To: T10 Technical Committee
From: Rob Elliott, HP (elliott@hp.com)
Date: 3 July 2007
Subject: 07-305r0 SAS-2 Zone phy information clarifications

Revision history
Revision 0 (3 July 2007) First revision

Related documents
sas2r10 - Serial Attached SCSI - 2 (SAS-2) revision 10

Overview
In a SAS-2 editor's meeting, a question was raised about a NOTE in the zone phy information field descriptions explaining that the the REQUESTED INSIDE ZPSDS bit may be changed by the expander device after a link reset sequence. That bit is special in that the expander device overrides the programmed setting in certain situations. Two other zone phy information fields can also be changed based on the link reset sequence, but are not singled out with notes. A new table is proposed to introduce all the fields indicating which ones are accessible via IDENTIFY, DISCOVER, DISCOVER LIST, CONFIGURE ZONE PHY INFORMATION and indicating which fields may be automatically changed by a link reset sequence.

Zone phy information may be saved in non-volatile storage. If an expander changes a value because of the link reset sequence, the saved value is not expected to be changed - just the volatile value. The saved values of two of the fields need to be reported separately from the working values in the DISCOVER response so the zone manager can predict the expander's behavior after a link reset sequence (even if power is cycled).

Suggested changes

4.9.3 Zone operation

4.9.3.1 Zone phy information

Each phy of a zoning expander device shall support the ~~following~~ zone phy information fields defined in table 1.~~:~~

> ~~a)   INSIDE ZPSDS bit;~~
> ~~b)   REQUESTED INSIDE ZPSDS bit;~~
> ~~c)   INSIDE ZPSDS PERSISTENT bit;~~
> ~~d)   ZONE GROUP PERSISTENT bit; and~~
> ~~e)   ZONE GROUP field.~~

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Table 1 — Zone phy information [new table]

Field	Transmitted in IDENTIFY address frame [a]	Indicated in DISCOVER function and DISCOVER LIST function [b]	Attached value indicated in DISCOVER function [c]	Programmed with the CONFIGURE ZONE PHY INFORMATION function [d]	Changeable by the expander device after a link reset sequence [e]
INSIDE ZPSDS bit	No	Yes	No	No	Yes
REQUESTED INSIDE ZPSDS bit	Yes	Yes	Yes	Yes	Yes
INSIDE ZPSDS PERSISTENT bit	Yes	Yes	Yes	Yes	No
ZONE GROUP PERSISTENT bit	No	Yes	No	Yes	No
ZONE GROUP field	No	Yes	No	Yes	Yes

[a] Defined in the IDENTIFY address frame (see 7.8.2).
[b] Defined in the DISCOVER response (see 10.4.3.8) and the DISCOVER LIST response SHORT FORMAT descriptor (see 10.4.3.14.4).
[c] Defined in the DISCOVER response (see 10.4.3.8).
[d] Defined in the zone phy configuration descriptor (see 10.4.3.23.3).
[e] See table 33 in 4.9.4.

All phys in an expander port shall have the same zone phy information (see 4.9.3.1). [new paragraph]

The expander device shall preserve the zone phy information while zoning is disabled and may or may not preserve the zone phy information through power loss (see 4.9.1). If the zoning expander device ~~preserves that~~powers on with zoning ~~is~~ enabled and does not preserve the zone phy information, it shall set the zone phy information as follows:

    a) INSIDE ZPSDS bit set to zero;
    b) REQUESTED INSIDE ZPSDS bit set to zero;
    c) INSIDE ZPSDS PERSISTENT bit set to zero;
    d) ZONE GROUP PERSISTENT bit set to zero; and
    e) ZONE GROUP field set to 00h.

If the zoning expander device does not power on with zoning enabled, it may set set the zone phy information to any values but should set them as follows:

    a) INSIDE ZPSDS bit set to zero;
    b) REQUESTED INSIDE ZPSDS bit set to zero;
    c) INSIDE ZPSDS PERSISTENT bit set to zero;
    d) ZONE GROUP PERSISTENT bit set to zero; and
    e) ZONE GROUP field set to 00h.

The INSIDE ZPSDS bit indicates if the phy is inside or on the boundary of a ZPSDS. An INSIDE ZPSDS bit set to zero indicates that the phy is attached to an end device, an expander device that does not support zoning, or a zoning expander device with zoning disabled, or a zoning expander device with zoning enabled that is outside the ZPSDS (i.e., is in another ZPSDS). An INSIDE ZPSDS bit set to one indicates that the phy is attached to a zoning expander device with zoning enabled and is thus inside a ZPSDS. The INSIDE ZPSDS bit only changes following a link reset sequence (see 4.9.4), based on:

    a) the REQUESTED INSIDE ZPSDS bit;
    b) the REQUESTED INSIDE ZPSDS bit received in the incoming IDENTIFY address frame (see 7.8.2);
    c) the INSIDE ZPSDS PERSISTENT bit; and

d)   the INSIDE ZPSDS PERSISTENT bit received in the incoming IDENTIFY address frame.

The REQUESTED INSIDE ZPSDS bit is used to establish the boundary of the ZPSDS. The REQUESTED INSIDE ZPSDS bit ~~is transmitted in the IDENTIFY address frame (see 7.8.2) to the attached phy and~~ is used to determine the values of other zone phy information fields after a link reset sequence (see 4.9.4).

> ~~NOTE 1 - The value of the REQUESTED INSIDE ZPSDS bit may be changed by the zoning expander device following a link reset sequence (see 4.9.4).~~

The INSIDE ZPSDS PERSISTENT bit ~~indicates the method~~is used to determine the value of the INSIDE ZPSDS bit after a link reset sequence (see 4.9.4). ~~The INSIDE ZPSDS PERSISTENT bit is transmitted in the IDENTIFY address frame (see 7.8.2).~~

The ZONE GROUP field ~~specifies~~contains the zone group to which the phy belongs. The zone group of the SMP initiator port and SMP target port in a zoning expander device shall be ~~1~~01h. 4.9.3.2 defines more about zone groups.

The ZONE GROUP PERSISTENT bit ~~specifies the method of determining~~ is used to determine the zone group of the phy after a link reset sequence when the INSIDE ZPSDS bit is set to zero (see 4.9.4).

4.9.4 Zone phy information and link reset sequences

At the completion of a link reset sequence (see 4.4), if a SATA device is attached to an expander phy, the zoning expander device with zoning enabled shall set the INSIDE ZPSDS bit to zero for that expander phy.

At the completion of a link reset sequence, if a SATA device is not attached to an expander phy, the zoning expander device with zoning enabled shall update the zone phy information fields as defined in table 33 based on:

a)   the REQUESTED INSIDE ZPSDS bit and the INSIDE ZPSDS PERSISTENT bit in the zone phy information (i.e., the bits transmitted in the outgoing IDENTIFY address frame (see 7.8.2)); and

b)   the REQUESTED INSIDE ZPSDS bit and INSIDE ZPSDS PERSISTENT bit received in the incoming IDENTIFY address frame.

Table 33 — Zone phy information fields after a link reset sequence

REQUESTED INSIDE ZPSDS bit		INSIDE ZPSDS PERSISTENT bit		Zone phy information field changes
Transmitted	**Received**	**Transmitted**	**Received**	
0	0 or 1	0 or 1	0 or 1	The zoning expander device shall set the INSIDE ZPSDS bit to zero.
1	0			
1	1	0	0	If the SAS address received in the IDENTIFY address frame during the identification sequence is different from the SAS address prior to the completion of the link reset sequence, then the zoning expander device shall [a]: a) set the REQUESTED INSIDE ZPSDS bit to zero; and b) set the INSIDE ZPSDS bit to zero. If the SAS address received in the IDENTIFY address frame during the identification sequence is the same as the SAS address prior to the completion of the link reset sequence, then the zoning expander device shall [a]: a) set the INSIDE ZPSDS bit to one; and b) set the ZONE GROUP field to ~~one~~01h.
		0	1	
		1	0	
		1	1	The zoning expander device shall [a]: a) set the INSIDE ZPSDS bit to one; and b) set the ZONE GROUP field to ~~one~~01h.
[a] If the zoning expander device preserves zone phy information through power loss, it shall change only the volatile settings and shall not change the saved settings.				

If the ZONE GROUP PERSISTENT bit is set to one, then a link reset sequence (see 4.4) shall not cause the zone group of an expander phy to change unless the INSIDE ZPSDS bit changes from zero to one as specified in table 33. If the ZONE GROUP PERSISTENT bit is set to zero, then table 34 specifies events based on the initial condition of an expander phy that shall cause a zoning expander device with zoning enabled to change the ZONE GROUP field of the expander phy to its default value (e.g., ~~zero~~00h).

Table 34 — Events that cause the ZONE GROUP field to be set to its default value when the ZONE GROUP PERSISTENT bit set to zero

Initial condition	Event after the initial condition is established
Completed link reset sequence with a SAS device attached	A subsequent link reset sequence completes and: a) the SAS address received in the IDENTIFY address frame (see 7.8.2) during the identification sequence is different from the SAS address prior to the completion of the link reset sequence; or b) a SATA device is attached.

Completed link reset sequence with a SATA device attached	Either:
	a) A subsequent link reset sequence completes and:
	   A) a hot-plug timeout (see 6.7.5) occurred between the time of the initial condition and the time the link reset sequence completed;
	   B) the zoning expander device has detected the possibility that a new SATA device has been inserted. The method of detection is outside the scope of this standard (e.g., an enclosure services process reports a change in the ELEMENT STATUS CODE field in the Device or Array Device element (see SES-2), or a change in the WORLD WIDE NAME field in the attached SATA device's IDENTIFY DEVICE or IDENTIFY PACKET DEVICE data (see ATA8-ACS)); or
	   C) a SAS phy or expander phy is attached;
	   or
	b) The expander phy is disabled with the SMP PHY CONTROL function (see 10.4.3.26) DISABLE phy operation.

4.9.6 Zone configuration

4.9.6.4 Activate step

The activate step copies the zoning expander shadow register values to the zoning expander active values. The active zone manager issues one of the following:

a) a Broadcast (Zone Activate) (see 4.1.13); or
b) an SMP ZONE ACTIVATE request (see 10.4.3.20) to all locked zoning expander devices.

After a locked zoning expander device receives a Broadcast (Zone Activate) or processes an SMP ZONE ACTIVATE request, then the zoning expander device ~~sets~~shall set the zoning expander active values equal to the zoning expander shadow values and, if it preserves zone phy information through power cycles, shall update the saved values in non-volatile storage.

If the active zone manager receives an SMP ZONE ACTIVATE response with the FUNCTION RESULT field set to ZONE LOCK VIOLATION (see 10.4.3.2), then it should unlock all locked zoning expander devices.

The activate step may be skipped when a locked zoning expander device is unlocked:

a) by a zone manager with a higher SAS address during the lock step (see 4.9.6.2); or
b) because the zone lock inactivity timer expires.

10.4.3 SMP functions

10.4.3.8 DISCOVER function

The DISCOVER function returns information about the specified phy. This SMP function provides information from the IDENTIFY address frame received by the phy and additional phy-specific information. This SMP function shall be implemented by all management device servers.

> NOTE 2 - The DISCOVER LIST function (see 10.4.3.14) returns information about one or more phys.

Table 35 defines the request format.

Table 35 — DISCOVER request

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (40h)							
1	FUNCTION (10h)							
2	Reserved							
3	REQUEST LENGTH (02h)							
4	Reserved							
7								
8	Reserved							IGNORE ZONE GROUP
9	PHY IDENTIFIER							
10	Reserved							
11								
12	(MSB)							
				CRC				
15								(LSB)

The SMP FRAME TYPE field shall be set to 40h.

The FUNCTION field shall be set to 10h.

The REQUEST LENGTH field shall be set to 02h. For compatibility with previous versions of this standard, a REQUEST LENGTH field set to 00h specifies that there are 2 dwords before the CRC field.

An IGNORE ZONE GROUP bit set to one specifies that the management device server shall return information about the specified phy (i.e., the phy specified by the PHY IDENTIFIER field) regardless of the zone permission table.

An IGNORE ZONE GROUP bit set to zero specifies that the management device server shall:

    a) if the SMP initiator port has access to the specified phy based on the zone permission table, return the requested information; and
    b) if the SMP initiator port does not have access to the specified phy, return a function result of PHY VACANT in the response frame.

If the management device server is not in a zoning expander device with zoning enabled, it shall ignore the IGNORE ZONE GROUP bit.

The PHY IDENTIFIER field specifies the phy (see 4.2.8) for which the information is being requested.

The CRC field is defined in 10.4.3.1.

Table 36 defines the response format.

Table 36 — DISCOVER response (part 1 of 2)

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (41h)							
1	FUNCTION (10h)							
2	FUNCTION RESULT							
3	RESPONSE LENGTH (17h)							
4	(MSB) EXPANDER CHANGE COUNT							
5								(LSB)
6	Reserved							
8								
9	PHY IDENTIFIER							
10	Reserved							
11								
12	Reserved	ATTACHED DEVICE TYPE			ATTACHED REASON			
13	Reserved				NEGOTIATED LOGICAL LINK RATE			
14	Reserved				ATTACHED SSP INITIATOR	ATTACHED STP INITIATOR	ATTACHED SMP INITIATOR	ATTACHED SATA HOST
15	ATTACHED SATA PORT SELECTOR	Reserved			ATTACHED SSP TARGET	ATTACHED STP TARGET	ATTACHED SMP TARGET	ATTACHED SATA DEVICE
16	SAS ADDRESS							
23								
24	ATTACHED SAS ADDRESS							
31								
32	ATTACHED PHY IDENTIFIER							
33	Reserved					ATTACHED INSIDE ZPSDS PERSISTENT	ATTACHED REQUESTED INSIDE ZPSDS	ATTACHED BREAK_REPLY CAPABLE
34	Reserved							
39								
40	PROGRAMMED MINIMUM PHYSICAL LINK RATE				HARDWARE MINIMUM PHYSICAL LINK RATE			
41	PROGRAMMED MAXIMUM PHYSICAL LINK RATE				HARDWARE MAXIMUM PHYSICAL LINK RATE			
42	PHY CHANGE COUNT							
43	VIRTUAL PHY	Reserved			PARTIAL PATHWAY TIMEOUT VALUE			

Table 36 — DISCOVER response (part 2 of 2)

Byte\Bit	7	6	5	4	3	2	1	0
44	Reserved				ROUTING ATTRIBUTE			
45	Reserved	CONNECTOR TYPE						
46	CONNECTOR ELEMENT INDEX							
47	CONNECTOR PHYSICAL LINK							
48	Reserved							
49								
50	Vendor specific							
51								
52	ATTACHED DEVICE NAME							
59								
60	~~Reserved~~	REQUESTED INSIDE ZPSDS CHANGED BY EXPANDER	INSIDE ZPSDS PERSISTENT	REQUESTED INSIDE ZPSDS	~~Reserved~~ SAVED REQUESTED INSIDE ZPSDS	ZONE GROUP PERSISTENT	INSIDE ZPSDS	ZONING ENABLED
61	~~Reserved~~ SAVED ZONE GROUP							
62	Reserved							
63	ZONE GROUP							
64	SELF-CONFIGURATION STATUS							
65	SELF-CONFIGURATION LEVELS COMPLETED							
66	Reserved							
67								
68	SELF-CONFIGURATION SAS ADDRESS							
75								
76	Reserved							
91								
92	Reserved							
93								
94	REASON				NEGOTIATED PHYSICAL LINK RATE			
95	Reserved							HARDWARE MUXING SUPPORTED
96	(MSB)				CRC			
99								(LSB)

The SMP FRAME TYPE field shall be set to 41h.

The FUNCTION field shall be set to 10h.

The FUNCTION RESULT field is defined in 10.4.3.2.

The RESPONSE LENGTH field shall be set to 17h. For compatibility with previous versions of this standard, a RESPONSE LENGTH field set to 00h indicates that there are 12 dwords before the CRC field.

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A REQUESTED INSIDE ZPSDS CHANGED BY EXPANDER bit set to one indicates that the zoning expander device set the REQUESTED INSIDE ZPSDS bit to zero in the zone phy information at the completion of the last link reset sequence. A REQUESTED INSIDE ZPSDS CHANGED BY EXPANDER bit set to zero indicates that the zoning expander device did not set the REQUESTED INSIDE ZPSDS bit to zero in the zone phy information at the completion of the last link reset sequence.

> NOTE 3 - The zone manager may use the REQUESTED INSIDE ZPSDS CHANGED BY EXPANDER bit to determine why the REQUESTED INSIDE ZPSDS bit has changed in the DISCOVER response from the value to which it last set the bit.

The INSIDE ZPSDS PERSISTENT bit contains the value of the INSIDE ZPSDS PERSISTENT bit in the zone phy information (see 4.9.3.1).

The REQUESTED INSIDE ZPSDS bit contains the value of the REQUESTED INSIDE ZPSDS bit in the zone phy information (see 4.9.3.1).

The SAVED REQUESTED INSIDE ZPSDS bit contains the value of the REQUESTED INSIDE ZPSDS bit in the zone phy information that is used after power on (see 4.9.3.1).

The ZONE GROUP PERSISTENT bit contains the value of the ZONE GROUP PERSISTENT bit in the zone phy information (see 4.9.3.1).

The INSIDE ZPSDS bit contains the value of the INSIDE ZPSDS bit in the zone phy information (see 4.9.3.1).

A ZONING ENABLED bit set to one indicates that zoning is enabled in the expander device. A ZONING ENABLED bit set to zero indicates that zoning is disabled in the expander device.

The SAVED ZONE GROUP field contains the value of the ZONE GROUP field in the zone phy information that is used after power on (see 4.9.3.1).

The ZONE GROUP field contains the value of the ZONE GROUP field in the zone phy information (see 4.9.3.1).

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The CRC field is defined in 10.4.3.2.

10.4.3.20 ZONE ACTIVATE function

The ZONE ACTIVATE function causes the zoning expander device to set the zoning expander active values equal to the zoning expander shadow values (see 4.9.6.4). All zoning expander devices shall support this function. This function is an SMP zone configuration function (see 4.9.6.3).

Table 37 defines the request format.

Table 37 — ZONE ACTIVATE request

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (40h)							
1	FUNCTION (87h)							
2	Reserved							
3	REQUEST LENGTH (01h)							
4	(MSB)			EXPECTED EXPANDER CHANGE COUNT				
5								(LSB)
6				Reserved				
7								
8	(MSB)			CRC				
11								(LSB)

The SMP FRAME TYPE field shall be set to 40h.

The FUNCTION field shall be set to 87h.

The REQUEST LENGTH field shall be set to 01h.

The EXPECTED EXPANDER CHANGE COUNT field is defined in the CONFIGURE GENERAL request (see 10.4.3.16).

The CRC field is defined in 10.4.3.1.

Table 38 defines the response format.

Table 38 — ZONE ACTIVATE response

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (41h)							
1	FUNCTION (87h)							
2	FUNCTION RESULT							
3	RESPONSE LENGTH (00h)							
4	(MSB)			CRC				
7								(LSB)

The SMP FRAME TYPE field shall be set to 41h.

The FUNCTION field shall be set to 87h.

The FUNCTION RESULT field is defined in 10.4.3.2.

The RESPONSE LENGTH field shall be set to 00h.

The CRC field is defined in 10.4.3.2.

10.4.3.21 ZONE UNLOCK function

The ZONE UNLOCK function unlocks a zoning expander device (see 4.9.6.5). All zoning expander devices shall support this function. This function is an SMP zone configuration function (see 4.9.6.3).

If a locked zoning expander device processes a ZONE UNLOCK request from the active zone manager then the management device server shall set the ZONE LOCKED bit to zero in the REPORT GENERAL response (see 10.4.3.3). If the CONFIGURING bit is set to one in the REPORT GENERAL response then the zoning expander device shall set the CONFIGURING bit to zero and originate a Broadcast (Change) from either:

    a)   each zone group whose zone permission table entries or zone phy information has changed; or
    b)   zone group 1.

Table 39 defines the request format.

Table 39 — ZONE UNLOCK request

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (40h)							
1	FUNCTION (88h)							
2	Reserved							
3	REQUEST LENGTH (01h)							
4	Restricted							
5								
6	Reserved							ACTIVATE REQUIRED
7	Reserved							
8	(MSB)							
				CRC				
11								(LSB)

The SMP FRAME TYPE field shall be set to 40h.

The FUNCTION field shall be set to 88h.

The REQUEST LENGTH field shall be set to 01h.

An ACTIVATE REQUIRED bit set to one specifies that the management device server shall unlock the zoning expander device only if the activate step has been completed. An ACTIVATE REQUIRED bit set to zero specifies that the management device server shall unlock the zoning expander device regardless of whether the activate step has been completed.

The CRC field is defined in 10.4.3.1.

Table 40 defines the response format.

Table 40 — ZONE UNLOCK response

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (41h)							
1	FUNCTION (88h)							
2	FUNCTION RESULT							
3	RESPONSE LENGTH (00h)							
4	(MSB)							
7	CRC							(LSB)

The SMP FRAME TYPE field shall be set to 41h.

The FUNCTION field shall be set to 88h.

The FUNCTION RESULT field is defined in 10.4.3.2.

The RESPONSE LENGTH field shall be set to 00h.

The CRC field is defined in 10.4.3.2.

10.4.3.23 CONFIGURE ZONE PHY INFORMATION function

10.4.3.23.1 CONFIGURE ZONE PHY INFORMATION function overview

The CONFIGURE ZONE PHY INFORMATION function configures zone phy information for one or more phys in a locked zoning expander device. This function shall be supported by all zoning expander devices. This function is an SMP zone configuration function (see 4.9.6.3).

SMP zone configuration functions change the zoning expander shadow values. These do not become zoning expander active values until the activate step (see 4.9.6.4). If the expander device preserves zone phy information across power cycles, the activate step also updates the values saved in non-volatile storage.

10.4.3.23.2 CONFIGURE ZONE PHY INFORMATION request

Table 41 defines the request format.

Table 41 — CONFIGURE ZONE PHY INFORMATION request

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (40h)							
1	FUNCTION (8Ah)							
2	Reserved							
3	REQUEST LENGTH ((n - 7) / 4)							
4	(MSB)							
5	EXPECTED EXPANDER CHANGE COUNT							(LSB)
6	Reserved							
7	NUMBER OF ZONE PHY CONFIGURATION DESCRIPTORS							
	Zone phy configuration descriptor list							
8	Zone phy configuration descriptor (first)(see table 42 in 10.4.3.23.3)							
11								
...	...							
n - 7	Zone phy configuration descriptor (last)(see table 42 in 10.4.3.23.3)							
n - 4								
n - 3	(MSB)							
n	CRC							(LSB)

The SMP FRAME TYPE field shall be set to 40h.

The FUNCTION field shall be set to 8Ah.

The REQUEST LENGTH field specifies the number of dwords that follow, not including the CRC field.

The EXPECTED EXPANDER CHANGE COUNT field is defined in the SMP CONFIGURE GENERAL request (see 10.4.3.16).

The NUMBER OF ZONE PHY CONFIGURATION DESCRIPTORS field specifies the number of zone phy configuration descriptors in the request. If the number of zone phy configuration descriptors exceeds the number of phys of the zoning expander device then the function shall report INVALID REQUEST FRAME LENGTH in the response FUNCTION RESULT field.

The zone phy configuration descriptor list contains zone phy configuration descriptors as defined in 10.4.3.23.3.

The CRC field is defined in 10.4.3.1.

10.4.3.23.3 Zone phy configuration descriptor

Table 42 defines the zone phy configuration descriptor.

Table 42 — Zone phy configuration descriptor

Byte\Bit	7	6	5	4	3	2	1	0
0	PHY IDENTIFIER							
1	Reserved		INSIDE ZPSDS PERSISTENT	REQUESTED INSIDE ZPSDS	Reserved	ZONE GROUP PERSISTENT	Reserved	
2	Reserved							
3	ZONE GROUP							

The PHY IDENTIFIER field specifies the phy to which the zone phy configuration descriptor information shall be applied. If the PHY IDENTIFIER field specifies a phy that does not exist then the management device server shall report PHY DOES NOT EXIST in the response FUNCTION RESULT field.

The INSIDE ZPSDS PERSISTENT bit specifies the value of the INSIDE ZPSDS PERSISTENT bit in the zone phy information (see 4.9.3.1).

The REQUESTED INSIDE ZPSDS bit specifies the value of the REQUESTED INSIDE ZPSDS bit in the zone phy information (see 4.9.3.1).

The ZONE GROUP PERSISTENT bit specifies the value of the ZONE GROUP PERSISTENT bit in the zone phy information (see 4.9.3.1).

The ZONE GROUP field specifies the value of the ZONE GROUP field in the zone phy information (see 4.9.3.1). Zone group values between 128 and 255, inclusive, are reserved.

10.4.3.23.4 CONFIGURE ZONE PHY INFORMATION response

Table 43 defines the response format.

Table 43 — CONFIGURE ZONE PHY INFORMATION response

Byte\Bit	7	6	5	4	3	2	1	0
0	SMP FRAME TYPE (41h)							
1	FUNCTION (8Ah)							
2	FUNCTION RESULT							
3	RESPONSE LENGTH (00h)							
4	(MSB)							
7	CRC							(LSB)

The SMP FRAME TYPE field shall be set to 41h.

The FUNCTION field shall be set to 8Ah.

The FUNCTION RESULT field is defined in 10.4.3.2.

The RESPONSE LENGTH field shall be set to 00h.

The CRC field is defined in 10.4.3.2.