



## Analysis of Channel Modelling for 5G mmWave Communication

### Reviewer 1: --

1. In several sections sentences has spelling and grammar mistakes, which needs to be corrected.
2. In several sections sentences has space problem, which needs to be corrected.
3. Proper sentence construction in several sections to be modified.

Actual	Suggested
Millimeter wave is one of the key-enabling	Millimeter-wave is one of the key enabling
requirements for mission critical situations and	requirements for mission-critical situations, and
5G channel modelling has been a complex problem	5G channel modeling has been a complex problem
work comprises of the analysis of several mmWave	work comprises the analysis of several mmWave
NLOS scenario of UMi environment considered	the NLOS scenario of the UMi environment considered
NYUSIM uses Time cluster (TC) - spatial lobe	NYUSIM uses a Time cluster (TC) - spatial lobe
The simulator support carrier frequency up to	The simulator supports carrier frequency up to
60 GHz and 73 GHz) in NLOS scenario of UMi environment	60 GHz, and 73 GHz) in the NLOS scenario of the UMi environme
the characteristics of mmWave channel	the characteristics of the mmWave channel
work done in 5G and propose NYUSIM	work done in 5G and proposes an NYUSIM
Section IV gives in-depth simulation environment	Section IV gives an in-depth simulation environment
used by researchers in past few decades	used by researchers in the past few decades
utilized the Clark's theory to develop a simulator	utilized Clark's theory to develop a simulator
Wireless World Initiative for New Radio (WINNER)	Wireless World Initiative for the New Radio (WINNER)
have frequency of 60 and 77 GHz respectively for	have a frequency of 60 and 77 GHz respectively for

the academia and industry are involved in development	academia and industry are involved in the development
There are very few simulators which are opensource	There are very few simulators that are opensource
out of which the most popular are 3GPP model	out of which the most popular are the 3GPP model
All these models can be broken down to the 3GPP	All these models can be broken down into the 3GPP
and industries are working on potential bands for 5G	and industries are working on potential bands for 5G
is far much better than 3GPP model (Release 14)	is far much better than the 3GPP model (Release 14)
compare the results with 3GPP model which concludes	compare the results with the 3GPP model which concludes
developed using Continuous Basis Pursuit	developed using the Continuous Basis Pursuit
Besides this both LOS and NLOS environment	Besides this both LOS and NLOS environments
omni directional) for each individual candidate	omnidirectional) for each candidate
the academia and industry and are expected to be the suitable	academia and industry and are expected to be suitable
next generation mobile communication but	next-generation mobile communication
to the environmental conditions like atmospheric pressure	to environmental conditions like atmospheric pressure
73 GHz carrier frequencies in UMi NLOS	73 GHz carrier frequencies in the UMi NLOS
In this section a brief overview of path loss	In this section a brief overview of the path loss
distance between transmitter & receiver	the distance between the transmitter & receiver
and free space pathloss at reference distance	and free space path loss at a reference distance
the complex amplitude of multi-element antenna	the complex amplitude of the multi-element antenna
and 73 GHz is simulated while scenario is	, and 73 GHz is simulated while the scenario is
UMi environment with radio bandwidth of 800MHz. Short	UMi environment with radio bandwidth of 800MHz. The short
and atmospheric pressure of 1013.25mbar	and an atmospheric pressure of 1013.25mbar
using co-polarization on antenna. Antenna parameters	using co-polarization on the antenna. Antenna parameters
as type of Uniform Linear Array (ULA)	as the type of Uniform Linear Array (ULA)
10° is considered at both transmitter and receiver.	10° are considered at both transmitter and receiver.

each individual frequency to find out	each frequency to find out
The Fig. 2 and Fig. 3 shows the 3-dimentional	Fig. 2 and Fig. 3 shows the 3-dimensional
power is transmitted from transmitter	power is transmitted from the transmitter
This realistic feature in not considered in	This realistic feature is not considered in
The Fig. 2 shows that 5, 2, 4 and 1 Spatial Lobes	Fig. 2 shows that 5, 2, 4, and 1 Spatial Lobe
transmission of received signal at receiver	transmission of the received signal at the receiver
UMi environment in SISO system for DPDP	UMi environment in the SISO system for DPDP
scene in both 38 and 60 GHz which is 0.3	a scene in both 38 and 60 GHz which is 0.3
nano-seconds, while absolute propagation	nanoseconds, while the absolute propagation
frequency for NLOS scenario of UMi environment	frequency for the NLOS scenario of the UMi environment
The Fig. 4, 5 and 6 shows the directional, omni-directional	Fig. 4, 5, and 6 show the directional, Omni-directional,
The Fig. 4 and 5 can be summarized in Table	Fig. 4 and 5 can be summarized in Table
It considers a set of OPDP over receiver's antenna	It considers a set of OPDP over the receiver's antenna
While smallest received power is observed in	While the smallest received power is observed in
wave as it travels from transmitter to receiver	wave as it travels from the transmitter to receiver
antenna gain in NLOS UMi environment which is	antenna gain in the NLOS UMi environment which is
The aim of the study was to carry out extensive simulations	The study aimed to carry out extensive simulations
study is helpful in modelling and designing 5G channels	study helps model and design 5G channels
VII. Acknowledgements	VII. Acknowledgments

### Comments to Editor :

1. After modifying the content, paper can be accepted for possible publication.

**Reviewer 2: --**

1. Paper should be written in JMCMS Journal format.
2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text.
3. In many places, sentences are started with abbreviations. When it is introduced for the first time, the full form should be given.
4. Authors need to Modify Abstract and conclusion more appropriately.
5. In section three, sentences end with few numbers of the full stop, which needs to be removed.
6. Conflict of interest regarding article should be mention in the text.

**Comments to Editor :**

1. After modifying the content, paper can be accepted for possible publication.

**Reviewer 3: --**

1. Paper should be written in JMCMS Journal format.
2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text.
3. Authors need to describe the literature survey in introduction section more elaborately
4. The Abstract and conclusion are needed to be Modified in accordance to fulfill the paper aim.
5. Conflict of interest regarding article should be mention in the text.

**Comments to Editor :**

1. After modifying the content, paper can be accepted for possible publication.

Regards  
Editorial Manager

**[Note: This is a computer-generated Report hence, no need of any Signature.]**