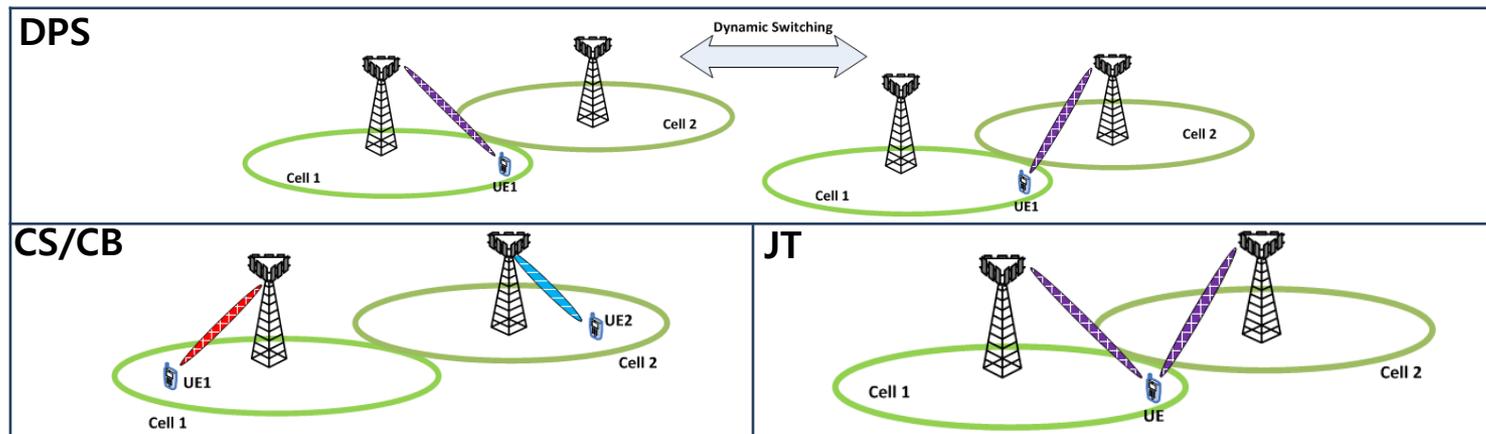


Motivation for CoMP for LTE with Non-Ideal Backhaul

Samsung

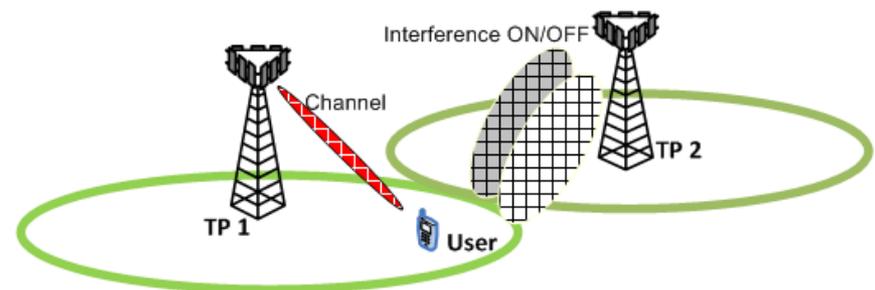
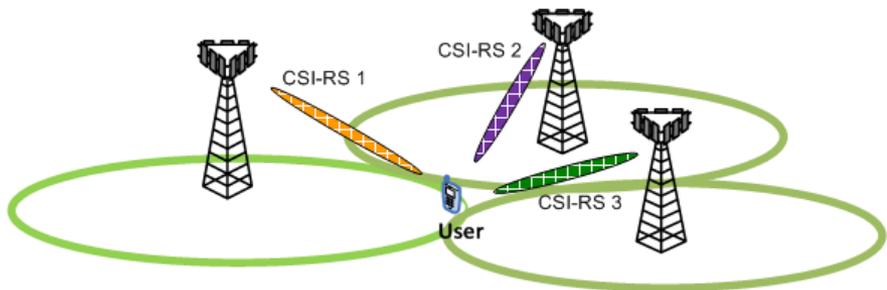
CoMP Study in Rel-11

- CoMP techniques considered in Rel-11
 - Coordinated scheduling/beamforming (CS/CB)
 - UE scheduling/beamforming decision in a coordinated manner among transmission points (TPs)
 - The TP transmitting data for a UE is chosen in a semi-static manner
 - Dynamic point selection (DPS)
 - TP serving a UE may be changed at subframe level
 - Joint transmission (JT)
 - Data to a single UE is transmitted from multiple TPs
- CoMP benefit: up to 50% cell-edge throughput gain [TR 36.819] under the assumption of ideal backhaul



CoMP Support in Rel-11

- Rel-11 CoMP focuses on air-interface between UE and network
 - Feedback support
 - Multiple non-zero power CSI-RS resources
 - Multiple interference measurement resources
 - Multiple CSI processes each of which generates one set of CSI (RI/PMI/CQI)
 - Signaling support
 - Dynamic UE-specific RS scrambling indication
 - Dynamic PDSCH resource mapping indication
 - Dynamic quasi co-location indication



Rel-12 eCoMP

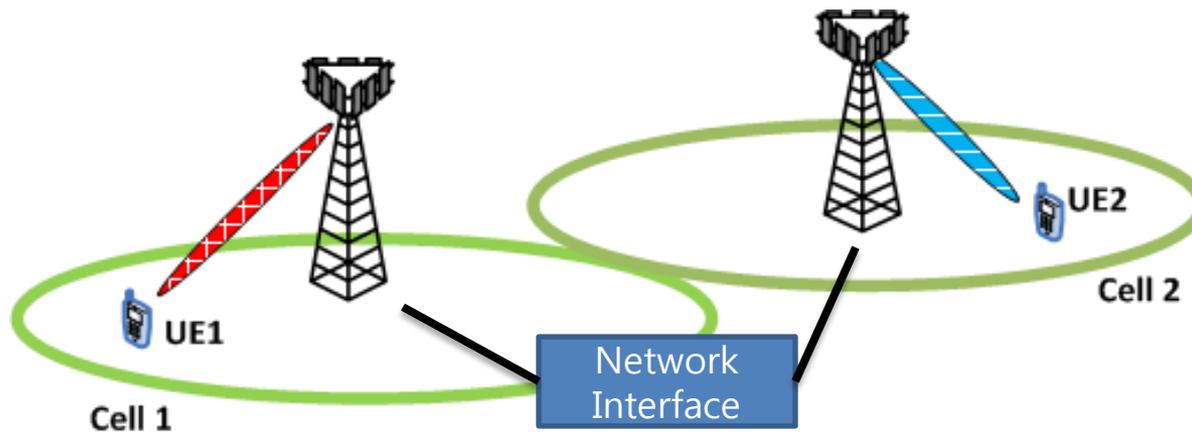
Release 11 CoMP

- Focuses on air-interface aspect only
 - ✓ Not designed for robust performance in networks with non-ideal backhaul
 - ✓ Inter-eNB CoMP should rely on proprietary network interface



Release 12 eCoMP

- Aims to support network interface for inter-eNB CoMP with non-ideal backhaul
 - ✓ Design to provide robust performance even in networks with non-ideal backhaul
 - ✓ Inter-eNB CoMP based on standardized network interface



Work Plan

SI for RAN1 Evaluation (June 2013 ~ December 2013)

- Evaluate candidate techniques for CoMP involving multiple eNBs with non-ideal but typical backhaul
- Recommend for which CoMP technique(s) signalling for inter-eNB operation should be specified, considering identification of potential impact on RAN3 work

WI for RAN3 (December 2013 ~ June 2014)

- Can start if justified by RAN1 evaluation. Creation of WI should be discussed when the SI is completed
- Specify necessary enhancements (if any) on network architecture and interfaces for support of CoMP with non-ideal backhaul