

802.11ak Architecture

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Abstract

This presentation discusses

- **802.11ak architecture**
- **802.11ak / 802.11 co-existence**

802.11ak & 802.11 Co-existence

- **The 802.11ak architecture does not interfere with the existing 802.11 architecture**
- **802.11ak BSS has its own SSID**
 - 802.11ak non-AP STAs only are associated to 802.11ak AP STAs
 - An attempt to associate a non-11ak non-AP STA to an 11ak BSS will always end in failure
 - A BSS of mixed 11ak and non-11ak non-AP STAs is not possible

802.11ak & 802.11 Co-existence

- **Simplified interoperability**
 - Limited to BSS overlap
 - 11ak MSPU header must be discriminable and ignored by non-11ak STAs
 - 11ak Unicast MSPU address mapping could use the 4 MAC address for inner (P2P 11ak link) and outer MAC addresses
 - 11ak Multicast MSPU inner address mapping is TBD (but could use any new defined field to specify the MC set)

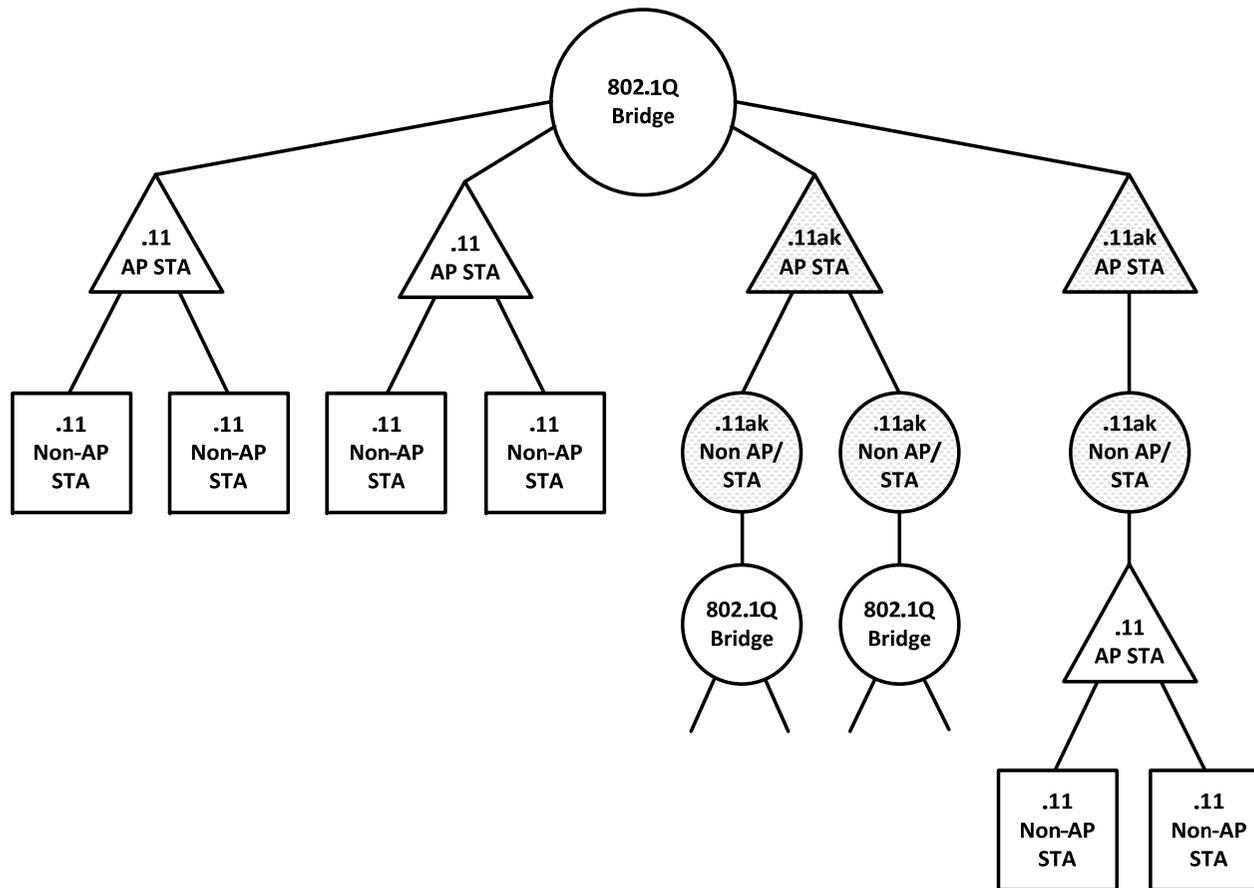
802.11ak MAC Port Services

- **The association of an 11ak non-AP STA to an 11ak BSS will result in the creation of two MAC port service points:**
 - “Infrastructure MAC Port”:
the 11ak AP STA exports to its upper layers an instance of a MAC Port service of the point-to-point 11ak link instance between this AP STA and the associated 11ak non-AP STA
 - “STA MAC Port”:
the 11ak non-AP STA exports to its upper layers an instance of a MAC Port service of the point-to-point 11ak link instance between this non-AP STA and the 11ak AP STA to which it associated

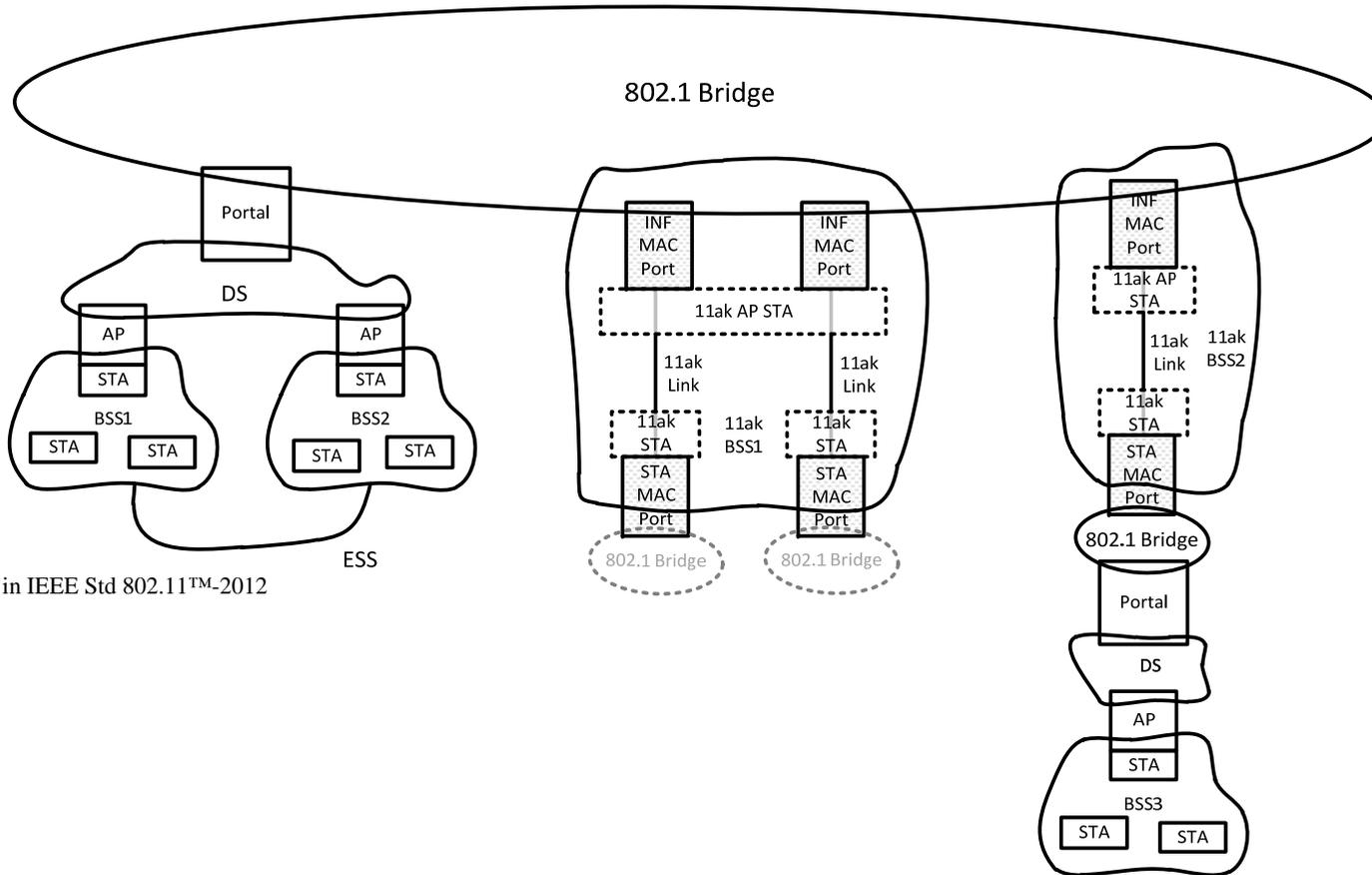
Direct Link Support in 802.11ak BSSs

- **Support for direct links in 802.11ak BSSs is under review and will be further addressed.**

802.11 and 802.11ak Architecture Co-existence Illustration: [1] The “Physical” View



802.11 and 802.11ak Architecture Co-existence Illustration : [2] The “Logical” View



cf Figs 4-x in IEEE Std 802.11™-2012

802.11 and 802.11ak Architecture Co-existence: ESS across 11ak BSS

