Project	**IEEE 802.20 Working Group on Mobile Broadband Wireless Access** <**http://grouper.ieee.org/groups/802/20/**>
Title	**Proposed Traffic Modeling Ad Hoc**
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Re:	IEEE 802.20 session #19, March 6-10, 2006
Abstract	The purpose of this contribution is to propose formation of an ad hoc to study the issue of traffic mix in FL/RL and identify relevant realistic assumptions and baselines to be considered as an enhancement to existing IEEE-802.20 Evaluation Criteria requirements that currently lead to highly FL/RL imbalanced system operation.
Purpose	For discussions
Notice	
Release	
Patent Policy	

Problem statement

According to proponents documents C802.20-05-89r1.pdf, C802.20-05-87r1.pdf performance analysis of both MBTDD and MBFDD was done using the following breakdown of the data traffic types:

Forward Link		Reverse Link	
FTP	30%	FTP	0%
HTTP	30%	HTTP	0%
NRTV	30%	NRTV	0%
VoIP	10%	VoIP	10% reciprocal of DL VoIP traffic

According to the proponents of MBTDD and MBFDD proposals, FTP, HTTP and NRTV are strictly DL downloads with only TCP acknowledgments being sent back over RL and such an arrangement warrants zero traffic percentages for the corresponding traffic types on the RL.

Two fundamental problems arise from the such extremely asymmetric traffic allocation

1. Being Interference limited Reverse Link VoIP performance is greatly overestimated, for it does not suffer from the interference caused by other types of data traffic in the same spectrum
2. The system that is FL/RL coverage balanced under such a asymmetric load scenario, will quickly become unbalanced if RL load increases as a consequence the RL coverage area shrinkage under increased RL load.

Proposed resolution

We propose to establish an ad hoc subgroup to study the issues of

1. Realistic Traffic mix for both DL and RL
2. Determine the conditions for DL/RL coverage balanced operation of the wireless system

The output of this ad hoc can be used as basis for more realistic simulation and analysis.