ANEXA 9

LA OFERTA DE REFERINŢĂ PENTRU INTERCONECTAREA CU REŢEAUA PUBLICĂ DE TELEFONIE MOBILĂ OPERATĂ DE TELEKOM ROMANIA MOBILE COMMUNICATIONS S.A. ÎN VEDEREA TERMINĂRII APELURILOR

SCENARIILE TELEKOM ROMANIA MOBILE PENTRU TESTELE DE COMUTATIE SI SEMNALIZARE

Scenariile pentru testele de semnalizare

Preambul:

Partile agreaza ca pentru testele de comutatie si semnalizare aferente interconectarii intre Telekom Romania Mobile si Operator sunt aplicabile numai scenariile de teste prezentate in prezenta Anexa 9 la Oferta de referinta pentru interconectare a Telekom Romania Mobile.

Inaintea efectuarii testelor este imperativ ca fiecare Parte sa comunice celeilate Parti, prin intermediul postei electronice, numerele de telefon din reteaua proprie de la care se vor efectua aceste teste si sa stabileasca de comun acord cu cealalta Parte data/datele, ora de inceput si de sfarsit aferenta fiecarei date in parte, precum si perioada de timp, in zile consecutive sau cu indicarea exacta a datelor aferente efectuarii testelor. Fiecare Parte va efectua apeluri de test numai de la numerele alocate special pentru teste din reteaua proprie, comunicate expres, in scris si prealabil celeilate Parti, si in niciun caz de la alte numere de telefon.

Partile sunt de acord ca pentru efectuarea unor scenarii diferite de test, in afara celor mentionate in prezenta Anexa 9 la Oferta de referinta pentru interconectare a Telekom Romania Mobile, Partile vor agrea (prin intermediul postei electronice sau prin fax) noile scenarii de test, cu indicarea exacta a datei/datelor, orei de inceput si de sfarsit aferenta fiecarei date in parte, precum si perioada de timp in zile consecutive sau cu indicarea exacta a datelor aferente, daca nu sunt zile consecutive, afectata efecturarii acestor teste. De asemenea, este imperativ ca fiecare Parte sa comunice prin intermediul postei electronice numerele de telefon din reteaua proprie de la care va efectua testele. De asemenea si in acest caz, fiecare Parte va efectua apeluri de test numai de la numerele alocate special pentru teste din reteaua proprie, comunicate expres si in prealabil celeilalte Parti, si in niciun caz de la alte numere de telefon.

Inaintea lansarii comerciale a serviciilor aferente interconectarii intre Telekom Romania Mobile si Operator, precum si inaintea lansarii unor noi servicii pe care Partile agreaza sa le lanseze dupa lansarea comerciala a serviciilor aferente interconectarii intre Parti convenite la data semnarii Acordului de Interconectare dintre Telekom Romania Mobile si Operator, Partile vor deschide legaturile de interconectare pentru aceste servicii numai pe perioada testelor, urmand ca deschiderea comerciala a acestor servicii sa aiba loc la data stabilita in scrisoarea de lansare comerciala care va fi semnata de catre ambele Parti.

Partile inteleg si sunt de acord ca va fi exceptata de la tarifare si implicit nu va fi facturata contravaloarea traficului aferent serviciilor de interconectare realizat de catre Parti inainte de lansarea comerciala a respectivelor servicii de interconectare, in scopul efectuarii testelor agreate in prealabil de Parti conform prevederilor prezentei Anexe 9 la la Oferta de referinta pentru interconectare a Telekom Romania Mobile.

Partile agreaza ca traficul efectuat de catre Parti pentru eventuale teste suplimentare, ce vor fi realizate numai cu acordul prealabil al ambelor Parti si cu respectarea intocmai a procedurii aferente testelor descrisa mai sus, in conditiile in care sunt efectuate pentru un serviciu de interconectare deja lansat comercial intre Parti, va fi tarifat prin includerea contravalorii acestuia in factura lunara a serviciilor de interconectare intre Parti.

In scopul evitarii oricarui dubiu, in cazul nerespectarii (i) scenariilor de test, a (ii) perioadei, a intervalului orar ori a datei/datelor afectate testelor, astfel cum acestea au fost agreate in prealabil de Parti, sau (iii) in cazul in care traficul aferent scenariilor de test este originat de la (a) alte numere de telefon decat cele din reteaua Partii care efectueaza testele si/sau (b) terminat la alte numere de telefon decat cele din reteaua celeilalte Parti si/sau (c) numere de telefon necomunicate pentru teste conform procedurii mentionate mai sus in prezenta Anexa 9, respectivul trafic nu va fi in nici un caz considerat drept trafic efectuat pentru testare. In consecinta, Partea in a carei retea a fost terminat un asemenea trafic este indreptatita sa tarifeze celeilalte Parti contravaloarea acestui trafic, in conformitate cu tarifele agreate in prezentul Acord de Interconectare dintre Telekom Romania Mobile si Operator.

Data: _____

Sub. No. Telekom Romania Mobile – CSR1:

_____

Sub. No. Operator – OPR1: _____

Sub. No. Telekom Romania Mobile – CSR2:

_____

Sub. No. Operator OPR2: _____

Pentru respectarea semnificatiei depline a termenilor tehnici a fost pastrata denumirea originala a scenariilor de test, in limba engleza.

Testele de comutatie (vezi Nota):

TEST ITEMS	PASS/FAIL	COMMENTS
Basic Call		
Make a call from CSR1 to OPR1. **Verify speech connection and disconnect the call.**		
Make a call from OPR1 to CSR1. **Verify speech connection and disconnect the call.**		
Call Forwarding to other OPERATOR (OPR)		
MS has Call Forward unconditional (CFU)		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFU to OPR1.** **Make a call from CSR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFU to CSR1.**		

Make a call from CSR2 to OPR1. The call is forwarded to CSR1. **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFU to OPR1.** **Make a call from OPR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFU to CSR1.** **Make a call from OPR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
MS has Call Forward Conditional		
MS has Call Forward on no reply (CFNRY)		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFNRYto OPR1.** **Make a call from CSR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFNRY to CSR1.** **Make a call from CSR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFNRY to OPR1.** **Make a call from OPR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFNRY to CSR1.** **Make a call from OPR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.**		

Remove call forwarding service for OPR1.		
MS has Call Forward on busy (CFB)		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFB to OPR1.** **Make a call from CSR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFB to CSR1.** **Make a call from CSR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1, CFB to OPR1.** **Make a call from OPR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1, CFB to CSR1.** **Make a call from OPR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
MS has Call Forward for „ATTACH" mobile		
Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1 to OPR1.** **Make a call from CSR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1 to CSR1.** **Make a call from CSR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
MS has Call Forward for „DETACH" mobile		

Give CSR1 Call Forwarding service. **Activate Call Forwarding for CSR1 to OPR1.** **Make a call from CSR2 to CSR1. The call is forwarded to OPR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.**		
Give OPR1 Call Forwarding service. **Activate Call Forwarding for OPR1 to CSR1.** **Make a call from CSR2 to OPR1. The call is forwarded to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.**		
MS has Multiple Unconditional Call Forwarding		
Call Forwarded for two times		
Give OPR1 Call Forwarding service. **Give CSR1 Call Forwarding service.** **Activate Call Forwarding for OPR1 to CSR1.** **Activate Call Forwarding for CSR1 to OPR2.** **Make a call from CSR2 to OPR1. The call is forwarded to CSR1 and after that to OPR2.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR1.** **Remove call forwarding service for CSR1.**		
Give CSR1 Call Forwarding service. **Give OPR1 Call Forwarding service.** **Activate Call Forwarding for CSR1 to OPR1.** **Activate Call Forwarding for OPR1 to CSR2.** **Make a call from OPR2 to CSR1. The call is forwarded to OPR1 and after that to CSR2.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR1.** **Remove call forwarding service for OPR1.**		
Call Forwarded for two times on the first number		
Give OPR2 Call Forwarding service. **Give CSR1 Call Forwarding service.** **Activate Call Forwarding for OPR2 to CSR1.** **Activate Call Forwarding for CSR1 to OPR1.**		

Make a call from OPR1 to OPR2. The call is forwarded to CSR1 and after that to OPR1. **Verify speech connection and disconnect the call.** **Remove call forwarding service for OPR2.** **Remove call forwarding service for CSR1.**		
Give CSR2 Call Forwarding service. **Give OPR1 Call Forwarding service.** **Activate Call Forwarding for CSR2 to OPR1.** **Activate Call Forwarding for OPR1 to CSR1.** **The call is forwarded to OPR1 and after that to CSR1.** **Verify speech connection and disconnect the call.** **Remove call forwarding service for CSR2.** **Remove call forwarding service for OPR1.**		
Calling a subscriber with CBIC (Call Barring Incoming Call)		
Provide CBIC to CSR1. **Make a call from OPR1 to CSR1.** **Verify that the service is active.** **Remove CBIC for CSR1.**		
Provide CBIC to OPR1. **Make a call from CSR1 to OPR1.** **Verify that the service is active.** **Remove CBIC for OPR1.**		
Call Forwarding to VMS		
MS has Call Forward unconditional (CFU) to VMS		
Provide CFU to CSR1. **Give CSR1 SMS subscription.** **CSR1 activates the CFU services by MS procedures.** **Verify that the service is active.** **OPR1 sets up a call to CSR1, OPR1 is redirected to CSR1's voice mailbox, OPR1 leaves a message.** **The service center will send an SMS message to CSR1 telling that he has received voice mail.** **Remove CFU from CSR1.**		
MS has Call Forward on no reply (CFNRY) to VMS		
Provide CFNRY to CSR1.		

CSR1 activates the CFNRY services by MS procedures. **Verify that the service is active.** **OPR1 sets up a call to CSR1, CSR1 does not answer the call, OPR1 is redirected to CSR1's voice mailbox, OPR1 leaves a message.** **The service center will send an SMS message to CSR1 telling that he has received voice mail.** **Remove CFNRY from CSR1.**		
MS has Call Forward on busy (CFB) to VMS		
Provide CFB to CSR1. **CSR1 activates the CFB services by MS procedures.** **Verify that the service is active.** **Set up a call between CSR1 and CSR2, verify speech connection.** **OPR1 sets up a call to CSR1, OPR1 is redirected to CSR1 voice mailbox, OPR1 leaves a message.** **Disconnect the call between CSR1 and CSR2.** **The service center will send an SMS message to CSR1 telling that he has received voice mail.** **Remove CFB from CSR1.**		
Call Forward on not reachable (CFNR) to VMS		
Provide CFNRC to CSR1. **CSR1 activates the CFNRC services by MS procedures.** **Verify that the service is active.** **Switch off CSR1.** **OPR1 sets up a call to CSR1, since CSR1 is not reachable, OPR1 is forwarded to CSR1 voice mailbox, OPR1 leaves a message.** **Switch on CSR1.** **The service center will send an SMS message to CSR1 telling that he has received voice mail.** **Remove CFNRC from CSR1.**		
SMS test		
SMS MT/MO: CSR1 -> OPR1. **Check that the MSs receives the correct message.**		
Fax test		
Make a fax call from CSR1 to OPR1. **Make a fax call from OPR1 to CSR1.** **Check that the MSs receives the correct fax call.**		

Data test		
Make a data call from CSR1 to OPR1. **Make a data call from OPR1 to CSR1.** **Check that the MSs receives the correct data call.**		

Nota: *Testele de comutatie* sunt teste ce permit: verificarea conexiunii intre operatori, verificarea calitatii convorbirii precum si verificarea rutarii. De asemenea aceste teste sunt necesare pentru verificarea taxarii intre operatori, fiind teste agreate de ambele parti.

Testele de comutatie nu sunt reglementate de catre ITU-T insa ele au corespondenta in *Tetele de semnalizare* (serviciile suplimentare SS7), teste ce sunt conforme cu: **White Book 1993** (Recomandarile ITU-T Q.731, Q.732, Q.733 si Q.737).

Testele de semnalizare:

Level 2 - Signaling link tests (Q.781)

Test number	Test case	Required	Remarks
1	**Link status control**		
1.1	Initialisation (Power-up)	X	
1.2	Timer 2	X	
1.5	Normal alignment - correct procedure (FISU)	X	
1.19	Set emergency while in “not aligned state“	X	
1.21	Both ends set emergency	X	
1.25	Deactivation during initial alignment	X	
1.29	Deactivation during link in service	X	
1.32	Deactivation during the proving period	X	
3	**Transmission failure**		
3.5	Link in service (break Tx path)	X	
8	**Transmission and reception control (Basic)**		
8.1	MSU transmission and reception	X	

Level 3 - Signaling network management tests (Q.782)

Test number	Test case	Required	Remarks
1	**Signaling link management**		
1.1	First signaling link activation	X	
1.2	Signaling linkset deactivation	X	
1.3	Signalling linkset activation	X	2 links are required
2	**Signaling message handling**		
2.4	Load sharing within a linkset		
2.4.1	All links available	X	2 links are required
2.5	Load sharing between linksets		
2.5.1	Between two linksets	X	2 linksets are required

3	**Changeover**		
3.1	Changeover initiated at one side of a linkset (COO <–> COA)	X	2 links are required
4	**Changeback**		
4.1	Changeback within a linkset	X	2 links are required
7	**Management inhibiting**		
7.1.1	Inhibition of a link - Available link	X	2 links are required
7.1.2	Inhibition of a link - Unavailable link	X	2 links are required
12	**Signaling link tests**		
12.1	After activation of a link	X	2 links are required

Level 4 - ISUP compatibility tests (Q.784.1)

Test number	Test case	Required	Remarks
1.	**Circuit supervision and signaling supervision**		
1.2	Reset of circuits		
1.2.1	RSC received on an idle circuit	X	
1.2.2	RSC sent on an idle circuit	X	
1.2.3	RSC received on a locally blocked circuit	X	
1.2.4	RSC received on remotely blocked circuit	X	
1.2.5	Circuit group reset received	X	
1.2.6	Circuit group reset sent	X	
1.2.7	Circuit group reset received on remotely blocked circuits	X	
1.3	Blocking of circuits		
1.3.1	Circuit group blocking/unblocking		
1.3.1.1	CGB and CGU received	X	
1.3.1.2	CGB and CGU sent	X	
1.3.2	Circuit blocking/unblocking		
1.3.2.1	BLO received	X	
1.3.2.2	BLO sent	X	
1.3.2.3	Blocking from both ends; removal of blocking from one end	X	
2.	**Normal call setup – ordinary speech calls**		
2.1	Both way circuit selection		
2.1.1	IAM sent by controlling SP	X	
2.2	Called address sending		
2.2.1	En bloc operation	X	
2.3	Successful call setup		
2.3.1	Ordinary call (with various indications in ACM)	X	
2.3.2	Ordinary call (with ACM, CPG and ANM)	X	
2.3.5	Blocking and unblocking during a call (initiated)	X	
2.3.6	Blocking and unblocking during a call (received)	X	
3.	**Normal call release**		
3.1	Calling party clears before address complete	X	
3.2	Calling party clears before answer	X	
3.3	Calling party clears after answer	X	
3.4	Called party clears after answer	X	

Test number	Test case	Required	Remarks
3.6	Suspend and resume initiated by a calling party	X	
3.7	Suspend and resume initiated by a called party	X	
4.	**Unsuccessful call setup**		
4.1	Validate a set of known causes for release User busy (17) No user responding (18) No circuit available (34)	X	
5.	**Abnormal situations during a call**		
5.2	Timers		
5.2.2	T9: waiting for ANM	X	

Level 4 - User-network-interface to user-network-interface compatibility test specifications for ISDN, non-ISDN and undetermined accesses interworking over international ISUP (Q.788)

Test number	Test case	Required	Remarks
1	***1.1.1.1 ISUP/ISDN Basic Call Control***		
1.1	Successful call set-up		
1.1.1	Basic Call set-up (BC)	X	
1.2	Normal call release		
1.2.1	Calling party clears before answer	X	
1.2.2	Calling party clears after answer	X	
1.2.3	Called party clears after answer	X	
1.3	Unsuccessful call set-up		
1.3.1	All circuits busy at the destination network	X	
1.3.2	Dialling of an unallocated number	X	
1.3.4	Calling to a busy subscriber	X	
1.3.5	Address incomplete	X	
1.4	Abnormal situation during call		
1.4.2	No answer from the called party (T9/Q.764 expiration)	X	
2	***ISUP/ISDN Call Control with supplementary services***		
2.1	Calling Line Identification (CLI)		
2.1.1	CLIP – network provided, without calling party subaddress	X	
2.1.3	CLIP – user provided, verified and passed	X	
2.1.5	CLIR – network provided, without calling party subaddress	X	
2.1.7	CLIR – user provided, verified and passed	X	
2.1.8	CLIR – network provided, not verified		

2.6 Call Forwarding Busy (CFB)			
2.6.1	Call Forwarding Busy (network determined) – full notification		
2.6.2	Call Forwarding Busy (network determined) – no notification		
2.6.3	Call Forwarding Busy (user determined) – full notification		
2.6.4	Call Forwarding Busy (user determined) – Unsuccessful		
2.7 Call Forwarding No Reply (CFNR)			
2.7.1	Call Forwarding No Reply (option A, late release) – full notification		
2.7.2	Call Forwarding No Reply (option A, late release) – no notification		
2.7.3	Call Forwarding No Reply (option B, immediate release) – full notification		
2.7.4	Call Forwarding No Reply (option A, late release) – Unsuccessful		
2.7.5	Call Forwarding No Reply (option B, immediate release) – Unsuccessful		
2.8 Call Forwarding Unconditional (CFU)			
2.8.1	Call Forwarding Unconditional – Successful – full notification		
2.8.2	Call Forwarding Unconditional – Successful – no notification		
2.8.3	Call Forwarding Unconditional – Unsuccessful		
2.10 Call Waiting (CW)			
2.10.1	Call Waiting successful		
2.10.2	Call Waiting rejection		
2.10.3	Call Waiting ignored		
2.11 Call Hold (HOLD)			
2.11.1	Hold and Retrieve during waiting for ANM		
2.11.2	Hold call and clear before Retrieve during waiting for ANM		
2.11.3	Hold and Retrieve during active phase		
2.11.4	Hold during active phase; served user clears call during held state		
2.11.5	Hold during active phase; non-served user clears call during held state		
2.13 Conference Calling (CONF)			
2.13.1	Establishment of a conference and termination of the conference		
2.13.2	Isolation, Reattachment and Disconnection of one party of the conference		
2.13.3	Splitting and Adding of a party		
2.13.4	Floating of a conference (explicit request)		
2.13.5	Call clearing by served user when floating is allowed		

The test cases are described in the ITU-T Recommendations Q.781, Q.782, Q.784.1 and Q.788.