The introduction of new mobile technologies and a boost in bandwidth requirements require increased investments in upgrading network coverage and capacity. This, together with a highly competitive market landscape, create new challenges for mobile backhaul, as network operators are forced to invest heavily in their network, increasing its capacity while relieving backhaul bottlenecks, and, in parallel, reducing the cost per transmitted bit and lowering their TCO (Total Cost of Ownership) by increasing operational efficiency. Competition and tight regulation in various markets lead mobile operators to rely on diverse transport technologies, including microwave, fiber, and copper DSL, as the rush for rapid RAN deployments and network expansions require them to use both self-owned and wholesale-leased connections. Additional challenges include the need to ensure TDM and Ethernet connectivity for multi-generation base stations, higher density and topology complexity as more small cells are being deployed and synchronization requirements become tighter with the introduction of LTE and LTE-A.

RAD’s Service Assured Access solution enables easy, cost effective control of mobile backhaul SLAs and the transport networks connecting colocated eNodeBs and BTSs, as well as small cells. Our MEF Carrier Ethernet 2.0-certified mobile demarcation portfolio enables Multi-CoS delivery of 2G/3G/4G traffic over the same RAN, with quick identification and isolation of faults and performance degradation. Furthermore, RAD’s best-of-breed timing and synchronization over packet suite, including Distributed Grandmaster capability ensures high performance for mobile traffic, distributing accurate timing synchronization without forklifting existing infrastructure.
Carrier Ethernet Mobile Backhaul Services

- Mobile demarcation and aggregation based on mature, multi-CoS Carrier Ethernet technology and developed standards for service management, and OAM-based diagnostics
- Performance monitoring for L2-based and L3-based backhaul
- Integrated Carrier Ethernet with TDM pseudowire support in the same device
- Ensure service visibility and control for small cells, while meeting space and power supply restrictions

Highly accurate phase (Time Of Day) and frequency synchronization using standard IEEE 1588v2 and/or Sync-E technologies
- Distribute clock to small cells where GPS is not practical or too expensive; deploy cost-effective back up for GPS
- Unique MiNID Mobile Demarcation SFP Sleeve helps normalize mobile backhaul transport network with diverse access architectures

RAD's Carrier Ethernet Mobile Backhaul Solutions

ETX-5
Carrier Ethernet Service Aggregation Platform

ETX-2
Carrier Ethernet Demarcation

MiNID
Ethernet Demarcation SFP Sleeve

RADview – Performance Monitoring
Ethernet Performance Monitoring Portal

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