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**3RD GENERATION  
PARTNERSHIP  
PROJECT 2  
"3GPP2"**

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## **Mobile Application Part (MAP) - Intersystem Handoff Annexes**

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## Revision History

Revision		Date
Rev. 1	Initial Publication	May 2006

# PART 290

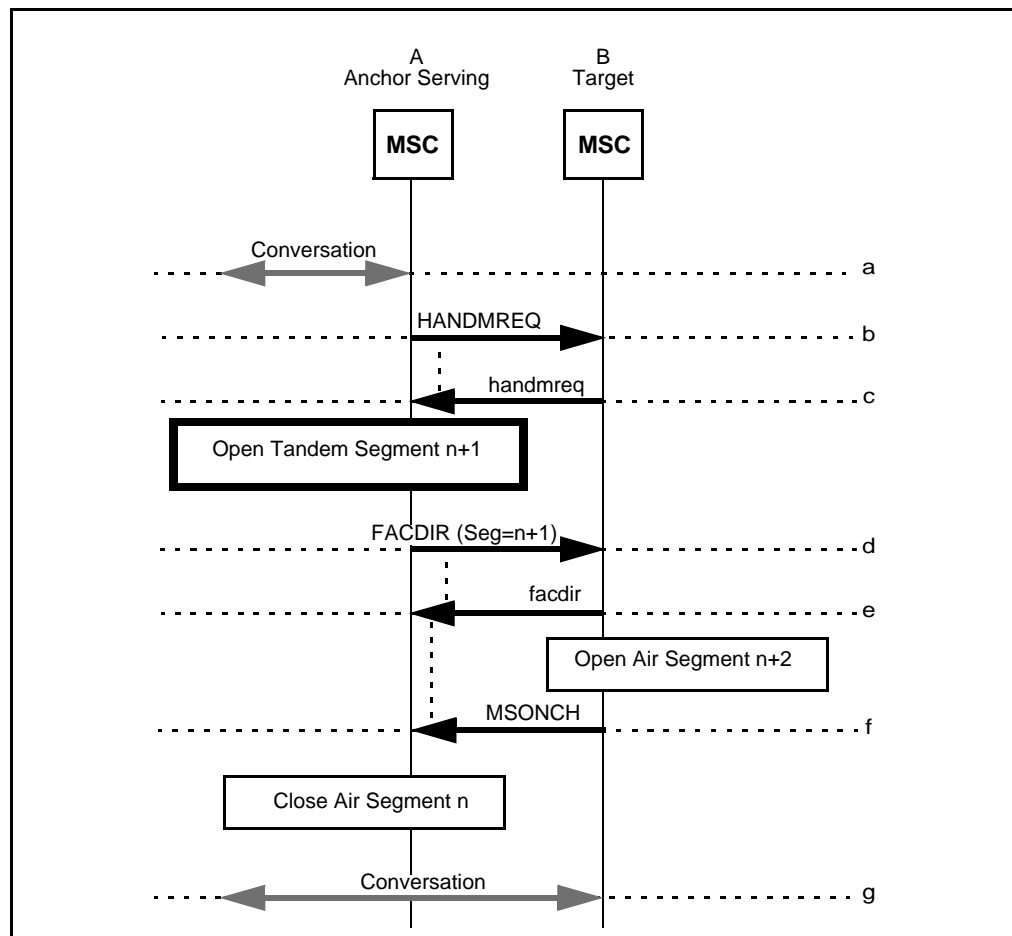
## Annex A: Additional DMH Support for Intersystem Handoff in MAP (normative)

This Annex is normative and is considered part of this Specification.

The Data Message Handler standard has some impact upon *MAP*. The changes which impact *MAP* Intersystem Operations are:

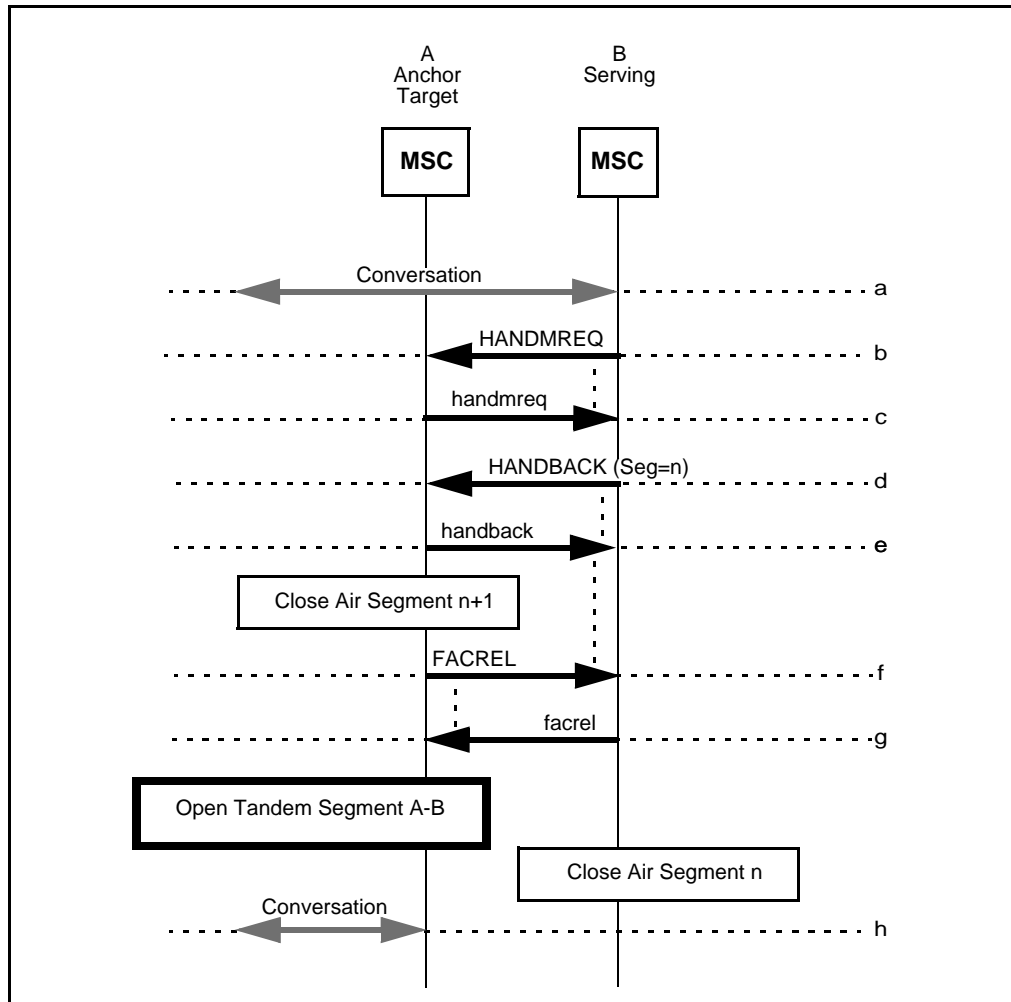
1. Change segment numbering to include the tandem segments as well as the air time segments.
2. *DMH* requires the number of segments in a call be saved in the audit record. This information must be passed from the serving system to the anchor system upon call disconnect.

These changes are detailed in the following stage 2 diagrams. Only the scenario steps which involve *DMH* related changes are described.



**Figure 1 — Handoff-Forward (A to B)**

- d. If the Serving MSC (Anchor) opens a tandem segment, it increments the current segment counter and then passes that value in the **FACDIR**.

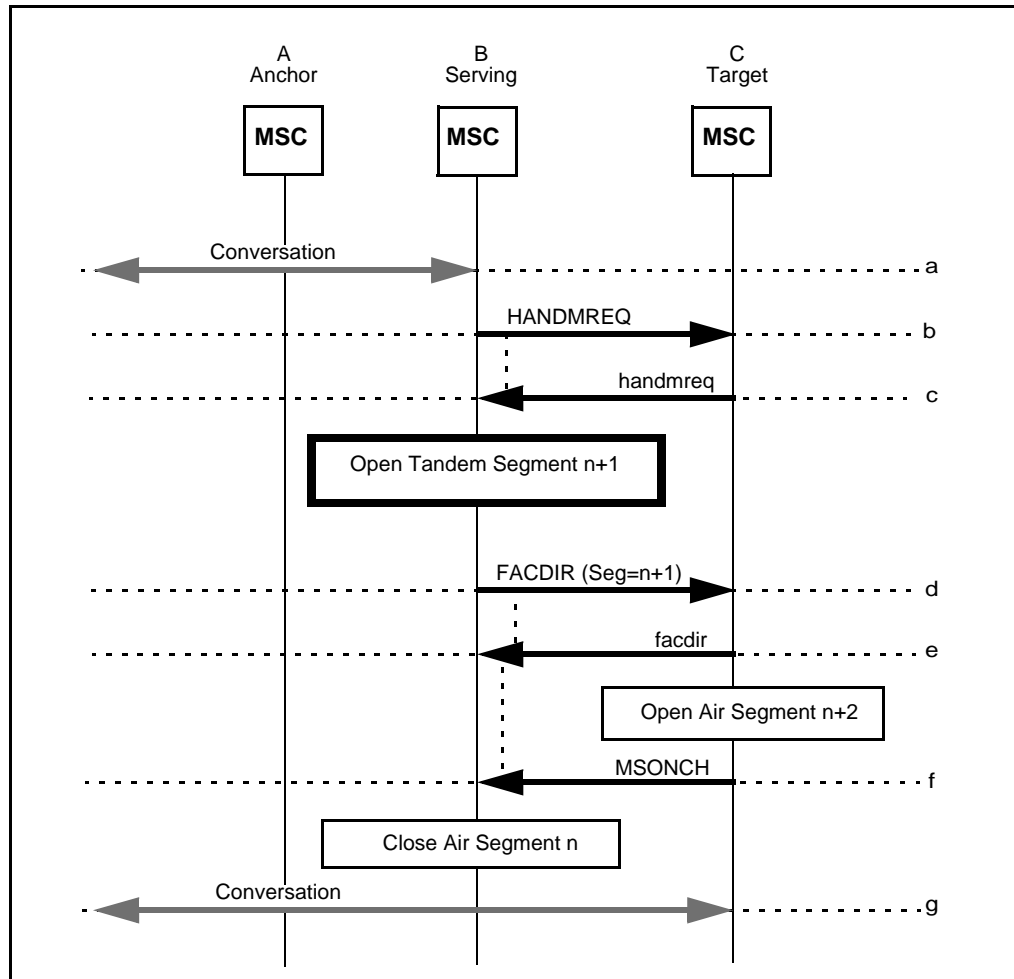


**Figure 2 — Handoff-Back (B to A)**

- g. If the Anchor MSC had a tandem segment open, it should now close that segment.

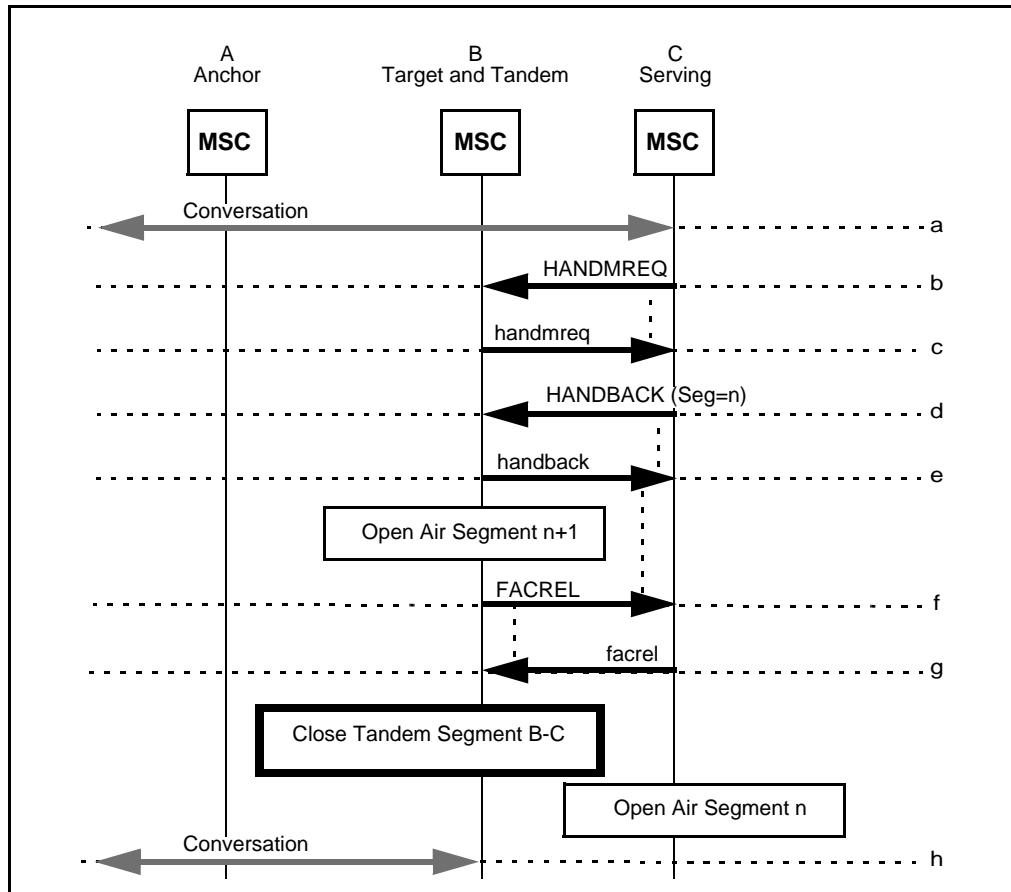
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**Figure 3 — Handoff-Forward (B to C)**

- d. If the Serving MSC opens a tandem segment, it increments the current segment counter and then passes that value in the FACDIR.

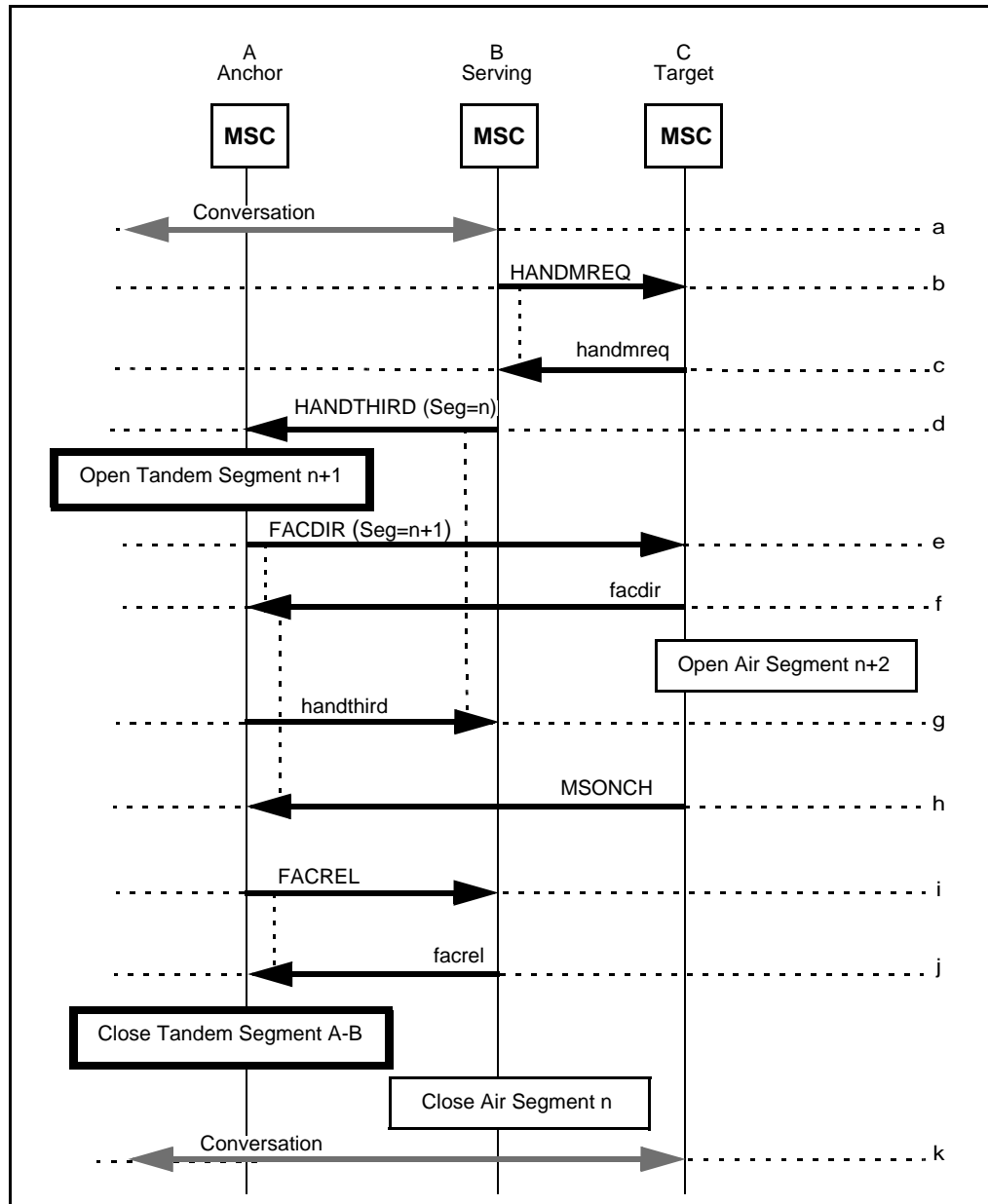


**Figure 4 — Handoff-Back (C to B)**

- g. If the Serving MSC opened a tandem segment, it should close it now.

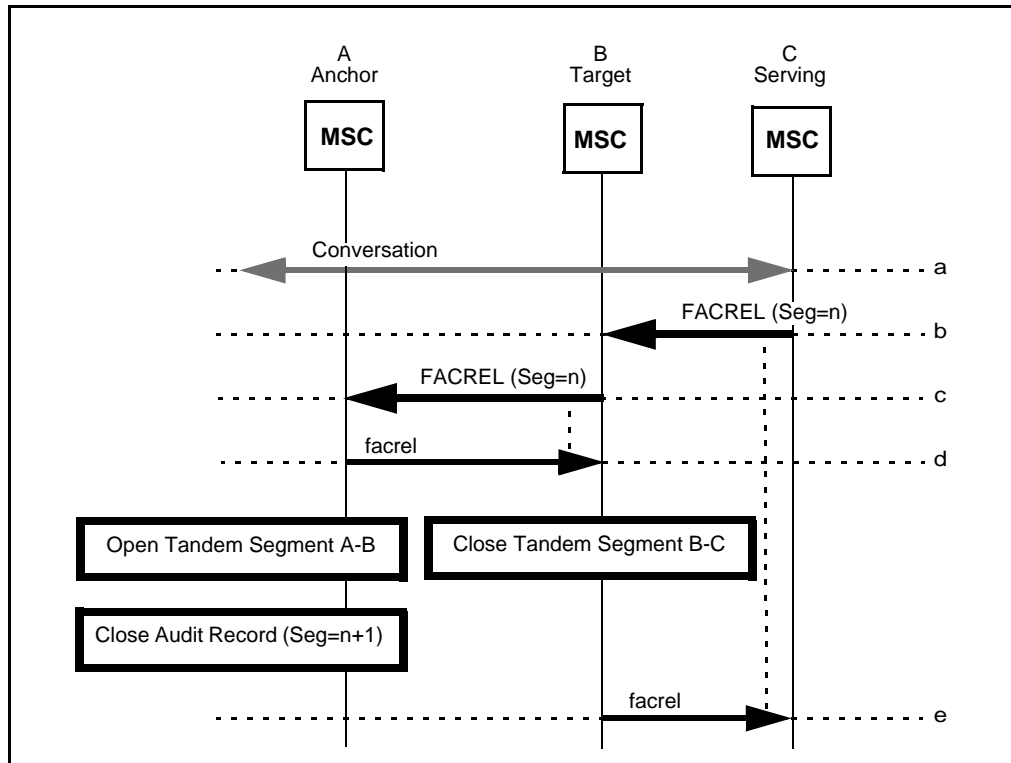
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**Figure 5 — Path Minimization (A-B to A-C)**

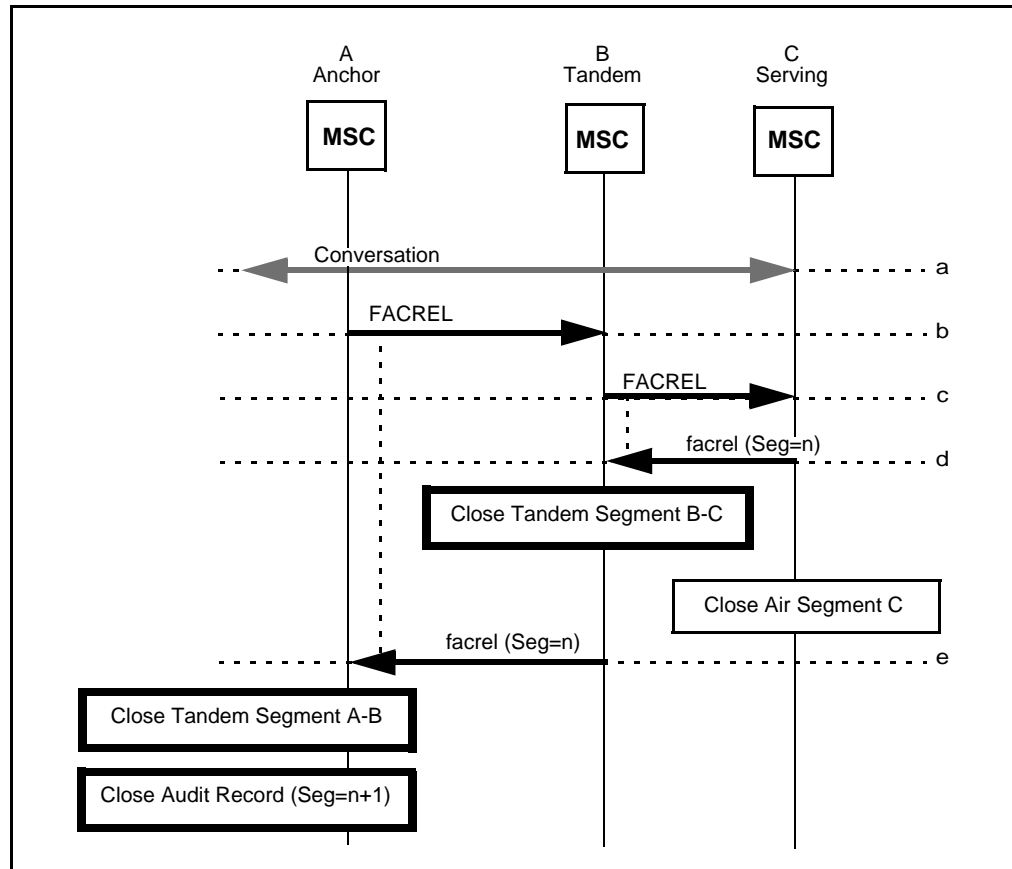
- d. If the Anchor MSC opens a tandem segment, it increments the current segment counter and then passes that value in the FACDIR.
- j. If the Serving MSC opened a tandem segment, it should close it now.



**Figure 6 — Release by the MS (C-B-A)**

- b. When the Serving MSC detects that the MS has disconnected or has lost radio contact, it signals the release of the facilities with a FACREL including the number of segments currently allocated.
- d. When a Tandem MSC processes a FACREL containing the number of segments in a BillingID, it should relay that parameter toward the Anchor MSC.

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34 **Figure 7 — Release by the other party (A-B-C)**

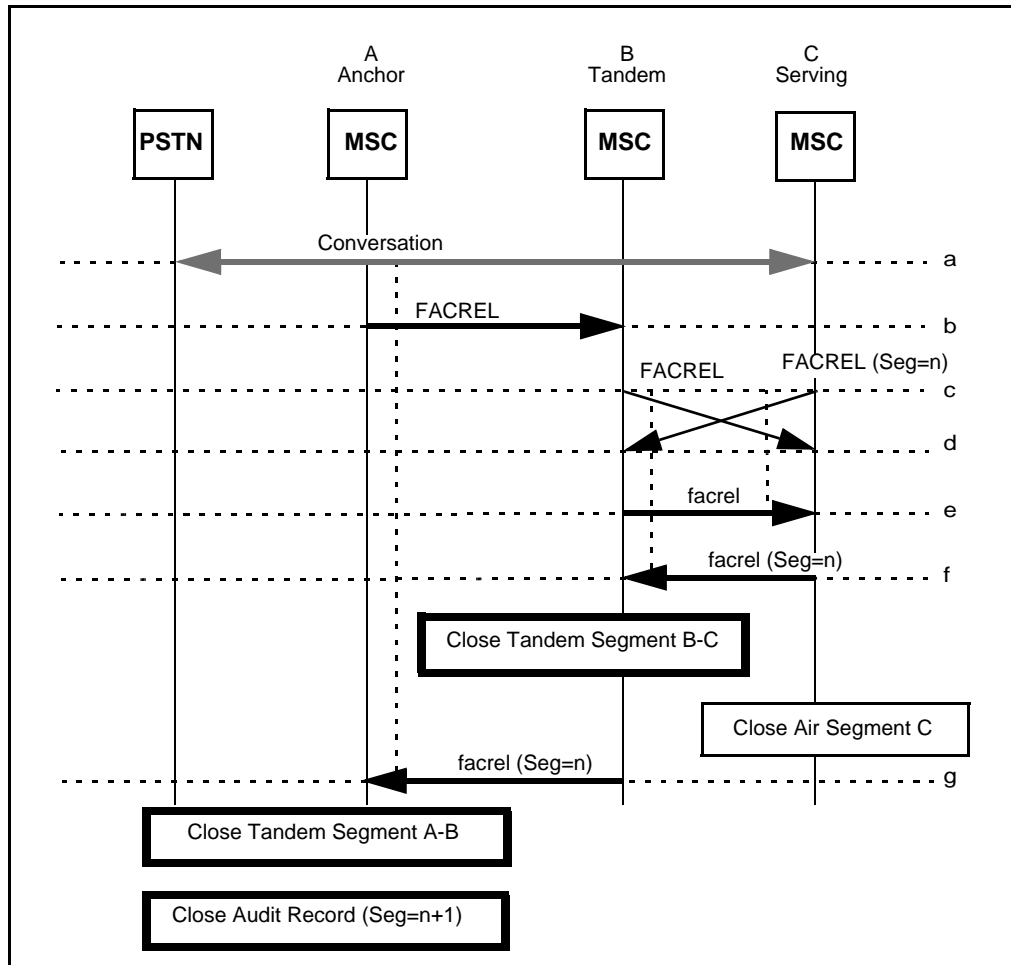
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- b. When the Anchor MSC receives a disconnect request from the other party for a handed off MS, it should launch a FACREL and start a timer to wait for the response. If the timer expires, an indicator for an unknown number of segments can be used.
  - c. When a Tandem MSC receives a FACREL from the Anchor MSC for a handed off MS, it should launch a FACREL toward the Serving MSC and start a timer to wait for the response. If the timer expires, an indicator for an unknown number of segments can be used.

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Upon receipt of the FACREL the Serving MSC can release any facilities that it is using and close out the current air segment DMH record. It confirms the release by sending a facrel to the Tandem MSC including the BillingID to convey the number of segments.

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- d. When a Tandem MSC receives a facrel from the Serving MSC for a handed off MS, it can release any facilities that it is using and close out the current tandem segment DMH record. It confirms the release by sending a facrel to the Tandem MSC including the BillingID to convey the number of segments.
  - e. When the Anchor MSC receives a facrel from the Tandem or Serving MSC for a handed off MS, it can release any facilities that it is using and close out the current tandem segment DMH record and the audit record for the call with the number of segments.

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**Figure 8 — Release Glare**

- a. This scenario occurs when an active call is disconnected by both the originating party and terminating party at about the same time.
- b. When the Anchor MSC receives a disconnect request from the other party for a handed off MS, it should launch a FACREL and start a timer to wait for the response. If the timer expires, an indicator for an unknown number of segments can be used.  
When a Tandem MSC receives a FACREL from the Anchor MSC for a handed off MS, it should launch a FACREL toward the Serving MSC and start a timer to wait for the response.  
Upon receipt of the FACREL the Serving MSC can release any facilities that it is using and close out the current air segment DMH record.  
The Serving MSC detects a disconnect request from the MS at about the same time and sends a FACREL toward the Anchor MSC with the number of segments. The Serving MSC is unaware that the other end is releasing simultaneously.
- c. Both the Tandem and Serving MSCs will receive the FACREL before they receive a facrel.
- d. The Tandem MSC will send a facrel to the Serving MSC.

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- e. The Serving MSC will send a `facrel` to the Tandem MSC including the number of segments.
- f. The Tandem MSC sends the `facrel` to the Anchor MSC including the number of segments.