Focus On Profitability: Here Is The Know-How Needed For Success

To succeed, the owner of an FTTH community must have up-to-date skills, from technical mastery to a capacity for management and marketing, plus plain common sense.

by Brian Blais

Author Profile

Brian Blais is the President and the founder of New England Broadband, which is based in Londonderry, NH. He has more than 18 years experience in engineering and management positions in the cable industry, including responsibility for wide scale deployments of integrated data, telephony and enhanced video services. New England Broadband provides engineering, technical support and customer service solutions to the broadband industry.
(bblais@newenglandbroadband.net)

For the owner of a fiber-to-the-home (FTTH) community, proper planning and operation can be the difference between long-term profitability and marginal profitability or, worst, a lost financial investment. But what, exactly, is proper planning and operation and how are they achievable?

As with any real estate deal, one key is the proverbial "location, location, location." Other important facets include intelligent design of the FTTH network and its environment, network usage models, and the usual business considerations, including deal-making and marketing.

Location, Location, Location

The location site of the network's "head end" must accommodate and be able to support the offering of so-called triple play services – telephony, video and data. Thus, there should be access to a commercial infrastructure, including the ability to serve the facility with adequate commercial-grade power. Also, there should be access to commercial fiber networks, to ensure the accommodation of commercial telephony services that can support inbound data circuits. Access to commercial natural gas supplies are not absolutely necessary, but having access to natural gas to fuel standby power generation eliminates the risky reliance on fuel deliveries.

The site should be tested for the suitability of satellite reception. This includes the simple issue of proper orientation to the satellite constellations, and the ability to support concrete pads and mounting systems. Tougher to accomplish, but important if it can be achieved, is keeping the site free of anything terrestrial (such as a building) that would interfere with line-of-sight access to the satellites. Room to add additional satellite antennae' is important.

Lastly, the site should provide for ready access to the network infrastructure no matter the weather, and security against vandalism by wayward people.

To that end, it is desirable to house the network in a building that is used only to house the network. While this may be impractical, it is important. Thus, minimally the facility should contain an equipment room that is secured from any other purpose or use.

A security system that is able to track multiple users and that sends power loss, high temperature, water, smoke and fire alerts, as well as intrusion or trespass alarms, also will contribute to keeping the network reliable.

Security also includes guarding against a flood. To that end, the building that houses the network should not include a water facility, unless such a facility can be contained. In no event should water facilities be placed above or on a floor above the network head end, because a burst water pipe will have disastrous effects on the equipment. Additionally, it is important to ensure that there is no intrusion from ground water. If the inbound conduit systems enter below grade, there should be accommodations made to prevent such intrusion. This might include engineering a trap configuration ahead of the conduit systems' entry into the building, or bringing the conduits above grade before they enter the facility.

The facility's design should include a barrier against dirt or debris, as well. Landscaping, asphalt or other paving is preferable. These will minimize the

amount of dust in the environment. Dust is an enemy of the network equipment.

Proper ventilation and air conditioning are critical. A fully-loaded voice, video and data head end will require constant and significant cooling. In fact, even in Northern installations in the winter season, the facility will require cooling. So, a backup cooling system should be deployed to be brought online in case the primary cooling system fails. This backup system could be composed of twin simultaneous systems or even an inexpensive exhaust blower and vent system that is activated at a critical high temperature.

Stand-by power and power conditioning are absolute requirements for a robust and operationally sound deployment. Generation capability without power conditioning is almost useless. Most power outages are the result of an "electrical event" and its associated spike or bump that can wreak havoc on modern digital equipment.

Finally, "grounding and bonding" is vital. The more care and attention that is paid to the grounding and bonding systems of both the building that houses the network and the surrounding area – including the area housing the satellite antennae – the larger the dividends for years to come in the form of reduced failures.

There is no preferred construction material for a facility, but ceiling heights of greater than 8' allow for future utilization of the building's airspace if all of the available "lateral" square footage is filled but more expansion space is needed.

Intelligent Design, Financial Rewards

Unfortunately, FTTH deployments are still perceived as costly. This is wrong.

The FTTH industry has seen substantial improvements in the economics of deploying FTTH networks, thanks to improvements in hardware technology that have yielded lower costs for components used in the networks.

With proper design and an effective business model, incremental revenue opportunities and reduced operating expenses can add substantially to the profitability of the venture.

To begin, do not try to improve the bottom line by cutting upfront costs. Too often, efforts to reduce initial deployment costs also reduce the reliability of the network. Of course, a network that continually exhibits problems to the customers ultimately will drive those customers to a competitor.

Perhaps the most important aspect of the FTTH network's design is in the mapping of the services that it will be used to offer. These include the triple play services and "content" offerings from involved service providers. Value-added services and services that differentiate the network from competitive services often will be the way to gain customers, while customer service will be the way to keep them.

An important technological basis for the good network design is the provisioning of two-banded inbound data circuits

rather than a single inbound circuit; the two-banded solution can provide some essential redundancy – and hence network security in case of a circuit failure. With a banded approach, if one of the inbound data circuits fails, it is likely that the other will continue to function properly. The network will be operating on limited bandwidth, but customers will continue to enjoy their services.

Those services must include high-speed data services including e-mail, Web site hosting, and video conferencing.

The provisioning of voice services can be accomplished with little difficulty, if these are offered for a flat rate that will simplify billing and administration – especially if offered in a package with other services such as conference calling.

Video service is a bit more complex to offer, because done properly, it must include a full suite of analog channels delivered digitally, as well as extra-cost options – including services such as premium channels, pay-per-view programming, high-definition television (HDTV) programming and video-on-demand (VoD). The good news is that these can be sold as value-added options.

This idea opens the issue of how to sell these services. Although programming costs are substantially lower if video options are sold for a flat fee in a bulk model, this model makes it more difficult to sell video services in a bundle with voice and data services. By contrast, selling services individually can be substantially more profitable even though the video programming cost can be considerably higher.

Ultimately, all of the aforementioned services should be offered through a TV set-top box.

Of course, customer service also is critical to a profitable FTTH deployment. A highly-motivated and well-trained staff is the greatest asset – whether it is composed of employees or workers provided by an outside firm.

Finding a reliable customer care provider and fulfillment organization can make the task of supplying outstanding customer service much easier. The provider must have a robust billing and subscriber management solution that adapts to a wide range of customer needs. The billing system must be accessible from the TV set-top box. This coupling is critical because it allows the network operator to add or remove services that the customer can access, in response to the payment history or customer orders made through the box. Also, the billing system must be capable of reporting system performance statistics, to accurately measure the reliability of the FTTH network.

Having technicians – either employees or contracted staff – on site is vital, too. And these technicians must be trained in splicing fiber, as well as in all the technologies used in the homes, and in how technologies in the home work with the FTTH network infrastructure.

One of the greatest benefits of an FTTH deployment is the extraordinarily high reliability of the network infrastructure equipment. Regardless, the prudent operator will have contingency plans to cover any problems that may arise – such as a severed fiber caused by an errant backhoe operator.

Striking The Deal, Closing The Deal

The bundling of services through the FTTH network will yield improved margins in every part of the business, no matter how the bundle is organized. Bundling helps maintain customer loyalty.

Video services often are the hardest to package in a bundle. One option is to bundle video services in tiers, offering substantial discounts to customers that subscribe to multiple levels of service, including premium programming. This is fine way to maximize revenue.

Continual promotion also is an important element in the marketing of an FTTH deployment. This can include providing a local video channel that is used to promote local events. Intranet sites specific to the FTTH project will help to add value, too.

A robust FTTH network and value-added services will attract customers. Outstanding customer service will retain them. Highly-satisfied customers consistently purchase more products and are much less likely to be tempted by competitor's offer.

The result, inevitably, is consistently higher profitability. ❖