitors.

Significant Market Power (SMP)

Operators with SMP shall be subject to competition regulation, as defined in this policy, due to their potential ability to adversely influence market competition.

Market definition is a pre-requisite for assessing competition in a market. The NCA will have the authority to establish criteria to define markets and market segments, including what products and services are relevant and their geographic dimension.

The NCA will define regulations to establish what constitutes Significant Market Power constitutes, but in general SMP will be determined to exist for an organisation providing telecommunications services that controls at least 40% of a relevant market segment, absent an NCA determination of a different standard in specific cases. The NCA will determine the methodology to determine SMP which may include analysis of market shares, control of infrastructure, technological advantages, absence of competition, privileged access to financial resources, bundling of services/products, economies of scale, scope, vertical and /or horizontal integration, distribution network(s), links with other markets and collusion issues.

The NCA will have the authority to determine the process, decision-making procedures and methodology for adoption of final decisions and for management of appeals related

to the application of SMP regulation. The NCA will have jurisdiction and authority to investigate abiding by the principles of transparent regulation and public consultation stipulated in section 4.1., and to seek co-operation with other agencies or organisations. NCA shall have full authority to solicit and obtain from all licensed operators, in a complete and timely manner, the market information that it requires to evaluate market conditions and the relative position of each operator.

The NCA will have authority and jurisdiction over decisions and/or remedies, which may include structural and accounting separation of operators and organisations in cases where SMP is deemed to infringe on effective competition.

Specifically, Ghana Telecom shall be considered, *a priori*, to have SMP in the market for basic telephone services, and accordingly NCA shall initiate a proceeding to effect structural separation of GT's Internet and mobile telephone operations by the end of 2005.

NCA decisions with regard to the determination of SMP can be appealed. Final decisions by the NCA with regard to SMP are binding.

Mediation, dispute resolution and arbitration

Mediation will always be the required first step when disagreement exists between operators. The NCA may facilitate mediation resources or operators may seek such mediation through a neutral third party. Demonstration of a comprehensive mediation effort is necessary before a disagreement is brought before the NCA for dispute resolution.

NCA shall have jurisdiction to resolve disputes among competing operators in all matters, especially those related to negotiation of interconnection arrangements or allegedly anti-competitive practices. All rulings on competitive disputes will be transparent and non-discriminatory, and will be resolved in the shortest time possible. NCA shall issue formal regulations setting forth the procedures and requirements for dispute resolution proceedings. In instances where NCA decisions are appealed, the initial rulings shall be binding upon all parties unless and until reversed on appeal.

All costs of mediation, dispute resolution and /or arbitration will be the responsibility of the operators involved.

4.4 Spectrum Management

The NCA shall be responsible for efficient management of the electromagnetic spectrum in Ghana, in recognition of the public interest in appropriate allocation and use of this

scarce resource. These responsibilities include planning for and allocation of frequency ranges, consistent with international conventions and standards; assignment of specific frequency bands to authorised public operators and private users; and monitoring of the proper use of radio transmissions within the scope of frequency authorisations. All spectrum management activities and frequency assignments shall be transparent and non-discriminatory.

As technology and the market change, and new frequency bands may become available for use, NCA shall periodically review the allocation of the spectrum in Ghana, and may reallocate frequencies consistent with international standards and the interests of Ghana's telecommunications industry and consumers.

The NCA shall establish a fair and proportionate scheme of recurring fees for ongoing spectrum use, as distinct from initial license acquisition fees as discussed in Section 4.2. These fees will reflect the cost of administering, controlling, and enforcing this use, and shall not be unduly burdensome to telecommunications operators authorised to utilise frequency bands. Fees for non-profit, community radio and other public service operators shall be reduced or waived to encourage cost-effective deployment of such operations.

In the ongoing implementation of its spectrum management functions, the NCA will consult regularly with representatives of users of spectrum in Ghana, including national security agencies, operators of wireless networks (including licensed mobile services carriers and other telecommunications operators), broadcasters, and civil aviation. All important decisions concerning planning, allocation, and general policy concerning the radio frequency spectrum shall take into account consultations with these users and with the public.

4.5 Facility Sharing

In order to ensure fair competition, to minimise cost and public inconvenience, and to protect the environment, access to public rights-of-way, towers, telephone poles, underground conduits, international cable landing stations, and other physical support structures will be shared among operators to the greatest extent possible. The owner of a shared facility will be responsible for its maintenance and for the connection and engineering of other occupiers' equipment.

NCA shall have jurisdiction and authority to ensure that operators have reasonable and timely access to necessary public rights of way, subject to appropriate local safeguards and operator liability for costs and damage. Shared use and related costs will be allocated equitably among all operators occupying a facility. The NCA shall facilitate and review negotiations concerning the terms and conditions, including cost allocation,

for such shared uses. The NCA shall also establish requirements to allow competing operators to co-locate their equipment on each others' premises, under competitively neutral terms and conditions.

The NCA is also responsible for ensuring that access to international transmission capacity, whether via the SAT-3 cable or via satellite transmissions is made available to all licensed international gateway service providers in a cost-based, transparent, and non-discriminatory manner.

4.6 Tariffs

NCA is responsible for regulation of the tariffs of services provided by dominant or monopoly telecommunications operators (Operators with Significant Market Power), where market forces are insufficient to constrain service pricing. The NCA's tariff regulation practices shall aim to establish cost-oriented prices for all regulated services. Where current tariffs are significantly out of balance with respect to costs, the NCA shall promote and monitor the phased rebalancing of such tariffs, subject to considerations of affordability (see below). The NCA shall also ensure that operators' tariffs do not lead to anti-competitive cross-subsidy of competitive services by monopoly or dominant operators, or other market distortions that inhibit fair and effective competition.

Tariffs in market segments where there is, in the NCA's determination, effective market competition (i.e., no carrier possesses significant market power) will be deregulated or subject to forbearance, requiring only informational filings and requirements for adequate customer notice of tariff changes and other consumer protection provisions. NCA shall establish procedures for determining where tariff deregulation or forbearance is appropriate.

All tariff determinations must take account of the interests of consumers of services, especially those with lower incomes. In the interests of Universal Access objectives, the NCA shall consider such measures – including targeted discounts – that may ensure that basic telephone and information services are reasonably affordable to all citizens.

Tariffs for public telephone services provided by any licensed operator which include charges that are based upon the timed duration of such calls shall be based upon the actual connect time of calls. NCA shall initial a proceeding to establish strict requirements that billing for calls shall be made in no greater than fifteen-second increments by the end of 2004, and in one-second increments by the end of 2005.

4.7 Consumer Protection

Quality of Service

The NCA shall ensure that the telecommunications services of licensed operators are of adequate quality to meet the needs of users, and shall establish standards and regulations to monitor service quality. Licensed and authorised operators will be required to submit periodic reports on their performance according to NCA determined standards, and the NCA will be empowered to verify these reports through independent investigation.

All public telecommunications operators shall be required to establish service level agreements with their customers, which identify the minimum quality of service standards to which customers are entitled, and the remedies and compensation available when service falls below such standards.

Technical standards to be covered by service quality provisions may include the bandwidth and signal quality of transmission networks; connect failure rates and measures of network congestion; incidence of customer outages and average repair times; and such other indicators as the NCA may establish. The NCA shall publicise the Quality of Service performance of operators on a region-by-region basis, and may establish specific requirements for compensation and recourse where required standards are not met.

The NCA shall also establish policies to require that operators and service providers respond appropriately to customer complaints and inquiries, and provide reasonable and convenient access to customer service representatives.

Fraud Prevention, Privacy Protection

The NCA is responsible for protecting consumers of telecommunications services from unfair and deceptive marketing practices, and from unwarranted use of private customer information. The NCA shall establish regulations for monitoring and preventing such behaviour, including such penalties for operators who violate these standards as the legislature may authorise. The NCA shall establish formal complaint review procedures, and shall require all licensed and authorised telecommunications operators and service providers to establish their own procedures for responding to customer complaints. The NCA shall also implement a public awareness campaign to inform customers of their rights and options, and to publicise its activities and invite public participation.

V. Universal Access to Communications

Universal access and universal service policy (universality policy) are key instruments to the development of the information and communication sector and to promote social and economic development in the Republic of Ghana. The Government considers universal access and universal service to information and communication a fundamental right of every citizen. The Government recognises that demands of equity and access to marginalised groups and communities, may in some cases be inadequately addressed by market forces, and therefore affirmative policies and initiatives shall be pursued to ensure such access.

5.1 Principles and Objectives of Universal Access

For purposes of this Policy, universal “access” to telecommunications is defined as the availability, through broad geographic coverage, of community-based broadband information and communication services that include voice, data services, access to the Internet, local relevant content, community radio and Government services, that are available, affordable, and of high quality, for all citizens of Ghana. It also includes signal coverage of mobile and broadcast networks throughout remote regions. The Government will promote universal access or community access especially in primary and secondary schools and universities, community health facilities and hospitals, telecentres and any other public or private community centres.

Universal “service” is defined as telecommunications services delivered to households or individuals, which may consist of both basic traditional telephone services, and broadband information and communication services that include voice, data services, access to the Internet, local relevant content and government services, that are available, affordable and of high quality.

The ultimate objective of this Policy is to achieve universal access to telecommunications, according to the above definition, throughout all regions and communities in Ghana, by the year 2010 or before. Simultaneously, the Government’s goal is to expand universal service penetration to at least 25% of the population within the same time period, which shall include at least 10% penetration in rural areas. All policies, regulations, and public-private initiatives within this Policy shall be geared toward achieving these targets.

5.2 Obligations and Responsibilities of Licensed Operators

In accordance with the above objectives, the NCA may establish specific obligations and responsibilities for all licensed telecommunications operators in Ghana, to ensure that movement toward universal access and service goals is a common goal of all participants

in the market. The nature and the degree of each type of operator's obligations may vary, except that competing operators in the same market may not be subject to different levels of obligations to support universal access that would result in discriminatory treatment of one competitor versus another. Network operators will be obligated to interconnect their networks with any service provider that establishes service in areas served by those operator networks, and shall not impose discriminatory or unduly burdensome terms and conditions for such interconnection.

5.3 Ghana Investment Fund for Telecommunications (GIFTEL)

GIFTEL has been established as an investment fund for collecting financial contributions from telecommunications sector licensees, which shall be distributed to promote universal access and universal service.

Every operator that has been either licensed and/or authorised by the NCA will have specific options and scope of contributions as defined in their respective license and/or authorisation. Contributions to GIFTEL will not replace, diminish or affect in any way separate obligations from each licensee, such as licensing or spectrum fees.

Contributions to the GIFTEL will begin effective in January 2005 and will be subsequently harmonised with the beginning and end of each fiscal year.

Use of funds

GIFTEL's primary responsibility shall be to facilitate partial investment funding to companies and entrepreneurs willing to implement eligible projects in under-served areas. Eligible projects are those that are deemed by the fund's management to improve human resource development in ICTs, that will develop and deploy access to infrastructure and services, which will provide delivery of government services and develop relevant local content and applications. GIFTEL funds shall not be utilised in locations where commercially viable services are available.

All and any funding from GIFTEL will be allocated on a competitive basis and through a competitive bidding process that will be open to the public in timely manner. The general principles of public-private-partnerships will be followed in the allocation of funds, which will require a minimum number of bidders per potential project, even in the event that a sole enterprise or individual has submitted an initial proposal for a particular project.

Funds from GIFTEL will be allocated only to support initial capital investments and start-up costs in funded projects, subject to performance guarantees and safeguards to ensure that funds are only spent as designated. GIFTEL funds may be used as quasi-

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equity to obtain additional financing for the same project, including for the implementation of any aspect of the project as stated in the approved business plan of the eligible project.

Use of funds for a particular project will be approved based on the successful assessment of its long-term financial sustainability and its ability to demonstrate that it will effectively contribute toward the objectives of this Policy. This assessment will include a measure of the degree to which local indigenous knowledge and languages are included, and local community leaders and local entrepreneurs, as well as socially disadvantaged groups, including youth and women, participate as stakeholders. Allocation of universal access projects will be made on a non-discriminatory basis, to the party with best identifiable ability to implement and maintain the project over its life period.

GIFTEL will prioritise projects in under-service areas that seek to increase basic rural connectivity, access to broadband services, development of relevant local content and of government services. The establishment of multi-purpose community tele-centres (MCTs) and /or community media centres combining community broadcasting with Internet services in under-served areas is also greatly encouraged and will receive priority allocation.

Monitoring and evaluation

Projects that are subsidised through GIFTEL will be independently monitored and evaluated on an ongoing basis, to ensure the universal access targets are met. Every project subsidised by GIFTEL will have reporting requirements.

Management of GIFTEL

Management of GIFTEL will be done according to the highest standards of good governance.

GIFTEL will be managed by a joint government and private sector enterprise, which will have the ability to hire competitive and professional staff to be paid at rates competitive with the private sector. The Board of the GIFTEL will consist of members of Government, including the Ministry, as well as the NCA, and representatives of contributing telecommunications industry companies.

The Board of GIFTEL will also have an advisory committee that include representatives of community, non-profit, and other stakeholders. The Board shall be appointed by the Government no later than the end of 2004, whereupon the Board shall appoint a Secretariat, and establish operating procedures for GIFTEL. Contributions from

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licensed operators may be required to be made to a Government-designated escrow fund until such time as the GIFTEL accounts are established and operational.

Acknowledgements

- 1. M.O.C. Policy Group**
- 2. NCA Policy Group**
- 3. Parliamentary Select Committee on Communications (3rd Parliament 4th Republic)**
- 4. ICT Policy group**
- 5. DNTA & Associates**