

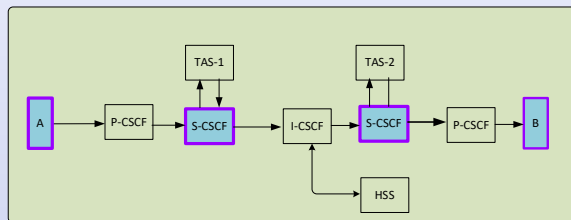
Unresolved mysteries of STIR/SHAKEN

Nagaraja (Nag) Rao; Boca Raton, FL

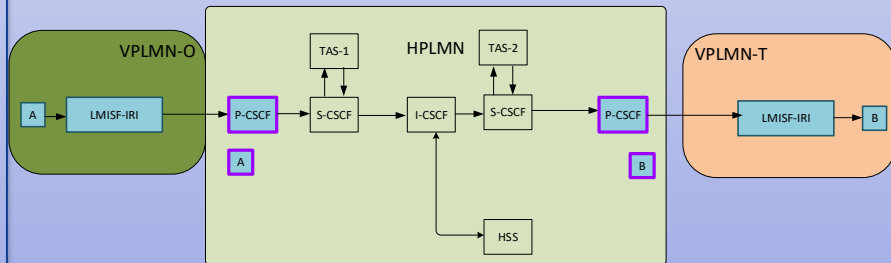
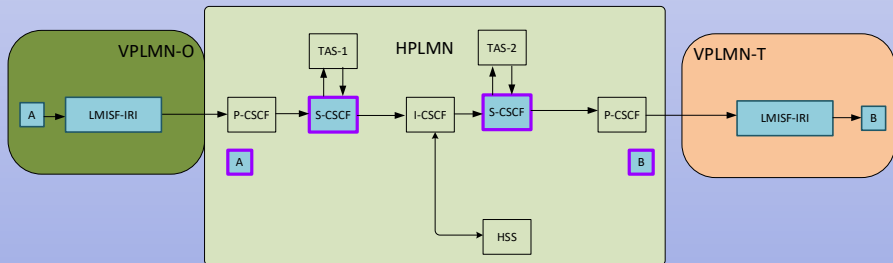
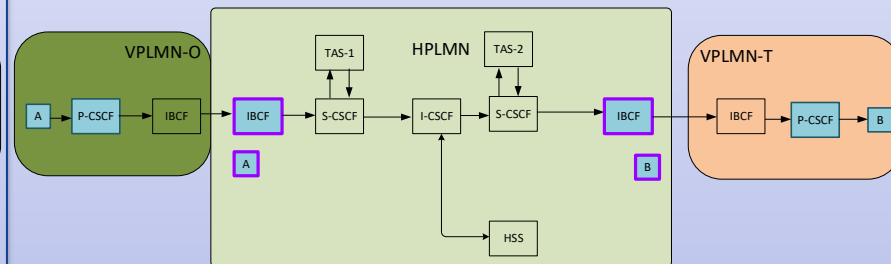
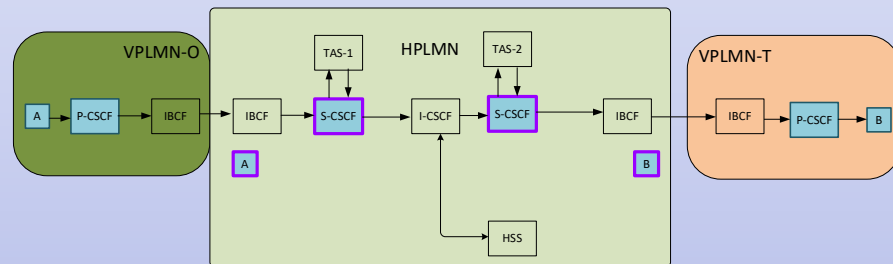
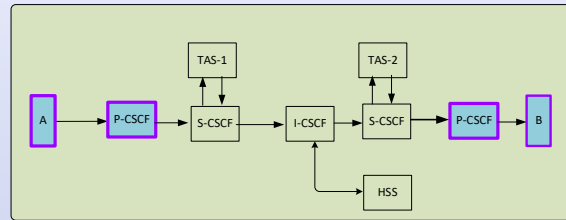
Background

IMS LI two deployment options (TS 33.127)

Default

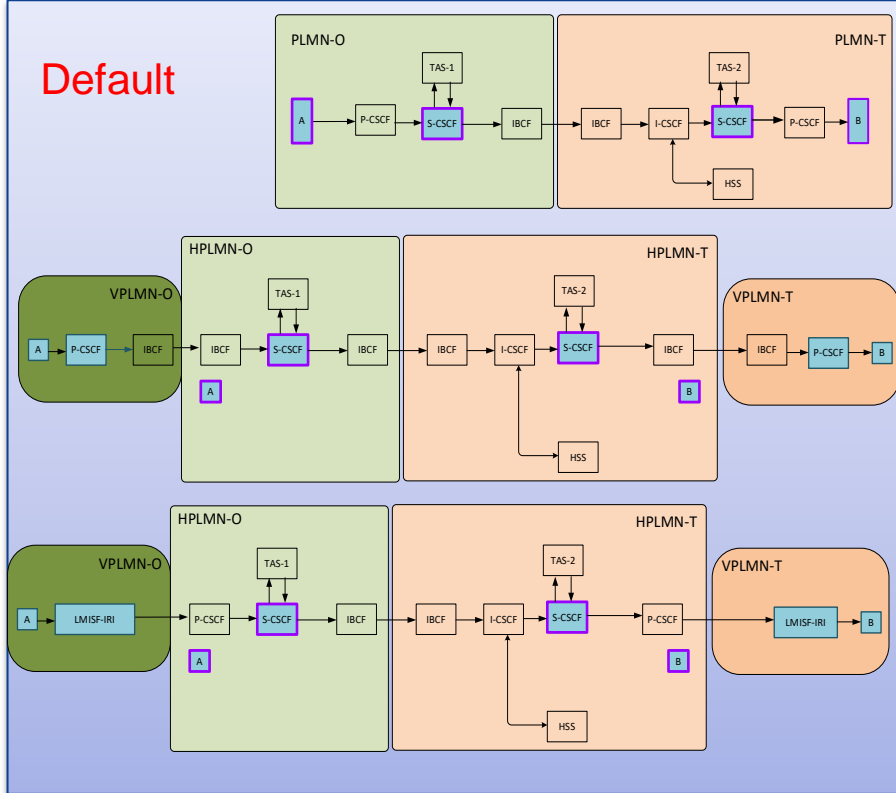


Alternate

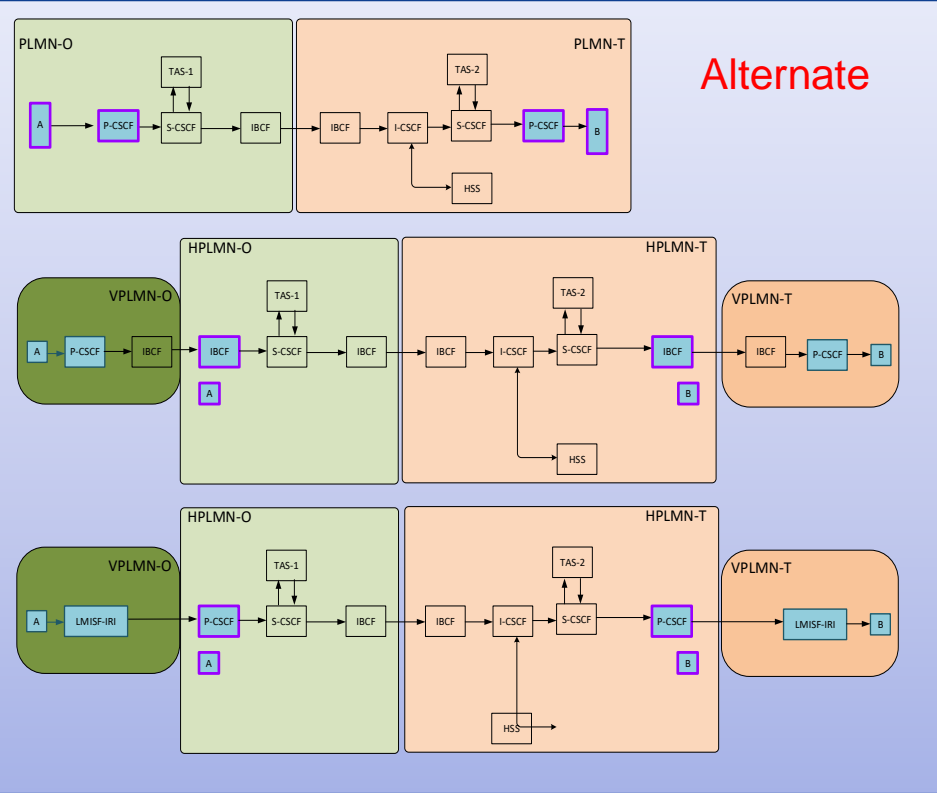


IMS LI two deployment options (TS 33.127)

Default

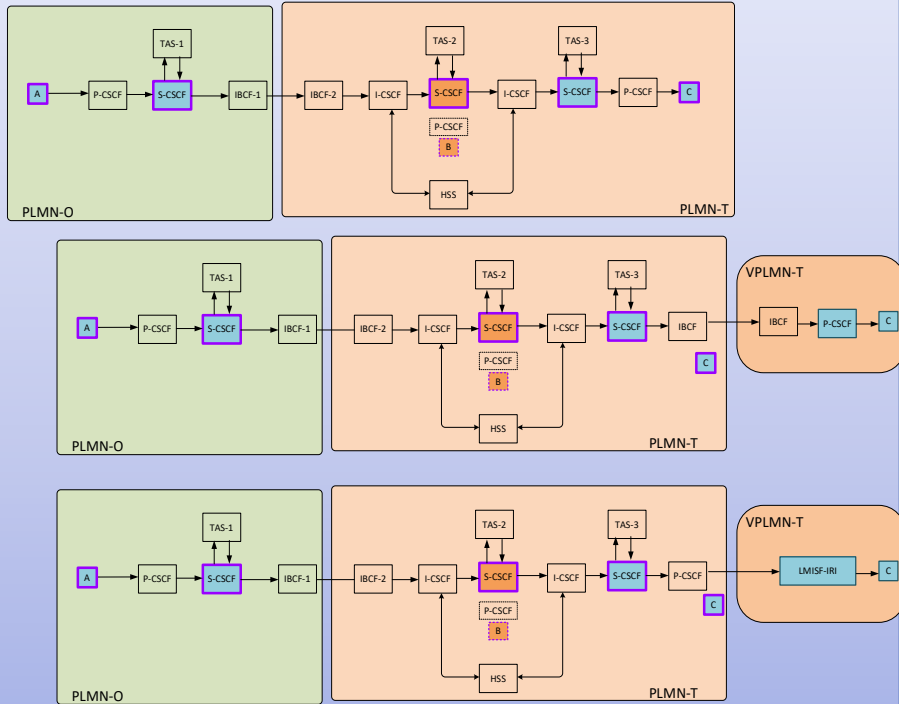


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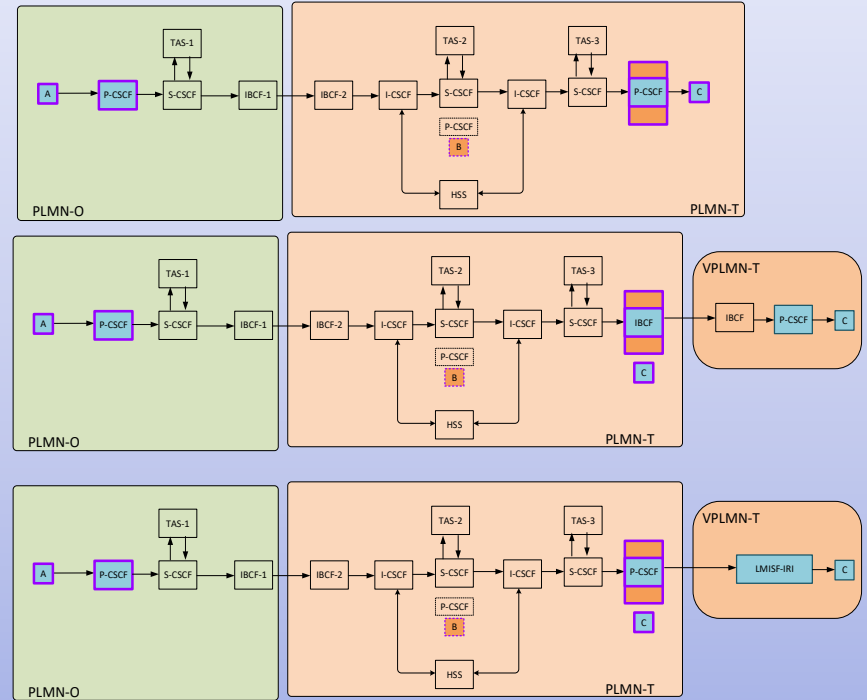


IMS LI two deployment options (TS 33.127)

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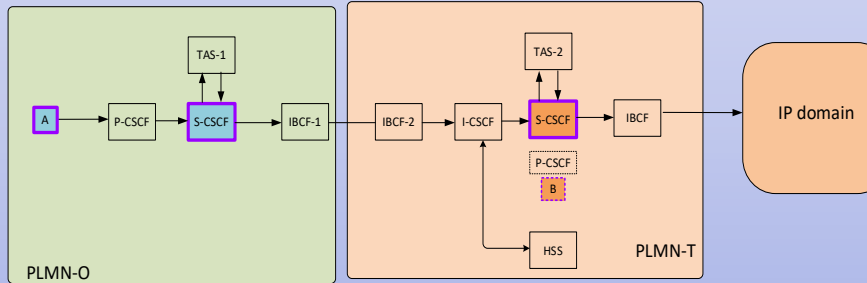
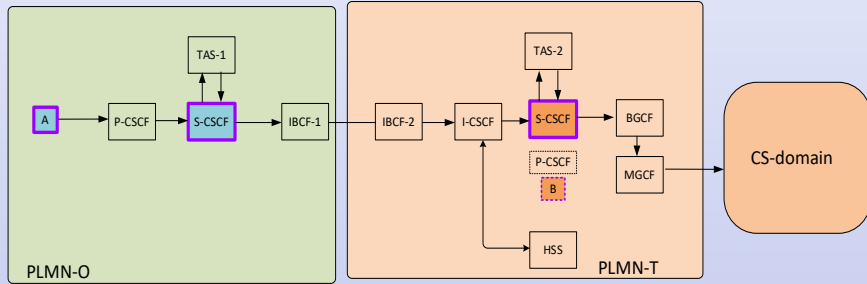


Alternate

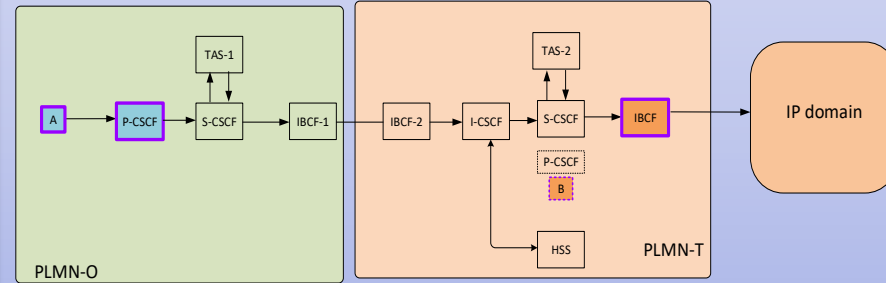
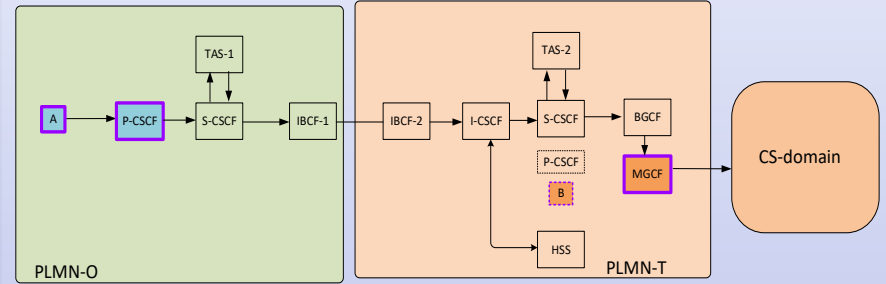


IMS LI two deployment options (TS 33.127)

Default



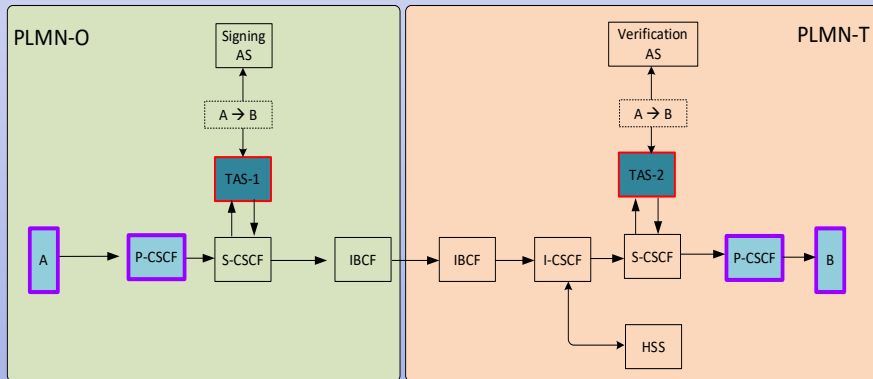
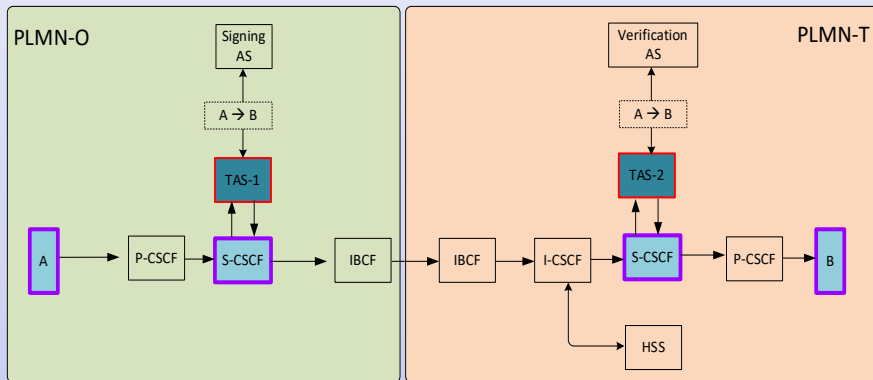
Alternate



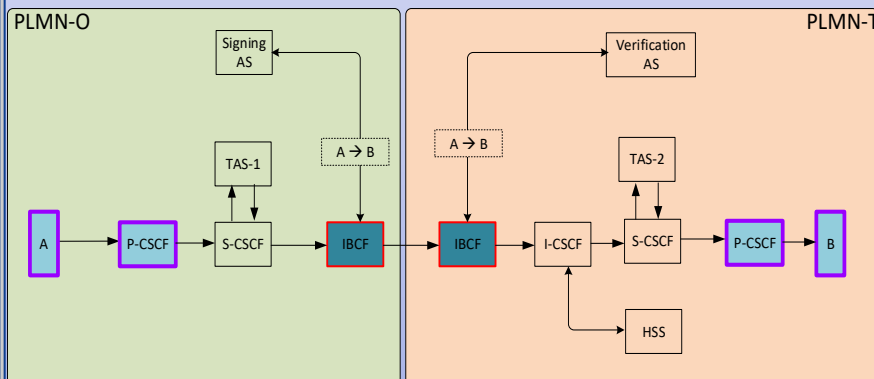
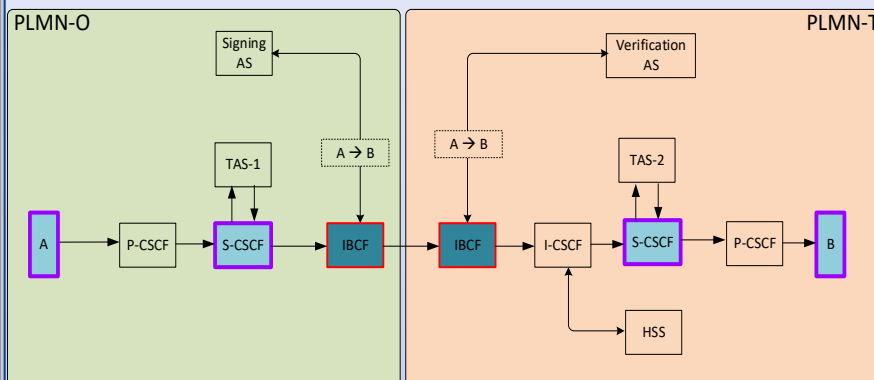
STIR/SHAKEN

STIR/SHAKEN has two deployment options - TAS based or IBCF based (TS 33.127)

Telephony AS based

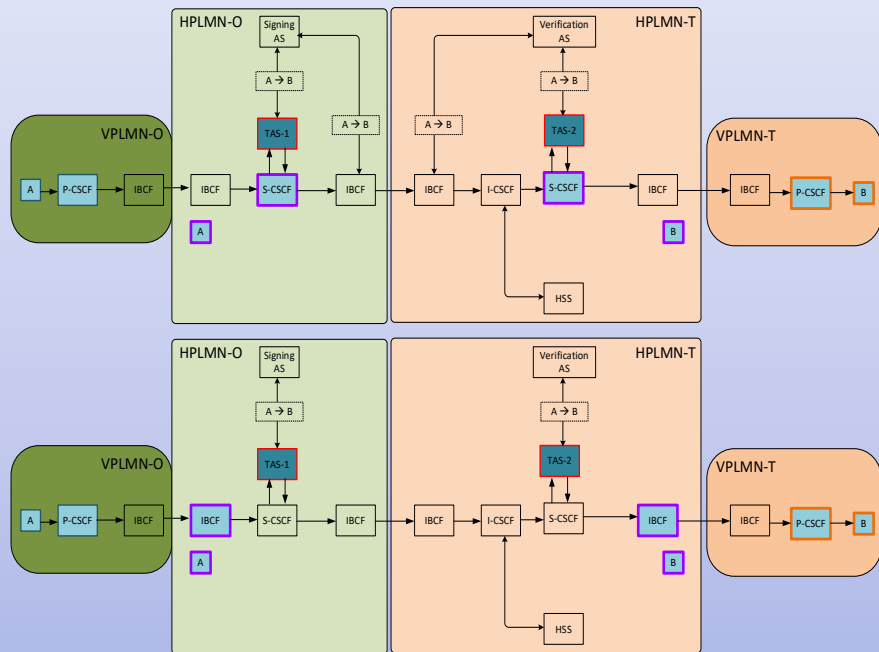


IBCF based

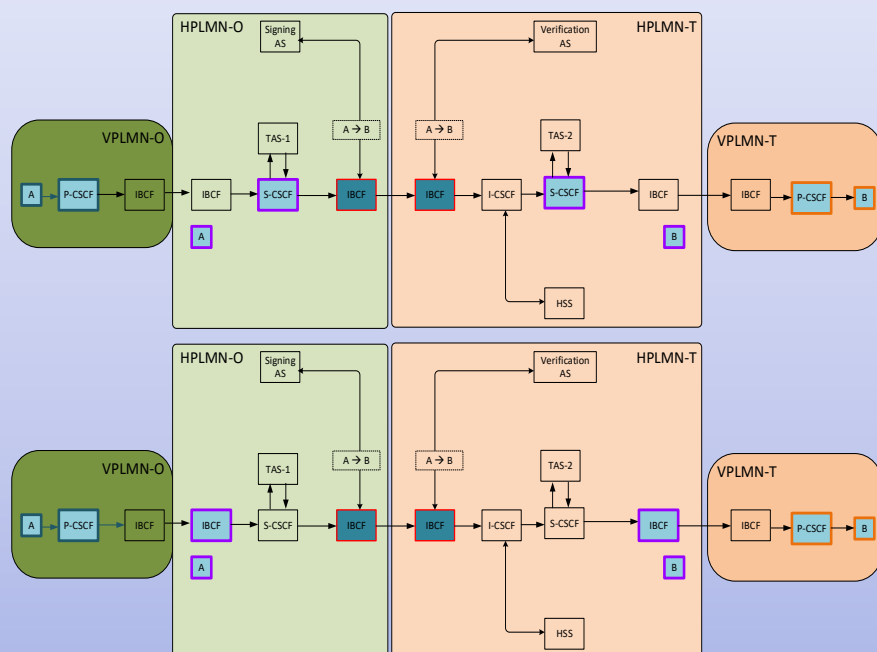


STIR/SHAKEN in roaming cases (LBO) (TS 33.127)

Telephony AS based

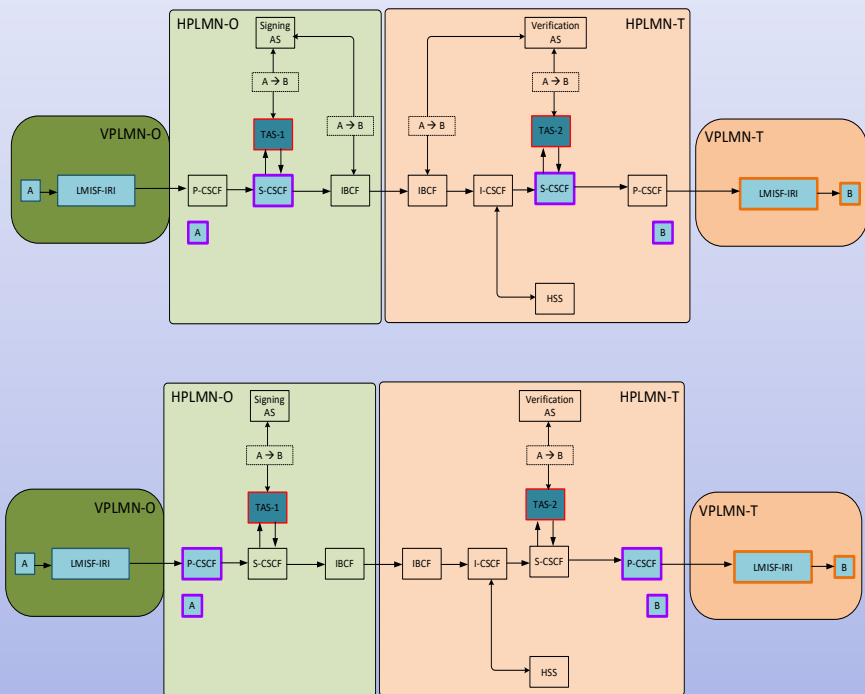


IBCF based

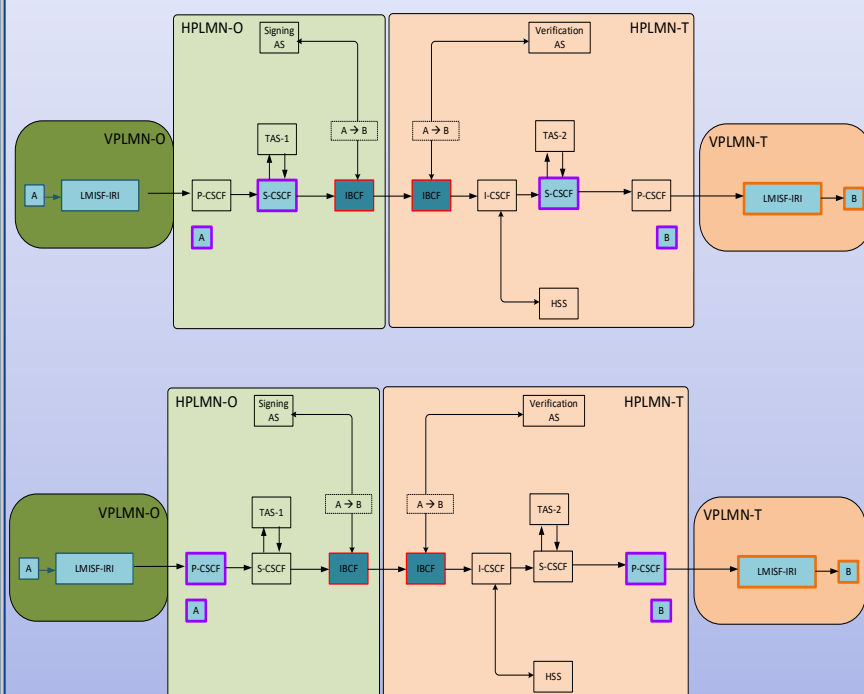


STIR/SHAKEN in roaming cases (Home-routed) (TS 33.127)

Telephony AS based



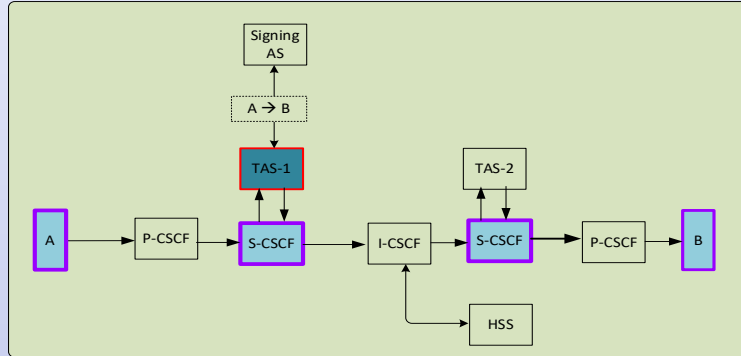
IBCF based



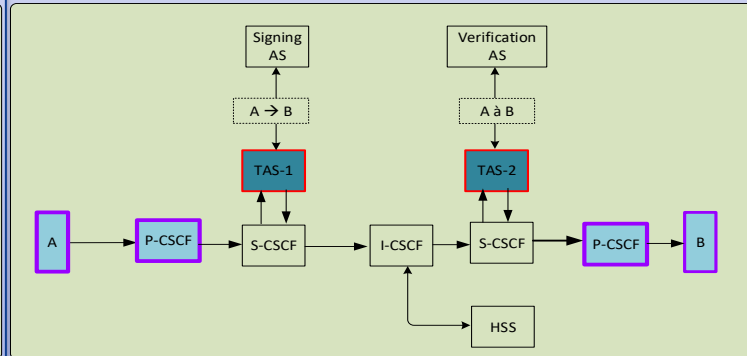
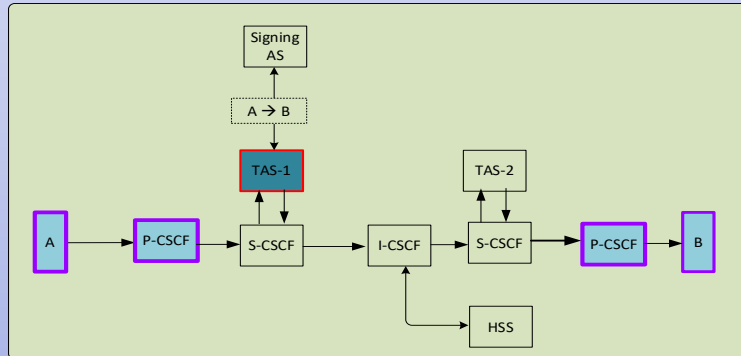
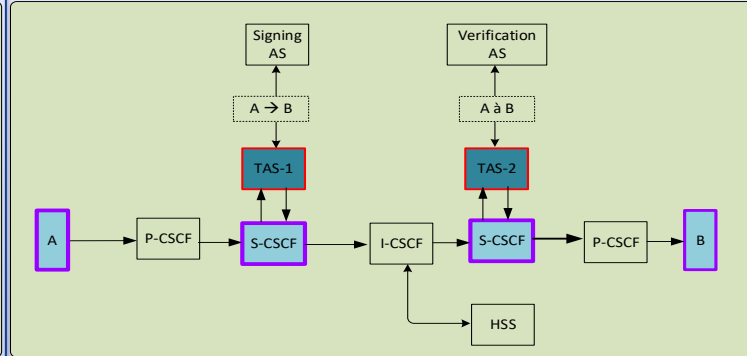
Special cases

STIR/SHAKEN intra-CSP sessions – signing or signing/verification required

Signing required, verification not



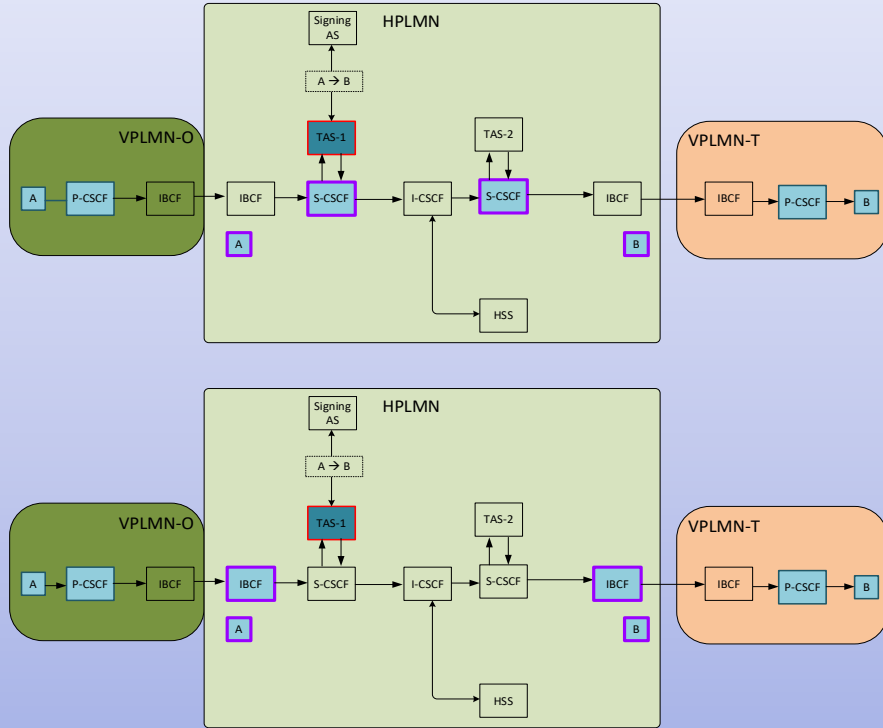
Signing required, verification required



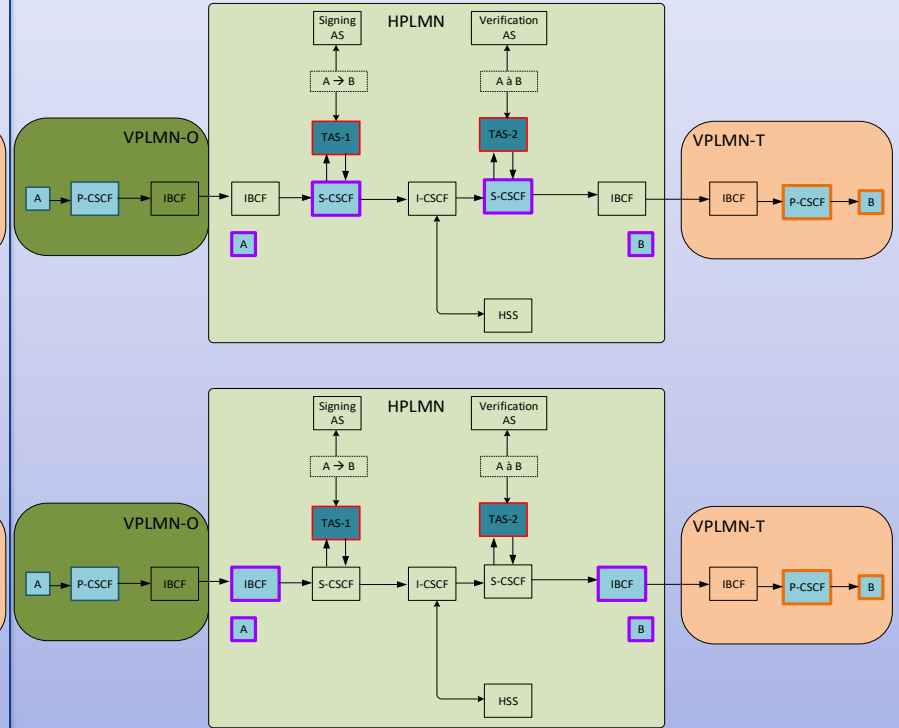
Non-LI function: IBCF based approach cannot be used even for inter-CSP sessions

STIR/SHAKEN intra-CSP sessions (roaming case) – signing or signing/verification required

Signing required, verification not



Signing required, verification required

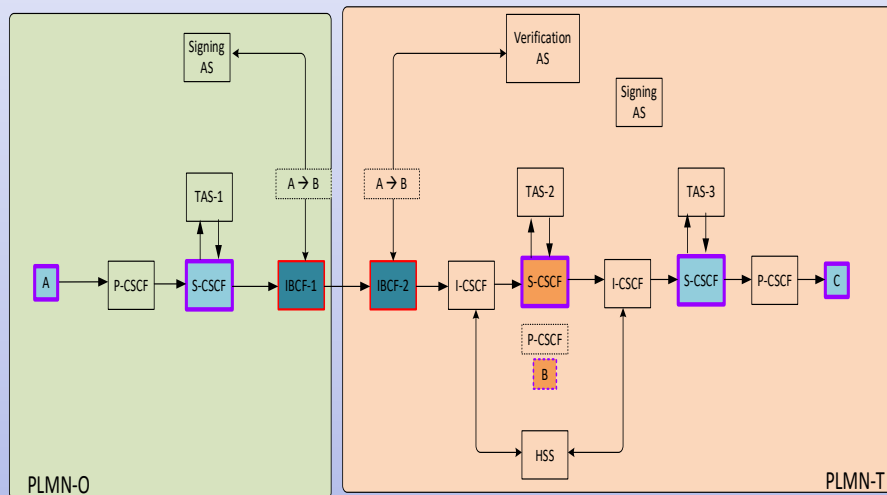


Non-LI function: IBCF based approach cannot be used even for inter-CSP sessions

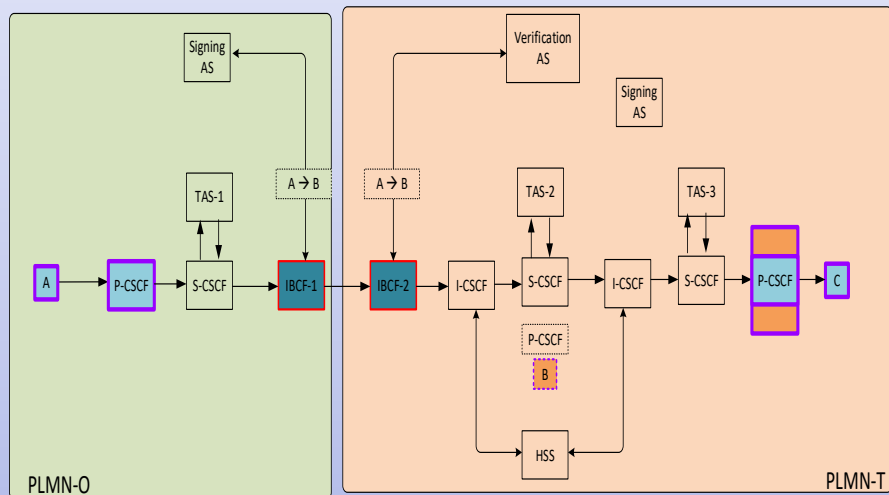
Unresolved cases

STIR/SHAKEN – redirected intra-CSP with no signing/verification required rules (IBCF)

IBCF based approach is used
(Default for non-STIR/SHAKEN LI)



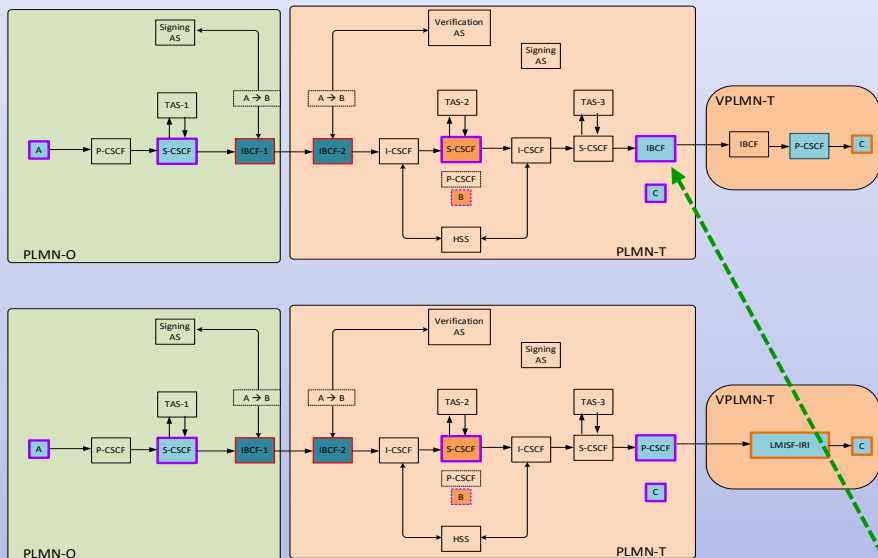
IBCF based approach is used
(Alternate for non-STIR/SHAKEN LI)



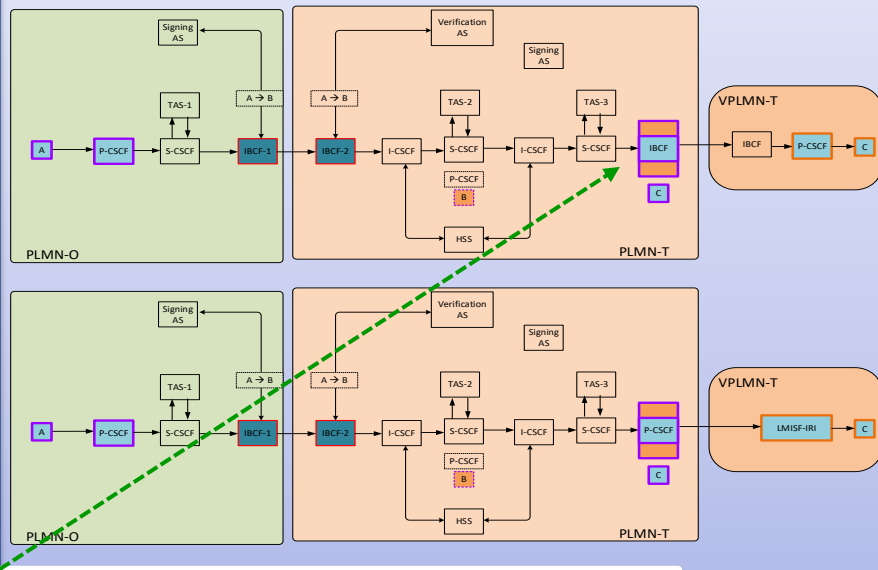
When signing/verification not required for intra-CSP sessions, IBCF approach may be used.
No STIR/SHAKEN results to C's LEMF.

STIR/SHAKEN – redirected intra-CSP with no signing/verification required rules (IBCF)

IBCF based approach is used
(Default for non-STIR/SHAKEN LI)



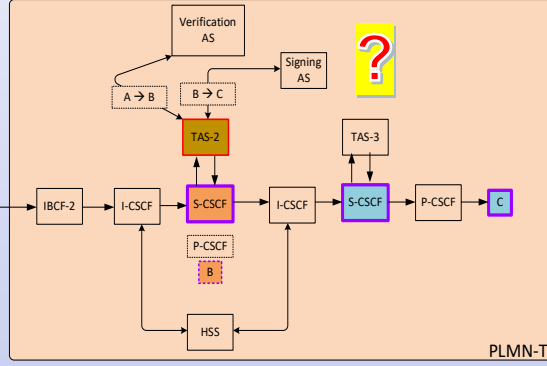
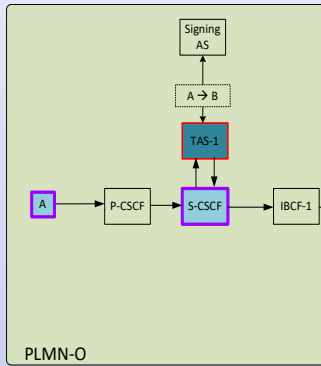
IBCF based approach is used
(Alternate for non-STIR/SHAKEN LI)



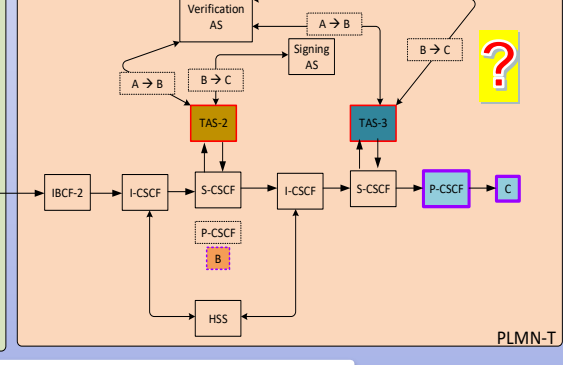
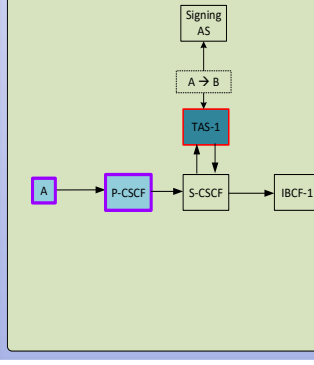
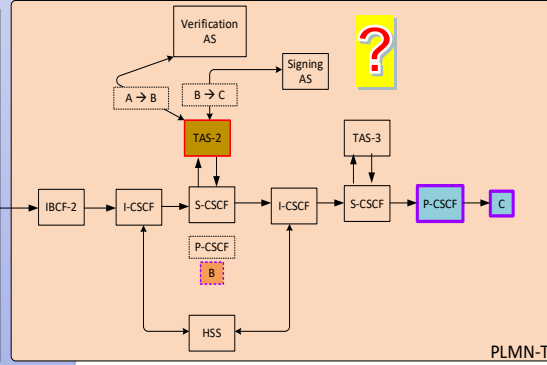
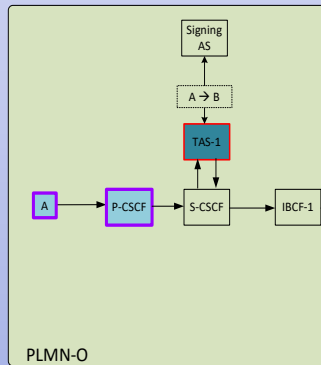
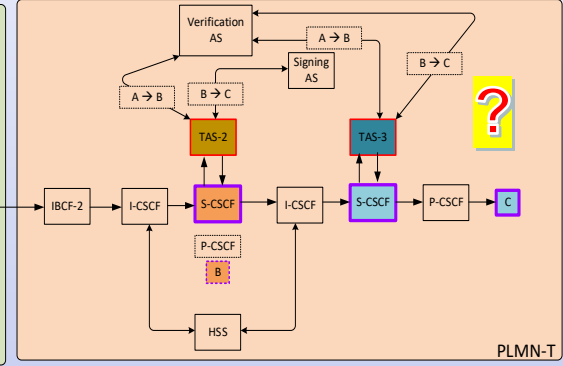
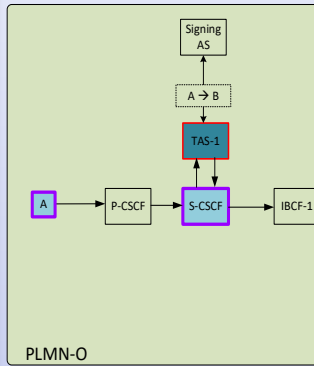
When signing/verification not required for intra-CSP sessions, IBCF approach may be used. What tells the Egress IBCF (with LBO) in PLMN-T to not to sign (B's number)? No STIR/SHAKEN results to C's LEMF in PLMN-T, but may be delivered in VPLMN-T

STIR/SHAKEN – redirected as intra-CSP with signing/verification rules (TAS)

Signing required, verification not



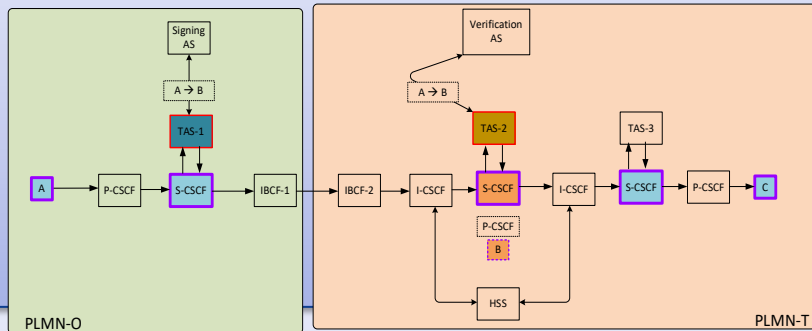
Signing required, verification required



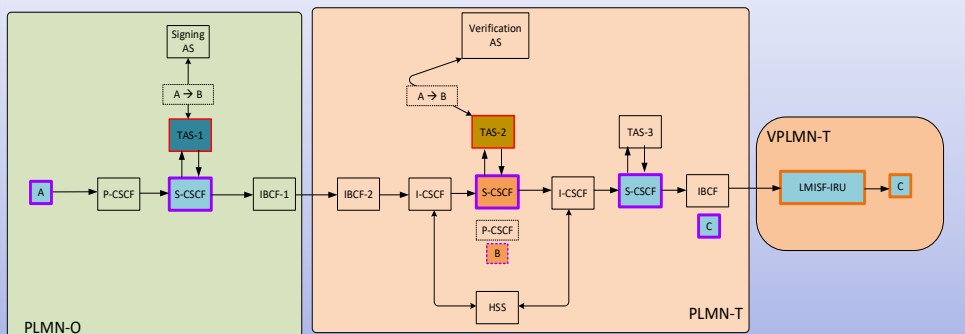
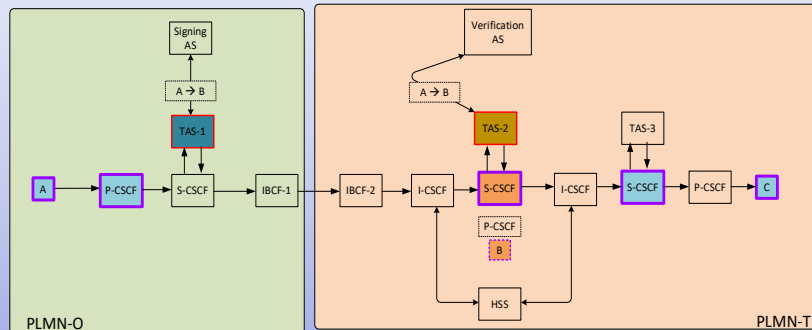
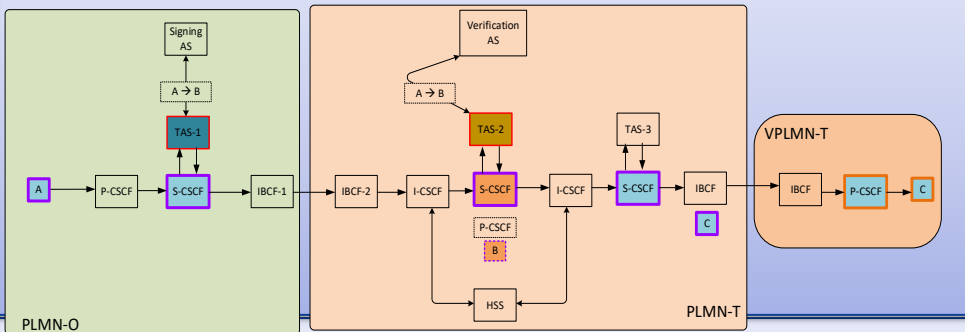
When verification not required for intra-CSP sessions, no STIR/SHAKEN results (of A) to C's LEMF

STIR/SHAKEN – redirected intra-CSP with no signing/verification required rules (TAS)

TAS based approach is used



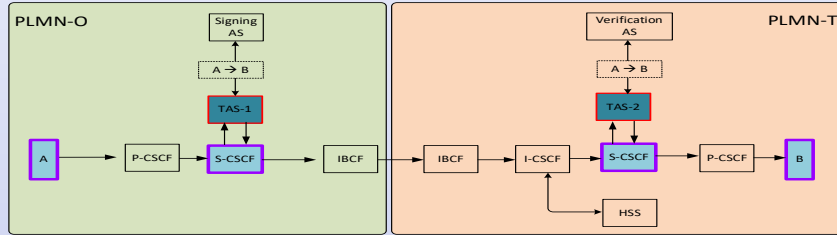
TAS based approach is used



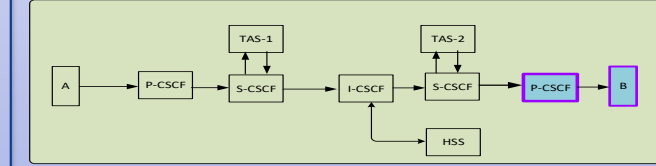
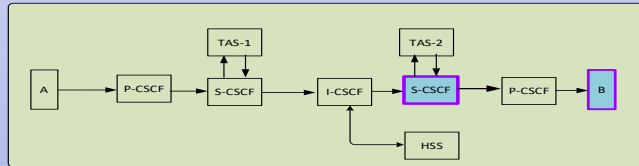
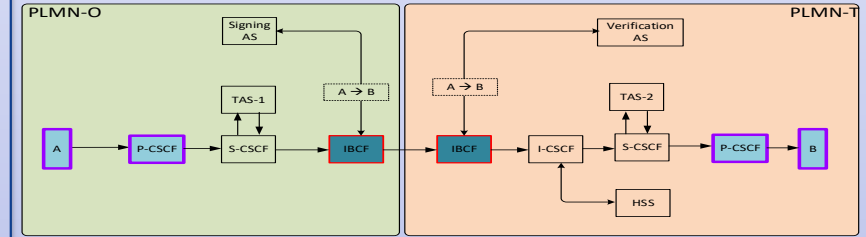
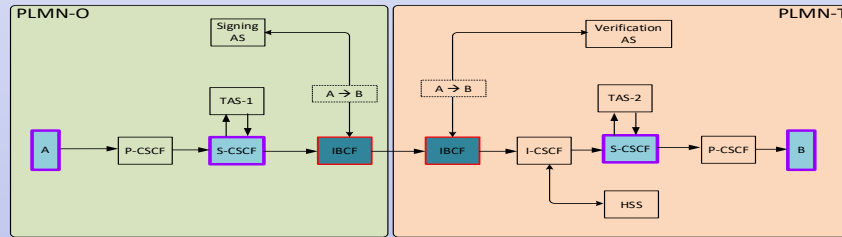
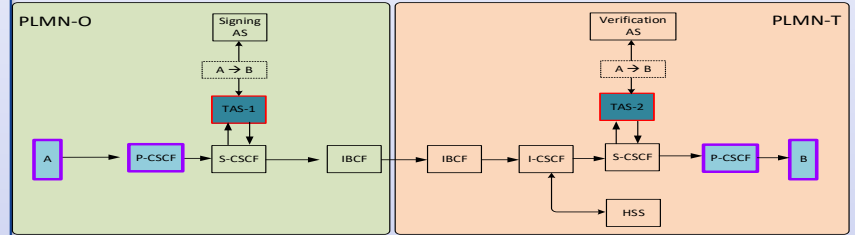
When signing/verification not required for intra-CSP sessions, no STIR/SHAKEN results to C's LEMF in PLMN-T, but may be delivered in VPLMN-T

No signing/verification for intra-CSP sessions

Default for non-STIR/SHAKEN LI



Alternate for non-STIR/SHAKEN LI

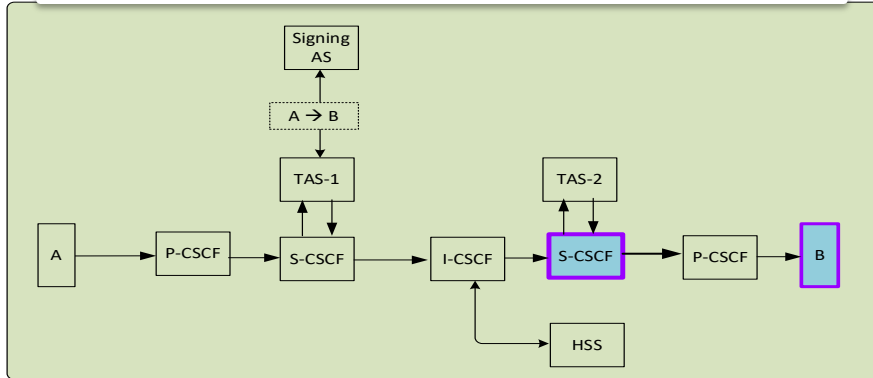


Non-LI question:
How does the TAS determine intra-CSP session?

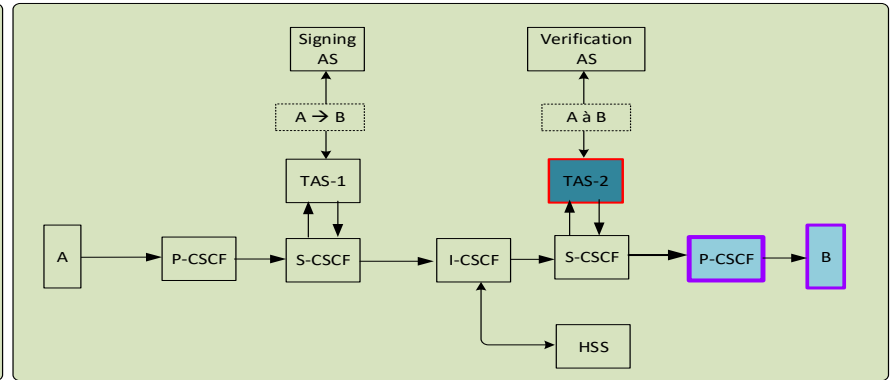
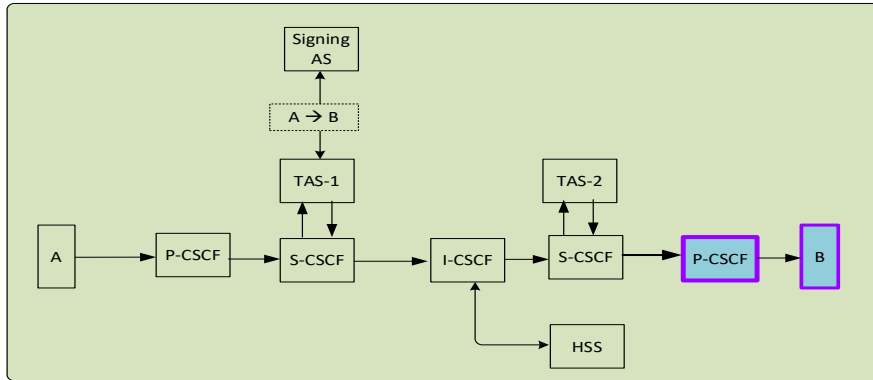
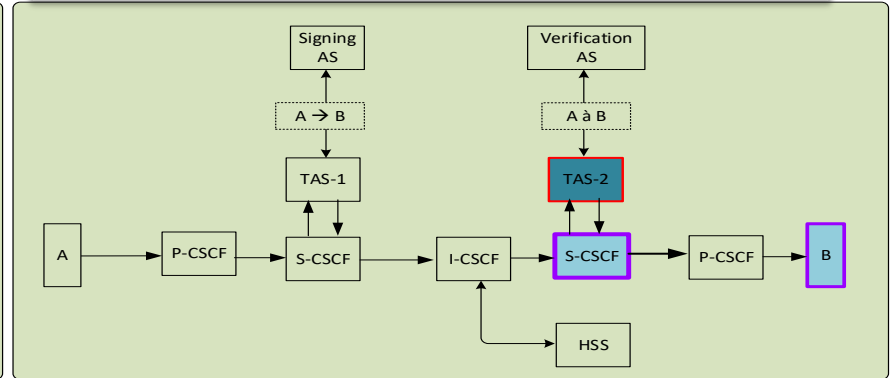
Summary

Intra-CSP sessions with signing required

No STIR/SHAKEN results (of A) to B's LEMF

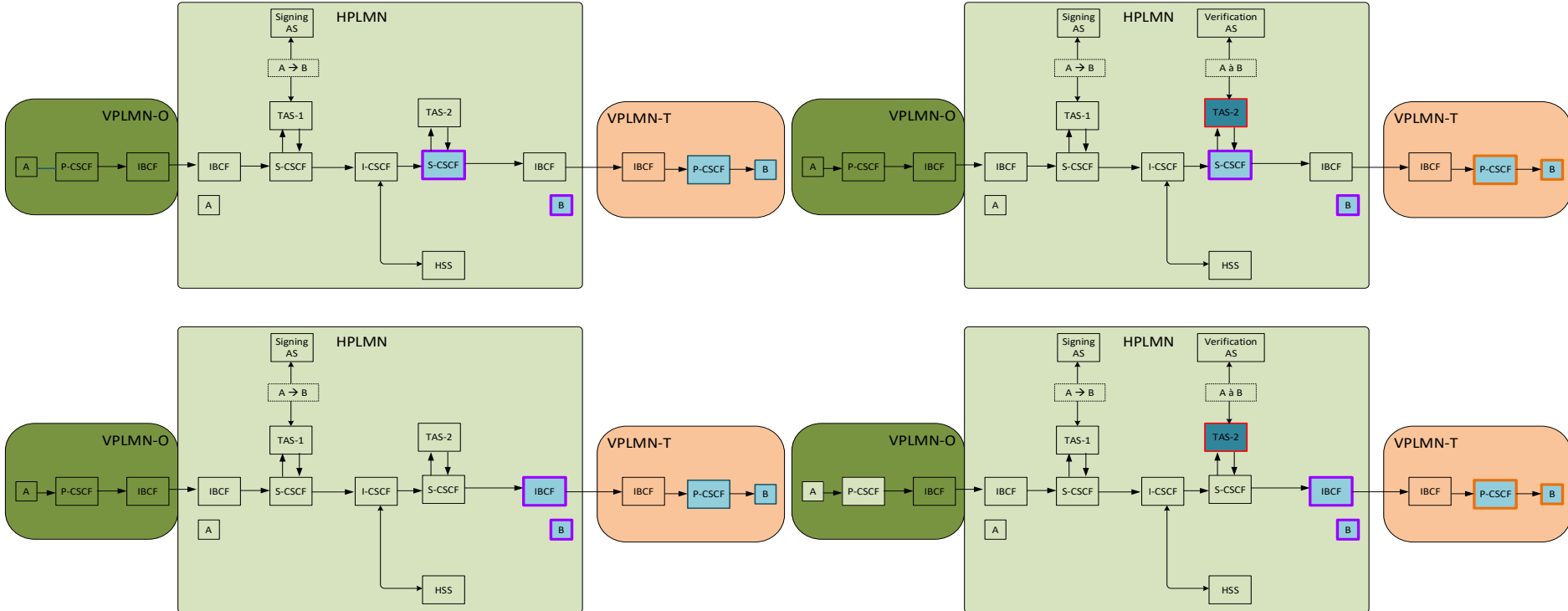


STIR/SHAKEN results (of A) to B's LEMF



Intra-CSP sessions when signing required - roaming cases

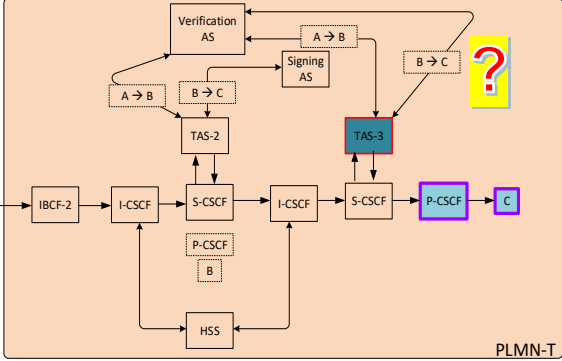
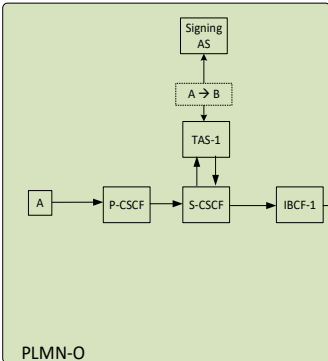
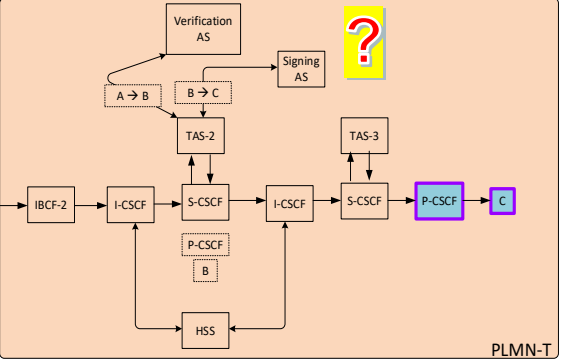
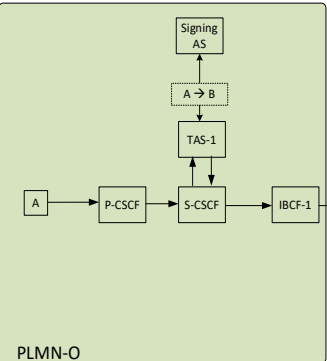
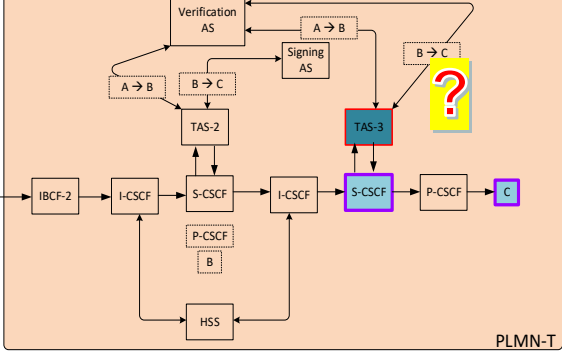
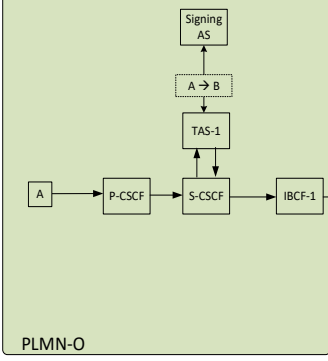
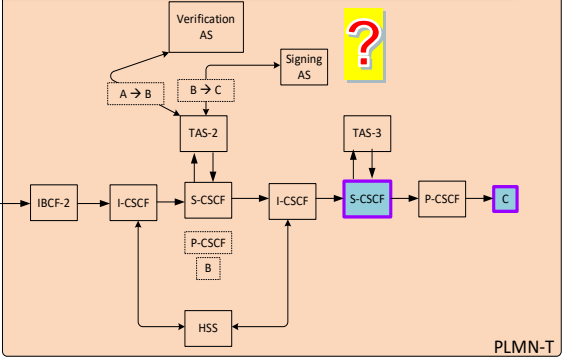
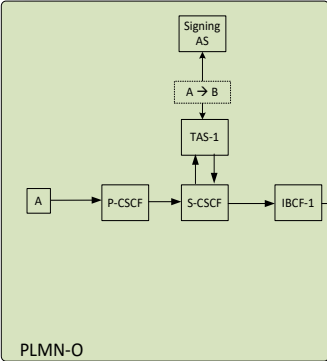
No STIR/SHAKEN results (of A) to B's LEMF (PLMN-T and VPLMN-T) | STIR/SHAKEN results (of A) to B's LEMF (PLMN-T and VPLMN-T)



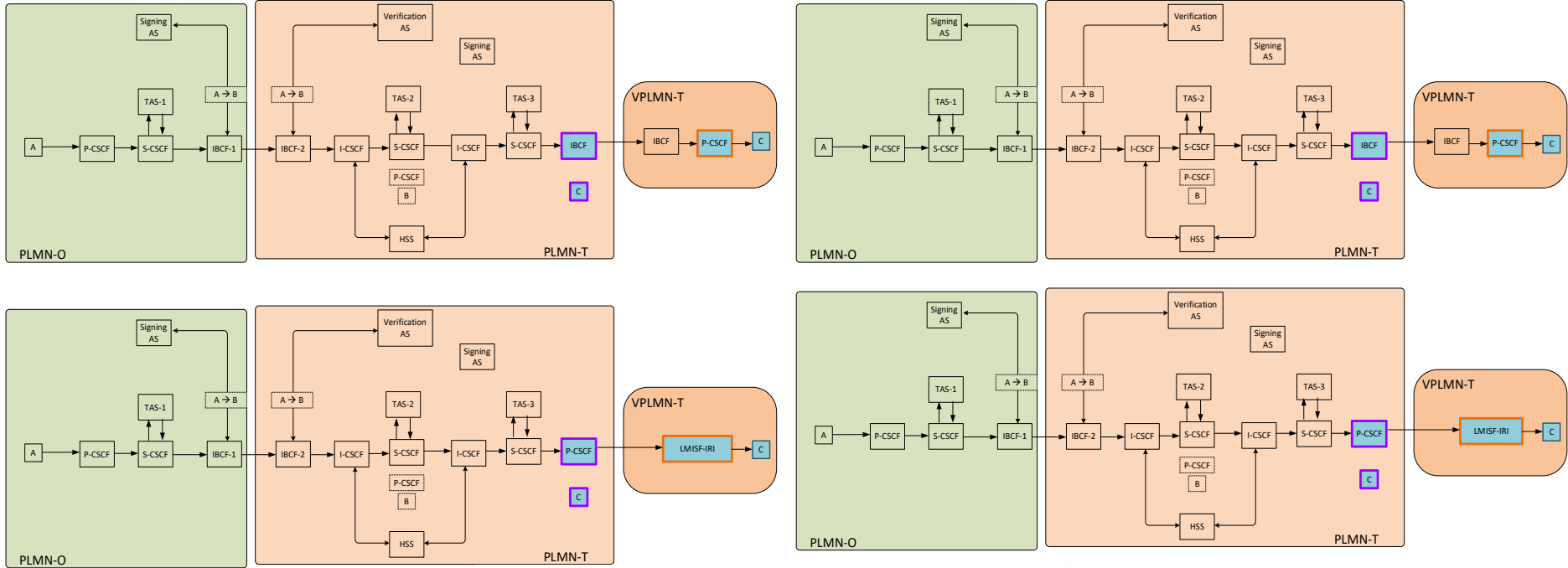
Intra-CSP redirected sessions with signing required

No STIR/SHAKEN results (of A) to C's LEMF

STIR/SHAKEN results (of A) to C's LEMF

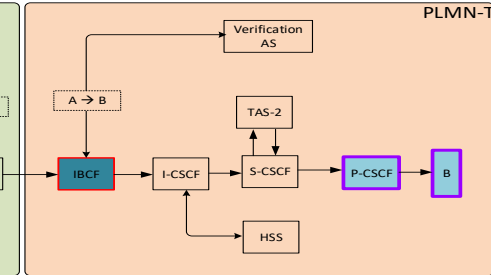
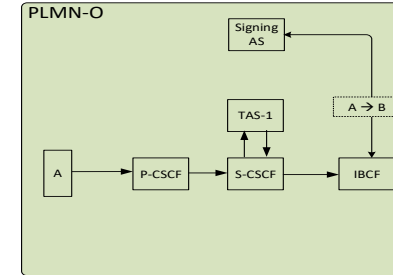
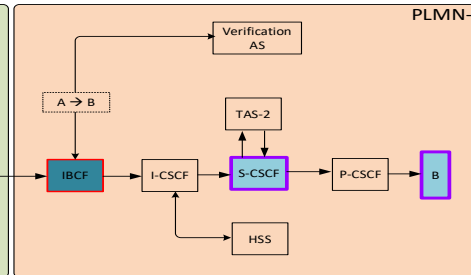
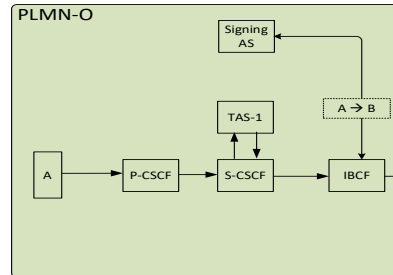
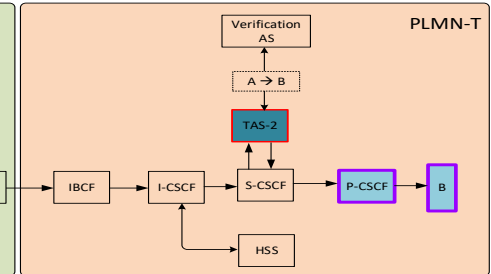
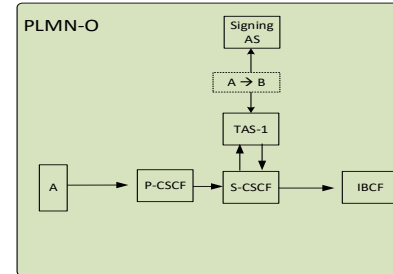
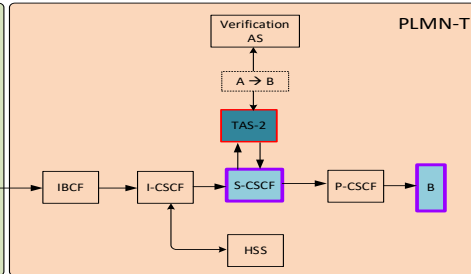
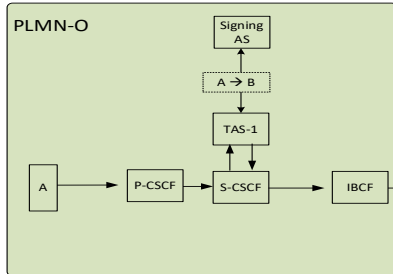
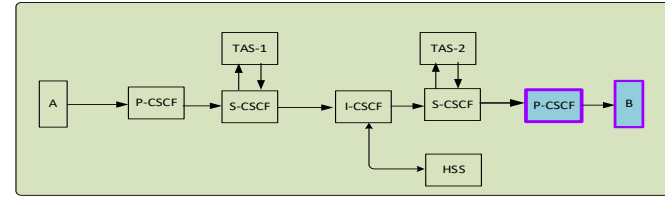
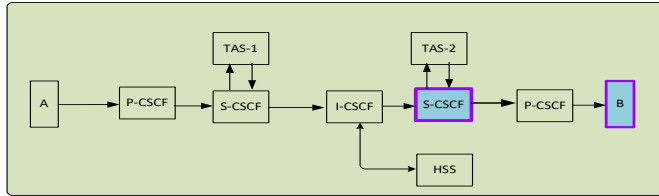


No signing/verification for intra-CSP sessions



STIR/SHAKEN results (of A) to C's LEMF in VPLMN-T, but not in PLMN-T

No signing/verification for intra-CSP sessions – undefined stage 3 clarity on TAS



Non-LI issue – how does the TAS determine to sign/verify only for inter-CSP sessions?

NOKIA