

Chapter 12

Wireless Communications

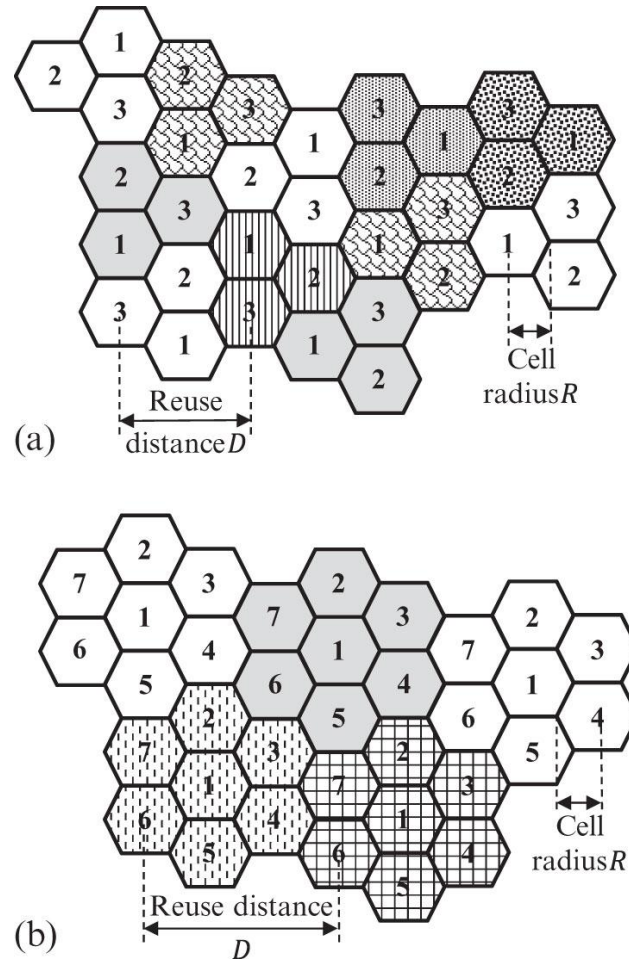
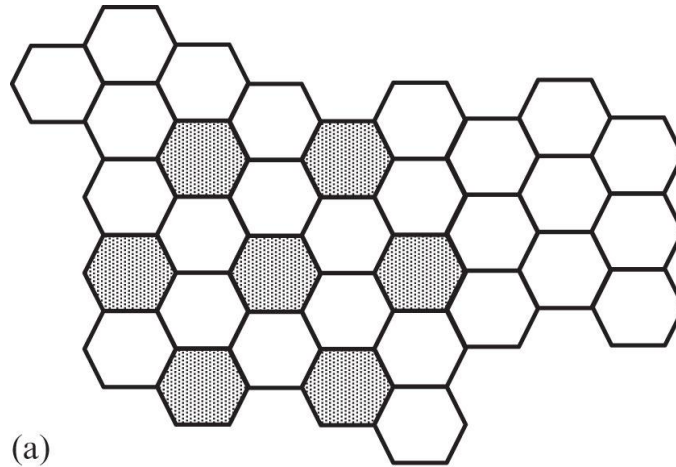
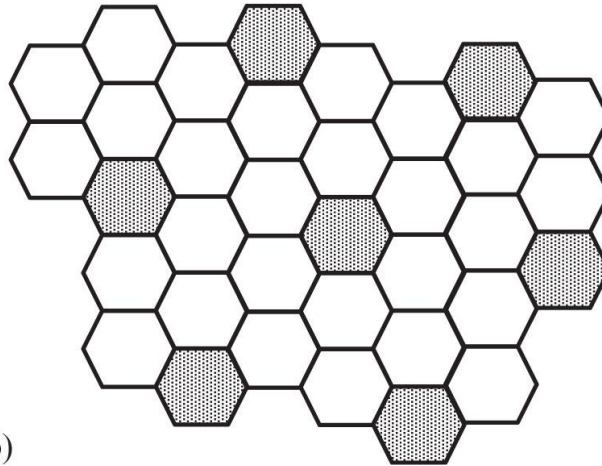


FIGURE 12.1 Frequency reuse pattern of hexagonal cells: (a) three-cell clusters and (b) seven-cell clusters.



(a)



(b)

FIGURE 12.2 Interfering cells: (a) three-cell clusters and (b) seven-cell clusters.

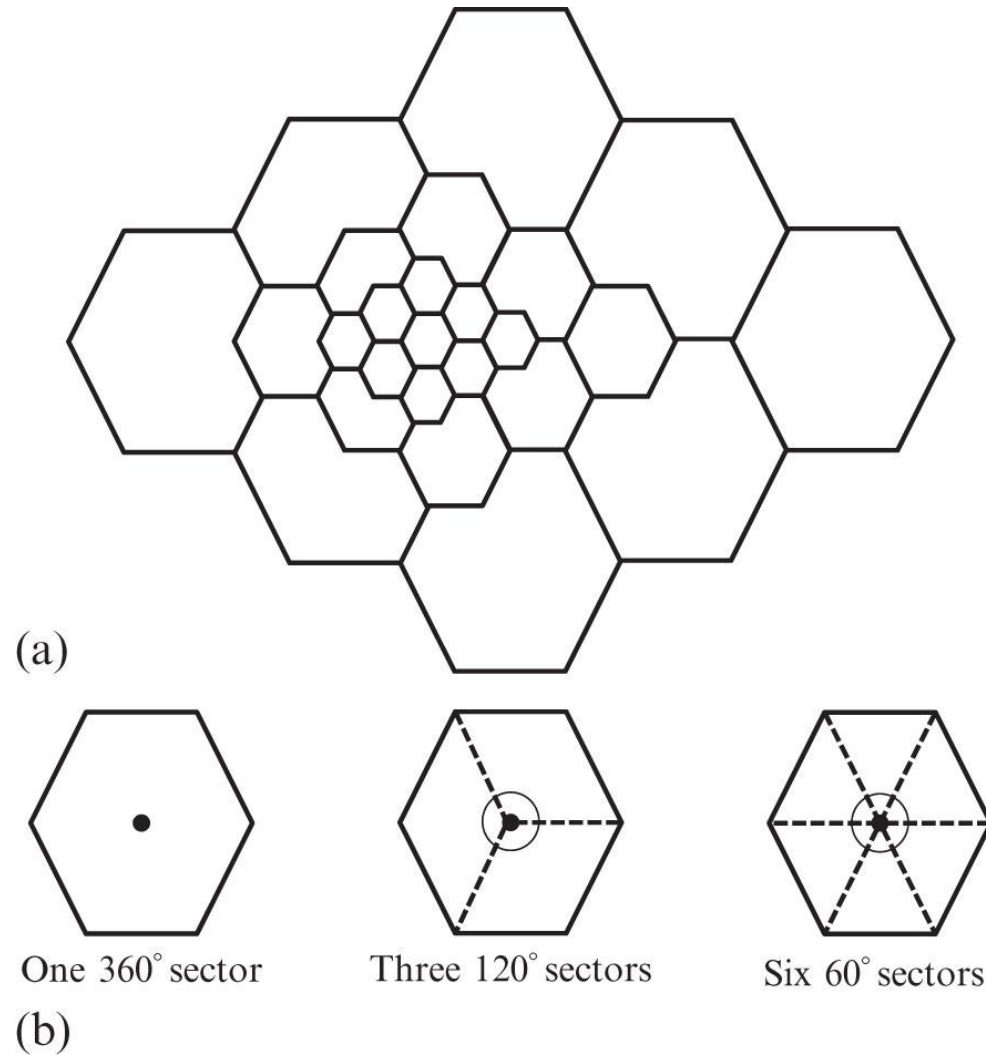


FIGURE 12.3 Hexagonal cells: (a) cell splitting and (b) cell sectoring.

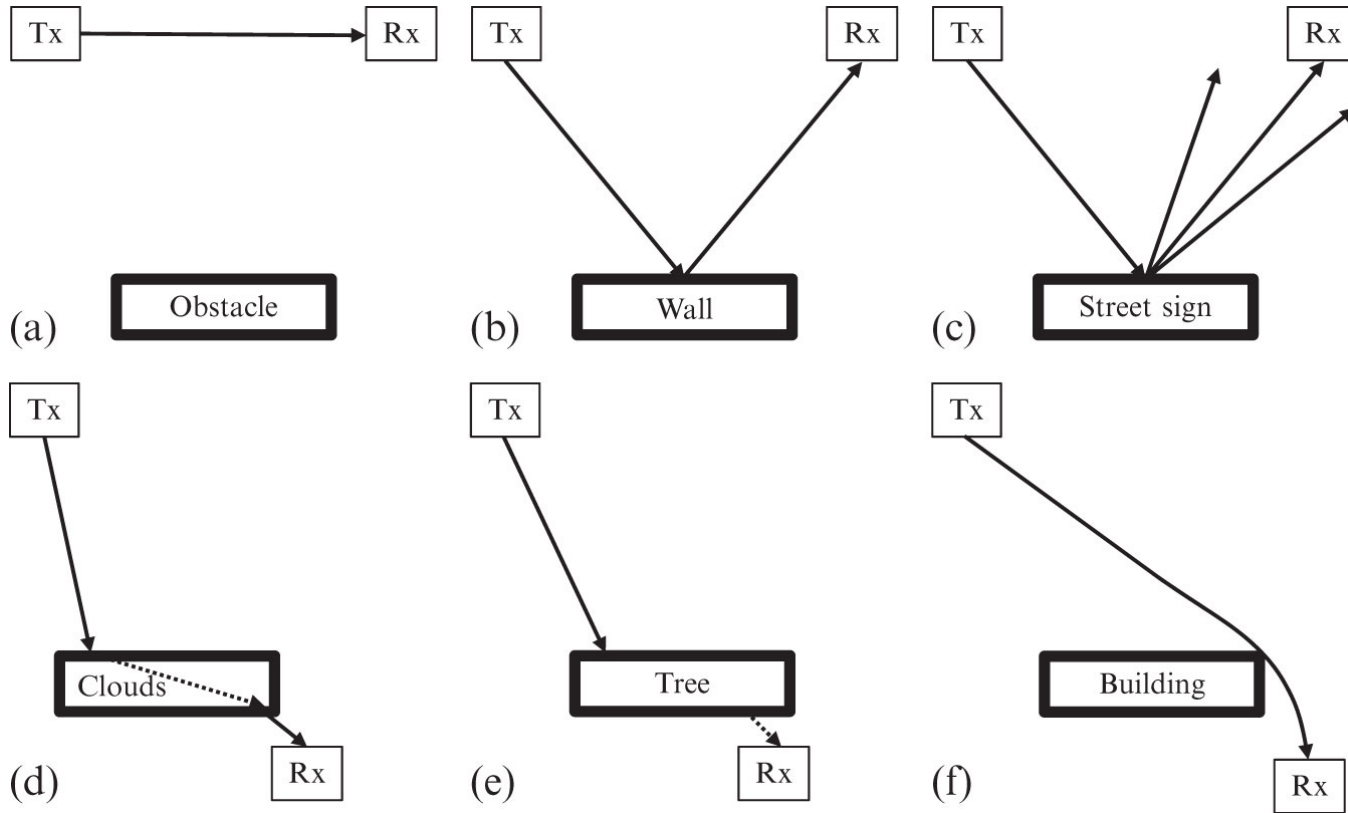


FIGURE 12.4 Radio-wave-propagation mechanisms: (a) line-of-sight transmission, (b) reflection, (c) scattering, (d) refraction, (e) absorption, and (f) diffraction.

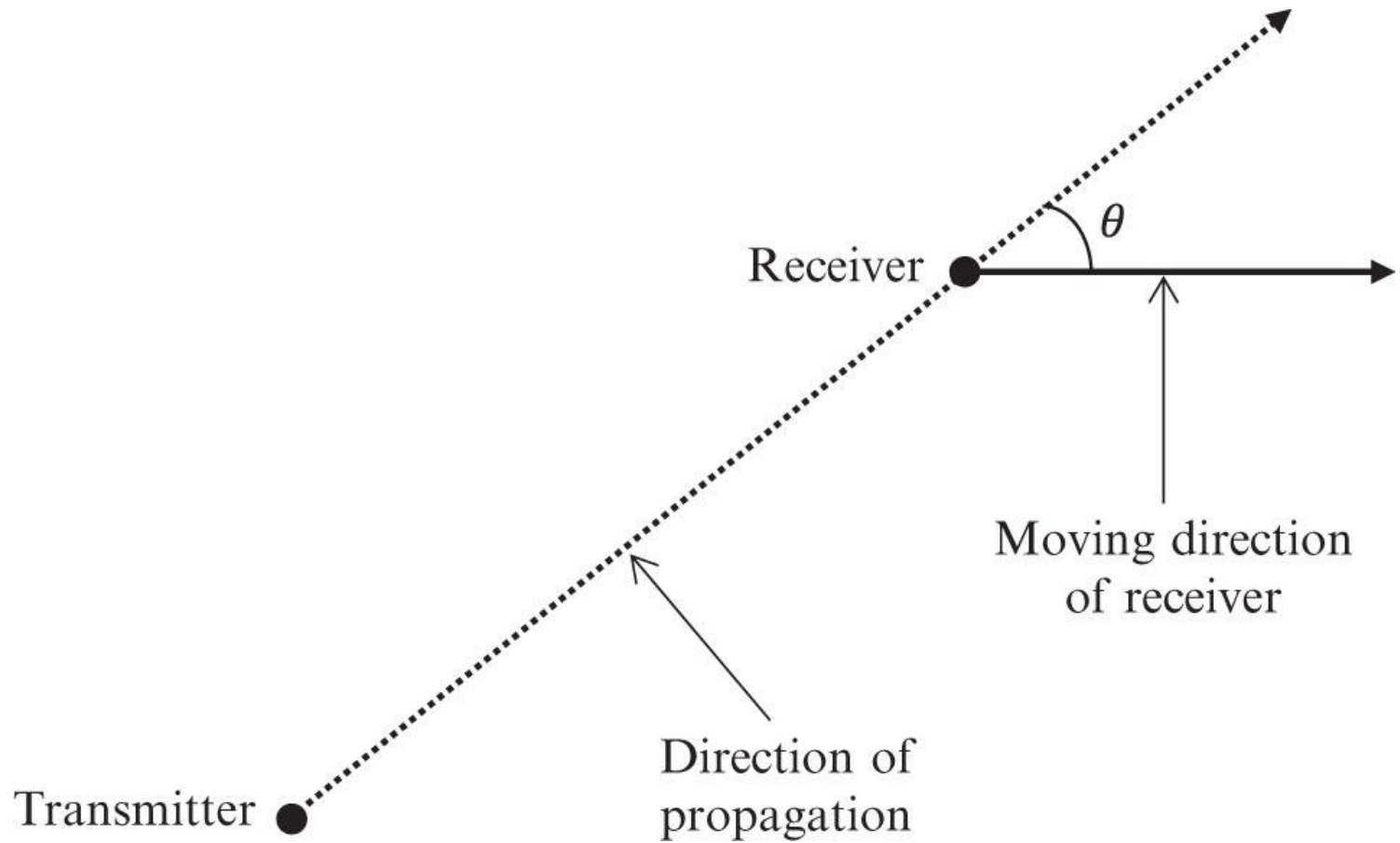


FIGURE 12.5 Projection of velocity component onto propagation direction.

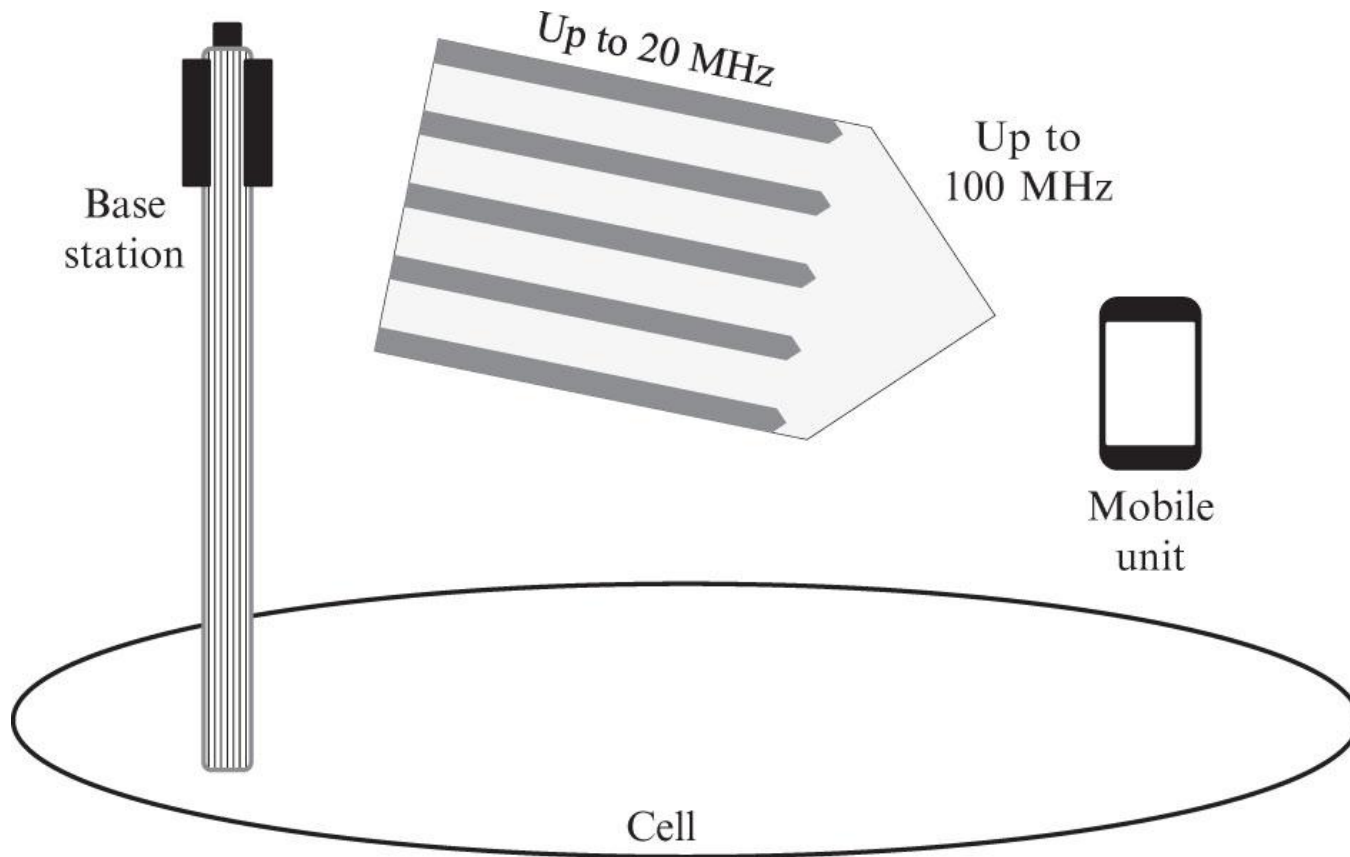


FIGURE 12.6 LTE-Advanced carrier aggregation-enabling technology.

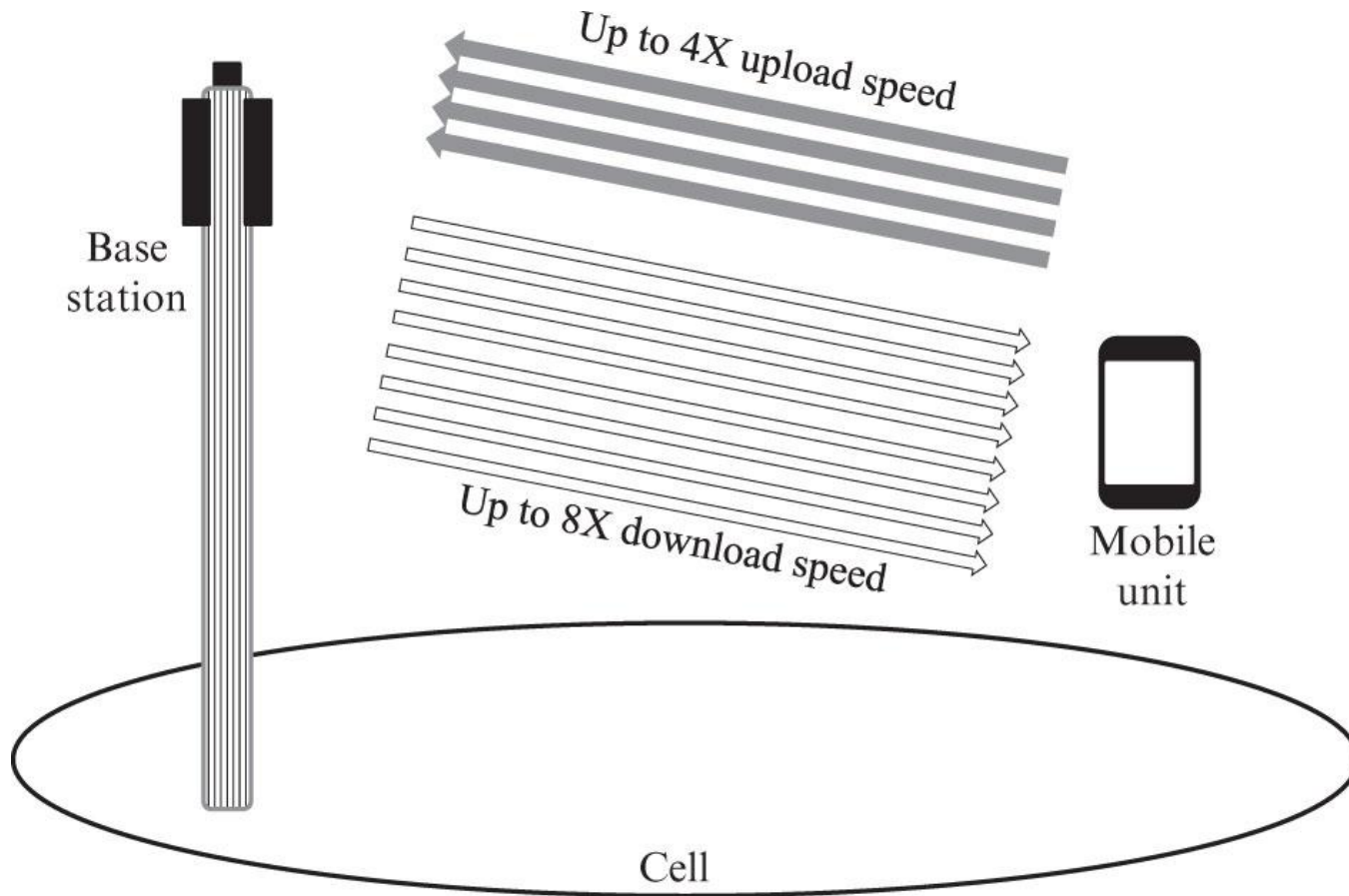


FIGURE 12.7 LTE-Advanced multiple-input multiple-output enabling technology.

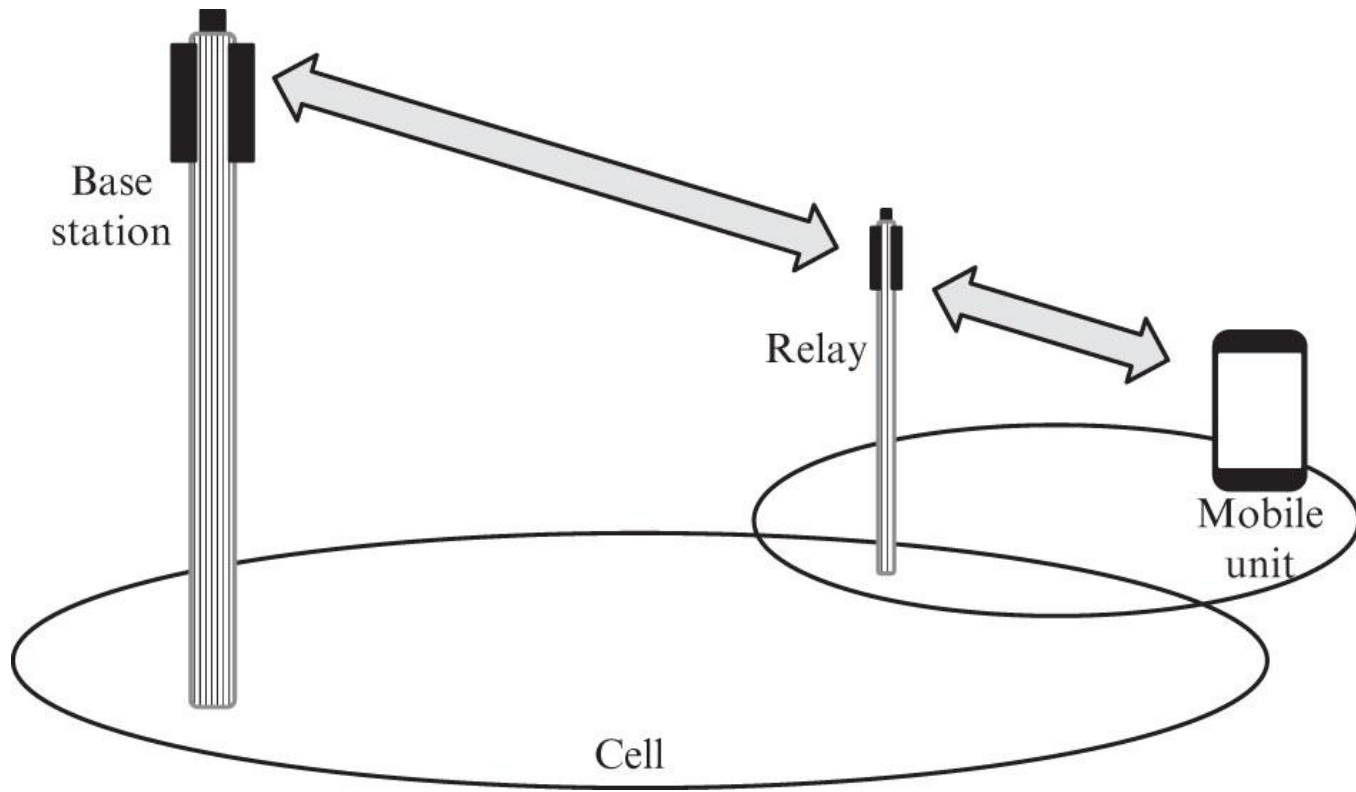


FIGURE 12.8 LTE-Advanced advanced relaying-enabling technology.

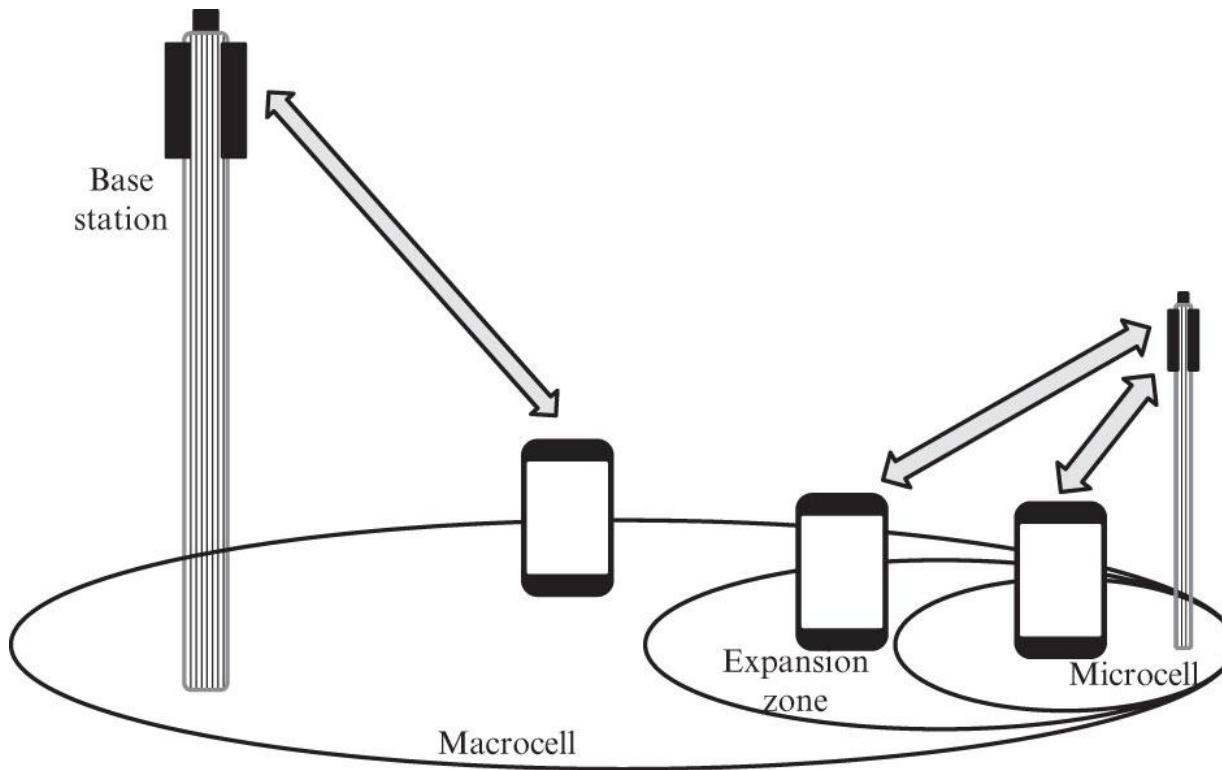


FIGURE 12.9 LTE-Advanced enhanced inter-cell interference coordination-enabling technology.

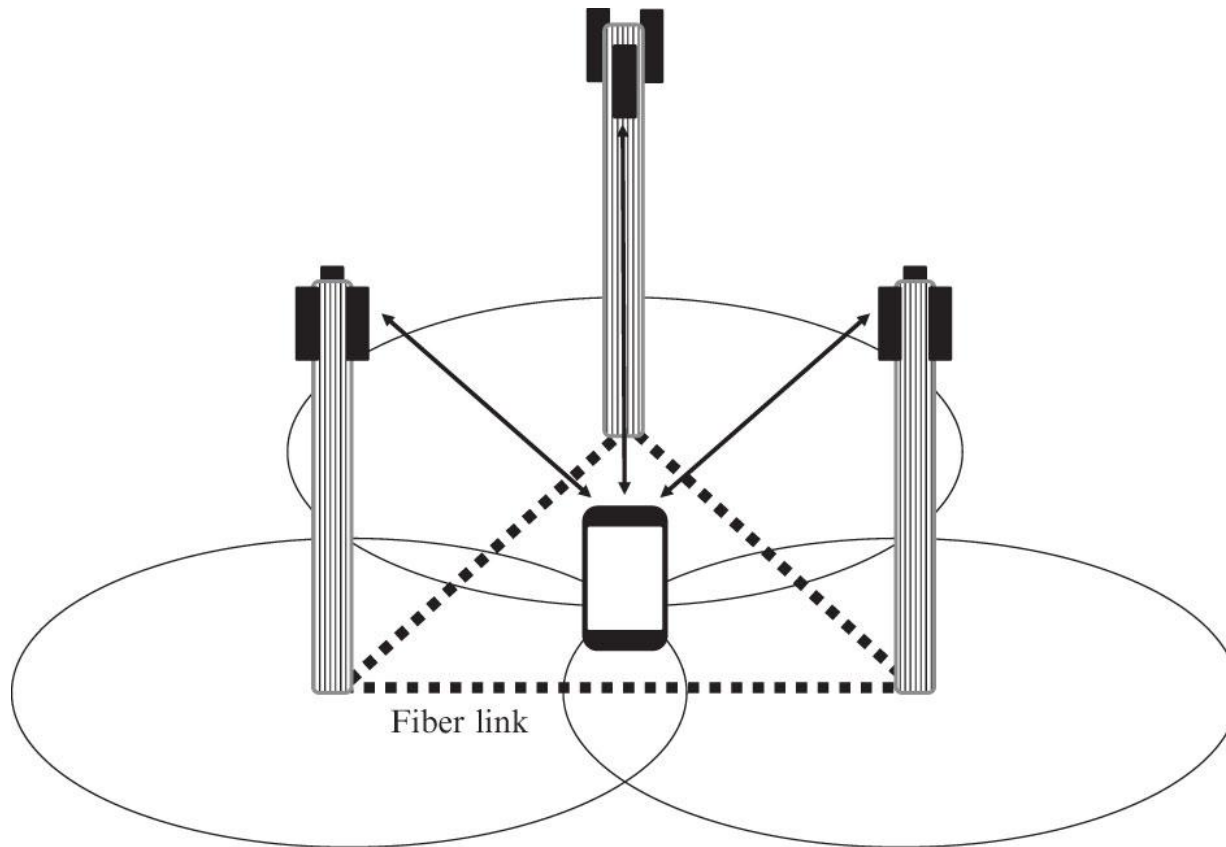


FIGURE 12.10 LTE-Advanced coordinated multipoint-enabling technology.