

To: INCITS T10 Committee

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Date: 18 February 2003

Document: T10/03-101r0

Subject: Add Version field to Port Login IU in ADT

## 1. General

During the development of the ADT standard, there has been some concern about what will happen if two devices attached using an ADT transport layer should support different version of the standard. Several proposals have been made attempting to specify action to be taken when frame sizes are incorrect due to fields that may have been added in later revisions. This proposal allows the revision of the ADT standard to be negotiated to simplify this issue.

## 2. Proposal

Add a revision field to the Port Login IU in ADT. This field will contain both a major revision and a minor revision. Describe a method of negotiating to a revision that is known and supported by both ports.

### 2.1 *Current Port Login IU*

The following table shows the Port Login IU as it is defined in ADT revision 1a:

Bit Byte	7	6	5	4	3	2	1	0
0	ACCEPT	Reserved					Vendor Specific	
1	Reserved					MAXIMUM ACK OFFSET		
2 -3	MAXIMUM PAYLOAD SIZE							
4 - 5	BAUD RATE							

### 2.2 *Proposed Changes*

Change this table to the following, adding a major version field and a minor version field.

Bit Byte	7	6	5	4	3	2	1	0
0	ACCEPT	Reserved					Vendor Specific	
1	Reserved					MAJOR REVISION		
2	MINOR REVISION							
3	Reserved					MAXIMUM ACK OFFSET		
4 - 5	MAXIMUM PAYLOAD SIZE							
6 - 7	BAUD RATE							

Add the following description for the new fields:

Ports claiming compliance with this standard at draft revision shall set the MAJOR REVISION field to 0. Ports claiming compliance with this standard at released version shall set the MAJOR REVISION field to 1.

Port claiming compliance with a draft version of this standard shall set the MINOR REVISION field to the revision of the draft standard. Ports claiming compliance with this standard at released level shall set the MINOR REVISION to 0.

When initiating a Port Login exchange, a port shall set the MAJOR REVISION field to the highest value it can support and the MINOR REVISION field to the highest draft standard revision it can support for the reported major revision. A port that was designed to support this standard at release level shall initiate a Port Login exchange with the MAJOR REVISION field set to 1 and the MINOR REVISION field set to 0. During the negotiation process, a port that can not support the revision in a Port Login IU that it receives shall reply with a reduced revision level. The revision level shall be reduced as follows:

- 1) If the port supports the major revision level in the received Port Login IU, but not the minor revision level in the IU, it shall respond with the same major revision level. The minor revision level shall be set to the highest it can support that is lower than the minor revision in the received Port Login IU. If the device does not support the major revision with a lower minor revision value, it shall respond as if it does not support the major revision level.
- 2) If the port does not support the major revision in the Port Login IU it receives, it shall respond with the highest major revision it does support that is lower than the major revision in the received Port Login IU. The minor revision shall be set to the highest level supported at that major revision level.

All fields in the Port Login IU sent by a port shall comply with the revision level specified by the MAJOR REVISION and MINOR REVISION fields. Once the Port Login process has completed, both ports shall operate as defined by the major revision and minor revision values in the accepted Port Login IU.