

The Royalston Broadband Project

Jon Hardie

The Mass. Broadband Initiative not only supports regional 'Fiber to the Premise' (FTTP) broadband solutions to connect homes and businesses in Western Mass, but is also assisting towns that are building out their own solutions to address 'last mile' broadband connectivity. The MBI recently awarded a \$45,000 grant to the town of Royalston for a wireless pilot project in the South Village neighborhood. South Royalston was chosen for the pilot as it contains the highest population density in the town, marginal phone and cell service, and limited public safety communications access. Currently satellite, hotspots, and dial-up connectivity are the only available options for Internet. This section of town has often been left behind with past technology initiatives.

Over the next 6 months, Royalston expects the pilot to become a permanent capital investment for a future town-wide hybrid Last Mile network, which would utilize both fiber-optic and wireless connections. This initial effort will help test the advanced wireless technology, providing both qualitative and quantitative service feedback. Input from users in the town will allow the necessary technical adjustments to be made before the launch of the town-wide network. Wireless access points for the pilot network have been installed at two locations in South Royalston. The bandwidth of each access point will be sufficient to provide coverage across the area and signals sufficient to meet the emerging 25/3 megabits per second standard for broadband connectivity, which will allow for ubiquitous high-speed Internet service to locations within the defined test footprint.

As proposed, the pilot network has the technical capacity to serve 80 premises in South Royalston Village, however, the town has targeted a smaller sampling of 50-60 unserved residential dwellings to ensure that pilot customers can be successfully managed as service data is collected, real-time system performance is evaluated, and modifications are made to equipment to enhance performance. The sample group will be determined by which premises within the test footprint are first to subscribe. Jon Hardie, Project Lead Royalston Hybrid Fiber/Wireless Broadband Network Project, provided a recent update on the project:

"Royalston's initial wireless network goal is to deliver 25 Mbps Down /5 Mbps Up. Today (August 26, 2015) we tested our [PtP] wireless network connection between our two access points with two low power point to point wireless antennas ... Our 25/5 is 450 times faster than dialup, and almost 20 times faster than DSL."

The committee believes that this is a highly transferable model that other unserved towns in Western Massachusetts could potentially replicate as a Last Mile solution. Leaders in Royalston have indicated that the project could serve as a technical case study for towns not involved in the regional FTTP (Fiber to the Premises) efforts led by WiredWest or other fiber-only projects, but which are looking at alternative solutions. Royalston has also offered to be a resource and is willing to share information, knowledge, and documentation. The MBI looks forward to the successful results of this pilot.

The proposed town-wide hybrid network is expected to have the capacity to provide broadband quality service to all 603 verified premises in the town of Royalston. For questions about the Royalston pilot or to get updates on its progress, contact Jon Hardie, Project Lead, Royalston Hybrid Fiber/Wireless Broadband Network Project, at Jon.Hardie@Royalston-ma.gov.