



Communications
Commission
of Kenya

Annual Report 2008/2009



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MISSION

To facilitate access to communications services through enabling regulation and catalyze the country's socio-economic development.

VISION

Access to communications services by all in Kenya by 2030.



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Acronyms & Abbreviations

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ASP	Applications Service Provider	ISP	Internet Service Providers
BPO	Business Process Outsourcing	IT	Information Technology
BTS	Base Transmitter Stations	ITU	International Telecommunication Union
CA	Consumer Affairs	KACC	Kenya Anti-Corruption Commission
CCK	Communications Commission of Kenya	KBC	Kenya Broadcasting Corporation
CDMA	Code Division Multiple Access	LA	Legal Affairs
CEP	Consumer Education Outreach Programme	LCS	Licensing, Compliance and Standards
CPR	Communication and Public Relations	LLO	Local Loop Operator
CS	Commission Secretary	NFP	Network Facilities Provider
CSP	Contents Services Provider	PAPU	Pan African Postal Union
CSR	Corporate Social Responsibility	PCK	Postal Corporation of Kenya
CTMA	Competition, Tariffs and Market Analysis	PROC	Procurement
CTO	Commonwealth Telecommunications Organization	RFID	Radio Frequency Identification
DCNO	Data Carrier Network Operator	SMS	Short Message Service
DTC	Digital Television Committee	SP & B	Special Projects and Broadcasting
DVB-H	Digital Video Broadcasting - Handheld	TEAMS	The East African Marine System
EARPTO	East African Regulatory, Posts & Telecommunications Organization	TKL	Telkom Kenya Limited
ESAMI	Eastern and Southern Africa Management Institute	UAE	United Arab Emirates
FA	Finance and Accounts	ULF	Unified Licensing Framework
FONN	Fibre Optic National Network	UPU	Universal Postal Union
FSM	Frequency Spectrum Management	USAID	United States Agency for International Development
GDP	Gross Domestic Product	USTTI	United States Telecommunications Training Institute
HRA	Human Resources and Administration	VCT	Voluntary Counselling and Testing
ICT	Information and Communications Technology	VoIP	Voice over Internet Protocol
IMIS	Integrated Management Information System	VSAT	Very Small Aperture Terminal
IPTV	Internet Protocol Television	WRC	World Radiocommunications Conference
		WSIS	World Summit on the Information Society



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Board of Directors



Hon. Eng. Philip Okundi
(Chairman)

Hon. Eng. Philip O. Okundi is the Chairman of the Board of Directors of the Communications Commission of Kenya. He was appointed in October 2008. He holds a Msc. in Telecommunications Systems Engineering from the University of Essex and a BSc. in Electrical and Telecommunications Engineering from the University of Westminster. He is a fellow of the Institution of Engineers of Kenya and the UK, a registered Engineer and a Chartered Electrical Engineer (UK).



Charles C. J. K. Njoroge
(Director-General)

Mr. Charles J.K. Njoroge is the Director-General and Chief Executive Officer of the Communications Commission of Kenya (CCK). He holds an M.A in Development Economics from Dalhousie University, Canada, a B.A in Economics from the University of Nairobi, Kenya, and a Postgraduate Certificate in Telecommunications Regulation from the University of Westminster, United Kingdom (UK). Mr. Njoroge was appointed Director General on 21st July 2008.



Joseph K. Kinyua
(Director)

Mr. Joseph K. Kinyua is the Permanent Secretary in the Ministry of Finance. He holds a bachelor's and master's degrees in Economics from the University of Nairobi.



Dr. Bitange Ndemo
(Director)

Dr. Bitange Ndemo is the Permanent Secretary in the Ministry of Information and Communications. He holds a PhD in Industrial Economics from the University of Sheffield in the UK, an MBA and Bachelors degree in Finance and Accounting from the University of Minnesota, U.S.A.



Francis Kimemia
(Director)

Mr Kimemia is the Permanent Secretary in the Office of the President in charge of Internal Security.



Eunice M. Ombati
(Director)

Ms. Maranya-Ombati holds an MBA from the United States International University-San Diego and a BSC in Agriculture from the University of Nairobi. She is serving her first term having been appointed to the CCK Board in November 2007.



Sheila Kiambati
(Alternate Director)

Ms. Sheila Kiambati is the Deputy Secretary in the Ministry of Finance. A Bachelor of Arts graduate of the University of Nairobi, Ms Kiambati also holds a postgraduate diploma in Financial Management. She has undertaken a host of other courses in both local and overseas institutions. She is the Alternate Director to the Permanent Secretary in the Ministry of Finance.



Joe Kamau
(Director)

Mr. Joe Kamau holds an MBA in Finance from the USA. He also has done various post-graduate courses in International Business. Mr. Kamau was appointed to the CCK Board in November 2007 for a three-year term.



Johnson S. Musengi
(Director)

A professional computer programmer, Mr Musengi holds a postgraduate diploma in Maritime Studies and Port Operations from the University of Wales. Mr. Musengi is serving his second term at the CCK Board. His first appointment to the CCK Board was in August 2003.



Alice Munyua
(Director)

Ms Munyua holds an M.A. in Social Communications from the Pontifical Gregorian University in Rome, Italy, and has also trained in gender mainstreaming, Internet law and negotiation skills at various reputable institutions. She is serving her second three-year term at the CCK Board. She joined the CCK Board in May 2005.



Kariithi Njogu
(Director)

Mr Kariithi holds two MSc. degrees in Human Biology and in Management and Organization Development from Loughborough University of Technology in the UK. He is serving his second term having joined the CCK Board in October 2006.



John Omo
(Commission Secretary)

Mr. John Omo holds a Master of Laws degree from the University of Sheffield, UK, and a first degree in Law from the University of Nairobi. He is the Secretary to the Board and Head of the Legal Affairs Department at CCK.



Patrick M. Musimba
(Director)

Mr. Musimba is the Managing Director of Musimba Investments Ltd, a consultancy firm in the mobile telephony sector. He is a PhD candidate in Entrepreneurship and Development at the Jomo Kenyatta University of Agriculture and Technology. Mr. Musimba retired from the CCK Board in October 2008.



Henry Mung'asia
(Alternate Director)

Mr. Henry M. Mung'asia is the Deputy Secretary in the Ministry of Information and Communications. A Bachelor of Arts (Hons) graduate of the University of Nairobi, Mr. Mung'asia has undertaken courses in Advanced Public Administration (APA) and in National Defense at the Kenya Institute of Administration and the National Defense College, respectively. He is the Alternate Director to the Permanent Secretary in the Ministry of Information and Communications.



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Chairman's Overview

On behalf of the Board of Directors, I am pleased to present to you the Commission's annual report for the year ended 30th June 2009 as required under Section 22(1) of the *Kenya Communications Act, 1998*.

This year is especially significant as the Commission attained 10 years of operational age. In the last 10 years, there has been significant growth in the performance of the ICT sector as exemplified by the growth in the mobile telephony sub-sector industry where the levels of subscription grew from a mere 20,000 subscribers in 1999 to the current 17.4 million subscribers. The number of operators offering mobile telecoms services now stands at four with the entry of Essar Telecoms (YU) and Telkom Kenya Limited (Orange) into the market.

The postal and courier industry is estimated to have grown in value from Kshs. 4.1 billion to Kshs. 10 billion between 2001 and 2009 and, is poised to be worth more than Kshs. 17 billion by 2012. The Internet industry is expected to witness unprecedented growth with the landing of the East African Marine System (TEAMS) and SEACOM cables during the year under review. The two cables shall link the country and the region to the rest of the world through

experience in regulating e-commerce, broadcast signal distribution and broadcast content regulation.

In the year under review, the Commission also embarked on an aggressive consumer education programme aimed at equipping consumers with the necessary knowledge on their rights and obligations, and how to safeguard them.

The Commission also attained ISO 9001:2000 certification in Quality Management System. The certification reflects improvement in the Commission's processes and procedures which is expected to translate to better service delivery to both consumers and licensees.

The Commission ensured that Kenya remained not only visible but also an active player in the international arena. In this regard, Kenya chaired the Universal Postal Union (UPU) Congress held in Geneva in July 2008. Kenya was also elected by that Congress to chair UPU's Council of Administration (CA) for the 2008-2012 cycle. The UPU Congress further chose Kenya as the host of the UPU Postal Strategy meeting in 2010. This Strategy meeting will double up as mid-term review of the implementation of the Nairobi Postal Strategy adopted at the last UPU Congress in 2008.

Kenya, further won the bid to host the next round of the Internet Corporation for Assigned Names and Numbers (ICANN) meetings to be held in March 2010. Holding this meeting in Kenya will, among other benefits, proffer a chance to showcase the Government of Kenya's achievements in the Information and Communications Technology (ICT) sector.

In conclusion, I would like to thank the Government, stakeholders and the general public for their overwhelming support during the year. I also wish to extend my sincere thanks to all our stakeholders for the invaluable support accorded to the Commission during its first ten years of existence. I wish to acknowledge the dedicated service of the Board and the staff of the Commission who have overseen the growth of the Commission from its infancy to what it is today. The Commission's achievements to date are by no means nominal, and I wish to assure all our stakeholders that the Commission will remain committed in facilitating growth, access and innovations in the ICT sector. We look forward to a dazzling and fruitful future together.

Hon. Eng. Philip O. Okundi, HSC



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The Commission attained ISO 9001 : 2000 Certification in Quality Management System

high speed broadband connectivity. As a result, Internet uptake and connectivity are expected to improve dramatically thanks to cheaper bandwidth.

The Kenya Communications (Amendment) Act, 2009, expanded the Commission's regulatory mandate to include broadcasting services and electronic transactions. The Act also established the Universal Service Fund (USF), which will go a long way in facilitating provision of communications services in the country, particularly to unserved and underserved areas.

During the year under review, the Commission initiated the process of operationalizing the Act. To enhance the Commission's capacity to effectively deliver on its expanded mandate, the Commission's Board went on a benchmarking visit to Spain to learn from Spain's



Director General's word

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The year under review was quite challenging as the economy had to contend with the adverse effects of the global economic meltdown, and the post-election violence which spilled over to the first quarter of 2008. These two developments had a slackening impact on the performance of the communications industry, with the sector recording its first contraction since liberalization 10 years ago.

In this regard, the growth of the Transport and Communications sector slowed down to 3.1 per cent compared to 15.1 per cent in 2007. As a result, the sector accounted for 10.2 per cent of total GDP in 2008 compared to the 10.6 percent in 2007. However, the outlook for the communications sector in 2009 is promising as the economy is expected to grow by between 2.0 to 3.0 per cent largely on the back of activities in the ICT sector.

During the year under review, the mobile telecommunications sub-sector maintained its growth trend. It dominated the telecommunications market by posting an increase of 53 percent in the subscriber base to stand at 17.4 million in June 2009 up from 11.4 million in 2007.

The industry witnessed increased investments due to the roll-out of services by Telkom Kenya and Essar Telecoms during the year. As a result of the entry of more players, the mobile telephony market experienced increased competition which led to a significant decline in tariffs and increased access and affordability to communications services. During the year, mobile penetration increased from 30.5 per cent to 46.8 per cent. The mobile telecommunications industry also continued to spearhead innovations in the sector as exemplified by the expansion of mobile money transfer. This service has transformed the money transfer market by enabling the un-banked to access financial services. The communications sector, therefore, continued to act as a stimulant for growth in other sectors of the economy.

To facilitate fair competition in the market by ensuring end users retain their subscriber numbers when changing service providers, service types and/or locations, the Commission initiated consultations to introduce number portability. The Commission received responses from key stakeholders, including operators, manufacturers, vendors, consumers and the general public. Further consultations will be held in the coming year to help develop effective number portability regulations.

Internet penetration remained at a low of nine per cent as at December 2008. The Internet is among the least accessible telecommunications services in the country. The cumulative number of Internet users

increased from 2.9 million in 2007 to 3.4 million in 2008, representing an increase of 17.2 percent. The low uptake of this service is attributed to lack of infrastructure, high Internet prices and lack of relevant local content. The completion of the national broadband infrastructure and the landing of international fibre optic cables are expected to reverse the situation and to mainstream the Internet into all facets of socio-economic development.

During the year under review, the Commission embarked on the process of preparing licences and regulations with a view to bringing the *Kenya Communications (Amendment) Act, 2009*, into operation. The Commission further suspended the processing of broadcast applications, pending completion of the aforementioned exercise. The regulations and licensing frameworks and instruments are expected to be put in operation in the next financial year.

The Commission continued to play an active part in national efforts geared towards transition to digital TV broadcasting. The process of transition from analogue to digital TV broadcasting is expected to

**This year is especially significant
as the Commission attained 10
years of operational age**



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increase efficiency in the use of the radio spectrum resources and boost the production of local content. The Commission is a member of the Digital Migration Committee (DTC), which is mandated to develop recommendations for effective implementation of digital broadcasting in Kenya.

The postal and courier market segment on the other hand, continued to register positive growth as demonstrated by the expansion of outlets, and number of licensed courier operators. The number of private operator courier outlets increased from 606 in 2007/08 to 622 in 2008/09, while the number of licensed postal operators increased to 164 from 148 in the previous year.

The Commission hosted the first Postal and Courier stakeholders' Forum in March 2009, which brought together stakeholders in the industry to exchange views on how to improve the regulatory environment and inform the policy making process. The Commission shall endeavour to convene the Forum every year.



Director General's word

To attune the regulatory environment to global best practice in a rapidly changing technological landscape, the Commission carried out research on new and emerging Information and Communications Technologies and their impacts. In this regard, studies were carried out in the following areas: Rural Telecommunication Technologies; communications and E-waste; implication of Wimax inclusion as a 3G technology on licensing; spectrum trading; Internet Protocol Television (IPTV); spectrum pricing; ICT and climate change; cyber security as well as an audit on Next Generation Networks.

To enhance operational efficiency and the level of transparency, the Commission began the process of implementing an Integrated Management Information System (IMIS). The System is also aimed at centralizing information within the Commission through the creation of a single database. During the year, the integration of existing systems for Finance and Accounts, Spectrum Management, and Human Resources management systems were successfully completed. The IMIS project is expected to be completed in the next financial year.

To equip consumers with skills, information and knowledge to enable them make informed decisions regarding the choice of products and services in the communications market, the Commission launched a two-phased Consumer Education Outreach Programme (CEP) dubbed "Chukua Hatua". The Campaign saw the Commission take information to the people in various regions of the country through road shows and public lecturers.

To ensure compliance with licence conditions, the Commission carried out regular countrywide inspections on licensed facilities in the entire communications sector. The inspections revealed that most of the inspected licensees were compliant with the terms and conditions of their licences. The inspections also revealed a notable improvement in quality of service in the postal/courier market, with most of the mail being delivered within the stipulated delivery standard. The Commission shall continue to carry out regular inspections with a view to protecting the interests of consumers.

The year under review was momentous in respect to universal access. *The Kenya Communications (Amendment) Act, 2009*, was enacted with a provision for the creation of a Universal Service Fund (USF).

The Commission, therefore, initiated the process of operationalizing the Fund, which is recognized globally as an effective mechanism of enhancing accessibility, availability and affordability of ICT services

in underserved areas. The Commission also initiated an additional Universal Access project focusing on People with Disabilities. The process of identifying eight beneficiary institutions for people with physical, hearing and visual impairments for provision of ICT assistive equipment was successfully completed during the year. In line with its long-term objective of facilitating affordability by aligning service prices to the cost of providing such services, the Commission implemented the third and final phase of its 2007 interconnection determination. As a result, mobile and fixed termination rates fell from Kshs. 5.27 to Kshs. 4.42 and Kshs. 1.65 to Kshs. 1.61, respectively. The overall impact of these interconnect rate reductions was a general decrease in calling rates for mobile services across the various tariff plans.

The Commission entered into partnership with the Kenya Institute of Education (KIE) in a project geared towards digitisation of the KCSE curriculum. This land mark project will enhance e-learning in the country and provide an incentive for teachers and students to access educational information and materials using ICTs. Eleven (11) subjects for Form One curriculum were digitized and piloted around the country.

The Commission also partnered with other stakeholders in Qualcomm's Wireless Reach Programme in a pilot project in support of e-health initiatives. The project involves computerization of the re-supply of ARV pharmaceuticals in health centres in Nairobi.

During the year under review, the Commission joined hands with the Radiation Protection Board (RPB) to carry out joint measurements of electromagnetic emissions from radio-communication installations to ensure that they do not exceed safe limits. The Commission also acquired additional portable equipment for radio frequency spectrum interference resolution.

To keep pace with the fast changing ICT industry, the Commission facilitated training for its staff through partnerships with intergovernmental and international organizations. The Commission's staff attended a vast array of courses on policy and regulation, professional courses, management and organization change, among others.

In recognition of the importance of a healthy workforce, the Commission implemented activities aimed at continued promotion of HIV and AIDS awareness and behaviour change among its staff. To promote a healthy and secure working environment, the

Commission undertook various measures including installation of a Closed Circuit Television (CCTV) Network and a fire suppression system in the CCK Centre building and all the Radio Spectrum Monitoring System (RSMS) Stations.

During the year under review, the Commission also put in place an Anti Corruption Policy, Corruption Prevention/Integrity Committees and introduced a Code of Conduct as well as Integrity Training and Corruption Prevention Plans. In recognition of its commitments in the fight against corruption, the Commission was awarded the Public Sector Integrity Award by Government.

As part of its Corporate Social Responsibility (CSR) programme, the Commission sponsored and participated in various activities including the Mater Heart Run. In collaboration with the Nurses Association of Kenya (Kenyatta National Hospital branch), the Commission carried out a medical camp for the community around the Huruma Children's Home in Ngong, Nairobi.

On the international front, the Commission participated in various meetings and fora in accordance with its role as the designated government representative to various intergovernmental organizations dealing with ICTs. The Commission also met all its obligations to the said organizations during the period under review.

The Commission hosted delegations and meetings in the country during the year. These included delegations from the Ugandan, Rwandan, Zambian and Ethiopian communications regulators on benchmarking missions. International meetings hosted by the Commission included the 26th Ordinary Session of the Pan African Postal Union (PAPU), Administrative Council and CTO's "Connecting Rural Communities" Conference.

The achievements of the Commission in the year under review and the last decade would not have been possible were it not for the dedicated staff and dynamic CCK Board. The Ministry of Information and Communications continuously provided unwavering support and goodwill. I also wish to thank the industry and private sector for continued investment in the sector and deployment of services to the public.



Charles J.K. Njoroge



Take a journey with CCK

as we look at the milestones over the last 10 years of service to the Kenyan and international community.



Groundbreaking Ceremony for the
CCK Headquarter
building on Waiyaki Way.



Award of GSM licence to
ECONET Wireless.

2000

2001

2002

2003

2004

Award of the 2nd GSM Mobile
licence to Kencell Communications
Ltd in January 2000.



African Advanced Level
Telecommunications Institute
(AFRALTI) launched as a regional
centre of excellence.



Commissioning of Radio Spectrum
Monitoring System at the CCK
Centre.





Award of International Voice Gateway licence to Celtel (K) Ltd.



Official opening of the postal exhibition during the 24th Universal Postal Union (UPU) Congress in Geneva, Switzerland.



Landing of TEAMS cable in Mombasa.

2005

2006

2007

2008

2009

Award of modified ISPs licences.



Award of the 3G licence to Safaricom.



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Corporate Governance

Governance of the Commission is vested in the Board of Directors whose powers are set out in the *Kenya Communications Act, 1998*. The Board is tasked with the twin functions of decision making and oversight. To this end, the Board provides leadership and vision for the Commission in fulfilment of its statutory mandate.

Role of the Board

In the discharge of its functions, the CCK Board is guided by the Board Charter, which lays down the functions and responsibilities of the Board. The principal role and responsibility of the Board is to establish long term goals for the Commission and ensure that effective plans are developed and implemented within a commonly agreed organizational structure. This entails among others:

- Determining the vision, purpose and values of the Commission;
- Ensuring that the Commission's management puts in place structures to achieve the Commission's purposes and objectives;
- Identifying and managing key risk areas;
- Setting targets, monitoring performance and determining the key performance indicators of the Commission;
- Ensuring preparation of financial statements and reports, communication and disclosure of information to the stakeholders; and
- Assessing its performance and effectiveness as a whole and that of individual directors.

Composition of the Board

The Commission's Board comprises eleven Directors. The day-to-day running of the Commission is in the hands of the Director General, who is an ex-officio member of the Board.

Directors possess, among other attributes, the following skills, competencies and experiences: sound business judgment and acumen; integrity; knowledge, understanding and experience in the law, customs and values that govern activities of the Commission; independence of thought and time to devote to the Commission.

Board Meetings

The Board is expected to meet at least four times within the year but, due to the nature of its work is forced to meet much more often. There were 11 full board meetings, in the year under review.

Board Committees

Section 9 of the *Kenya Communications Act, 1998*, authorizes the Board to delegate any of its functions or duties to any committee of the Board or any member, or agent of the Commission. The Board, therefore, has four standing committees: Finance Committee; Audit Committee; Staff Matters Committee; and the Technical Committee. Board and Committee agendas are structured in such a manner as to assist the Board meet its responsibilities.

The Finance Committee is responsible for, among others, accounting and financial management policies of the Commission. This Committee met twice in the year under review.

The Audit Committee, among other things, reviews internal and external audit reports and recommendations to ensure that where major deficiencies or breakdowns in controls or procedures have been identified, appropriate and prompt remedial actions are taken by management.

The Staff Matters Committee is responsible for, among others, the development of human resources and related policies and their implementation. This Committee met four times during the year under review.

The Technical Committee deals with technical issues such as the granting of licences. The Committee met five times during the year under review.

Induction and Continuing Education

Management provides an orientation programme for new directors. The programme includes presentations on the functions of the various departments in the Commission, its compliance programmes, Code of Conduct, management structure and, internal and external audit programmes as well as directors' rights, duties and responsibilities.

The directors undergo training on corporate governance and communications regulation. Directors also attend local, regional and international conferences, workshops and benchmark visits to other jurisdictions to gain better insights into global best practices in ICT regulation.

(Continued on page 15)



TODAY'S NEWS

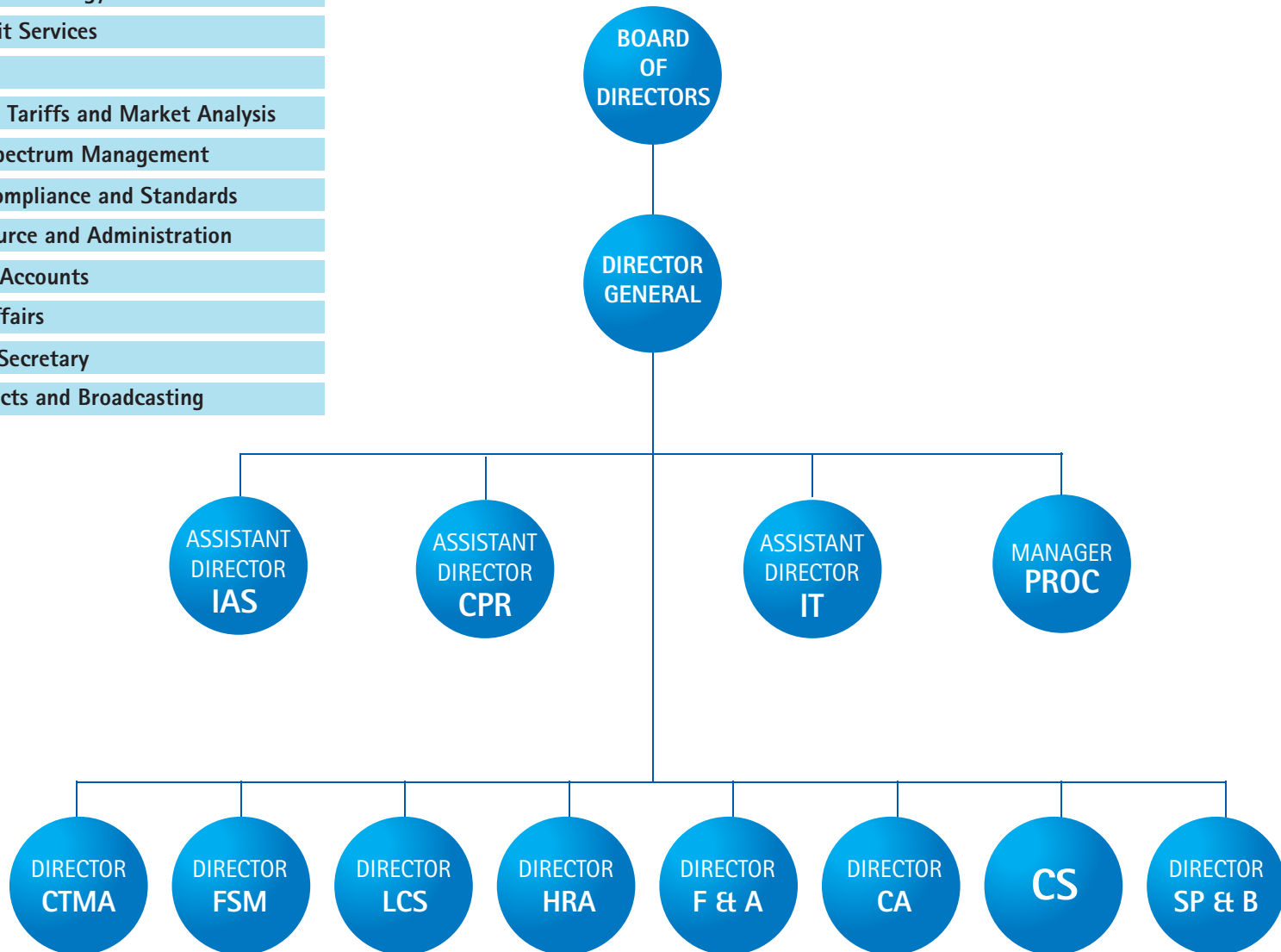
TONIGHT



Organizational Structure

KEY

CPR	Communication and Public Relations
IT	Information Technology
IAS	Internal Audit Services
PROC	Procurement
CTMA	Competition, Tariffs and Market Analysis
FSM	Frequency Spectrum Management
LCS	Licensing, Compliance and Standards
HRA	Human Resource and Administration
F & A	Finance and Accounts
CA	Consumer Affairs
CS	Commission Secretary
SP & B	Special Projects and Broadcasting



Commission's Mandate

The Communications Commission of Kenya (CCK) is the regulatory authority for the communications sector in Kenya.

Established in 1999 by the *Kenya Communications Act (KCA) No. 2 of 1998*, CCK's initial mandate was regulation of the telecommunications and postal/courier sub-sectors, and the management of the country's radiofrequency spectrum.

In recognition of the rapid changes and developments in technology which have blurred the traditional distinctions between telecommunications, Information Technology (IT) and broadcasting, the Government enacted the *Kenya Communications (Amendment) Act, 2009*, in January 2009. This statute enhanced the regulatory scope and jurisdiction of CCK, and effectively transformed it into a converged ICT regulator.

CCK is now responsible for facilitating the development of the information and communications sectors (including broadcasting, multimedia, telecommunications and postal services) and electronic commerce.



CCK Board members Matei Ndeti (left) and Joe Kamau (right) join the CCK Director-General to water a young plant moments after planting it during a staff event held at the CCK grounds.

(Continued from page 12)

In the year under review, four directors undertook a benchmarking mission to Spain. The aim of this trip was to learn from a well established regulatory authority in light of the Commission's expanded regulatory mandate to include broadcasting and electronic transactions.

CHAPTER 1

Macroeconomic Environment »



Chapter 1 » Macro-Economic Environment

Global and Regional Information Communication Technologies

Industry

Globally, Information and Communication Technologies (ICTs) have proved to be a key driver of socioeconomic progress and development, enhancing productivity and therefore economic growth, reducing poverty and improving living standards in many ways. ICTs in this case include telecommunications, Internet and Business Process Outsourcing (BPO), broadcasting and postal services. ICTs are increasingly revolutionizing production processes, access to markets, and information sources together with social interactions. ICTs also have an impact on government efficiency and transparency.

Diffusion of mobile telephony in the last decade has had a strong social and economic impact. The technology has proven instrumental in raising prosperity and reducing poverty in developing countries (Global Information Technology Report, 2008/09). It has worked to reduce the digital and economic divide existing between high and low-income countries (Global Competitiveness Report, 2008/09). This has been driven by: acceptance of the technology in the developing world; an infrastructure that is fairly easy to deploy; a market that is generally open to new entrants; and the decreasing costs of mobile handsets and communication services. The technology has also led to introduction of innovative, competitive and customized products such as mobile banking and mobile money transfer services.

Internet has become part of the basic infrastructure in many countries and one of the key foundations of the knowledge economy. It expands the range of connectivity options across the world and is one of the key indicators used to measure a country's competitiveness (Global Competitiveness Report, 2008/09). Broadband Internet in particular offers a unique, cost-effective opportunity to enhance countries' competitiveness (Broadband Internet as defined by ITU for developing countries as Internet speed of more than 256 kbps). With wireless broadband, Internet offers connectivity to people wherever they are, whenever they want to access the network and with devices of their choice.

ICTs have facilitated new forms of international trade accompanied by profound changes in the way in which talents are mobilized and combined across national borders, under the current wave of globalization. Outsourcing has become one of the major components of this new landscape as the market continues to grow, particularly in India and Philippines. It is estimated that the value of the total

worldwide outsourcing market, including Information Technology Outsourcing (ITO) and Business Process Outsourcing (BPO), was almost at USD 300 billion at the end of 2007, an increase of about 19 percent over the previous year (World Economic Forum, Global Competitiveness Report, 2008/09).

Service providers in developed countries and their customers are seeking new regions where low-cost, high-quality work can be done. Emerging economies view outsourcing as an innovative way of benefiting from globalization and offering international businesses new ways of mobilizing talents worldwide at the best price and creating jobs with significant positive spill-overs on their respective national processes of economic growth, technological development, and skills upgrading.

Postal organizations in many countries of the world have deployed an innovative use of Radio Frequency Identification (RFID) technology to address inefficiencies in the postal service's delivery system. The technology has enabled postal organizations to refine and develop their "track and trace" solutions to provide a wealth of information on any product present in their networks giving customers the opportunity to manage their stocks as accurately as possible. It has also enabled these organizations improve efficiency of their counter services and money transfers. To further improve postal services, countries are now adapting home delivery systems where mail, parcels and goods are delivered to the recipients.

Globally, migration to digital television broadcasting is well underway, creating new business opportunities for broadcast equipment manufacturers, as well as television broadcasters and broadband service providers. Digital broadcasting in selected developed and newly industrialised countries has helped to address concerns associated with analogue broadcasting which include poor quality of service; limited channel capacity; frequent interferences in broadcasting bands; limited scope for future expansion due to saturated broadcasting spectrum; limited scope for innovative, interactive and value added services; and limited room for meeting consumer expectations. Furthermore, new ways to distribute content such as Internet Protocol Television (IPTV) and mobile TV are creating further opportunities for innovation and growth. The number of digital high-definition (HD) channels available to the consumer is proliferating and HD-capable TV sets are setting new sales records. Underlying all of these is the ongoing quest for improved audio/video quality and lower bit rates to enable increased demand and lower costs of distribution, respectively.

Local Macro-Economic Environment

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Local Environment

As shown in Table 1.1, the economy recorded a very modest performance as the growth momentum which began in 2003 was restrained. The economic growth declined from 7.1 percent in 2007 to 1.7 percent in 2008. The dismal performance of the economy can be attributed to post-election violence and its spill-over effects that hit the country in the first quarter of 2008; high fuel and food prices; unseasonal weather patterns; deteriorating exports and capital flows and the global financial crisis coupled with the global economic decline.

Table 1.1 also shows that Gross Domestic Product (GDP) per capita decreased from Kshs. 36,000 to Kshs. 35,611 over the same period. The slowed growth in 2008 is attributed to contractions in the

Hotels and Restaurants; and Agriculture and Forestry sectors which decreased by 36.1 percent and 5.1 percent compared to growth rates of 16.3 percent and 2.0 percent, respectively, in 2007. Other sectors that contributed to the decline in the national economy were Manufacturing, and Transport and Communications which recorded the lowest growth in the last five years of 3.8 percent and 3.1 percent, respectively.

The Transport and Communications sector slowed down to 3.1 percent growth compared to 15.1 percent in 2007, accounting for 10.2 percent of total GDP in 2008 compared to the 10.6 percent recorded in 2007. This performance was mainly driven by the Posts and Telecommunications sub-sector which, however, grew marginally by 7.9 percent compared to 30.3 percent recorded in 2007.

Table 1.1: Selected Economic Indicators

Indicator	2004	2005	2006	2007	2008*
Population (Millions)	34.2	35.1	36.1	37.2	38.3
GDP at market prices (in KES .Min.)	1,274,328	1,415,724	1,622,434	1,825,960	2,099,798
Growth of GDP at Constant (2001) Prices (%)	5.1	5.9	6.3	7.1	1.7
GDP per Capita (in 2001 Prices) (Kshs.)	32,463	33,441	34,570	36,000	35,611
Transport and Communications contribution to GDP at Current Prices (Kshs. million)	125,727	145,523	171,991	194,011	214,983
Postal and telecommunications contribution to GDP (in Kshs. million)	30,167	36,242	43,251	54,947	58,574
Transport and Communications as % of GDP	9.9	10.3	10.6	10.6	10.2
Postal and telecommunications as % of GDP	2.4	2.6	2.7	3.0	2.8
Growth of Transport and Communications at Constant (2001) Prices (%)	7.0	9.0	11.4	15.1	3.1
Growth of Postal and telecommunications at Constant (2001) Prices (%)	8.5	17.7	16.5	30.3	7.9
Private sector wage employment in transport and communications ('000s)	60.7	75.1	90.9	117.8	120.3
Public sector wage employment in transport and communications ('000s)	37.9	38.9	40.2	36.1	37.4
Consumer Prices, Annual Average [Index numbers October 1997=100]	163.72	180.61	206.71	226.88	286.41
CPI Annual Inflation Rate (Overall) %	11.6	10.3	14.5	9.8	26.2
* Provisional					
+ Revised					

Source: Adapted from Economic Survey, 2009



Macro-Economic Environment

Further, the postal and telecommunications sub-sector accounted for 2.8 percent of the total GDP in 2008 compared to 3.0 percent in 2007. Mobile telephony dominated the telecommunications market by posting a rise of 53 percent in the subscriber base to stand at 17.4 million by June 2009 up from 11.4 million in 2007. The communications industry continued to act as a stimulant for growth in other sectors of the economy.

During the period under review, the industry witnessed increased investment due to the roll-out of mobile telecommunications services by Telkom Kenya (Orange Mobile) and Essar Telecoms in September 2008 and November 2008, respectively; and expansion of existing networks by Celtel Kenya and Safaricom Limited. As a result, the mobile telephony market experienced increased competition which led to significant decline in tariffs; increased access and affordability to communications services and increased mobile penetration from 30.5 percent to 46.8 percent.

As at December 2008, the Internet penetration stood at nine (9) percent (excluding mobile Internet). This shows that Internet is among the least accessible telecommunication services in the country. The cumulative number of Internet users increased from 2.9 million in 2007 to 3.4 million in 2008, representing an increase of 17.2 percent. The low uptake of this service is attributed to lack of infrastructure, high Internet prices and relevant local content.

During the period under review, the public and private sectors continued to invest in the maintenance and expansion of infrastructure to ensure access to communications services by all. The Government implemented the Fibre Optic National Network (FONN) and The East African Marine Systems (TEAMS) projects. Other submarine cable systems including Seacom, Flag and the East African Submarine Cable

System (EASSy) are expected to close the 'missing link' around the East and Southern African coast. These projects are expected to link the country to the rest of the world and bring closer the prospect of cheaper and high speed networks and Internet connections in the country and within the region.

The liberalized broadcasting sector remains competitive with increased demand for spectrum and the number of broadcasting stations. The transition from analogue to digital TV broadcasting is expected to increase efficiency in the use of radio spectrum and improve the quality of content produced.

The outlook for the growth of the national economy in 2009 is promising, as the economy is expected to grow by between 2.0 to 3.0 percent. This is evidenced by the expansion of GDP by 3.9 percent in first quarter of 2009 compared to 0.6 percent recorded during the same quarter of 2008. The expansion in economic activity is expected to be driven by growth in Transport and Communications; Wholesale and Retail Trade; Building and Construction; Hotels and Restaurants; and Manufacturing sectors. However, a stable political and macroeconomic environment, improvement in weather, and expected ease in the global financial crisis are critical to the realization of this growth.

Regionally, Kenya continues to be the major communications and financial hub of the East Africa community region. It enjoys the region's best transportation linkages, ICT infrastructure, and trained personnel. The arrival of the undersea cable in 2009 is expected to drive growth in the communications industry particularly Internet connectivity and BPO services, connect the country to the rest of the world and improve Kenya's competitiveness.



Fibre Optic cables



CHAPTER 2

Management of Scarce Resources »



Chapter 2 » Management of Scarce Resources

The Commission manages the scarce radio frequency spectrum and numbering resources, which are typically at the centre of most communications services. During the year under review, the Commission continued to respond to the changing and increasing demands for spectrum and numbering resources due to technological advancements and convergence. The expansion of the Commission's mandate to include regulation of broadcasting services under the *Kenya Communications (Amendment) Act, 2009*, is expected to facilitate efficient management of broadcasting spectrum resources.

2.1. Frequency Management

The Commission is mandated to manage radio frequency spectrum to ensure efficient utilization of the resource. This is achieved through planning, licensing, monitoring and coordination of the radio frequency resource. During the year under review, the Commission assigned and re-planned various types of frequencies as follows:

2.1.1. Fixed Microwave Links

During the year, the Commission continued to assign frequencies for fixed microwave links to operators in the country.

As illustrated in Figure 2.1, the overall demand for spectrum for fixed microwave links decreased during the period under review. This was attributed to the expansive deployment of fibre networks country wide.

The fibre infrastructure constitutes a cheaper alternative with higher bandwidth capacity compared to microwave links. Further, several microwave links were decommissioned after operators opted for fibre optic networks.

The Commission successfully migrated Telkom Kenya from the analogue microwave networks in the lower frequency bands to digital microwave networks in the higher frequency bands.

2.1.1. Wireless Access Systems

The Commission assigned Government Security Agencies wireless access frequencies in the 380-400 MHz band for the trunked radio network to deploy networks in Nairobi, Nakuru and Nyeri. This is expected to enhance communication among security agencies.

The Commission recovered CDMA 1.9 GHz frequencies from three Local Loop Operators (LLO) and migrated Telkom Kenya from the same frequency, enabling the Commission to avail 30 MHz bandwidth of 3G frequencies. The subscribers previously on the CDMA 1.9 GHz were migrated to the new wireless platform using the CDMA 800 MHz system.

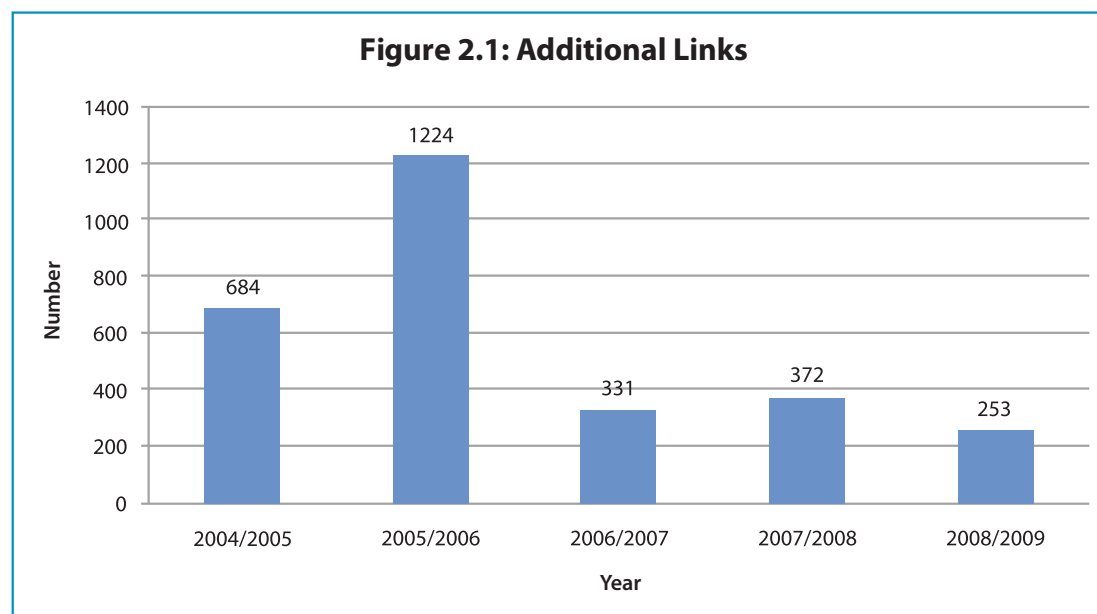
2.1.2. Satellite Systems

In the year under review, the Commission made frequency assignments to 25 VSAT applicants in the C and Ku bands as compared to 27 in the previous year.

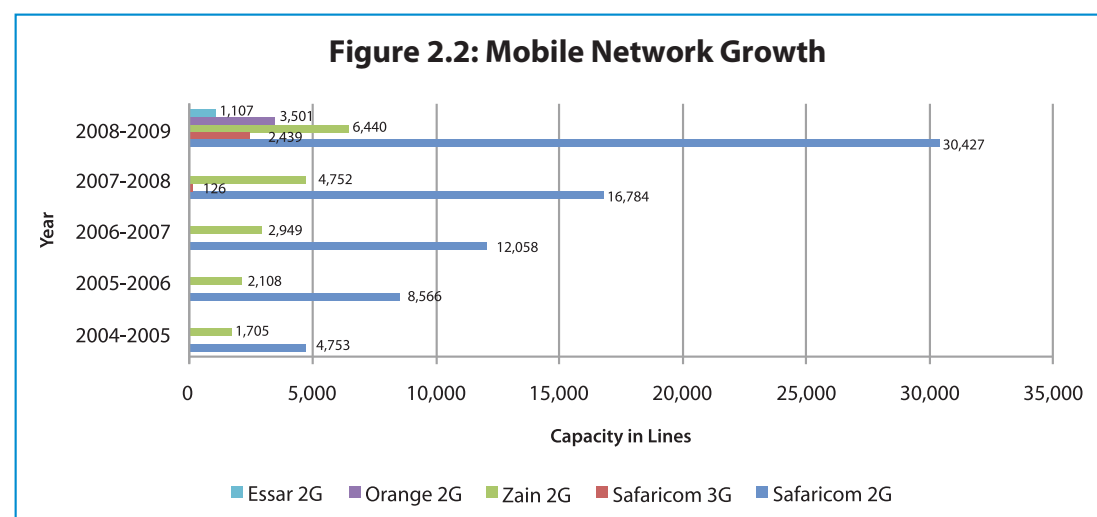
2.1.3. Mobile Services

As shown in Figure 2.2, Safaricom continued to expand its network in the GSM 900 and 1800 MHz frequency bands, reaching 30,426 transceivers up from 16,784 the previous year. On 3G services, the network sharply grew from 126 to 2,439 transceivers by the end of June 2009. Zain also grew its GSM 900 and 1800 MHz network reaching 6,440 transceivers from 4,752 the previous year.

On its part, Telkom Kenya launched the Orange Mobile brand by building the GSM 900 and 1800 MHz network to reach 3,501 transceivers by end of the financial year. Essar Telecom also launched the "yu" brand with the rollout of GSM 900 and 1800 MHz band network to reach 1,107 transceivers by June 2009. During the year under review and as shown in Table 2.1, the Commission assigned frequencies to 85 fixed and 440 portable private land mobile networks in the VHF band.



Source: Communications Commission of Kenya



Source: Communications Commission of Kenya

Management of Scarce Resources

During the same period frequencies in the HF band were assigned to 14 fixed networks and 16 portables. The Commission also assigned 46 simplex and 10 duplex frequencies in the VHF and seven (7) in the HF bands.

Table 2.1: Private Land Mobile Networks

Station Type	2004/05	2005/06	2006/07	2007/08	2008/09
VHF Fixed	167	85	97	140	85
Mobile / Portable	737	422	401	571	440
Total	904	507	498	711	525
HF Fixed	106	22	14	48	14
Mobile / Portable	94	29	39	24	16
Total	200	51	53	72	30

Source: Communications Commission of Kenya

The decline in the demand for frequencies to establish private land mobile networks was partly due to the growth of mobile telephony.

2.1.1. Assignment of Broadcasting Frequencies

During the period under review, the Commission continued to receive a large number of applications for broadcast frequencies.

(a) FM Broadcasting

Prior to the commencement of the *Kenya Communications (Amendment) Act, 2009*, a total of 28 FM frequencies were assigned to broadcasters in the year as compared to 30 in the previous period. These included Kenya National Assembly (22), KBC (2) and private broadcasters (4). The FM frequencies assigned to the Kenya National Assembly will facilitate live broadcasts of parliamentary proceedings to most parts of the country.

During the same period, the Commission revoked nine (9) FM broadcasting frequencies following failure by licensees to put the spectrum into use within the stipulated period.

(b) Television Broadcasting

During the year under review, no TV frequencies were assigned, arising from the Commission's decision to discontinue assignment of analogue TV frequencies in order to prepare the country for transition to digital TV broadcasting. However, the Commission authorized the relocation of one of the national public broadcaster's channels to Namanga border on temporary basis pending the migration to digital broadcasting.

During the period under review, the implementation of the Digital Video Broadcasting – Handheld (DVB-H) mobile broadcasting network expanded to Mombasa, Nakuru, Kisumu and Eldoret.

2.1.2. Alarm Update

The Commission updated the number of alarm network modules in Nairobi, Coast, Western and Mt. Kenya regions. The total number of alarm units in the country increased from 28,396 in 2007/08 to 31,680 in 2008/09.

2.2. Broadcasting

The Kenya Communications (Amendment) Act, 2009, expanded the Commission's mandate in the broadcasting sector to include licensing, content regulation and broadcasting complaints handling. Prior to coming into force of the Act, the Commission's mandate with respect to broadcasting was limited to management of broadcasting frequencies. During the period under review, the Commission embarked on the process of operationalizing the Act by setting up the necessary structures and frameworks. These include:

- Development of a draft broadcasting licensing framework, including preparation of licenses and certificates;
- Development, in consultation with other government agencies, of draft broadcasting regulations, standards and programming code which are aimed at promoting plurality and diversity in the broadcasting sector;
- Development of draft guidelines on content and complaints handling; and
- Development of requisite licensing procedures and forms.

The Commission also issued a public notice advising broadcasters of the changes in the law which would require them to obtain broadcasting licences within one year from the date of commencement of the Act in place of broadcasting permits previously issued by the Ministry of Information and Communications.

2.2.1 Suspension of processing of Broadcasting Applications

The Commission suspended processing of applications for broadcasting licences and frequencies in order to first develop a new framework for the regulation of broadcasting services. It is expected that the new framework will be in place before the end of the next financial year.

2.2.2 Transition from Analogue to Digital Television Broadcasting

The Commission continued to coordinate the work of the Digital Migration Committee (DTC) by providing secretariat and logistical

support. The mandate of the DTC is to develop recommendations for effective implementation of digital broadcasting in Kenya so as to ensure a smooth transition. It is expected that this initiative will fast track the migration from analogue to digital platform by making it possible for existing analogue channels in Nairobi to be simulcast in digital media within the first half of the next financial year. The DTC also developed draft specifications for set top boxes.

2.2. Numbering

The Commission is responsible for assignment of numbering resources to its licensed operators. During the review period, the Commission assigned eight (8) National Destination Codes. The assignment availed additional capacity of eight (8) million subscriber numbers to cellular mobile operators and 50,000 fixed subscriber numbers to fixed telephony services. Other numbering assignments included two (2) international signalling point codes, four (4) Network Codes to international voice gateway providers, one national signalling point code and fifty (50) toll free numbers as indicated in Table 2.2. The Commission carried out a numbering audit in order to establish

levels of number usage, and reasons for non-utilization with a view to reclaiming unutilised resources. The numbering resources categories considered were Subscriber Numbers, National Signalling Point Codes, Network Colour Codes, Mobile Network Codes, SIM Card Headers, Short Codes and International Signalling Point Codes. To date, the numbers assigned amount to 46,603,588. The activated numbers are 30,152,168, representing utilization level of 64.7 percent.

It was also established that most of the numbers that have not been activated are either in circulation with the dealers or with the manufacturers of SIM cards. Those not in the said categories have since been recovered and are now available for reassignment to other licensed operators.

As shown in Table 2.2, the general decline in demand for numbering resources in the year under review could be due to the fact that operators were still in the process of utilizing the numbers assigned to them in the 2007/08 financial year.

Table 2.2: Numbering Resources Assigned

Type of Resource	2004/05	2005/06	2006/07	2007/08	2008/09
Mobile National Destination Codes	8	10	16	24	8
Mobile Subscriber Number capacity	8,000,000	10,000,000	16,000,000	24,000,000	8,000,000
Numbers for fixed telephony and data services	1,210,000	1,625,000	1,629,000	1,729,000	50,000
Toll free Numbers	-	-	5,010	15,010	50
National Signalling Point Codes	203	228	233	361	1
International Signalling Point Codes	2	2	6	6	2
Network Colour Codes	-	-	-	-	1

Source: Communications Commission of Kenya

The general decline in demand for numbering resources in the year under review as shown in Table 2.2 can be attributed to the fact that operators are still in the process of utilizing the numbers assigned to them in the financial year 2007/08.

2.3. Number Portability

Number Portability enables end users to retain their telephone numbers when changing service providers, service types, and/or locations. Number portability is aimed at enhancing the competition environment in a multi-operator setting. It removes inertia or reluctance by users to change network operators or service providers due to the inconveniences associated with change of numbers, updating printed documents, phone books, friends, family and business records, and costs. ►

The Commission initiated consultation on number portability in November 2008. Responses were received from key operators, manufacturers, vendors and consultants. The Commission has compiled the views received with the intention of holding further consultations, including holding a stakeholders' workshop. This will culminate in the development of number portability regulations, should its introduction become acceptable.



CHAPTER 3

Encouraging Competition
and Innovation »

Chapter 3 » Encouraging Competition & Innovation

27

One of the Commission's mandates is to foster a competitive environment in the ICT market so as to guarantee sector growth and encourage efficiency. The Commission is also charged with the responsibility of promoting investment in the sector by creating a favourable business environment. The growth of the communications sector has generally been high with new entrants joining and innovative products being developed to meet consumer demands.

3.1 Telecommunications

The growth and expansion in telecommunications has completely transformed commercial and individual communication, opening up untapped areas within the economy. This is not only in the direct use of telecommunications, but also in enabling and enhancing the availability of other products. Many players have joined the industry ranging from network providers to vendors. The development of the sector has been driven mainly by innovations in wireless technology that have made it possible for provision of competitive and quality services.

Currently, there are four licensed mobile operators namely Celtel Kenya (Zain), Safaricom Limited, Essar Telecom, and Telkom Kenya (which is also the sole national fixed network operator). The development of the sector is set to improve as a result of technological convergence and implementation of a unified licensing framework.

The sector registered 17.4 million subscribers up from 12.9 million subscribers in June 2008. Competition in the sector also spurred product and service innovations, especially in the mobile sub-sector, with the operators coming up with competitive tariffs.

3.1.1 Fixed Network Services

Telkom Kenya Limited (TKL) and the two operational Local Loop Operators (LLOs) – EM Communications (Popote Wireless) and Flashcom-offer fixed network services. While Telkom Kenya offers services using both copper and Code Division Multiple Access (CDMA), the LLOs are basically providing their services using CDMA.

The total fixed line (including wireless) subscribers increased to 696,501 in June 2009 up from 527,064 by the end of June 2008. Out of these, fixed wireless amounted to 448,529 subscribers, accounting for 85 percent. The increase in subscriber rate led to an increase in fixed tele-density from 1.4 percent in 2008 to 1.8 percent in June 2009. The improved performance is attributed to the growth in the wireless networks and the privatization of TKL which led to improved service delivery. Table 3.1 shows TKL's network development and the corresponding traffic over the years.

Table 3.1: Telkom Kenya's Network Growth Indicators

Type	2004/05	2005/06	2006/07	2007/08	2008/09
Wireline Capacity	513,82	516,993	505,1035	12,281	485,581*
Wireline Connections	278,867	293,364	263,122	252,615	247,972
Wireless Connections	--	--	84,104	274,449	448,529
Total Connections (Wireline and Wireless)	278,867	293,364	347,226	527,064	696,501
Urban Wireline Connections	264,509	279,0792	51,924	246,927	240,533
Rural Wireline Connections	14,358	14,285	11,198	5,688	7,439
Waiters	93,192	64,618	26,925	8,194	2,259
International Outgoing Traffic (Minutes)	42,558,605	46,957,348	27,363,876	15,582,304	10,553,849
International Incoming Traffic (Minutes)	157,836,403	113,692,918	85,672,270	83,148,332	67,835,356*
Traffic to Mobile networks (Minutes)	163,324,095	150,000,000	124,378,826	98,238,064	26,444,224*
Payphones	8,915	7,232	5,045	5,513	4,681*

Source: Communications Commission of Kenya



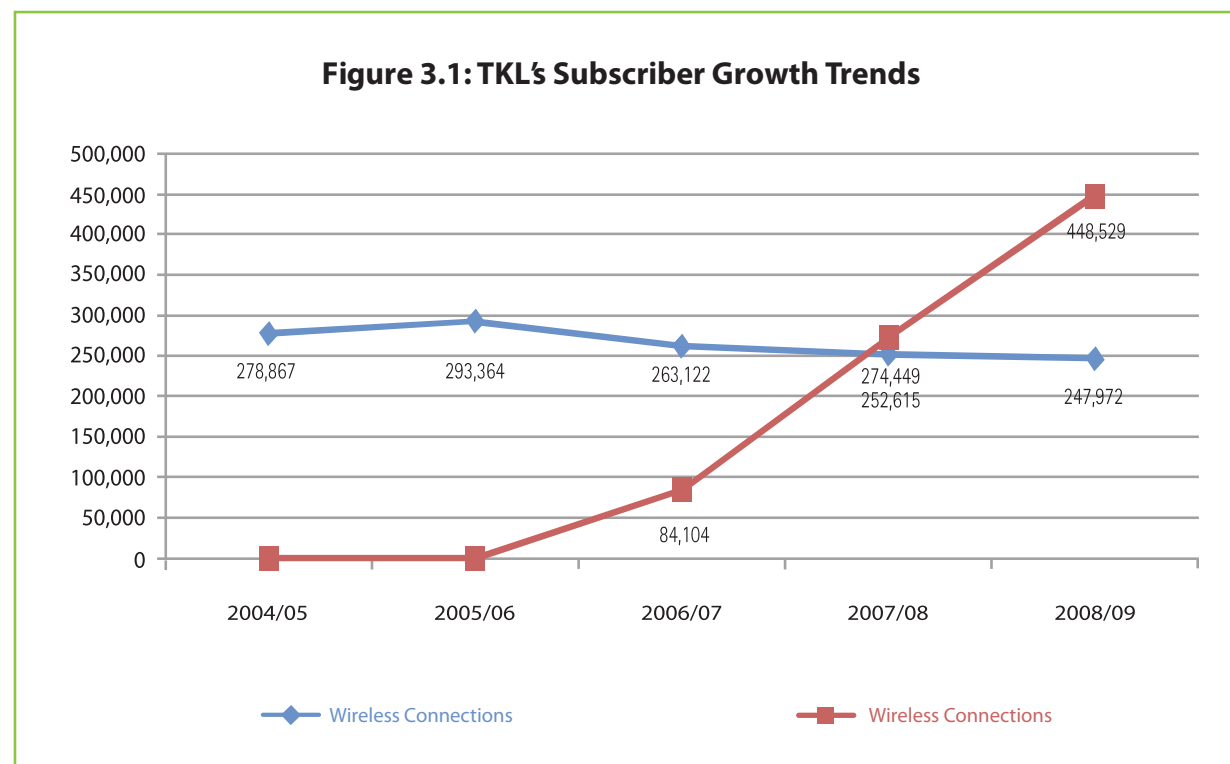
Encouraging Competition and Innovation

The year under review saw TKL shrink its fixed wireline capacity to 485,581 in March 2009 from 512,281 in June 2008. It attained a total subscriber base of 696,501 (for both wireline and wireless). The subscriber growth in TKL came from wireless connections which increased from 274,449 in 2007/2008 to 438,904 in 2008/2009 as the wireline connections declined from 252,615 to 247,972.

The fixed wireline connections in the rural areas increased by 30.8 percent while the connections in urban area declined by 2.6 percent over the same period. The number of payphones declined from 5,513 in June 2008 to 4,681 in March 2009. ►

As illustrated in Figure 3.1, the wireline connections have been declining over the years while the number of wireless subscribers has been increasing steadily.

The poor performance of the fixed wireline services may be attributed to cable vandalism that has affected the operations of TKL and competition from increased number of mobile service providers. Further, the number of customers waiting to be connected to the wireline network dropped by 72.4 percent from 8,194 in 2007/08 to 2,259 in 2008/09. This significant drop could be attributed to reduction in demand for wireline services as more people substitute those services with mobile services.



Source: Communications Commission of Kenya

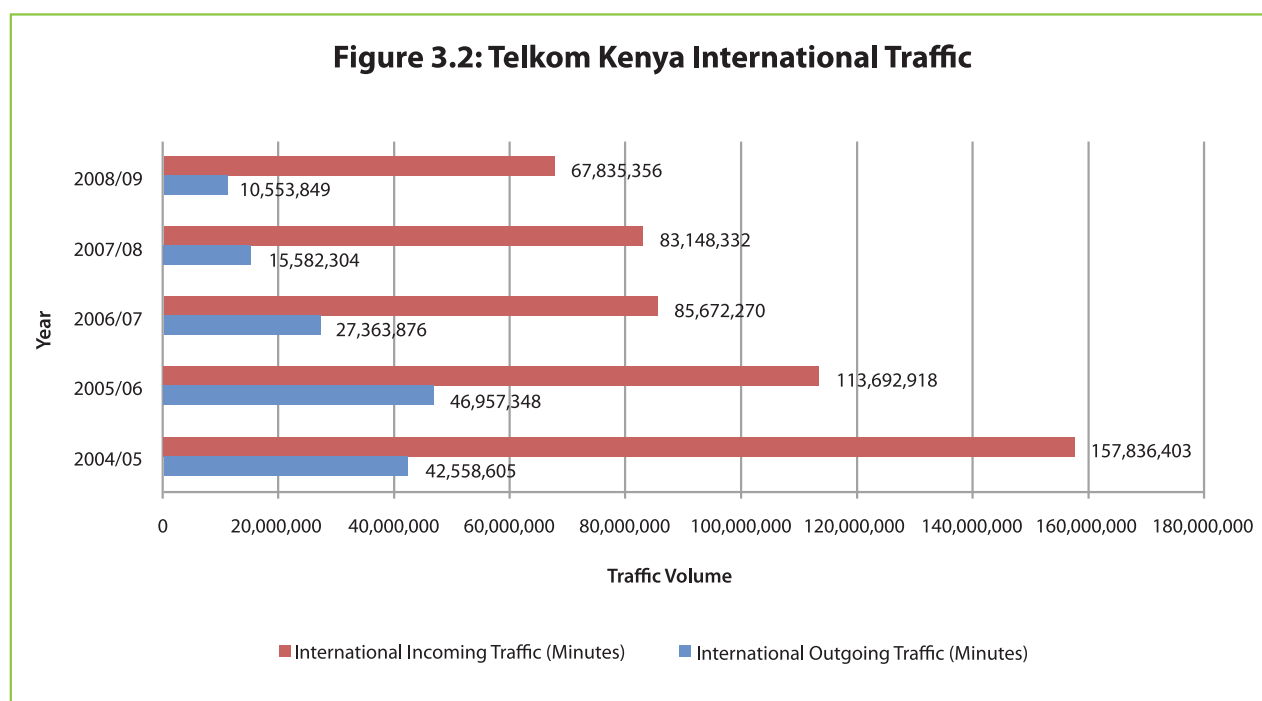
As shown in Figure 3.2, TKL's international traffic (both outgoing and incoming) declined for the fifth year in a row. This could be due to competition in the international services market mainly from the mobile operators and the use of Voice over Internet Protocol (VoIP).

Similarly, the LLO market recorded declining activities in both subscriber base and traffic flow. The decline may be attributed to geographical limitations of these operators and stiff competition from TKL (which offers similar services) and the mobile telephony operators. ▼

3.1.2 Mobile Network Services

The mobile market segment had the most significant growth in the telecommunications sector as depicted by the growth in number of subscribers. The market segment experienced intense competition among the four operators.

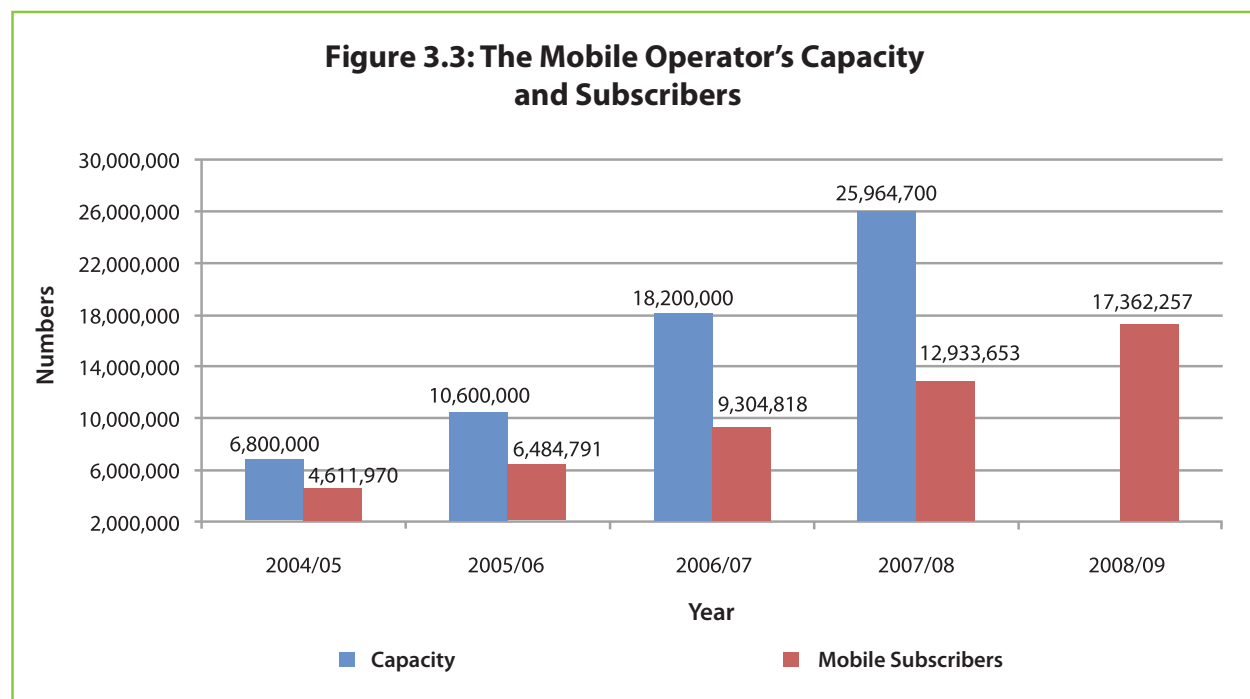
The increase in competition was attributed to the rollout of mobile services by Telkom Kenya with its Orange brand and Essar Telecoms with its YU brand.



Source: Communications Commission of Kenya

The number of mobile network subscribers increased from 12.9 million in 2007/2008 to 17.4 million in 2008/09, representing a growth of 34.2 percent as reflected in Figure 3.3. This led to an increase in the mobile penetration rate from 34.8 percent to 46.8 percent. ▲

The growth could be attributed to affordability of handsets, reduced call tariffs, aggressive marketing and the introduction of additional value added services.



Source: Communications Commission of Kenya

The growth in mobile subscribers was supported by an increase in transceivers from 21,662 in June 2008 to 43,914 in the June 2009.

As indicated in Table 3.2, the volume of SMS messages increased by 604.8 percent to reach 2,023,744,703 from 287,145,378 in June 2008.

This may be attributed to a reduction in SMS charges and the promotional/ special offers aimed at expanding the subscriber base of individual operators during the review period. ►

The mobile networks recorded international incoming traffic of 407,901,982 from 304,671,300 minutes in June 2008, while international outgoing traffic was 159,017,689 from 119,148,600 minutes in June 2008. These represent increases in international incoming and outgoing traffic of 33.9 percent and 33.5 percent, respectively.

Table 3.2: Mobile Network Growth Indicators

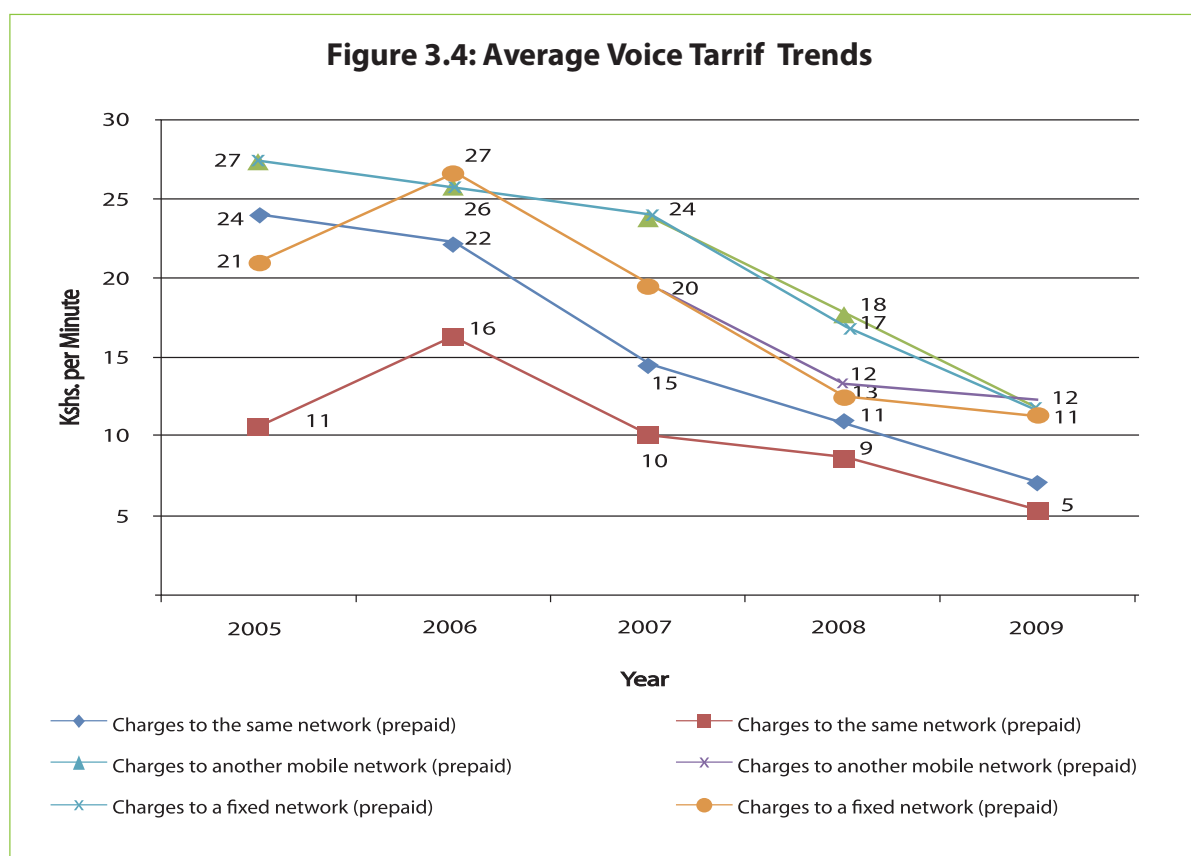
Type	2004/05	2005/06	2006/07	2007/08	2008/09
Capacity	6,800,000	10,600,000	18,200,000	25,964,700	-
Connections	4,611,970	6,484,791	9,304,818	12,933,653	17,362,257
No. of Transceivers	-	-	-	21,662	43,914
SMS	-	201,445,683	315,557,601	287,145,378	2,023,744,703*

Source: Communications Commission of Kenya

*Data incomplete (Safaricom intranetwork and /telkom missing)

The use of mobile technology to provide money transfer services continued to expand with the launch of the ZAP service by Celtel Kenya. This saw the number of MPesa and Zap subscribers at June 2009 to stand at 7,153,028 and 255,020 for Safaricom and Celtel Kenya, respectively. This service has transformed the money transfer market by enabling the un-banked to access financial services. ▼

Interconnection Determination No. 1 of 2007. Based on the determination, new interconnection rates were issued with effect from March 2009. Consequently, the interconnection rates reduced by 16.1 percent from Kshs. 5.27 to Kshs. 4.42 for the mobile networks termination and 2.4 percent from Kshs. 1.65 to Kshs. 1.61 for the fixed networks local area termination. The reduction in the interconnection rates encouraged mobile operators to reduce tariffs across the various tariff plans.



Source: Communications Commission of Kenya

3.1.3 Tariffs and Competition

With the entry of Essar Telecoms and Telkom Kenya in the mobile market, competition has intensified with tariff wars and 'promotions' driving call charges to the lowest levels since the market was liberalized. The Commission continued to ensure fair play in the market by implementing the last phase of the cost-based ▲

During the period under review, the market experienced a reduction in both post-paid and prepaid tariffs, with average tariff reductions of 37.8 percent for post-paid calls within the same network and 9.4 percent for post-paid calls to fixed networks. On the other hand, prepaid tariffs declined by 35.8 percent for on-net and 32.5 percent for off-net calls.



Encouraging Competition and Innovation

From Figure 3.4, it is apparent that operators charged the same tariffs for off-net calls regardless of the type of network the calls terminate in. Charges for mobile and fixed networks have equalized. In the year under review, average prepaid call charges and average post-paid charges equalised at Kshs. 10. However, the average prepaid charges declined by 33.3 percent whereas those of the post-paid charges declined by 16.0 percent.

The internet market continued to expand with the total number of internet users estimated at 3.6 million in June 2009 up from 3 ►

million in June 2008. The increase could be attributed to innovations in the media of internet access by the operators from the simple personal computer means of access to mobile handsets and portable broadband internet modems.

3.1.4 Telecoms Licensing

The growth in number of licences issued before the introduction of the new unified licensing framework in October 2008 is shown in Table 3.3.

Table 3.3: Growth in Number of Licenses

Licence Category	2004/05	2005/06	2006/07	2007/08	Sep 2008
Vendors Et Contractors	846	867	887	917	937
Technical Personnel	207	257	287	315	326
Internet Service Providers	59	72	83	108	-
Value Added Service Providers	24	34	44	65	73
Public Data Network Operators	11	16	17	24	-
Local Loop Providers	10	19	23	31	-
VSAT Terminal (through local Hubs)	548	673	971	1,025	1,067
VSAT Terminal (through external Hubs)	78	101	110	121	133
Commercial VSAT Hub Operators*	3	4	4	-	-
IBGO*	4	6	8	-	-
DCNO	-	-	7	12	14
Global Mobile Personal Communications by Satellite Service Providers (GMPCS)	1	2	2	3	-
Business Processes Outsourcing	1		2	18	18
Totals	1792	2051	2445	2639	2568

Source: Communications Commission of Kenya

* The licences have been merged to form DCNO

The Commission implemented the Unified Licensing Framework (ULF) in October 2008. All new telecommunications licences were henceforth issued under the ULF framework and the licensees under the old framework were requested to migrate. By the end of the year under review 96 licensees had migrated to the new framework. Under the framework, additional quality of service obligations ►

were introduced in the licences. The Commission also issued two Submarine Cable Landing licences to The East African Marine System (TEAMS) Limited and Sea Submarine Communications (SEACOM) Limited. The number of licensees issued with ULF in the year under review is shown in Table 3.4:

(Continued on page 31)

Table 3.4: Unified Licensing Framework (ULF) Licensees (October 2008 to June 2009)

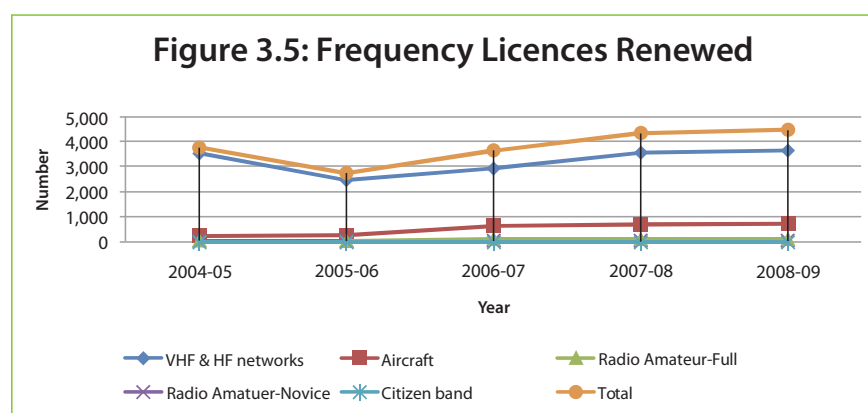
Licence Category	Licensees Migrated to ULF	New Licences issued	Total
Submarine Cable Landing Rights (SCR)	-	2	2
International Gateway Systems & Services (IGS)	7	-	7
Network Facilities Provider - Tier 1 (NFP T1)	3	-	3
Network Facilities Provider - Tier 2 (NFP T2)	5	1	6
Network Facilities Provider - Tier 3 (NFP T3)	3	-	3
Applications Service Providers (ASP)	16	1	17
Content Service Providers (CSP)	14	9	23
Business Processes Outsourcing (BPO)	-	3	3
Telecommunications Contractors (TEC)	33	21	54
Technical Personnel (TP)	15	25	40
Telecommunications Equipment Vendors (V)	-	36	36

Source: Communications Commission of Kenya

3.1.5 Frequency Licence Renewals

The number of renewed radio licences increased from 4,334 in 2007/08 to 4,471 in 2008/09 as shown in Figure 3.5. This is attributed to increased vigilance, inspections and follow-ups in enforcement of existing licence conditions. However, the growth of the Citizen ►

Band radio licence has stagnated. This may be attributed to the lack of popularisation of this service. The Commission shall endeavour to popularise this band as it has the potential to reduce pressure on the demand for spectrum in the land mobile radio network sub-bands.



Source: Communications Commission of Kenya

3.1.6 Network Expansion and Cancellation

During the year under review, the Commission authorized expansion of 23 networks through the addition of 48 fixed stations and 379 ►

mobile/portable radios to the existing radio networks. There were 93 radio network licence cancellations during the year.



Encouraging Competition and Innovation

3.2 Internet Services

Internet service is critical to the development of the ICT sector and to socio-economic development. Internet penetration in Kenya is low and way behind the penetration of other ICT services (e.g. mobile) despite the liberalization of the data market. In order to improve the uptake of Internet services, the Commission, through the community ICT telecentres, partnered with implementing agencies on the development of local content that is geared towards assisting communities to search for information that is beneficial for their day-to-day activities.

Access to Internet services has continued to be hampered mainly by high access charges brought about by high costs of bandwidth. The international gateway bandwidth has increased tremendously over the last year to reach 2,746.55Mbps from 909.44Mbps in June 2008. This was attributable to increasing demand for bandwidth as innovative services such as the mobile broadband modems were introduced in the market. The level of bandwidth utilization as at June 2009 was 62 percent with 40 percent of it being consumed by Internet Service Providers. The demand for bandwidth is expected to continue increasing as the customer base expands and demand for wireless broadband services continues to increase. Based on the returns received from ISPs and Internet backbone providers, the total estimated revenue generated from the Internet market was Kshs. 7.6 billion by the end of 2008 compared to Kshs. 5.0 billion

in December 2007. Out of this, ISPs contributed Kshs. 2.5 billion up from the previous year's revenue of Kshs. 1.8 billion.

3.3 Postal and Courier Services

The Commission continued to monitor developments in the postal/courier sub-sector with a view to improving the regulatory environment. Towards this end, the Commission successfully hosted the first Postal and Courier stakeholders' Forum in March 2009. The Forum brought together postal and courier operators, consumer organizations, government and the regulator. The decision to hold such a forum was made in recognition of the importance of experience gained from interaction with the players in the postal industry which will go a long way towards improving the regulatory environment and informing policy making.

3.3.1 Postal Network Development

During the year under review, the courier market segment continued to register positive growth in terms of network development. There was increased competition and investment in the segment as demonstrated by the expansion of outlets and, the number of licensed courier operators. The number of private operator courier outlets grew from 606 in 2007/08 to 622 in 2008/09, while the number of post offices decreased from 744 to 710, over the same period as shown in Table 3.5.

Network		2004/05	2005/06	2006/07	2007/08	2008/09
Postal Corporation of Kenya						
Total Post Offices		861	768	721	744	710
Departmental Offices		494	498	498	495	503
Sub-Post Offices		367	270	223	249	198
Private Letter boxes	Installed	399,667	400,016	411,716	414,616	412,006
	Rented	305,458	308,760	321,217	335,438	340,148
	Un-let	94,199	92,476	90,499	79,178	71,858
Letter Posting Boxes		1,049	1,049	966	827	890
Public Counter Positions		1,377	1,388	1,388	1,390	1,279
Automated		-	79	79	94	430
Non-Automated		1,377	1,309	1,309	1,296	849
Stamp Vending Licenses		4,088	4,242	4,125	4,609	4,505
Stamp Vending Machines				264	246	280
Private Operators Outlet		437	521	554	606	622
Total Outlets (Post Offices = Private Operators Outlets)		1,298	1,298	1,275	1,350	1,332

Source: Communications Commission of Kenya

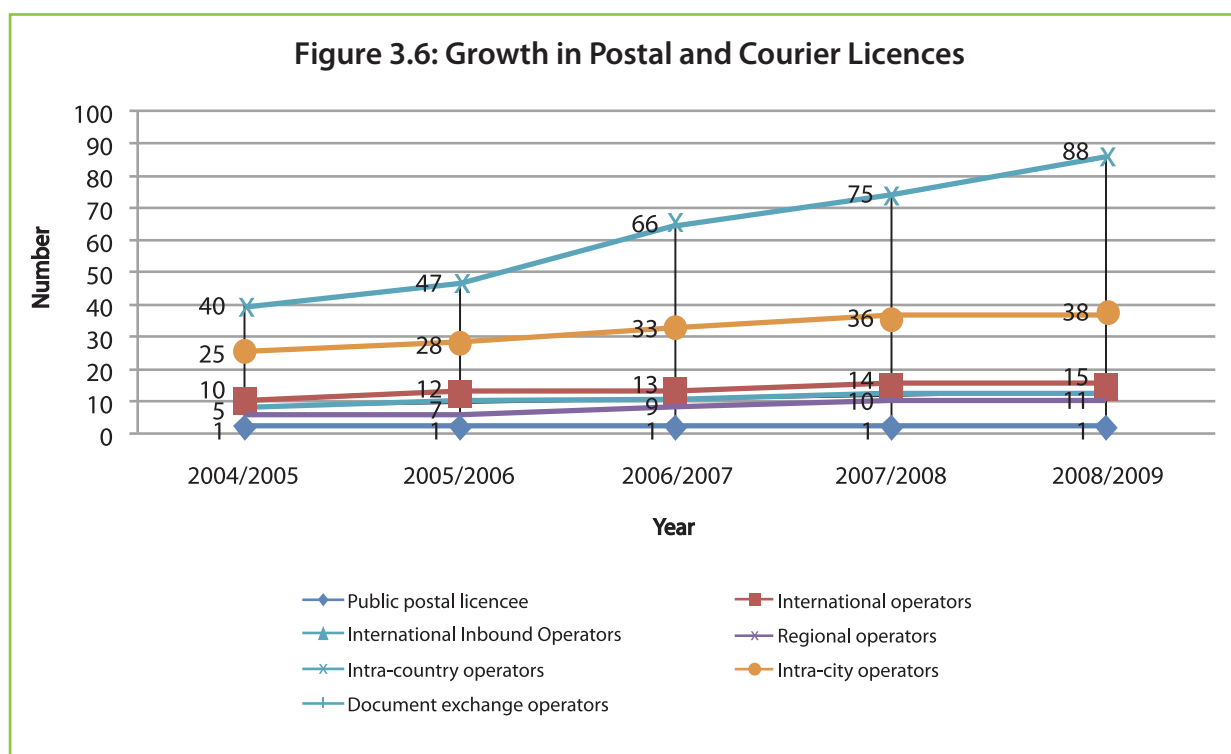
The Commission continued to encourage adoption of new technologies in the sub-sector in tandem with global trends to facilitate efficient delivery of service. In this respect, the number of automated public counter positions increased significantly from 94 in the previous year to 430 in June 2009.

The total number of rented letter boxes increased from 335,438 to 340,148 during the year under review, as shown in Table 3.5. Private letter boxes are the main mode of mail delivery in Kenya used by the Public Postal Licensee. The country is yet to embrace the home delivery system. The introduction of this mode of delivery is hampered by the absence of home addresses as a result of lack of proper naming of streets and buildings as well as poor road networks, among other factors. In an effort to mitigate the challenge of home delivery, the

Ministry of Information and Communications established a multi-sectoral task force, in which the Commission participates, to study the challenges of the street/building naming and come up with recommendations on the best way of addressing this challenge.

3.3.2 Postal Licensing

The number of licensed operators increased to 164 from 148 in the 2007/08 financial year. The increase was attributed to improved enforcement and public awareness of the opportunities in the sector carried out throughout the year. As illustrated in Figure 3.6, the Intra-country licence category has continued to attract many investors, followed by the intra-city category. The increase in licensees has enhanced competition in the sub-sector which will result in greater choice and quality of service.



Source: Communications Commission of Kenya



Encouraging Competition and Innovation

3.3.3 Postal Tariffs and Competition

The regulated postal tariffs remained stable throughout the year, which in part could be attributed to increased competition in the sub-sector. The Commission deferred a request for tariff adjustment for certain categories of private letter boxes, as the Postal Corporation of Kenya (PCK) had not satisfactorily fulfilled some of its licence conditions.

Other factors considered by the Commission included the cost of providing the service and representations received from the public.

3.4 e-Transactions

With the enactment of the *Kenya Communications (Amendment) Act, 2009*, the Commission's mandate was expanded to include the regulation of electronic transactions. In this respect, the Commission embarked on the process of preparing licences and regulations with a view to bringing the new provisions of the Act into operation.

3.5 Embracing New and Emerging Technologies

In line with its mandate and with a view to facilitating regulatory best practice in a rapidly changing environment, the Commission continued to carry out research on new and emerging ICT technologies and their likely impacts. Towards this end, the Commission carried out studies in the following areas:

3.5.1 Rural Telecommunication Technologies

In addition to reduced entry barriers, infrastructure sharing, the unhindered use of new wireless broadband technologies, is a measure of regulators should consider in the promotion of cost-effective and rapid deployment of last-mile network technologies in rural and underserved areas.

High infrastructure costs and low rates of return are the main inhibitors to communications infrastructure development in rural areas. The Commission, therefore, identified and analyzed various technologies that can be suitable for use in rural areas. These include GSM, WiMax, CDMA, Wi-Fi and VSAT. The aim was to look at their technological viability in terms of effectiveness, cost implications and efficiency. The study was meant to inform initiatives geared towards the provision of telecommunication services in rural areas such as the universal service / access strategy.

3.5.2 Communications and E-waste

Effective management of e-waste is critical to sustainable development. E-waste is of particular significance to developing countries especially

in Africa, which has witnessed phenomenal growth in mobile phone subscription. Damaged cell phones have deposits of precious metals including gold, silver, copper and iridium.

On the basis of research in this area, the Commission proposed the exploration of the possibility of 'urban mining' (extraction of precious metals from E-waste), the development of an e-waste management policy and the implementation, through licensing and type approval, of the ICT policy 2006 provision that states: "As a prerequisite for grant or renewal of licences, applicants must demonstrate their readiness to minimize the effects of their infrastructure on the environment. This should include provision of appropriate recycling/disposal facilities for waste that may contain toxic substances."

3.5.3 Implications of WiMax inclusion as a 3G Technology on Licensing Conditions

The ITU's World Radio Conference 2007 (WRC-2007) designated WiMax (Worldwide Interoperability for Microwave Access) as a member of IMT-2000/3G family of technologies. With a view to keeping a balance of competing demands and ensuring efficient utilisation of spectrum, this research recommended a possible review of 3G frequency pricing methodology such as ascending auctions that have a reserve price, the provision of guard bands as well as sharing information to prevent interference between cohabited Frequency Division Duplex (FDD) or Time Division Duplex (TDD) systems and the implementation of spectrum reallocation (re-farming).

3.5.4 Next-Generations Networks – Audit of Best Practices

The Commission carried out a Next-Generation Networks (NGN) audit to determine the alignment of the Kenyan regulatory regime with best practice guidelines for NGN migration set out by the 2007 Global Symposium for Regulators. The aspects considered in the audit included consultations and awareness promotion of NGNs, competition, authorization, access, interconnection and interoperability. Numbering and next-generation identification systems, universal access, quality of service, consumer awareness, security and protection were also considered in the audit.

Based on the audit, the following recommendations alone were made: development of guidelines on migration to NGN; consideration of subsidies for NGN hardware and cost of service delivery for users with special needs; consultations and awareness promotion of NGNs; the undertaking of an NGN market review; design of interconnection models; service level agreements (SLA) between operators and finalization of the Electronic Number Mapping (ENUM).

3.5.5 Internet Protocol TV

Internet Protocol TV (IPTV) has not taken off as vigorously as other terrestrial means of delivering television mainly due to the poor broadband infrastructure in the country. A research carried out by the Commission provides insight on how IPTV works, architecture and general approaches for implementing IPTV functional architectures, a generic IPTV service model, and its applications as well as a licensing case study of Media Development Authority of Singapore.

The research proposed a regulatory framework that would facilitate IPTV deployment in the country including the licensing of service providers under the Application Services Provider (ASP) licence category, type approval of each model of equipment introduced and intended for use in the country in accordance with relevant ITU recommendations and national standards.

3.5.6 Internet Protocol Version 6 (IPv6) Implementation

In preparation for migration from IPv4 to IPv6, the Commission participated in various Government initiatives by providing technical advice and initiating partnerships on technical training on IPv6 deployment, and creating awareness on the need to deploy IPv6. The migration is expected to boost the pool of available address space by a factor of 85,000. Other advantages of IPv6 over IPv4 include automatic configuration; enhanced network mobility support, support for Internet Protocol Security (IPsec), better network management and better quality of service.

3.5.7 Procedure for issuance of Trial Licences

Most of the new services such as 3G mobile telephony service and Digital Video Broadcasting -Handheld(DVB-H) that require a licence from the Commission have been launched on trial basis after a series of negotiations between the Requesting Party and the Commission. This research sought to raise pertinent regulatory issues with regard to the issuance of trial licences in Kenya.

The research recommended public declaration of the Commission's intention to create room for trial of a given telecommunication technology, service or product, and establishment of an open application process according equal treatment to all interested parties. It also recommended establishment of a clear demarcation between a trial period and a commercial operation period of any given communication technology, service or product put on trial in the country through a competitive award of the relevant licence; filing the findings on the performance of the said technology, service or product at the end of the trial period or as may required

by the Commission. For technologies that have been technically tested successfully, in other parts of the world, it is recommended that there should be no need to put such technology or service under another technical trial in the country.

Further, the study recommended that commercial trials should not be permitted unless the award of the Trial Licence is done through a competitive process. In addition, there should be sharing of information and/or findings collected during a trial period of any technology, service or product, with any eligible party (as determined by the Commission).

3.5.8 Spectrum Pricing Study

During the year under review, the Commission with assistance of the ITU initiated a spectrum pricing study whose objective were:

- Harmonise the frequency spectrum charging methods and levels with global best practices;
- Evaluate and propose enhancements on existing frequency fees schedule;
- Propose and map frequency assignment zones in the country;
- Propose rules and guidelines for assigning frequencies on a market based mechanisms; and
- Propose models to be used in determining prices for frequencies assigned on market based mechanisms.

The study has been completed and the Commission is reviewing the findings.





Chapter 4 » Ensuring Compliance & Empowering Consumers

In line with one of its core mandates of protecting consumers of information and communications services in Kenya, with respect to prices charged and the quality and variety of those services, the Commission undertakes consumer protection and empowerment, and ensures compliance with licence conditions.

4.1 Monitoring and Enforcing Compliance

In order to ensure that licensees comply with the various requirements under the Act, the Commission carries out inspections, frequency spectrum monitoring, and quality of service measurements, network installations certification and type approval of ICT equipment.

Spectrum monitoring is carried out to ensure that radio spectrum users communicate without interference from other spectrum users and to resolve reported cases of interference. Quality of service measurement on the other hand is carried out on cellular mobile networks to determine the level of quality of service offered to the public by the mobile operators. The quality of service measurements enable the Commission to independently verify the compliance returns information submitted by the operators on the level of quality of service provided to the public.

The Commission type-approves all telecommunications equipment to facilitate interoperability of telecommunications equipments and networks installed by different operators, and to ensure quality of service as well as the safety of personnel and the public.

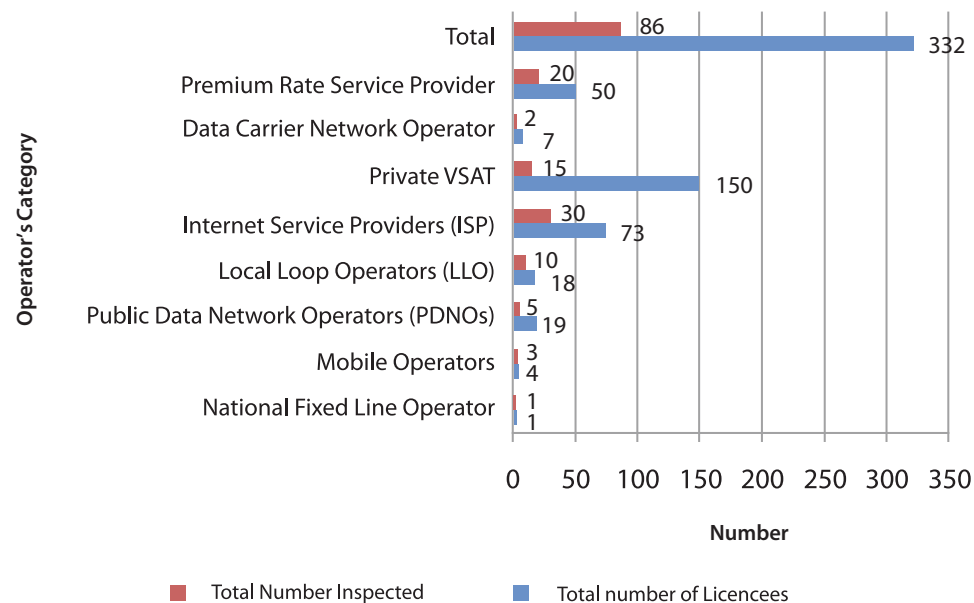
4.1.1 Inspections

Inspections are carried out to determine compliance with specific provisions of the Act, Regulations and the respective licences. During the year under review, the Commission undertook inspections of telecommunications, broadcasting and postal facilities.

(a) Telecommunications

During the year under review, the Commission carried out countrywide inspections of licensed facilities. As shown in Figure 4.1, a total of 86 out of 322 telecommunication licensees were inspected in all categories which translates into about 27 percent of the total licensees against a target of 20 percent of the licensees expected to be inspected. Unlike for other licensees, private VSAT inspections were, however, based on reports of new VSAT installations done and submitted to the Commission to inspect and determine compliance with the relevant installation standards.

Figure 4.1: Inspected Telecommunication Licensees



Source: Communications Commission of Kenya

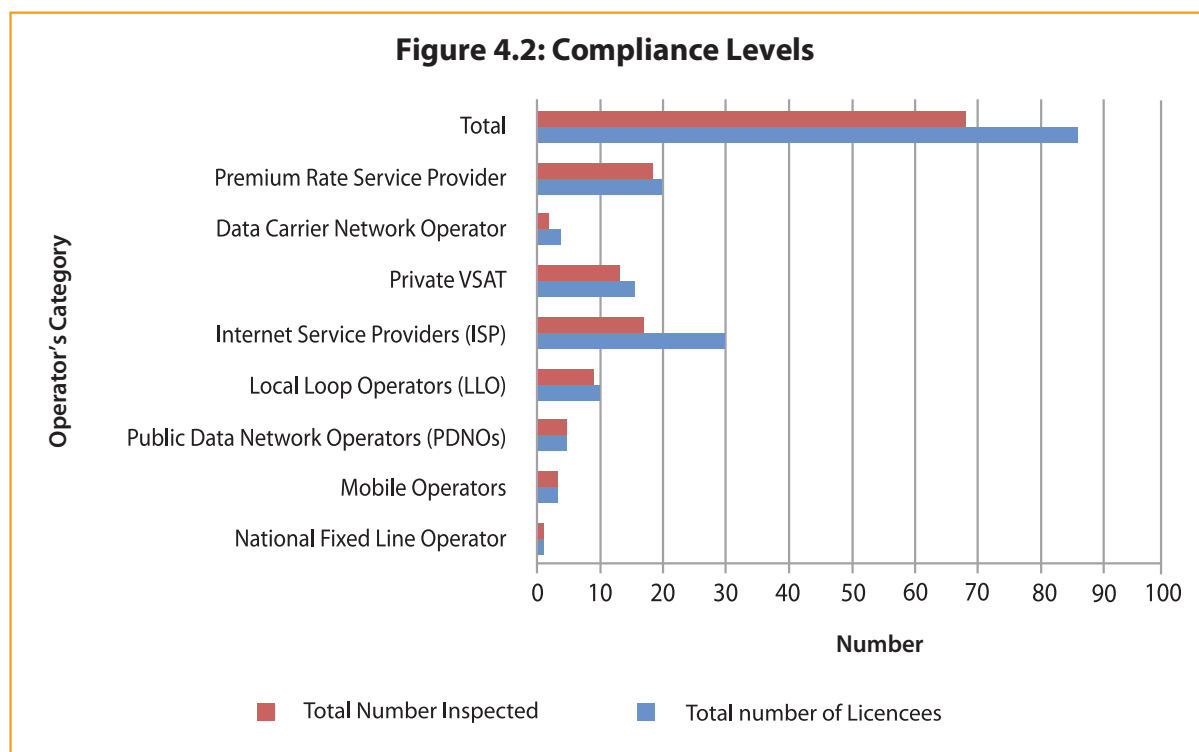
The inspections revealed that 68 of the licencees inspected were compliant with the licence conditions while 18 were non-compliant. The non-compliance mainly entailed non-commencement of operation within the stipulated timeframe.

When the Commission conducted inspections to determine the reasons for non-commencement of services, some of licencees could not be traced by the postal and physical addresses given to the Commission at the time of licensing.

Subsequently, the Commission issued a public notice to licencees requiring them to update of their contact addresses.

As illustrated in Figure 4.2, the Internet Service Providers (ISPs) contributed more to non-compliance by recording a compliance rate of about 57percent.

The other categories had over 95 percent compliant rate.

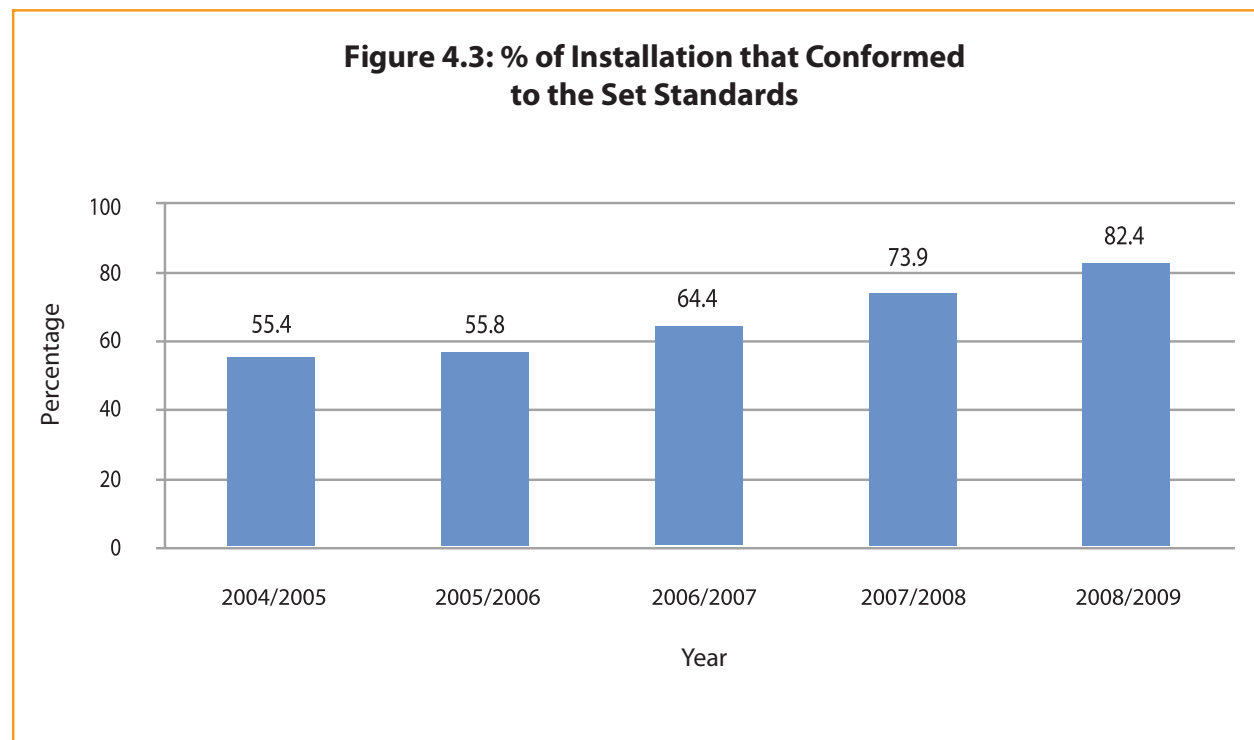


Source: Communications Commission of Kenya

b) Network Standards and Equipment Inspections

The Commission inspected 61 ICT/telecommunications installations to ensure that licencees maintain network integrity and acceptable

quality of network standards. The inspections revealed that 82.4 percent of the installations conformed to the set installation standards as shown in Figure 4.3.



Source: Communications Commission of Kenya

As illustrated in Figure 4.3 above, there has been steady improvement in conformity over the years. This improvement was attributed to increased inspection; sensitization of contractors by the Commission on the importance of adhering to proper installation standards; and increased surveillance by the network operators providing fixed line services.

However, there were nine installations undertaken by unlicensed operators and unlicensed personnel, thus compromising on the safety of the users and the quality of the network. These contractors and personnel were advised to seek appropriate licences from the Commission.

Some of them subsequently obtained the required licences from the Licence Commission.

In order to further improve adherence to installation standards, the Commission reviewed the contractor licence to introduce specific conditions and penalties. The conditions include the requirement that contractors submit regular returns and notify network operators and the Commission upon commencement and completion of installations works.

Further, the Commission amended the installation guidelines which are meant to ensure that contractors adhere to the stipulated installation standards and procedures. The guidelines were enhanced in view of the new licensing framework that substantially increases the scope of contractors.

The Commission also held sensitization meetings with operators and contractors across the country to ensure that all unlicensed entities were brought into the licence regime.

(a) Postal and Courier Services

The Commission inspected postal and courier outlets to ensure compliance with licence conditions and regulations. The inspection results revealed notable improvement in quality of service with mail largely being delivered within the Commission-stipulated delivery standard of J+1 (next day).

The number of licensees displaying service tariffs rose during the year under review, thus facilitating improved consumer choice.

In order to reduce the prevalence of undeliverable articles, the Commission notified operators of the need to adopt and strictly adhere to receiving and disposal guidelines. It was noted that undelivered articles in the Public Postal Licensee's network were largely due to non-usage or wrong usage of post codes while those on private courier outlets were as a result of poor documentation.



CCK radiocommunications engineer Titus Cheptoo explains to the CCK Board Chairman Hon. Eng. Philip O. Okundi (right) how the Spectrum Analyzer works during a Board visit to one of the Radio Monitoring stations in Nairobi.

(b) Radiocommunications Services

During the year under review, the Commission inspected 400 Radiocommunications licensees operating Land Mobile and Broadcasting Services out of the estimated 4,000 licensees. This represented 10 percent of the total licensees, which is the target required to be inspected per year

4.1.1 Monitoring

4.1.1.1 Radiocommunications Monitoring

(a) Interference Resolution and Frequency Clearance

There was one case of HF interference that was reported and resolved. In the V/UHF bands, 49 cases were reported out of which 46 were resolved. The average time taken to resolve interference cases was 10 days which is within the time-frame set in the CCK Service Charter of 14 days. During the year under review, 37 VHF /UHF frequencies and 7 HF frequency clearance requests were handled.

(b) FM Sound Broadcast Weekly and Monthly Surveillance

The Commission carried out 48 and 46 weekly surveillance measurements in Nairobi and Mombasa, respectively. Further, 11 monthly inspections were done in Nairobi and Mombasa. The monthly inspections for the month of July 2008 were not completed due to communications link failure.



CCK Board member Joe Kamau (Centre) goes through the readings of the portable spectrum analyzer. His Board colleague, Kariithi Njogu (left), looks on.

Ensuring Compliance & Empowering Consumers

4.1.1.2 Quality of Service Monitoring

(a.) Telecommunications

In order to ensure that operators and service providers maintain acceptable quality of service levels, the Commission identified eight Key Performance Indicators (KPIs) to be used to gauge and monitor Quality of Service (QoS) in the telecommunications sub-sector.

As shown in Table 4.1, out of the eight parameters (KPIs), the Commission published six (6) of them in the *Kenya Gazette*, detailing their respective targets and the time they will become enforceable. The last two parameters shown in the Table will be published in the *Kenya Gazette* in the next financial year.

Table 4.1: Quality of Service Parameters and their Thresholds

No	KPI (Parameter)	Immediate threshold	Threshold in 3 years
1	Completed calls	90%	95%
2	Call Set Up Success Rate (CSSR)	90%	95%
3	Dropped calls	2%	2%
4	Blocked Calls	10%	5%
5	Call Set UP Time	<13.5 sec	<13.5 sec
6	Speech Quality (MOS PESQ)	95% of calls to have MOS >.2.7	95% of calls to have MOS >.3.1
7	Handover Success Rate	85%	95%
8	Received Signal Strength (RxLev)	Outdoor = - 102 dBm, Indoor = -95 dBm, Incar = - 100 dBm	Outdoor = - 102 dBm, Indoor = -95dBm, In car = - 100 dBm

Source: Communications Commission of Kenya

Using its state-of-the-art Quality of Service Measurement System (QSMS), the Commission continued monitoring and measuring quality of services (QoS) levels in the mobile market segment so as to ensure compliance to the set targets. The areas covered included Nairobi, Coast, Nyanza, Western, Central, Eastern, North Eastern and Rift Valley. The measurements covered major towns, urban centres and highways/roads in these regions.

The data collected on the gazetted KPIs will be published regularly.

This will clearly indicate the compliance status of each mobile operator against each KPI to enable the public to make informed decisions in respect to choice of service providers in accordance with their quality of their service.

(b.) Postal and Courier Services

In order to facilitate the enforcement of quality of services required of Postal Corporation of Kenya (PCK), the Commission commenced the process of procuring a quality of service measurement system designed to monitor the quality of service of mail by monitoring test letters at key points in the mail delivery system. The system registers test letters automatically and objectively when they pass through specific gates or locations. It uses Radio Frequency Identification (RFID) equipment which is widely used globally.

This will enable the Commission to monitor and enforce quality of service requirements of PCK in a more scientific and reliable manner than the current method involving physical examination of letters during inspections.

The first opportunity from RFID is lowering the cost of information. Today, business information is often conveyed by a combination of bar codes and electronic data interchange (EDI) between computers. After 30 years' experience with these mature practices, there is substantial knowledge and infrastructure for generating and reading bar codes.

The second opportunity from RFID is increasing information accuracy. By allowing information to be captured and stored instantly, wherever it is most convenient, RFID helps ensure that the information is correct.

Finally, RFID tags can capture and convey new kinds of information that are difficult or impossible to get using traditional methods. Tags can be made unique and they can easily carry encrypted authentication information. RFID tags can also be combined with sensors on a chip, making it possible to have tags actually collecting data about conditions they experience. These features enable new security and anti-counterfeiting applications.

4.1.1.3 Non Ionizing Radiation (NIR) Measurements

To ensure that emissions from radiocommunication facilities are



CCK officers in a routine frequency spectrum monitoring exercise.

Table 4.2: Non-Ionizing Radiation Measurement Results

Frequency Band	Number of Sites	Measurement Results		%age of ICNIRP Limits	
		Lowest	Highest	Lowest	Highest
3MHz – 18 GHz	5	Below 1mW/M2		0.0149%	
3MHz – 18 GHz	13	1mW/M2	10mW/M2	0.0149%	0.149%
3MHz – 18 GHz	2	10mW/M2	24.76mW/M2	0.149%	0.371%

Source: Communications Commission of Kenya

within the safe limits stipulated by the International Commission on Non-Ionizing Radio Protection (ICNIRP), the Commission acquired a Radio Frequency (RF) Meter to measure Non Ionizing Radiation (NIR) levels from radiocommunication facilities. The Commission also acquired a Spectrum Analyzer to complement the RF meter. The analyser will also be used for radio frequency spectrum interference resolution.

During the year under review, the Commission entered into a Memorandum of Understanding (MoU) with the Radiation Protection Board (RPB) and commenced joint measurement of electromagnetic emissions from radiocommunication installations to ensure that they do not exceed safe limits.

According to the data obtained from an exercise undertaken jointly ▲

by RPB in Rift Valley, Nairobi and Central Kenya regions during the year, all the Base Transceiver Station (BTS) facilities were found to be emitting electromagnetic radiation that were compliant with the ICNIRP stipulated limits.

The results of the measurements performed in the frequency bands 3MHz – 18GHz covering mobile BTS emissions are shown in Table 4.2. The data indicates that out of the 20 sites at which the measurements were taken, five sites had average emissions below one (1) Milli-watt per square meter (mW/M2) while 13 sites had emissions ranging from 1 mW/M2 to 10 mW/M2. Two (2) had emissions between 10 and 24.76 mW/M2.

The highest average of the above represents approximately 0.37percent of the recommended ICNIRP safe limit. The averages reported above were based on a six minute average of the signal level as measured by the joint team and demonstrates that they were all within the 1% ICNIRP guidelines of the World Health Organization (WHO).

Although the measurements were specifically taken close to the Base Stations in order to determine the highest possible radiation levels, the above results are for emissions covering the 3MHz and 18GHz frequency bands and therefore include radiation levels from other sources of emissions within the surrounding areas.

4.1.1.4 Returns from Operators

The Commission requires licensed operators to submit compliance returns. The returns enable the Commission to determine if licensees are offering services according to the licence terms and conditions.

They also enable the Commission to collect data on industry growth, in terms of revenues, investment, services offered, subscribers, prices charged, service outlets, bandwidth/infrastructure utilization and employment levels.



Ensuring Compliance & Empowering Consumers

During the year under review, the Commission received quarterly and annual compliance returns, which bear information on performance for the preceding quarter/year, from a total of 86 licensees as can ►

be seen in Table 4.3. This represented 76 percent of the 113 operational licensees required to make such submissions.

Table 4.3: Compliance Returns Status

License Category	No. of Licensees	No. of Operational Licensees	No. of licensee that submitted returns	% of submitted Compliance Returns	% Level of Operational Compliance
Mobile Country Operators	4	4	4	100	100
International Gateway Systems and Services	2				
	2	2	100	100	
National Long Distance Operator	1	1	1	100	100
Local Loop Operators	35	16	10	62.5	45.7
Data Carrier Network Operator	12	12	11	91.6	100
Public Data Network Operator	12	10	9	90	83.3
Internet Service Provider	109	44	32	72.7	40.3
Premium Rate Services	73	20	14	70	27.3
Business Process Outsourcing	18	4	3	75	22.2

Source: Communications Commission of Kenya

There were low rates of compliance in the Business Process Outsourcing, Premium Rate Services, Internet Service Providers and Local Loop Operators licence categories, which have relatively the highest number of licensees, and therefore highly competitive. Consequently, many licensees in these categories received licences but were unable to commence service provision due to market related conditions including competition and lack of adequate finances, thus resulting to low rates of compliance. To address this situation, the Commission issued 16, 60 and 32 notices to non-compliant licensees for failure to pay fees, commence service provision and to submit compliance returns, respectively.

4.1.2 Type Approval

Type Approval is a process through which the Commission seeks to guarantee the safety of users, interoperability of networks and efficient utilization of frequency resources. During the review year, 177 type approval applications were received and successfully processed compared to 129 the previous year. The details of these, in terms of equipment types and numbers are as shown in Table 4.4. The Commission also gave clearance to 59 applicants for the importation of telecommunication equipment into the country.

Table 4.4: Type Approval Applications Handled

Equipment Type	Number of Equipment				
	2004/ 2005	2005/ 2006	2006/2007	2007/2008	2008/2009
Data Routers	1	2	13	6	4
Gateway/Switches/PABX	12	10	9	11	5
PSTN/IP Server Equipment	-	-	-	9	-
Wireless Terminals/Systems	11	33	15	11	16
Transceiver-VHF/UHF	14	19	14	16	11
Transceiver-HF	8	1	-	3	2
Transceivers-CB	8	5	6	-	-
Low Power Wireless Terminals	2	1	-	29	46
Satellite Terminals	1	5	-	2	-
Alarm Transmitter	2	1	-	-	-
Broadcast Equipment	10	9	5	7	5
VSAT Equipment (Transceiver, BUC, HPA, etc)	4	14	4	13	11
GSM Interface Et BTS	8	1	-	1	45
CDMA Interface	-	-	-	2	-
VOIP Terminals	2	-	-	-	2
Telephone Sets	11	1	2	2	2
Payphone	5	-	-	1	-
GSM mobile handsets	1	2	4	9	18
CDMA Telephone sets	2	14	6	5	5
Fax Machines	-	1	-	2	5
Accepted/approved Equipment	98	119	75	129	177
Rejected Equipment	6	1	3	0	0
Total cases	104	120	78	129	177

Source: Communications Commission of Kenya

During the year under review, the Commission commenced the process of acquiring conformance testing equipment to boost the type approval process.

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The testing facility will reduce the turn-around time taken to test equipment.

4.2 Empowering the Consumer

4.2.1 Consumer Education

The Commission launched a two-phased Consumer Education Outreach Programme (CEP) dubbed the "Chukua Hatua" campaign with the Kiswahili slogan "Pata Huduma ya Mawasiliano Unayostahili" during the period under review. The CEP was geared towards equipping consumers with skills, information and knowledge to enable them make informed decisions regarding the choice of products and services in the communications market. The main focus of the campaign was mobile telephony and internet services. The programme was designed to inform and educate consumers on CCK's role and mandate in consumer protection, safe mobile use, buyer awareness, responsible internet use and premium rate services.

The CEP was made up of road shows and public lectures in Nyeri, Eldoret, Kisumu, Nakuru, Mombasa and Nairobi. The launch of the CEP took place at the Kenyatta International Conference Centre (KICC) on 25th September 2008.

While the road shows were open to all members of the public, the public lectures targeted a limited and select number of consumers who have some reasonable knowledge in ICT. In Nairobi, the road show was held side by side with an open day for consumers where the Commission attended to issues of concern raised by the members of the public.

As part of the CEP, the Commission uploaded the consumer education fact sheets on its website. The Commission also distributed fact sheets, brochures and fliers to individual and corporate consumers during the road shows and public lectures, covering the topics listed in Table 4.5.

Table 4.5: List of Topics on the Consumer Brochures and Fliers

1	Buying a Mobile Phone
2	Children and the use of Cell-phone
3	Children and the use of Internet
4	Choosing a Mobile Phone Service
5	Consumer Rights and Responsibilities
6	Electromagnetic Energy and Human Health

7	How to Make a Complaint Regarding Communication Equipment or Service
8	Internet Security And Privacy
9	Internet Service Options
10	Mobile Phone Etiquette
11	Mobile Phone Security
12	Premium Rate Services
13	Productive Use of The Internet
14	Quality of Service
15	Role of the Communication Commission of Kenya in Consumer Protection
16	The Consumer Education Outreach Program
17	Warranties and Service Level Agreement
18	What to Know about Internet Service
19	Wireless Phone Technologies
20	Tariffs

During the consumer education outreach activities, consumers raised a number of issues. Key among them was the need for the Commission to rein in on FM Broadcast and TV stations which air/promote inappropriate programmes, low internet speeds offered by Internet Service Providers and mobile operators, and the sale of defective handsets (mainly mobile handsets) by unscrupulous vendors and dealers. To address the concerns raised, the Commission is exploring the possibility of strengthening the existing regulations and introduction of new ones to cover areas previously unregulated.



A CCK Chukua Hatua Road Show in Nakuru.

The Commission continued its efforts to ensure that members of the public are aware of the Commission's commitments in the service charter. In this respect, 3,250 copies of the service charter were distributed to industry stakeholders and the general public through various functions. The Commission also translated the service charter into Kiswahili in an effort to reach a wider section of the population.

4.2.2 Effects of Communications Infrastructure on Health, Safety and Environment

The Commission continued to address the concerns expressed by consumers regarding possible health and environmental hazards that may be posed by the numerous communications infrastructure like Base Transceiver Stations (BTS). To this end, the Commission facilitated the industry's efforts to develop a Code of Practice on deployment of Communications Infrastructure in Kenya. This industry code will guide the rollout of communications infrastructure in the country in a manner that takes cognizance of colocation, environmental aesthetics, human health and safety concerns

In an effort to narrow the rift between the consumers and the operators/service providers regarding siting of communications infrastructure, the Commission facilitated a workshop themed "Addressing environmental Concerns in ICT Infrastructure Development".

The Commission also signed a Memorandum of Understanding (MoU) with the Radiation Protection Board to, among other objectives, guide collaboration in the determination of Electromagnetic Emissions (EME) levels from various communications infrastructure. To further streamline the environmental issues relating to communications infrastructure, the Commission, in addition to working closely



Central Deputy PC Mr. Ahmed Omar Hassan addresses members of the public who turned up for the inaugural Chukua Hatua road show in Nyeri.

with the National Environment Management Authority (NEMA) is considering an MoU with NEMA to strengthen this collaboration.

4.2.3 Consumer Protection

The Commission received 219 complaints compared to 29 in the previous year, which represents a phenomenal increase of 655%. The huge increase in the number of complaints was attributed to the CEP which increased consumers' awareness of the Commission's role in dispute resolution. Most complaints reported related to defective communications equipment especially mobile phone handsets as shown in Table 4.6.

Table 4.6: Number of Complaints

CATEGORY	2007/2008	2008/2009		
		Total	In Progress	Resolved
Defective Terminal Equipment	2	89	76	13
Poor Quality of Service	10	5	51	4
Service Interruptions	5	6	6	0
Billing Errors	9	20	5	15
Service Provisioning delays/failures	0	13	8	5
Misleading advertisements	0	8	7	1
Frequency interference	0	4	3	1

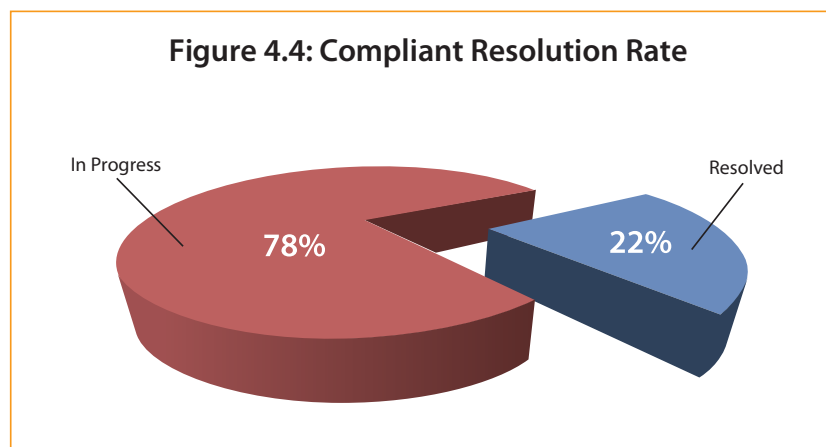
Ensuring Compliance & Empowering Consumers

Table 4.6: Number of Complaints

Vender Warranty violation	0	1	0	1
Unauthorized charges	0	4	2	2
Electromagnetic Radiation	0	5	3	2
Inappropriate Content	0	1	1	0
Tariffs	0	4	3	1
Unfair Trading Practices	0	3	3	0
Confidentiality breaches	0	1	1	0
Fraud (Calls/SMS)	0	2	0	2
Nuisance/Stalking	0	3	1	2
Warranty violations	0	1	0	1
Other	3	0	0	0
TOTAL	29	219	170	49

Source: Communications Commission of Kenya

The resolution rate of complaints stood at 22 percent as shown in Figure 4.4.



Source: Communications Commission of Kenya

The Commission recognizes that the rate of complaint resolution still remains low. This, as pointed out the previous year, is attributed to the lack of strong and explicit consumer protection regulations. The Commission will strive to have the Consumer Protection Regulations in place to better resolve the complaints that it receives. It is also expected that the enactment of the proposed Consumer Protection Bill will help boost consumer confidence in the appeal process by making it easier for consumers to seek redress from the courts.

The QSMS system has also been very instrumental in the verification and resolution of Consumer Complaints. During the year under review, a total of 20 consumer complaints were investigated using the system. Consequently, the Commission was able to advise operators to take appropriate remedial measures. The complaints were at various stages of resolution by the end of the year as reported elsewhere in this report.

As indicated in Table 4.7, a total of 20 enquiries were reported during the year under review out of which 85 percent were provided with the required information. The bulk of the enquiries were on products in the ICT market.

Table 4.7: Number of Enquiries received in the year

CATEGORY	Number Received	Number Resolved	In Progress
Frequency	2	1	1
Warranty	2	2	0
Information	1	1	0
Online Lottery	1	1	0
Other Products	5	5	0
Billing	1	1	0
Tariffs	1	0	1
Consumer Education Information	1	1	0
Licence Categories	1	0	1
Stalking	1	1	0
Credit Facilities	1	1	0
Prank Calls	1	1	0
Subscriber Confidentiality	1	1	0
Spam Mail	1	1	0
TOTAL	20	17	3

Source: Communications Commission of Kenya

The Commission has uploaded complaints and enquiries forms on its website to facilitate easier submission of complaints.

One of the challenges met in handling complaints and consumer enquiries was that, complainants were presenting inadequate information, making it difficult for the Commission to handle such complaints.

4.2.4 Customer Service Charter

In order to ensure that the Commission's service delivery standards are known to the public, the Commission displayed its service charter at service delivery points and reception areas. Familiarity with the service standards is expected to translate into customer demands that the standards be met. Additionally, the Commission reviewed

its standards, following a survey undertaken the previous year, in order to address issues raised in the said survey.

In recognition of the fact that a section of Kenyans do not understand English, the Commission also translated its service charter into Kiswahili. The Commission plans to distribute the revised Service Charter to as many Kenyans as possible during the coming year.

4.2.5 Customer Satisfaction Survey

The Commission is committed to continuous improvement in service delivery so as to ensure customer satisfaction. In line with this policy, the Commission undertakes customer satisfaction surveys annually in order to gauge the level of satisfaction experienced by its customers and the clients of licensees.



In this regard, the Commission launched its second Customer satisfaction and perception survey during the year under review. The results are expected in the first quarter of the next financial year. The outcome of the survey will help the Commission determine service delivery areas that require improvement with a view to striking the best balance between the needs of its licensees vis-à-vis those of consumers.

4.2.6 Complaints Handling Procedure

The Commission has in place a complaints handling procedure, which is available on both the Commission's website and in print. In line with its expanded mandate, the Commission started developing a draft complaints handling procedure on broadcasting content. The procedure provides a framework on filing and handling of complaints on broadcast content. This is expected to help consumers lodge their complaints appropriately.



CHAPTER 5

Meeting Universal
Access Objectives »

Chapter 5 » Meeting Universal Access Objectives

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The Commission is mandated to ensure the provision of ICT services to all parts of the country. Over the last ten years, the Commission has facilitated access through liberalization of the sector, entrenching the Universal Service Obligations (USO) in the respective licences and creating an enabling environment. These initiatives have only served to address the market that could not be served efficiently prior to liberalization. A significant number of the population has yet to be connected to basic voice telecommunications services, postal services as well as gain access to the internet.

By June 2009, Kenya had 17.4 million mobile subscribers. Taking into consideration that a sizeable number of subscribers are connected to more than one network, this implies that a wider segment of the Kenyan population is not connected. This is attributed to limited access to and availability of the mobile services as only 32 percent of the Kenyan land mass is covered; and/or difficulties in affordability of the services. As at June 2009, the Internet penetration stood at only nine (9) percent of which 80 percent of all the users were in Nairobi. With respect to the postal and courier services, the access gap has been widening as the national postal licensee, PCK, continues withdrawing services from high cost areas. The current statistics indicate that there are only 710 postal courier outlets down from 872 outlets in 2004. The challenge that faces the Commission, therefore, is how to ensure accessibility and availability of affordable services in rural and remote areas, and to low income groups.

During the year under review, the Commission continued with the following initiatives towards achieving universal access:

5.1 Implementation of the Universal Service Fund

In order to address the challenges of low penetration of ICT services among the population, the Government, through the *Kenya Communications (Amendment) Act, 2009*, created the Universal Service Fund (USF). USF is globally recognized as an effective mechanism of enhancing accessibility, availability and affordability of ICTs services in unserved and underserved areas, and among communities with low incomes and special groups. During the year under review, the Commission commenced the process of making the Fund operational. The Commission laid the ground work for a consultative process involving key stakeholders. The output from the consultations is expected to guide the development of appropriate operational and administrative guidelines that shall ensure successful implementation of the Fund. The Fund is expected to leverage operations in high cost areas, support innovations in the sector and enhance ICT capacity in the country.

5.2 Universal Access Projects

In the past three years, the Commission has been implementing pilot universal access projects. The primary objective of the projects was to inform future national roll out plans of similar initiatives. During the year under review, the Commission carried out the following projects.

5.2.1 ICT Access Centres

In order to provide internet access as well as build ICT capacity in communities in un-served and under-served areas, the Commission continued to support the 16 school-based ICT centres and the four (4) community ICT access points established during the last financial year. During the year under review, the Commission supported these centres by meeting the cost of internet connectivity, maintenance of equipment and software. As part of the project implementation and management, the Commission also continued monitoring and evaluating the centres and, in collaboration with the centres, worked out modalities to ensure that the centres are sustainable.

5.2.2 ICT for People with Disabilities

In recognition of the ICT needs of people with special needs and keeping in line with the ITU theme of 2008, "ICT for People with Disabilities (PwDs)", the Commission embarked on an initiative aimed at providing ICT solutions for PwDs. The programmes in this initiative included:

- Setting up school-based ICT centres within post primary school institutions for PwDs;
- Creation of an accessibility web portal to provide information for and on PwDs in the country; and
- Conducting an awareness campaign on ICT and PwDs with a view of developing guidelines on ICTs and PwDs.

Further, the Commission identified eight (8) institutions for people with physical, hearing and visual impairments to be on this programme. The Commission supported the supply, delivery, installation and maintenance of computers, requisite software, and furniture to these institutions. The Commission will also continue to support Internet connectivity in these institutions for a period of two years.

5.2.3 Digitization of the Kenya Certificate of Secondary Education Curriculum

In the spirit of partnership with other public institutions and in the Commission's endeavour to encourage the development of relevant



CCK Board Chairman Hon. Eng. Philip O. Okundi officially opens the ICT Centre for Persons with Disabilities at the Machakos Technical School for the Blind. CCK Director General Charles J. K. Njoroge (right) and Machakos Technical Institute Principal, Francis Saya, look on.

local content as a demand driver for ICT services, the Commission supported the Kenya Institute of Education (KIE) in its programme for digitization of the Kenya Certificate of Secondary Education (KCSE) curriculum. This is a land mark project that will enhance e-learning in the country and provide an incentive for teachers and students to access ICT services.

During the year under review, 11 subjects for Form 1 curriculum were digitized and piloted in 20 schools, 16 of which are the beneficiaries of the Commission's school-based ICT Centre initiative. The Commission supported acquisition of hardware and software and capacity building at a cost of Kshs. 15 million.

5.2.4 Computerization of Health Centres

Similarly, the Commission partnered with other stakeholders (Telkom Kenya Limited, Ministry of Health, Qualcomm, Axesstel, and Research Triangle Institute) in "the Wireless Reach Kenya" pilot project in supporting e-health initiatives aimed at enhancing public service delivery in health institutions.

The project involves computerization of the re-supply of Antiretroviral (ARV) pharmaceuticals in health centres in Nairobi. The primary objectives of the pilot project are:

- To demonstrate the use of wireless broadband technology to improve patient care by improving the efficiency of the reporting system between health facilities under the supervision of the Nairobi Provincial Medical Office (PMO);
- To improve the ability of health workers at Anti-Retroviral Treatment (ART) sites, pharmacists in the district, and the provincial pharmacist to communicate regarding changing policies and trends in ART; and
- Ensure that patients with HIV/AIDS within the locality of the health centres have a constant supply of anti retroviral drugs.

The centres selected to participate in this phase include Nairobi Remand Prison, Riruta, Makadara and Mathari Hospital. The Commission's contribution to the project was towards acquisition of computer hardware and software.



CHAPTER 6

Capacity Building
and Systems Improvement »



Chapter 6 » Capacity Building & Systems Improvement

Capacity building of human resources and modernization of the systems and internal processes are key performance facilitators in any organization and play a pertinent role in improving service delivery. Quality management systems and internal communication among staff are also at the heart of the success of any organization.

During the year under review, the Commission undertook various initiatives to develop its human capital in the ICT sector; improve the working environment; automate internal processes; ensure quality management systems and best practices; and enhance communication and effective feedback among staff.

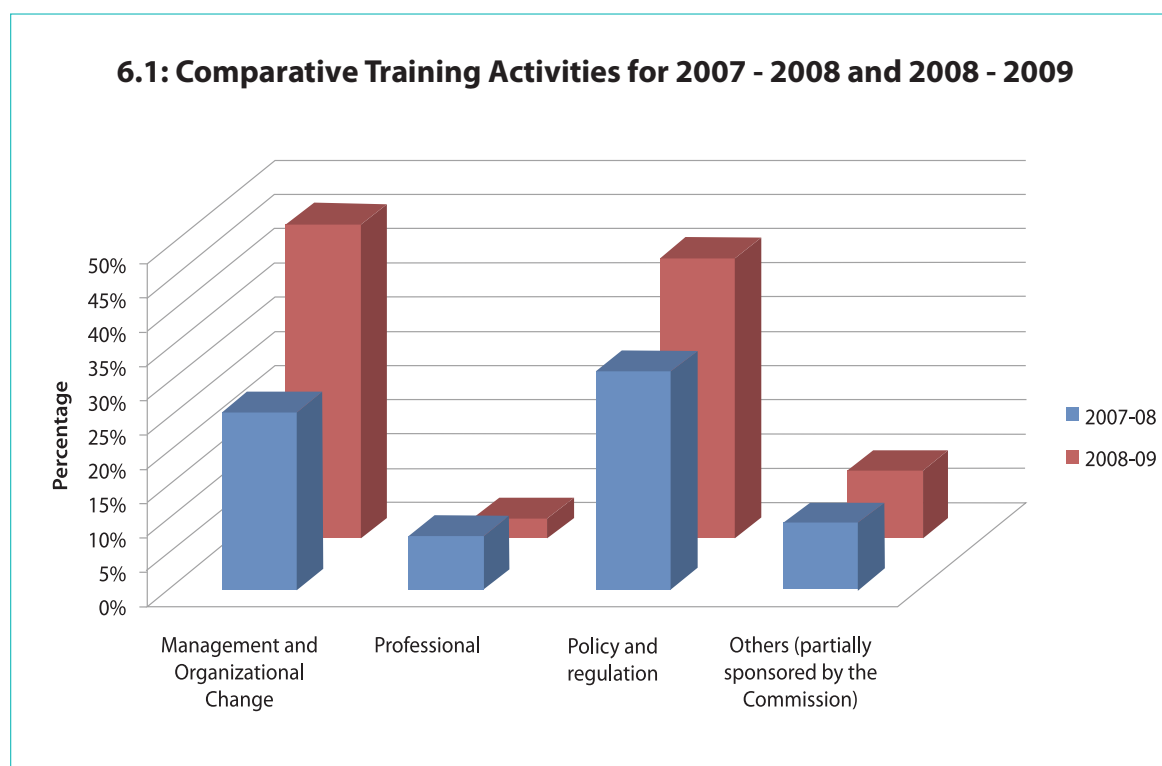
6.1 Human and Capacity Development

Human capital is the most important resource in any organization or country. The Commission contributes to the development of capacity of its staff and also builds capacity in the ICT industry, through training and availing internship opportunities to students.

6.1.1 Human Capital

The Commission ensured that its staff establishment (which stood at 139 employees at June 2009, of which 40 percent were women) were well equipped with the necessary capacity to better serve the industry. To this end, the Commission put in place a budgetary allocation to cater for various staff training and development activities locally and overseas as part of its capacity building initiatives.

During the year under review, various local, regional and international institutions partnered with the Commission through knowledge and skills transfer ventures. Some of the institutions included the Commonwealth Telecommunications Organization (CTO), International Telecommunication Union (ITU), United States Telecommunications Training Institute (USTTI), African Advanced Level Telecommunications Institute (AFRALTI), Eastern and Southern Africa Management Institute (ESAMI), United States Agency for International Development (USAID) and Japanese International Corporation Agency (JICA).



Source: Communications Commission of Kenya



CCK wins Runners-up Integrity prize in the State Corporations category from KACC. Deputy Prime Minister and Minister for Finance, Hon. Uhuru Kenyatta, handed over the prize to CCK Director-General Mr. Charles J.K. Njoroge.

The Commission's staff training is guided by the Training Needs Assessment (TNA) carried out annually. During the year under review, the Commission's staff attended a total of 96 courses on policy and regulation, professional courses, management and organization change, among others. As depicted in Figure 6.1, policy and regulation courses accounted for 41 percent which was an increase of nine (9) percentage points compared to the last financial year, and were mainly carried out overseas and included benchmarking visits to other regulatory bodies. Professional courses, involving a longer training duration, stood at three (3) percent. Management and Organizational Change training accounted for 46 percent, while Other Courses such as HIV/AIDs awareness, customer care programmes, defensive driving, and short seminars of general nature accounted for 10 percent in comparison with 26 percent and 34 percent, respectively, in the previous year.

Out of the 96 courses that were attended by a total of 123 staff ►

(75 male and 48 female), 47 were local. The increased number of staff trained was attributed to increased bilateral partnerships with institutions such as CTO, ITU and JICA.

During the year under review, the Commission conducted an employee satisfaction survey to establish the status of the satisfaction levels and factors contributing to the satisfaction/dissatisfaction. In an endeavour to retain and attract a highly motivated and productive skilled worked force, and also address some of the recommendations contained in the Staff satisfaction survey, the Commission put in place a number of motivational strategies and policies. In this regard, some clauses in the Human Resources (HR) Policy Manual touching on various staff terms and conditions of service were reviewed.

During the year under review, the Commission also commenced operation of a staff canteen within the CCK Centre as part of its endeavour to promote staff welfare.



Capacity Building & Systems Improvement

6.1.2 ICT Sponsorship

As a regulatory agency, the Commission is also concerned with capacity building in ICT industry, since this has a significant impact on the overall growth of the industry. In this regard, the Commission, in collaboration with CTO and the ITU hosted ICT programmes which attracted a total of 73 professionals (63 male and 10 female) from various operators (Telkom Kenya, Safaricom, Zain, KCCT, Essar Telecoms) during the year. Twenty one (21) staff members participated in the said programmes.

In its effort to encourage transfer of knowledge between the industry and academia, the Commission also continued to offer opportunities for two-month attachments/internships covering 68 students (46 male and 22 female) from various local universities and colleges, and also facilitated a one-day exposure visits for 65 students from four local learning institutions.

6.2 Improvement of the Working Environment

During the year under review, the Commission undertook various initiatives as outlined below geared towards ensuring a healthy, safe, secure and a corruption-free work environment for all the staff and clients.

6.2.1 Occupational Health and Safety

The Commission embarked on various activities aimed at promoting a healthy and secure work environment in line with the Commission's Health, Safety and Environmental Policy, and the *Occupational Safety and Health Act, 2007*. These activities included installation of a fire suppression system at the Commission's headquarter building and all the RSMS Stations, construction of an electric fence along the entire Centre's stone fence perimeter wall and installation of a CCTV Network and an Underbelly metal vehicle Scanner. Further, the Commission provided protective clothing for the staff members who are involved in technical and field assignments as required by the *Factories Act Cap 514*.

6.2.2 Campaign against HIV/AIDS

The Commission implemented activities aimed at continued promotion of HIV and AIDS awareness and behaviour change during the year under review. It availed male and female condoms in strategic places and trained nine peer educators/counsellors on advanced peer educators training.

These initiatives were aimed at promoting HIV/AIDS awareness.

6.2.3 Anti-Corruption Strategies

To ensure a corruption free environment, the Commission put in place an Anti-Corruption Policy, Corruption Prevention/Integrity Committees, Code of Conduct, Integrity Training and Corruption Prevention Plans. In recognition of its commitments in the fight against corruption, the Commission was awarded the second runners up prize in the Public Sector Integrity Award category.

Further, the Integrity Assurance Committee was trained on Ethics by the Kenya Anti-Corruption Commission (KACC). The Commission also carried out a Baseline Corruption Perception Survey to determine the perceived level of corruption. The results of the survey indicated that the Commission attained an index of 7.58 out of a scale of 10. The Commission will implement the recommendations of the survey and seal possible loopholes that may encourage the perceived corruption in the next financial year.

6.3 Automation of the Commission's Processes

During the last one year, the Commission has been in the process of implementing the Integrated Management Information System (IMIS). The purpose of the system is to centralize information within the Commission by having a single database and thus enhancing the efficiency of access to information within the Commission. The system is intended to improve the workflow in the running of the business process of the Commission and more importantly increase the level of transparency.

The Commission computerized processes which were initially done manually. Some of the existing systems were also integrated. Further the IMIS modules were developed for finance and accounts; procurement; document management system; IT Help Desk; Intranet/shared portal; and customer relationship. Integration of the existing Human Resources and Administration (HRA) Perpay system within the IMIS was also carried out during the year under review. These modules will enable the Commission to implement the IMIS project which is expected to be completed in March 2010.

Further, two more multifunctional printers (MFP's) were added in the Local area network so as to assist in enforcing controlled and group printing with a view to enhancing efficiency and cutting costs.

6.4 Procurement and Disposal

As a statutory obligation, the Commission's Committees on Tender Procurement, Disposal and Inspection and Acceptance continued to

carry out their activities in accordance with the *Public Procurement and Disposal Act, 2005 and Regulations, 2006*. This ensured fairness, transparency and accountability in the tendering process for all the goods/services/works.

In this regard, the Commission made a lot of progress in the area of procurement of services/goods and works, with 33 contracts executed during the review period.

To ensure economy and efficiency, the Commission developed a supplier monitoring and evaluation system with the aim of improving quality and timely delivery of goods, services and works.

The Commission also put in place maintenance contracts for major equipment. This has not only improved optimum performance of the Commission's equipment but also led to reduction in administrative costs.

To increase transparency and accountability, the Commission developed a draft Procurement Manual. The manual has documented the procurement internal processes and procedures aimed at improving efficiency and accountability. Further, a market price survey was conducted in order to ensure that the Commission gets competitive market rates and value for its money for goods and services procured.

The Commission also embarked on supplier rationalization system for low cost items by entering into an annual framework agreement with prequalified suppliers. This is aimed at reducing the administrative cost of processing quotations and getting attractive prices through economies of scale.

Finally, the Commission through competitive tendering disposed off nine (9) out of 10 old motor vehicles that had been earmarked for disposal as per the recommendation of the Commission's Disposal Committee.

6.5 ISO 9001:2000 Quality Management System

To achieve world-class customer satisfaction, the Commission undertook to achieve ISO 9001:2000 standard. In 2007, the Commission signed a performance contract with the Ministry of

Information and Communications to ensure that this standard is attained within the year under review.

The standard requires the Commission to demonstrate the ability to consistently provide services that meet customers' requirements as well as enhancing customer satisfaction through effective application of the quality management system, including processes for continual improvement of the system and assurance of conformity to customers and applicable regulatory requirements.

During the year under review, the Commission carried internal quality audits. Pre-Certification Stage 1 Audit and Certification Audit Stage 2 Audit by the international ISO certifying organization, the Société Generale de Surveillance (SGS), were also carried out. All these activities culminated in the award of ISO 9001:2000 certificate to the Commission in May 2009. The certificate has positioned the Commission among the few ICT regulatory authorities that have attained international standards.

6.6 Internal Communication Policy

In order to enhance internal communication, the Commission developed an internal communications policy, which sets out the standards, methods, processes and responsibilities for communication with staff. The implementation of the said policy will go a long way in ensuring that staff feel respected, motivated and valued. In line with the internal communications policy, the Commission continued to use the weekly e-bulletin to keep staff abreast of key events and developments within the Commission. The intranet/shared portal developed within the IMIS project will also double up as a vehicle for internal communication.





CHAPTER 7

Corporate Relations and International Liaison »

Chapter 7 » Corporate Relations & International Liaison

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In line with Key Results Areas outlined in the 2008-2013 Strategic Plan, the Commission carried out a number of image building and International Relations activities during the year under review. These include the marking of the 10th anniversary celebrations and participation in relevant meetings organized by affiliated regional and international ICT organizations.

7.1 Image Building

7.1.1 Anniversary Celebrations

The Commission attained 10 years of age during the period under review. As a result, a decision was made to celebrate the anniversary in July 2009 to coincide with the month when the Commission commenced its operations 10 years ago. Towards this end, preparations for the anniversary were initiated during the year, including the production of marketing communications materials, and making logistical arrangements for commemorative events and activities. To flag off the celebrations, the Commission hosted a staff party in appreciation of employees' contribution towards the development of ICT industry. Most of the anniversary events and activities will be rolled out at the onset of the next financial year.

7.1.2 Website Redesign

To meet the information needs of a wide array of stakeholders, the Commission initiated the process of re-designing its website. The new look website will have enhanced functionality to enable online submission of compliance returns. The redesigned website shall be up and running in the early part of the next financial year.

7.1.3 Corporate Social Responsibility

As part of its Corporate Social Responsibility (CSR) programme, the Commission participated in a number of CSR activities during the year under review. These included support to the Mater Heart Run for the fifth year running. The Commission also donated Kshs. 2 million in support of the Government Famine Relief kitty in response to a biting food shortage in the country, and One (1) Million Shillings in aid of the Molo and Nakumatt fire disaster victims. With the participation and help of the Kenyatta National Hospital branch of the Nurses Association of Kenya, the Commission ran a medical camp for the community living near the Huruma Children's Home in Ngong, Nairobi. In a show of support for the development of local content, the Commission sponsored the Best Local TV Content Award category at the Kalasha Awards for the Film and Television industry in Kenya.

7.1.4 Public Consultations

In line with the Commission's tradition of consultation, the Commission hosted various stakeholder forums to gather inputs and involve the industry in key decisions. The most notable was the first Postal/courier Stakeholders Forum, which brought together industry players and stakeholders to address issues of concern to the postal/courier industry. The Commission will sustain this tradition in order to ensure that industry players and other stakeholders are involved in the regulatory decision making process.

7.1.5 Exhibitions and Promotional Activities

During the year under review, the Commission, in collaboration with the Kenya ICT Board and industry players, participated in promotion activities geared at positioning Kenya as a Business Process Outsourcing (BPO) and investment hub. To this end, the Commission joined the Government and the private sector at the Call Centre Europe, a leading outsourcing conference and exhibition held annually at Birmingham in the United Kingdom. Participation in this event was important in ensuring the country's visibility in Europe's outsourcing space. During the event, Kencall EPZ Ltd, one of the licensed BPO service providers in Kenya, emerged the winner of the Best Non-European Call Centre of the Year Award, a clear testimony of the country's potential and capabilities in outsourcing. Kenya's Pavilion at the event generated tremendous interest from BPO investors and offshoring firms.

Closer home, the Commission also participated in the Public Service Week, which is an annual event aimed at facilitating greater interaction between the Government (including state corporations) and the public. The Commission participated in the exhibition under the Ministry of Information and Communications Pavilion, and emerged the Runners Up Overall in respect to stand presentation. The Commission shall continue to participate in this annual event with a view to ensuring that it interacts much more with the public and ICT consumers.

7.2 International Relations and Liaison

In the international arena, the Commission participated in various meetings and fora in accordance with its role as the designated government representative to various intergovernmental organizations dealing with ICTs. The Commission also met all its obligations to the said organizations during the period under review.



Corporate Relations & International Liaison

7.2.1 International Telecommunication Union

During the year, the Commission participated in a number of events organized by the International Telecommunication Union (ITU).

7.2.1.1 World Telecommunications Standardization Assembly (WTSA-08)

The Commission participated in the World Telecommunication Standardization Assembly (WTSA) held in Johannesburg, South Africa, in October 2008. WTSA is a regular four yearly event that defines the next period of study for the ITU Standardization sector (ITU-T). The assembly reviews working methods including approval processes, the work programme and the structure of ITU-T Study Groups.

Prior to WTSA 08, the Commission participated in a number of preparatory meetings throughout 2008 notably the regional preparatory meetings held in Accra, Ghana, and London in May and September 2008, respectively. WTSA 08 was the first to be held in Africa and was preceded by the Global Standards Symposium (GSS).

The WTSA 08 reduced the ITU-T study Groups from 13 to 10 by merging some study groups. Study Group restructuring was mainly undertaken on the basis of ensuring cost-effectiveness and efficiency for the membership and the ITU. Kenya was elected the vice chair of both the Assembly and Study Group 3 of the ITU-T Sector.

In recognition of the need to improve Quality of Service/Quality of Experience in the continent and as part of "bridging the standardization gap between developed and developing countries' initiative", the standardization bureau of the ITU (ITU-T), through Study Group 12, formed the Regional Group for Africa (RG-AFR) during the year under review. Kenya was elected to Chair the group. The group accords African telecommunication operators and regulators an opportunity to directly participate in the standardization process and a greater sense of ownership of resultant Recommendations/Standards.

The group's very successful inaugural meeting, in which over 100 Telecommunications Operators and Regulators participated, was held in Accra, Ghana, in June, 2009. The next meeting, which will include Study Group 5 Regional Group for Africa, will be held in Kenya in 2010.

7.2.1.2 Preparatory activities for World Radio Conference 2011 (WRC-11)

The World Radio Communication Conference (WRC) is a world wide meeting convened by ITU every four years to make decisions regarding administration and use of frequency spectrum resource for all United Nations (UN) member countries. The next conference will be held in 2011. The main objectives of WRC-2011 are:

- Enhancement of the international spectrum management framework;
- Consideration of appropriate regulatory provisions for the operation of unmanned aircraft systems (UAS);
- Harmonization of spectrum for use by terrestrial electronic news gathering systems;
- Consideration of regulatory provisions and spectrum allocations for use by enhanced maritime safety systems for ships and ports;
- Regulatory measures and their relevance to enable the introduction of software defined radio systems; and
- Enhancement of the use of various bands by the aeronautical mobile (R) service.

During the year under review, the Commission began preparatory work for WRC-2011 by constituting the National Preparatory Committee consisting of major spectrum stakeholders and allocating various subcommittees specific agendas to study and prepare the national position on various issues in line with the above listed objectives.

7.3 UPU/PAPU/CTO

The Commission also hosted the 26th Ordinary Session of the Pan African Postal Union (PAPU) Administrative Council, and CTO's Connecting Rural Communities Conference during the year.

The Commission chaired the 24th Universal Postal Union (UPU) Congress in Geneva, Switzerland. The Congress, which was scheduled to be held in Kenya, was relocated to Switzerland, in the wake of the uncertainties engendered by the post-election violence.

In spite of the change of venue, Kenya was elected Chair of the UPU's Council of Administration for the next four years.

During the year under review, Kenya was selected to host the Universal Postal Union (UPU) Postal Strategy meeting in Nairobi in 2010. This will be the mid-term review of the implementation of the Nairobi Postal Strategy adopted at the last UPU Congress in 2008. Preparations for this meeting have already commenced in readiness to hosting the conference in August 2010.

7.4 Visits and Benchmarking

The Commission hosted delegations and meetings in the country during the year. These included delegations from the Uganda Communications Commission (UCC), the Rwanda Utilities Regulatory Authority (RURA) and the Ethiopian Telecommunications Authority (ETA) on benchmarking missions in the country.

In addition, Commission hosted a meeting on consumer protection for members of the East African Communications Organization (EACO), which brought together consumer protection experts from the

regulatory institutions in the East African region. Among the issues agreed upon was the need for member administrations to create or strengthen consumer affairs departments/units; put in place/implement customer service charters; educate consumers on communications services; enact/enhance consumer protection regulations and exchange information within the region.

7.5 Industry ICT Initiatives

The Commission participated in a number of forums relating to Internet Governance. These included the East African Internet Governance Forum (EAIGF) and meetings convened by local public and private institutions.

Due to Commission's continued participation in International Corporation for Assigned Names and Numbers (ICANN), Kenya won the bid to host the next ICANN meeting in March 2010 in Nairobi.



A Kenyatta National Hospital (KNH) nurse attends to a patient during a medical camp organized jointly with CCK at the Huruma Children Home in Ngong, Nairobi.



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Corporate Relations

CCK staff display their certificates moments after participating in the Mater Heart Run in support of needy children with heart ailments. CCK has been supporting the Mater Heart Run for the last four years as part of its CSR programme.



Information and Communications Minister Hon. Samuel Poghisio signs the visitors book at the CCK stand during the Public Service Week at the KICC grounds, Nairobi. Looking on is CCK Director-General (left) and other CCK staff.





Information and Communications Minister Hon. Samuel Poghisis (Centre), the then Postal Corporation of Kenya (PCK) Postmaster General Fred Odhiambo (left) and Ambassador Maria Nzomo (the then Kenya Ambassador to Switzerland and the UN) follow the proceedings of the 24th Universal Postal Union (UPU) Congress in Geneva, Switzerland. Kenya was elected chair of the Congress, and is the current chair of UPU Council of Administration.



Signing ceremony of an MOU between Multimedia University of Malaysia and the Kenya College of Communications Technology (KCCT), to build institutional relations, exchanges and course franchising. Seated (from left): representative of the Malaysia Multimedia University, PS, Ministry of Information and Communications, Dr. Bitange Ndemo, and James Kulubi, Director of KCCT (now Multimedia University College of Kenya) Standing: (from left): Ken Gathuma, State Counsel at the AG's Office, CCK Director General, Charles Njoroge.



CHAPTER 8

Financial Information »

Chapter 8 » Financial Information

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8.1 Statements of Directors' Responsibilities

The Kenya Communications Act, 1998, provides that the CCK Board of Directors shall cause to be kept proper books of accounts and records of income, expenditure, assets and liabilities of the Commission.

The Directors are also required to prepare and submit financial statements for each financial year, which include a statement of income and expenditure and a statement showing the assets and liabilities of the Commission as at the end of the financial year.

The Board of Directors accepts responsibility for the annual financial statements contained in this report which have been prepared using appropriate accounting policies supported by reasonable and prudent judgment and estimates, in conformity with generally accepted accounting practice (GAAP), International Accounting Standards (IAS) and in the manner required by the *Kenya Communications Act, 1998*.



Hon. Eng. Philip Okundi
(Chairman)



Charles J.K. Njoroge
(Director General)

Date: 4th December 2009

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The draft annual accounts for financial year 2008/09 are under audit. Therefore, the financial report contained herein is the audited report for 2007/08.

8.2 Income

The Commission's income in the 2007/08 financial year was Kshs. 3.5 billion, compared to Kshs. 3.1 billion in 2006/07. Frequency Spectrum Management fees comprised the Commission's main income stream as it accounted for 82 percent of the total income. Income from annual operating licence fees amounted to Kshs. 483 million, posting Kshs. 69 million increase over that of the 2006/07. In the financial year 2007/08, interest income increased to Kshs. 122 million compared to Kshs. 83 million in the 2006/07 financial year. This increase was brought about by an increase in the cash balances held by the Commission and a stabilization of the interest rates on Treasury Bills in which the Commission invested cash not required for immediate use.

8.3 Operating Expenditure

During the 2007/08 financial year, the Commission spent Kshs. 946 million on operations compared to Kshs. 1.02 billion during 2006/07 financial year period.

The expense items included in the operating expenditure are salaries and allowances, travelling, training, professional fees, subscriptions, universal access obligation, National Communications Secretariat, Corporate Affairs, printing and stationery, medical expenses, postage and telephone and other expenses incurred in the day to day running of the Commission.

8.4 Capital Expenditure

The total capital expenditure for the year 2007/2008 was Kshs.47.45 million compared to Kshs.107.83 million in the 2006/07 financial year. The items responsible for this expenditure included telecommunications equipment, furniture and fittings, radio equipment and office equipment.

8.5 Surplus

The resultant surplus before tax for the 2007/08 financial year was Kshs. 2.6 billion, reflecting an increase of 21 percent over the same period in the previous year. A total of Kshs. 783 million was paid by the Commission as corporate tax with respect to the financial year 2007/08. The surplus after tax for financial year 2007/08 grew from Kshs.1.5 billion to Kshs. 1.8 billion, representing a growth of 21percent.

During the year under review, the Commission paid Kshs.862 million as corporation tax. The audited income statement for the financial year 2007/08 is reproduced below:

Communications Commission of Kenya Income and Expenditure Account For the Year Ended 30 June 2008

	2008	2007
	Kshs.'000	Kshs.'000
Income	3,559,746	3,176,291
Operating expenses	946,428	1,024,646
Surplus for the year	2,613,318	2,151,645
Less Corporation Tax	783,995	645,494
Less Proposed dividends	-	1,000,000
Net surplus	1,829,322	506,152



8.6 Balance Sheet

The total assets of the Commission amounted to Kshs. 7.76 billion, during the 2007/08 financial year, comprising net non-current assets of Kshs. 1.49 billion, investment in KCCT of Kshs. 2.40 billion, cash and cash equivalent of Kshs. 3.38 billion and net debtors of Kshs. 483.12 million.

Communications Commission of Kenya Balance Sheet as at 30 June 2008

	2008	2007
	Kshs.'000	Kshs.'000
ASSETS		
Non Current Assets		
Property, plant and equipment	1,493,769	1,513,380
Investment In KCCT	2,404,266	2,304,266
	3,898,035	3,817,646
Current Assets		
Debtors	483,127	444,979
Cash and cash equivalent	3,380,788	1,689,127
	3,863,915	2,134,105
TOTAL ASSETS	7,761,950	5,951,751
	2008	2007
	Kshs.'000	Kshs.'000
EQUITY AND LIABILITIES		
Capital and Reserves		
Owners equity	741,965	741,965
Revaluation reserve	380,681	380,681
Retained surplus	5,333,991	3,500,434
	6,456,637	4,623,080
Current Liabilities		
Proposed for dividends	1,000,000	1,000,000
Corporation Tax for the year	159,264	231,078
Creditors	146,049	97,593
	1,305,312	1,328,672
TOTAL EQUITY AND LIABILITIES	7,761,950	5,951,751

8.7 Capital and Reserves

The current liabilities of the Commission at the close of the year 2007/2008 stood at Kshs.1.3 billion, comprising tax payable, suppliers' liabilities and proposed dividend to the Treasury. During the year under review, the Commission paid Kshs. 1.0 billion to the Treasury. The balance sheet for the financial year 2007/08 is reproduced below:

8.8 Annual Budget Estimates and Revised Budget

In accordance with Section 19 of the *Kenya Communications Act, 1998*, and the provisions of the *Exchequer and Audit Regulations 2001*, the estimates of revenue and expenditure of the Commission for the year 2009/2010 were prepared and submitted to the Ministry of Information and Communications. The total budgeted estimates income is Kshs. 4.4 billion, while operating expenditure is estimated at Kshs. 1.68 billion. The total budgeted capital expenditure is Kshs. 131.8 million.



Annex 1: Selected Key Communications & Economic Indicators

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Communications Statistics

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Fixed telephony capacity Wire line	490,000	508,000	508,000	513,820	516,993	505,103	512,281	485,581
Wire line Connections	328,116	328,358	299,225	278,867	293,364	339,229	527,064	247,972
Wireless Connections	-	-	-	-	-	84,107	274,449	448,529
Total Wire line & Wireless Connections	328,116	328,358	299,225	278,867	293,364	347,226	527,064	696,501
Mobile telephony capacity	1,500,000	2,00,000	3,935,000	6,800,000	10,600,000	18,200,000	25,964,700	N/A
Connections	944,128	1,590,286	2,546,157	4,479,375	6,484,791	9,304,818	12,933,653	17,362,257
Postal services								
Total postal Outlets	891	890	872	861	768	721	744	710
Private letter boxes	394,121	397,731	395,811	399,667	400,016	411,716	414,616	412,006
Letter posting boxes	1,137	1,138	1,120	1,049	1,049	966	827	890
Public counter positions	1,429	1,394	1,378	1,377	1,388	1,388	1,390	1,279
Stamp vending licences	299	4,466	3,733	4,088	4,242	4,125	4,609	4,505
Stamp vending machines	-	-	-	-	-	264	246	280
Private operator outlets	320	330	341	437	521	554	606	622
N/A-Data Not Available								

Economic Indicators 2008

Indicator	2001	2002	2003	2004	2005	2006	2007	2008*
Population (Millions)	30.9	31.8	33.2	34.2	35.1	36.1	37.2	38.3
Growth of GDP at Constant (2001) Prices (%)	4.5	0.6	2.9	5.1	5.8	6.4	7.1	1.7
GDP per Capita (in 2001 Prices) (KShs)	-	-	31,825	32,458	33,402	34,556	36,000	35,611
Consumer Prices, Annual Average								
[Index numbers October 1997=100]	131.0	133.6	146.7	163.7	180.6	206.7	226.9	286.4
CPI Inflation Rate (Overall) %	5.8	2	9.8	11.6	10.3	14.5	9.8	26.2
*Provisional								





CORE VALUES

The Commission and its staff are committed to the following set of core values:

- To act with integrity
- To be open in communication
- To be innovative
- To act diligently
- To be fair in all engagement
- To be results oriented
- To embrace teamwork &
- To respect all.



Communications Commission of Kenya

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