

Local Exchange Evolution: *How Service Providers are Growing Revenue and Reducing Costs through Legacy Switch Migration*



Lisa Wigington, TEC's Director of LEC and Video Operations

Executive Summary

Service providers stand to gain significantly by migrating subscribers from legacy TDM switching equipment to next-generation architecture. Key benefits include the ability to quickly and easily deliver a leading-edge, converged services offering over a streamlined and flexible network, dramatically reducing operating expenses and greatly simplifying operations.

Backed by an experienced team and an array of support resources that promote a smooth migration, MetaSwitch is enabling carriers like TEC, One Communications and ENMR-Plateau to simultaneously

reduce operating costs and offer a host of new services and features that were not previously possible.

These new services are increasing customer loyalty while at the same time creating new revenue streams in new markets. By better positioning them to meet the evolving needs of their customers, both incumbent and competitive service providers can grow and thrive within a viable, future-proof, long term business model.



Telephone Electronics Corporation (TEC)

Telephone Electronics Corporation (TEC) headquartered in Jackson, Miss., serves nearly 50,000 subscribers in Mississippi, Alabama, Louisiana, and Tennessee. Founded in 1923, it employs over 250 people.

TEC recently “rebranded its independent subsidiaries and CLECs to unify the company’s marketing,” says Lisa Wigington, TEC Director of LEC and video operations. “The rebranding is directly related to the introduction of Metaswitch powered services and our fiber-build.”

Recognizing the need to become a brand recognized for technology and innovation, TEC wanted to “let our customers know that TEC was not just the small town telco anymore, that we could provide their total communications needs and were moving with technology,” says Wigington.

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– Lisa Wigington, TEC,
Director of LEC and video operations

TEC also might have more reason than most to upgrade its switching infrastructure. It was using Siemens EWSD switches which, aside from not supporting the features TEC customers demanded, also required high maintenance and upgrade expenditure.

At the same time, TEC sought to upgrade just about every other key part of its infrastructure, from trunking fiber to Ethernet, 160 remotes and IPTV, spread over six different operating companies. “We expect to be 100 percent FTTN by the end of 2011 and hope to have increasing FTTH deployments in all of the companies moving forward,” says Wigington.

Given the complexity of its network conversion, TEC anticipated a lengthy and complicated process, says Wigington. “We needed more than just another vendor – we needed a true partner who could work with us closely throughout our switch transition.”

Now that TEC has deployed, “We’ve been very satisfied with Metaswitch and the migration in particular,” she says. “We felt the Metaswitch people and project management team were very helpful, and kept us on track,” she says.

Describing the process, Wigington explains, “Metaswitch’s automation tools regenerated the subscriber data on the EWSD side and created a file to



Ike White, Central Office Manager for TEC-Bay Springs uses MetaView to help monitor its network.

convert the number. We ran a script to load this onto the new switch. There were no service issues at all with Metaswitch. Wake up service did not work exactly the same way as the existing features we were offering, but we worked around these issues and our customers seem very satisfied.”

Operationally, TEC expects to reclaim about 80 percent of existing central office space and will be in a position to consolidate its technical and support staffs – driving further savings. “We currently do not know what we will do with the old switch, but perhaps we will find some interest from the secondary market or maybe a museum.”

TEC is now delivering on its new found capabilities. “Unified communications will really make a difference for us,” Wigington says, especially as it ties landline service to mobile. TEC believes this kind of feature is one reason the company eventually will stabilize access-line loss. “People are hungry for new technology.”

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TEC is in the process of rolling out MetaSphere Unified Messaging, which it will promote as TEC Track and TEC Message, enabling residential customers to manage home phone, cell phone, e-mail and voicemail through CommPortal, a Web-based portal.

“The ability to create new revenue streams with TEC Track and TEC Message and provide a highly cost-effective solution for modernizing legacy services such

as voicemail is critical to maintaining our competitive advantage,” says Wigington.

“Services like ‘find me-follow me’ are stickier,” Wigington says. “The opportunity cost of doing nothing and leaving our customers more vulnerable to defection is tremendous. Reducing our line loss even fractions of a percent can mean millions of dollars in saved revenue while enabling us to upsell new services in the future.”

While TEC’s current revenue is driven almost entirely by its residential base, it sees new opportunities in its business markets as well. “Businesses and colleges

really want to be on the cutting edge,” she says. “They are excited about getting IP services. They will look to us to deliver it, even when they don’t really know what all it entails,” says Wigington.

TEC recognizes that an entrepreneurial spirit and a willingness to experiment are necessary to effectively compete as a 21st century communications provider. “Metaswitch’s commitment to innovation gives us the opportunity to deploy exciting new services to our subscribers,” Wigington says. “You just never know what people will want, so you have to keep pushing things out there.”

One Communications

One Communications is the largest privately-held, multi-regional integrated telecommunications solutions provider in the United States. With nearly 2000 employees and close to \$800M in annual revenue, the company serves approximately 160,000 business customers throughout the Northeast, Mid-Atlantic and Upper Midwest, plus the District of Columbia.

Formed through the merger of three prominent CLECs, One Communications was tasked with integrating its formerly independent network architectures in order to continue to offer a superior competitive value proposition while at the same time reducing its operating expense.

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– Russ Oliver, One Communications
Executive Vice President of Strategy

One Communications developed a vast next-generation IP core backbone utilizing nearly 11,000 route miles of fiber to interconnect more than 700 collocation sites and 42 Class 4 and 5 voice switches. These included both TDM and softswitches from a variety of vendors that served a variety of access types across its broadened geography. “Continued investment in TDM switch upgrades and expansion is costly and was not consistent with our long-term business goals of having a future-proof, integrated network,” recalls Russ Oliver, executive vice president of strategy at One Communications. “We envisioned a next-generation platform that would provide us with greater core redundancy and fault tolerance, flexibility to more

easily build new converged products and applications, easier interconnection with IP providers, and ultimately the ability to more rapidly develop and deploy new applications for our customers.”

After rigorous testing and evaluation, One Communications selected Metaswitch as its common platform for integrated voice and data communications. According to Oliver, “We had experience with other softswitch platforms and have been pioneers in deploying these services. Metaswitch exceeded expectations in all criteria and has proven to be an excellent partner as we transformed the business.”

With a geographically distributed customer base, the local network intelligence of digital local exchanges had to be distributed over a very large number of sites. An integrated IP network offered One Communications the opportunity to greatly simplify its switching architecture post merger. The cost savings of such a migration was powerful, potentially yielding tens of millions of dollars in operating expense savings and offering an aggressive payback period on its capital expense. According to Oliver, “The power and real estate costs alone to maintain a legacy network could be quickly and effectively mitigated through our planned network consolidation.”

Power cost savings included both the initial deployment of power supply equipment, such as battery backup and generators, as well as the ongoing cost of power for the switch, air conditioners, peripheral equipment and more. Metaswitch’s compact, lightweight solution leverages state-of-the-art technology that requires a fraction of the power of legacy switches, and significantly less than most competitive softswitch platforms.

“The Metaswitch team works tirelessly with ours – from original project design, through test-plans and over-night

and weekend migrations,” states Jim Weidman, manager of switch engineering for One Communications. “We have customers served off a variety of switches by a variety of access types and DLCs. Metaswitch can seamlessly replace almost all legacy switch capabilities.”

“Through our network integration, supported by the Metaswitch platform, we’ve been able to strengthen the product and expand our on-net capabilities to better meet customer needs.”

– Nick Sgroi, One Communications
Vice President of Carrier Services

With its network solidified with Metaswitch, One Communications has now begun to more aggressively expand its product portfolio to grow revenues within its core small and medium sized business market by introducing both managed and hosted communications solutions, leveraging the MetaSphere Application Suite, and through expanding the breadth and reach of its Wholesale offerings.

As a result of its network migration and integration, supported by the Metaswitch platform, One

ENMR-Plateau Telecommunications

Founded in 1949, Clovis, N.M.-based ENMR Telephone Cooperative provides local phone service to over 10,000 businesses and consumers in rural areas in eastern New Mexico and West Texas, covering over 25,000 square miles. Plateau Telecommunications, its subsidiary, provides CLEC service in Clovis and cellular service under the Plateau Wireless brand in the same areas, serving over 70,000 cellular subscribers.

ENMR•Plateau has had a long track record of deploying leading-edge technology. It was the first to deploy FTTH in New Mexico and is the state’s 2nd largest ISP, proudly serving broadband across its vast, rural geography via DSL, Fiber, Satellite, or Wireless to every subscriber in its territory.

As the company evaluated its existing Nortel DMS-100 and 200 switching platforms, it considered its legacy and its future. Desiring to provide a wider range of services to its incumbent customer base and to attract new customers out of region, ENMR•Plateau realized it needed a platform that could both deliver new services to its base of TDM customers, while better competing for new customers in new territories with IP-enabled products.

Communications has been able to expand the availability of its dynamic bandwidth, Wholesale Integrated T1 Solution to a broader geography at more competitive pricing than it could offer before migration. “Our primary goal is to dramatically improve the customer experience,” says Nick Sgroi, vice president of carrier services. “Through our network integration, supported by the Metaswitch platform, we’ve been able to strengthen the product and expand our on-net capabilities to better meet customer needs.”

For its retail customers, One Communications is recognizing the challenges of today’s business climate and is offering products with reduced upfront costs, better internal resource utilization, and improved end-to-end network management to support their business communication needs.

“Small and mid-sized businesses are often challenged by limited IT resources and budgets,” says Randy Ritter, vice president of marketing at One Communications. “With our new product offerings, our customers can leverage integrated solutions to maximize their telecommunications efficiencies, while also cost-effectively offloading the assessment, installation, monitoring and maintenance of their solutions, so they can focus their resources on running their business.”

ENMR•Plateau selected Metaswitch after “evaluating all the leading softswitch vendors, going on multiple vendor visits and talking to existing customers,” says Buddy Vaughan, ENMR•Plateau’s chief strategy officer. “We chose Metaswitch because of our comfort with their company and their ability to deliver a solid solution.”

“Getting into more markets is one of the things we have to do, and we couldn’t do that before,” says Vaughan. ENMR•Plateau found it cost-prohibitive to put local switches in every market it wants to serve. But with Metaswitch, it will be able to leverage its new optical facilities in new markets and provide competitive communication services.

The initiative already has paid off handsomely. “CLEC is very strong,” says Vaughan. “As a result of Metaswitch, this is our single biggest revenue opportunity.”

New business IP telephony services also are on the product roadmap, driving its second-biggest opportunity. Vaughan plans for Plateau to offer both SIP trunks to its phone system business customers, and also a hosted IP telephony alternative.

In its consumer segment, Plateau has been marketing a one-number service for its existing CLEC area consumer customers. “We have had customers coming in to disconnect phone numbers, in some cases because they find they aren’t using them so much anymore,” he says. To save such accounts, it has been offering a single-number service that rings customer mobile phones as well as the landline.

The “ONENumber” service is being sold in the CLEC area and “is marketed as an alternative home phone service enabling the customer to keep their home phone number and utilize Metaswitch features to control call routing,” says Vaughan.

On the operational front, switch replacement offers savings in space and energy consumption as well. “The legacy switches required 40 racks of gear, which is being replaced by one rack and one chassis with Metaswitch,” says Vaughan. This translates into significant savings in real estate, and operating expense as well. Vaughan predicts, “We will free up so much room we are literally moving lab and office space into the main switch center.”

There are workforce and management savings as well. Now that the transition is complete, “we have gone from

six or seven technicians to just three engineers,” says Vaughan. “In the Metaswitch environment, network engineers handle both IP and the CO operations, unlike before, when switch technicians worked only on CO switching operations. That’s one of the biggest advantages.” He also expects between \$15,000 and \$20,000 in savings to operate the element management system.

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While software expenses will be similar to what it had been spending, the company will get a lot more. Where it had previously been paying only for software patches, “we now get full software upgrades, and premium support services,” Vaughan exclaims. “With Metaswitch, we get a lot more for the same cost.”

Conclusion

While TDM circuit-switched voice networks represent a mature technology, delivering the converged voice and data services and value-added applications that customers are increasingly demanding can be costly to develop if deployed through the traditional network. With the operating expense associated with legacy switches increasing, service providers such as TEC, One Communications and ENMR•Plateau have seen the wisdom of evolving to an IP infrastructure based on Metaswitch.

Once deployed, these companies are growing revenue and maintaining customer loyalty by offering an array of new services, such as unified communications and hosted telephony. In addition, by standardizing on a reliable and flexible IP infrastructure they are better positioned to maintain their competitive advantage in the future.

About Metaswitch

Metaswitch is a leading provider of carrier systems and software solutions that are powering the migration of communications networks to open, packet-based architectures. Hundreds of network operators worldwide depend on its Carrier Systems Division for reliable, scalable session control, media gateway and application/feature server solutions to enable compelling revenue-generating services.

Metaswitch's Network Protocols Division develops high performance, portable software components that are integrated into the products of the world's leading communications equipment manufacturers.

Service Providers and equipment vendors recognize Metaswitch as having a unique culture which delivers

innovation, quality engineering, reliability and exceptional support. This culture has helped grow revenue and maintain profitability every year since the company was founded in 1981, which assures Metaswitch customers of ongoing technology investment and supplier stability. For more information, please visit www.metaswitch.com.

For more information about planning and executing a network migration, read our Whitepaper — Transforming Your Network: Strategies for a Successful Subscriber Migration to a Next-Generation Architecture.

<http://www.metaswitch.com/rescenter/whitepapers.aspx>

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