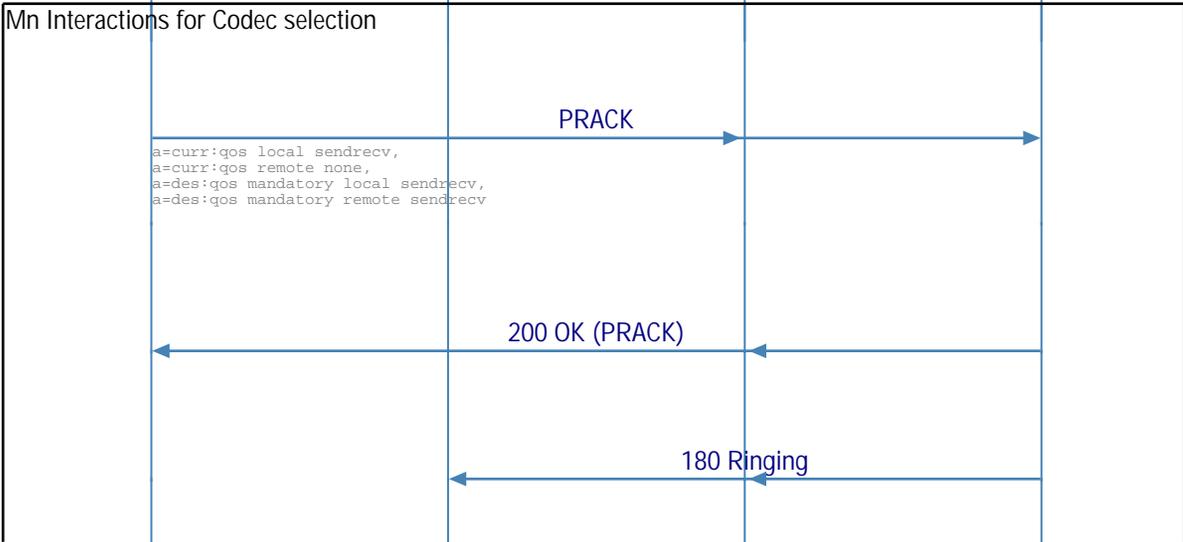|	IMS Core Network			Copyright © 2013 EventHelix.com
PSTN Interface	CSCF Servers			
MGCF	I-CSCF	Term S-CSCF	Term P-CSCF	10-Jan-13 16:44 (Page 1)

This call flow covers the handling of a CS network originated call with ISUP. In the diagram the MGCF requests seizure of the IM CN subsystem side termination and CS network side bearer termination. When the MGCF receives an answer indication, it requests the IM-MGW to both-way through-connect the terminations.

This sequence diagram was generated with EventStudio System Designer (http://www.EventHelix.com/EventStudio).

Initial Handshake between MGCF and IMS CSCF Servers

INVITE
`INVITE tel:1-811-CALLED SIP/2.0,`
`...`

The public URI in the SIP INVITE is replaced with the called subscriber's registered IP address and port number. The message is routed to the P-CSCF IP address that was recorded at the time of registration. The Via and Record-Route headers are updated.

INVITE
`INVITE tel:1-811-CALLED SIP/2.0,`
`...`

100 Trying

100 Trying

The UE replies indicating that the session is in progress. The contact address is set its own IP address. The Via and the Record-Route headers are copied from the received INVITE.

183 Session Progress   **183 Session Progress**

Mn Interactions for Codec selection

PRACK

`a=curr:qos local sendrecv,`
`a=curr:qos remote none,`
`a=des:qos mandatory local sendrecv,`
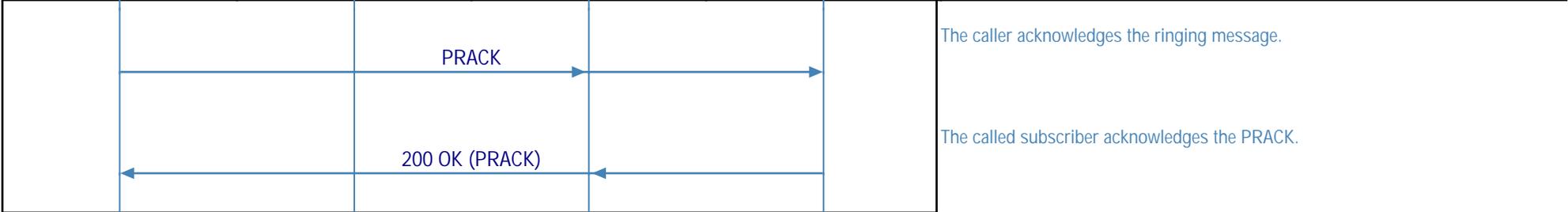`a=des:qos mandatory remote sendrecv`

The Caller now sends a PRACK to inform the called subscriber about the selected Codec. The message also indicates that currently the resources needed for meeting the quality of service requirements of the session are already available ("a=curr:qos local sendrecv").

200 OK (PRACK)

This "200 OK" just acknowledges PRACK.

180 Ringing

Inform the caller that the called subscriber is being rung. This serves as an implicit indication to the caller that the QoS at the called side has also been met.
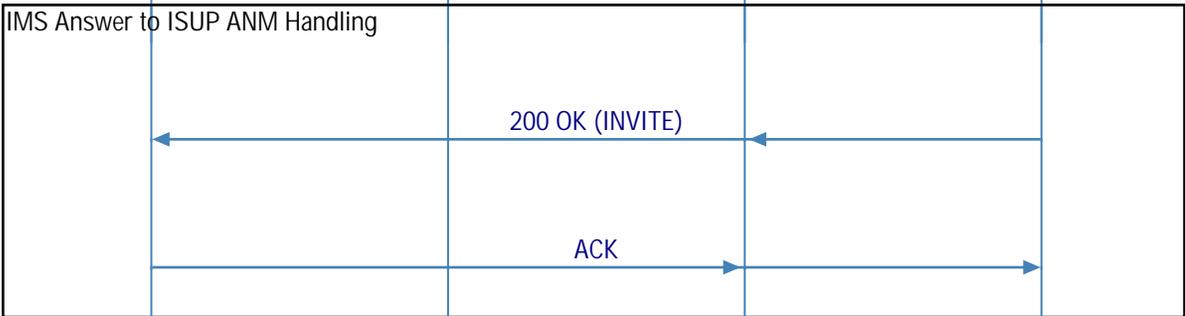
	IMS Core Network			Copyright © 2013 EventHelix.com
PSTN Interface	CSCF Servers			
MGCF	I-CSCF	Term S-CSCF	Term P-CSCF	10-Jan-13 16:44 (Page 2)

PRACK

The caller acknowledges the ringing message.
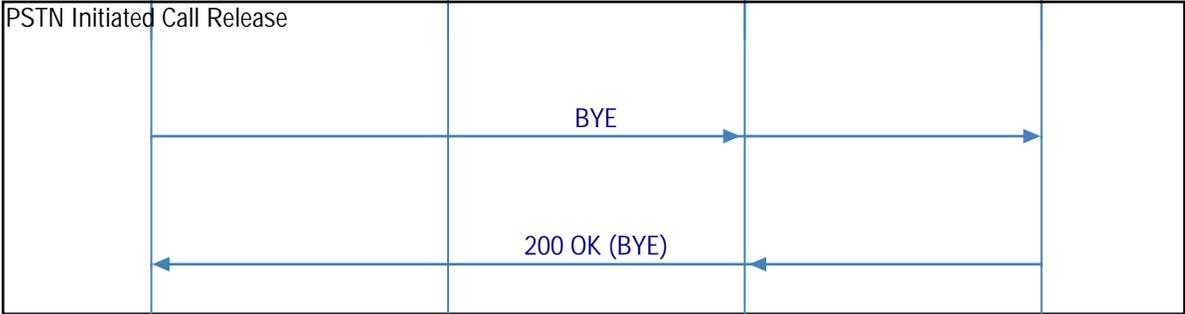
200 OK (PRACK)

The called subscriber acknowledges the PRACK.

IMS Answer to ISUP ANM Handling

200 OK (INVITE)

Notify the caller that that the call has been answered.

ACK

The caller acknowledges the "200 OK" message. The call is now ready to enter conversation mode.

PSTN Initiated Call Release

BYE

MGCF initiates IMS side call release by sending BYE.

200 OK (BYE)

Acknowledge the BYE that was received from the IMS network.

| Term S-CSCF Interfaces (Alternate Scenario: Called IMS Subscriber Initiated Call Release)				
	IMS Core Network			
PSTN Interface	CSCF Servers			10-Jan-13 16:44 (Page 3)
MGCF	I-CSCF	Term S-CSCF	Term P-CSCF	

This call flow covers the handling of a CS network originated call with ISUP. In the diagram the MGCF requests seizure of the IM CN subsystem side termination and CS network side bearer termination. When the MGCF receives an answer indication, it requests the IM-MGW to both-way through-connect the terminations.

This sequence diagram was generated with EventStudio System Designer (http://www.EventHelix.com/EventStudio).

Initial Handshake between MGCF and IMS CSCF Servers

Mn Interactions for Codec selection

IMS Answer to ISUP ANM Handling

Called Subscriber Initiates Call Release

BYE
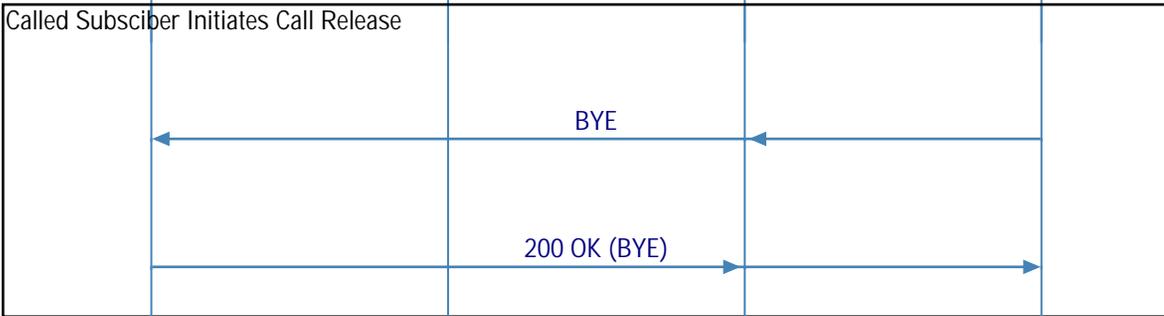
BYE is sent to initiate the call.

200 OK (BYE)

MGCF acknowledges the receipt of the BYE message.

This sequence diagram was generated with EventStudio System Designer (http://www.EventHelix.com/EventStudio).