

Source: Ericsson, AT&T, ETRI, Huawei, HiSilicon, Intel, KT Corporation, Nokia, NTT DOCOMO, Qualcomm, Samsung
Agenda Item: 7.2.2
Document for: Discussion, Decision



WF on RMa LSPs

Background



- › In RAN1#84bis, a Rural Macro scenario was introduced
 - Channel model parameters in Appendix A in R1-163909 were taken as a working assumption
 - › This includes LOS and NLOS parameters
- › In 38.913, the Rural scenario is defined with 50% in-car users and 50% indoor users
 - Some clarification is needed on how to use the channel parameters for in-car and indoor users
- › Furthermore, it has been found that the cross-correlation matrix for the LOS LSP parameters is not positive definite

On in-car and indoor users



- › Proposal 1: For in-car and indoor users, reuse LSPs for outdoor users according to the working assumption
 - Note: These parameters are in Appendix A in R1-163909
 - Note: Car and building penetration loss should be added for these users

On cross-correlations



- › The LSP cross-correlation matrix can become positive definite by setting entries with values <0.4 to zero
- › Proposal 2: Adopt the following revised cross-correlation entries for LOS
 - ZSD vs DS: 0
 - ZSD vs ASA: 0
 - ZSA vs ASA: 0

Table 7.3-6: Channel model parameters

Scenarios		3D-RMa	
		LOS	NLOS
Cross-Correlations	<i>ASD vs DS</i>	0	-0.4
	<i>ASA vs DS</i>	0	0
	<i>ASA vs SF</i>	0	0
	<i>ASD vs SF</i>	0	0.6
	<i>DS vs SF</i>	-0.5	-0.5
	<i>ASD vs ASA</i>	0	0
	<i>ASD vs K</i>	0	N/A
	<i>ASA vs K</i>	0	N/A
	<i>DS vs K</i>	0	N/A
Cross-Correlations ¹⁾	<i>SF vs K</i>	0	N/A
	<i>ZSD vs SF</i>	0	0
	<i>ZSA vs SF</i>	-0.8	-0.4
	<i>ZSD vs K</i>	0	N/A
	<i>ZSA vs K</i>	0	N/A
	<i>ZSD vs DS</i>	0	-0.5
	<i>ZSA vs DS</i>	0	0
	<i>ZSD vs ASD</i>	0.5	0.5
	<i>ZSA vs ASD</i>	0	-0.1
	<i>ZSD vs ASA</i>	0	0
<i>ZSA vs ASA</i>	0	0	
<i>ZSD vs ZSA</i>	0	0	

Summary



- › Proposal 1: For in-car and indoor users, reuse LSPs for outdoor users according to the working assumption
 - Note: These parameters are in Appendix A in R1-163909
 - Note: Car and building penetration loss should be added for these users
- › Proposal 2: Adopt the following revised cross-correlation entries for LOS
 - ZSD vs DS: 0
 - ZSD vs ASA: 0
 - ZSA vs ASA: 0