

# **QUALITY OF SERVICE REPORT**

## **(A) GSM MOBILE TELEPHONY**

### **1. INTRODUCTION**

The Uganda Communications Commission (UCC) is the regulator of the communications sector in Uganda. One of the functions of UCC, under the Uganda Communications Act 2013, is to promote the interests of consumers and operators as regards the quality of communications services and equipment.

In this regard, UCC carried out a Quality of Service (QoS) performance exercise on the five operational Global System for Mobile communications (GSM) networks in Uganda: Airtel Uganda, Limited, MTN Uganda Limited, Uganda Telecom Limited (utl), Orange Uganda Limited and Warid Telecom Uganda Limited.

### **2. BACKGROUND**

This QoS report, for the period May-July 2013, covered the eight (8) towns of Gulu, Jinja, Kampala, Lira, Masaka, Mbale, Mbarara and Mukono.

### **3. MONITORING AND EVALUATION METHODOLOGY**

#### **3.1. Monitoring**

This monitoring exercise was carried out under the QoS standards of 2007. Under these standards, the drive test method is the mode of monitoring. Measurements were carried out from 9:00am to 1:00pm and from 2:00pm to 9:00pm every day from Monday to Friday. The measurements were then evaluated for busy hour performance which is from 10:00am to 1:00pm and 4:00pm to 9:00pm.

Performance was reviewed for Mobile Originated intra network test calls which were auto-generated by the monitoring system. Monitoring was carried out alongside pre-determined test routes. The drive test routes were chosen to go through areas with high-human concentration, for example, markets and trading centres during the day and residential areas in the evening.

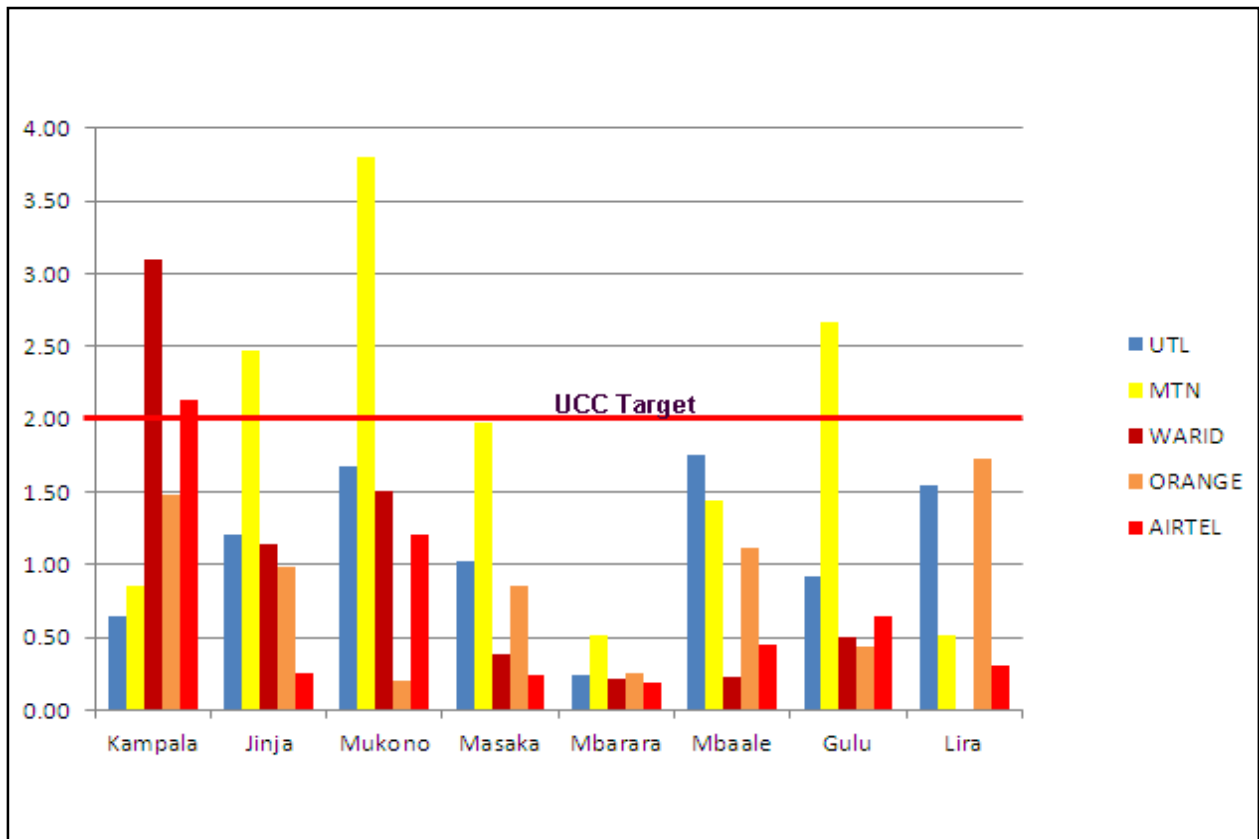
#### **3.2. Evaluation criteria**

Events associated with the QoS indicator are statistically compiled for each measurement session and expressed as a percentage of call attempts, which is the performance indicator for the session. The performance indicator is then averaged for the week to get the performance indicator for the respective town during the period of testing.

### **4.0 RESULTS**

#### **4.1 Dropped Call rate**

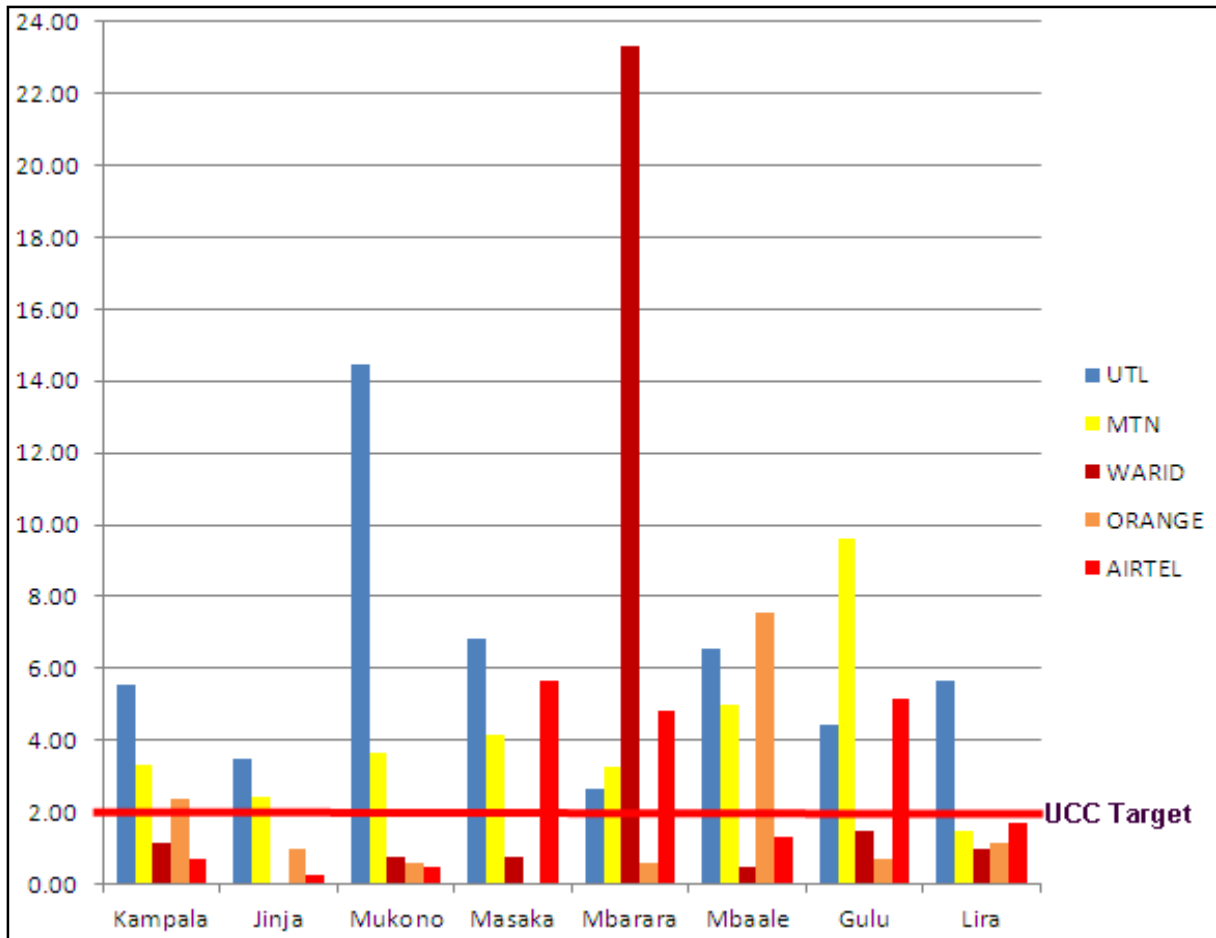
**Graph 1: Dropped Call Rate - Complies if less than 2%**



	Kampala	Jinja	Mukono	Masaka	Mbarara	Mbaale	Gulu	Lira
<b>UTL</b>	0.65	1.20	1.67	1.02	0.24	1.75	0.92	1.54
<b>MTN</b>	0.85	2.47	3.80	1.97	0.52	1.44	2.67	0.51
<b>WARID</b>	3.10	1.14	1.50	0.39	0.22	0.23	0.5	0
<b>ORANGE</b>	1.48	0.98	0.20	0.85	0.25	1.11	0.43	1.73
<b>AIRTEL</b>	2.13	0.25	1.21	0.24	0.19	0.45	0.65	0.31

#### 4.2 Blocked Call rate

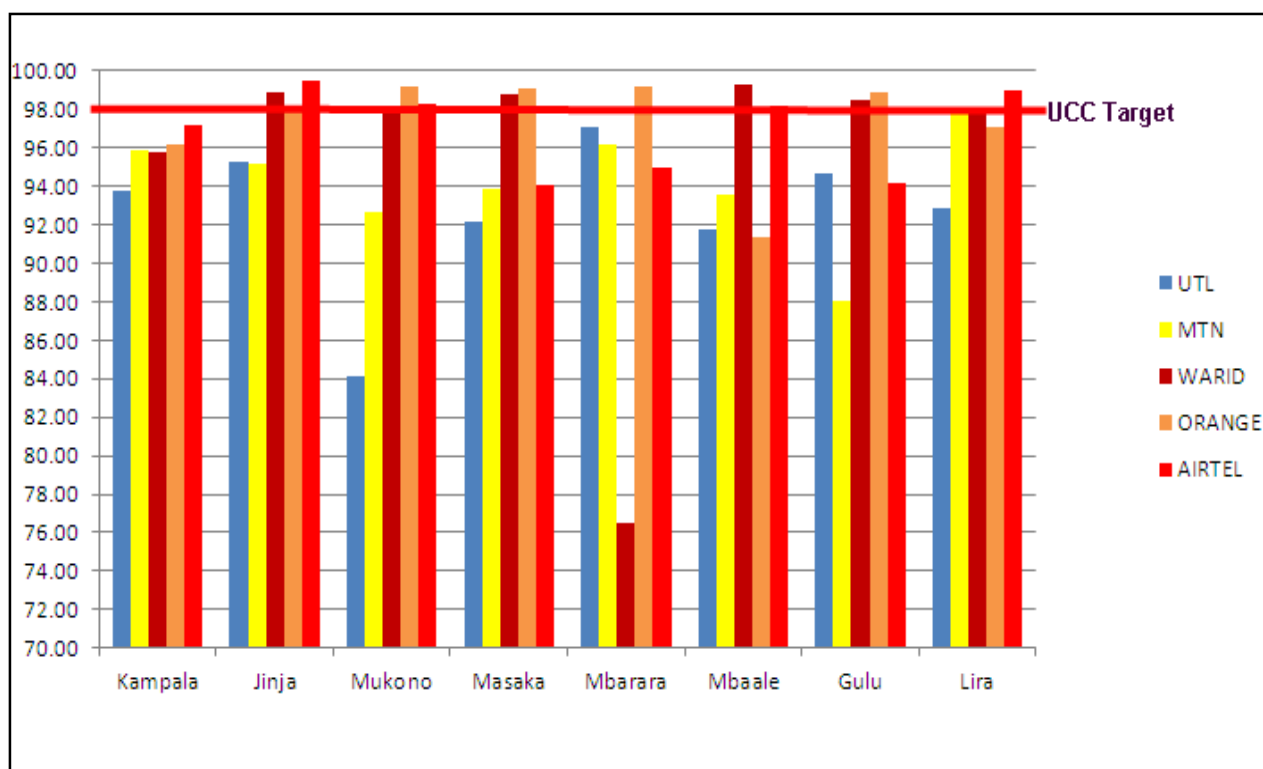
**Graph 2: Blocked Call Rate - Complies if less than 2%**



	Kampala	Jinja	Mukono	Masaka	Mbarara	Mbale	Gulu	Lira
<b>UTL</b>	5.56	3.49	14.49	6.83	2.67	6.56	4.42	5.64
<b>MTN</b>	3.31	2.41	3.66	4.18	3.26	5	9.64	1.5
<b>WARID</b>	1.15	0.00	0.74	0.77	23.34	0.47	1.49	0.99
<b>ORANGE</b>	2.40	0.97	0.59	0.00	0.58	7.55	0.72	1.14
<b>AIRTEL</b>	0.71	0.25	0.48	5.68	4.84	1.34	5.14	1.71

#### 4.3 Successful Call Rate

**Graph 3: Successful Call Rate - Complies if higher than 98%**



	Kampala	Jinja	Mukono	Masaka	Mbarara	Mbale	Gulu	Lira
<b>UTL</b>	93.80	95.30	84.10	92.20	97.10	91.8	94.7	92.9
<b>MTN</b>	95.90	95.20	92.70	93.90	96.20	93.6	88	98
<b>WARID</b>	95.80	98.90	97.80	98.80	76.50	99.3	98.5	98
<b>ORANGE</b>	96.20	98.10	99.20	99.10	99.20	91.4	98.9	97.1
<b>AIRTEL</b>	97.20	99.50	98.30	94.10	95.00	98.2	94.2	99

## 5.0 ANALYSIS

### 5.1 Performance of operators

As a total of compliance incidences in the eight towns which have been sampled, the Orange (U) Ltd and the Warid Tel networks registered the highest total number of incidences of compliance as per UCC Quality of Service (QOS) standards of 2007. The compliance performance ranking is as detailed in table 1 below.

**Table 1: Comparative Network Compliance performance ranking**

Rank	Network	KPI	No of towns in which compliance was registered
1	Orange	Dropped call rate	Eight
		Blocked call rate	Six
		Successful Call Rate	Five
			19
1	Warid	Dropped call rate	Seven
		Blocked call rate	Seven

		Successful Call Rate	Five
			19
3	Airtel	Dropped call rate	Seven
		Blocked call rate	Five
		Successful Call Rate	Four
			16
4	UTL	Dropped call rate	Eight
		Blocked call rate	Zero
		Successful Call Rate	Zero
			8
5	MTN	Dropped call rate	Five
		Blocked call rate	One
		Successful Call Rate	One
			7

## 5.2 Ranking of towns with respect to availability of good service

As a total of compliance incidences in the eight towns which have been sampled, Lira town registered the highest total number of incidences of compliance as per UCC Quality of Service (QOS) standards of 2007. The compliance performance ranking is as detailed in table 2 below.

**Table 2: Comparative town compliance performance ranking**

Rank	Towns	KPI	No of Networks that registered compliance
1	Lira	Dropped call rate	Five
		Blocked call rate	Four
		Successful Call Rate	Three
			12
2	Jinja	Dropped call rate	Four
		Blocked call rate	Three
		Successful Call Rate	Three
			10
3	Masaka	Dropped call rate	Five
		Blocked call rate	Two
		Successful Call Rate	Two
			9
3	Mbale	Dropped call rate	Five
		Blocked call rate	Two
		Successful Call Rate	Two
			9
3	Mukono	Dropped call rate	Four
		Blocked call rate	Three
		Successful Call Rate	Two
			9
6	Gulu	Dropped call rate	Four
		Blocked call rate	Two

		Successful Call Rate	Two
			8
7	Mbarara	Dropped call rate	Five
		Blocked call rate	One
		Successful Call Rate	One
			7
8	Kampala	Dropped call rate	Three
		Blocked call rate	Two
		Successful Call Rate	Zero
			5

Of all the three KPIs that were evaluated, blocked call rate was the worst performed parameter. The worst performers on this KPI were Warid in Mbarara followed by UTL in Mukono. This could be a consequence of limited available network resources in these towns.

## NETWORK OUTAGE REPORTS

In the 1<sup>st</sup> and 2<sup>nd</sup> Quarters of 2013 some telecom networks submitted network incident reports to UCC. The reports are analysed as part of the analysis for performance against the Quality of Service standards.

Airtel reported 15,626 outage minutes. Approximately 60% of these were power-related outages and 40% were transmission and fibre cut related. Warid reported 190,888 outage minutes, approximately 89% were power related outages and 11% were transmission and fibre cut related.

MTN reported 22,961 outage minutes. Approximately 76% of the outages are due to transmission faults and fibre cuts and 24% are power related. MTN has reported high outages alongside Jinja and Masaka Road. UTL and Orange did not report on their outages in the 1<sup>st</sup> and 2<sup>nd</sup> Quarters of 2013.

Outages severely impact on network availability and network quality. The major causes of outages have been identified as power failures (fuel, faulty generator sets, and grid fluctuation.) and transmission issues (fibre cuts, link fluctuations and interference). The networks have reported high outages mainly due to fibre cuts and power failures.

## 7.0 RECOMMENDATIONS

**7.1** It is imperative that network operators enhance their redundancy measures, especially to provide a back-up transmission route when the primary route has been interfered with.

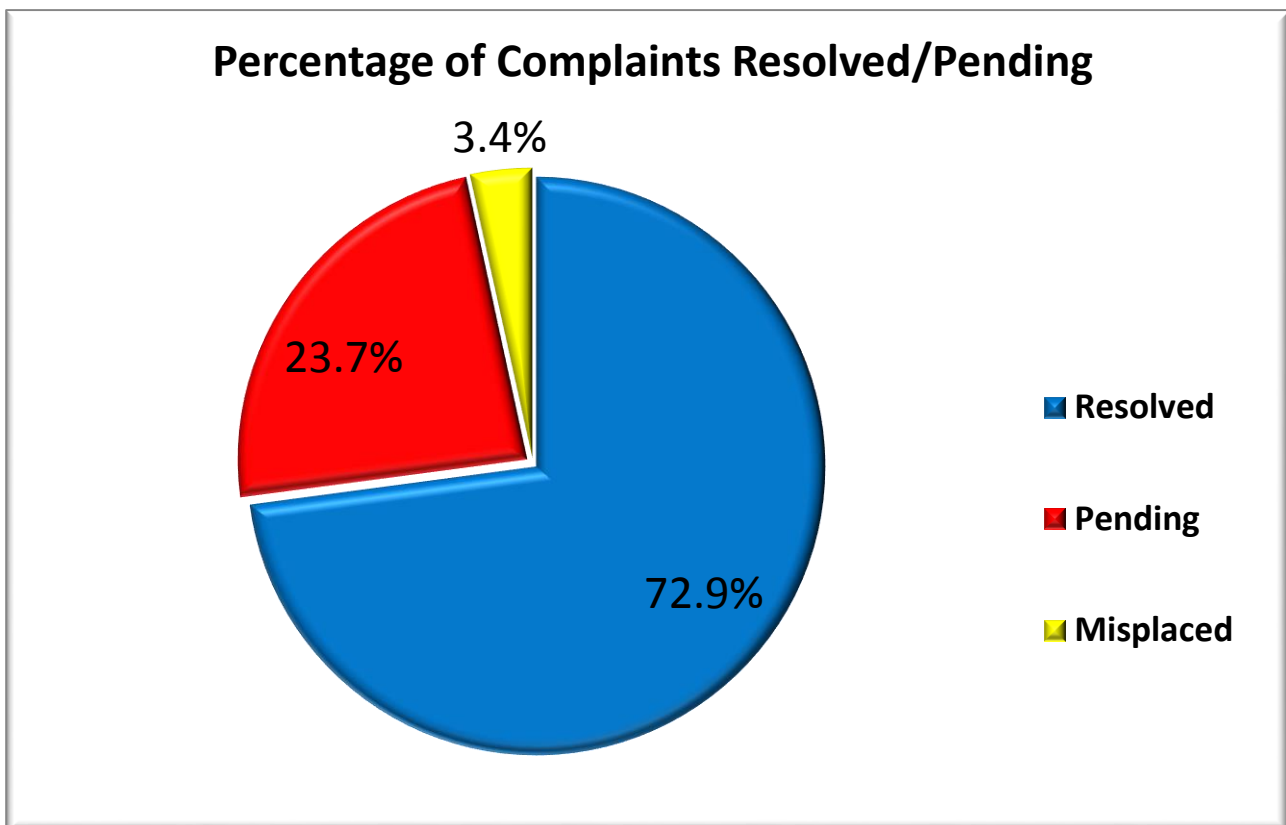
**7.2** Operators should give high priority to the protection of their physical transmission infrastructure such as fibre cables and network sites. The Commission shall not tolerate any QoS deterioration as a result of inadequate protection of fibre cables and other infrastructure from physical damage and in locations where other public works are likely to destabilise the installation.

7.3 The Commission strongly advises network operators with low or limited available network resources to desist from carrying out promotions that have a direct impact on network resources. The Commission shall not grant permission for any promotions unless the concerned operator has fully addressed the QoS gaps identified in the previous QoS monitoring reports.

## **(B) CONSUMER COMPLAINTS (APRIL-JUNE, 2013)**

Consumers of communication services when dissatisfied with a service are required to first lodge complaints with their respective service providers. Where a consumer remains dissatisfied, they then can lodge complaints with UCC. The statistics used in this report represent second level complaints to UCC. However, the figures may include some first level complaints from consumers who claim inability to access their service providers.

During this period, **72.9%** of the total complaints received were resolved by the respective service providers, while **23.7%** are still pending either completion of investigations or response from the service providers. **3.4%** of the complaints were misplaced. The following graphical representations illustrate the pattern and trends of various complaints received by UCC.



### **DEFINITION OF COMPLAINT TYPES**

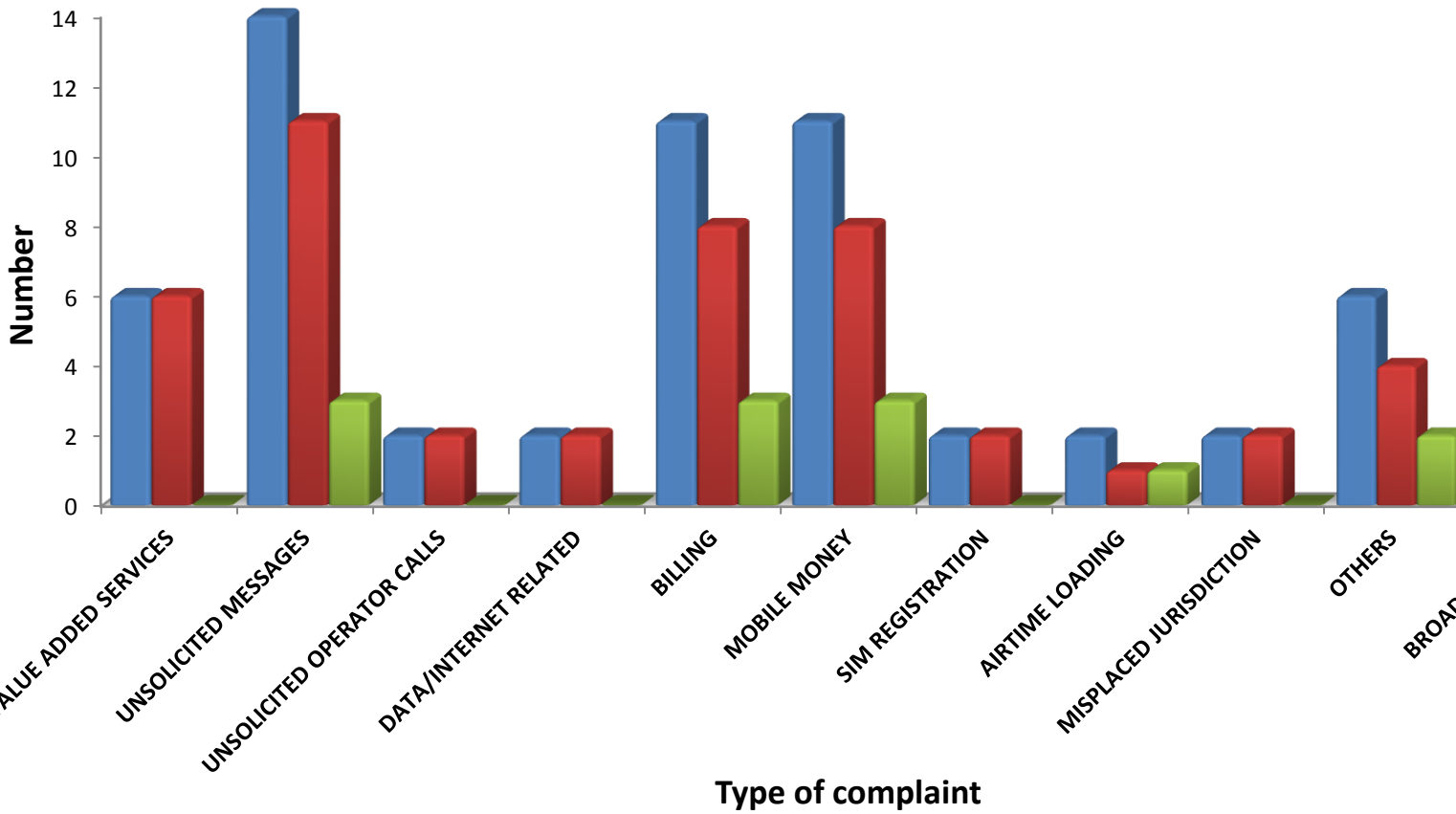
- **BILLING:** These are complaints regarding presumed over charging for services or excessive deduction of credits, refunds or bill adjustments. It comprises the following:

Dropped balance, inappropriate billing, non-crediting of account, and non-delivery of service paid for, multiple SMSs and undelivered SMSs.

- **UNSOLICITED TEXT MESSAGES:** This refers to unwanted messages sent to consumers by the service provider.
- **QUALITY OF SERVICE RELATED ISSUES:** Inaccessibility of lines and other services, general network quality, and nonchalant attitude of call agents.
- **UNSOLICITED OPERATOR CALLS:** This refers to unwanted calls to consumers by the service providers usually promoting a particular product/service.
- **MISPLACED COMPLAINTS:** These are complaints that are not under UCC's jurisdiction.
- **MOBILE MONEY SERVICES:** Complaints regarding mobile money transactions for different telecom operators
- **INTERNET/GPRS ISSUES:** These are complaints regarding erratic internet services and subscribers not getting the agreed speed and bandwidth. These also include subscribers being disconnected from using internet service prior to expiration of validity days.
- **VALUE ADDED SERVICES:** These comprise complaints such as: Me 2 U, caller tunes, magic voice, voice mail and other services.
- **PROMOTIONS:** These complaints comprise misleading adverts regarding advertisements that are dubious, untruthful, deceitful, just to mention a few e.g. bonus-related issues on promised incentives such as free SMS, free calls, extra credit on recharge which is believed to have not been redeemed, breach of contract.
- **BROADCASTING:** Complaints on both television and radio broadcasting services such as frequency interference and content related issues.
- **OTHERS:** These include complaints on other issues such as fraud, counterfeit devices, and adverts, among others.

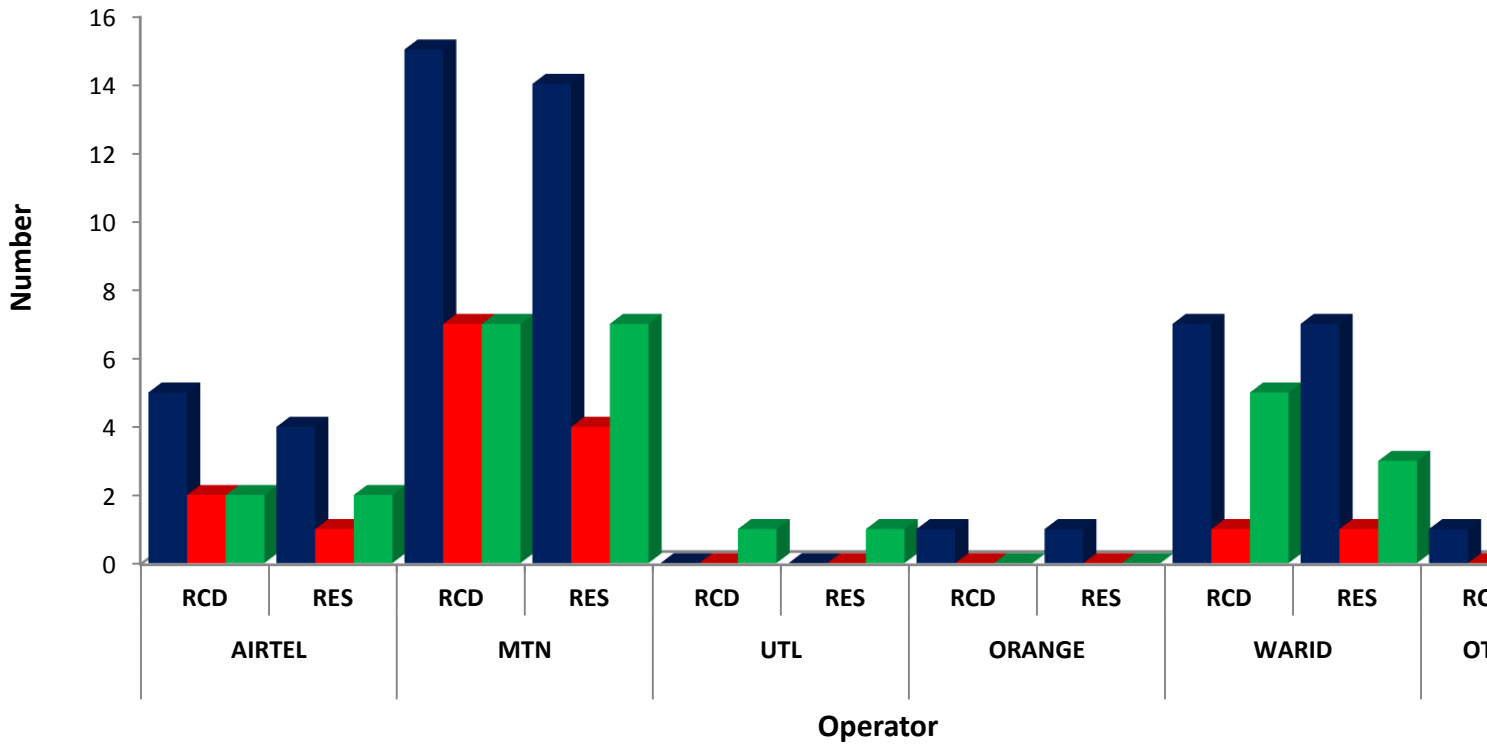


## Type of complaints received, resolved and pending for April-Jun



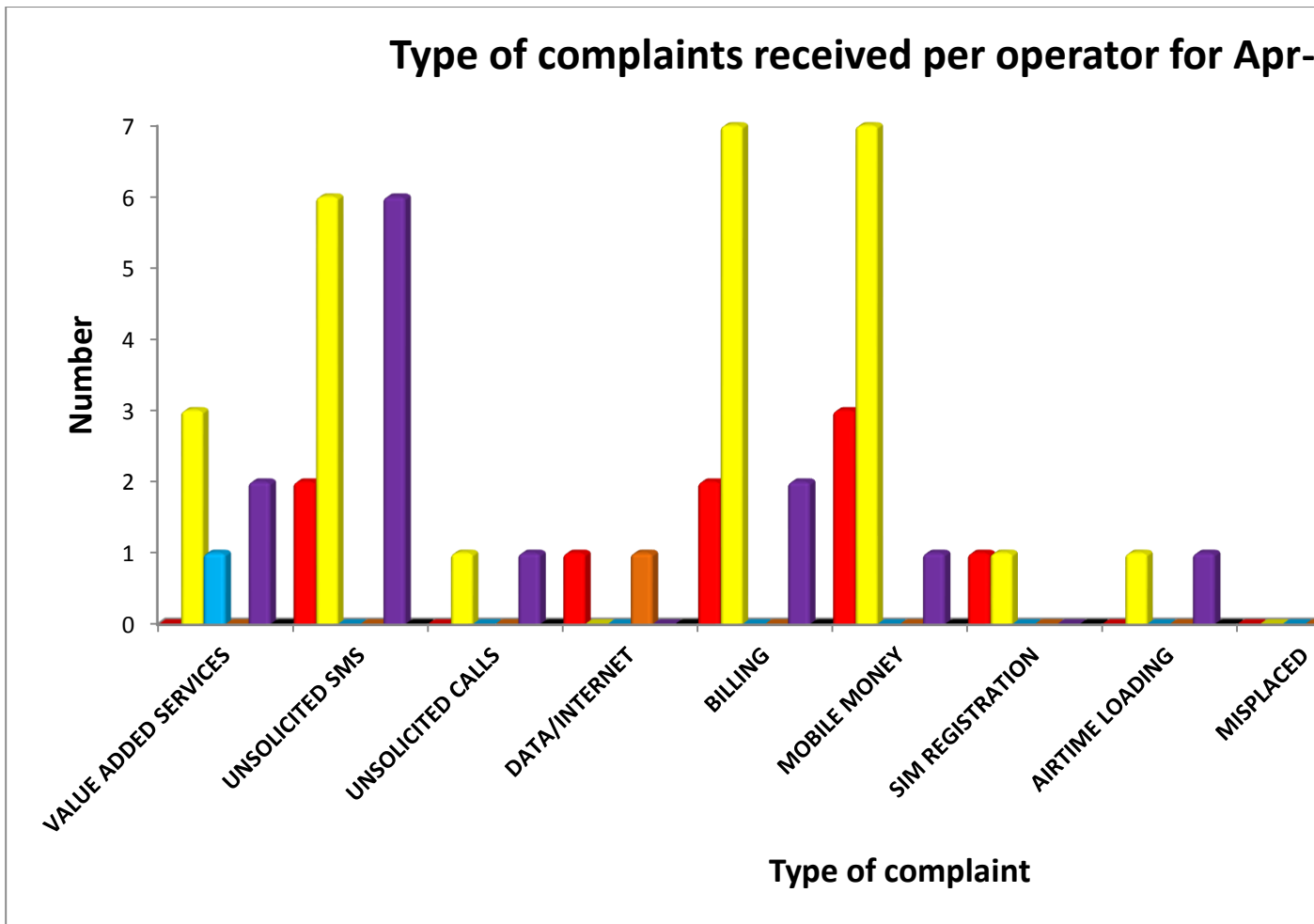
**Note: The Commission noted with concern that, for the period under review, the highest number of complaints registered were related to Unsolicited Messages.**

## Monthly breakdown of complaints received and resolved per operator



**RCD – Received Complaints**  
**RES – Resolved Complaints**

**Note: In the quarter under review, the highest number of complaints were registered in the month of April. While a significant number of complaint were resolved, some complaints remain unresolved.**



**Note:** While MTN registered the highest number of complaints received in most categories, Warid and Airtel registered a significant number of complaints in the period under review.

## 6.0 CONCLUSION

The Commission will remain resolute in its mandate of safeguarding the interests of consumers and operators as regards the quality of communications services and equipment. Accordingly, the consumers of communication services, and the general public, should remain vigilant and demand value-for-money for the services consumed.

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