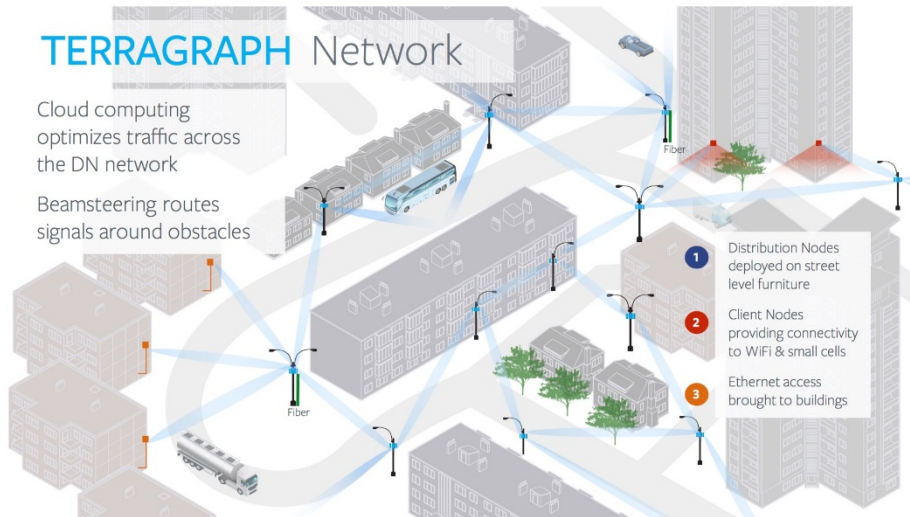# Terragraph

Facebook Connectivity Lab

What is demonstrated

A 60GHz Wireless Network for Dense Urban environments

Small nodes on city street furniture
Utilizes high volume, low cost chipsets (WiGig)
Enabled by Facebook Connectivity Lab breakthroughs

TERRAGRAPH Network

Cloud computing optimizes traffic across the DN network

Beamsteering routes signals around obstacles

1 Distribution Nodes deployed on street level furniture

2 Client Nodes providing connectivity to WiFi & small cells

3 Ethernet access brought to buildings

What was improved

PERFORMANCE

Supports fiber-like bandwidth, delivered wirelessly

High reliability due to cloud computed routing across nodes

AFFORDABILITY

Utilizes 60GHz spectrum

Leverages wireless radios used in high volume consumer electronics (WiGig)
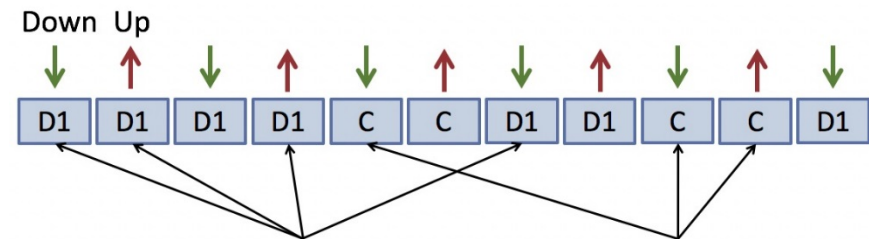
DEPLOYMENT

Fast installation & configuration

Small form factor

Employs existing street furniture

Packet Switched Beams and Dynamic Bandwidth Allocation

Down Up

| D1 | D1 | D1 | D1 | C | C | D1 | D1 | C | C | D1 |

Hardware Information

- IEEE802.11ad Radio with Custom TDMA-TDD Mac Layer
- Multi-element Phase Array Antenna
- Built-in switch and hardware accelerated forwarding

Source code or detail technical information availability

http://tinyurl.com/Terragraph