MRFC-AS Interfaces (IMS Conference Call)

Calling UE	IMS Network							Called UE	EventStudio System Designer 4.0
Caller User Equipment	IMS 1		IMS 1 MRF		IMS 2			Called User Equipment	
Conference Initiator	Initiating P-CSCF	Initiating S-CSCF	MRFC-AS	MRFP	Participating I-CSCF	Participating S-CSCF	Participating P-CSCF	Conference Participant	18-May-08 10:40 (Page 1)

This sequence diagram shows an IMS user creating a conference by using a conference-factory URI. The conference is created at a MRFC-AS of the users home network. The steps involved in the conference scenario covered here are:

(1) The conference initiator UE uses the conference factory URI to initiate a conference with the MRFC-AS (Multimedia Resource Function Control/Application Server).

(2) The MRFC-AS assigns a conference URI to the conference and configures the MRFP (Multimeda Resource Function Processor).

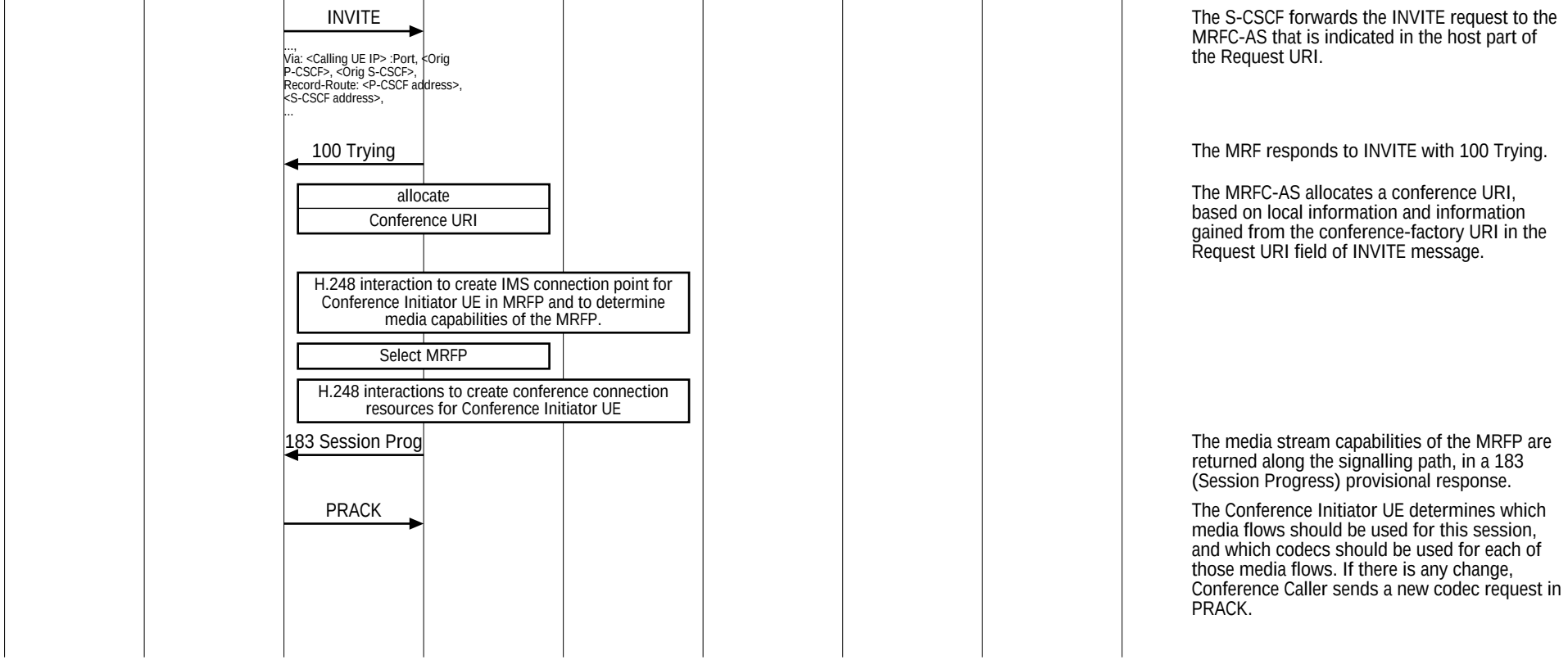
(3) The conference call is setup and the RTP data begins flowing between the conference initiating UE and the MRFP.

(4) The conference initiator then uses the refer procedure to add more users to the conference. The new users establish a call to the conference URI passed in the refer message.

(5) When the conference is in progress, RTP media streams are being mixed and propagated to all the participants.

(6) The conference user drops out of the conference. All users are notified for this exit from the conference.

Initiating an IMS conference using the Conference Factory URI



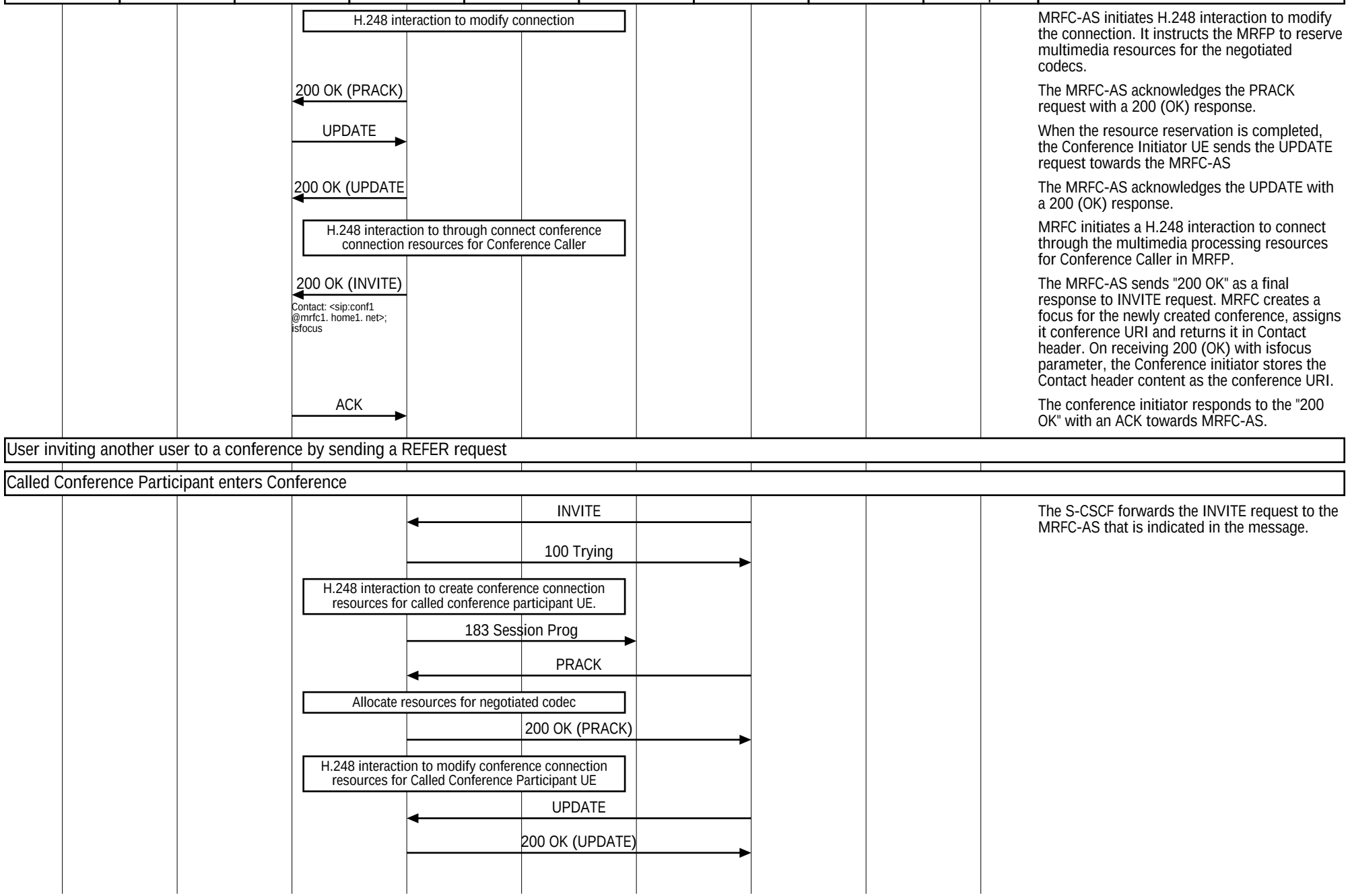
The S-CSCF forwards the INVITE request to the MRFC-AS that is indicated in the host part of the Request URI.

The MRF responds to INVITE with 100 Trying.

The MRFC-AS allocates a conference URI, based on local information and information gained from the conference-factory URI in the Request URI field of INVITE message.

The media stream capabilities of the MRFP are returned along the signalling path, in a 183 (Session Progress) provisional response.

The Conference Initiator UE determines which media flows should be used for this session, and which codecs should be used for each of those media flows. If there is any change, Conference Caller sends a new codec request in PRACK.



MRFC-AS initiates H.248 interaction to modify the connection. It instructs the MRFP to reserve multimedia resources for the negotiated codecs.

The MRFC-AS acknowledges the PRACK request with a 200 (OK) response.

When the resource reservation is completed, the Conference Initiator UE sends the UPDATE request towards the MRFC-AS

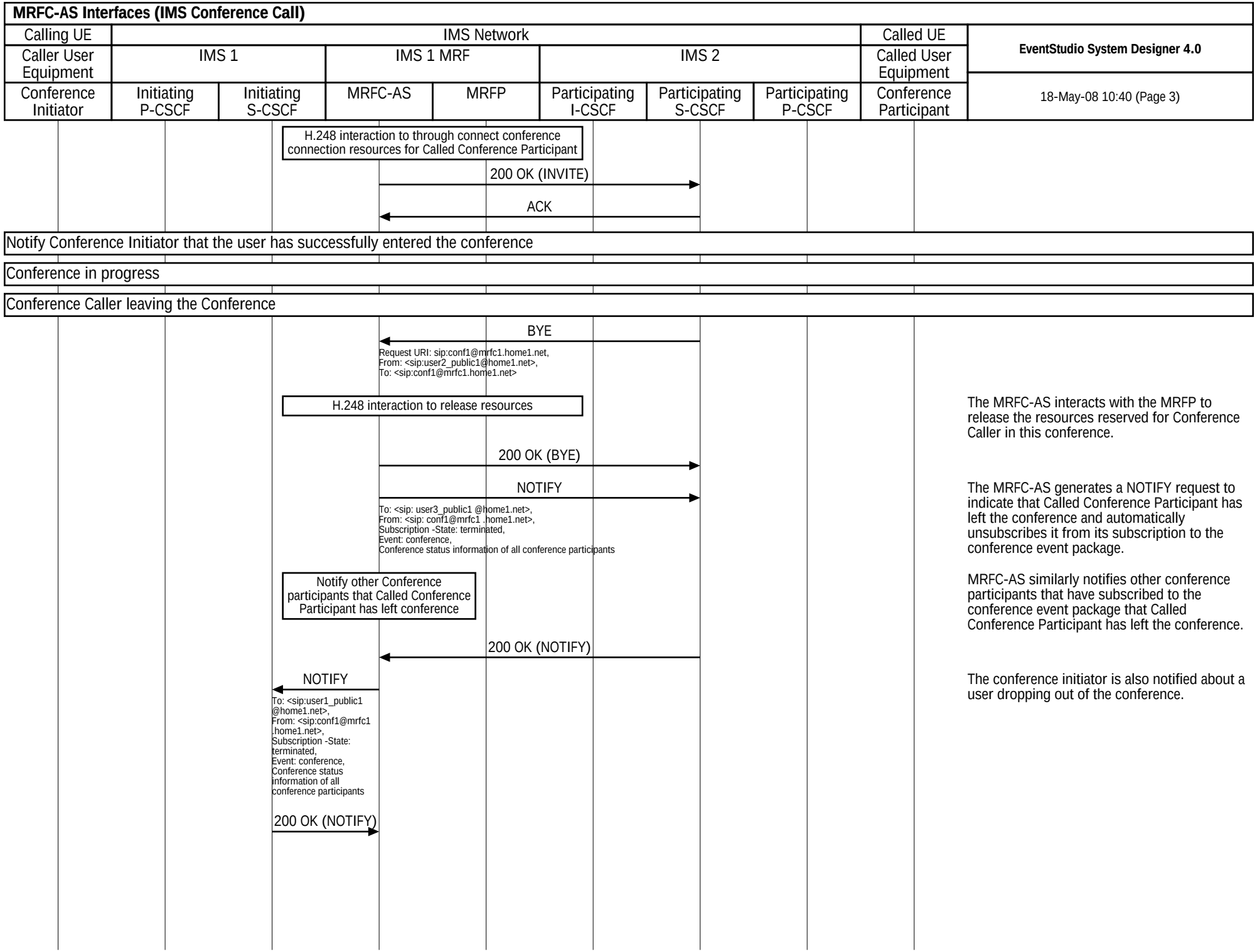
The MRFC-AS acknowledges the UPDATE with a 200 (OK) response.

MRFC initiates a H.248 interaction to connect through the multimedia processing resources for Conference Caller in MRFP.

The MRFC-AS sends "200 OK" as a final response to INVITE request. MRFC creates a focus for the newly created conference, assigns it conference URI and returns it in Contact header. On receiving 200 (OK) with isfocus parameter, the Conference initiator stores the Contact header content as the conference URI.

The conference initiator responds to the "200 OK" with an ACK towards MRFC-AS.

The S-CSCF forwards the INVITE request to the MRFC-AS that is indicated in the message.



The MRFC-AS interacts with the MRFP to release the resources reserved for Conference Caller in this conference.

The MRFC-AS generates a NOTIFY request to indicate that Called Conference Participant has left the conference and automatically unsubscribes it from its subscription to the conference event package.

MRFC-AS similarly notifies other conference participants that have subscribed to the conference event package that Called Conference Participant has left the conference.

The conference initiator is also notified about a user dropping out of the conference.