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EXHIBIT A

Mesh networks are the most flexible and cost-effective solution for extending broadband services to a mass residential market. Each wireless router in the network becomes part of the infrastructure and can route data through the wireless mesh network to its destination, just like the wired Internet.

A routed mesh network simplifies line-of-sight problems and scales more cost-effectively than a client/base station architecture because each router only needs line-of-sight to another router in the network, not all the way to the ultimate destination of the traffic. This extends the reach and coverage of the network with a minimal amount of network infrastructure and interconnection costs. Traffic can be routed around obstructions rather than needing to deploy additional base stations for line-of-sight in densely populated diverse geographical locations. This makes coverage of a residential area much less expensive, because the coverage from each access point can extend around obstacles, thus fewer access points are needed for full coverage of an area.

Nokia RoofTop Wireless Routers combine a radio frequency modem and digital router board with the Nokia AIR OS to create a router that is “wireless-aware and intelligent”. Wireless routers provide high-speed Internet access and act as an “always-on modem” for subscribers. The same device performs routing and traffic forwarding for neighboring routers, becoming an integral part of the network infrastructure.

Nokia RoofTop Wireless Routers have both a subscriber unit (R240) and an AirHead unit (R240A). The AirHead unit features special software that allows it to act as the “access point” or “gateway” to the Internet for a network of subscriber routers. Traffic in and out of the network is routed through the AirHead.



The R240/R240A router is an outdoor-mounted unit with an integrated 8 dBi omnidirectional antenna. Measuring 29” in height, the unit includes a versatile mount to attach to a variety of surfaces.

A thin, flexible power and data cable runs from the outdoor router unit to a small power supply/network interface unit placed indoors. This indoor network/power unit (NPU) plugs directly into an AC outlet and has two data interface options: 10/100 Base-TX Ethernet (RJ-45) and HomePNA 2.0/1.0 (RJ-11). The HomePNA interface allows for quick installation using existing phonelines within the home. The R240/R240A also includes an integrated amplifier that dynamically adjusts in 1-decibel (dB) increments (from 12 dBm to 27 dBm). The amplifier allows the radio to transmit at maximum power when necessary but can dynamically adjust to minimize interference and maximize frequency reuse.

Specific objectives for this experimental radio service are to deploy some pilot locations to resolve technology issues, check market acceptance and experiment new product features.