COMMUNICATIONS STATISTICS REPORT SECOND  QUARTER 2008/09

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contingent to the operators/service providers compliance returns.

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# 1.0 THE QUARTER IN REVIEW

The quarter in review was marked with several activities in the communications sector which led to significant growth in most of the sub sectors. In the mobile sub sector two operators namely Telkom Orange and Econet made entry into the market in September and November 2008 respectively. As a result the market was highly competitive with consumers enjoying an array of innovative and attractive services from the different operators. Some of the promotional offers provided tariffs as low as Ksh. 1.00 for on net calls, Ksh. 6.00 for off net calls and Ksh. 1.00 on SMS.

In the internet subsector, A Data Carrier Network Operator (DCNO) launched a free web portal that is expected to enhance local content in the country. Additionally, growth in the internet subsector was boosted by the launch of a mobile wireless broadband service by one of the providers. Mobile operators continued to offer broadband services using 3G while the Local loop operators offered internet connectivity for as low as Kshs 2,999 per month.

On the postal and courier front an innovative mail delivery service was launched by the Postal Corporation of Kenya to enhance efficiency in mail delivery.

#### 2.0 MOBILE TELEPHONY

During the quarter under review, Telkom Kenya and Econet Wireless started rolling out their services in September and November respectively. This brought to four the number of licensed cellular mobile operators in the Country.

With the additional players, competition is expected to intensify leading to a range of benefits such as reduction in cost and choice for consumers which should ultimately increase mobile penetration in the country.

## 2.1 Mobile Growth

The mobile subscription registered 11.9% growth between Q2<sup>1</sup> 2008 compared to 5.3% recorded in the same period 2007. The growth of subscribers was further enhanced by the roll out of mobile services by the two operators who entered the market during this period. This is as shown in table 2.1 below.

**Table 2.1:** Mobile Telephony Subscription (Cumulative)

Indicator	Sept-07	Dec-07	Change (%)	Sep-08	Dec-08	Change (%)
Number of mobile subscribers	10,777,102	11,349,412	5.3%	14,503,964	16,233,833	11.9%
Mobile Penetration (%)	28.97	30.51	5.3%	41.7%	43.64	4.6%

**Source:** CCK Database.

Mobile penetration increased by 4.6 % in the period Q2 2008 compared to an increase of 5.3 % in the same period 2007.

The increase in mobile penetration can be attributed to increase in the number of mobile operators, increased mobile coverage and availability of low denomination calling cards. Currently some mobile operators offer calling cards of denomination for as low as Kshs 20 which continues to provide affordable reach to most income users.

<sup>&</sup>lt;sup>1</sup> Q2 refers to the period October to December

## 2.2 Mobile Traffic

During the quarter, the mobile to fixed traffic increased by 12.2% while the local mobile traffic decreased by close to 60 % from Q1<sup>2</sup>. It is important to note that local mobile traffic in Q1 was exceptionally high due to the reduced/free calling rates offered by some operators. The summary of the mobile traffic is as shown in table 2.1 below.

**Table 2.2: Mobile Traffic** 

Indicator	Q4 <sup>3</sup> 2007/2008  April-June 2008	Q1 2008/2009  July -Sept 2008	Q2 2008/2009 Sept-Dec 2008	Change (%)
Mobile to fixed traffic (Minutes)	5,799,400	8,716,732	9,778,341*	12.2%
Total local mobile traffic (Minutes)	680,792,168	6,316,043,666 <sup>4</sup>	2,606,590,177*	-58.7%
Local SMS sent	670,192,766	699,136,122	361,862,632*	-48.2%
International Incoming Voice Minutes	77,232,903	97,018,882	99,596,864*	2.7%
International outgoing Voice Minutes	32,310,252	25,917,552	42,871,613*	65.4%
Incoming VoIP Minutes	7,716,723	289,134	6,979,693*	2314.0%
Outgoing VoIP Minutes	978,288	10,201,275	696,274*	93.2%
Total Roaming traffic Voice	1,6121,485	10,172,264	44,473,805	337.2%
Total Roaming traffic SMS	39,052,242	37,420,779	55,674,755	48.8%
Total Roaming data (KB)	84,818,841	85,771,720	169,305,837	97.4%
Approximate number of data users (GPRS/EDGE, HSPA, EVDO)	388,199	392,964	392,964*	0.0%

CCK Database, (\*) Provisional, Telkom Orange and Econet not included **Source:** 

 $<sup>^2</sup>$  Q1 refers to the period July to September  $^3$  Q4 refers to the period April to June  $^4$  The high traffic is from one of the operators who offered free call promotion during this period

The table also shows that incoming VoIP minutes increased 20 times during Q2 while outgoing VoIP minutes increased by 93.2%.

The local SMS traffic reduced over the period. A factor that may be attributed to among others, intense competition which led to reduction in voice tariffs whereby subscribers chose to use voice calls over SMS to communicate.

Roaming voice traffic increased by 337.2% compared to roaming SMS traffic which increased by 48.78%. Similarly, the number of data users (GPRS/EDGE, HSPA and EVDO) rose by 1.2%.from Q2 2008

#### 2.3 Mobile Tariffs

As illustrated in table 2.3 below the average mobile tariffs has dropped over the period with a 45.4% reduction in charges for on net calls between the Q1 and Q2 compared to a reduction of 9.3% during the same period in 2007. At the same time the international calling charges dropped by close to 17% compared to 1.97% during the same period in 2007. The entrant of the two mobile operators in the 2<sup>nd</sup> quarter seems to be the main reason for the overall call charge reduction in the mobile market.

**Table 2.3:** Mobile Tariffs (Kshs)

Indicator	Q1 2007/2008  July-Sept 2007	Q2 2007/2008 Oct-Dec 2007	Change %	Q1 2008/2009 July - Sept 2008	Q2 2008/2009 Oct-Dec 2008	Change (%)
Charges to same network	18.10	16.43	-9.3%	16.43	8.98	-45.4%
Charges to another mobile network	24.85	22.63	-9.0%	22.63	13.26	-41.4%
Charges to fixed network	24.43	22.75	-6.9%	22.75	11.67	-48.7%
International call charges	89.60	71.97	-2.0	52.24	43.39	-16.9%
SMS same network	4.47	4.47	0.0%	4.47	3.04	-32.0%
SMS to another network	5.03	5.03	0.0%	5.03	3.69	-26.7%
International SMS	10.00	10.00	0.0%	10.00	10.00	0.0%

**Source:** CCK Database.

# 2.4 Mobile Coverage

By end of Q2, the population coverage increased by 1.2% points from 82% in December 2007 to 83% in December 2008. Land coverage also expanded from 30.7% to 32% during the same period as shown in Table 2.4.

The entry of the two mobile operators within the quarter may have compelled the existing operators to expand their network coverage in order to solidify their market positions.

**Table 2.4:** Mobile Coverage (Cumulative)

Indicator	Sept-07	Dec-07	Sept-08	Dec-08	Change (%)
Population coverage	81%	82%	83%	83%	0.0%
Land coverage	30.67%	31%	31%	32%	2.2%

Source: CCK Database.

#### 2.5 Mobile Revenue and Investment

As shown in table 2.5 below, the annual revenue generated by mobile communication services increased by 25.2% between 2007 and 2008.

Increase of service availability as well as high subscriptions within the period have contributed towards boosting the sector's revenue. It is however worth noting that Average Revenue per User (ARPU)<sup>5</sup> declined by 12.46%. This fall could be driven principally by subscriber increase in the low income group and reduction of tariffs by the mobile operators.

As shown in table 2.5 below, mobile revenue per inhabitant increased by 25.22% from 2007 to 2008. On the other hand mobile investments per subscriber declined by 3.26% while mobile investments per inhabitant increased by 38.38%. This reflects reduced investment in existing customers for example in customer retention programs while there is a general overall increase in investments.

Mobile investment as a percentage of mobile revenues rose by 10.38 %. This is indicative of increased investments in telecommunication networks motivated by dynamic competition and growth.

<sup>&</sup>lt;sup>5</sup> ARPU is computed by dividing the total revenue by the total number of subscribers

**Table 2.5:** Mobile Revenue and Investment

Year	2007	2008	Change (%)
Mobile Annual revenue (Kshs Millions)	57,998	72,625*	25.2%
Mobile revenue per inhabitant (Kshs)	1,559.09	1,952.28	25.2%
ARPU (Kshs)	5,110.22	4,473.68	-12.5%
Mobile annual investment (Kshs Millions)	21,221.00	29,365*	38.4%
Mobile investments per inhabitant (Kshs)	570.46	789.38	38.4%
Mobile investments per mobile subscriber (Kshs)	1,869.79	1,808.88	-3.3%
Mobile investment as a % of revenue	36.6	40.4%	10.4%

Source:

CCK Database. (\*) Provisional, Telkom Orange and Econet not included

#### 3.0 FIXED TELEPHONY

The fixed network has continued to perform relatively poorly in the growth of its fixed line service. The convenience of mobile telephony and the low penetration of the fixed network contribute to the poor performance in the sub sector.

#### 3.1 Fixed Network Growth

As illustrated in table 3.1, the fixed line subscribers have declined by 0.23% from Q1 to Q2 2008. This is a lower decline compared to 0.9% during the same period in 2007.

The introduction of fixed wireless technology using CDMA in 2006 has, however, increased the total subscriber base in the fixed network market. Fixed wireless network subscribers increased by 3% during the quarter, compared to 63.7% registered in the same period in 2007.

The decline experienced within the quarter may be due to the dynamic benefits in the mobile segment as a result of increased competition.

**Table 3.1: Fixed Network Subscribers (Cumulative)** 

Indicator	Sept-07	Dec-07	Change (%)	Sept-08	Dec-08
Number of Wire line subscribers	267,305	264,882	-0.91%	252,882	252,296*
Fixed wireless subscribers	117,823	193,074	63.7%	350,529	360,909*
Subscribers in urban areas	240,575	238,214	-0.98%	227,594	227,064*
Subscribers in rural areas	26,730	26,668	-0.023%	25,288	25,232*
Number of business lines	130,739	129,554	-0.91%	128,969	128,671*
Number of residential lines	136,566	135,328	-0.91%	123,913	123,625*
Number of payphones	5,805	5,805	0.0%	5,210	5,210*

**Source:** CCK Database, (\*) Provisional, incomplete data from the fixed network operator

During Q2 2008, the number of fixed subscribers in rural areas declined by 0.22% compared to a decline of 0.23% in the urban areas.

The number of Public Payphones has continued to decrease over the years. By end of Q1 2008 the number had declined to 5,210 compared to 5,805 in the same period 2007. Though this reduction poses a threat to Universal Access, increased mobile penetration and access to mobile community pay phones have significantly increased access to voice services.

Regarding disaggregated information on service provision to customers, between Q1 and Q2 2008, the number of business lines and residential lines declined by 0.23%. This is reflective of the overall trend in the fixed network market.

# 3.2 Local Loop Network

Local Loop Operators (LLOs) are small operators with regional licenses to complement the fixed line services by providing the last mile. Their license limits their operation within a district level; traffic between districts is transmitted through Telkom Kenya's fixed network. As shown in Table 3.2, the combined subscriber base of LLOs has registered a decline of 0.1% from Q1 to Q2 2008 compared to an increase of 3.1% in the same period 2007.

**Table 3.2:** Local Loop Subscribers (Cumulative)

Indicator	Sept-07	Dec-07	Change (%)	Sept-08	Dec-08	Change (%)
Subscribers to local loop	10,257	10,575	3.10%	9,918	9,908	-0.10%
Subscribers in urban areas	10,257	10,575	3.10 %	9,918	9,908	-0.10%
Subscribers in rural areas	0	0	0.0%	0	0	0.0%
Number of business lines	5,714	6,028	5.5%	5,653	5,647	-0.11%
Number of residential lines	4,147	4,547	9.6%	4,265	4,261	-0.094%

Source: CCK Database.

The number of business lines on LLOs declined by 0.11% from Q1 to Q2 2008 while residential lines decreased by 0.094%. Both of which are consistent with the overall performance of the sub sector.

A summary of the fixed network subscriber trends is shown in figure 3.1:

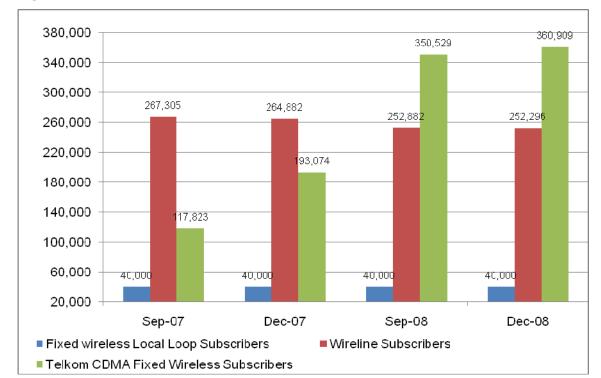


Figure 3.1: Fixed Network Subscriber Growth

Source: CCK Database.

## 3.3 Fixed Network Traffic

The fixed line traffic showed declining trends, reflecting the impact of mobile telephony on the fixed services. As illustrated in Table 3.3, over the period Q4 2008 and Q1 2008, the local incoming fixed traffic declined by 1.6% while outgoing fixed traffic<sup>6</sup> declined by 7.0%. Mobile services continue to substitute fixed voice services.

<sup>6</sup> National incoming traffic is traffic from Telkoms major routes outside Nairobi namely, Mombasa, Nakuru, Nyeri, Kisumu, Kakamega and Eldoret.

**Table 3.3: Fixed Network Traffic** 

Indicator	Q4 2007/2008	Q1 2008/2009	Q2 2008/2009
indicator	April-June 2008	July-Sept 2008	Oct-Dec2008
Local outgoing fixed traffic	10,068,201	9,368,259	9,368,259*
Local incoming fixed traffic	36,034,019	35,466,895	35,466,895*
International outgoing traffic(Minutes)	3,177,738	3,064,692	3,064,692*
International Incoming traffic(Minutes)	19,332,883	19,308,201	19,308,201*
Incoming VoIP	9,813,082	9,807,034	9,807,034*
Outgoing VoIP	4,216,567	3,991,338	3,991,338*

**Source:** CCK Database, (\*) Provisional, incomplete data from fixed operator

The international outgoing traffic and international incoming traffic also declined between Q4 and Q1 2008 by 3.6% and 0.13%, respectively. This could be due to the use of other means of international traffic transfer which include use of Voice over Internet Protocol (VoIP), roaming and international voice services offered by the mobile operators.

## 3.4 Fixed Revenue and Investment

As illustrated in Section 3.1, though the number of wire line subscribers has declined by 1.2%, there has been an increase in investment of 279.2% from 2006 to 2007. This has also led to impressive revenue growth of 6.6% from 2006 to 2007; as illustrated in table 3.4.

**Table 3.4: Fixed Network Revenue and Investment** 

Year	2006	2007	2008
Fixed Annual Revenue(Millions)	49,211	52,435	52,435*
Fixed Annual Investment(Millions)	5,533	20,980	20,980*

**Source:** 

CCK Database, (\*) Provisional, data incomplete from fixed operator

## 4.0 DATA COMMUNICATION SERVICES

# 4.1 International Gateway Bandwidth

The increase in demand of data services has led to increase in International Gateway downlink and uplink bandwidth by 0.56% and 87.9% respectively. As depicted in Table 4.1(a), the total international Gateway Bandwidth has increased from 524.4Mbps in December 2007 to 1421.15 Mbps in December 2008, representing an 18 folds increase. This reflects increased demand and usage of internet services.

**Table 4.1(a): International Gateway Bandwidth (Cumulative)** 

Indicator	Sept-07	Dec-07	Change (%)	Sept-08	Dec-08	Change (%)
International Gateway  Downlink	337.18	379.5	12.55%	823.69	828.31	0.56%
Bandwidth(Mbps)						
International Gateway						
Uplink	142.14	144.9	1.94%	315.44	592.84	87.9%
Bandwidth(Mbps)						
Total International						
Gateway	479.32	524.4	9.4%	1,139.13	1,421.15	24.76%
Bandwidth(Mbps)						

**Source:** CCK Database

As illustrated in table 4.1(b); over the period Q1 2008 to Q2 2008, total upstream bandwidth utilized by individuals and corporate increased by 6.9 % while downstream bandwidth increased by 10.74%.

Of the total bandwidth reported by the DCNO's about 90% is utilized by ISPs while the rest is used by institutions and individuals.

The upstream and downstream bandwidth to ISPs also rose by 7.5% and 13.0% respectively.

**Table 4.1(b): Upstream and Downstream Bandwidth Utilization (Cumulative)** 

Indicator	Sept-07	Dec-07	Change	Sept-08 Dec-08		Change
	Sept 07	Dec or	(%)	Берг об	<b>Dec</b> 00	(%)
Total upstream						
Bandwidth to	52,256	161,762	209.56%	263,160	281,200	6.9%
individuals and	32,230	101,702	207.3070	203,100	201,200	0.770
corporate(Kbps)						
Total Downstream						
bandwidth to individuals	76,988	197,422	156.43%	371,404	411,278	10.74%
and corporate(Kbps)						
Upstream bandwidth to	-	100,585	_	235,432	253,079.64*	7.5%
ISPs(Kbps)		100,505	255,452 255,077.04	255,077.04	7.570	
Downstream bandwidth	-	181,782	_	336,426	380,150.20*	13.0%
to ISPs(Kbps)	-	101,702	_	330,420	300,130.20	13.070

**Source:** CCK Database. (\*) Provisional, (–) Data not available

#### 4.2 Internet Service

Among the telecommunication services, the Internet has been among the least accessible service in the country. The low uptake of this service is attributed to lack of infrastructure

and relevant local content. The new market structure and Unified Licensing framework introduced within the quarter is expected to stimulate growth in this sub sector. Further, enhancement of the competition regulatory framework as well as operationalisation of the National Fiber Optic cable is expected to boost internet penetration.

Although the Commission has issued 127 licenses to Internet Service Providers (ISPs), only 50 are operational.

Table 4.2 shows the number of internet customers and internet users in the country.

**Table 4.2:** Internet Customers (Cumulative)

Indicator	Sept-07	Dec-07	Change (%)	Sept-08	Dec-08	Change (%)
Number of leased line customers	2,518	1,777	-29.43%	1,695	1,809*	-6.7%
Number of dial up customers	18,611	12,574	-32.43%	7,696	7,846*	-1.9%
Number of Customers using wireless connectivity	880	1,813	106.02%	5,176	5,226*	0.97%
Internet users(cumulative)	2,177,340	2,865,646	31.6%	3,043,442	3,359,552*	10.4%

Source: CCK Database,\* Provisional

From table 4.2, the number of leased line customers and dialed up customers declined by 6.7% and 1.9% in Q1 and Q2 2008 compared to 29% and 32% in the same period 2007. The decline could be characterized by demand for wireless connections that have grown by 0.97% between Q1 2008 and Q2 2008.

The increase in cumulative internet users by 10.4% from the period September 2008 to December 2008 shows increase in demand of internet services. The introduction of broadband services by mobile operators could also be attributed to this increase.

Internet penetration remains low with a penetration rate of 9%.

# 4.3 Revenue and Investment from Internet and Data services

As illustrated in Table 4.3, the revenue generated in the Internet and data services has improved over the years and by 2008, the Internet market generated close to Ksh.2.5B while the data services generated Ksh 5.1B. This is an improvement of 5.9% and 1.77 % in the internet and data services respectively from 2007 to 2008.

During that period, investment in the Internet subsector decreased from Ksh. 417M in 2007 to Ksh. 234M in 2008 while in the data service investment increased from Ksh.416M in 2007 to Ksh.937M in 2008.

**Table 4.3:** Revenue and Investment

Year	2007	2008	Change (%)
Total annual revenue from internet services(Millions)	2,324	2,460*	5.9%
Total annual revenue from data services(Millions)	5,046	5,135*	1.77%
Total investment from internet services from (Millions)	417	234*	-43.88%
Total investment from data services(Kshs)	416	937*	125.24%

**Source:** CCK Data Base. (\*) Provisional, data incomplete from all DCNOs and ISPs

## 5.0 POSTAL AND COURIER SUB-SECTOR

#### 5.1 Postal Services

The growth in the number of operators owing to the liberalized postal and courier subsector has intensified competition in this subsector.

**Table 5.1:** Indicators for Postal and Courier Sector

	Q1	Q2		Q1	Q2	
Indicator	2007/2008	2007/2008	Change	2008/2009	2008/2009	Change
	July-Sept	Oct-Dec	%	July - Sept	Oct-Dec	(%)
	2007	2007		2008	2008	
Total traffic local letters below 350gms	23,305,759	24,896,275	6.8%	21,054,339	21,673,532	2.9%
International incoming letters below 350gms	330,125	184,900	-44.0%	863,180	137,660	-84.1%
International outgoing letters below 350 gms	3,214,395	2,837,721	-11.72%	3,047,721	2,509,430	-17.7%

**Source:** CCK Database

From Table 5.1 it is evident that between Q1 and Q2 total traffic of local letters below 350gms increased by 2.9 %, representing a 5.7 % reduction compared to Q2 2007. At the same time the international incoming and outgoing letters below 350 grams declined by 84.1% and 17.7% respectively during the same period. This may be attributed to postal substitution by electronic means of communication.

#### 5.2 Postal and Courier Revenue

In 2008, postal and courier revenue increased by 8.3% from 2007. However, there has been a decline in investment in both postal and courier services.

The increase in revenue earned by PCK despite a decline in the number of postal outlets could be attributed to the tariff increase for various categories of postal services, service diversification and improved management of postal services.

A summary of the revenue and investment levels in postal and courier services are shown Table 5.2.

**Table 5.2:** Postal and Courier Sector

Year	2006	2007 2008		Change (%)
Postal Annual Revenue	2,582,570	2,950,173,963	3,194,756,965	8.3%
Postal Annual investment	65,934,332	53,636,183	26,366,564	-50.8%
Courier Annual Revenue	1,469,209,409	1,064,061,523	1,985,661,523*	86.6%
Courier Annual investment	256,597,752	93,905,690	77,605,747*	-17.4%
Total revenue from postal and courier operations	4,051,780,171	4,014,235,486	5,180,418,488*	29.1%
Total investment from postal and courier operations	322,532,084	147,541,873	103,972,311*	-29.5%

**Source:** CCK Database, (\*) Provisional

#### 6.0 CONCLUSSION AND THE FUTURE OUTLOOK

#### 6.1 Conclusion

There has been significant growth in telecommunication sector particularly in the use of mobile telephony and a decline in the fixed line subscribers. Competition among the operators, unification of the licences and the application of new technologies in mobile market segment has witnessed diversification of services by the operators, reduced tariff rates and increased affordability of communication services by a large population. This is further seen as a movement towards closing the digital divide. Whereas the number of

internet users seems to be increasing, this is not in tandem with other telecommunications services. The growth in the internet sub sector has been hampered by poor infrastructure.

The Postal and Courier sector have both witnessed decline in investment with the former posing a risk to Universal Postal Service. The volume of international letters has also declined which may indicate the impact of electronic substitution in these services. Local mail traffic has also continued to decline.

#### **6.2** Future Outlook

The future outlook of the postal, telecommunication and broadcasting is positive as the Commission embarks on the implementation of the Kenya Communications Amendment Act 2008. The Act has not only given the Commission mandate over regulating the broadcasting industry, it has also enhanced its regulatory authority related to competition and universal service obligations. In addition, the Act provides a legal framework for e-commerce and electronic transactions both of which are expected to boost the usage of internet services.

The mobile market is set to record further reductions in tariffs following the implementation of the Third Phase of the Interconnection Determination No. 1 of 2007 in the next quarter, March 1<sup>st</sup> 2009. The revised interconnection rates will reduce the existing rates by 15%. This reduction is expected to have a ripple effect on the retail rates enhancing affordability of mobile voice services.

Within the next quarter, telecommunication infrastructure will have a major boost with the completion of the National Optic Fibre Backbone Infrastructure. This key infrastructure is expected to increase bandwidth capacity, in most parts of the country which should have a positive impact on internet diffusion and mobile coverage in rural and remote areas.

With the recent focus on local content by data service providers' internet usage in the country is expected to rise.

In the postal and courier sub-sector, it is expected that the mail service delivery launched by the Postal Corporation of Kenya will enhance efficiency in mail delivery. Its impact on local mail traffic should be seen within the next quarter.