



**ChEG**  
**Chinese Evaluation Group**

# Chinese Evaluation Group Work for LTE-Advanced

*May 18<sup>th</sup>, 2010*

*Second 3GPP LTE-Advanced Evaluation Workshop*

# On ITU-R WP5D #7 meeting

- 11 IEGs submitted 12 evaluation reports and one status report
- ChEG submitted two contributions on this meeting
  - Preliminary evaluation report on 3GPP LTE RELEASE 10 & beyond (5D/650)
    - Includes TDD and FDD RITs
    - Focuses on compliance template for technical performance
  - Further clarification on antenna pattern and sector pattern for correlated beam-forming antenna system (5D/645 )
    - as additional evaluation method

# Recent work

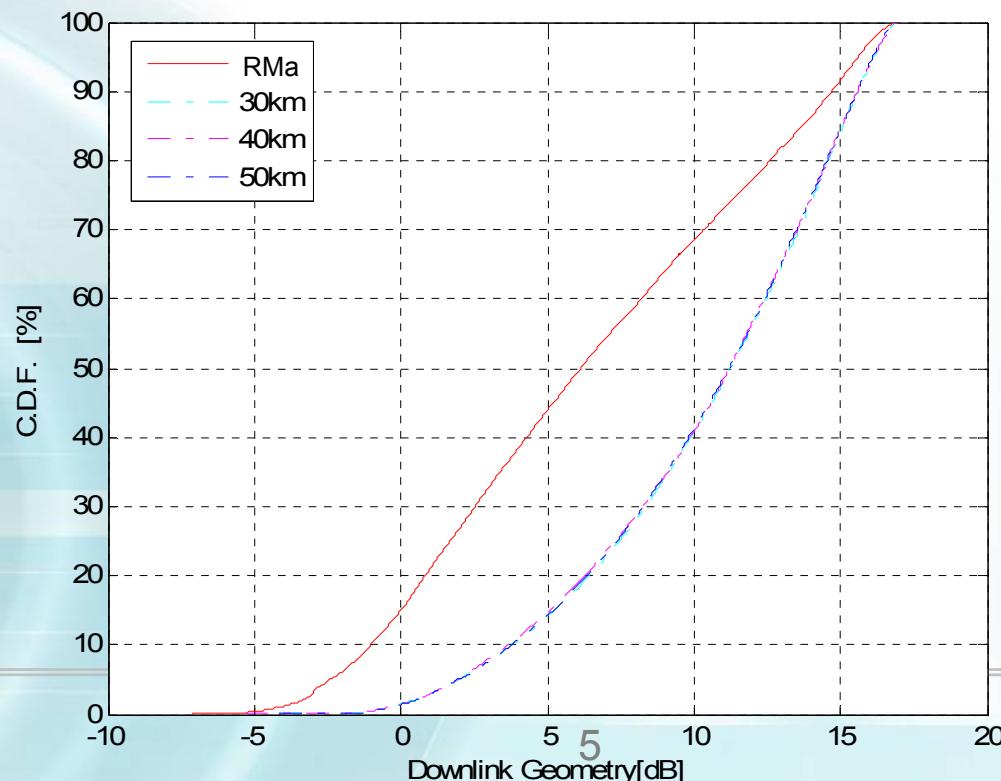
- Face to face meetings and email discussion were performed to facilitate evaluation work among members
- Evaluation work to develop final reports
  - further evaluation works on technical performance
  - assessment by analysis and inspection for service and spectrum characteristics
- Intercommunication with other IEGs
- Discussion and evaluation work on Open Area Rural Model proposed by TCOE India

# Work on Open Area Rural Model

- Provide questions and suggestion, which have been submitted to Forum 3 of the Correspondence Group
- Evaluate TD-LTE-Advanced RIT performance based on clarified model and assumption provided by TCOE India on Forum 3
- Some features of Open Area Rural Model
  - Large ISD ( 30, 40, 50 km)
  - Directional UE antenna with 3D pattern
  - Low mobility
  - no penetration loss
  - Larger user/village number(40,70,100 users per sector)

# Evaluation on Open Area Rural Model

- Evaluation to determine parameters which are TBD
  - BS tilt: 2 degree is used considering large cell radius
  - MS tilt: MS's antenna points to antenna of serving sector
- GSINR for Channel model



# Initial evaluation results

- TD-LTE-Advanced performance with SU-MIMO, SU-beamforming and MU-MIMO schemes are evaluated

Scheme	ISD	DL Sector SE/cell edge user SE			
		10 UEs/sector	40 UEs/sector	70 UEs/sector	100 UEs/sector
SU-MIMO (4x2, c)	30km	2.8547/0.1208	2.7538/0.0356	2.7546/0.0204	2.7547/0.0141
	40km	2.8383/0.1179	2.7506/0.0352	2.7511/0.0199	2.7517/0.0139
	50km	2.8336/0.1036	2.7229/0.0348	2.7232/0.0198	2.7239/0.0133
SU-beamforming (8x1, e)	30km	2.964/0.134	2.985/0.033	2.994/0.019	2.998/0.013
	40km	2.843/0.128	2.912/0.031	2.921/0.018	2.932/0.012
	50km	2.786/0.123	2.834/0.030	2.846/0.017	2.865/0.011
MU-MIMO (4x2, c)	30km	4.334/0.105	-	-	-
	40km	4.327/0.099	-	-	-
	50km	4.322/0.097	-	-	-

Scheme	ISD	UL Sector SE/cell edge user SE			
		10 UEs/sector	40 UEs/sector	70 UEs/sector	100 UEs/sector
SU-Beamforming (1x8,e)	30km	2.654/0.067	2.659/0.016	2.663/0.009	2.701/0.006
	40km	2.543/0.062	2.563/0.015	2.570/0.008	2.602/0.005
	50km	2.498/0.061	2.501/0.014	2.521/0.008	2.548/0.005

# Plan for WP5D #8 meeting

- Final evaluation report will be submitted to WP5D #8 on June,2010
- Evaluation results on Open Area Rural Model will be submitted

# Thank You!

