

Etér ©É! pEî L à}Šîb; tî-è\é

I tér ©É! pEî L à}Šîb; YPXb;
£2002 £S^pf' à Un -L r £tµG· Eør t\» ¼ ¼Wr
†ÔÑÐN F'' £p^aTµ £· NµM VPYr

I Ôg-~ tég^ŪŒb; «" XŒsXr
Étég^ŪŒb; £RW Bª r

†«é^ †Im
· èor 2002

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1. L · l é |

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l ŠéAà L \Tr 2002 h YPXb}à **የተላከውን** ÉS^p f' à Un -L r ÉtÖÑÐN **ሪፖርት** l L µNµN ^~ ' à° îpÿN EmE-Ya t<Fr l M] ' i ^ç«éAàN L EŠé| L ^ÔYstÿ | F⁹Eär ç l L Eér ÉÛpsut' à ÉMèL EŠp' à t<Fr VPYr M-T· ^~ l d»'' pµé ^YN± ^ç^ap' \^amt' à l MT¶µ¼ ÉšYÖ ° î-M ^-µr ÉW\àç t^p" 0% |^aY¶G::

2. É· NµM' à tFM

Š YPXb}à l ÉUn tL pý ^Épš¶ l ÉMÉŠ' à VPYr l tí-ç\é' à ^ÉpµL µL ' à° îpý pL G_ E YPXb}à ÉMÉÉl r AàEr -l'' r tFM· v tÉär ^}àN:-

- ÉtµG· Eørý p° gMè· v^aT±' àç É° l d tµG· Eør M· , q t' à MT¶µ¼ ^~ É^aç|⁹v ^Y<q ^ç«é¾NY M-T· }' à:
- ÉtµG· Eør ¼Wr L 3^aG |¶° Mt' àç ÉtµG· Eør šYÚv E''s l M' à»r tµG· Eør \À ' à ÉMaa| ^YN± ^ç«é' ^- M^uG'

3. NµM' à Ép<Bf l r ^Gr

· NµM' à Ép^aTµ' à Étér ©É | pÉi L à}Šibç YPXbç 2002 ÉS^p f' à **ሩብ አመት** l FŠ' à ÉtµG· Eør ¼Wr tL F<wvç tÖÑÐN É|š VPYr F''

Table 1: **PSTN Services & Network Performance 2002EC 3rd quarter report measured values**

No.	QoS Parameters	Targets/Standards Set by ETA	1 st month measured value	2 nd month measured value	3 rd month measured value	Quarter measured values by ETC	Remarks
1	Call Setup Success Rate	>90%	67.54%	79.92%	76.23%	70.33%	
2	Call Setup Time	<25 second for 95% of established national call	89.11%	82.49%	91.22%	90.25%	
		<35 second for 95% of established international calls	52.90%	51.56%	54.37%	52.69%	
3	Conversational Voice quality	≥ 3.0 on MOS or PESQ scale	NA	NA	NA	NA	
4	Fulfillment of service provision (Installation Orders)						
4.1	Within 48 hours	80%	80.49%	81.49%	82.05%	83.40%	
4.2	Within 96 hours	90%	92.28%	93.15%	97.21%	85.64%	
4.3	Within 7 days	100%	96.63%	96.08%	99.82%	99.94%	
5	Service Restoration Performance						
5.1	Within 48 hours	60%	64.90%	70.21%	69.69%	70.19%	
5.2	Within 96 hours	90%	79.51%	84.38%	85.90%	85.64%	
5.3	Within 7 days	100%	90.94	94.12%	97.24%	96.77%	
6	Call Center (Operator speed of answer) Performance						
6.1	Calls answered within 40 seconds	90%	98.93%	98.90%	98.27%	98.27%	
6.2	Call answered within 60 seconds	100%	100%	100%	99.71%	99.71%	
7	Fault Incidence	500 reports per 1000 lines	0.046	0.049	0.055%	0.147	Per 12 months

No.	QoS Parameters	Targets/Standards Set by ETA	1 st month measured value	2 nd month measured value	3 rd month measured value	Quarter measured values by ETC	Remarks
8	<i>Public Payphone Service Availability</i>	90%	NA	NA	NA	NA	
	PSTN, Mobile, Dial up and Broadband Internet Access Services						
9	General Customer Complaints	100 complaints per 1000 Subscribers	0.002	0.001	0.002	0.004	

Table 2: Data-com (Internet) Services & Network Performance 2002EC 3rd quarter report measured values

No	QoS Parameters	Unit	Targeted value set by ETA	1 st month measured value	2 nd month measured value	3 rd month measured value	Quarter measured values by ETC	Remarks
1	Dialup Internet Access Service							
1.1	Number of Login Attempts before successful connection		Max of 3 with in 1 minute interval	75%	70%	65%	70%	
1.2	Login Success	within 40 seconds	95%	55%	60%	50%	55%	
1.3	Fulfillment of service provision (Installation Orders)	Fulfilled within 24 hours	80%	65%	70%	73%	69%	
		Fulfilled within 48 hours	100%	86%	88%	89%	88%	
1.4	Service Restoration Performance	Within 48 hours	60%	50%	43%	40%	44%	
		Within 96 hours	90%	84%	79%	70%	78%	
		Within 7 days	100%	92%	86%	78%	85%	

No	QoS Parameters	Unit	Targeted value set by ETA	1 st month measured value	2 nd month measured value	3 rd month measured value	Quarter measured values by ETC	Remarks
2	Broadband Internet Access							
2.1	Network Latency	≤ 200 ms for local link					1ms	
		≤ 300 ms for international link					298.33ms	
2.2	Throughput	≥ 75% of subscribed level for 95% of the time during busy hours					18.75%	
2.3	Packet Loss	≤ 1%					1%	
2.4	Network Availability	≥ 99%					99.23%	
2.5	Fulfillment of service provision(Installation Orders)	Within 72 hours	80%	70%	76%	75%	74%	
		Within 120 hours	90%	81%	82%	73%	79%	
		Within 7 days	100%	88%	85%	80%	84%	
2.6	Service Restoration Performance	Within 48 hours	80%	75%	72%	68%	72%	
		Within 72 hours	100%	89%	85%	83%	86%	

Table 3: **GSM Cellular Mobile Network Performance 2002EC 3rd quarter report measured values**

No.	QoS Parameters	Targets/Standards	1 st month measured value	2 nd month measured value	3 rd month measured value	Quarter measured values	Remarks
1	Call Setup Success Rate	> 98%	96.11%	96.08%	96.09%	96.09%	
2	Call Setup Time	<25 second for 95% of established national calls	NA	NA	NA	NA	The measured value is not provided with the report
		<35 second for 95% of established international calls	NA	NA	NA	NA	“
3	Dropped Call Rate	<2%	0.32%	0.34%	0.33%	0.33%	
4	Handover Success Rate	>95%	95.05%	94.25%	94.65%	94.65%	
5	Blocked Call Rate	<2%	NA	NA	NA	NA	
6	SDCCH Blocking Rate	< 0.5%	0.43%	0.99%	0.71%	0.75%	
7	TCH Blocking Rate	< 5%	2.98%	2.56%	2.77%	2.77%	
8	Conversational Voice Quality	≥ 3.0 on MOS or PESQ scale				NA	

Table 4: **PSTN, Mobile and Internet Services Billing Performance 2002EC 3rd Quarter report measured values**

No	Performance parameters (For PSTN, Mobile & Internet) Measurement Areas	Percentage of billing complaints in any one billing period<=2%	Complaints resolved within days		Time taken to refund deposits after closure		Remarks
			15	30	By Zonal and Regional Offices (≤ 10 days)	By Head Office (≤ 15 days)	
1	Addis Ababa						
1.1	Central A.A zone	0.290%	68.38%	68.38%	NA	NA	
1.2	Northern A.A. zone	0.090%	95.71%	95.71%	»	»	
1.3	Southern A.A. zone	0.014%	100%	100%	»	»	
1.4	South Western A.A. zone	0.114%	24.56%	100%	»	»	
1.5	Eastern A.A. zone	0.153%	57.48%	100%	»	»	
1.6	Western A.A. zone	0.103%	100%	100%	»	»	
2	Regional						
2.1	Northern Region	0.322%	61.98%	76.04%	»	»	
2.2	North-Eastern Region	0.002%	100%	100%	»	»	
2.3	Semera Region	-	-	-	»	»	
2.4	North Western Region	0%	-	-	»	»	
2.5	Western Region	0.298%	100%	100%	»	»	
2.6	Asosa Region	0.089%	100%	100%	»	»	
2.7	Eastern Region	0.130%	68.52%	68.52%	»	»	
2.8	Jijiga Region	-	-	-	»	»	
2.9	Southern Region	0%	-	-	»	»	
2.10	South south west Region	-	-	-	»	»	
2.11	South western Region	0.672%	95.04%	100%	»	»	
2.12	Gambela Region	-	-	-	»	»	
2.13	South Eastren Region	0.829%	100%	100%	»	»	

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 I   C L \Tr I t    '   ŠpdL  '    ¼Wr  T  (100%)

6.2.1 L^aI f E[^]G E L[^]L Y }r • Y E ngr /PSTN Performance/

IVPYpj Eppm^r L T_±•v EL^aI f E[^]G E L[^]L Y }r • Y E ngr L EŠe₁}r Špš₁° r₂ L[^]OYsv ₁Y I₂ĀĪY \édL^o à ŠšéC ^₂^aMēšpE' à ^oμEÑEà:

- EApY tdÜ ^~ tEN tdÜ ¼V•v ^Šîr L^o /Call setup success rate/ I tî⁻ġ\é' à ŠpdL^o ' à œi pf E}r • Y E ¼Wr^aT_±(>90%) ₁Y \é}ÑDY I 19.67% L^o ġ } \ G₂}r \é T' ä ŠAàEpf' à Un -L r t₂ŃY \éq^o a. O I 16.78% |CG d₂]iG ' ^EšéC Eppμ, ' à ' ^oîr tITqv mEL D}à E' ^aÖpj EpaE ' ^oîr EMN»r^o ġ E Z L[^]Wr ^₂^aMē| ^ÔG. . ġ>Iî Eé' \- ^oμmG ::
- I tî⁻ġ\é' à I pdL^o ' à E}r • Y E ¼Wr^aT_± L \Tr I ApY tdÜ ^aT_± 95% EMD}' à ġ E[^]G E ¼V EM-T. E Mē| ^ÔGμ' à E ¼V L L[^]Tu μēšī /call setup time/ Š25 \ ġ- } \ \éD₂ I YPXb}à I ŠàG EdTI' à VPYr ^₂^aMē| L EEp' à Š25 \ ġ- m} \ μšī ' à^¼ E p[^]p~μ^a ' à 90.25% }' à I šéC L \Tr Š¼Wr^aT_±' à I 4.75% œi nEø E Mē, \éD₂ ŠAàEpf' à Un -L r t₂ŃY \éq^o a. O 0.89% |CG d₂]iG '
- I tî⁻ġ\é' à E pdL^o ' à E}r • Y E ¼Wr^aT_± 95% EMD}' à ġ tEN tdÜ ¼V Š35 \ ġ- /call setup time/ m} \ μšī ' à^¼ L L RTr ' ^o N M-T. \éD₂ I YPXb}à I ŠàG EdTI' à VPYr ^₂^aMē| L EEp' à Š35 \ ġ- m} \ μšī ' à^¼ E p[^]p~μ^a ' à 52.69% EMD}' à tEN tdÜ ¼V nu }' à I šéC L \Tr Š¼Wr^aT_±' à I ŠÛpf L^o ġ I 42.31% œi nEø ^oμfG ^oC MEr I p^¾MVN ŠL⁻L V|' à Un -L r^a . O I 4.82% E ¼Wr^aT_±' à d₂]iG'
- I L^aI f E[^]G E L[^]L Y }r • Y E ' à^¼ ġ . Y I M^oT. μšī E Mē T' à E-NØ ¼Wr GŠîr /Conversational voice quality measurement value/ IVPYpj ' à^¼ p<s tGdTI N EN₂ ^₂«Gp<ppN

IM^q' a/Remark/ tGpuEN IŠeC NĚz|r ě-N0 ¼Wr aT±' ě
 EL μNN tGpuEN::

6.2.2 ětěpY}r }r • YĚ ngr

- ě«|GTÝ těpY}r }r • YĚ

➤ ě«|GTÝ těpY}r }r • YĚz IL ° dN ětěpY}r • ě}r
 EL L ^Tr ŠMĚTμā L āŠW•v L <ŠG 95% |CEā |40 \ ě-
 μēšī ' ā¼ ^ŠiqM L Dě ^ě«Ě|r |tīě\é' ā ěpdL ° ' ā
 ě¼Wr aT± |ěμG0N | YPXB}ā |ŠāG ŠdTI' ā VPYr
 EL T«r ^ěa puE' ā ^ŠiqM ěD} ' ā ětěpY}r • ě}r 55%
 |CG nu \ěDě Š¼Wr aT±' ā |40% dě]IG' EšēCN
 | YPXB}ā |ŠāG ^ěa NĚz|r ěp° d\ ' ā |tμG• Eor \Ā ' ā
 ^~ |a ěaf' ā L <ŠG ěpšT} ' ā ěL ^LY ¼Wr L 1a G
 ^ěa D} }' ā }μY • ě ěL ^LY ěY}q' ěN D} ětěpY}r
 tμG• Eopĵ ěMĚ° ' ā YPXB}ā |L D}ā v• Uě |L Ûqr
 aT±' ě ě° |d ě}r' YĚ ěY}q ^ě«é Y M-T. ^~
 Eā ě...tý ěpaE ětěpY}r tμG• Eor L ^° r pd«Mē
 tFM' ā L D}ā r ŠāTr Eē\° ' ā "μmG'

- ěnZ-mě- těpY}r }r • YĚ

➤ ěnZ-mě- těpY}r }r • YĚ ¼Wrz EL ě<r ěpdL ° ā
 L EŠē|•v (Parameters) EN]Eī ^ěa “Network Latency”,
 “Throughput” ^~ “Packet loss” ěL]\Ěār ě |pL EŠp Š YPXB}ā
 |ŠāG ědTI' ā VPYr ě|>t' ě L T±•v |tīě\é' ā
 Špš} ' ā ě¼Wr aT± }Y |M}ŇDY ^ěa MšpE' ā "dYmG::

➤ E”Network Latency” |tīě\é' ā ěpdL ° ' ā ě¼Wr aT± EAmY
 ' ā¼ • ě}r Š200ms |} \ ' "N ^ŠāG \ěDě EtEN tdÜ
 • ě}r 300ms |} \ ' "N ^ŠāG ěD} }' ā |VPYpý F"
 ědTI' ā EAmY ' ā¼ • ě}r 1ms \ěDě EtEN tdÜ • ě}r

298.33ms }' á' I šéC L \Tr Épμ, ' á ' á° ír Š¼Wr áT± tžŃY \éq'' tITqv }' á:

- E" Throughput" I tí-ž\é' á ÉpdL ° ' á É¼Wr áT± ÉMÉ' á ŠÜpf ÉrWÖÉ Ú\r IMē Ylr méší 95% IMÉD}' á \tr ' á^¼ pÉEs ÉMē, ' á "Throughput" Šážaf' á ¶Y IpáTμ' á ' áG ŠpμÉD' á áT± Š75% Iqv LDž ÉElrN }' á' "Áž ^ž±ē I YPXb}á I ŠáG IdTI' á VPYr F'' ^žá pμÉD' á pÉEs Épμ, ' á " Throughput" 18.75% }' á' I šéC L \Tr ŠpdL ° ' á É¼Wr áT± ¶Y \é}ŃDY I 56.25% |CG æi nEø ''μfG:: ''C MÉR ážaf' á M·, r tElr pnEø ŠMēL p' á ' á^¼ tž- tWpf' áž |CG nu ^|μ, LD}áž L μžšn ''uFG' ^ÉšéC ''C tμG·Eør ŠÜpf É¼Wr L 1áG ÉqElr LD}áž I L μžšn ''Cž EMaaG YPXb}á ŠÜpf ¼Tr M-T· '' YIqG'
- E"Packet loss" I tí-ž\é' á ÉpdL ° ' á É¼Wr áT± Š1% |} \ ''N ^ŠáG \éDž IVPYpý F'' ÉdTI' á 1% }' á' I šéC L \Tr Épμ, ' á ' á° ír Š¼Wr áT± tžŃY \éq'' tITqv }' á:
- E"Network Availability" I tí-ž\é' á ÉpdL ° ' á É¼Wr áT± Š99% ÉIE° ' ''N ^ŠáG \éDž IVPYpý F'' ÉdTI' á 99.23% }' á' I šéC L \Tr Épμ, ' á ' á° ír Š¼Wr áT± tžŃY \éq'' tITqv }' á:

6.2.3 ÉOm''G }r·YÉ ngr

ÉOm''G }r·YÉ ngrž IpL EŠp Š YPXb}á I ŠáG ÉdTI' á VPYr É|>t' áž L T±·v I tí-ž\é' á Špš¶' á É¼Wr áT± ¶Y IM}ŃDY ^žá MšpE' á ''dYmG::

- E"Call setup success rate" I tí-ž\é' á ÉpdL ° ' á É¼Wr áT± Š98% IF'' \éDž IVPYpý F'' ÉdTI' á 96.09% }' á' I šéC L \Tr ' á 1.91% |CG Š¼Wr áT± Iqv LD}áž L μžšn ''uFG::

- E“call setup time” IVPYpý ' á^{1/4} EdTI L T± ' ' N GŠir ^EEiE £¼Wr^aT±' ě IL μNμN EtEN tDÜ ^~ EApY ' á^{1/4} ¼V• v ^zr ŪY\zr INz |CG méšī ' ^p~μ«G EMÉ' ě L · E0 tGpuEN::
- E“Drop call rate” EpdL ° ' á £¼Wr^aT± Š2% Iqv \éDz IVPYpýN EdTI ' á 0.33% }' á IšéC L \Tr Epμ, ' á ' i° ír Š¼Wr^aT± tžŇY \éq'' tITqv }' á:
- E“Handover success rate” EpdL ° ' á £¼Wr^aT± Š95% IF'' \éDz IVPYpý EdTI ' á · z 94.65% }' á ^EšéC ŠpdL ° ' á £¼Wr^aT± ¶Y \é}ŇŇY tITqv }' á:
- E“Blocked call rate” EpdL ° ' á £¼Wr^aT± 2% IéDzN IVPYpý ' á^{1/4} EdTI L T± ' ' N GŠir ^EEiE £¼Wr^aT±' ě L μNμN tGpuEN::
- E“SDCCH Blocking rate” EpdL ° ' á £¼Wr^aT± Š0.5% |}\ \éDz IVPYpý EdTI ' á · z 0.75% }' á ^EšéC ŠpdL ° ' á £¼Wr^aT± ¶Y \é}ŇŇY tITqv }' á:
- E“TCH Blocking Rate” EpdL ° ' á £¼Wr^aT± Š5% Iqv \éDz IVPYpýN EdTI ' á 2.77% }' á IšéC L \Tr Epμ, ' á ' i° ír Š¼Wr^aT± tžŇY \éq'' Epae }' á:
- “Conversational Voice Quality” EpdL ° ' á £¼Wr^aT± 3.0 ^~ Ššé| IF'' IéDzN IVPYpý ' á^{1/4} EdTI L T± ' ' N GŠir ^EEiE I Om'' G^az|...v L <ŠG Ep^aTμ' ě E-N0 ¼Wr^aT±z L μNμN tGpuEN::

7. M° gE!

I 2002 IS^pf' á Un -L r IdTI ' á VPYr L \Tr IL aIf E^GE L ^LY EtμG· Eor t\» ¼ ¼Wr I tī-ž\é' á ŠpdL ° ' á £¼Wr^aT± ¶Y \é}ŇŇY I ¼U Aā}iq F'' EMμ„ \éDz ^~ E}ir • YE ngr^aT± · z I ^3 μā dž_ q'' pG tž«ž- E}ir • YE ngr L L šf• v GŠir Š^aT± Iqv \éDz GŠiq t' á IVPYpý |Gp< ppý L L šf• v N tEā

$I_{p \approx 3/4} MVN$ $E_{J \text{œn}} \wedge G_{\text{E}} t_{\mu G} \cdot E_{\text{œr}} \wedge E \setminus \circ$ $L D \} \grave{a}$ $E_{M \grave{a} q'} i$ $I \acute{e} D \grave{z} N$
 $E t_{\mu G} \cdot E_{\text{œp} \acute{y}} \frac{1}{4} W_r$ $E \check{S} \acute{r}$ $I V P Y p \acute{y}$ ' $\acute{a} \wedge \frac{1}{4}$ $m E L i T I \acute{a}$ $E \frac{1}{4} W_r$ $^a T_{\pm}$ ' $\acute{a} \grave{z}$ $E L \mu N \mu N$
 $t G p u E N$ ' $\wedge E D \} N$ E' $^a \ddot{O} p \acute{y} p < s$ $I \acute{e} d Y n$ $L G < N$ ' } ' \acute{a}

$E \ll | G t \acute{Y} \wedge \sim$ $E n Z - m \grave{z} -$ $t \acute{e} z p Y \} \acute{r}$ $E t_{\mu G} \cdot E_{\text{œr}}$ $t \setminus \gg \frac{1}{4}$ $\frac{1}{4} W_r \grave{z}$ $I p L E \check{S} p$
 $E t \acute{e} z p Y \} \acute{r}$ $L \wedge L Y$ $E \text{ማስገባት እና}$ $E \frac{1}{4} \mu \sim$ $አገልግሎት$ $E M \cdot$, r $E Y P X b \} \grave{a}$
 $< L E \check{S} p \acute{r}$ $^a \grave{z} | \dots v$ $L < \check{S} G$ $I \ddagger M < \ddot{\prime}$ 85.5% $E_{M \acute{e} D} \} \acute{a} r$ nu $I t \acute{t} \bar{z} \acute{e} \acute{a}$ \acute{a}
 $I p d L \circ$ ' \acute{a} $E t_{\mu G} \cdot E_{\text{œr}}$ $\frac{1}{4} W_r$ $^a T_{\pm}$ $L \setminus T r$ $t_{\mu G \mu E_{\text{œp} \acute{y}}}$ $| \mu \check{f}$ ' $\acute{e} D \grave{z}$ 14.5%
 $E_{M \acute{e} D} \} \acute{a} r$ $^a \grave{z} | \dots v$ $t_{\mu G \mu E_{\text{œp} \acute{y}}}$ $| F \mu \check{f}$ ' $L D \sim t'$ ' $\acute{a} \grave{z}$ $I L \mu \acute{z} \check{S} n$ $E t_{\mu G} \cdot E_{\text{œr}}$ $t \setminus \gg \circ$ $\acute{a} \grave{z}$
 $t \setminus W Y$ $\ddot{O} r c$ $E p a E$ ' $\acute{a} \circ$ \acute{r} $L \wedge W_r$ $| \wedge \hat{O} G \check{r} | G'$

$E t \acute{e} z p Y \} \acute{r}$ $\} \acute{r} \cdot Y_{\text{E}}$ $\frac{1}{4} W_r \grave{z}$ $I p L E \check{S} p$ $I L \bar{L} V |'$ ' $\acute{a} \sim$ $I A \acute{a} E p f'$ ' \acute{a} $U n - L r$
 $G \check{S} \acute{r} q t'$ ' \acute{a} $I V P Y p \acute{y}$ ' $\acute{a} \wedge \frac{1}{4}$ $] \ddot{\prime} < p p \acute{y}$ $E d U$ $L L \check{S} f \cdot v$ $I \check{S} \acute{e} C$ $V P Y r$ $p < p'$ ' \acute{a}
 $L i T m t'$ ' \acute{a} $E_{M \acute{e} T q q}$ ' } ' \acute{a} ' } μY ' \grave{z} ' $\acute{a} \circ$ $\acute{r} p \acute{y}$ $E \} \acute{r} \cdot Y \check{S} \acute{z}$ $\frac{1}{4} W_r$ $E L \cdot E \ddot{O}$
 $\check{S} p d L \circ$ ' \acute{a} $^a T_{\pm}$ $I p E \ddot{\prime}$ E "Throughput" $L \circ \grave{z}$ $I \wedge \mu \acute{a}$ $E d \} \setminus$ ' } ' \acute{a} ' $I L D \} \acute{a} N$
 $E t_{\mu G} \cdot E_{\text{œp} \acute{y}}$ $p \circ$ $g M \acute{e} \cdot v$ $M \cdot$, r $\check{S} M \acute{a} m t'$ ' \acute{a} E "Bandwidth" $L \circ \grave{z}$ $\check{S} \cdot M b$ $I q v$
 $\wedge | \mu \check{f}$ ' $L D \sim t'$ ' $\acute{a} \grave{z}$ $\check{S} d T I'$ ' $V P Y r$ $E L \mu \acute{z} \check{S} n$ $\ddot{\prime} u F G$ ' $\wedge E \check{S} \acute{e} C$ $Y P X b \} \grave{a}$
 $^a \grave{z} | \dots t \acute{y}$ $E M \check{S} \ddot{U} E \acute{a} r$ $\mu \acute{z} \check{S} n$ $p L \gg \gg$, $t_{\mu G} \cdot E_{\text{œr}}$ $\wedge \grave{z}$ $\ll \acute{e} | \mu \check{f}$ ' $M - T \cdot$ $\ddot{\prime} \mu m$ " G'

$E O m \ddot{\prime} G$ $\} \acute{r} \cdot Y_{\text{E}}$ $n g r$ $I \check{S} \acute{e} C$ $U n - L r$ $I t \acute{t} \bar{z} \acute{e} \acute{a}$ ' \acute{a} $\check{S} p d L \circ$ ' \acute{a} $E t_{\mu G} \cdot E_{\text{œr}}$
 $\frac{1}{4} W_r$ $^a T_{\pm}$ $t \acute{z} \check{N} Y$ $\setminus \acute{e} \mu L \mu N$

- $I M \check{S} p E \acute{a} r$ $L E \check{S} \acute{e} | \cdot v$ $L a a G$ $t \ddot{\prime} p p G$:-
 - ✓ Drop Call rate
 - ✓ Handover Success rate
 - ✓ SDCCH Blocking rate
 - ✓ TCH Blocking rate
- $\check{S} A \acute{a} E p f'$ ' \acute{a} $\acute{z} \cdot \acute{a}$ $አመት$ $t \acute{z} \check{N} Y$ $\setminus \acute{e} \mu L \mu N$ "Call Setup Success rate" $d \acute{z}] \acute{e} G$
- $E M \check{S} p E \acute{a} r$ $L L \check{S} f \cdot v$ $G \check{S} \acute{r}$ $I V P Y p \acute{y}$ ' $\acute{a} \wedge \frac{1}{4}$ $t G d T I N$
 - ✓ Call Setup time
 - ✓ Blocked Call rate

✓ Conversational Voice Quality

^EšC E}•YŒ ¼Wr ^aT±t' à IšC L ° ĵ t-ŹG ' ' N dĵ]G EMER
tGpuEN'

I t° gF'' IL ^aI f E^GŒ L ^L Y & IOm''G ^~ I tĵpY}Œ E tµG· Eør
t\»¼ ¼Wr ^~ E}•YŒ ngr F'' E q α ° ĵ < W ^~ ^a< M µø vĵ IL Efr
^ĵ«éAāN E¼Wr L Ź^aG |Œ° Mt' ĵ E tµG· Eør šYÚv IMaaG ^~ ¼Wr
|E' à tµG· Eør IL ^° r E^aĵ|...ĵ ^Y<q L ° ĵ M] ^a· I YPXb}ā i -Mēĵ
Eé\° ' à EMĵm p· mY L Dĵ tElr IMER E2002 S^pf' à Un -L r
E pĒĪ L ĵšĪbĵ tµG· Eør t\»¼ E¼Wr ^aT± tŒŒŒN EMēĵ]E' ĵ VŒYr
I šéAā ^~° gGFEĵ'

