Sprint Network Vision

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Technology Evolution

The synthesis of all of the Sprint networks through The All-new Sprint Network allows innovation and evolution for each of Sprint’s major services for tomorrow and beyond.
Network modernization
Multimodal equipment allows every tower to support any or all frequencies

Today

Three networks, with distinct technology and spectrums

- 4G
- 3G
- Push-To-Talk / iDEN

Vision

Unified networks, spectrums support any protocol / purpose

Multiple technologies operate on the Sprint network:
- 4G
- 3G
- Sprint Direct Connect
Available spectrum

Access to considerable spectrum assets allows Sprint to maximize capacity and coverage.
Current and Multimode Site

Individual 3G & 4G Units Today

Multimode 3G & 4G Units Combined

CDMA
Network Vision Base Station and Antenna

4G
3G
5G?

1.9MRRU
Multimode Antenna View*
Network Vision Backhaul Improvements
Major upgrades at each site to support high performance 3G and 4G services

Existing Sprint Network

1.5 – 3.0 Mbps Average
- T1 services
- Mixed copper and fiber access
- Multiple circuits often required for each additional service

Network Vision Targets

100+ Mbps
- Ethernet services
- Fiber and optionally microwave
- Traffic aggregated
Sprint Network Vision Progress

Network Vision is on track and accelerating:

• LTE launched in 70+ markets
• Major site development activity
  > Over 13,500 NV sites On Air
  > Goal is for 200M POPs LTE by EOY ’13
LTE launched in 88 cities

- Atlanta/Athens
- Baltimore, MD
- Boston, MA
- Charlotte, NC
- Chicago, IL
- Dallas/Fort Worth, TX
- Ft. Wayne / South Bend, IN
- Houston, TX
- Indianapolis, IN
- Kansas City, MO
- Columbia, TN
- Puerto Rico/Virgin Islands
- San Antonio, TX
Small Cell Solutions Use Case*

**Indoor C-Femto:** 10 mW
- Outdoor: NA
- Coverage: 5k sq. ft.

**Indoor E-Femto:** 200 mW
- Outdoor: NA
- Coverage: 100k sq. ft.

**Indoor or outdoor and can be fed by a Pico or Macro which will vary power output**

**Indoor:** 250mW
- Outdoor: 5W
- Coverage Indoor: 90k sq. ft.
- Coverage Outdoor: 0.5 sq. Km

**Outdoor:** >10W
- Coverage radius: 1-25 Km

**Indoor:** 20-100mW
- Outdoor: 0.2-1W
- Coverage radius: 100-500m

K 12 School
- Residential
- Office Park - Low

Mall / Shopping center
- Hospital / College Campus / Tall bldg.
- Airport

Dense Residential Urban canyon - downtown
- Office Park - High
- Major Highways
Enhanced customer experience

Sprint Network Vision is expected to profoundly enhance the customer experience

**Positive impact**

**TODAY**

- Multiple devices for different services
- Move in and out of coverage zones
- Risk losing signal strength at edges of tower coverage / in buildings

**VISION**

- Existing devices perform better; a selection of new, universal devices automatically access all networks / services via strongest signal
- Consistent coverage / quality across all towers / spectrums, even in buildings
- Seamless, superior service indoors, across the city and around the country