

# Distributed Cell Site Architecture

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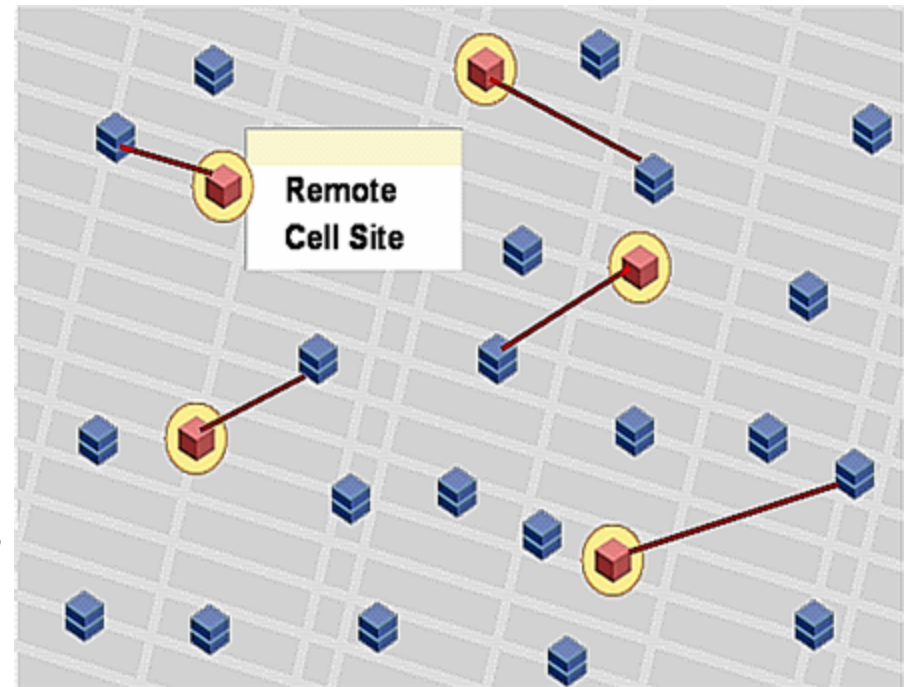
**May 2004**



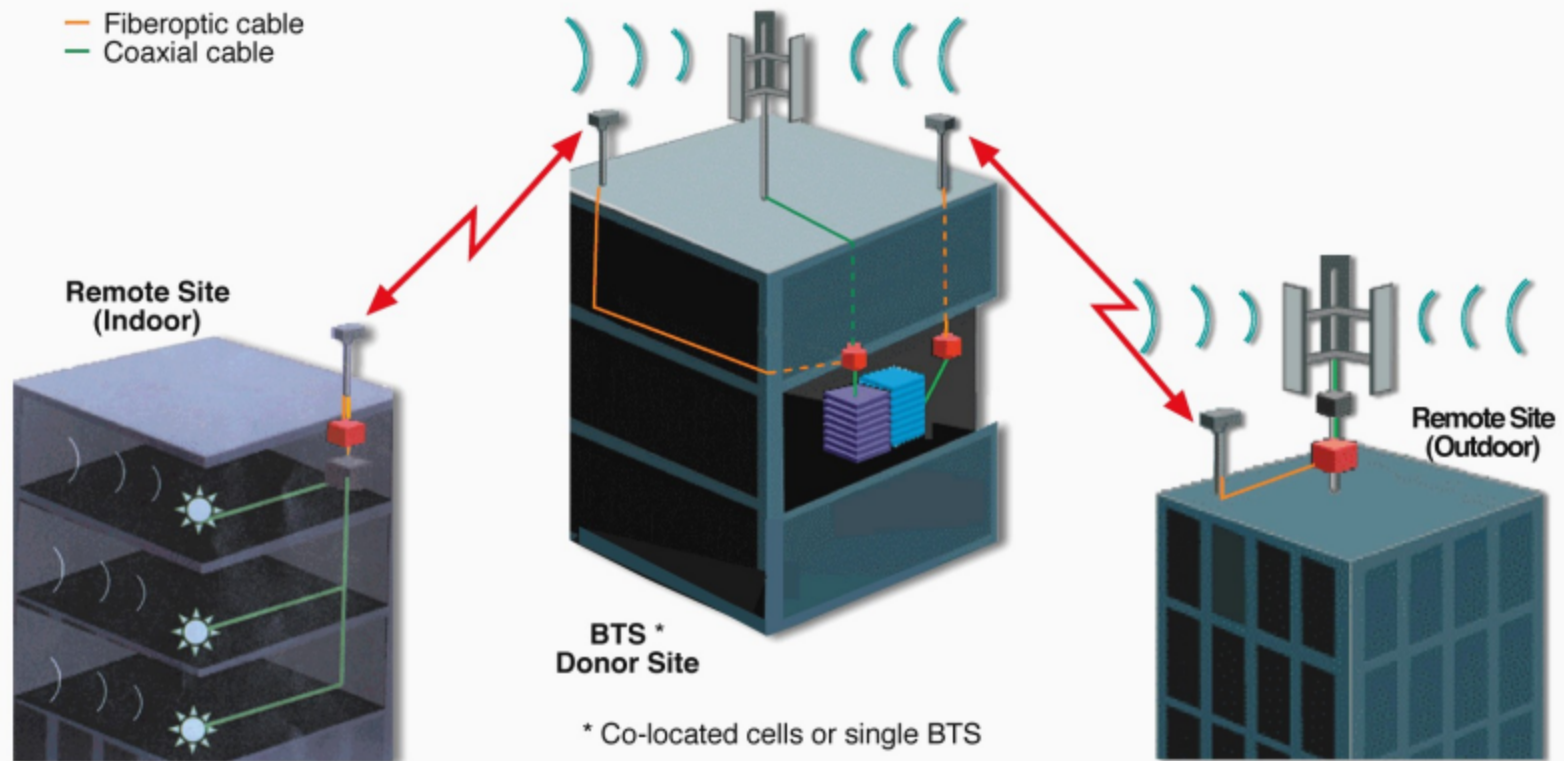
## Distributed Cell Site Architecture - Introduction



- New or existing sites become BTS Hubs
- BTS Hubs store equipment for two or more base stations
- Remote cells are created in lieu of conventional cells by extending the link between the radio equipment at the BTS Hubs and antennas at remote locations
- Remote cells are installed at new base station locations
- Links between the BTS and antennas can be extended using fiber, optical wireless (laser), RF (microwave), and RF (Cellular)
- Links between the BTS and antennas can be Point-To-Point, or Point-To-Multipoint

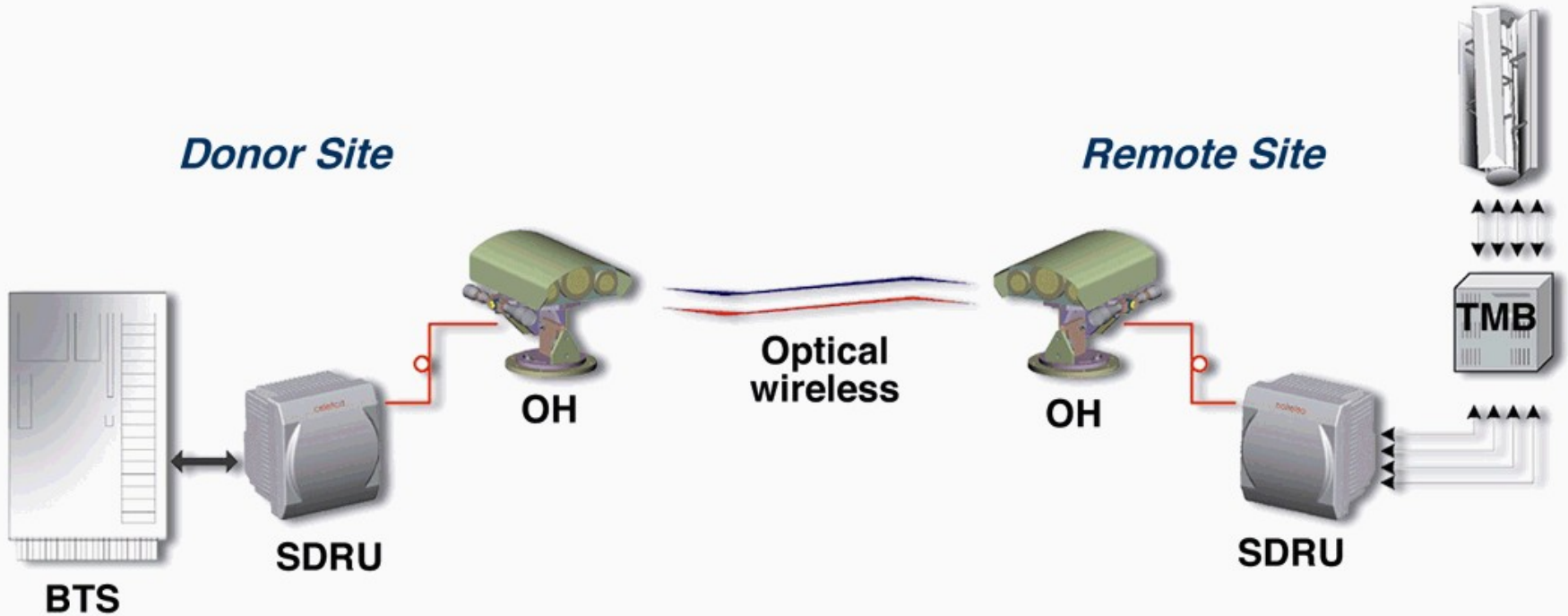


## Wireless Optical Link Between BTS and Antenna

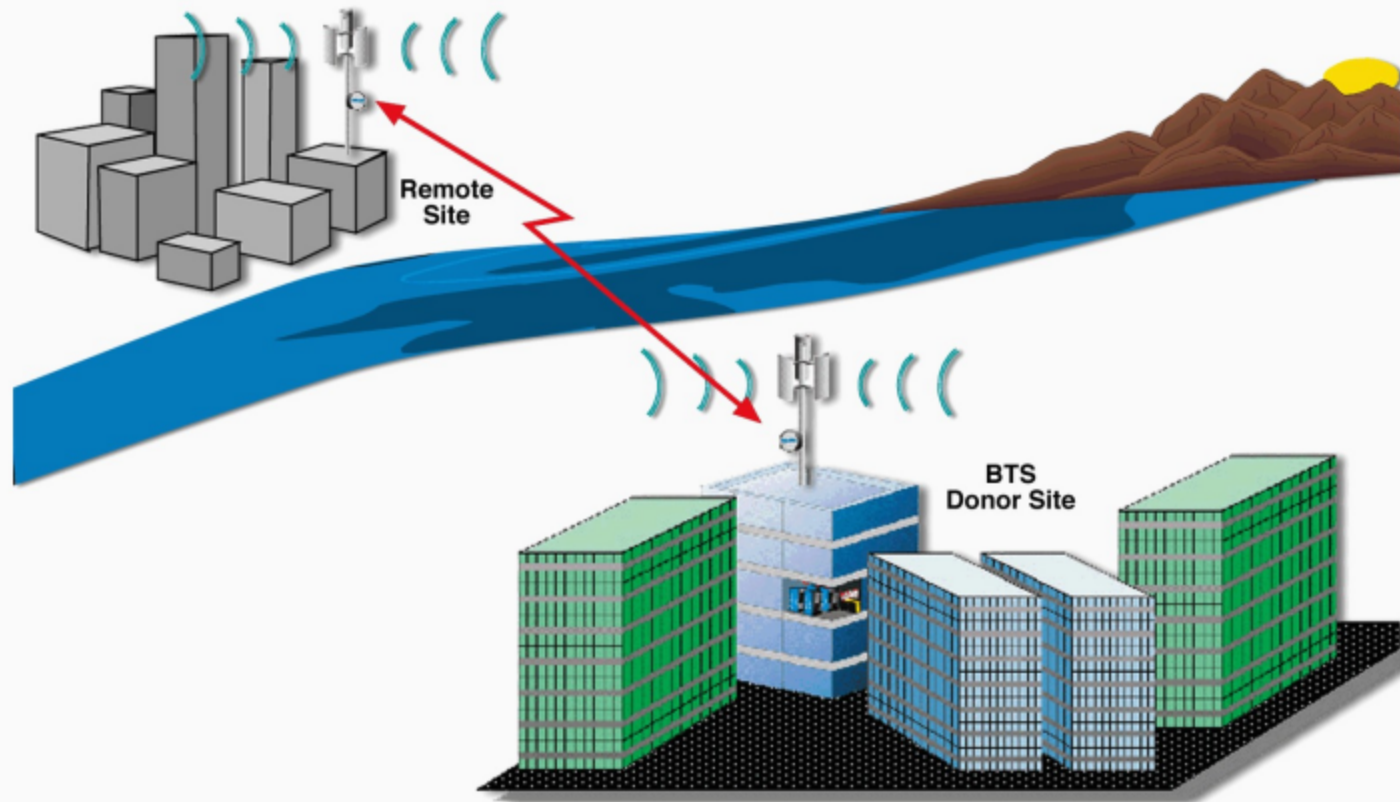




## C500 System Configuration

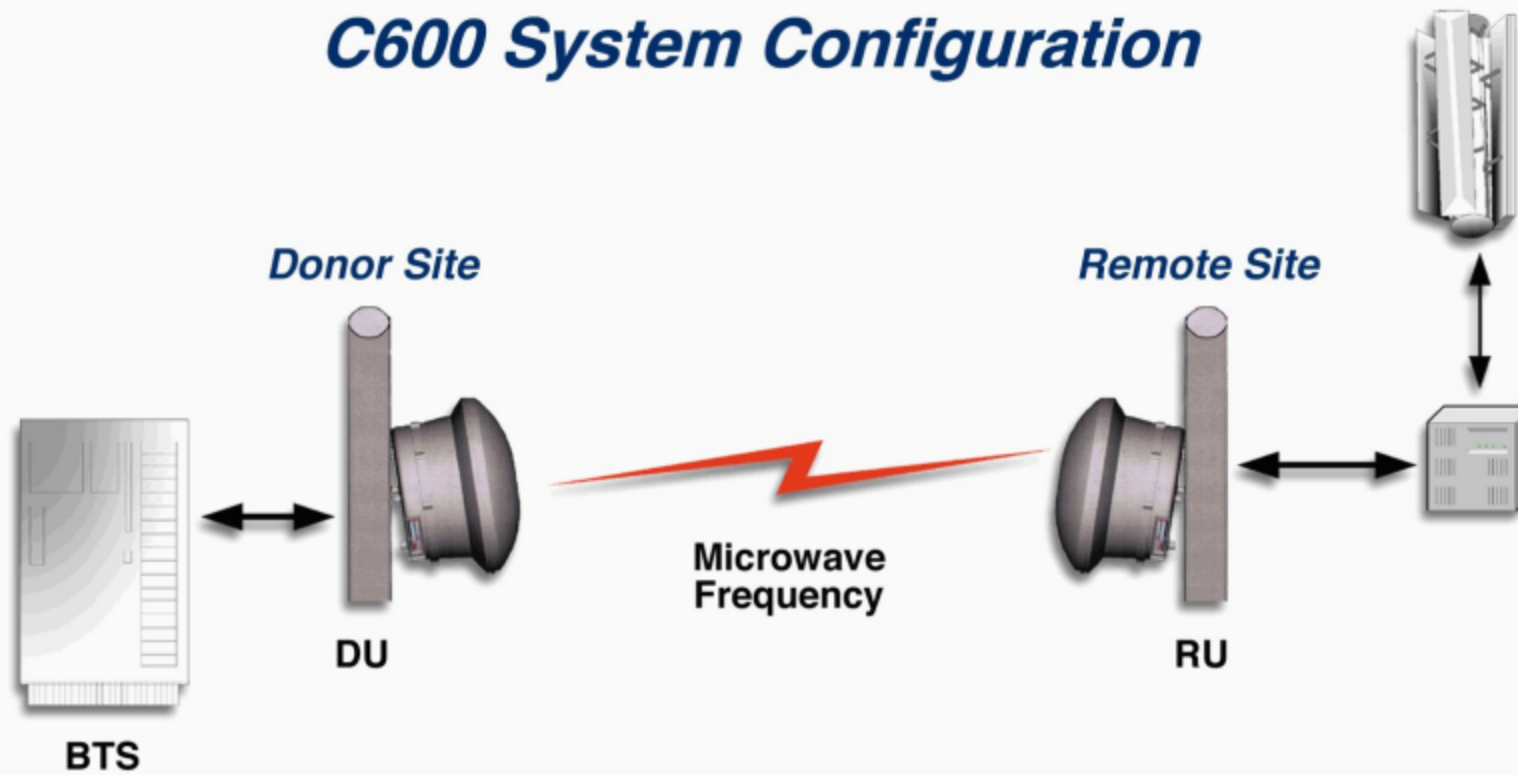


## Wireless Microwave Link Between BTS and Antenna





## *C600 System Configuration*







## Distributed Cell Site Architecture Benefits

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### Benefits

- Investment Protection
  - Builds on existing infrastructure
  - Lowers expansion costs
  - Reduces operation & maintenance costs
  - New engineering opportunities for fewer, larger backhaul links
  - Trunking efficiencies
  - Consolidation of BTS units decreases common costs
- Increased End User Satisfaction
  - Adding cells = lower radiation levels
  - Increase in handset battery life
  - Provides incremental capacity growth and in-building coverage

