

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Replacement TSS&amp;TP Section 6.5.11</b>	
Date Submitted	<b>2003-03-04</b>	
Source(s)	Ken Stanwood Ensemble Communications 9890 Towne Centre Dr. San Diego, CA 92121	Voice: +1 858 404 6559 Fax: +1 858 458 9860 <a href="mailto:ken@ensemcle.com">mailto:ken@ensemcle.com</a>
Re:	1802.16.2-03/01 Call for comments and contributions regarding C1802.16.2-03/01r1.	
Abstract	Edited Structure Section to be more in line with rest of document.	
Purpose	Replace current section 6.5.11	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures < <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a> >, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair < <a href="mailto:chair@wirelessman.org">mailto:chair@wirelessman.org</a> > as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site < <a href="http://ieee802.org/16/ipr/patents/notices">http://ieee802.org/16/ipr/patents/notices</a> >.	

## Replacement TSS&TP Section 6.5.11

*Ken Stanwood*  
*Ensemble Communications*

### 0.0.1 ATM Convergence Sublayer- BS

#### 0.0.1.1 Capabilities

**Table 1 ATM Convergence Sublayer - Capabilities**

TP/BS/ACS/ATM/CA-000	<p>Reference:</p> <p>Initial Condition: SS has transmitted TFTP-CPLT to BS. (SS is authenticated and registered.)</p> <p>Stimulus: BS is stimulated to transmit a DSA-REQ message instructing the SS to create and activate both the UL and DL portions of an ATM service. The SS transmits to the BS a DSA-RSP message accepting the creation and activation of both the UL and DL portions of the service.</p> <p>Expected Behavior: The SS and BS shall pass user data on the service.</p> <p>Repeat this test for all ATM service types supported by the BS.</p>
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### 0.0.1.2 Valid Behavior

**Table 2 ATM Convergence Sublayer - Valid Behavior**

TP/BS/ACS/ATM/BV-000	<p>Reference: IEEE 1802.16.1, Table A127/1,2</p> <p>Initial condition: Base station is operational. Four downlink services are set up, 2 for one SS, 2 for another. At least one service is VC switched and at least one is VP switched.</p> <p>Stimulus: ATM cells received from backhaul (ingress).</p> <p>Expected behavior: BS forwards ATM cells on correct CID to correct SS. ATM cells with VPI/VCI not mapped to a service are discarded. Cells are correctly encapsulated.</p>
TP/BS/ACS/ATM/BV-001	<p>Reference: IEEE 1802.16.1, Table A127/1,2</p> <p>Initial condition: Base station is operational. At least one VC switched bi-directional service and at least one bi-directional VP switched service are set up. No PHS.</p> <p>Stimulus: ATM cells received from backhaul (ingress) and from the airlink.</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with VPI/VCI preserved in the MAC PDU (53-byte SDU). ATM cells with VPI/VCI not mapped to a service are discarded. BS forwards cells from the airlink to the backhaul, preserving the VPI/VCI from the MAC PDU.</p>

**Table 2 ATM Convergence Sublayer - Valid Behavior**

TP/BS/ACS/ATM/BV-002	<p>Reference: IEEE 1802.16.1, Table A127/2</p> <p>Initial condition: Base station is operational. At least one VC switched downlink service is set up. No PHS. At least 2 classifiers are set up.</p> <p>Stimulus: ATM cells received from backhaul (ingress).</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with VPI/VCI preserved in the MAC PDU (53-byte SDU). ATM cells with VPI/VCI not mapped to a service are discarded.</p>
TP/BS/ACS/ATM/BV-003	<p>Reference: IEEE 1802.16.1, Table A127/1</p> <p>Initial condition: Base station is operational. At least one VP switched downlink service is set up. No PHS. At least 2 classifiers are set up. At least one of the classifiers has at least 2 VCIs.</p> <p>Stimulus: ATM cells received from backhaul (ingress).</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with VPI/VCI preserved in the MAC PDU (53-byte SDU). ATM cells with VPI/VCI not mapped to a service are discarded.</p>
TP/BS/ACS/ATM/BV-004	<p>Reference: IEEE 1802.16.1, Table A127/4</p> <p>Initial condition: Base station is operational. At least one VC switched bi-directional service is set up. PHS.</p> <p>Stimulus: ATM cells received from backhaul (ingress) and from the airlink.</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with 49-byte SDU format. ATM cells with VPI/VCI not mapped to a service are discarded. BS forwards ATM cells from airlink on backhaul, correctly reconstituting VPI/VCI and remainder of ATM header from CID and 49-byte SDU format</p>
TP/BS/ACS/ATM/BV-005	<p>Reference: IEEE 1802.16.1, Table A127/3</p> <p>Initial condition: Base station is operational. At least one VP switched bi-directional service is set up. PHS. Classifier specifies no VCIs.</p> <p>Stimulus: ATM cells received from backhaul (ingress) and from the airlink.</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with 51-byte SDU format. ATM cells with VPI/VCI not mapped to a service are discarded. BS forwards ATM cells from airlink on backhaul, correctly reconstituting VPI/VCI and remainder of ATM header from CID and 51-byte SDU format</p>
TP/BS/ACS/ATM/BV-006	<p>Reference: IEEE 1802.16.1, Table A127/2,4</p> <p>Initial condition: Base station is operational. At least one VP switched bi-directional service is set up. PHS. Classifier with multiple VCI specified.</p> <p>Stimulus: ATM cells received from backhaul (ingress) and from the airlink.</p> <p>Expected behavior: BS forwards ATM cells from backhaul on correct CID with 51-byte SDU format. ATM cells with VPI/VCI not mapped to a service are discarded. BS forwards ATM cells from airlink on backhaul, correctly reconstituting VPI/VCI and remainder of ATM header from CID and 51-byte SDU format</p>
TP/BS/ACS/ATM/BV-007	<p>Reference: IEEE 1802.16.1, Table A127/1,2</p> <p>Initial condition: Base station is operational. At least one downlink service is set up. At least one classifier specified. Cells entering from backhaul that match the classifier, and other cells that do not match the classifier. Those that do not match are being discarded, those that do match are being forwarded.</p> <p>Stimulus: Replace classifier so that originally discarded cells are now forwarded and originally forwarded cells are now discarded.</p> <p>Expected behavior: Originally discarded cells are now forwarded and originally forwarded cells are now discarded.</p>

**Table 2** ATM Convergence Sublayer - Valid Behavior

TP/BS/ACS/ATM/BV-008	<p>Reference: IEEE 1802.16.1, Table A127/1,2</p> <p>Initial condition: End of TP/BS/ACS/ATM/BV-007.</p> <p>Stimulus: Add original version of classifier that was replaced in TP/BS/xxx/xxx/xx-008 so that originally forwarded cells are now forwarded once more, but newly forwarded cells are still forwarded.</p> <p>Expected behavior: Originally forwarded cells are now forwarded once more, but newly forwarded cells are still forwarded.</p>
TP/BS/ACS/ATM/BV-09	<p>Reference: IEEE 1802.16.1, Table A127/1,2</p> <p>Initial condition: End of TP/BS/ACS/ATM/BV-008.</p> <p>Stimulus: Delete version of classifier that was created by replace in TP/BS/xxx/xxx/xx-008 so that originally discarded cells are now discarded once more, but originally forwarded cells are still forwarded.</p> <p>Expected behavior: Originally discarded cells are now discarded once more, but originally forwarded cells are still forwarded.</p>

### 0.0.1.3 Invalid Behavior

All BI tests for the ACS protocol group are covered by the DS protocol group.

### 0.0.1.4 Inopportune Behavior

All BO tests for the ACS protocol group are covered by the DS protocol group.

### 0.0.1.5 Timer

All TI tests for the ACS protocol group are covered by the DS protocol group.

### 0.0.1.6 Message Formats

For all TP/BS/ACS/ATM tests ensure that messages transmitted by the BS contain the correct parameters in the correct order.