ITU Kaleidoscope 2016

ICTs for a Sustainable World

ASSESSING INTERNET PERFORMANCE OVER MOBILE NETWORKS: FROM THEORY TO PRACTICE

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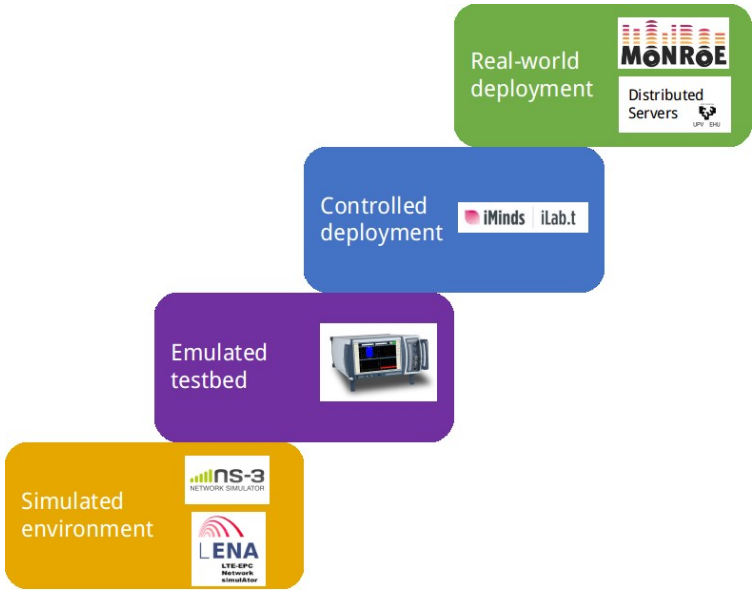
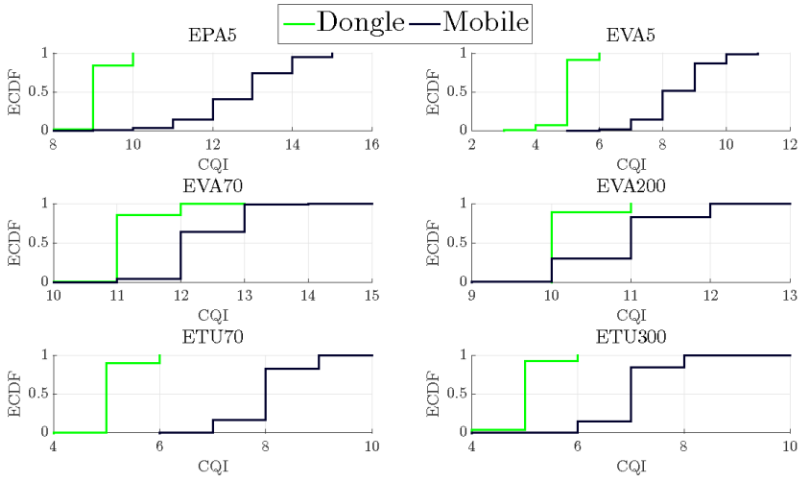
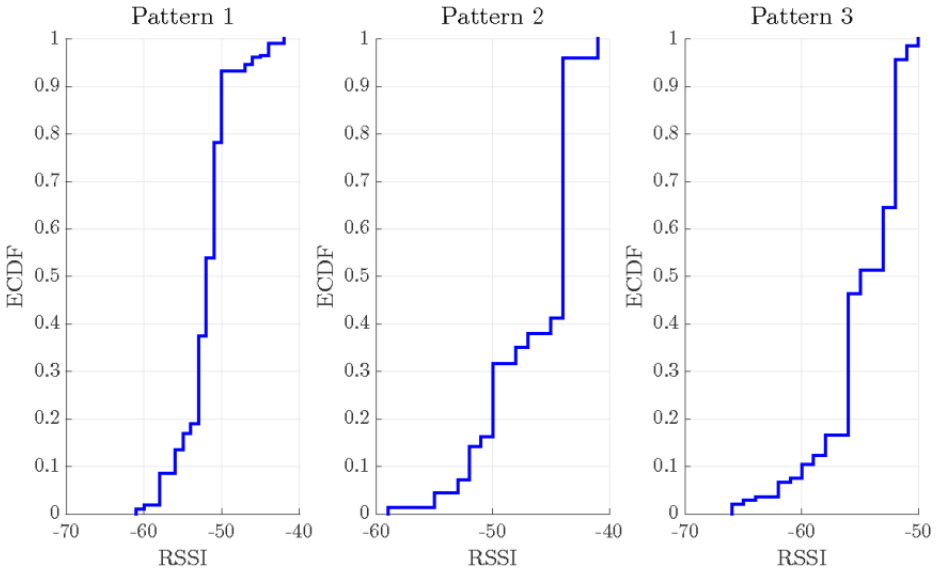
Bangkok, Thailand
14-16 November 2016

Experimentation stair (I)

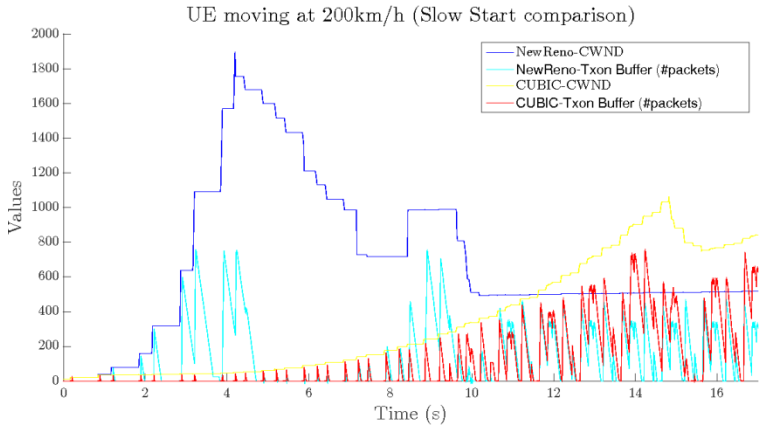


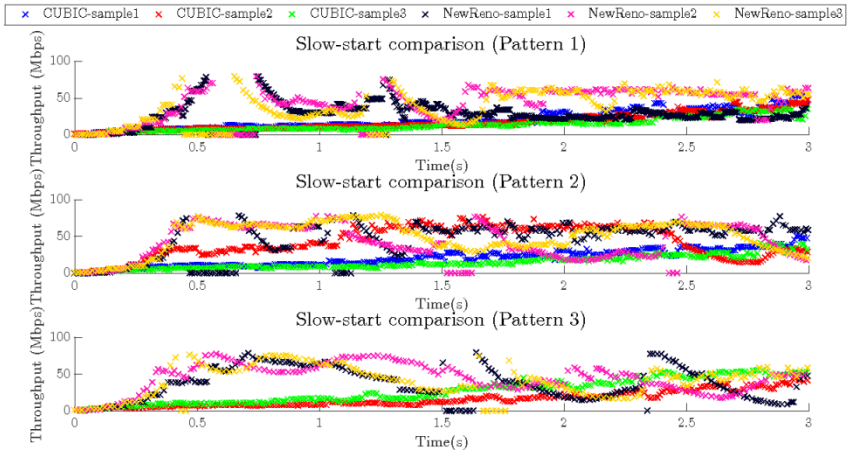
Experimentation level	Pros	Cons
Simulated environment	-Repeatability -Cheapest option -Parameters gathering	-Synthetic fadings -Faked UEs -Hard modeling
Emulated testbed	-Real UEs -Easy LTE configuration -Radio info. collection	-Statistics required -No real movement
Controlled deployment	-Real movement -Ad-hoc patterns -Air transmission	-Speed/space limitation
Real-world deployment	-Real speeds -Real patterns -Ability to study realism	-Limited parameters study -Data quota



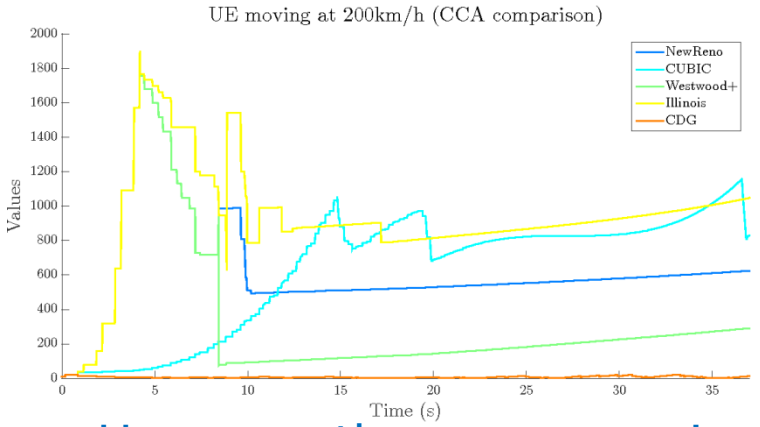


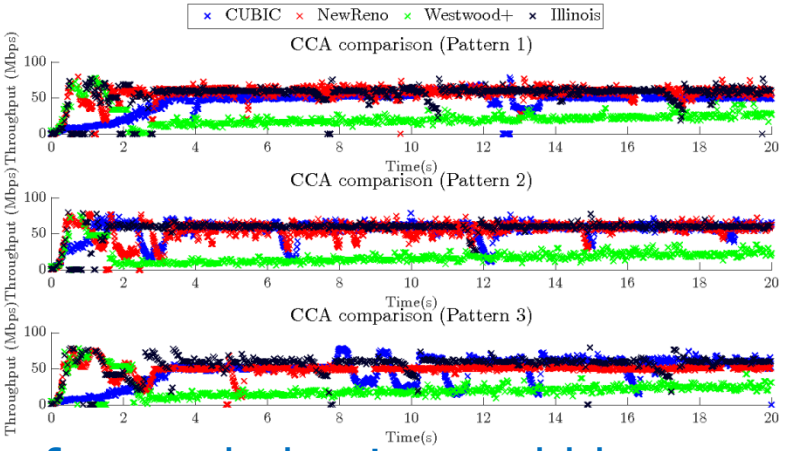
Experimentation stair (II)





- Micro-effects could not be presented as equal among the different deployments (example of Hybrid Slow-Start's deficiency on mobile networks under high delay variability).





- However, the macroscopic view of some behavior could be found and double-checked along the different steps (example of some CCAs' features).