

Tellabs® Global Services — Greenfield Mobile Backhaul Networks

Tellabs® Global Services helps meet aggressive rollout dates for “greenfield” mobile backhaul networks in two major metropolitan markets.

Recent U.S. wireless auctions have largely served to provide more spectrum to carriers that already have a network in the license area. But there are some exceptions.

One of the nation’s largest wireless carriers recently won spectrum in several major metropolitan areas where it did not already have coverage — a big win from a business and marketing point of view, but a challenge from a technology perspective.

In today’s wireless market, ubiquitous service coverage is critical to maximizing ad revenues and roaming agreements and to providing attractive service packages for customers. As a result, the carrier needed to turn up new markets as soon as possible. To capitalize on new metro markets it had recently won, the company set an aggressive timeline for building its network from the ground up.

Normally, that goal would require the company to hire and train a large number of technologically skilled workers. Finding and hiring employees with the right skill set isn’t easy — and after the network was completed, many of those people would no longer be needed.

Faced with these challenges, the company opted to take a different approach. It enlisted the help of Tellabs Global Services with the transport engineering and deployment of its wireless backhaul network in two major metropolitan markets, the first being one of the five largest in the U.S. and the other in the top twenty-five.

Tellabs Global Services has a wealth of experience in backhaul network deployments with carriers worldwide. With Tellabs’ help, the wireless carrier quickly put the new markets into service, while minimizing deployment risks and avoiding the need to add temporary employees.



The Partnership

The wireless carrier contracted with Tellabs Global Services to provide a range of services, including program management, traffic engineering, action service request (ASR) provisioning, circuit provisioning in a pre-existing operations support system and others.

Tellabs Global Services provided a team of people to work with the carrier, most working full-time on the project for just over a year. A program manager coordinated the team’s efforts, conducting daily reviews to help make sure that the group met key milestones. The team worked closely with a range of employees on the carrier side, including construction, RF and electrical engineers, and market launch directors. Service was turned up in one of the two markets within a year, with the second market following about three months later.

Early in the engagement, Tellabs Global Services demonstrated its value to the carrier by detecting costly flaws in the carrier’s initial design plan. These flaws resulted, in large part, from the carrier’s network optimization tool, which was not optimized for networks that involved multiple access and transport areas.

Using their own tools and methodologies, Tellabs’ wireless backhaul services team presented the carrier with an alternate design. The new method provided better network optimization and a substantial savings compared to the customer’s projected capital budget. Upon reviewing the two proposed networks, the carrier chose the Tellabs design.



The carrier's backhaul network now connects approximately 1200 cell sites in the two metropolitan markets. Underlying the network are leased lines from seven different wholesale transport providers. Tellabs Global Services helped the carrier make vendor selections from an initial field of fourteen wholesale carriers that responded to requests for information, procurement and quotation — which Tellabs Global Services also helped in creating.

Placing orders for leased lines for the two markets required a total of 4400 ASRs. Several members of the Tellabs team responsible for placing the orders had previously worked for wholesale carriers. That experience proved invaluable, as the team members could leverage their experience to negotiate better pricing for the wireless carrier. As a result of those negotiations, Tellabs Global Services saved the wireless carrier approximately \$25 million over five years.

Another important aspect of the wireless backhaul network rollout was to provision circuits in the carrier's pre-existing network and service resource management software. This important database interoperates with other operations support systems, including the carrier's billing system.

In order to meet key turn-up dates, the Tellabs team sometimes provisioned multiple OC-12 links where OC-192 links were preferred but were not available. When the wholesale carrier subsequently deployed OC-192 service to the area, the Tellabs Global Services re-provisioned the network to move traffic to the higher-speed link.

Ongoing Benefits

After the turning up the network, Tellabs Global Services continued to work with the wireless carrier to forecast requirements for additional network facilities eighteen months into the future.

Tellabs Global Services also provided another important service that benefits the wireless carrier by supporting backhaul network rollouts in other markets. Tellabs created work flows based on the activities they performed, including explaining how to order eleven categories of services from DS-1 to OC-192, and a provisioning section detailing the requirements for each record.

Although Tellabs Global Services' work for the wireless carrier is now complete, its efforts continued to deliver benefits when they rolled out the workflow processes nationwide. The carrier views those workflow processes as best practices and strives to replicate the success of the two-market deployment in all of its projects.

Executive Summary

Client

A major U.S. mobile operator

Project

Building a mobile backhaul network in "greenfield" deployments in two major metropolitan markets

Tellabs Solution

A dedicated project team provided:

- Transport engineering
- Program management
- Assistance with selection of seven wholesale network operators and negotiations with those vendors
- Assistance with provisioning circuits in the carrier's pre-existing network and service resource management software
- Forecast of requirements for additional network facilities eighteen months into the future
- Documented work flow processes based on activities performed

Business Results

- 1200-cell site network was completed on schedule
- Substantial savings in customer's projected capital budget as a result of better network optimization
- Saved the carrier approximately \$25 million over five years by negotiating better prices for wholesale network connections
- Ongoing work flow efficiencies as a result of work flow processes documented by Tellabs Global Services, which the client has rolled out nationwide

North America

Tellabs
One Tellabs Center
1415 West Diehl Road
Naperville, IL 60563
U.S.A.
+1 630 798 8800
Fax: +1 630 798 2000

Asia Pacific

Tellabs
3 Anson Road
#14-01 Springleaf Tower
Singapore 079909
Republic of Singapore
+65 6215 6411
Fax: +65 6215 6422

Europe, Middle East & Africa

Tellabs
Abbey Place
24-28 Easton Street
High Wycombe, Bucks
HP11 1NT
United Kingdom
+44 870 238 4700
Fax: +44 870 238 4851

Latin America & Caribbean

Tellabs
1401 N.W. 136th Avenue
Suite 202
Sunrise, FL 33323
U.S.A.
+1 954 839 2800
Fax: +1 954 839 2828

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