



# WSTS Panel Session

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Can Sync Support Hybrid Small Cells in Dense  
Metro Areas?

Co-Chairs  
Don Kurt & Pat Diamond

# Panel Members

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- Martin Nuss CTO of Vitesse - manufacturer of Transparent clocks, Switch Fabric, Boundary Clock devices
- Chip Webb VP Technology Ixia – manufacturer of network simulation and performance measurement
- Anurag Gupta Principal Engineer at Aviat Networks - manufacturer of microwave backhaul systems
- Ron Evans Director of Sales & Marketing for FEI-Zyfer - manufacturer of network timing systems.
- Mike Gilson – British Telecom - Telecom Operator

# Panel Questions Targeted

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- **Anurag** - When a hybrid small cell community of single operator eNodeB's is being planned how does the operator insure the sameness in performance of critical components in the backhaul?
- **Ron** - How would a timing system be implemented if the hybrid small cell community was made up of both FDD and TDD radio technologies?
- **Martin** - Are component based timing subsystems integrated in backhaul equipment up to the timing task of LTE-A MIMO systems?
- **Chip** - How can an operator measure the performance of these backhaul mechanisms to insure the application is receiving the level of timing performance it demands?
- **Mike** - As an operator, how much of the network architecture is determined by the Network Equipment Vendors?



# Panel Questions General

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- General for all panel members
- 1. How would the small cell deployment architecture change in neutral host deployments with multi-operator small cells?
- 2. If GNSS is used how do we protect against vulnerabilities?
- 3. Can the network path be engineered with minimal or no asymmetry?
- Audience Questions