

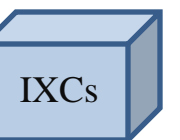
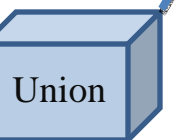
Wireless Network

(controller) controls the
es, and is the interface
s and the GSM switch.

converts the 16 kb/s
4 kb/s voice channels

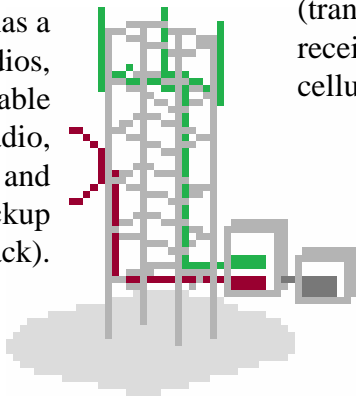
switch interconnects
Cs, and connects calls
ic switched network.

MS switch is Union's
c telephone network.

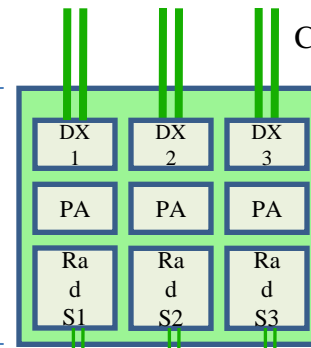


This is the switch-to-switch
"trunking" portion of the
network.

A typical cell site has a
tower, cellular radios,
antennas and cable
(green), microwave radio,
cable and dishes (red), and
a primary and backup
power system (black).

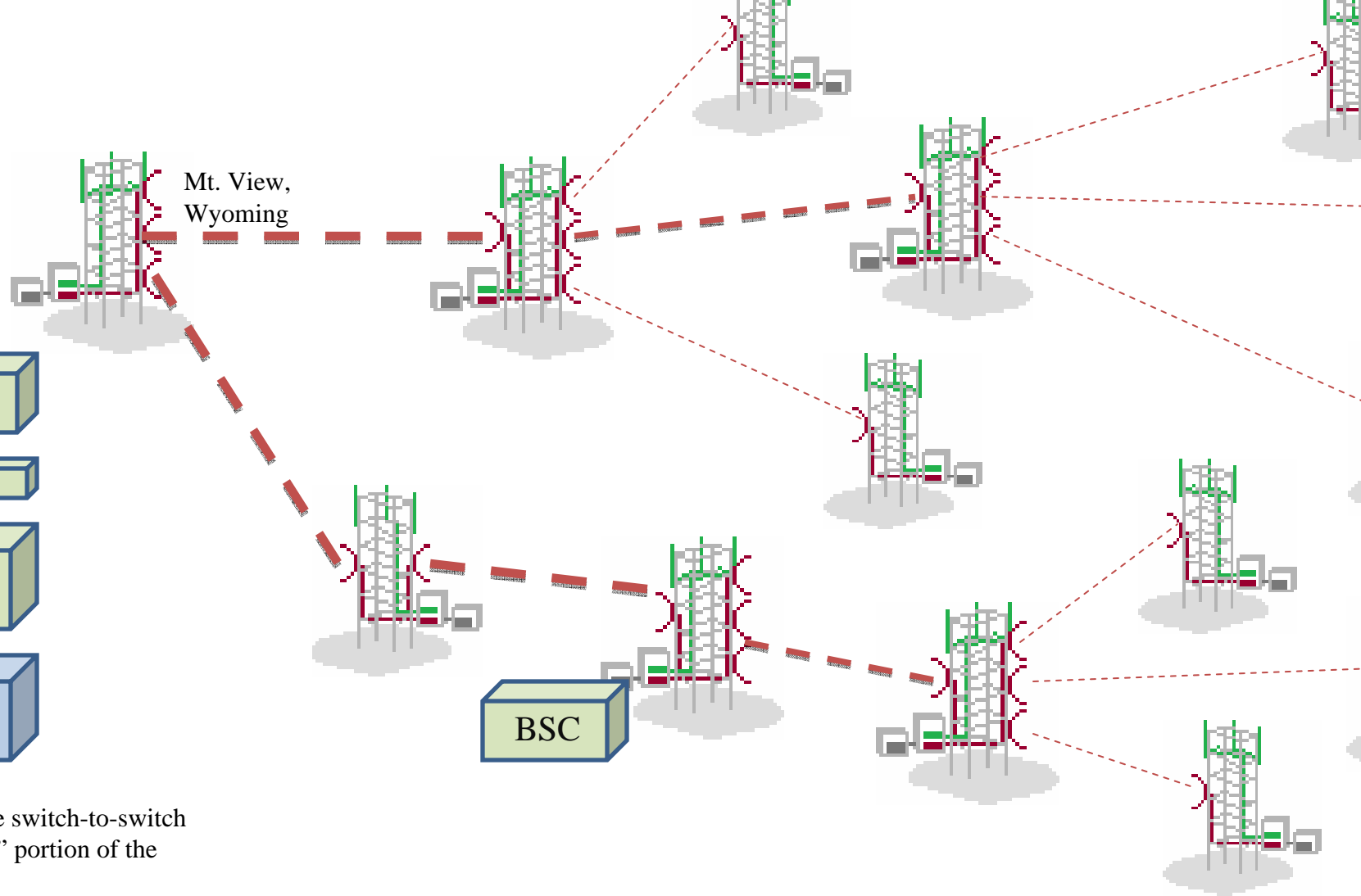


Base Transceiver Station
(BTS) contains radio
transmitters and receivers
(transceivers) that send and
receive signals to/from
cellular telephones.



Coaxial cables to the Antennas

Duplexers. Combine TX and
Power Amplifiers. Strengthen
signals
Radios. The total radios per
determined by the size of
sector has dedicated radio
channels. Radios in a sector
amount of traffic occurring

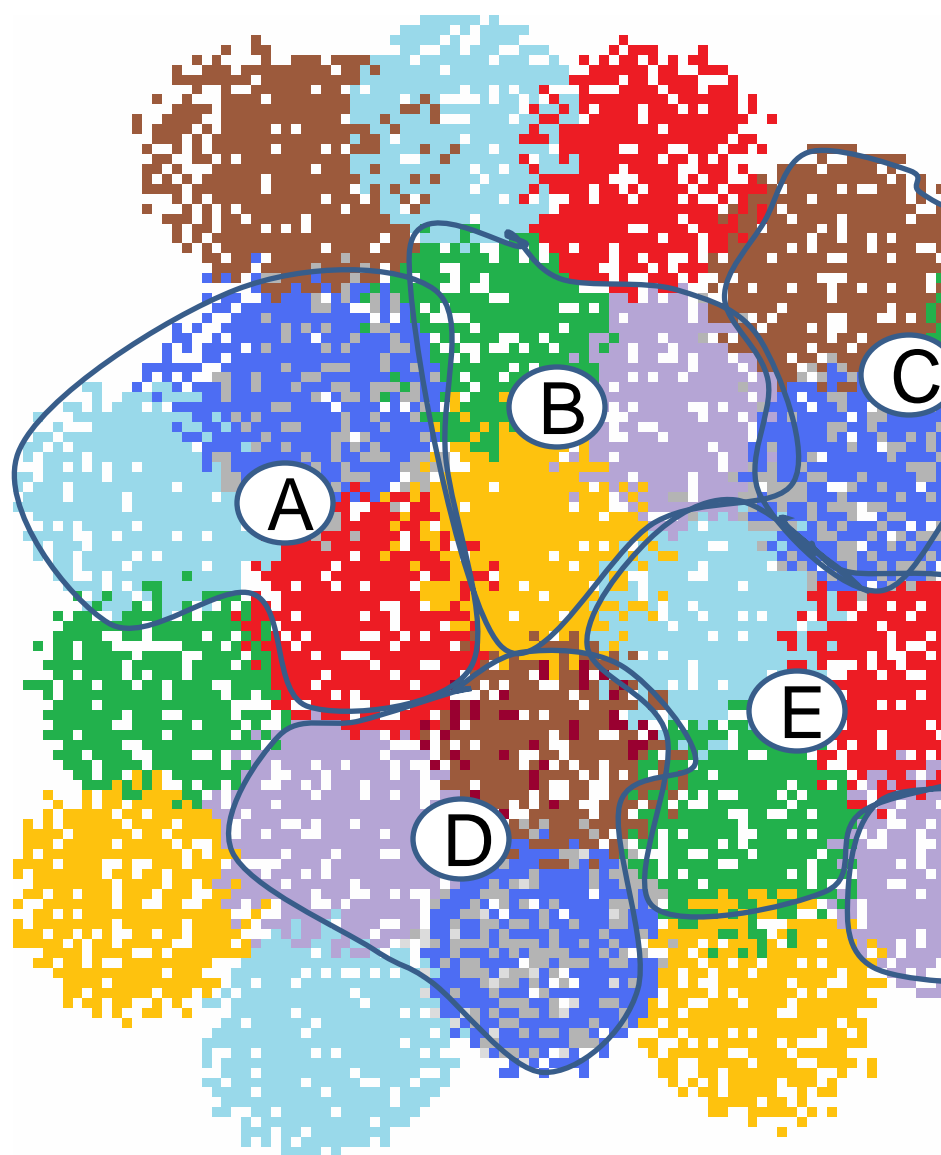
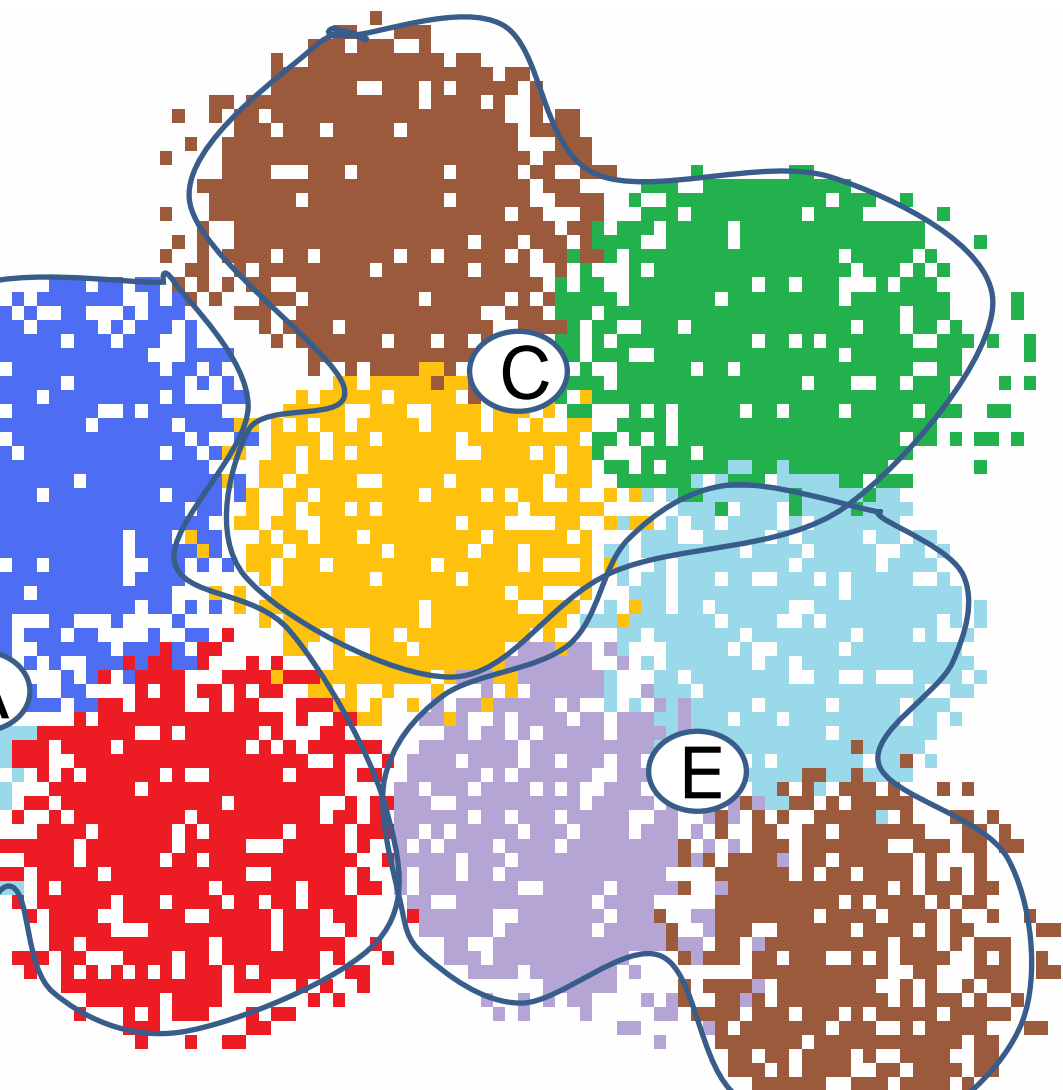


Individual radio channels connect to the BSC in the microwave system

of Increasing Traffic on Cell Size and Frequencies

(Why New Cell Sites Are Considered Traffic-Sensitive)

ally served by three cell
together, they use all of
pectrum in an industry-
n-color" frequency
void interference.



Traffic increases. Since the same s
be re-used, new sites are required.
of the original cell sites A-C-E mu
and frequency allocations must be