
Meeting Type:	SandyNet Advisory Board
Meeting Date:	10/16/2025
From:	Gregory Brewster
Subject:	Calix SmartHome and Equipment Purchase

BACKGROUND / CONTEXT:

Calix, SandyNet's main provider for fiber-to-the-home equipment, released a series of routers named Gigaspire, which were the replacement line for Calix's existing Gigacenter modem/router combination. Staff has been working over the past four years to replace aging Gigacenters with the newer Gigaspire model. The Gigaspire line was designed to support new Wi-Fi standards, but also a platform that Calix calls the Experience Operating System (EXOS). This operating system runs services on top of the platform's existing operating system in containers that allow for expanded use.

Calix has previously experimented with value-added services that ran on top of EXOS, including some lines that did not pan out, which SandyNet did not seriously entertain before those initiatives were retired. SandyNet waited upwards of a year and a half after the initial Gigaspire release before it began retiring Gigacenter's from homes. Since then, Calix has focused more of its efforts on subscriber experience. Calix released its CommandIQ application around 2019, and SandyNet adopted a branded version of the application in 2022. The CommandIQ application allows subscribers to manage their home network remotely from a smartphone. The application is only compatible with the Gigaspire line, which is currently deployed to about 70% of the city. Adoption of the application has remained somewhat low at this time and has not been widely pushed during device installations or swaps. Staff has plans to increase the application's adoption rate, especially after its recent 3.0 version release.

In late 2023, Calix announced its SmartHome program, which included a consolidation of services that were previously available under a per subscriber basis. Calix has consolidated most of its residential services under the SmartHome umbrella. The list of applications can be found under *Exhibit A*. These services are similar to the services that other router companies offer, with a few exceptions that only service providers can get.

Calix has slowly changed its model from being a traditional telecom equipment manufacturer to pushing service providers more into their subscribers' homes. This is something that SandyNet has always done and was one of the original selling points for the Gigacenter line. SandyNet as a service provider can get into any SandyNet provided router and help individuals with their connection or Wi-Fi devices. Older service providers traditionally ended their responsibility at a home's demarcation point, which made service delivery easy, but didn't allow the provider to help the subscriber any further. The trend of having the service provider take on more responsibility over time is increasingly becoming the norm. Many service providers are still hesitant to adopt this method and stay out of the home by offering and charging a monthly fee for managed Wi-Fi service, or by not supplying a router and forcing the subscriber to provide and manage their own device.

Managing Wi-Fi has been incredibly important for SandyNet, and most trouble tickets are Wi-Fi or device related. Without having a SandyNet router in each home, SandyNet would be unable to assist subscribers with their Wi-Fi or hardwired devices. These services are not free but have been built into the SandyNet rate model since it first began deploying fiber in 2014.

The Calix SmartHome program is poised to be the next evolution of this idea. Subscribers have become increasingly more reliant on their service providers and have higher expectations than they did a decade ago. Additionally, the lack of technical assistance for wireless issues or network problems has naturally fallen to service providers to pick up. A subscriber is more likely to attribute a Wi-Fi issue as an internet issue, and if they are unable to get assistance to fix it, it will result in dissatisfaction or even a cancellation of service.

SandyNet can only help subscribers who use a SandyNet router. That limitation is nearly impossible to circumvent due to the nature of how networks and internet security work. As more homes demand services like parental controls or virus protection, if SandyNet cannot offer those services, subscribers may use their own devices instead, and prevent SandyNet from being able to assist them.

ANALYSIS / KEY CONSIDERATIONS:

SandyNet has not taken advantage of the Calix SmartHome program yet and has mostly delayed reviewing and considering the program prior to the adoption of the SandyNet Master Plan. Calix has announced that its future initiatives will be heavily tied to its SmartHome program and the Gigaspire line, which means that there will likely be a time that SandyNet will have to adopt the program if it intends on using Calix systems in the future.

While staff is unsure of the number of future features that will be added to the program, there are several features that exist today that SandyNet could benefit from. Calix has packaged SmartHome as a bundle for all of its services, which are applied to the entire subscriber base.

ProtectIQ is Calix's version of a real time Deep Packet Inspection system, which compares traffic signatures to a database of known ransomware or malware threats. This is a residential version of what an enterprise might have under a firewall, which analyzes traffic real time and attempts to block things at the network level before they reach an end device. These are similar to paid subscriptions that you might find on similar consumer routers like Netgear's Armor subscription.

ExperiencIQ is Calix's expanded parental control functionality that is a commonly requested service from family households. This includes device time and zone conditions, down to the application level, but also allows for content filtering as well based on category or group.

SmartTown is a feature that SandyNet has traditionally handled in house by using existing systems but has not been able to leverage across its entire fiber-to-the-home network. SandyNet specifically wants to utilize this service to allow for a city wide first responder Wi-Fi network to fill in mobile connection dead zones as well as rural areas that have no mobile service for technicians. SandyNet is not interested in offering a service similar to Comcast's Wi-Fi umbrella network, where any subscriber can connect to another Comcast subscriber's Wi-Fi network. SandyNet specifically wants to use this service for its technicians and first responders.

HomeOffice is an upcoming service that will enable work-from-home (WFH) individuals to fail over to a cellular hotspot connection for their router in the event of an internet disruption. Staff is increasingly seeing pressure from (WFH) individuals to prioritize repairs from those who need to

stay online during an outage. Traditionally, SandyNet has told those who WFH to purchase an alternate connection. Those discussions have had mixed outcomes in the past. SandyNet hopes that it can change the narrative by being able to directly inform existing and new subscribers on how to stay connected during an outage, as well as reduce overall dissatisfaction during an outage and decrease the overhead that service providers have to take on after an outage.

Back in April 2025, SandyNet reached out to the other municipal ISPs in Oregon to see which Calix customers were implementing SmartHome. The City of Hillsboro has already entered into this program with Calix, and the City of Sherwood expressed interest in moving towards the program and is currently under an older version of the program which only includes the ProtectIQ and ExperienceIQ suites.

The cost to implement the program results in an increase of \$1.5 for per subscriber, per month and is set up under a three-year term. Calix does not operate under annual or two-year terms. SandyNet has already allocated the necessary funds in its 2025 to 2027 budget to pay for that increase, in anticipation of joining the program.

LIST OF ATTACHMENTS / EXHIBITS:

- Calix SmartHome Datasheet
- ProtectIQ and ExperienceIQ Technical Specifications