



AOA multiplexing Comparison Xevo and Livio

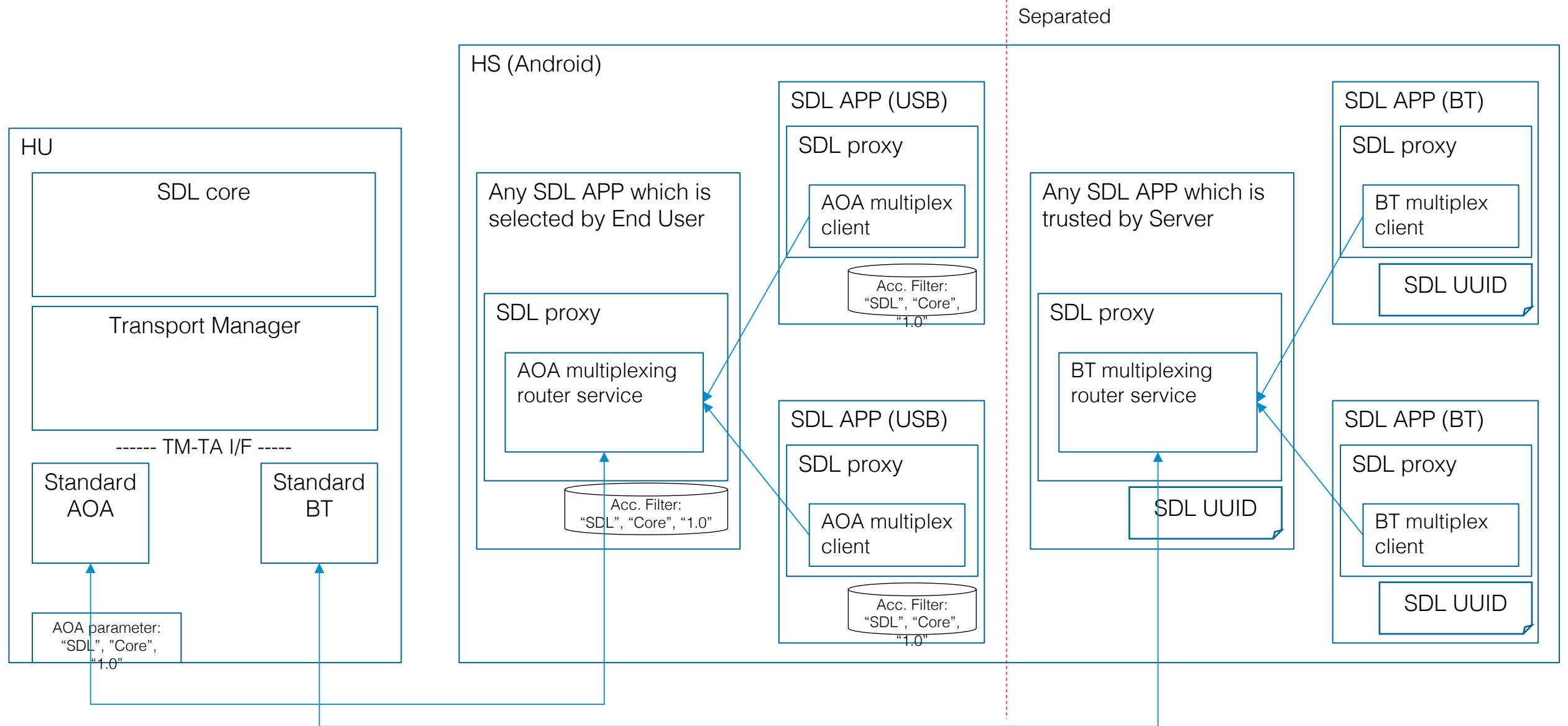
Sep 26, 2017

Requirement

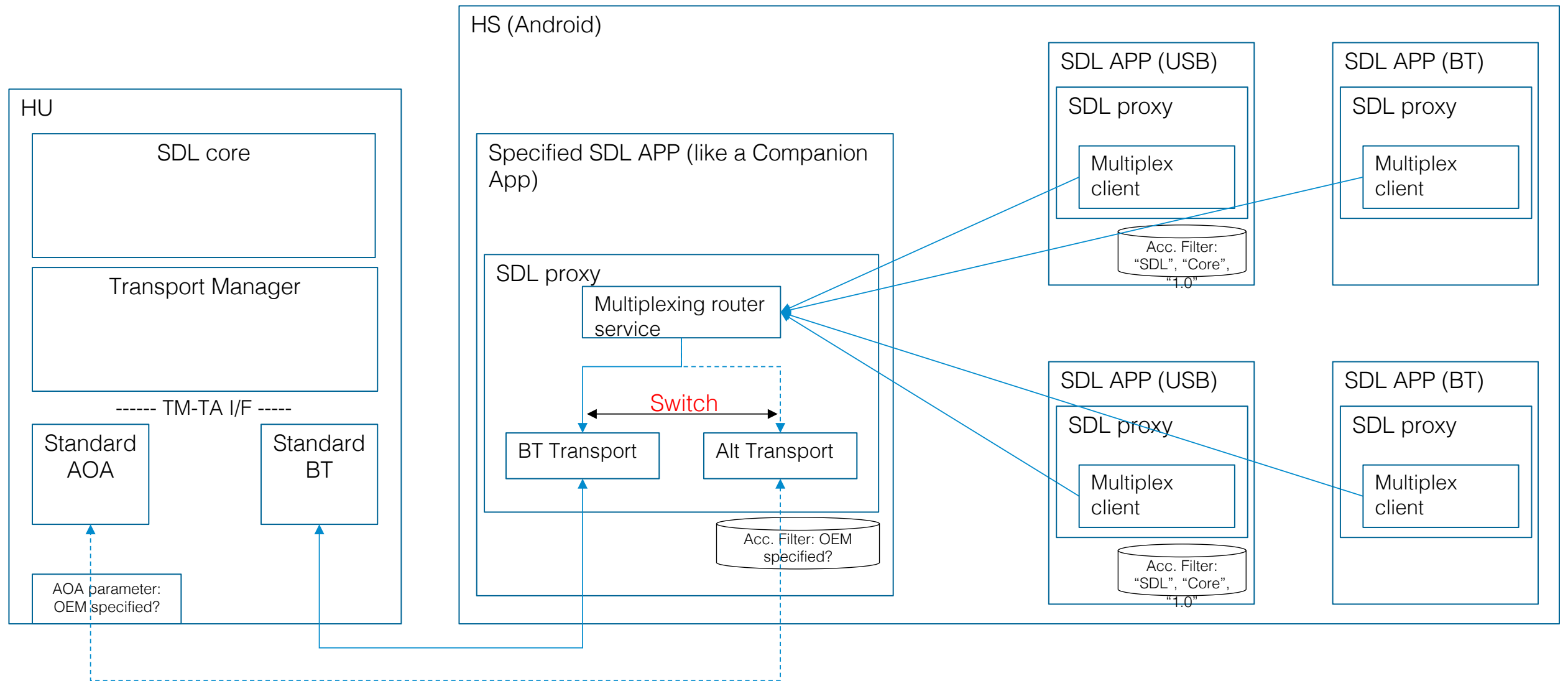
Purpose:

Two or more SDL apps can use USB(AOA) as transport.

Overview Xevo (standard SDL)



Overview Livio (standard SDL)



Comparison detail Xevo and Livio

Equivalent:

- It's unnecessary to modify SDL core.

Comparison detail Xevo and Livio

Xevo's approach:

- Short term (did implement, already started testing).
- Small impact to existing BT multiplexing sequence (code change is not too small, however logic still keep)
- Existing Navi apps can be adapted easily.
- Minimize impact to existing code (HMI, TransportAdapter)

Comparison detail Xevo and Livio

Livio's approach:

- Trusted/Specified app is required (like a companion app).
- The app have transport switching logic, "when USB connected then switch from BT to USB".
- Other SDL apps must use MultiplexingTransport (not declared to use which BT or USB).
- Transport type cannot be detected by each SDL apps. Additional implementation is required in Proxy for it.
- BT is primary. When another transport can be used then, switch to the transport (=alternative transport). (It's similar to iAP's behavior)
- Schedule is not fixed. Currently, just POC.

Risks

There is no risk for requirement in both approach.

Risks:

- Schedule
- Detail behavior when illegal or semi-normal sequence such as unexpected disconnect, frequently disconnect – reconnect.

Consideration points:

Architecture: Livio said that “AltTransport is NOT just for USB; other transport can be supported in the future”, If this is correct then the approach may be a little bit better than ours.

Side affect: Xevo’s approach should be better.

Schedule risk: Xevo’s approach is much smaller than Livio’s one.

Answers for Livio's concern

Trusted check:

- Current Xevo's proposal is based on Android security policy (End User shall choose)
- It can be follow to Bluetooth Multiplexing trusted logic, too.

Notification Icon on HS status-bar:

- Xevo thought that it's not critical bad UX for end user, because End User shall concentrate to HU UX in vehicle.

Volume of code change:

- Xevo's approach is re-use well-implemented BT multiplexing logic but separated. So that, code change is wide range. However, there is not big damage to existing sequence.

Thank you.



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