Project	**IEEE 802.20 Working Group on Mobile Broadband Wireless Access** <**http://grouper.ieee.org/groups/802/20/**>	
Title	**Channel Modeling Document Background**	
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Re:	802.20 WG Documents Discussions: Channel Modeling Document	
Abstract	This presentation gives a brief background and history of the development of the channel modeling document illustrating some of the decisions and positions made by the WG that shaped the document.	
Purpose	To facilitate discussion of the 802.20 WG channel modeling document .	
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Background

- Early drafts stated that SISO systems shall use the ITU channel models in simulation.
- Early drafts also highlighted different modeling methods for MIMO Channels. Only details of the SCM channel model were described. (Channel Modeling Document ver 7. Nov. 2004)
- During its discussions, the WG recognized the following:
  - MIMO-based and none MIMO-based technology proposals must be compared based on the same underlying ITU channel model.
  - SCM MIMO channel model DOES NOT collapse to the ITU SISO channel model (power-delay profiles of the SCM-generated channel is different from the power-delay profiles of the ITU channel models

Background

- The WG decided to adopt the “Correlation-Matrix” approach in modeling none-SISO channels.
  - First attempt at this is outlined in Ver. 8 of channel modeling document, March 2005. No specific procedure for
  - Contribution C802.20-05/32 outlined a specific procedure for generating MIMO channel models based on an underlying ITU-channel model
  - WG discussions & conference calls from May 2005 through July 2005 focused on refining this proposal.
  - During its July 2005 meeting, the WG agreed on two different methods for generating the correlation matrices to be used as an input to the channel modeling approach described in C802.20-05/32.
  - Channel modeling document was approved in July 2005 meeting by a 46-1-0 vote