

Perspective on the AWS-3 Proceeding

December 4, 2008

Overview

1. Broadband Maximization Plan – the better approach for AWS-3
2. Imposing one company's business plan on AWS-3 is anticompetitive and inefficient
3. M2Z's promises of “free broadband” are illusory

Broadband Maximization Plan

- Asymmetrical pairing of AWS-3 downlink with J Block
- The AWS-3 downlink could be paired with J Block uplink/downlink
- Eliminates TDD adjacent to AWS-1 FDD, along with associated interference
- More efficient because it avoids the need for guard bands
- Facilitates bi-directional use of the new bands at higher speeds
- Allows new entrants, including M2Z, to bid

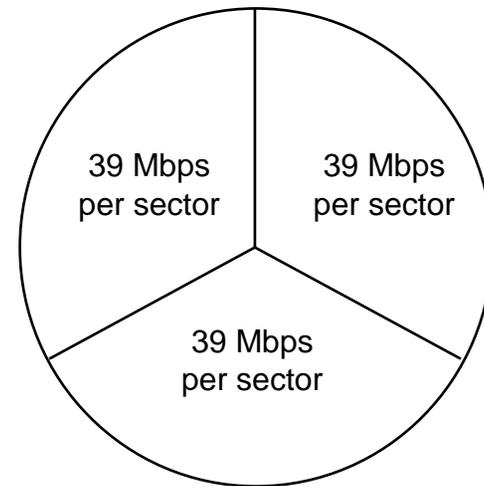
Broadband Maximization Plan: More Efficient; No Interference

- Enables faster and more robust broadband service than under any other proposal in the record
- Allows new entrants to provide wireless broadband services using a variety of technologies, including WiMAX
- Increases spectral efficiency by as much as 40 percent by eliminating the need for guard bands or strict technical limitations
- Does not preclude the Commission from imposing conditions on the licensee(s), including requiring the provision of free service
- Cures the significant interference problems in the adjacent AWS-1 and MSS spectrum

Increases Usable Spectrum

Asymmetric pairing increases the *usable* spectrum from 15 to 30 MHz - with WiMAX technology, asymmetric pairing could provide an *average* capacity per sector of about 39 Mbps – 117 Mbps for a typical three sector cell

	FNPRM TDD	Asymmetric FDD
Total Spectrum	25 MHz	30 MHz
Guard Bands	10 MHz	-
Usable Spectrum	15 MHz	30 MHz
DL Capacity	17.2 Mbps	35 Mbps
UL Capacity	5.7 Mbps	4 Mbps
Total Capacity	23 Mbps	39 Mbps



Typical 3 sector cell

40% More Efficient Than the *Further Notice* TDD Proposal

- Efficiency = capacity ÷ spectrum used (capacity/spectrum)

	FNPRM TDD	Asymmetric FDD
Total Spectrum	25 MHz	30 MHz
Guard Bands	10 MHz	-
Usable Spectrum	15 MHz	30 MHz
Capacity	23 Mbps	39 Mbps
Efficiency	0.92 bps/Hz	1.30 bps/Hz

Asymmetric Pairing Has Wide Support

- AT&T
- Ericsson
- SpectrumCo
- Terrestar
- 3G Americas
- MetroPCS
- Cellular South
- Cincinnati Bell Wireless
- CTIA – The Wireless Association®
- Independent Telephone & Telecommunications Alliance
- National Telecommunications Cooperative Association
- NTELOS Wireless
- Rural Cellular Association
- Rural Telecommunications Group, Inc.
- Smith Bagley, Inc. dba CellularOne of NE Arizona
- U.S. Cellular
- U.S. Chamber of Commerce
- 3 Rivers Communications
- Advanced Communications Technology, Inc.
- Alliance Communications Cooperative, Inc.
- BEK Communications Cooperative
- Big Bend Telephone Company
- Buggs Island Telephone Cooperative
- Central Utah Telephone, Inc.
- Communications 1 Network
- Emery Telcom
- Haviland Telephone Company, Inc.
- Horizon Telcom, Inc.
- Kennebec Telephone Company, Inc.
- Ligtel Communications, Inc.
- Main Street Broadband, LLC
- New Ulm Telecom, Inc.
- Peñasco Valley Telephone Cooperative, Inc.
- Smithville Telephone Company, Inc.
- South Slope Cooperative Communications Co.
- Uintah Basin Telecommunications Association, Inc.
- Van Buren Telephone Co., Inc.

Tailoring Service Rules to Single Business Plan Will Preclude Competitive Auction

- Proposed rules closely track M2Z's business plan
- When the Commission tailors an auction to the business plan of a single company, there is little if any competition for the spectrum
 - 1670-1675 MHz Band
 - Only two qualified bidders
 - Only a single bid
 - No commercial service
 - D Block
 - Only one bidder
 - Reserve price not reached
 - License unassigned

Preventing a \$3 Billion Auction Windfall

Encumbered Auction

- M2Z plans have valued AWS-3 spectrum at \$50 million.
- No enforcement mechanisms in pending proposals that carry penalties if free broadband conditions are not met.
- No requirement of surety to deter spectrum speculation.

*** Source: e.g., *The Brattle Group, LSI Presentation 9/18/08.***

Fully Competitive Auction

- Economists value this 20 MHz of AWS-3 spectrum at \$3 billion, were it to be auctioned without restrictions. *
- Estimate is based on 700 MHz E-Block, AWS-1 prices.
- Eliminating special conditions would maximize competition, ensure rules not tailored to one firm's business model.
- Would eliminate unnecessary litigation liability, revenue risk to the U.S. government.

Bottom Line: The AWS-3 proposal would result in an auction windfall that would subsidize the business plan of a new start-up at a \$3 billion cost to taxpayers.

M2Z's Promises Are Illusory

- “Free broadband” is not free and not broadband
- Requires purchase of PC/laptop + \$250 network device
- 768 kbps is hardly broadband today; it is “already *below* the lowest available speed offered by commercial cable modem providers.”
 - Free Press Comments, WC Docket No. 05-337, at 23 (filed November 26, 2008) (emphasis in original)
- By 2013, 768 kbps will be the equivalent of dial-up service
- In this financial climate, it is unrealistic to think that M2Z could obtain the \$43 billion estimated to build and operate a new national network
- Broadband access for low-income people can be addressed more directly through the Lifeline program
 - T-Mobile and CTIA support expanding Lifeline program to include broadband service
- Promise of service for rural America is illusory – build-out to cover 95% of the population would cover only 40% of geography

Free “Broadband” Falls Far Short of *Currently* Available Broadband Offerings

	Downstream Speed	Technology
FNPRM “Free Broadband”	768 kbps	WiMAX
3.5 G Wireless	Up to 7.2 Mbps	HSPA
Wi-Fi Hotspots	11 Mbps	802.11b
Digital Subscriber Link	768 kbps to 6 + Mbps	ADSL
FiOS	10 Mbps to 50 Mbps	Fiber optic cable
Cable Modem	6 Mbps to 50 Mbps	Hybrid Fiber Coax (HFC)

What People Are Saying About M2Z's Business Plan and the Proposed AWS-3 Rules

■ No Financing for Nationwide AWS-3 Start-up

- “Given the dislocation in the credit markets, it remains to be seen what entity would be able to raise the capital required to build a nationwide wireless network, with the provision of free service as part of the business plan.” UBS Investment Research
- “If you're looking at start-ups and new entrants to come in this space, boy, that seems like a tall order to me under current finance conditions.” Former FCC Chairman Michael Powell
- “For a new player, you basically have to have all your capital up front.” New America Foundation

■ Free Service Would Be Poor Quality and Deter Broadband Deployment

- “Chairman Kevin Martin is trying to saddle lower income and communities of color with slow, low-quality Internet technology with their AWS-3 scheme.” Black Leadership Forum
- “Everybody likes the concept – free broadband, free access to the Internet – but in practice, the way the model is set up, it may present problems.” Free Press
- “The FCC should scrap its scheme to give away \$2 billion of radio spectrum assets to billionaire venture capitalists at the expense of rural, urban, and low-wealth communities of color.” Black Leadership Forum
- “The plan will hamper broadband deployment by destabilizing the marketplace and deterring investment in rural broadband deployment.” Rural Telecommunications Group
- “Rather than foster universal broadband service, the FCC AWS-3 plan will discourage it.” Rural Telecommunications Group

What People Are Saying About M2Z's and the Proposed AWS-3 Rules (continued)

▪ Interference Harms Consumers

- Harmful interference “would potentially be magnified to those wireless customers using hearing-aid compatible handsets with their hearing aids or cochlear implants.” Hearing Loss Association of America
- “Wireless consumers cannot be in a position in which the most important calls they make, 9-1-1 calls, are disrupted or blocked.” National Emergency Number Association

▪ Free Market Principles Should Guide FCC

- “The FCC’s proposal ... run[s] counter to the free market principles that have so successfully guided the wireless and broadband industries to date.” U.S. Chamber of Commerce
- “The FCC should not engage in ‘designer allocations,’ crafting rules to require or benefit one specific business model of the FCC’s choosing.” Rural Telecommunications Group
- “The FCC should not be in the business of picking winners and losers or of regulating the success of one business plan over another.” Rural Telecommunications Group

▪ Proposed Rules Have a Disastrous Economic Impact

- “The unencumbered license would be worth approximately \$3 billion at auction.” Dr. George S. Ford, Phoenix Center
- “M2Z’s proposal would likely do more harm than good by slowing the pace of future innovation among broadband access providers, and by costing American taxpayers billions of dollars in lost auction revenue.” Criterion Economics, L.L.C.
- “The economic costs of M2Z’s proposal, in terms of losses in both static efficiency and dynamic efficiency, are real and likely to be sizeable.” Criterion Economics, L.L.C.

T-Mobile is the Competitive Provider

- T-Mobile is the new entrant in wireless broadband – offering a competitive alternative to AT&T, Verizon, and Sprint.
- T-Mobile is already building out broadband wireless networks – in more than 120 major cities before year end – spending billions of dollars in infrastructure investment after having spent billions in the 2006 spectrum auction and clearing the spectrum of Federal users.
- We are the first carrier to launch an Android open handset phone in partnership with Google – the G-1.
- T-Mobile is the industry leader in creative rate plans that continue to offer consumers the best value in wireless and a real alternative to the industry giants.

AWS-1 is Critical

- The AWS-1 band is critical to T-Mobile's broadband wireless initiative.
- The draft orders will not sufficiently address the serious interference problems that will occur if mobile transmissions are allowed in the AWS-3 band.
- Technical experts continue to believe mobile transmissions in the AWS-3 band will lead to significant interference in the adjacent AWS-1 band, which could undermine the real competition and consumer choice T-Mobile brings in the broadband market.

Conclusions

- Given the important spectrum and broadband policies implicated by this proceeding, the new Administration, the new Congress, and the new FCC should have the opportunity to consider them carefully before allocating this band.
- If the Commission nonetheless wishes to act now, the asymmetric pairing plan is superior to the *Further Notice* on all counts.
- The proposal in the *Further Notice* will undermine the real wireless broadband competition that T-Mobile is already providing.