

INTERVIEW

Interview with Mary Cotton CEO, iDirect

Bringing TDMA and SCPC onto a Common Platform:
How service providers can meet growing customer demands while
lowering their costs



iDirect has just made a major announcement about integrating TDMA and SCPC on its platform. What business challenge are you addressing?

In the satellite industry, service providers face an ironic challenge when it comes to growth. The more satellite IP networks are adopted for core communications, the more these networks can become difficult and costly to support.

While it's ironic, the logic is simple. Greater reliability leads to greater volumes of network traffic and more dynamic applications. All that puts a growing strain on service providers who are managing a valuable and often fixed resource: satellite capacity.

The solution lies on two fronts: efficiency and flexibility. And service providers are always looking for a better way to allocate satellite capacity and adjust to customer demand trends.

This has always been the case in our industry. Recently, however, we've seen several key innovations that are enabling service providers to increase bandwidth efficiency. The most significant of these was the introduction of DVB-S2. But a longer list of technologies – such as Adaptive Coding and Modulation, 2D 16-State inbound coding and Adaptive TDMA – are helping make satellite networks much more efficient.

Flexibility is another long-standing challenge. How can service providers meet the broad diversity of customer needs that characterize our industry? Historically, this diversity has led to the development of two main transmission technologies: TDMA and SCPC. SCPC is designed for sites that need a high-volume, fixed, point-to-point link. TDMA is a shared channel engineered for service providers that want to allocate a pool of bandwidth across multiple sites.

In recent years, TDMA has been widely adopted over SCPC. According to analyst firm COMSYS, SCPC networks in the maritime market have dropped from 80 percent of implementations in 2003 to less than a third today, while the adoption of TDMA technology has surged. And NSR reports that mobile operators are migrating from SCPC to TDMA as a backhaul solution, at a rate of up to 15 percent.

One of the most significant reasons for the growing popularity of TDMA is that SCPC networks tend to waste bandwidth. They can only be set at one size, and that size is usually matched to peak bandwidth demand. Yet, SCPC networks are the appropriate solution for customers that require constant, heavy bandwidth requirements.

The reality for service providers is that they may need both TDMA and SCPC. And this means investing in and operating two technology platforms, which increases capex and leads to operational inefficiencies.

Can you tell us more about how you are bringing TDMA and SCPC together?

We have listened closely to our partners to understand exactly how this diversity impacts their business. And over the past few years,

we worked hard to create a solution. It's the integration of TDMA and SCPC onto a single technology platform. It's now available with the introduction of iDirect's iDX 3.0 software.

Service providers can convert any Evolution remote router to hybrid device that can switch back and forth between TDMA and SCPC. Take an enterprise network that is built on TDMA. It supports core voice, data and video applications. Let's say the customer wants to use the same network to support HD-quality video or transfer large data files. Typically, this would be a decision between installing a TDMA network or an SCPC connection.

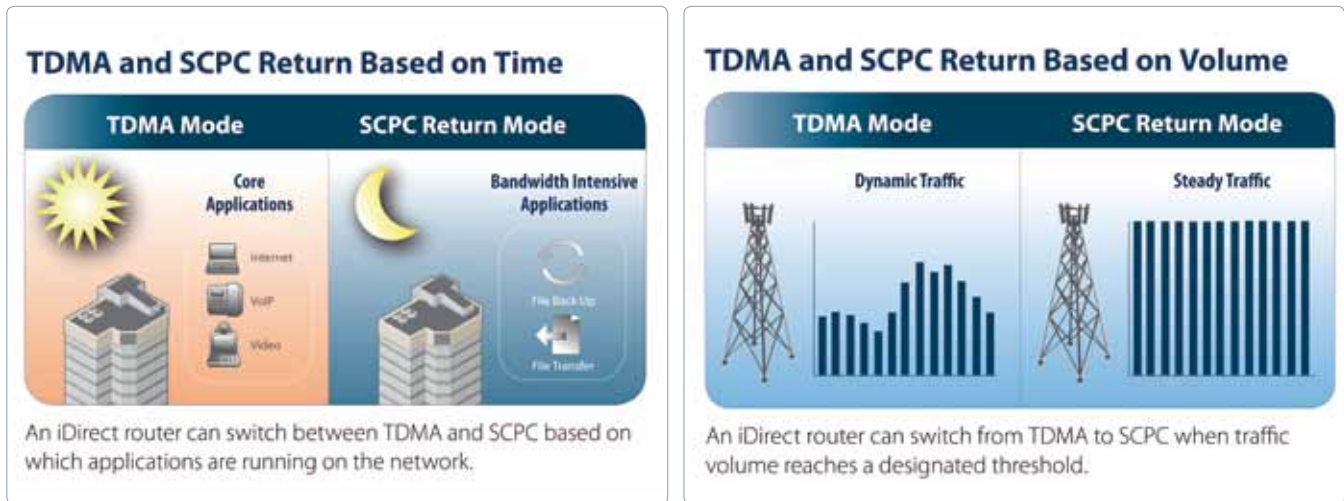
However, on an integrated TDMA/SCPC network, a router can be set to TDMA as a default mode for core applications, and then be switched temporarily to run in SCPC mode to support temporary heavy traffic conditions like data back-up or HD video applications. In this example, TDMA and SCPC can be switched based on time intervals. A remote router can also be switched from TDMA to SCPC on a permanent basis once traffic reaches a threshold where a dedicated SCPC connection is more economical longer term.

One application for this is cellular backhaul. For mobile operators, TDMA networks typically present the most cost-effective way to backhaul data when they first introduce service in remote areas. Once these operators gain subscribers in local villages, network traffic expands in volume and becomes steadier. If an integrated TDMA/SCPC remote router is in place, it can be remotely switched through a network management system to run in SCPC on the return channel.

In the same way, Internet Service Providers can start with TDMA as they get their service up and running and shift to SCPC once they reach a designated volume of network traffic.

How can this improve business operations and increase revenue?

For the first time ever, service providers have the flexibility to offer both dedicated and shared service on a single platform. It helps significantly lower both their capital and operating costs. And it gives them greater flexibility in how they design customer networks.



For example, service providers can create premium SLAs that allow for temporary bursts in traffic. This is valuable for applications such as file transfer, back-up, video, military surveillance and telemedicine.

They can more easily accommodate seasonal bandwidth requirements for maritime customers like luxury yacht owners and fishing vessel operators. Military networks can be designed to handle regular intervals of large surveillance data streams or to provide dedicated connectivity before an operation. Oil and gas companies can efficiently support daily communications while taking on extra bandwidth to send large files containing high-resolution images, seismic data or other information.

When customer sites grow larger, service providers can up-sell their customers to a dedicated SCPC link. And all this can be done instantly and without the need for a costly site visit to exchange hardware.

An integrated TDMA/SCPC platform enables service providers to invest in just one core platform to grow their service. They can reduce capital and operating expenses. They gain network-wide cost savings and bandwidth efficiencies. And they have greater flexibility to meet ever-changing customer demands and deliver a highly reliable service – whether that’s over TDMA, SCPC or both.

This will change the way service providers can support their customers, especially as they rely on satellite more than ever. It’s truly an economic game changer for providers and an exciting first for our industry. 🚀

Mary Cotton joined iDirect in September 2007, bringing more than 18 years of technology leadership creating and driving successful growth strategies in CEO, COO and CFO roles. Prior to joining iDirect, Ms. Cotton served as Senior Vice President with SAP Industry Solutions, the world’s largest business application software company. She joined SAP in 2005 after managing the acquisition and sale of Frictionless Commerce, a provider of supplier relationship management software, where she served as Chief Executive Officer. Prior to SAP, Ms. Cotton held several top management positions including Chief Operating Officer and Chief Financial Officer at Aspen Technology Inc., a provider of software and services that help companies improve their manufacturing processes. There she executed an aggressive growth strategy that took AspenTech from a \$6M private company to a \$330M publicly traded international solutions provider. Ms. Cotton holds a Bachelor of Science degree from Boston College.