PHS MoU Document
C-IF3.02-02-TS

Title:	PHS-FWA System : Interface Specification between FWA Access Controller and Service Node - ITU-T G.964:V5.1 Interface-
Version:	02
Date:	June 7, 2000
PHS MoU Classification: Unrestricted	

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Number of pages: 15

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History of Revised Versions

Version	Date	Outline
01	Dec. 17, 1996	Established
02	June 7, 2000	Changed all WLL into FWA. Clause 2 and 6 are deleted. ISDN specification is added. Annex J is changed to Annex A

PHS-FWA System:
Interface Specification between FWA Access Controller and Service Node
-ITU-T G.964:V5.1 Interface-

1. General

This specification defines a V-interface (V5.1) for the connection of a FWA Access Controler(WAC) to a Service Node (SN) for the support of the following access types:

- analogue telephone access;
- ISDN basic access;
- other analogue or digital accesses for semi-permanent connections without associated outband signalling information,

with flexible information channel allocation but without concentration capability within the WAC.

Interface V5.1 is upgradable to V5.2 through re-provisioning and by implementation of the additional functionality.

2. Interface Specification

This specification is conformed to ITU-T Recommendation G.964.

3. Comments for Implementation

This Clause shows examples of PSTN sequence on V.5.1 interface (see Annex A).

4. References

ITU-T Recommendation G.964

Annex A

Examples of PSTN sequence on V5.1 interface

(1) Originating call (Successful call setup)
(note) This sequence includes Ground Start PBX call setup.
refer to Figure A.1/C-IF3.02

(2) Originating call (no answer signal sent to the original line)
refer to Figure A.2/C-IF3.02

(3) Originating call (answer signal sent to the original line)
refer to Figure A.3/C-IF3.02

(4) Originating call (coin box with meter pulse)
refer to Figure A.4/C-IF3.02

(5) Originating call (clear the call)
refer to Figure A.5/C-IF3.02

(6) Originating call (clear back)
refer to Figure A.6/C-IF3.02

(7) Originating call (time-out after calling party clears)
refer to Figure A.7/C-IF3.02

(8) Terminating call (normal successful call setup)
(note) This sequence includes Direct Dial In procedure.
refer to Figure A.8/C-IF3.02

(9) Terminating call (called subscriber does not answer)
refer to Figure A.9/C-IF3.02

(10) Terminating call (called subscriber re-answered)
refer to Figure A.10/C-IF3.02

(11) Special Features (Hooking signal from called subscriber)
refer to Figure A.11/C-IF3.02

(12) Special Features
(CLIP: Calling Line Identification Presentation , case1)
refer to Figure A.12/C-IF3.02

(13) Special Features
(CLIP: Calling Line Identification Presentation , case2)
refer to Figure A.13/C-IF3.02

(14) Special Features (Three Way Calling)
refer to Figure A.14/C-IF3.02

(15) Semi-normal sequence
(on hook before receives ESTABLISH ACK)
refer to Figure A.15/C-IF3.02

(16) Semi-normal sequence
(abandoned during ringing)
refer to Figure A.16/C-IF3.02

(17) Semi-normal sequence(Call Collision)
refer to Figure A.17/C-IF3.02

(18) Layer 3 Error (Message lost in WAC)
refer to Figure A.18/C-IF3.02

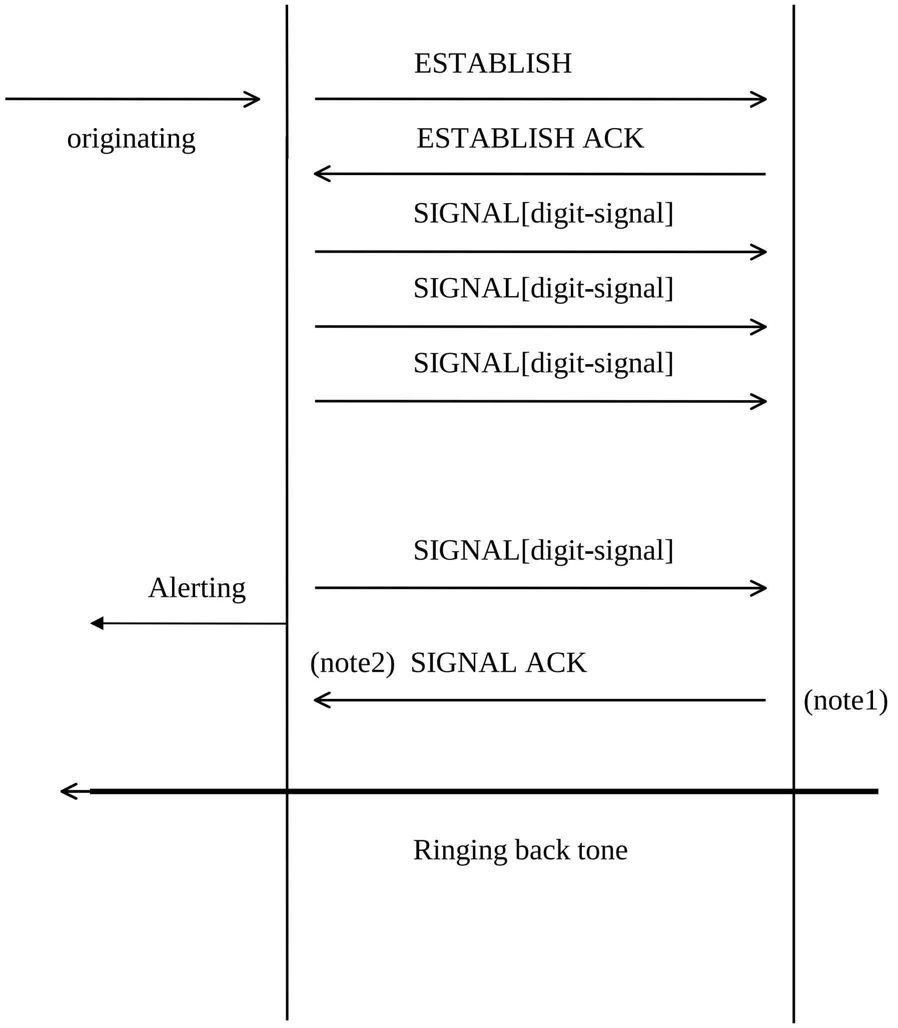
(19) Layer 3 Error (Message lost in SN)
refer to Figure A.19/C-IF3.02

(20) Layer 3 Error
(Unexpected Message in WAC , V5-state in SN un-compatible)
refer to Figure A.20/C-IF3.02

(21) Layer 3 Error
(Unexpected Message in SN , V5-state in WAC un-compatible)
refer to Figure A.21/C-IF3.02

(22) Layer 3 Error
(Unrecognize B-subscriber or destination)
refer to Figure A.22/C-IF3.02

(1) Originating call (Successful call setup)



(note1) The SIGNAL ACK message shall be sent when the receiving time of the SIGNAL message was time out.

(note2) The Alerting message shall be sent because speech-channel on air is not opened ,yet.

Figure A.1/C-IF3.02

(2) Originating call (no answer signal sent to the original line)

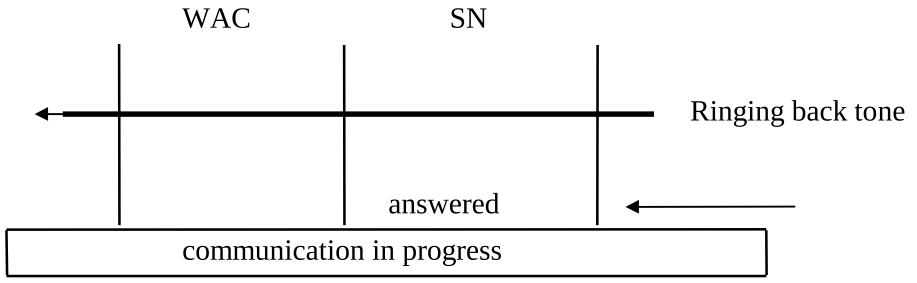


Figure A.2/C-IF3.02

(3) Originating call (answer signal sent to the original line)

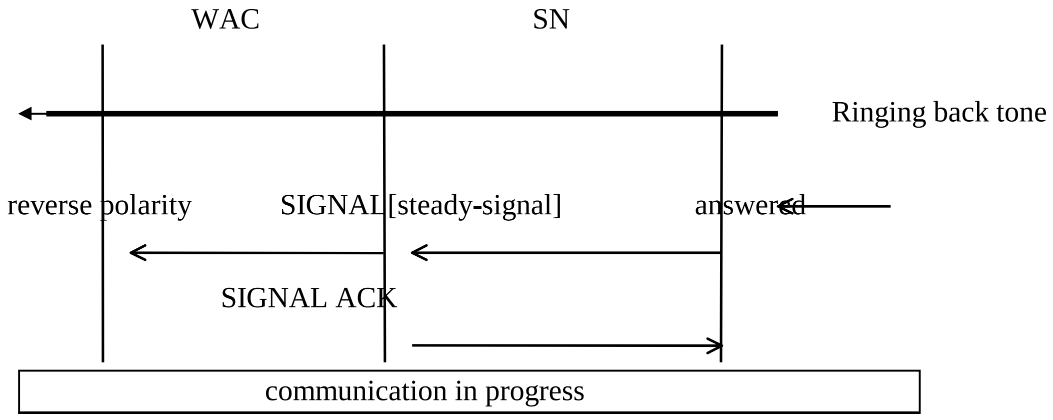


Figure A.3/C-IF3.02

(4) Originating call (coin box with meter pulse)

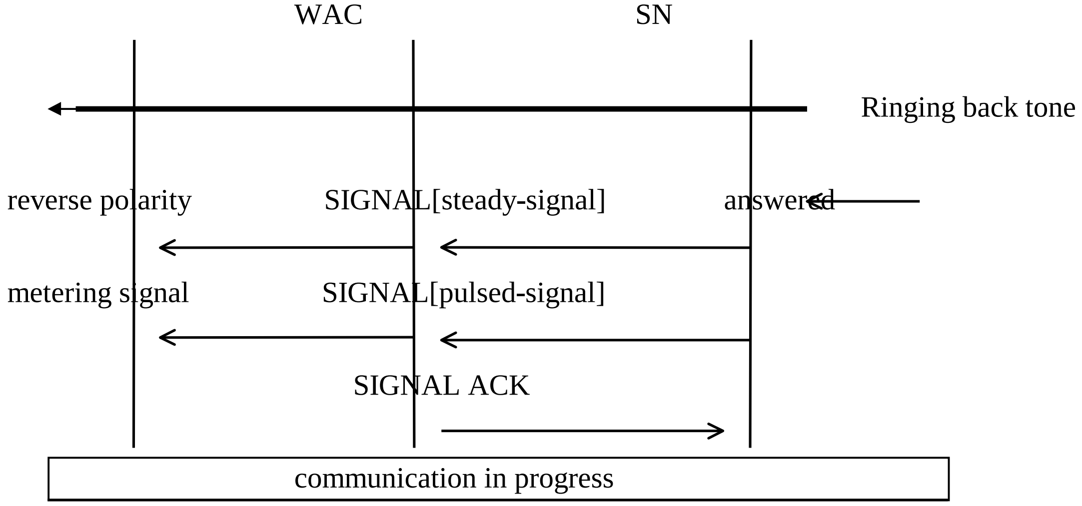


Figure A.4/C-IF3.02

(5) Originating call (clear the call)

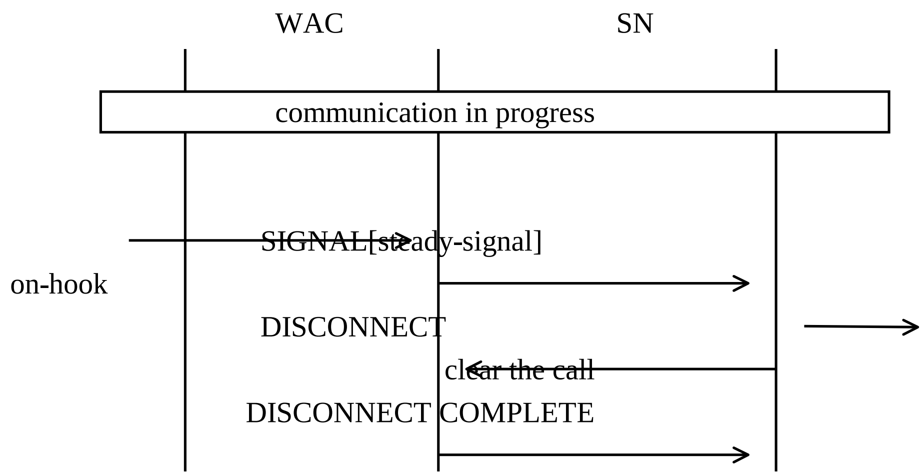
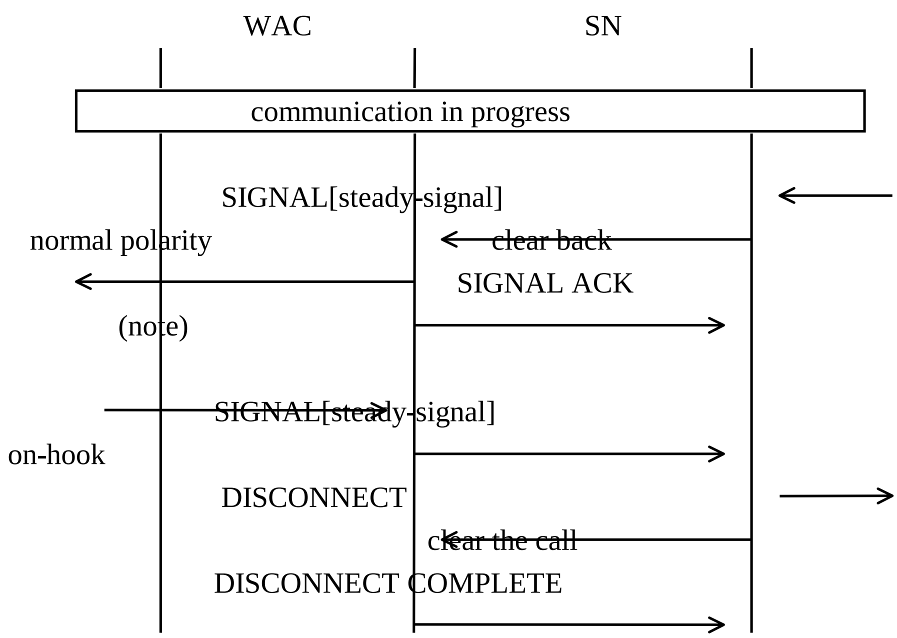


Figure A.5/C-IF3.02

(6) Originating call (clear back)



(note) WAC may not transmit normal polarity signal.

Figure A.6/C-IF3.02

(7) Originating call (Timeout after called party clears)

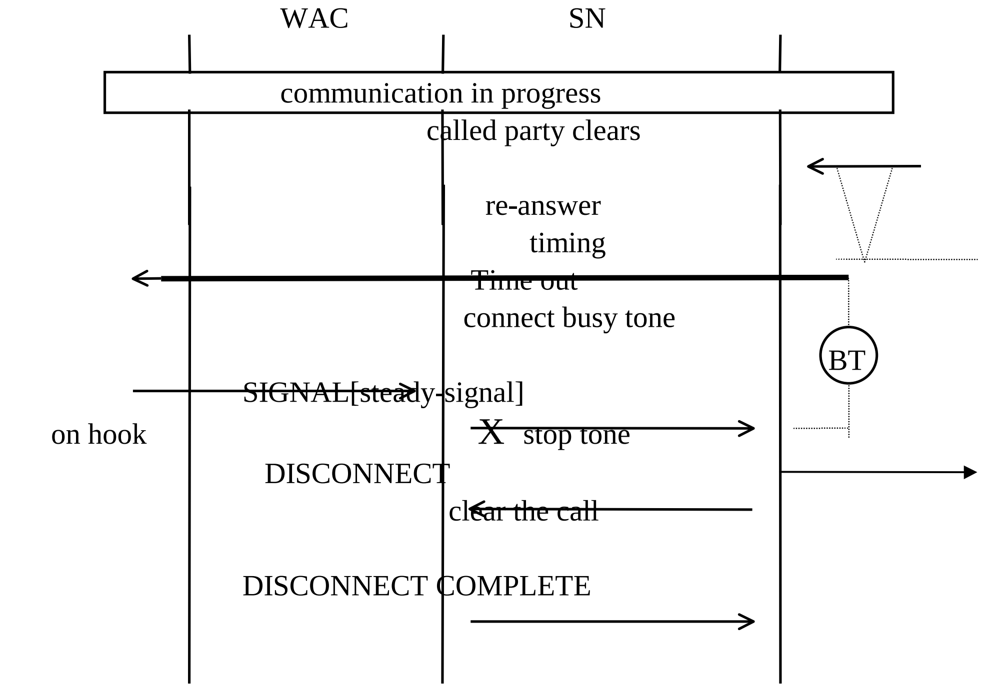


Figure A.7/C-IF3.02

(8) Terminating call (normal successful call setup)

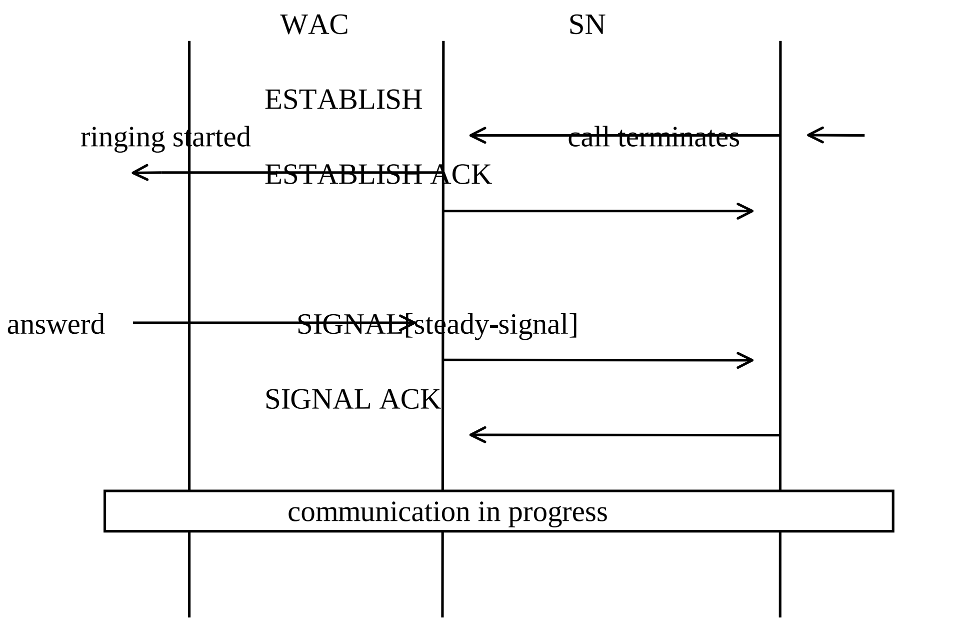
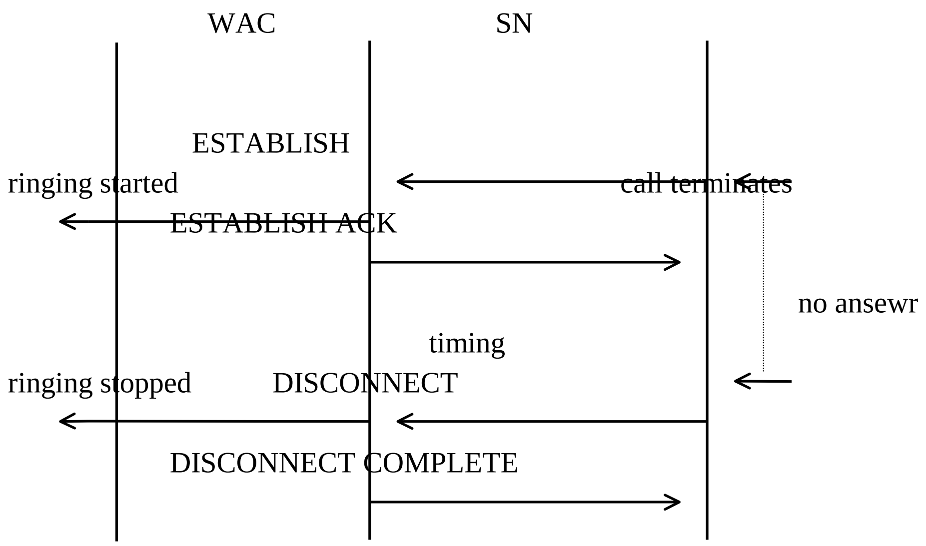


Figure A.8/C-IF3.02

(9) Terminating call (called subscriber does not answer)



(note) This sequence is used to wake-up service or effectivily utility of radio channel ,etc .

Figure A.9/C-IF3.02

(10) Terminating call (called subscriber re-answerd)

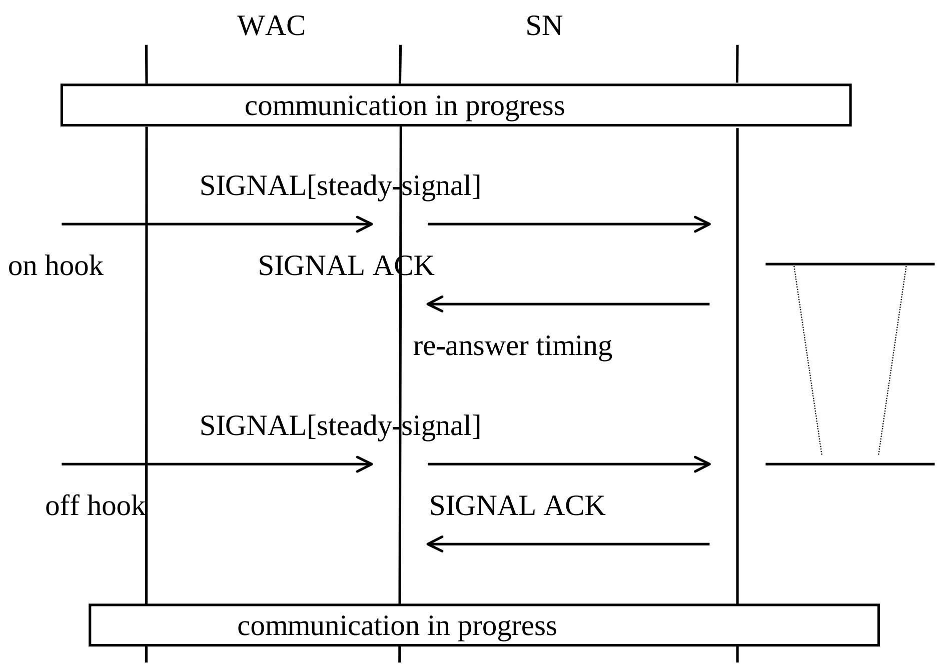
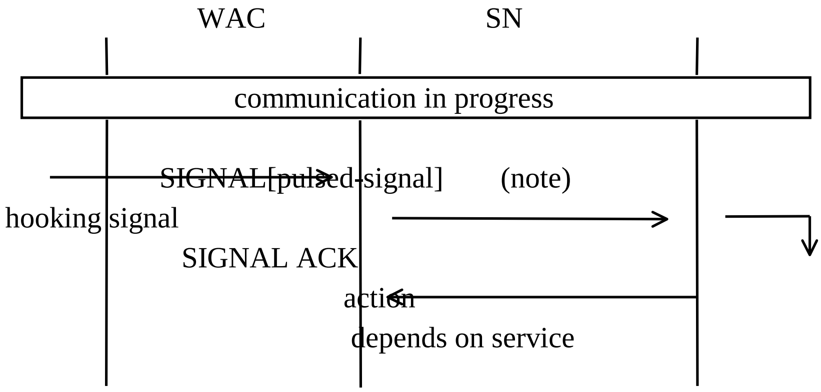


Figure A.10/C-IF3.02

(11) Special Features (Hooking signal from called subscriber)



(note) Hooking signal use register recall of pulse type.

Figure A.11/C-IF3.02

(12) Special Features
(CLIP: Calling Line Identification Presentation ,CASE1)

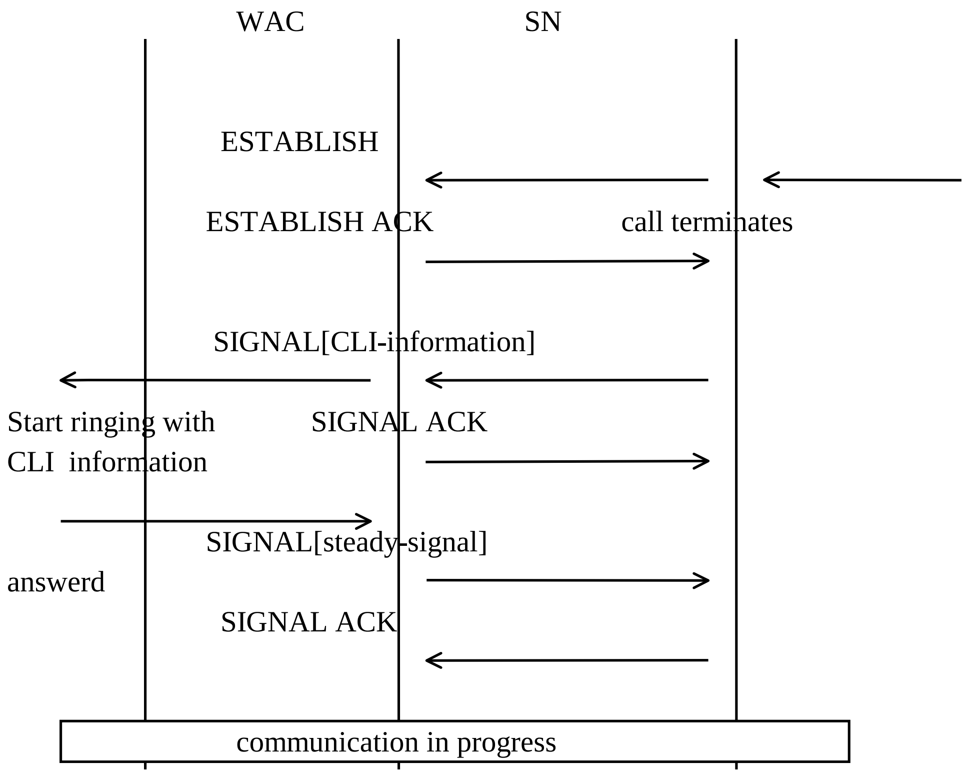


Figure A.12/C-IF3.02

(13) Special Features

(CLIP: Calling Line Identification Presentation ,CASE2)

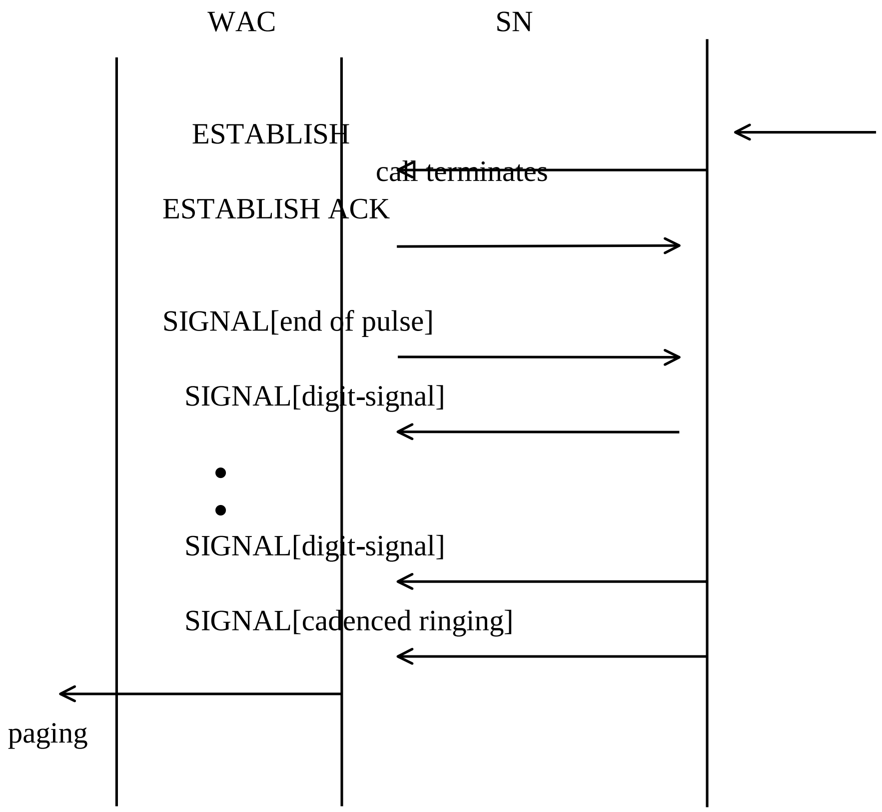


Figure A.13/C-IF3.02

(14) Special Features (Three Way Calling)

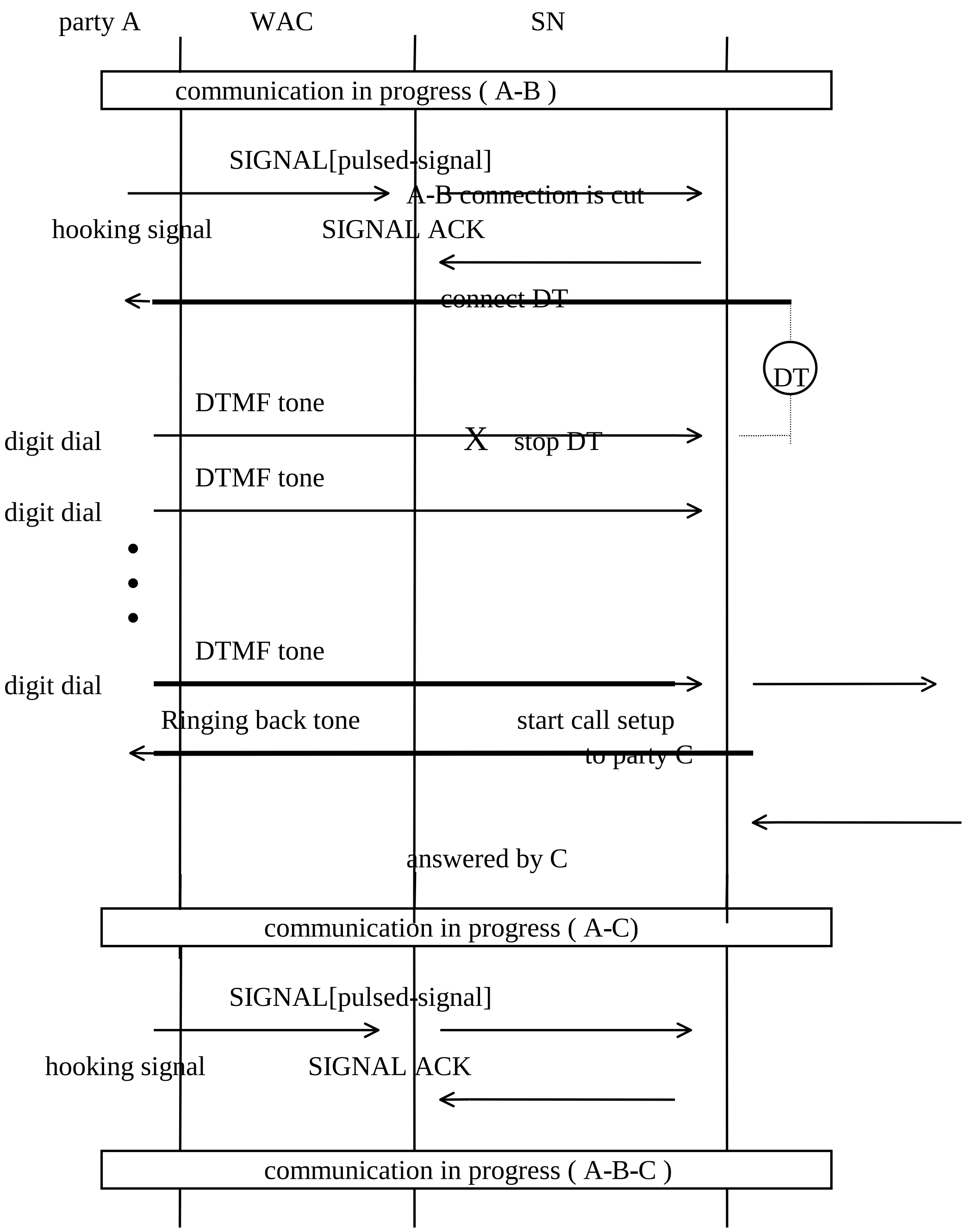


Figure A.14/C-IF3.02

(15) Semi-normal sequence
(on hook before receives ESTABLISH ACK)

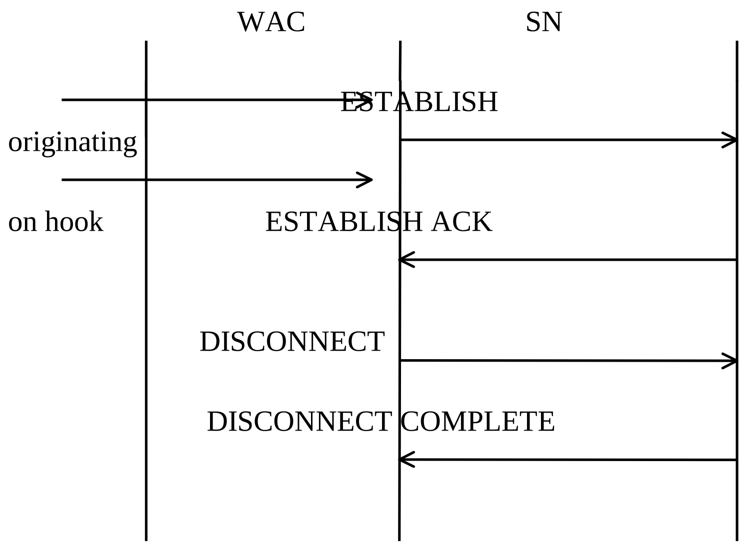


Figure A.15/C-IF3.02

(16) Semi-normal sequence
(abandoned during ringing)

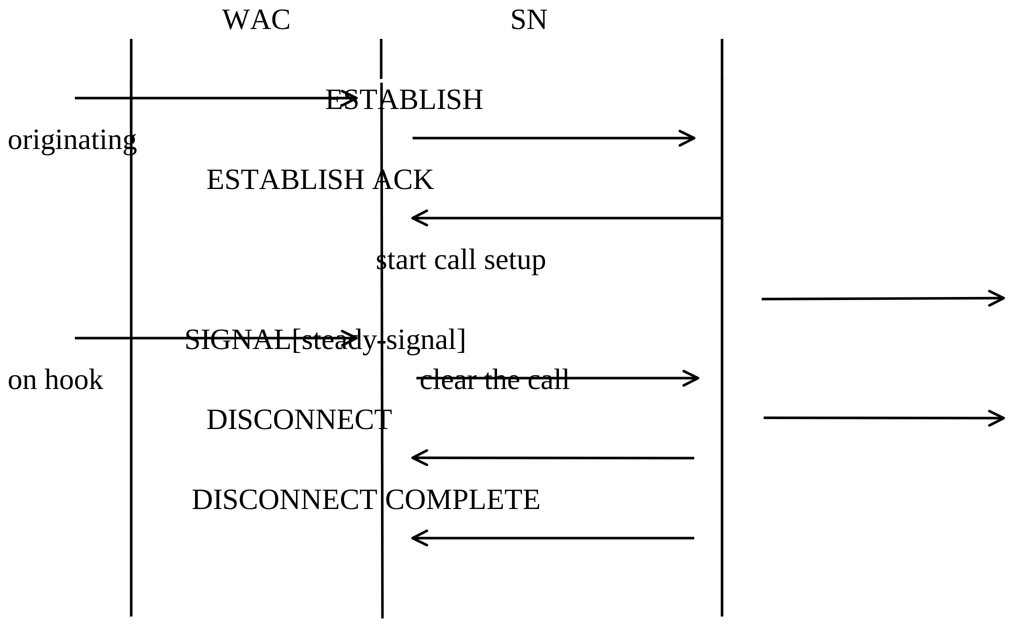


Figure A.16/C-IF3.02

(17) Semi-normal sequence (Call Collision)

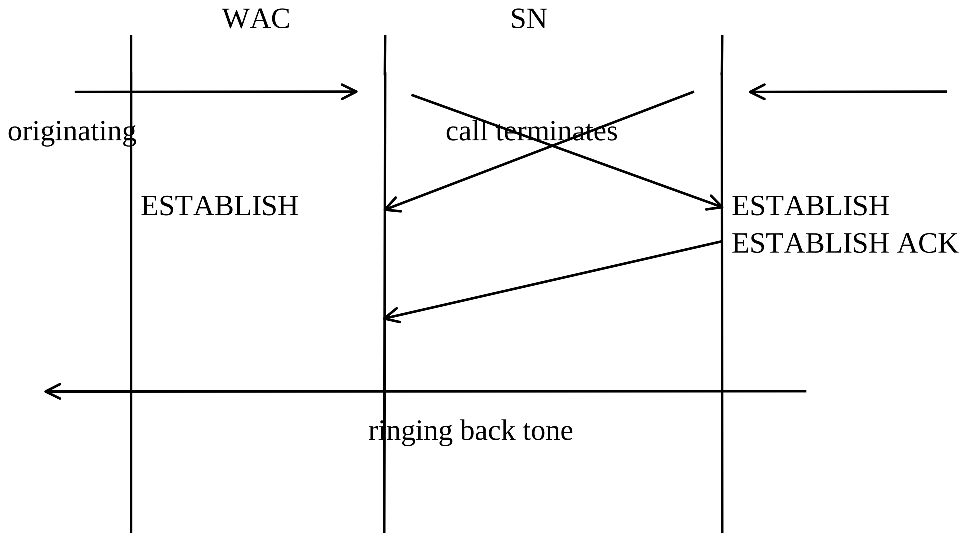


Figure A.17/C-IF3.02

(18) Layer 3 Error (Message lost in WAC)

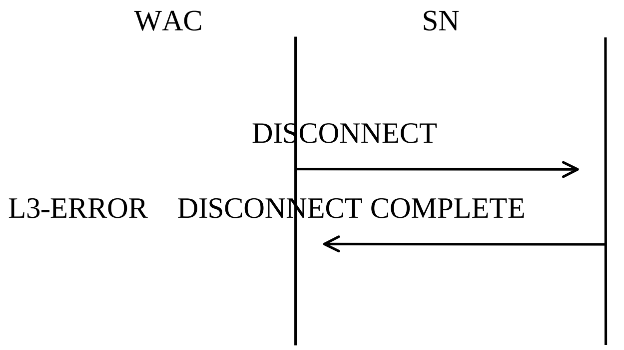


Figure A.18/C-IF3.02

(19) Layer 3 Error (Message lost in SN)

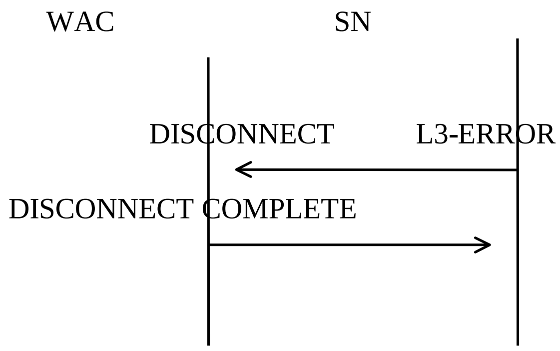


Figure A.19/C-IF3.02

(20) Layer 3 Error

(Unexpected Message in WAC , V5-state in SN uncompatible)

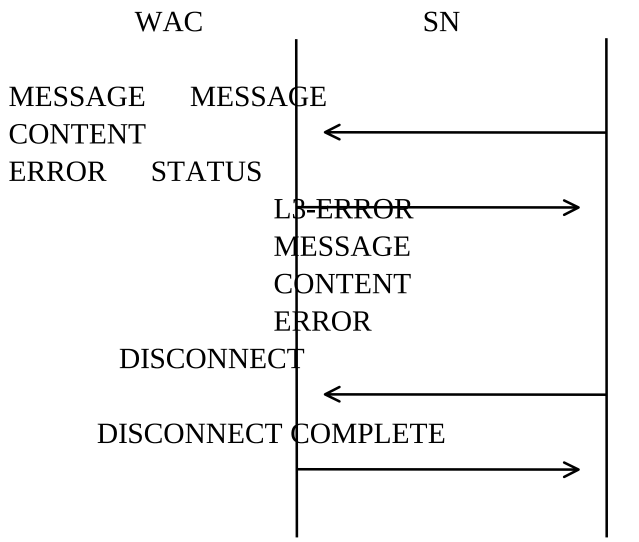


Figure A.20/C-IF3.02

(21) Layer 3 Error

(Unexpected Message in SN , V5-state in WAC uncompatible)

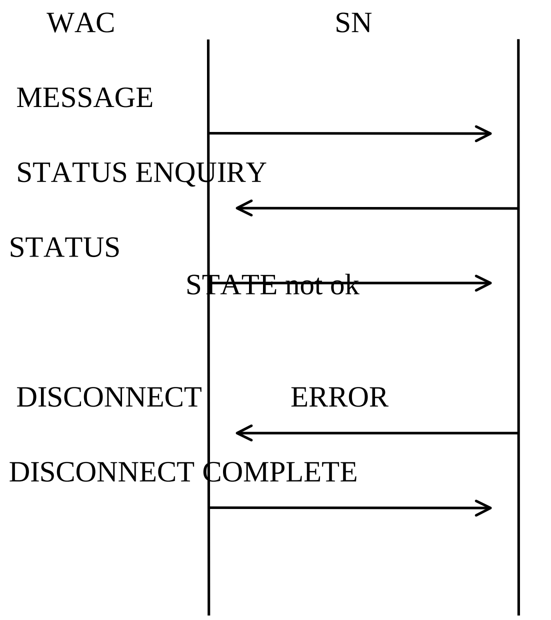


Figure A.21/C-IF3.02

(22) Layer 3 Error
(unrecognige B-subscriber or destination)

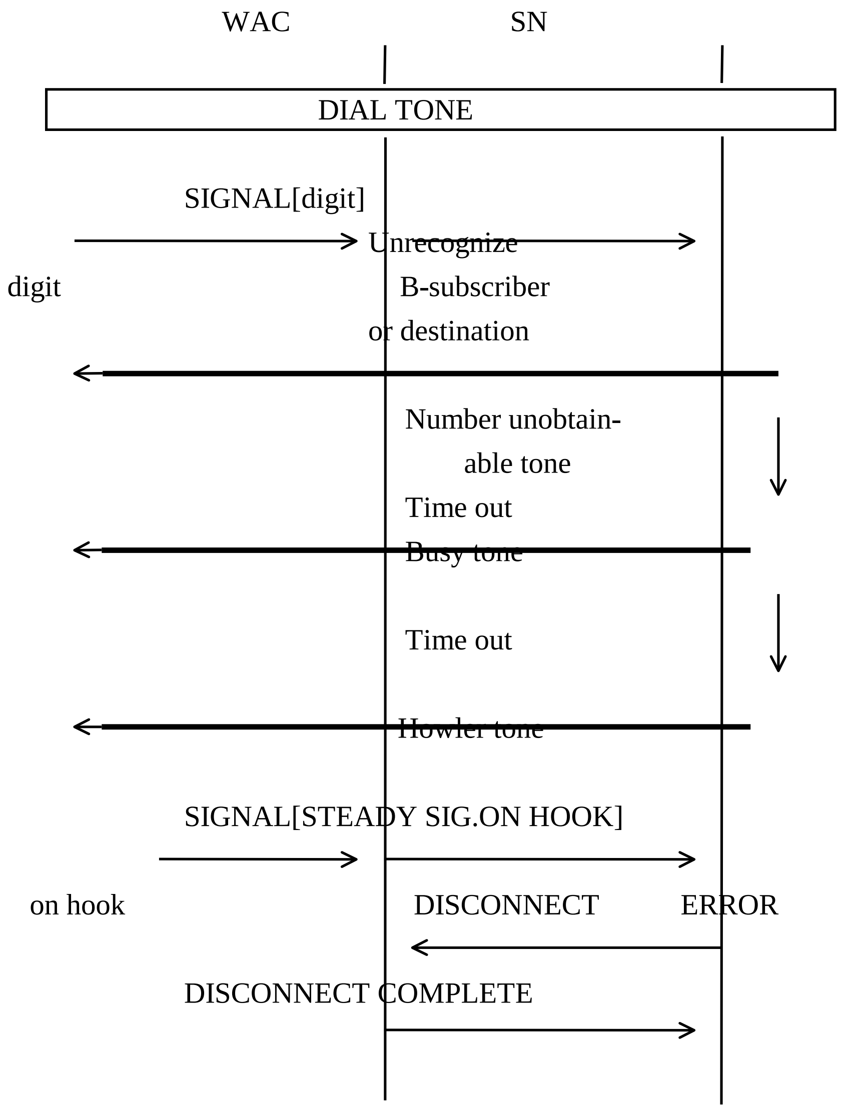


Figure A.22/C-IF3.02