ZSDS Management

Description of zone management definitions as revised in 06-019r4

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Components for managing the ZSDS

Zone Supervisor Device

- Zone supervisor devices are devices are electable, but were not elected to be the AZSD.
- An SMP CONFIGURE ZONE PERMISSION request originated by a zone supervisor device shall only be sent to the AZSD.
- SMP CONFIGURE PHY ZONE requests shall be sent directly to a phy to be updated. This is an immediate single-cycle update function and does not need the control provided by the AZSD.
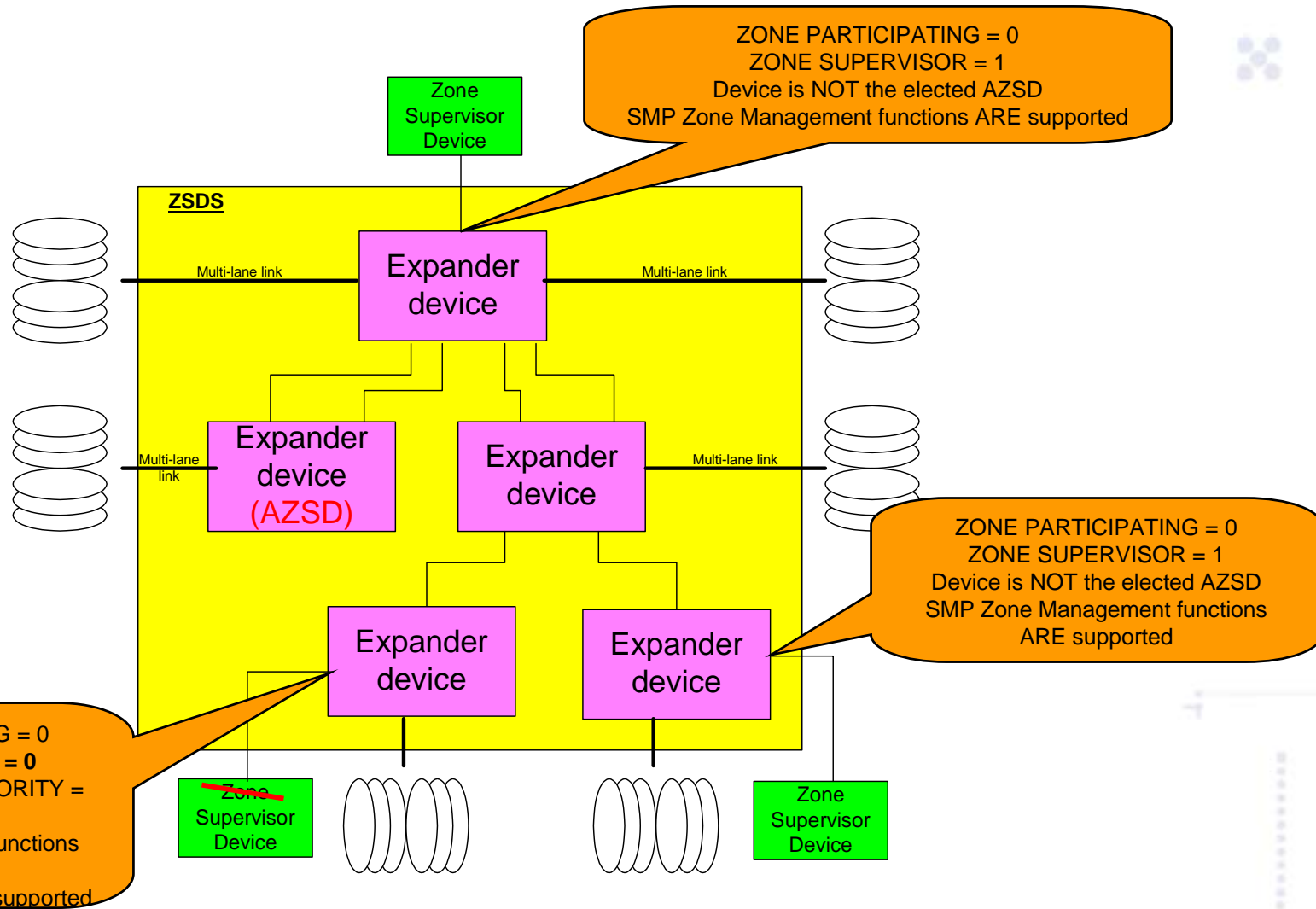
Active Zone Supervisor Device

- The elected zone supervisor device is the only device that sends SMP CONFIGURE ZONE PERMISSION request to all zoning devices in the ZSDS.
- An SMP CONFIGURE ZONE PERMISSION request originated by a zone supervisor device shall be processed if the AZSD is not already processing a zone permission change.
- The AZSD ensures consistency throughout the ZSDS. The SMP CONFIGURE ZONE PERMISSION is a multi-step process, that shall be completed before any additional requests are processed.

ZONE SUPERVISOR bit (Previously called the ACCESS ZONE MANAGEMENT bit)

- A phy zone route table bit, that is reported in OPEN address frames.
- When the ZONE SUPERVISOR is set to 1, the phy shall support zone supervisor devices.
- When the ZONE SUPERVISOR is set to 0, the ZONE SUPERVISOR PRIORITY field is ignored from the device and shall be set to zero in all functions.
- When the ZONE SUPERVISOR is set to 0, SMP zone management functions shall return FUNCTION FAILED.

Example : Zone management

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 1
Device is NOT the elected AZSD
SMP Zone Management functions ARE supported

ZSDS

Zone Supervisor Device

Expander device

Multi-lane link

Multi-lane link

Expander device (AZSD)

Multi-lane link

Expander device

Multi-lane link

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 1
Device is NOT the elected AZSD
SMP Zone Management functions ARE supported

Expander device

Expander device

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 0
ZONE SUPERVISOR PRIORITY = 0000
SMP Zone Management functions **NOT** supported
Other SMP functions ARE supported

Zone Supervisor Device

Zone Supervisor Device

Example : Zone manager attached to non-zoning device

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 1
Device is NOT the elected AZSD
SMP Zone Management functions ARE supported

ZSDS

Zone Supervisor Device

Expander device

Multi-lane link

Multi-lane link

Expander device (AZSD)

Expander device

Multi-lane link

Multi-lane link

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 1
Device is NOT the elected AZSD
SMP Zone Management functions ARE supported

Expander device

Non-Zoning Expander device

ZONE PARTICIPATING = 0
ZONE SUPERVISOR = 0
ZONE SUPERVISOR PRIORITY = 0000
SMP Zone Management functions **NOT** supported
Other SMP functions ARE supported

Zone Supervisor Device

Zone Supervisor Device