
PROJECT	IEEE P802.16 Broadband Wireless Access Study Group	
TITLE	ITU-R 9B/134E (cable modem over BWA) requirements	
SOURCE	Brian Petry 3Com 12230 World Trade Dr. San Diego CA 92128	Voice: 619-674-8533 Fax: 619-676-7533 E-mail: brian_petry@3com.com
DIST	IEEE P802.16 Working Group	
ABSTRACT	I went through the ITU-R 9B/134E contribution, which is a draft proposal to run cable modem protocols over broadband wireless, and distilled what I thought were requirements. Here is the list in a brief, "bulletized" form that I presented to the group at the 5/99 Boulder meeting.	
NOTICE	This document has been prepared to assist the IEEE P802.16. 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.	

ITU-R 9B/134E (BWA cable modem) requirements

1.5-45 Mbps; possibly scale to 310 Mbps
elevation angles up to 40-60 deg.
BTS=Base Transceiver Station
BTS-NSI=BTS Network Side Interface
CMCI=CPE-modem-to-CPE interface
Decent reference diagram (p. 20)
Security interfaces listed in ref. Model
Assumes FDD/TDMA
Cell radius < 15km
Support rain fade=30 dB; fade rate=5dB/sec
Fault isolation, detection and recovery
Must define at least one set of PHY params: modul., FEC, symbol rate, etc.
Line-of-sight
Upstream channel B/W=20 MHz; Downstream=40MHz
Power control required on upstream
10E-9 BER required
Includes protocol stack diagrams
Requires ISO 8802-2 (LLC) TEST & XID PDUs
IP forwarding required, bridging optional
Bandwidth control by BTS: mixture of contention and reservation
CoS and QoS Support
Implicit requirement for video broadcast bypassing MAC layer
Data link security required; specified separately from air interface

No implicit or explicit requirement for STM