



December 12, 2008

Via Electronic Filing

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW, TW – A325  
Washington, DC 20554

**Re: WT Docket Nos. 07-195 and 04-356 – Notification of Oral Ex Parte  
Presentation**

Dear Ms. Dortch:

On December 11, 2008, Paul Kolodzy, and the undersigned on behalf of M2Z Networks, Inc. met with Julius Knapp, Ira Keltz and Bruce Romano from the Office of Engineering and Technology. Enclosed is a presentation used at the meeting that covers the topics discussed.

Pursuant to Section 1.1206(b) of the Commission rules, an electronic copy of this letter is being filed. Please let me know if you have any questions regarding this submission.

Sincerely,

A handwritten signature in black ink, appearing to read 'Uzoma Onyeije', with a long horizontal flourish extending to the right.

Uzoma Onyeije

cc: Mr. Julius Knapp  
Mr. Ira Keltz  
Mr. Bruce Romano

Innovation. Freedom.

2000 North 14th Street · Suite 600 · Arlington, VA 22201

OFFICE 703.894.9500 FAX 703.894.9501

## Claims of Technical Impediments

### 1. Old Claim → Asymmetric interference

- Assumption of only mobile-mobile interference → discredited by ITU, UK, and 3GPP indicating that base-base interference more likely, but addressable
- Assumption of likely mobile-mobile interference and required testing → FCC OET report indicating that potential of mobile-mobile interference small

### 2. New Claim → TDD spectrum plan is less efficient than FDD spectrum plan

- This has been addressed multiple times in this proceeding.

## Analysis Assumptions

Issue	T-Mobile Assumption	Fact
Guard Band	10 MHz	<p>Technology Dependent, Analysis indicates as low as 4 MHz. The Market, as with 700 MHz C-Block will determine value</p> <p><i>See FCC OET Advanced Wireless Service Interference Tests Results and Analysis Oct 10, 2008, pgs 12-15</i></p>
TDD Spectral Efficiency	<p>1.71 bps/Hz Downlink 1.15 bps/Hz Uplink</p> <p>(no support for these figures provided)</p>	<p>SDMA and Interference Rejection allow 2x improvement over comparable FDD</p> <p>1.4 * 1.8 = 2.52 bps/Hz Downlink 0.8 * 1.8 = 1.44 bps/Hz Uplink</p> <p><a href="http://www.arraycomm.com/serve.php?page=practice">http://www.arraycomm.com/serve.php?page=practice</a></p>
Spectrum Available	<p>30 MHz for T-Mobile Plan</p> <p>25 MHz for AWS-3 Plan</p>	Need to compare equivalent BW for efficiency

## Maximizing Choice and Capacity

		Tech Neutral Plan		T-Mobile Ex Parte		T-Mobile Proposal
		AWS-3	J-Block	AWS-3	J-Block	AWS-3 + J Block
<b>Parameter</b>						
<b>Band</b>		AWS-3	J-Block	AWS-3	J-Block	AWS-3 + J Block
<b>Structure</b>		TDD	TDD	TDD		FDD
<b>Application</b>		Data	Wireless Mic	Data	None	Data
<b>Total Spectrum (MHz)</b>		<b>25</b>	<b>5</b>	<b>25</b>		<b>30</b>
Downlink Analysis	Guard Band (MHz)	4	0	10	0	0
	Usable Spectrum (MHz)	21	5	15	0	25
	Time Division Duplexing	67%	12%	67%	0%	100%
	bps/Hz	2.52	1.4	1.71	0	1.4
	Capacity (Mbps)	35.5	0.84	17.2	0	35
	<b>Total DL Capacity (Mbps)</b>	<b>36.3</b>		<b>17.2</b>		<b>35.0</b>
Uplink Analysis	Guard Band (MHz)	4	0	10	0	4
	Usable Spectrum (MHz)	21	5	15	0	5
	Time Division Duplexing	33%	88%	33%	0%	100%
	bps/Hz	1.44	0.8	1.15	0	0.8
	Capacity (Mbps)	10.0	3.52	5.7	0	4
	<b>Total UL Capacity (Mbps)</b>	<b>13.5</b>		<b>5.7</b>		<b>4.0</b>

- TDD allows for technology neutral selection of communications, a basic tenet of FCC policy
- Direct comparison of 30 MHz solutions clearly indicates Technology Neutral Plan provides over 25% improvement in capacity

## Capacity Comparison

Technology Neutral Plan	Technology Neutral Plan (without J-Block)	T-Mobile Proposal
<p><b>25 MHz AWS TDD</b></p> <p><b>5 MHz J-Block TDD</b></p>	<p><b>25 MHz AWS-3 TDD</b></p>	<p><b>25 MHz AWS-3 FDD</b></p> <p><b>5 MHz J-Block FDD</b></p>
<p><b>49.8 Mbps</b></p>	<p><b>45.5 Mbps</b></p>	<p><b>39 Mbps</b></p>