SIP P25 message exchange for a group voice call
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This network topology contains four RFSSs connected by three physical links (indicated by thick black lines). One RFSS is acting as the group home RFSS. The other RFSSs are acting as serving RFSSs with at least one subscriber unit (SU) within its coverage (serving) area [Not shown].

One SU within one of the serving RFSS initiates a group voice call. [Not shown]. This serving RFSS sends a SIP INVITE message to the RFSS that is acting as the home for this group.

The group home RFSS then sends a SIP INVITE message to the other serving RFSSs that have previously registered and affiliated for this group. This may be done in parallel (least amount of time) or serial (least amount of burst data rate).

The response to a SIP INVITE is a SIP 200 OK message.

The response to a SIP 200 OK message is an ACK message.

This three-way exchange of messages completes the establishment of a group voice call.

*NOTE: Depending on the type of group voice call, the SIP 200 OK message from the group home RFSS to the serving RFSS that initiated the group voice call may be delayed until all the other serving RFSSs have responded.