

3GPP TSG CN Plenary Meeting #26
8th – 10th December 2004 Athens, Greece.

NP-040525

Source: TSG CN WG4
Title: Corrections on Camel4
Agenda item: 8.3
Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-040	Phase	Subject	Cat	Ver_C
23.078	754		1423	Rel-6	Clarification on Outstanding Request Counter (ORC) handling at EDP-R or TDP-R resumption	F	5.8.0
23.078	748	5	1635	Rel-6	Clarification on Outstanding Request Counter (ORC) handling at EDP-R or TDP-R resumption	A	6.3.0

3GPP TSG CN WG4 Meeting #25
Seoul, Korea, 15th – 19th November 2004

N4-041423

CHANGE REQUEST

⌘ **23.078 CR 754** ⌘ rev **-** ⌘ Current version: **5.8.0** ⌘

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Clarification on Outstanding Request Counter (ORC) handling at EDP-R or TDP-R resumption	
Source:	⌘ CN4	
Work item code:	⌘ Camel4	Date: ⌘ 17 November 2004
Category:	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ In Section 4.5.7.4, the rules for the outstanding request counter specify that all the counters for the legs in the Call Segment shall be set to 0, when the Continue is received. This shall be applied also in case of multiple reporting. The indicated criteria might fail in case of multiple reporting. As an example, when reporting DP Route Select Failure and DP O_Abandon, in sequence and in request mode, the rules would require that ORC_Leg(Legid1) =1 and ORC_Leg(Legid2) =1. At the next CUE reception, the rule 10) requires that ORC_Leg(Legid1) =0 and ORC_Leg(Legid2) =0 and, if other reports are pending, the CS_gsmSSF enters the Monitoring state. Even worst, if no other report is pending, the dialogue might even be closed. On the other hand, the gsmSCF, when analysing the first reported DP (Route Select Failure), is not aware of the fact that it will receive the reporting for the DP O_Abandon and shall not close the dialogue just after sending the first CUE. When receiving the reporting of the DP O_Abandon, the gsmSCF might choose to send the CUE again, but either the CS_gsmSSF is in state Monitoring or the dialogue might have been already closed.
Summary of change:	⌘ - Correct section 4.5.7.4 and sheets 16, 17, 18 and 19 for the process CS_gsmSSF
Consequences if not approved:	⌘ - Possible hanging dialogues in case of multiple reporting related to the same Call Segment.

Clauses affected: ⌘ 4.5.7.4 and 4.5.7.5 (process CS_gsmSSF, sheets 16, 17, 18, 19)

Other specs affected:		<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X		X		X	Other core specifications	⌘	
	Y	N											
		X											
	X												
	X												
		Test specifications											
		O&M Specifications											
Other comments:	⌘												
*** First modification ***													

4.5.7.4 Outstanding Request Counter and Rules for CAMEL

In the following the rules on handling of the 'outstanding requests' variables in the process CS_gsmSSF are given. They are storing the number of required resumptions.

- 1) There shall be one outstanding requests variable ORC_Leg (legID) per leg to handle TDP-R and EDP-R reports and ICA.
- 2) In addition there shall be one outstanding requests variable ORC_CS (CSID) per call segment to handle the CPH IFs.
- 3) A leg will only be resumed if the ORC_Leg (legID) variable for this leg and the ORC_CS (CSID) for the call segment containing the leg are 0.
- 4) Events that cause the suspension of the call processing are signalling events armed as TDP-Rs or EDP-Rs, or the processing of a CPH IF (Disconnect Leg, Split Leg or Move Leg) or Initiate Call Attempt sent by the gsmSCF.
 - a) For TDP-R or EDP-R events the number of required resumptions relative to the associated leg will be incremented by 1.
 - b) For CPH IFs the number of required resumptions per call segment will be set to one if it is still 0. Otherwise the number of resumptions remains unchanged. For Split Leg the number of required resumptions for each of the source call segment and the target call segment will be set to one if it is still 0
 - c) For ICA the number of required resumptions relative to the associated leg will be set to 1.
- 5) In addition the CS_gsmSSF stores information about the events (DP with the associated leg, CPH) that require resumption and keep track of the order of events for TDP-Rs and EDP-Rs for each leg . The order of resumptions for a leg shall be the order in which the suspension events occurred for that leg.
- 6) For DP event resumption Continue with Argument with legID or Continue are valid. If not otherwise stated below, for each received resumption the number of required resumption for that leg will be decremented by 1 if it was a valid resumption for the event that has to be handled first. Decrementing of the outstanding requests variables does not go below 0.
- 7) For CPH resumption Continue with Argument with CSID is valid. On receipt of the resumption the number of required resumptions for that call segment will be set to 0.
- 8) For ICA resumption Continue with Argument with LegId is valid. On receipt of the resumption the number of required resumptions for that Leg will be set to 0.
- 9) If Continue with Argument with neither LegID nor CSID is received, then the number of resumptions required for the leg that was reported will be decremented by 1. If reporting is performed on more than one leg, then the related leg will be selected following the sequence of the reporting. ~~The processing of a Continue with Argument with neither LegID nor CSID causes the number of all required resumptions for legs to be set to 0. All stored resumption events for legs are discarded.~~
- 10) If Continue is received, then the number of resumptions required for the leg that was reported will be decremented by 1. If reporting is performed on more than one leg, then the related leg will be selected following the sequence of the reporting. ~~If a Continue is received to resume a DP for O_Disconnect or for T_Disconnect the number of resumptions required for that leg will be decremented by 1. For other DPs the number of resumptions for legs is set to 0 and all stored resumption events for legs are discarded.~~

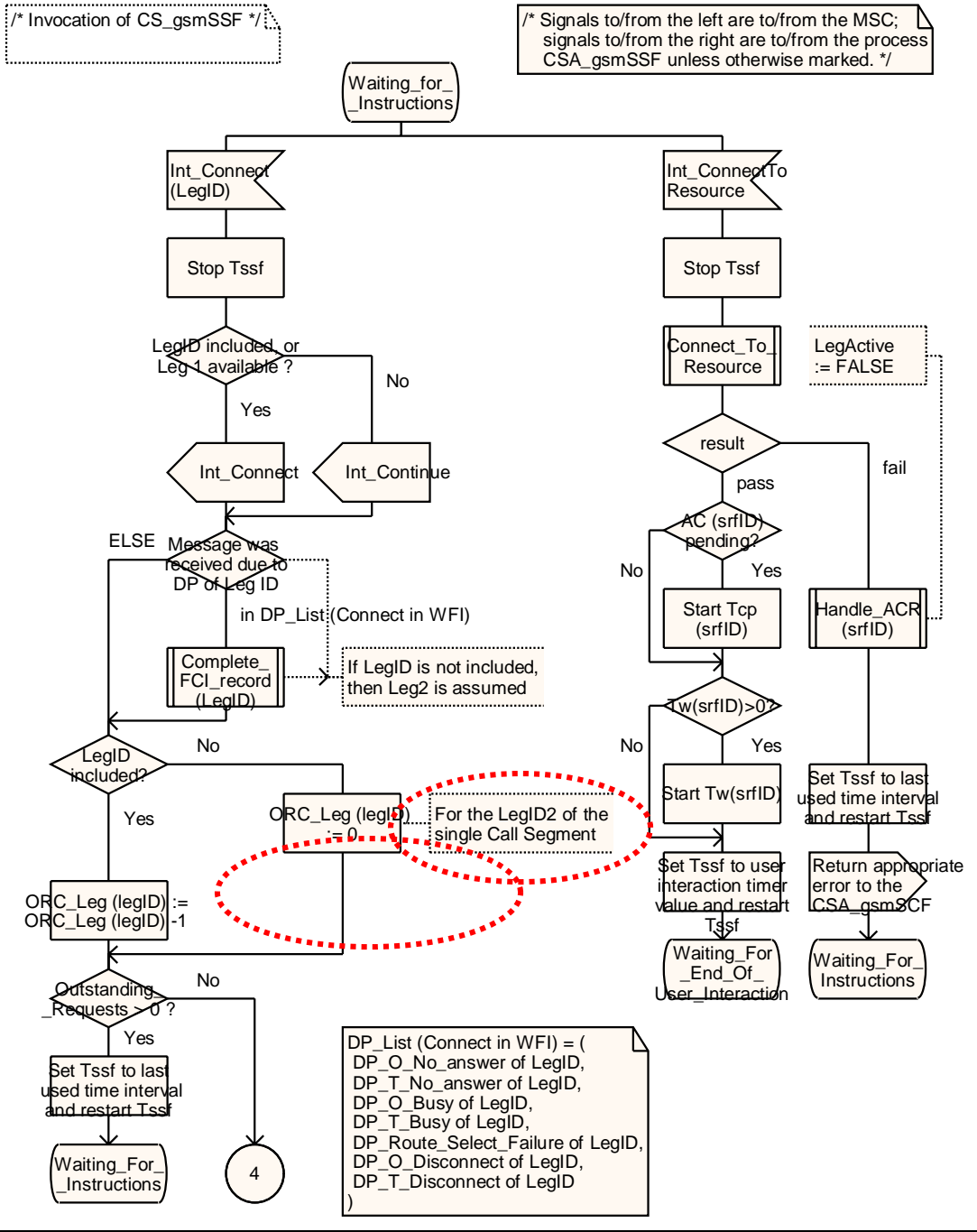
- 11) The processing of a Connect with a LegID causes the number of required resumptions for that leg to be decremented by 1. The processing of a Connect without a LegID causes the number of resumptions for the LegID = 2 to be set to 0. ~~The processing of a Connect with a LegID causes the number of required resumptions for that leg to be set to 0. The processing of a Connect without a LegID causes the number of resumptions required to be set to 0 and all stored resumption events for legs are discarded.~~
- 12) The processing of Tssf expiry and of TC Abort causes the number of resumptions required to be set to 0 and the call processing to be resumed. All stored resumption events are discarded.
- 13) On receipt of a Disconnect Leg the number of resumptions required for the corresponding leg is set to 0.
- 14) If Release Call is used, nothing needs to be resumed.

***** *Next modification* *****

4.5.7.5 Process CS_gsmSSF and procedures

Process CS_gsmSSF

16(61)



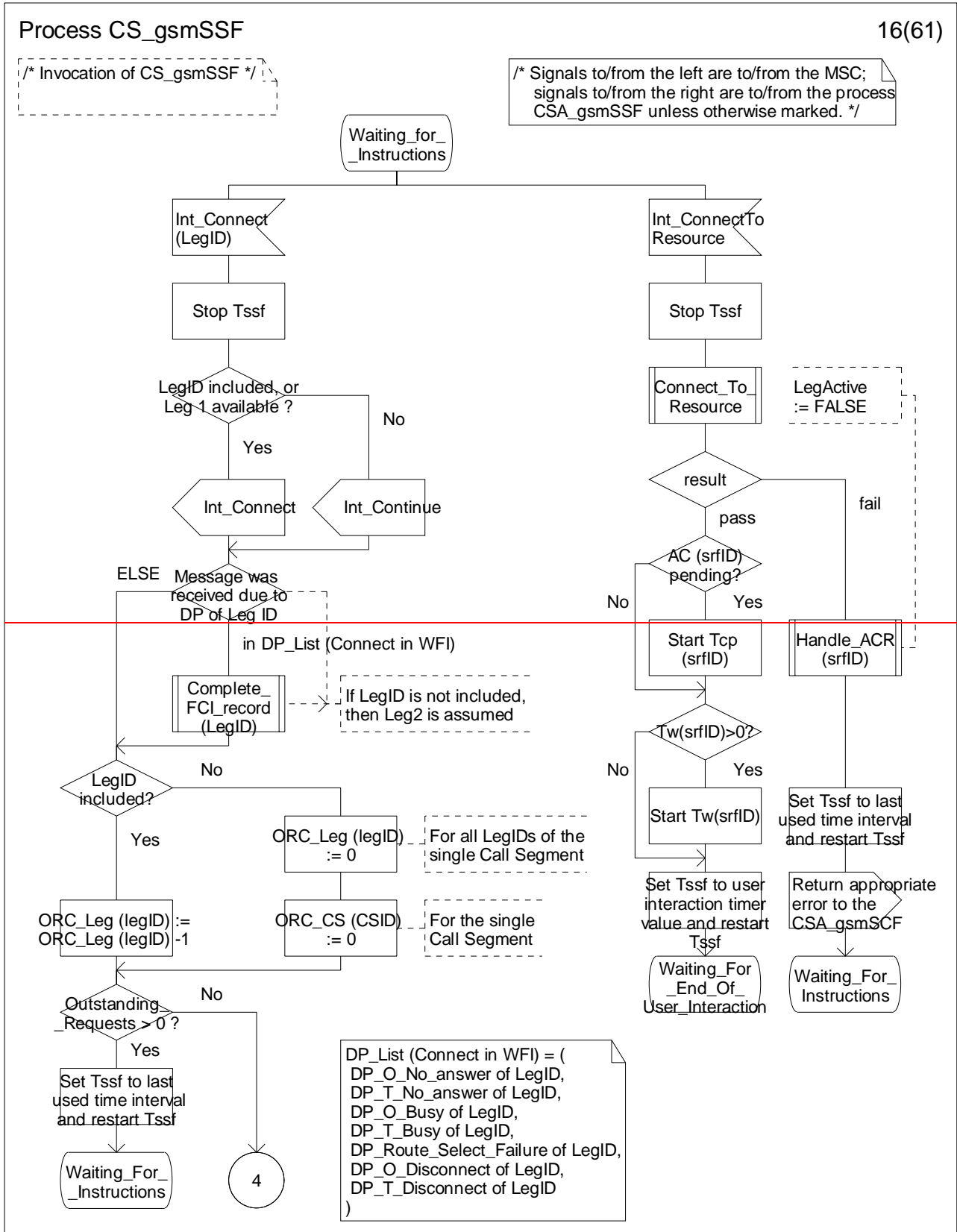
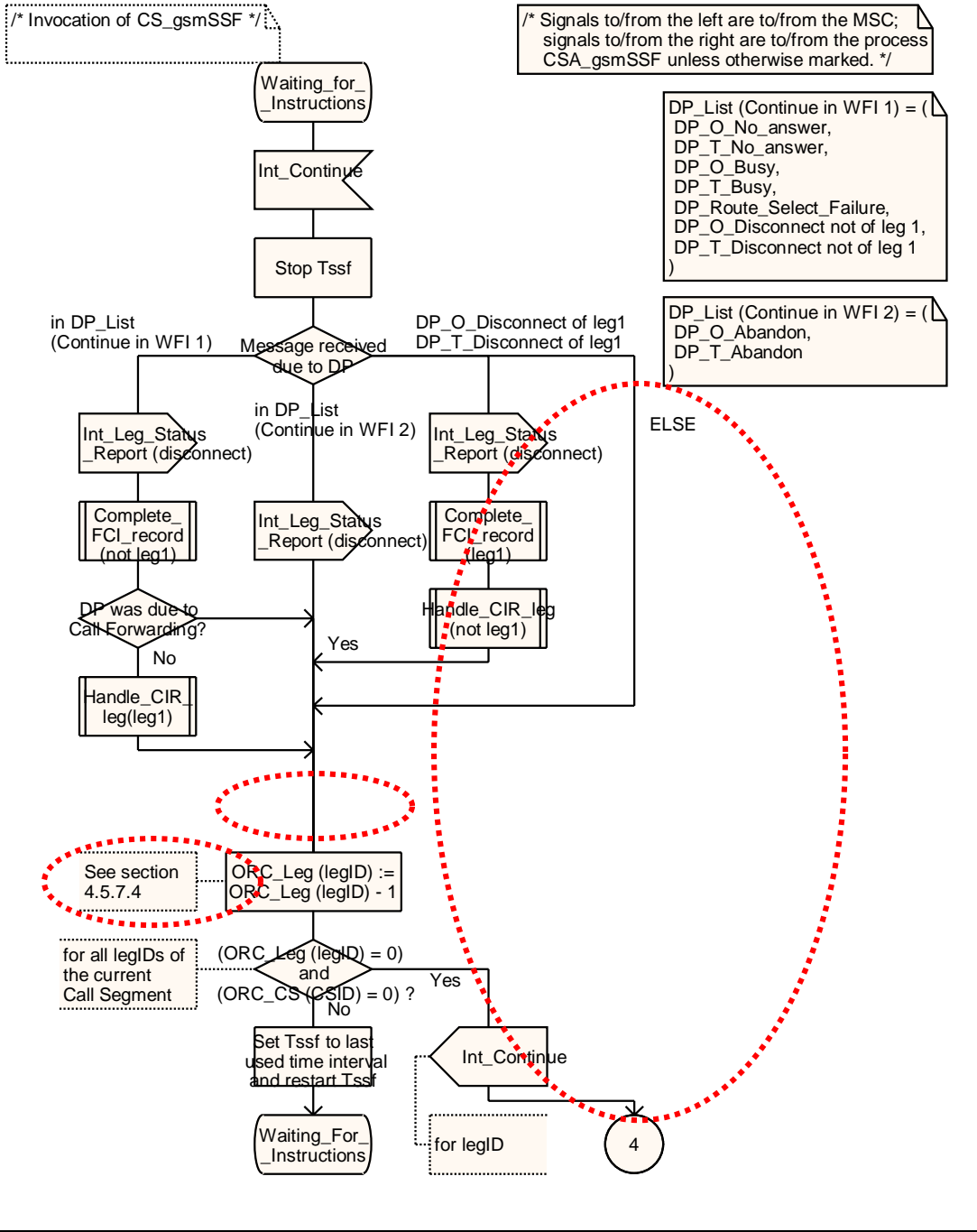


Figure Error! Reference source not found.-1: Process CS_gsmSSF (sheet 1)

Process CS_gsmSSF

17(61)



Process CS_gsmSSF

17(61)

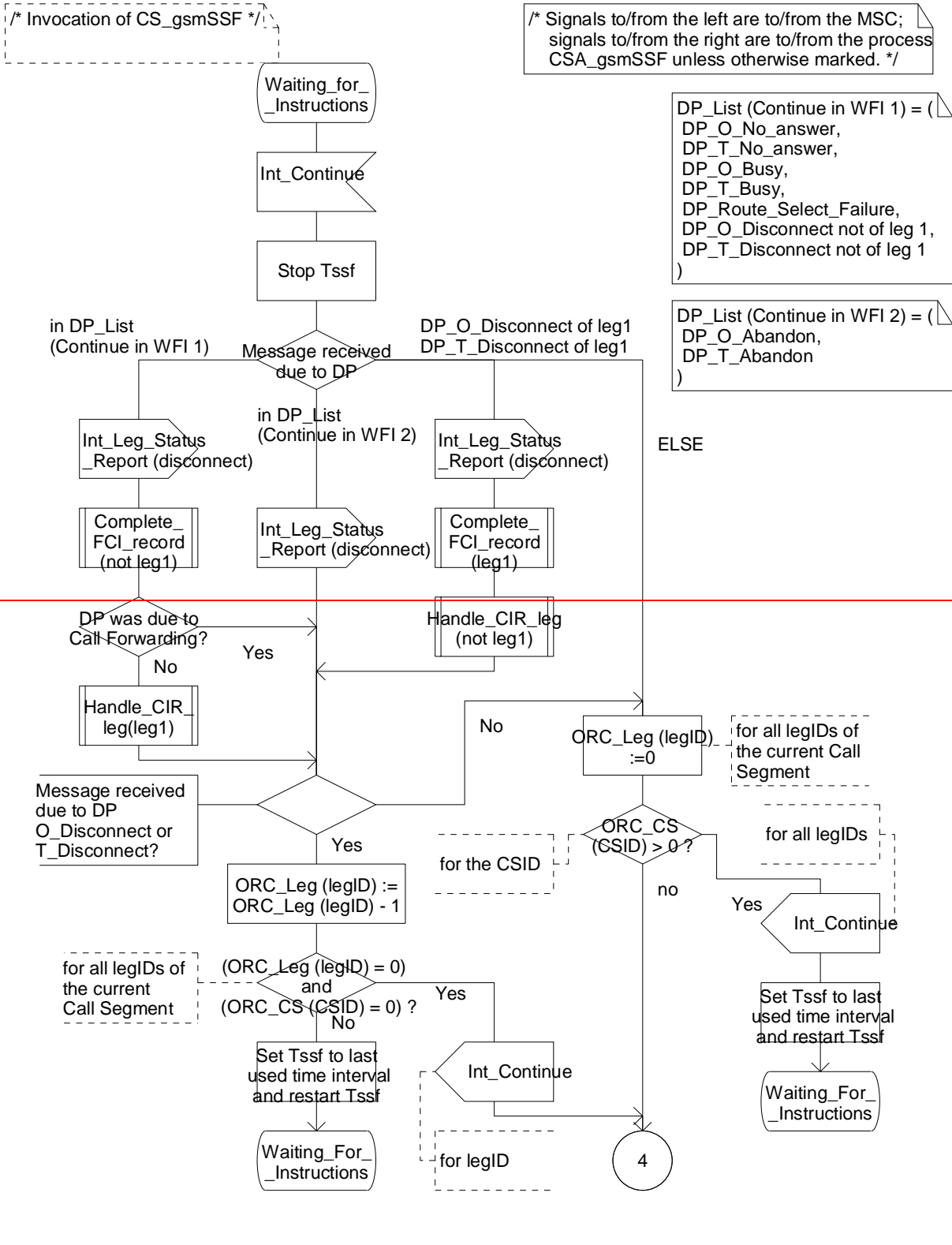
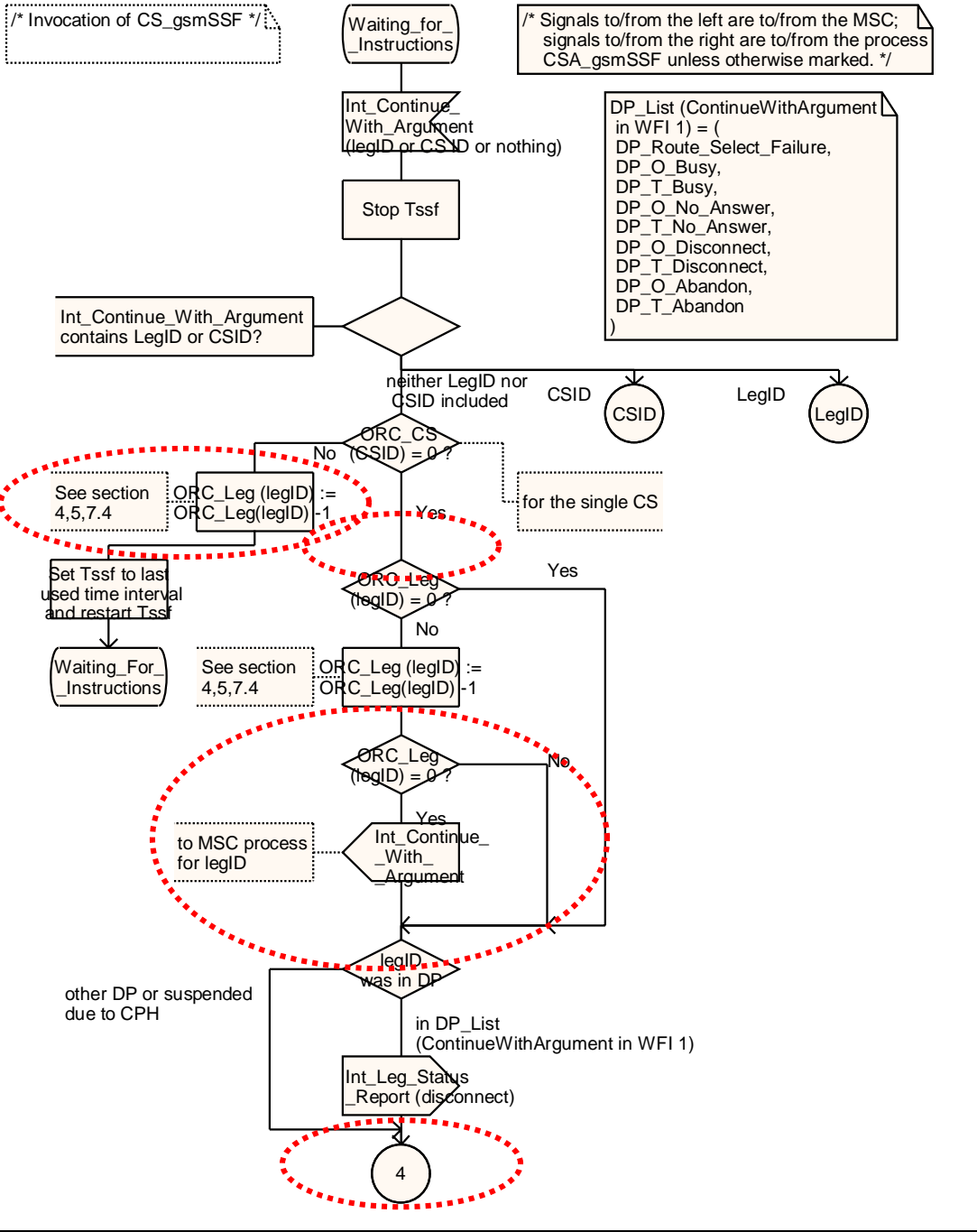


Figure Error! Reference source not found.-2: Process CS_gsmSSF (sheet 2)

Process CS_gsmSSF

18(61)



Process CS_gsmSSF

18(61)

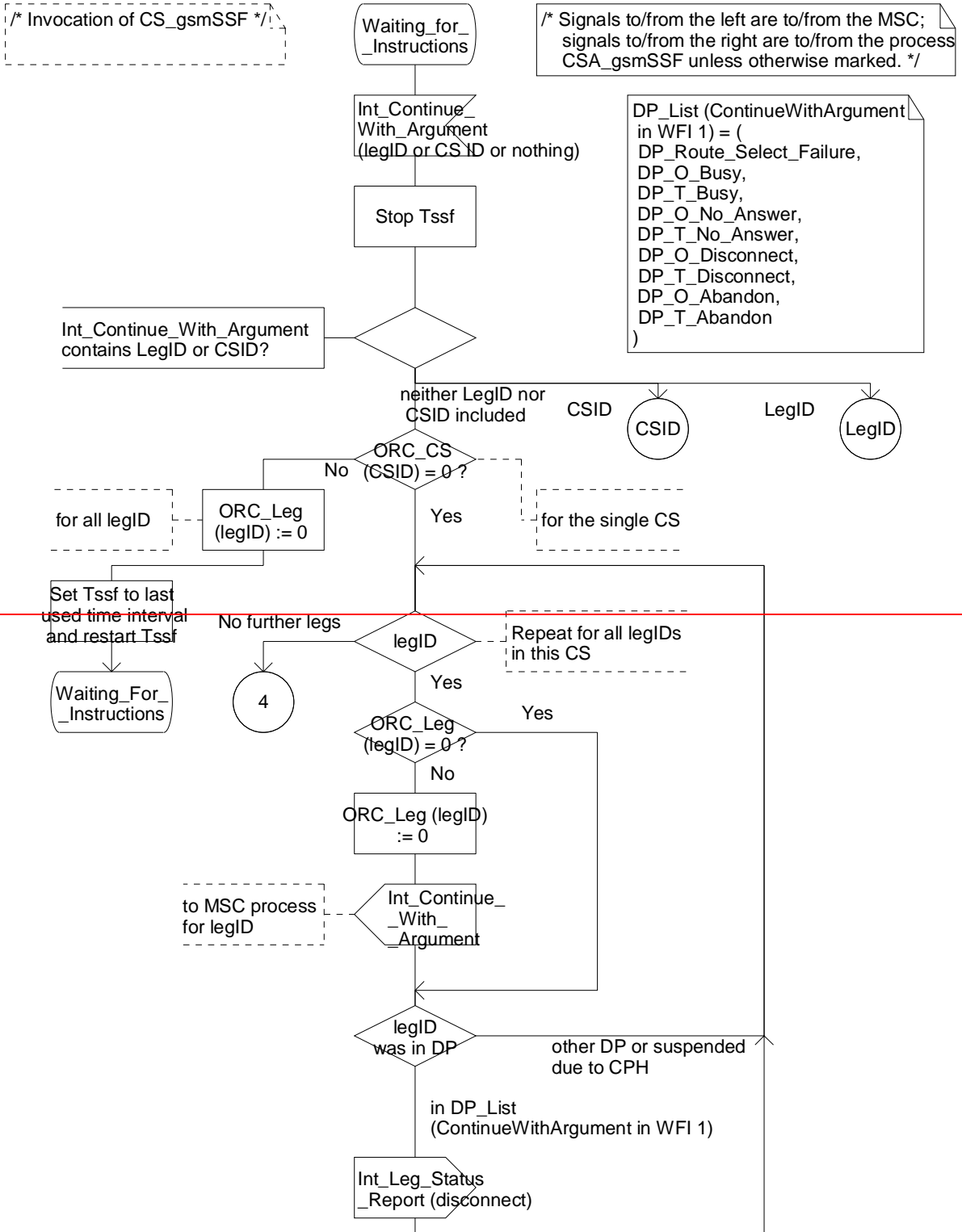
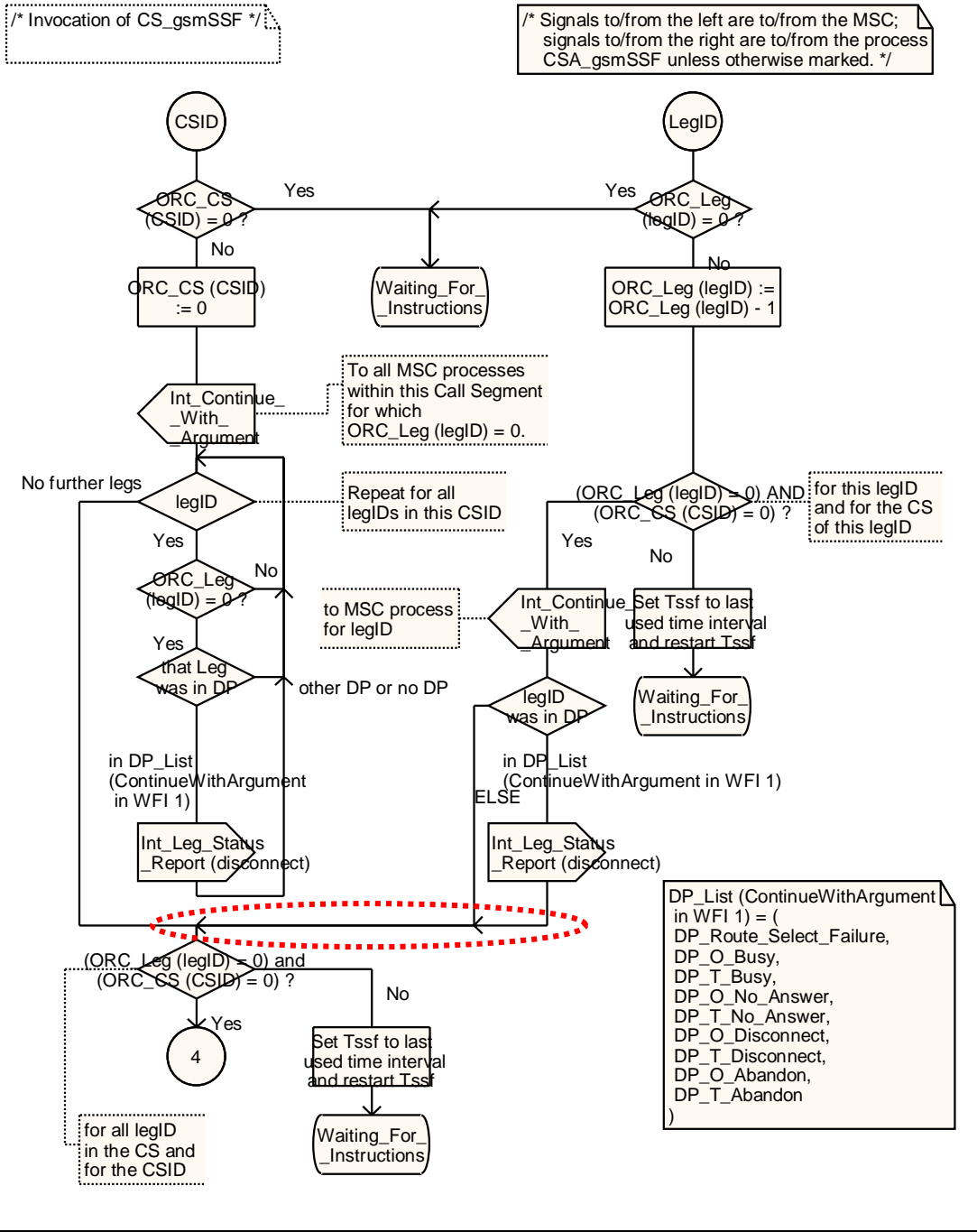


Figure Error! Reference source not found.-3: Process CS_gsmSSF (sheet 3)

Process CS_gsmSSF

19(61)



Process CS_gsmSSF

19(61)

/* Invocation of CS_gsmSSF */

/* Signals to/from the left are to/from the MSC; signals to/from the right are to/from the process CSA_gsmSSF unless otherwise marked. */

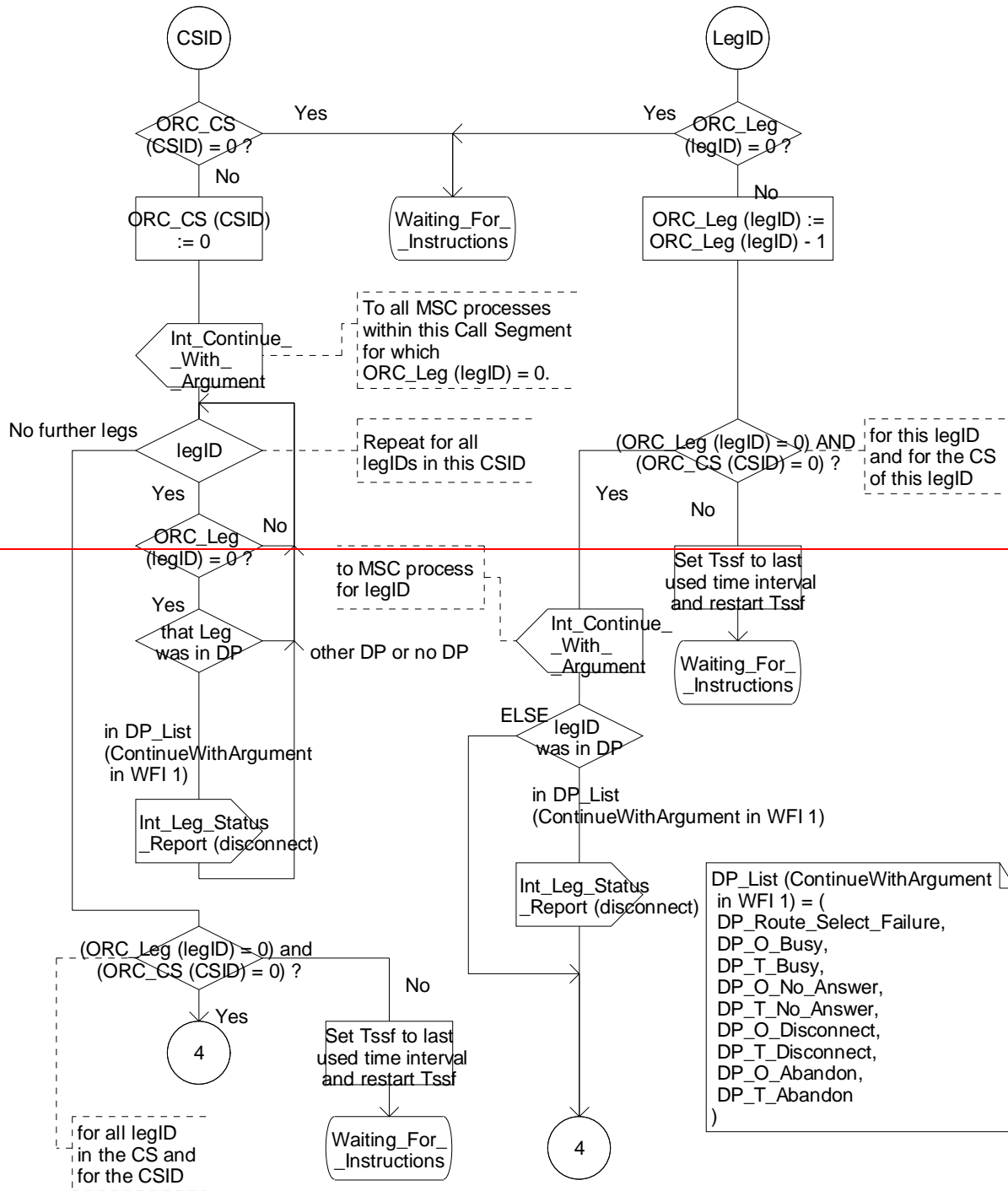


Figure Error! Reference source not found.-4: Process CS_gsmSSF (sheet 4)

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3GPP TSG CN WG4 Meeting #25
Seoul, Korea, 15th – 19th November 2004

N4-041635

CHANGE REQUEST

⌘ **23.078 CR 748** ⌘ rev **5** ⌘ Current version: **6.3.0** ⌘

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Clarification on Outstanding Request Counter (ORC) handling at EDP-R or TDP-R resumption	
Source:	⌘ CN4	
Work item code:	⌘ Camel4	Date: ⌘ 17 November 2004
Category:	⌘ A Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Release: ⌘ Rel-6 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ In Section 4.5.7.4, the rules for the outstanding request counter specify that all the counters for the legs in the Call Segment shall be set to 0, when the Continue is received. This shall be applied also in case of multiple reporting. The indicated criteria might fail in case of multiple reporting. As an example, when reporting DP Route Select Failure and DP O_Abandon, in sequence and in request mode, the rules would require that ORC_Leg(Legid1) =1 and ORC_Leg(Legid2) =1. At the next CUE reception, the rule 10) requires that ORC_Leg(Legid1) =0 and ORC_Leg(Legid2) =0 and, if other reports are pending, the CS_gsmSSF enters the Monitoring state. Even worst, if no other report is pending, the dialogue might even be closed. On the other hand, the gsmSCF, when analysing the first reported DP (Route Select Failure), is not aware of the fact that it will receive the reporting for the DP O_Abandon and shall not close the dialogue just after sending the first CUE. When receiving the reporting of the DP O_Abandon, the gsmSCF might choose to send the CUE again, but either the CS_gsmSSF is in state Monitoring or the dialogue might have been already closed.
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***** *Next modification* *****

4.5.7.5 Process CS_gsmSSF and procedures

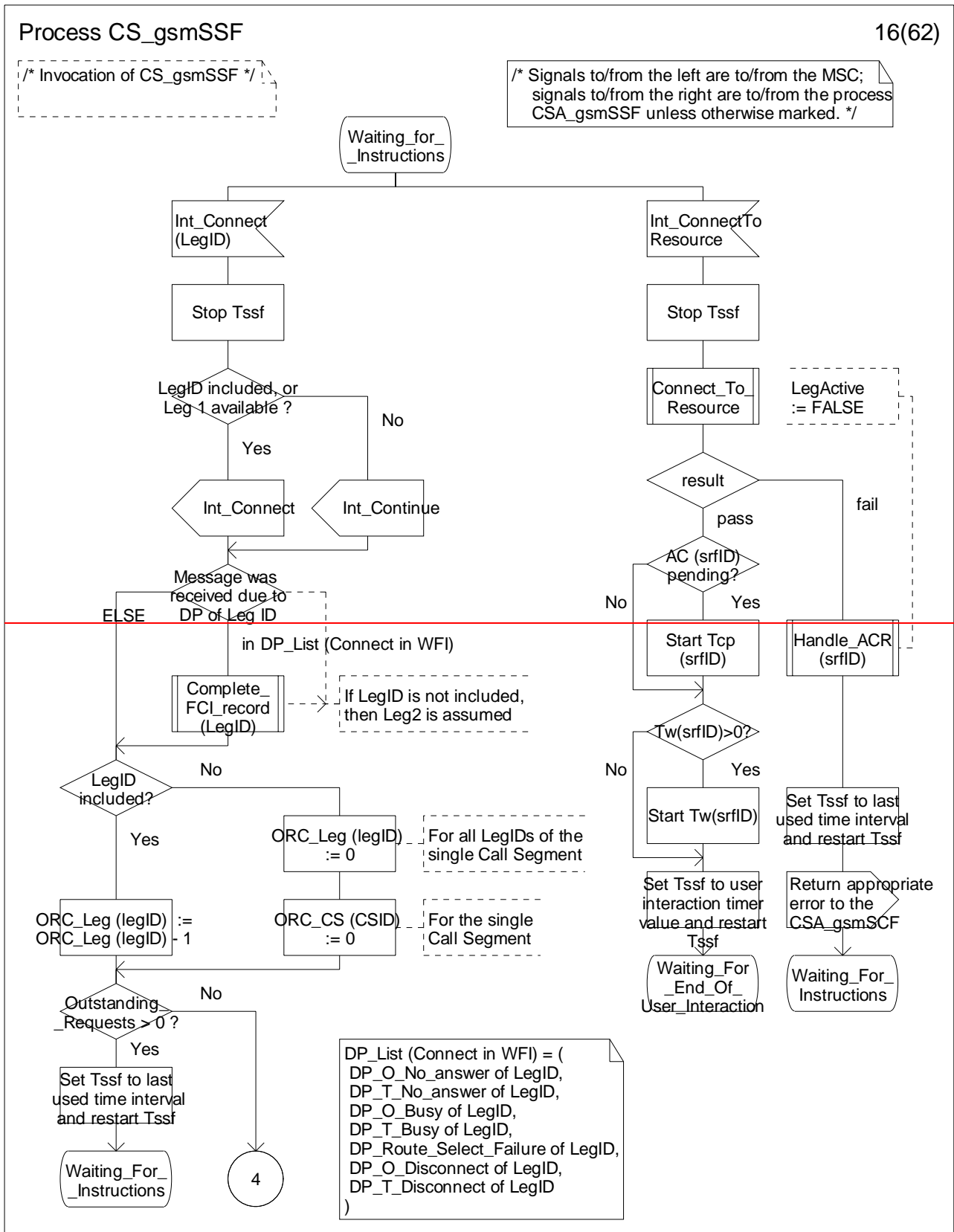


Figure 4.99-16: Process CS_gsmSSF (sheet 16)

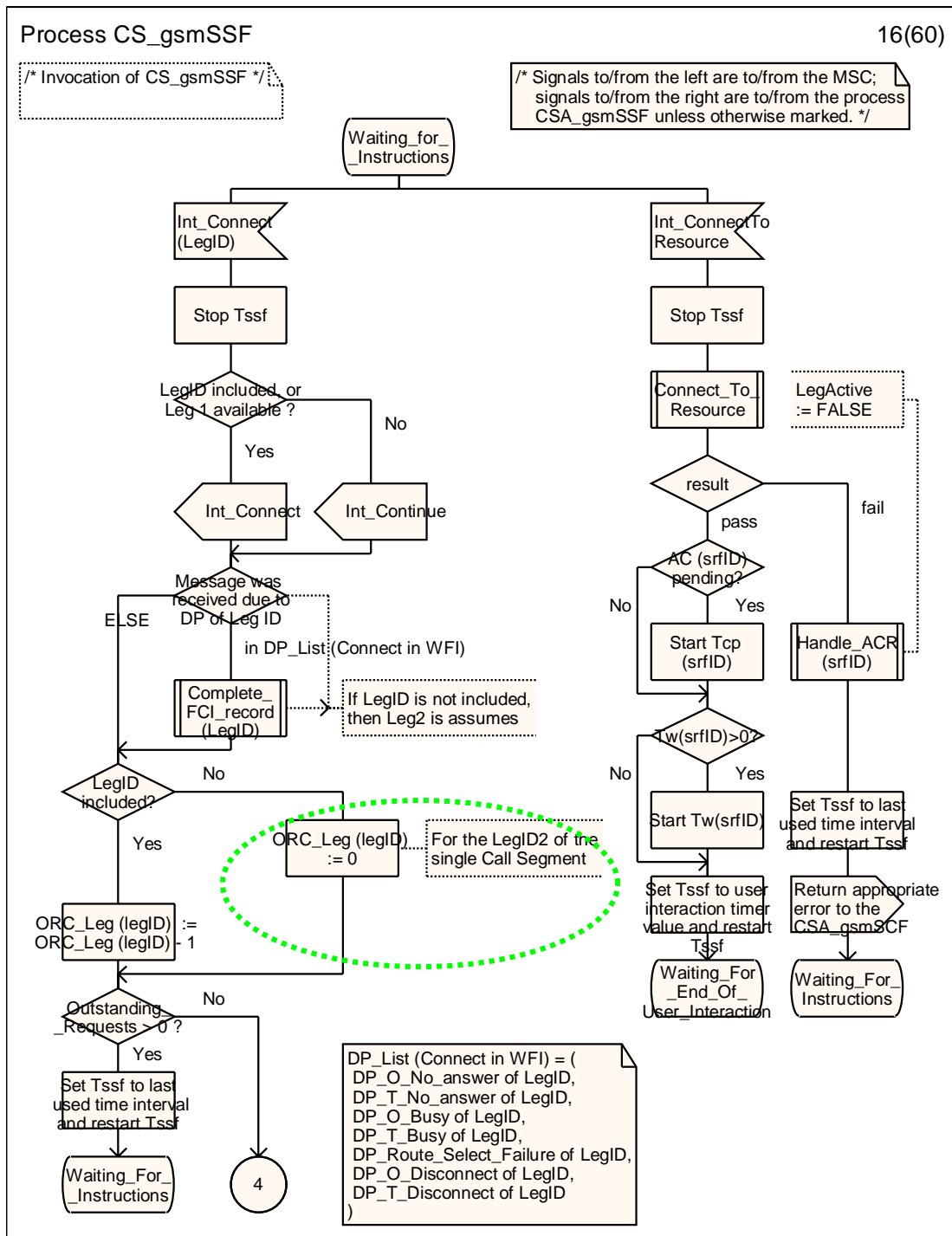


Figure 4.99-16: Process CS_gsmSSF (sheet 16)

Process CS_gsmSSF

17(62)

/* Invocation of CS_gsmSSF */

/* Signals to/from the left are to/from the MSC; signals to/from the right are to/from the process CSA_gsmSSF unless otherwise marked. */

DP_List (Continue in WFI 1) = (DP_O_No_answer, DP_T_No_answer, DP_O_Busy, DP_T_Busy, DP_Route_Select_Failure, DP_O_Disconnect not of leg 1, DP_T_Disconnect not of leg 1)

DP_List (Continue in WFI 2) = (DP_O_Abandon, DP_T_Abandon)

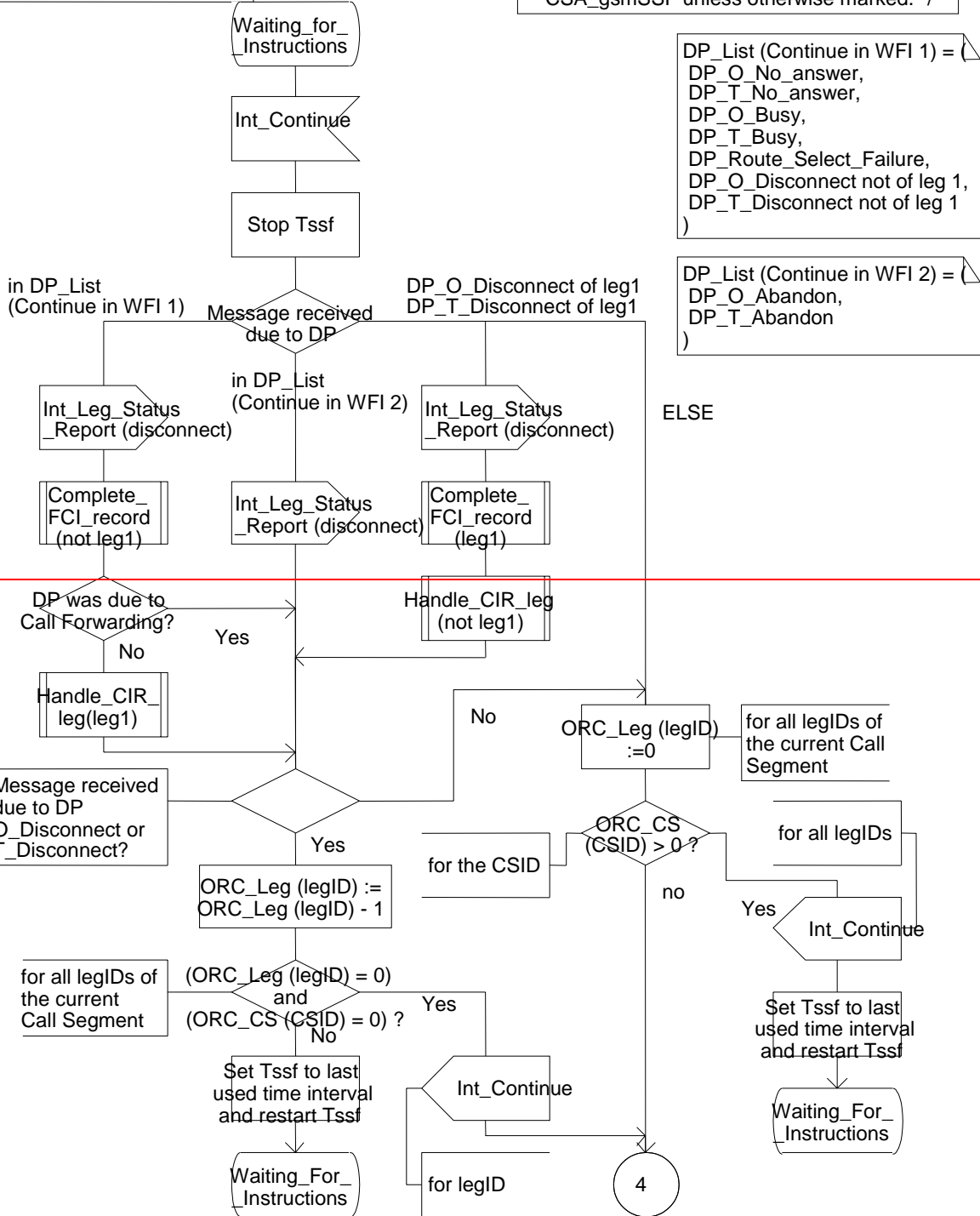


Figure Error! Reference source not found.-1: Process CS_gsmSSF (sheet 17)

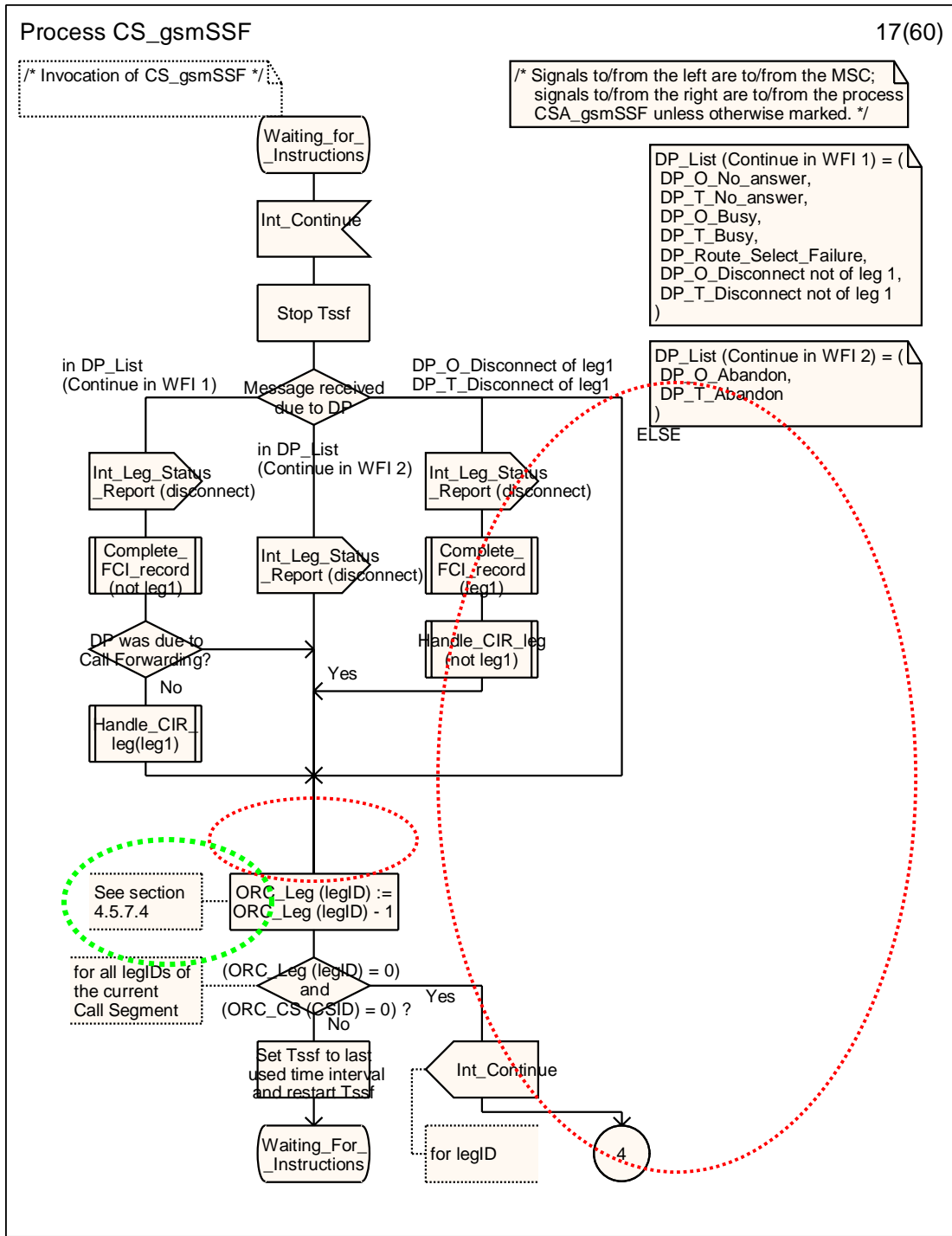


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Reference source not found.-2: Process CS_gsmSSF (sheet 17)

*** Next modification ***

Process CS_gsmSSF

18(62)

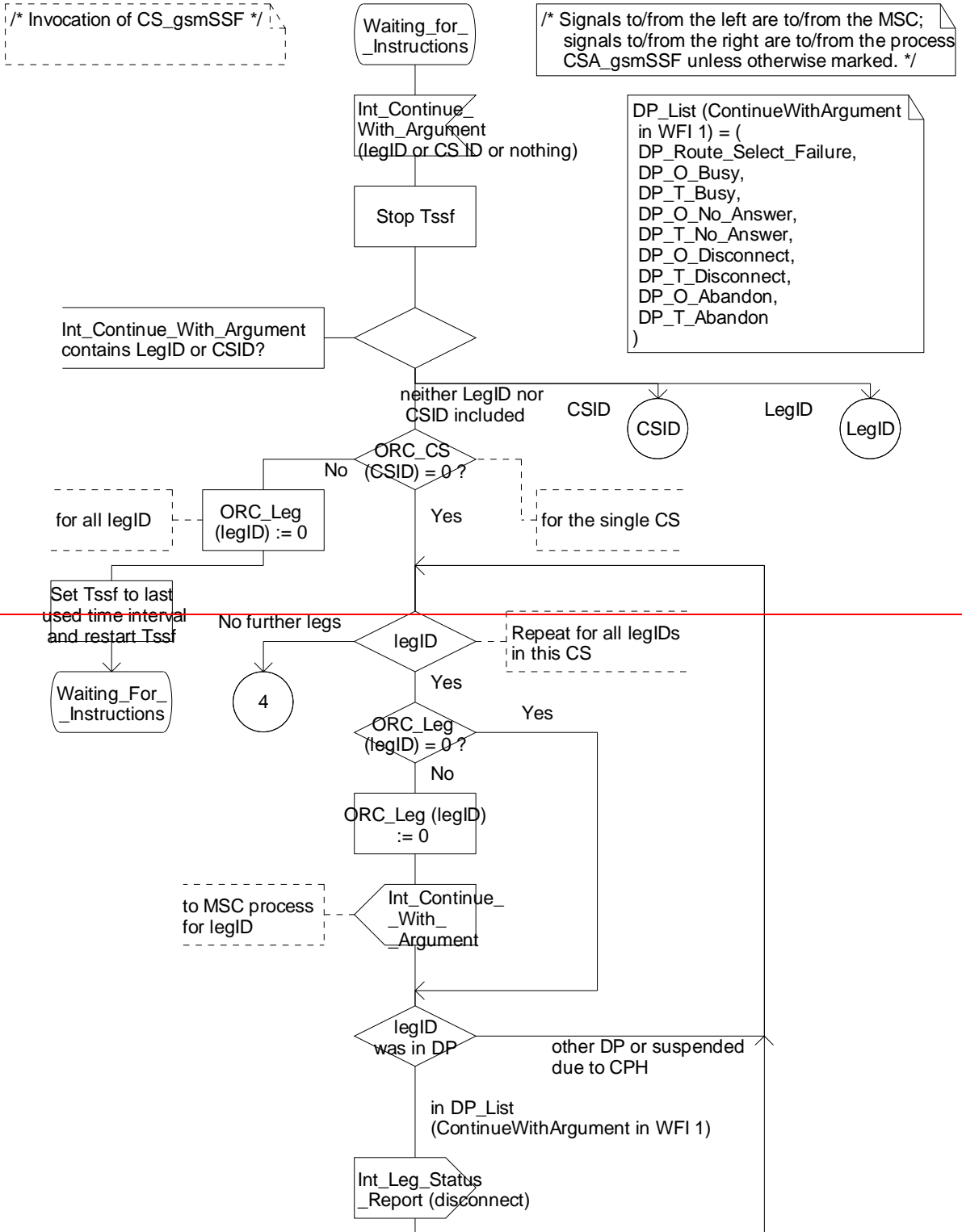


Figure Error! Reference source not found.-3: Process CS_gsmSSF (sheet 18)

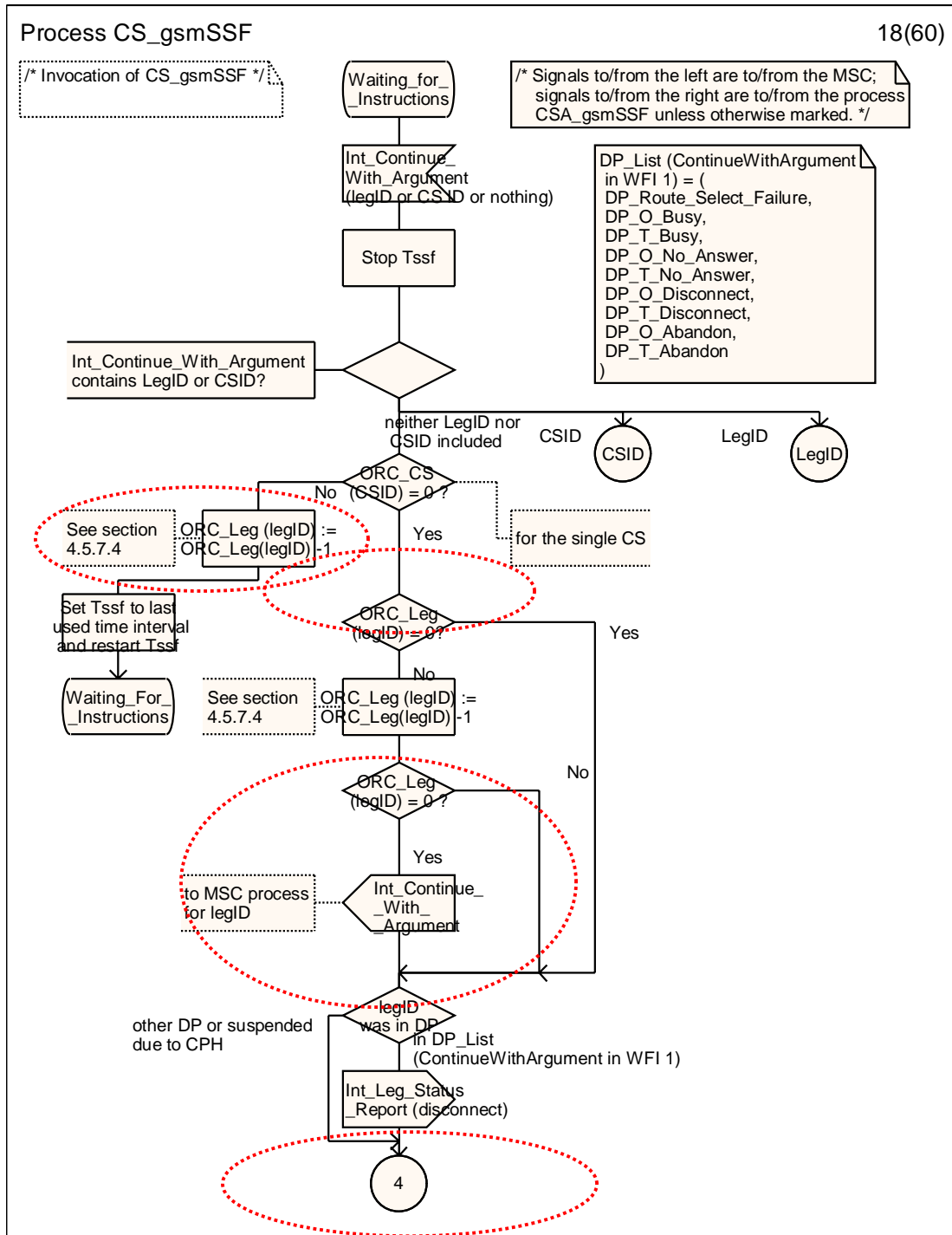


Figure Error! Reference source not found.-4: Process CS_gsmSSF (sheet 18)

Process CS_gsmSSF

19(62)

/* Invocation of CS_gsmSSF */

/* Signals to/from the left are to/from the MSC; signals to/from the right are to/from the process CSA_gsmSSF unless otherwise marked. */

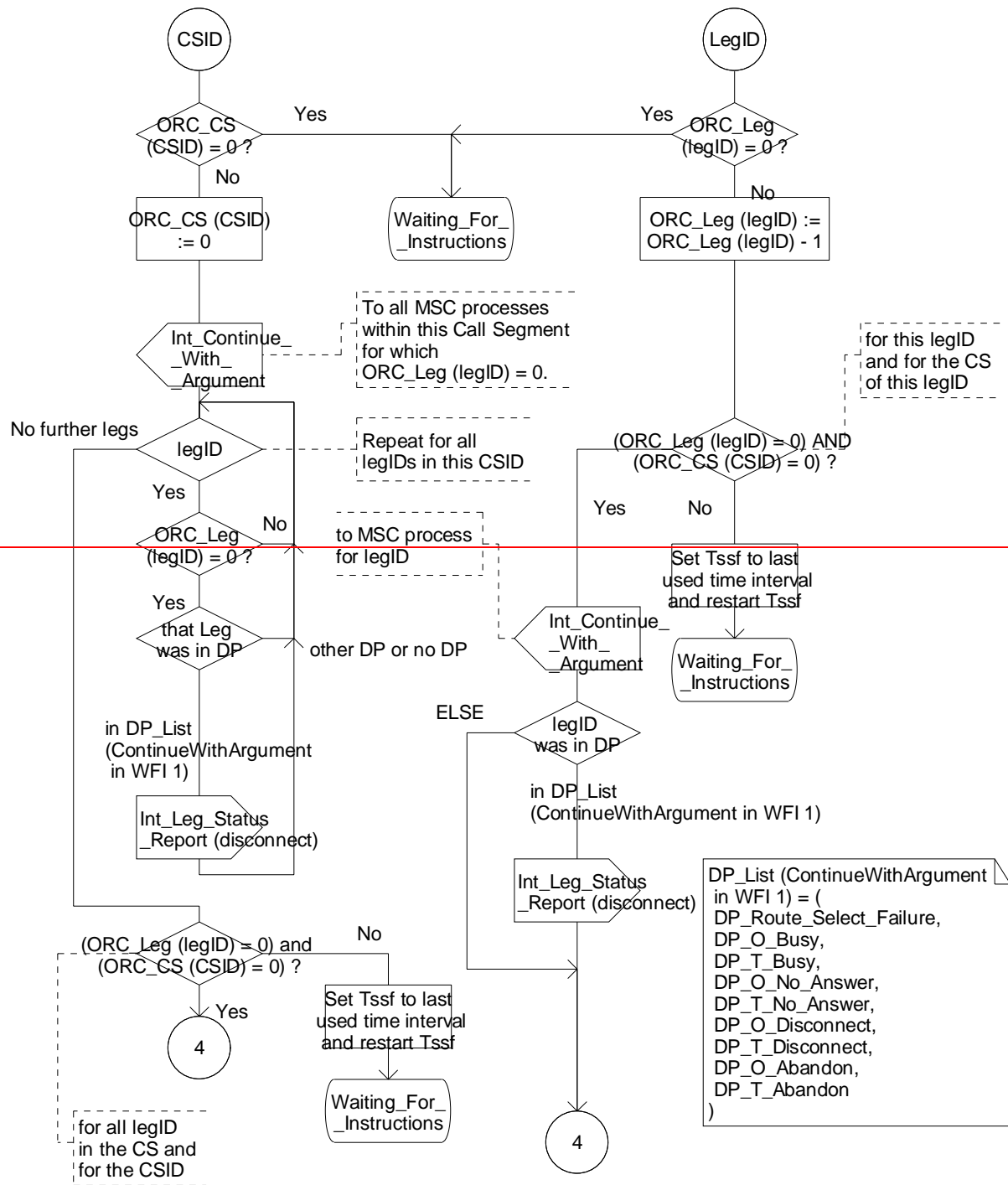


Figure 4.99-19: Process CS_gsmSSF (sheet 19)

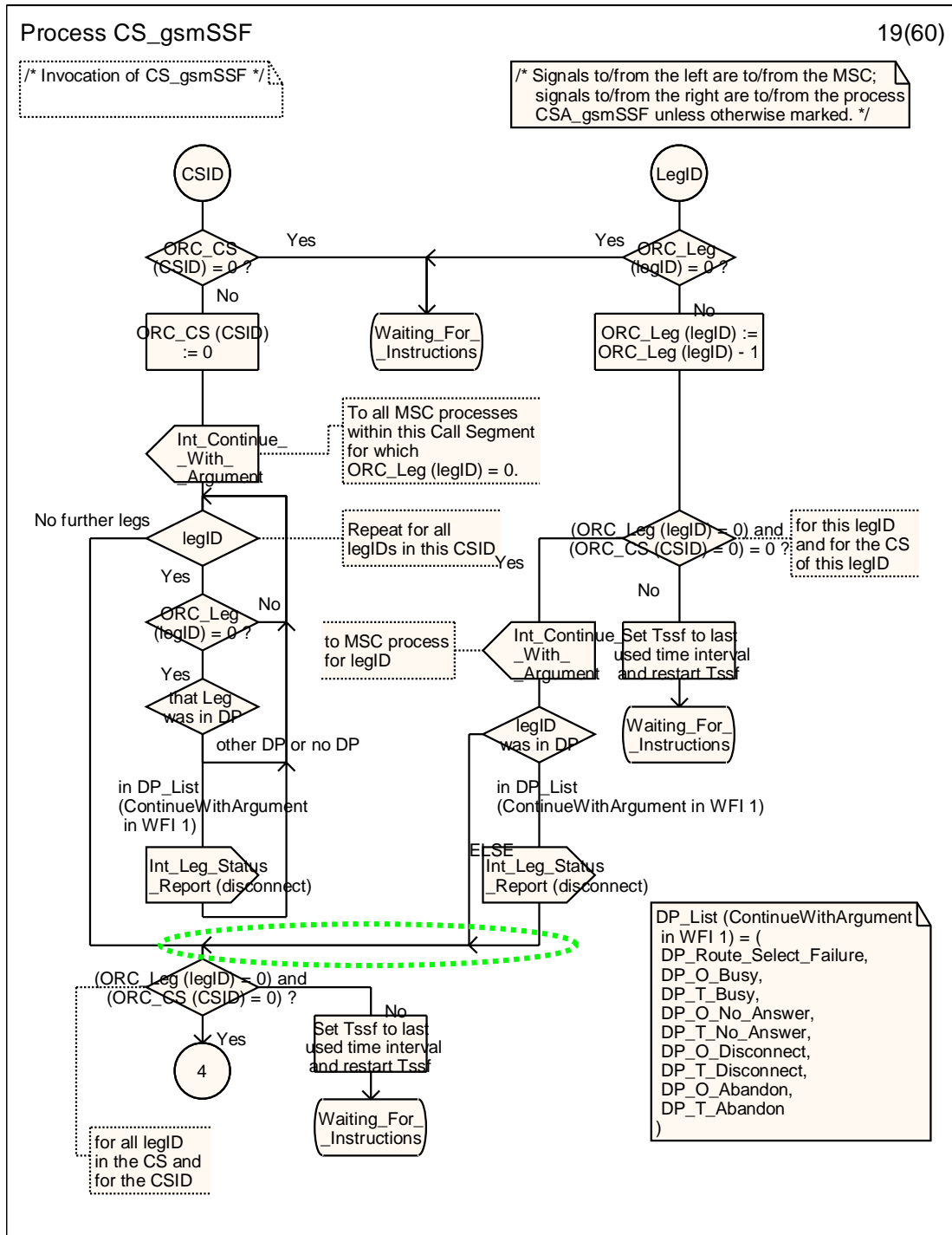


Figure 4.99-19: Process CS_gsmSSF (sheet 19)

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