THE CCA VOICE

FOR COMPETITIVE CARRIERS

www.ccamobile.org
Fall/Winter 2023

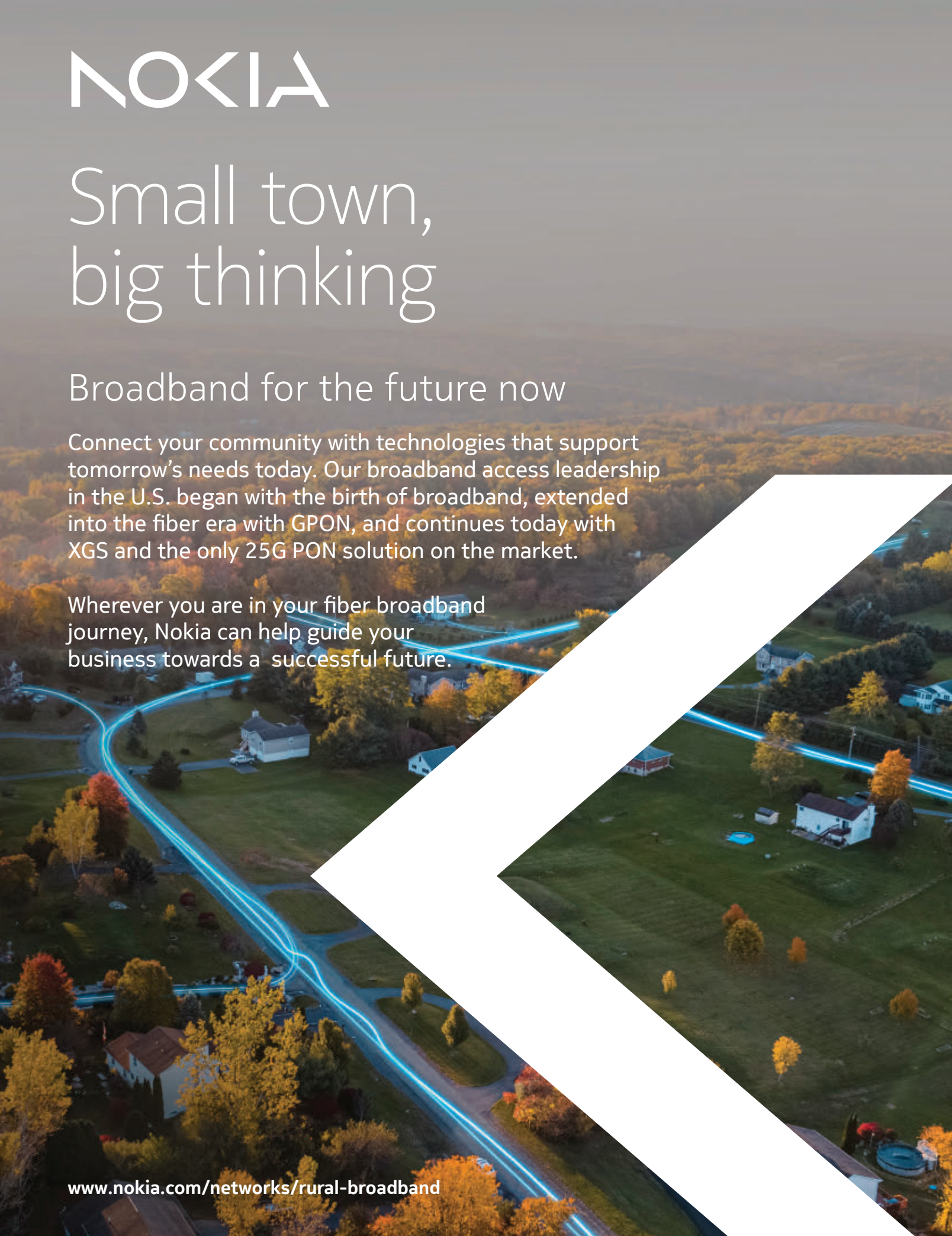
OUR CONNECTED FUTURE

PLUS

Reliable Spectrum Access is the Key to Our Connected Future
Page 8

Carrier Q&A Featuring Union Wireless
Page 16

Embracing the AI Wave: Why the Wireless Industry Should Take Notice
Page 19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Wherever you are in your fiber broadband journey, Nokia can help guide your business towards a successful future.
www.nokia.com/networks/rural-broadband

CCA Mission

CCA is committed to being the premier advocacy organization for competitive wireless carriers and stakeholders. CCA will use advocacy leadership, education, and networking opportunities to help rural, regional, and nationwide carriers grow and thrive in the wireless industry.

CCA Vision

CCA will be the leading organization for competitive wireless carriers and stakeholders, joining together to improve the lives of Americans through delivery of wireless communications.

cca rural. regional. nationwide.®

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Contents

THE CCA VOICE

FEATURES

Reliable Spectrum Access is the Key to Our Connected Future 8
Simplifying the Adoption of 5G Roaming 9
Unlocking the Power of BI for a Better Customer Experience 10
5G: Can You Afford to Go All-In? 12
Meeting Evolving Network Requirements: What Our Research Reveals About the Connected Future 13
Carrier Q&A: Union Wireless 16
The Future of Broadband Connectivity: Consumer Behavior and Future Trends 17
The Defining Elements of Tomorrow's Holistic Bill Pay Platform (And How to Achieve Them Today) 18
Embracing the AI Wave: Why the Wireless Industry Should Take Notice 19
5G Needs a Robust Optical Network 20
The Unstoppable Demand for 'Always On' Connectivity 21
High-Gain E-Band Radios for Maximum Dual-Band Link Performance 22
Taking Advantage of New Opportunities – What's Next for America's Rural Providers 23
The More the ARPU Game Changes, the More It Stays the Same 24

DEPARTMENTS

Board of Directors/Staff 4
Chairman's Letter by Mark Nazé 5
A Message from the President & CEO by Tim Donovan 6
CCA's 2023 Excellence in Marketing Awards 7
Welcome New CCA Members 15
Congressional Spotlight: Senator Cynthia Lummis (R-WY) 25
Index of Advertisers 26

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Carrier Collaboration Can Benefit All Members

By: Mark Nazé
Strategic Projects Officer, Cellcom

CCA offers many opportunities for members to get involved, and, like many other trade associations, provides exclusive benefits that come with membership. Discounts to trade shows, membership directories, and educational and advocacy resources are fairly standard offerings for trade associations. But CCA is not your average association. In addition to the exceptional advocacy work, I would like to highlight another unique characteristic of CCA that makes this association stand out from the others — and that is the unparalleled collaboration among our carrier members.

I have had the pleasure of serving as co-Chair of the Business Innovation Group (BIG) for the past several years with my colleagues Maureen McCabe Moore of GCI and Slayton Stewart of Carolina West Wireless. The BIG was formed by the carriers, for the carriers, and I'm proud to say that we now have 34 companies represented on this carrier-only committee.

The BIG meets monthly to discuss current challenges faced by their companies and potential solutions. I have found these conversations to be very open (without disclosing any confidential information), friendly, and productive. While every carrier in the group may not face the same exact challenges, the fact that so many companies — some of which may even be competitors! — are willing to come together to share ideas and work together, speaks volumes about the CCA community. I truly believe it is one of the most significant benefits — aside from advocacy, of course — that CCA provides its members.

And benefits of the BIG are certainly not limited only to the carriers. Associate members can benefit as well. When the BIG identifies a challenge that needs to be addressed, the committee turns first to the associate members for solutions. Priority is given to fellow members that may have a remedy for carriers' needs.

While every carrier in the Business Innovation Group may not face the same exact challenges, the fact that so many companies — some of which may even be competitors! — are willing to come together to share ideas and work together, speaks volumes about the CCA community.

The BIG also completes a survey each year, and the results are shared with the entire membership. The survey covers carriers' top strategic priorities and primary investments, along with other valuable information, including technologies they are considering and estimated deployment timelines. The fact that so many carriers participate in the survey (anonymously) and are willing to share for the benefit of the greater membership is quite remarkable.

CCA members' collaborative spirit does not exist only within the Business Innovation Group. It also is apparent through the other committees — the Washington Reps Group, the Associate Member Committee, and the Events Committee. The Events Committee is particularly active in planning the educational sessions and recruiting speakers for the association's annual events. Carriers, associates, and affiliates work together to brainstorm ideas and come up with an interesting and informative program that will not only be of interest to current members, but also will help attract new attendees to our shows.

The events also provide specific opportunities for collaboration through the CMO, CFO, and CTO meetings that take place during the conferences. The CFO and CTO meetings are open to carrier members, and the CMO meeting is open to all members. I thank Ben Pace of C Spire and Jackie Mallory, Paul Feldman, and David Zylka of Carolina West Wireless for their time and efforts leading these valuable meetings each show. These meetings are often the most popular and most appreciated by member attendees.

The theme of this issue, "Our Connected Future," not only can represent the path forward for individual carriers, but it also reflects the relationships that many CCA carriers have with one another. There are so many instances of good collaboration and sharing of ideas to help all CCA members succeed. The more we cooperate, the more we all can benefit, and I look forward to our continued work together.

An Association Worth Your While

By: Tim Donovan
President & CEO, CCA

It is hard to believe we are well into the third quarter of 2023, which has been an incredibly busy year for CCA. Our advocacy team has been astutely focused on key issues including reauthorization of the FCC's spectrum auction authority, implementation of the IIJA, the Secure and Trusted Communications Networks Act Reimbursement Program, and more. In addition, and by direction of the Board of Directors, we have been working hard on the membership — not only to enhance engagement and benefits of current members, but also to recruit new members to the association.

By turning special attention to member needs through collaboration with internal staff and the Board of Directors, CCA aims to make our members the focus of our wonderful community. And I am very pleased to say that our efforts have resulted in several new companies joining or re-joining CCA over the past few months. I encourage all readers to take a moment and explore the dedicated section of this issue showcasing CCA's newest members and reach out to extend a warm welcome. As an association, we believe in fostering a supportive environment where collaboration and knowledge-sharing thrive, and welcoming new members is an integral part of this endeavor.

At CCA, we continuously strive to enhance the value of membership and provide meaningful opportunities to engage, network, and grow.

At CCA, we continuously strive to enhance the value of membership and provide meaningful opportunities to engage, network, and grow. We have an array of benefits and participation opportunities up for all our members, from those who knew us as RCA to those who joined this last month. Allow me to introduce you to some of these exciting offerings:

Join a Committee: CCA's committees are the heart and soul of our association, enabling members to play an active role in shaping the future of our industry. Whether it's advocating for regulatory policies, driving innovation, or sharing best practices, your involvement in a committee is both rewarding and impactful. These include the Business Innovation Group, the Events Committee, the Associate Member Committee, and the Washington Reps Group.

Post Your Press Releases: CCA's platform serves as an invaluable resource for sharing your company's news and announcements. Take advantage of this benefit to increase your visibility, reach a wider audience, and establish yourself as a thought leader within the industry. We are eager to amplify our members' successes and milestones.

Attend Shows at a Discount: Our association hosts the fall Annual Convention and spring Mobile Carriers Show, as well as various other events throughout the year. As a member, enjoy exclusive discounts on registration fees, allowing you to participate in these events without straining your budget. Don't miss out on these valuable networking opportunities and chances to gain insights from industry leaders.

Sponsor a Webinar: Present your expertise and thought leadership and introduce your newest business ideas by sponsoring a webinar through CCA. This platform allows you to connect directly with our members and share your unique insights, solutions, and innovations. It's an excellent way to demonstrate your commitment to driving the industry forward.

Get Introductions to Carriers: CCA takes pride in its extensive network of carriers and industry professionals. As a member, you gain access to this invaluable network and have the opportunity to connect with carriers who share your passion and vision. Let us help you forge meaningful connections and explore potential collaborations.

Finally, I would like to thank the carrier and associate members that have renewed membership early for 2024. Your early commitment not only affirms your unwavering dedication to CCA's mission but also helps us plan and provide even greater value to our members. All members are equally welcome to renew their memberships early, reaffirming their involvement in our community and the industry.

I am deeply grateful for the trust you have placed in CCA, and the CCA staff is committed to ensuring that your membership remains invaluable and rewarding. Together, we will continue to drive the growth and success of a competitive mobile industry.

Thank you for your ongoing support, and I look forward to connecting with many of you at our Annual Convention, October 17-19 in Atlanta.

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CCA's 2023 Excellence in Marketing Awards

Announced during CCA's Mobile Carriers Show in Pittsburgh, the 2023 Excellence in Marketing Award winners were honored for their memorable marketing campaigns across various platforms including radio, print, TV and YouTube, online, and animated online videos. The People's Choice award is given to the campaign submission with the most overall votes.

Animated Online Videos: Carrier Member
Nex-Tech Wireless:
5G for Kansans by Kansans

Online Ads: Carrier Member
Cellular One of NE Arizona:
Make the Switch

Online Ads: Associate Member
Ookla: The State of 5G Worldwide 2022

Print Ads: Carrier Member
Carolina West Wireless: CWW Q1 Go Stay Connected Outdoor Board

Print Ads: Associate Member
Telsasoft: Telsasoft Your Network's Eyes & Ears 1

Radio Spot: Carrier Member
GTA Teleguam: Smart Trade In Program

TV Commercials & YouTube Videos: Carrier Member
Viaero Wireless: First Responder Plus

TV Commercials & YouTube Videos: Associate
IDI Billing Solutions:
The IDI Difference

People's Choice
Cellular One of NE Arizona: The Healing Blanket

Reliable Spectrum Access is the Key to Our Connected Future

By: Steve Sharkey
Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile US

Looking ahead in the wireless industry landscape, the most important factor in ensuring a connected future for our customers is securing reliable access to spectrum. Increasing spectrum use, both efficiently and effectively, is what allows our industry to innovate to meet the rising demand of consumers. The challenge that T-Mobile faced in accessing critical mid-band 5G spectrum this year is a cautionary tale to the entire industry.

As of the summer submission of this article, the FCC failed to act to provide T-Mobile access to the 2.5 GHz spectrum that we purchased for $304 million in September 2022 — delaying service and competition that the FCC widely recognizes as beneficial if not critical. Regardless of whether the issue is resolved by the time this article is published, our experience is nevertheless an important warning for all competitive carriers, large and small.

The FCC has successfully used auctions for nearly 30 years, issuing licenses of all shapes and sizes to fuel 2G, 3G, 4G, and now the world's best 5G service. Historically, this has been a reliable and sustainable process for our industry to use to access spectrum and offer service to consumers. Given the importance of communications and broadband as an economic engine, Congress has always reliably extended the FCC's auction authority — but not this this time. The failure of Congress to renew auction authority not only created uncertainty about the future availability of spectrum, but also caused stagnation at the FCC.

The FCC's claim of being helpless to act without its staff being criminally liable — despite four former FCC General Counsels, third-party organizations, and CCA agreeing that the FCC's authority to grant licenses is separate from its authority to conduct auctions — is misplaced and sets a damaging precedent. And though we vehemently disagree with the FCC's legal assessment and worked extensively with industry and both houses of Congress to re-institute the FCC's authority, the larger issue is that this situation has the potential to cause a chilling effect on all licensees. Our industry goes to capital markets and raises millions (and billions) of dollars to enter and participate in these auctions. And high bidders expect to receive their licenses promptly. Delays like we have experienced threaten the licensing structure on which auctions are based, not to mention the integrity of the entire licensing process.

These issuing delays also cost Americans nationwide. The licenses T-Mobile won are an important component of our expanding nationwide 5G network, and a June 2023 report from The Brattle Group found that delaying issuance of the licenses put at risk $42 billion of value to consumers and postponed the creation of nearly 17,000 jobs. These unique licenses provide significant additional coverage and capacity in urban, suburban, and rural areas across the country.

Thousands of T-Mobile sites in the areas these licenses cover were built and ready for deployment long before the FCC's auction authority lapsed, so T-Mobile even requested the FCC issue special temporary authority (STA) to use the licenses while the FCC awaited auction authority reauthorization. Granting the STA allows T-Mobile to serve more than 50 million people almost immediately. Those benefitting most from issuance of the outstanding licenses include educators and students, veterans and the hospital facilities they rely upon, and rural consumers who need better, more cost-efficient broadband access and service.

What we saw play out this spring and summer is not just a concern for T-Mobile — it is a warning for our entire industry with the potential for widespread ramifications impacting mobile service across the country. As an industry, we need to think critically about how we advocate for auctions and congressional oversight of the FCC. The FCC's runway for auction authority needs to be long enough to ensure that what happened with our licenses does not become a pattern and does not happen again to any carriers. To safeguard our future and meet the growing demands of our customers, we need a reliable and consistent spectrum auction process. Situations like what T-Mobile faced this spring set a dangerous precedent that will harm industry trust, future auctions, and American consumers.

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Simplifying the Adoption of 5G Roaming

By: Bob Chiodo
Senior Vice President, Syniverse

As a rural operator, you're probably facing a number of challenges when implementing or considering the implementation of 5G NSA/SA roaming. The cost of deploying 5G infrastructure is high, knowledgeable resources may be scarce, spectrum is limited, and negotiating complex roaming agreements are a few of the challenges.

Despite these challenges, there are a number of opportunities for rural operators to implement 5G NSA/SA roaming as it continues to grow in popularity, both regionally and globally. By offering 5G they immediately increase the potential for new revenue opportunities as more 5G enabled mobile devices roam into networks.

In addition to supporting inbound roamers, operators can also support their own roaming subscribers as they travel into partner networks. And of course, by supporting 5G an operator is positioned to provide their own customers with faster connection speeds, lower latency, and improved coverage while monetizing the use cases that will depend on these capabilities.

How can you effectively take advantage of 5G roaming while still being able to keep costs in check and retire your legacy 3G networks, and all this without abandoning inbound and outbound roamers and the revenues they drive? Utilizing services designed to offset the costs of 5G roaming implementations while bridging the 3G-to-VoLTE gap is imperative.

Minimize 5G roaming upfront investment costs

Saving costs on expensive network investments is a common objective. This has become more prevalent over the past few years as more operators look to migrate to 5G. Utilizing cloud-based solutions can help reduce the cost of 5G roaming by providing a centralized platform for managing roaming agreements and transactions. A complete and field-tested solution can be highly valuable when implementing new technologies.

Syniverse provides a complete 5G solution based on an industry leading premium IPX network. It supports the expanded capabilities of 5G through a 5G Signaling Controller supporting HTTP2, delivers advanced security through 5G SEPP, provides robust charging and clearing with billing and charging evolution (BCE), institutes policy controls, offers roaming VAS, comprehensive analytics, business intelligence, and other core functions.

Shut down 3G with confidence

For many operators, reallocating spectrum and resources from aging legacy networks to 5G is a strategic business move. But when retiring a 3G network, the circuit switched voice is eliminated, abandoning inbound roamers whose home networks have yet to implement VoLTE roaming. This also affects an operator's own subscribers who will then be limited to roaming only into networks that support VoLTE roaming and related agreements.

To help MNOs efficiently handle 3G retirement and transition to newer technologies such as 5G, Syniverse has developed a new solution suite — Evolved Mobility. This solution contains all the critical elements necessary to successfully address this business challenge.

Evolved Mobility Inbound allows operators to retire their RAN, reallocate that spectrum to 5G, while retaining revenue and supporting roamers whose home network does not support VoLTE roaming. With Evolved Mobility Outbound, operators can achieve significant cost savings by retiring legacy network infrastructure, while supporting the needs of roaming partners that have not transitioned to VoLTE roaming.

For a more complete description of both Syniverse's 5G roaming solutions and Evolved Mobility, please visit www.syniverse.com.

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Unlocking the Power of BI for a Better Customer Experience

By: Ron Whaley
Chief Revenue Officer,
IDI Billing Solutions

It's no secret that today's customer demands a frictionless, end-to-end, omnichannel experience. The carriers we work with are moving at neck-breaking speeds, committed to investing in that journey — meeting customers wherever they are and whenever they feel motivated to engage. For these businesses to have an edge in the market, every decision they make must be informed.

To that end, IDI has recently embarked on a Business Intelligence (BI) initiative to help our customers provide a better experience for their customers, by leveraging the massive amounts of data that many of them have access to, but aren't quite equipped to truly maximize.

Our BI platform is designed to help customers by organizing and presenting what has historically been considered an unusable pile of data into an understandable and interpretable form. It enables them to capitalize on the analytical aspects of their business, relying on the interpretation of data and various reports to become more resilient, achieve better business continuity, and identify and tackle possible risks and weak points. Not only are they better prepared to execute new ideas, but they have a better understanding of what works and what doesn't — and why.

Ultimately, BI enables our carriers to combine the power of technology and business expertise to make fully informed, data-driven decisions to increase productivity, drive revenue, and stay ahead of the competition.

Gain Actionable Customer Insights and Improve Marketing Efforts

Through effective business intelligence, carriers can better understand their customers by analyzing buying patterns and creating user profiles for segmentation. For example, based on behavior — the type of service plan a subscriber is enrolled in, coupled with the types of products

they buy, when they buy, how often they buy, etc. — individuals can be grouped into segments to better predict the types of offers and engagements they are most amenable to, and when. From there, carriers can deliver a more relevant, meaningful experience through custom-tailored communications and offers served up based on what they know — not what they think.

With this type of intelligence, marketing teams have the means to analyze past and current campaigns to execute programs with more predictability and a higher ROI. What's more, the analysis provides visibility into key metrics such as new activations, churn rates, promotions, etc. that can be used to better inform marketing decisions, enabling teams to pivot and make adjustments on the fly when needed.

Improved Business Operations Visibility and Efficiency

A solid BI platform enables better control over your business processes and procedures — allowing you to address issues quickly vs. reacting to them after the fact.

Take, for example, a carrier managing inventory across dozens of stores. Having a real-time snapshot of turnover and what's on hand can be critical to ensuring that customers don't experience backlogs or delays. Or, consider orders and installations — knowing what's in progress, what's completed, and what, if any, bottlenecks we're experiencing on any given day can be critical to getting in front of issues sooner and providing a smooth service experience.

Making this type of meaningful data accessible across various teams in the organization not only allows for quick decision-making, but it also increases productivity at nearly every level.

Gain a Competitive Advantage

If you're working with a strong B/OSS partner, you no doubt have a wealth of data at your fingertips. How to leverage that data, using business intelligence to build a better customer experience, should be a priority for every forward-thinking carrier today. Through innovative technology, people, partners, and systems, IDI is dedicated to providing the insightful counsel and specialized expertise required to navigate the ever-evolving customer landscape.

IDI Billing Solutions has been a leading provider of billing, automation, and workflow solutions for the communications industry since 1996. Servicing a diverse client base with an award-winning application, IDI's comprehensive, highly secure, cloud-based solution enables providers with the ability to streamline operational efficiency, monetize services, automate operations, and seamlessly scale as their business demands.

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Dedicated To Bringing The Rural Communities Of Our Nation Into The Digital Age.

IDI Billing Solutions

Designed to support innovative offerings, complex rating schemes and diverse business models, IDI Billing Solutions offers a world class, cloud-based B/OSS platform that provides carriers the freedom and flexibility to:

- Automate operations and maximize efficiency
- Expand services and quickly grow revenue
- Enhance the digital customer experience
- Seamlessly scale as your business grows

Ready To Transform Your Ideas Into Growth?

Contact us at **888.924.4110,**
or visit **idibilling.com** today.

5G: Can You Afford to Go All-In?

By: Parallel Wireless

Few advancements in mobile technology have been as heralded and widely anticipated as 5G, by consumers and regulators alike. For carriers, however, fully adopting 5G (5G Standalone: SA) is much more challenging, as it requires major investments in both the edge (radios) and core networks.

A compromise chosen by some carriers is to "partially" deploy 5G. This is done by "adding" 5G radio resources to the existing LTE sites, thus providing higher 5G-enabled data throughput at the edge, though using the LTE core network. This approach is known as 5G Non-Standalone (NSA). The NSA compromise allows for significant short-term cost savings while providing infrastructure for future "real 5G" SA service, which will use the same antennas. Still, it should be noted that the short-term CAPEX saving translates into higher CAPEX spending in the future, once 5G SA will be inevitably required.

A big investment in small steps

5G NSA gives operators a quick, relatively low-cost alternative for introducing 5G technology to their customers. This allows them to offer 5G eMBB (Enhanced Mobile Broadband) and make the claim of providing higher throughput and more capacity for customers with 5G-enabled phones. In the short term, it seems like checking a variety of boxes, as it gives them a competitive edge, satisfies regulatory demands, and displays the lucrative "5G" icon on the customers' mobile phones. However, the lower short-term investment translates into a respective limited ROI, since in the short term few customers have a real need for higher bandwidth and capacity, *not* enough for them to be willing to pay extra for it.

Many of the exciting benefits of 5G go beyond what NSA has to offer, as they rely on changes to the core architecture. Thus, 5G NSA is just delaying the almost-inevitable core network upgrade. Moreover, carriers who choose to start with the 5G NSA compromise will find that transition to real 5G will be slower, more complex, and more expensive, as it requires operators to simultaneously maintain their already deployed 5G NSA and 4G LTE core networks side by side with the 5G SA, to support the various use cases and customer needs.

A bold step in the right direction

Rolling out 5G SA requires carriers to invest in a completely new RAN infrastructure, in order to benefit from everything that 5G provides. To enjoy the true benefits of 5G, end users must also have 5G-enabled handsets, which may be less common.

While adding speed and capacity does not directly translate into creating immediate new revenue streams, true 5G features definitely create new opportunities. Users' demand for bandwidth and reliability will grow exponentially in the upcoming years as advanced applications and high-bandwidth media become part of everyday life. In addition, new applications such as URLLC (ultra reliable low latency communication) will change the way technology is deployed. Such 5G features provided only by 5G SA offer significantly lower latency than 4G, supporting anything from autonomous vehicles to smart homes. In addition, features such as mMTC (massive machine type communication) provide better support for IoT, enable improvements across the agricultural (e.g. smart irrigation, better crop monitoring, livestock management) and industrial (e.g. production management, quality assurance, shipping logistics) applications and value chains.

Looking Ahead

While deploying 5G SA may involve higher upfront costs compared to 5G NSA, it is a strategic investment that future-proofs the network and results in long-term cost efficiencies. This is especially meaningful for smaller carriers who may suffer more from having to go through two separate network upgrades and a costly migration from 5G NSA to 5G SA.

As the 5G ecosystem evolves, compatible devices, infrastructure, and software become more readily available, and operators might find it more beneficial to start deployment with 5G SA. This ensures a better ecosystem alignment, interoperability, and compatibility with a broader range of industry partners, enabling seamless integration and collaboration.

In summary, despite a significantly higher short-term investment, 5G SA provides greater flexibility, lower latency, new revenue opportunities, and better support for new services.

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Meeting Evolving Network Requirements: What Our Research Reveals About the Connected Future

By: Ericsson ConsumerLab & IndustryLab

What does the Connected Future look like from our perspective today? Each year, Ericsson ConsumerLab & IndustryLab conduct an extensive survey of the industry that measures key trends and sentiment among communications service providers in North America and around the world. The latest June 2023 Mobility Report gives us a detailed glimpse of an exciting future ripe with opportunities for regional carriers.

We see mobile network data traffic exploding, 5G adoption growing, and technologies like Fixed Wireless Access (FWA) helping regional carriers to deliver the reliable, ubiquitous mobile broadband services that consumers expect and deserve.

Here are some highlights from the report particularly relevant to regional carriers who are strategizing their next steps.

5G rollout continues apace

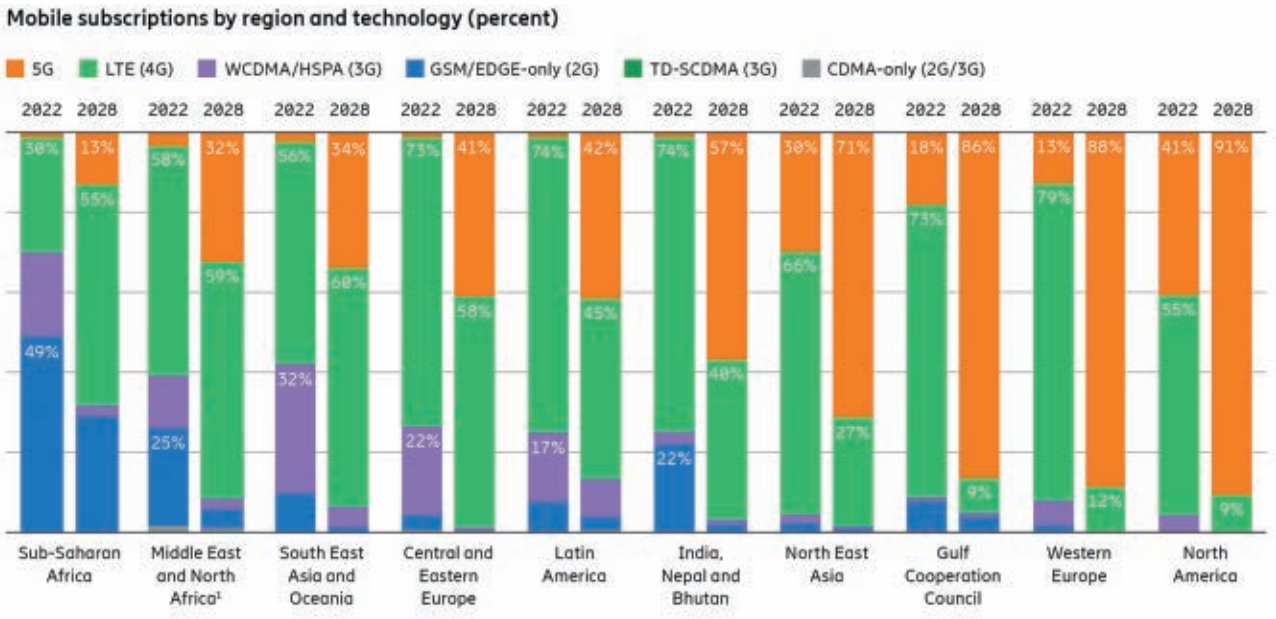
With over 1 billion 5G subscriptions worldwide, service providers in leading 5G markets have been experiencing positive revenue growth over the past two years. However, the 5G rollout is still in progress, and the deployment of 5G mid-band spectrum, which offers high capacity and good coverage for superior user experiences, remains limited to around 25% of 4G sites globally, with North America ahead and Europe behind.

5G subscriptions are now forecast to reach 4.6 billion globally by the end of 2028, making up more than 50% of all mobile subscriptions. 5G will become the dominant mobile access technology by subscriptions in 2028.

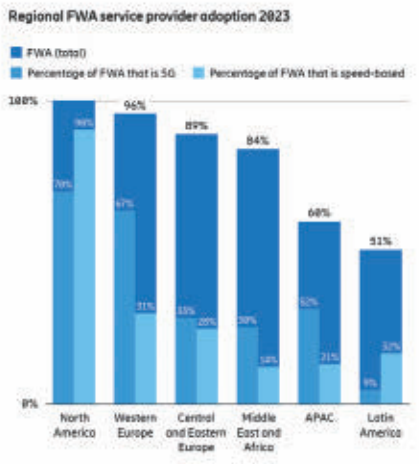
As global mobile network data traffic continues to grow, with a CAGR of around 25% projected through 2028, smart network modernization becomes imperative. Managing this growth while improving the mobile user experience requires continued network evolution. Notably, 5G mid-band build-out is proving to be more energy-efficient and cost-effective compared to the expansion of 4G networks.

North America shows strongest 5G subscription growth

5G subscriptions are rising in every region, but the uptake of 5G subscriptions in North America has



been stronger than expected. A 5G subscription is counted as such when associated with a device that supports New Radio (NR) as specified in 3GPP Release 15 and is connected to a 5G-enabled network. Here, the addition of mid-band spectrum now enables superior multi-band 5G experiences for many users. At the end of 2022, North America had the highest 5G subscription at 41%. In 2023, 5G adoption is continuing to grow strongly, with more than 250 million subscriptions expected by the year's end.



5G subscriptions are now forecast to reach 4.6 billion globally by the end of 2028, making up more than 50% of all mobile subscriptions.

More service providers are offering FWA over 5G

Fixed Wireless Access, providing high-speed internet to homes and small businesses, has become the primary technology fueling fixed broadband growth in North America. FWA is growing solidly, serving greater amounts of traffic in terms of the number of connections and traffic volume per connection. More mobile service providers are offering FWA, and a greater proportion of them are offering it over 5G. Speed-based tariff plans continue to increase, especially in North America where 90% of service providers offer them.

Other takeaways

- Mobile network traffic has almost doubled in two years.
- 5G will account for all mobile data growth within five years.
- The next wave of 5G applications will bring new network requirement challenges for communications service providers.
- Providers will have to apply new models for rating mobile quality of experience (QoE) to design networks that support the performance need of future applications.

Regional carriers are on the front lines of the effort to bring reliable, ubiquitous mobile broadband services to your community. With the data and forecasts shared in the full Ericsson Mobility Report June 2023, you'll be forearmed for the challenges and the opportunities ahead. cca

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Carrier Q&A: Union Wireless

CCA is pleased to introduce the Carrier Q&A, which will feature a different carrier member each issue. Learn about the company, their priorities, and what CCA membership means to them.

There are many benefits Union receives from being part of CCA. The biggest is CCA's world-class advocacy for those providing services in the rural and non-urbanized sections of the United States.

CCA: Please tell us about your company.

Union: Headquartered in Mountain View, Wyoming, Union Telephone Company D.B.A. Union Wireless (Union) was founded in January of 1914 by John D. Woody.

Union currently provides wireless services to approximately 100,000 square miles across 1) all of Wyoming; 2) the northwest corner of Colorado; and 3) parts of Utah, Idaho, and Montana, as well as wireline services to 20 local exchanges in the region.

For some time, Union has been the largest telecom employer in the region with approximately 250 employees. Union started with just a few landlines connecting prominent ranches to each other in the rural hinterlands and today connects over a million subscribers and roamers annually throughout its network.

What is the most important advocacy issue for Union Wireless right now?

Considering all the advocacy items relevant today such as the rip and replace funding shortfall, USF reform, national local number portability, federal lands permitting, and so many more to list, rip and replace is by far the largest advocacy issue Union faces at this time. Yet along with that, federal lands permitting continues to take a very strong second place since you can't build or upgrade facilities without a permit and still meet the build out requirements of rip and replace.

What sets you apart from your competitors?

Union cares about our part of the world like no one else. These potentially forgotten customers are the sole reason Union exists. They are not a second thought and certainly not a compliancy coverage requirement. Union's customers are our neighbors, since we live in the communities we serve.

How is Union Wireless looking to grow in the short and long term?

The short-term focus is to continue modernizing the network to offer all the services customers desire and deserve. In the long-term, it is continual growth and fill-in of the market area, to work toward connecting everyone possible in the Intermountain West region.

What are some of the best ways Union Wireless has benefited from membership in CCA?

There are many benefits Union receives from being part of CCA. The biggest is CCA's world-class advocacy for those providing services in the rural and non-urbanized sections of the United States. The other top benefit is access to so many individuals and organizations working to make a difference for those we serve.

What lessons or advice would Union Wireless like to impart to industry peers?

Telecom should never be about million- or billion-dollar deals. It's all about connecting people at nickels, dimes, and pennies, or even those fractions-of-a-penny transactions. In the end, it's really about connecting people. More importantly for us, it's all about connecting those people who would otherwise be forgotten. Continue to fight for your place in the industry — there are so many Americans who would be forgotten and become underserved or unserved without us. We, as the rural and regional operators, are the last line of defense for so many to remain connected today and into the future. cca

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The Future of Broadband Connectivity: Consumer Behavior and Future Trends

By: Fayyaz Patwa
VP Sales Engineering, and
Tao Qu
Sales Engineer, Nokia

As technology continues to advance at an unprecedented rate, the landscape of broadband connectivity and consumer behavior is undergoing significant changes. The expansion of 5G networks, the Internet of Things (IoT), cloud-based services, and XR experiences are revolutionizing the way consumers interact with broadband connectivity.

As we look to the future, end-user needs and expectations will strongly influence technology evolution, and these are expected to change significantly by 2030.

Fundamental innovation is expected to continue in many key technologies — for example semiconductors, software, and AI/ML. Technology areas of metaverse, together with cloud computing and Web3 will have the greatest potential impact toward consumer behavior.

Augmented and Virtual Reality Experiences

Augmented reality (AR) and virtual reality (VR) technologies are poised to revolutionize various industries, from gaming and entertainment to education and health care. These immersive experiences heavily rely on broadband connectivity to deliver high-quality graphics and real-time interactions. As AR and VR become more mainstream, the demand for ultra-low latency and high-bandwidth connections will increase, driving ISPs to invest in cutting-edge infrastructure to support these emerging technologies.

On-Demand Services

OTT platforms like Netflix, Amazon Prime Video, and Disney+ drive the need for high-speed connections to deliver seamless 4K and 8K content. Personalized recommendations and interactive features are becoming standard, requiring robust broadband connectivity. A recent metaverse survey revealed consumer interest: 55% want to be active users, with gaming (59%), media and entertainment (54%), fitness and recreation (41%), retail and commerce (40%), medical activities (37%), and travel and hospitality (36%) being top areas. The industry needs to listen to consumers and be ready to address their needs.

The Potential of the Metaverse

Nokia Bell labs started research on the metaverse more than five years ago around two key concepts:

- "Human augmentation" covers those sorts of extensions that enable people to interact with and within the digital world. This includes VR headsets, XR glasses, remote control with haptics and, in the future, network-connected exoskeletons and sensors, and brain-machine interfaces.
- "Digital-physical fusion" covers dynamic, network-connected representations of real-world objects, systems, and processes in the digital world. Digital twins are a great example — and we will see many applications and tremendous evolution emerge in this area. 6G network sensing is another example of Digital-Physical Fusion.

We see the metaverse opportunities as clearly differentiated between the consumer metaverse, the enterprise metaverse, and the industrial metaverse — which has a primary focus on operational, "mission-critical" technologies. We believe that all segments promise significant revenue potential by 2030.

Demands on the Network

The network is crucial for the metaverse and other services. Nokia Bell Labs predicts metaverse-centric usage may surpass OTT video by 2028, and industrial/enterprise segments could see 9x higher bandwidth consumption by 2030.

Key attributes of the network of the future include:

- Extreme capacity and performance and the ability to optimize for a very wide range of customer specific needs.
- Heightened sensing capabilities and increased context-awareness in terms of user status and intent; dynamically and automatically adapting connectivity to meet user needs.
- 100% cloud-native design supporting a distributed architecture and supporting openness through developer-friendly APIs.
- Efficiency, resilience, and agility with zero-touch management and orchestration achieved though AI/ML-driven intent-based autonomy.
- Security and energy efficiency features, designed-in as core requirements.

Conclusion

Consumer behavior and expectations evolve dramatically with evolution of technology and proliferation of the metaverse. Consumers and enterprise will demand networks that sense, think, and act. cca

The Defining Elements of Tomorrow's Holistic Bill Pay Platform (And How to Achieve Them Today)

By: Erick Alvarez
Partner Manager, Paymentus

Paymentus

New research from PYMNTS and Paymentus highlights two very important learnings for today's billers:

1. Consumers expect bill pay experiences to offer convenience, choice, and control (the three Cs).
2. The meaning of these three Cs varies greatly by demographic.

It is against this backdrop that wireless carriers must work to deliver a bill pay solution that is comprehensive, inclusive, and frictionless if they are to reduce involuntary churn. With 48% of consumers paying more than six bills each month, the ability to meet these expectations could be the difference between being the first bill paid or the last or losing subscribers entirely.

Defining Holistic Bill Payments

For many bill payers, managing their monthly bills is a chore. Inconsistencies in user interfaces, confusing payment flows, and multiple processes all work to undermine a customer's ability to view and pay their bills. Financial concerns aside, simply keeping track of what's been paid and how can leave many bill payers feeling stressed. This is why 62% of consumers experiencing multiple pain points in the last three months say they would want a holistic bill payment platform.

But what defines a holistic billing and payment platform? Simply, it's a comprehensive approach that connects bill payment and account management in a single destination. Customers gain an omnichannel payment experience that expands payment flexibility and offers them their preferred ways to pay.

Bill Pay Channels Your Subscribers Want

The PYMNTS-Paymentus research shows digital payment methods (e.g., cards, digital wallets) combined with mobile app payments and smartphone payments account for 80% of today's preferred payment channels. That leaves 20% of bill payers preferring more traditional or cash-based options.

These numbers make it clear that wireless carriers must prioritize a holistic billing and payment solution that offers *every* payment type and channel.

The real pain point here is that younger consumers — millennials and below — are more apt to use digital payments and are growing as a customer base. 24% of millennials say they prefer to pay through their billers' mobile apps — five times that of baby boomers and seniors. However, only half of the organizations surveyed had deployed a mobile app or responsive web designed portal.

Prioritizing Inclusive Payments

The research shows that inclusivity — the ability for all customers to pay in a way that best fits their needs and/or lifestyle — must become a top priority for today's carriers. 22% of consumers say that having a wide range of payment options is a highly desirable feature in a comprehensive bill pay service.

Inclusive payments remove the guesswork of meeting consumer expectations, while delivering the choice and control consumers expect. If a customer is offered a payment method they find convenient, the likelihood of them prioritizing that bill increases (along with customer satisfaction).

Paymentus delivers this holistic experience through its purpose-built billing, payment, and communication solution. This solution has been natively built from the ground up, enabling it to seamlessly offer billers and consumers more payment channels and methods, as well as a modern user experience and simplified back-office processes.

Through the Paymentus Instant Payment Network® (IPN), carriers can tap into an expanding network of premier payment partners, quickly launch new payment offerings, and optimize customer communications with implementation ease and flexibility into their existing environments.

For more, download the full white paper by visiting Paymentus.com/industry-insights/what-consumers-want.

Note: All statistics are courtesy of PYMNTS, "Why Holistic Bill Payment Experiences Will Win the Payment Platform War," May 2023.

Embracing the AI Wave: Why the Wireless Industry Should Take Notice

By: Katy J. Milner
Partner, and
David Fritz
Senior Director & Consulting Engineer,
Hogan Lovells LLP

This year has seen an unprecedented rise in interest and use of artificial intelligence ("AI"). From creating AI images to completing homework assignments, humans are engaging with AI like never before. While it might be tempting to view AI as a fad, its immense potential for harnessing and analyzing vast amounts of data gives this new technology real staying power.

Taking their lead from the White House, which released a *Blueprint for an AI Bill of Rights* this summer,[1] regulatory agencies such as the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC) are evaluating how AI can be responsibly used. Earlier this year, NTIA sought comment on strategies to encourage accountability and promote trustworthy AI, receiving over 1,400 comments.[2] The FCC also is getting involved, co-hosting with the National Science Foundation a workshop for network operators and vendors to meet with agencies and public interest stakeholders to discuss, among other topics, how AI can assist in spectrum management, network resiliency and optimization, and improvements to spectrum policy.[3] As use cases expand and policymakers consider regulation, now is the time for mobile carriers to consider how to leverage the technology and position themselves to advocate for rules that further, rather than stymy, this emerging industry.

As discussed in the Hogan Lovells *Global AI Trends Guide*, AI has the power to transform every industry, including the telecommunications industry.[4] AI both will rely on wireless networks and has the potential to improve them. Many AI applications may require real-time, high volume, reliable data transmission at lightning-fast speeds. Wireless carriers should proactively assess their network coverage, capacity, latency, and spectrum portfolios to ensure that they are poised to support the demands of AI applications. If additional spectrum at certain bandwidths will be necessary for this purpose, mobile carriers should start engaging with the FCC on how to make this spectrum available with the appropriate technical and operating rules for robust AI commercialization.

AI also holds the potential for numerous beneficial use cases in the wireless sector. AI deployment in the wireless context can unlock new possibilities and help solve the industry's toughest challenges. For example, AI could be used by operators to:

- Improve network modeling and aid in capacity planning and deployment decisions;
- Optimize network traffic;
- Bolster network resiliency through predictive tools, real-time monitoring, and automation of response functions;
- Facilitate spectrum sharing;
- Combat robocalls and robotexts;
- Synthesize data to improve business processes; and
- Provide faster customer service via AI assistants and automated troubleshooting.

AI is a disruptive force and a catalyst for change that will impact sectors across society — including the mobile telecommunications landscape. Mobile carriers would be wise to consider shaping AI policy at this juncture, before regulatory approaches are pursued that may limit AI's potential or preclude valuable use cases. Now is also the time to consider risk and liability issues associated with using AI technologies, and ensuring that your legal counsel is up to date on this emerging area. The wireless industry should explore how it can leverage AI and engage with other stakeholders in the regulatory conversation to ensure that the proper balance is struck between responsible policy and robust innovation.

Hogan Lovells LLP is a global law firm creating valuable solutions for our clients at the intersection of business and government. Our top ranked Communications, Internet & Media group has extensive experience advising the world's largest companies to startups, enabling us to anticipate problems, develop strategic responses, and handle disputes.

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5G Needs a Robust Optical Network

By: Prayson Pate
VP, Solutions Marketing, Adtran

The internet requires high-capacity fiber transport. But how far does that fiber need to extend? For wireline business and residential users, the answer is to the premises. That's the only way to provide the required high-bandwidth and low-latency connections. And those same requirements apply to wireless connections, meaning we must focus on the optical network as much as the wireless technologies. But how much bandwidth is required? As it turns out, a lot!

Bandwidth-intensive applications like streaming video, multiplayer games, and fixed wireless access have fueled the demand for bandwidth. Satisfying that demand is one of the main benefits of 5G. While the 4G LTE maxes out at about 1Gb/s, 5G is expected to provide speeds of 10Gb/s. That's a per-cell bandwidth increase of ten times.

But the aggregate bandwidth demand is much higher because wireless spectrum is a shared medium. If we increase the available bandwidth to each user, we can support fewer users on each cell and will need a lot more cells. 4G supports about 1000 cells/km2. With 5G, that density increases to 1,000,000 cells/km2. That works out to be 1,000 times more cells and a total bandwidth expansion of 10,000. We need more fiber!

How can you build out and manage an optical network for 5G without breaking the bank?

- Embrace a variety of optical technologies, including WDM, Carrier Ethernet, and XGS-PON
- Leverage ORAN and distributed compute to terminate connections farther out in the network, reduce latency, and minimize backhaul traffic
- Deploy efficient pre-aggregation to maximize the usage of expensive ports on gateway routers
- Take advantage of active fiber monitoring to ensure rapid response to network issues

Adtran empowers service providers to deliver intelligent, self-optimizing fiber broadband to their customers, unlocking greater value — simply and sustainably at scale. Learn more at adtran.com.

The Unstoppable Demand for 'Always On' Connectivity

By: Lisa Murray
Director, Corporate Communications,
Interop Technologies

In an era where people are constantly seeking connection and living an "always on" mobile life, the demand for uninterrupted connectivity continues to grow. The battle for "coverage equality" has shifted to a fight for a "connected reality" as individuals and businesses rely on mobile devices for communication, commerce, and data mining. Mobile connection is having a tremendous impact on our lives and the demand is becoming unstoppable.

The Convergence of Connection and Connectivity

Today, the concept of being constantly connected has transitioned from a mere desire to an integral part of everyday life. Individuals update their statuses, share their locations, post content, and seek validation through likes and interactions. Simultaneously, businesses leverage mobile networks to establish connections, facilitate sales, communicate effectively, and provide customer care. As a result, carriers now find themselves immersed in a competitive environment where they need networks and solutions that offer the utmost reliability and extensive connectivity to position themselves at the center of this fast-evolving ecosystem.

People crave the ability to stay continuously connected, which is what drives the demand for seamless coverage. At the same time, their reliance on a constant mobile connection has demonstrated the necessity for uninterrupted coverage. As the pursuit of uninterrupted connectivity intensifies, enterprises will undoubtedly pursue partnerships with carriers who can provide the utmost comprehensive and dependable networks and solutions to assist their growth and profitability. So, it only makes sense for carriers to leverage emerging communication channels that will concurrently help them generate revenue.

Capturing Revenue Opportunities

It comes as no surprise that messaging stands out as one of the most prevalent communication channels, as it seamlessly integrates with the ever-connected nature of our lives. Carriers can capitalize on the rising demand for "always on" connectivity and unlock revenue potential through RCS business messaging (RBM). By partnering with businesses, carriers can offer value-added services within RCS messages, such as targeted advertising, promotions, and transactional capabilities. With new supplementary revenue streams, carriers can not only bolster their network infrastructure investments, but also expand coverage and enhance capacity to effectively cater to the escalating connectivity demand. The rise of innovative monetization opportunities plays a pivotal role in nurturing business expansion, fostering partnerships, and promoting collaborations across various industries. In the end, the capacity to generate revenue through RBM not only enables carriers to address the evolving user demands but also guarantees a resilient and dependable network infrastructure for seamless "always on" connectivity.

Juniper Research, in its "Mobile Messaging 2023-2027" report, predicts that total annual RCS traffic in North America will increase by 189% and revenue will increase by 214% between 2023 and 2027.

Uninterrupted Connectivity

In this era of rapid technological advancement, uninterrupted connectivity is no longer a mere luxury; it has become an indispensable aspect of our personal and professional lives. The consequences of poor or no coverage can be significant, causing missed opportunities, strained relationships, churn, and stalled economic growth. Reliable connection ensures that businesses can effectively communicate with and care for their customers, offer seamless services, and harness the vast potential of data-driven insights. Likewise, individuals depend on uninterrupted coverage for social connection, information, safety, and participation in the expansive digital world. As the demand for nonstop connection continues to escalate, it is imperative for carriers to meet the challenge and deliver robust networks and solutions that meet the evolving needs of a hyper-connected society.

The demand for "always on" connectivity shows no signs of slowing down. Whether it is individuals seeking constant connection or businesses capitalizing on the opportunities that mobile communication channels provide, it is the backbone of the new mobile economy. Carriers must acknowledge the significance of this and strive to deploy and innovate swiftly to meet this increasing demand. As we move forward, the seamless ability to keep us always connected will surely serve as the key for carriers to unlock endless growth opportunities in our progressively interconnected world.

High-Gain E-Band Radios for Maximum Dual-Band Link Performance

By: Dr. Konstantinos Dimopoulos
Senior Product Manager, Wireless Network Systems, Intracom Telecom

Wireless systems are an important part of the transport technology mix used in fixed and mobile networks and will continue to be so, given that optical fiber-based transport cannot be optimally deployed everywhere. Traditionally, individual point-to-point radio links are implemented by radios operating in a particular frequency band. A Dual-Band (DB) radio link, consisting of a combination of radio link(s) operating at lower RF frequency bands, capable of delivering moderate capacity at long distances, with radio link(s) operating at higher RF frequency bands, capable of providing higher capacity at shorter ranges, is an effective solution to deliver both high capacity and long-range transport connectivity for the 5G-era networks. The DB scheme can be applied to existing microwave (MW) radio link deployments to achieve a capacity upgrade or to greenfield deployments to enable high capacity and long-range connectivity from the start.

Currently, one of the most effective DB link combinations consists of MW radio links operating in, or below, the 23 GHz band with an E-Band radio link operating in 71-76/81-86 GHz. E-Band radios are a key technology for the 5G-era transport networks as the large channel sizes of the E-band can offer abundant capacity, 10 Gb/s or more, in simple and economical link configurations, in terms of deployment costs as well as spectrum licensing costs. The physics of electromagnetic wave propagation dictates that radio operation at higher frequencies results in smaller radio link ranges. Typically, stand-alone E-Band links are deployed by operators, for backhaul applications, for link ranges up to 2-5 kilometers depending on factors such as the deployment area climate conditions, the required operational availability of the link, and the system gain capabilities of the E-Band radios.

The DB scheme exploits and further extends the benefits of adaptive modulation, as well as the differentiated link availability concept, used in radio link planning to enable obtaining the benefits of E-Band technology for considerably longer links. For link ranges beyond 5 kilometers, the total capacity of a DB link, as the sum of the capacities of its constituent links, is dominated by the capacity of the E-band link at favorable weather conditions for, indicatively, 99% to 99.9% of the time. For 99.9% to 99.99% of the time the total capacity is composed of contributions from the links of both bands. For the last few thousandths of availability percentage points, when intense rainfall disrupts the E-Band link, the DB link reverts to the lower frequency band link only. Upon weather improvement the DB link comes back up to full capacity. When the DB radio link "bonding" of the E-Band and MW radio carriers is based on Radio Link Aggregation (RLA) methods, the between-band transitions happen smoothly, similarly to adaptive modulation transitions, avoiding interruptions to the network traffic portion that is supported by the DB link capacity at each instant.

The E-Band radio's system gain at high/maximum radio capacity determines the potential of the DB scheme as a link's capacity/range-extender — the higher the system gain, the longer the range. Network operators can benefit from link ranges of 10

kilometers or more, for capacities of 10 Gb/s by using high system gain E-Band radios in a DB solution.

Intracom Telecom's UltraLink™-GX80 E-Band radios, widely deployed in mobile and ISP transport networks, are at the forefront of performance in terms of link range, spectral efficiency, and operational flexibility. UltraLink™-GX80 offers a leading System Gain at 10 Gb/s capacity and supports RLA-based DB configurations, either in combination with Intracom Telecom's OmniBAS™ MW radios or with other vendor's MW radios. Furthermore, Intracom Telecom offers a customizable DB antenna, capable of supporting both its own, or other vendors' MW radios as well as the UltraLink™-GX80, enabling the deployment of the DB solution though a single antenna dish.

Intracom Telecom is a global telecommunication systems and solutions vendor operating for 45 years in the market. The company has become the benchmark in fixed wireless access and successfully innovates in the 5G/4G wireless RAN transport and small-cell SON backhaul international arena. The company has extensive know-how and a proven track record in the market, serving fixed and mobile telecom operators, public authorities, and large public and private enterprises. Intracom Telecom maintains its own R&D and production facilities and operates subsidiaries worldwide. For more information, please visit: www.intracom-telecom.com.

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Taking Advantage of New Opportunities — What's Next for America's Rural Providers

By: Elizabeth Page
Senior Director, National Sales, Ribbon

As more applications and services move online, reliable high-capacity connectivity to these services is becoming increasingly fundamental to both our lives and our livelihoods. For underserved communities, including those in rural areas, lack of this connectivity will hamper the socio-economic well-being of counties, communities, and individuals. The government is taking advantage of the deployment of superfast broadband delivered by 5G mobile, 5G FWA (fixed wireless access), and/or FTTP (fiber to the premise) to provide funding to reduce this digital divide.

But the modern services that open up socio-economic prosperity require much more than just high capacity. Working from home and running small businesses require highly reliable connectivity; telemedicine requires reliable, low latency and secure connectivity; video services require high capacity and low latency and so on. It is neither cost effective nor environmentally responsible to overbuild the network such that every connection supports the maximum level of reliability, security, capacity, and undersubscription. In addition, many modern services and applications are delivered via web services hosted in edge data centers, so the network must be dynamic enough to connect to the edge center rather than to the core of the network.

Today's providers, then, must account and plan for the delivery of these services, which means supporting the right access technology to meet their needs — 5G, WiFi, FWA, FTTP, and more.

Clearly, to achieve this, the dynamics of network connectivity must change — providing simple 10G or even 100G backhaul links to the core of the network is no longer enough. A multiservice xHaul network is required, which must be "service-aware," allowing it to provide connectivity to the right network location, with the right performance, and the right level of resources, for each service type being delivered. Network slicing is key in making this multiservice xHaul network cost-efficient. With network slicing, a single network can be used to support the full range of different service performance characteristics without costly and environmentally unsound over-build. Each network slice is designed to provide the performance characteristics required by the services it supports, thus allowing one network to support many different performance levels.

Of course, all networks require maintenance, which can be prohibitive, especially in rural communities that may not have sufficient staff and resources available to conduct the round-the-clock fiber health monitoring that is critical to maintain continuity of service. A cost-effective workaround is to leverage

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optical time domain reflectometer modules embedded in the network. These provide continuous monitoring, helping rural carriers with limited staff ensure the health and viability of their network.

Ultimately, it takes more than "just" tech in order to transition currently underserved areas to a digital environment. In addition to the many funding opportunities currently offered by the U.S. government, engaging with their communities, getting a better understanding of their priorities, and offering insights and guidance on the opportunities these new networks can offer is key to making these opportunities broadly available.

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical network solutions to service providers, enterprises, and critical infrastructure sectors globally. Our end-to-end solutions portfolio delivers core to edge software-centric solutions, cloud-native offers, leading-edge security, and analytics tools, along with IP and optical networking solutions for 5G. Visit rbbn.com.

The More the ARPU Game Changes, the More It Stays the Same

By: Jon Mikow
Vice President — Sales, Fortegra

FORTEGRA®

No matter how you slice it (pun intended), all wireless carriers are struggling to monetize 5G network investments in a climate of intense competition. While this is nothing new, moves made over the last couple of years showcase the challenge. Verizon and AT&T both made pricing adjustments last year with mixed results. T-Mobile decided to step in and try to capitalize on the volatility among postpaid subscribers. Of course, regional carriers are paying attention based on the larger competitors in their footprint.

While local marketing messaging and superior customer service is always a good idea for smaller competitors, it is past time to truly examine options for driving maximum average revenue per unit (ARPU) through your existing subscriber base. While methodologies might vary, many of you are most likely in the process of drilling into your customer data for additional insights into their buying behaviors, service preferences, etc.

Now what? The game is still the same, but the board has changed.

There are certainly several options out there, and they typically fit into some broad categories:

- Additional connected devices
- Additional services
- Loyalty programs

When it comes to solving this problem, Fortegra fits cleanly into the "additional services" category. So do many other firms. Before I go into specific options, though, the devil is in the details. Simply launching a program provides no guarantee of ARPU-generating success. You will want to consider:

- Marketing: Have I identified the customer segment that will respond to the offering, and is that segment of sufficient size and/or quality to justify the effort?
- Distribution: How will I cross-sell or up-sell this solution? Will it be retail, outbound call center, email/online marketing, or a combination?
- Systems: What is the appropriate level of integration to sell the solution? Should I integrate directly with a partner, or should I let them handle the registration and billing?
- Structure: Would this solution be more valuable embedded into a rate plan or loyalty program? Or should I sell it on a standalone basis?

All these questions matter, and this is not an exhaustive list. Whatever the solution, lean on your partners and vendors. They have data and experience to help you craft the right strategy.

Now let's move onto options. There are a lot out there, but I'm going to stick to the ones I know and that Fortegra offers directly. There are an infinite number of ways to structure and offer these solutions, but I'll keep it simple. Some options to consider are:

- Smart home/home electronics service contracts: These plans allow you to gain an additional foothold in your customers' homes and can cover almost anything that plugs into the wall and hooks up to a network. It saves the customer through a bundle vs. buying coverage separately from another retailer and includes 24/7/365 tech support.
- Involuntary unemployment insurance (IUI): Safeguard your revenue while letting your customer know you're looking out for them. If they lose their job involuntarily, Fortegra pays you for their service while they're looking for another position.
- Business workstation coverage: Downtime is a major issue with your business clients. What if they could cover an employee's entire workstation? Items could include desktops, laptops, tablets, phones, peripherals, etc.
- Roadside assistance (both personal and corporate fleet coverage): This offers additional peace of mind to your customers' mobile lives and can be offered by itself or as part of another bundle.

As you can see, options are available. I've only scratched the surface of what's out there, both inside and outside of Fortegra's walls. While you're managing your other priorities, take some time. Sit down with your leadership team. Sit down with your vendors. Craft a strategy that will propel you into a more customer-satisfying and profitable future. cca

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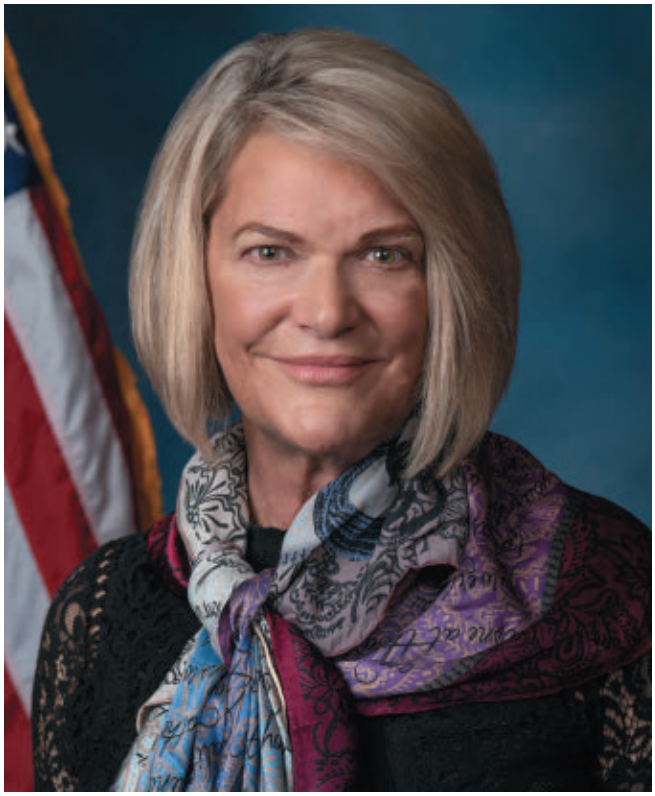
Congressional Spotlight: Senator Cynthia Lummis (R-WY)



Senator Cynthia Lummis (R-WY) was elected to the Senate in 2020. Prior, she served as a member of the U.S. House of Representatives from 2009-2017. She is a member of the Senate Committee on Commerce, Science, and Transportation.

CCA: The 118th Congress is in full swing. What priorities do you hope the Senate Commerce Committee will address when it comes to wireless connectivity?

Sen. Lummis: As a member of the Senate Commerce Committee, I am working to ensure that Congress renews the Federal Communications Commission's (FCC) spectrum auction authority. For the United States to keep pace with the rest of the world in deploying 5G networks, additional spectrum is needed. Auction authority is key to giving the FCC the ability to license needed spectrum for use by industry. Unfortunately, this authority expired earlier this year, and since Congress has not renewed it, the U.S. risks falling behind in 5G innovation. I support renewing this auction authority, as it is key to deploying 5G and connecting more people with increased speeds and improved networks. People in rural Wyoming rely on small cellular and broadband carriers to not only get in touch with friends and family, but also to access lifesaving emergency services. Broadband access is essential to our rural communities, and I will continue being a voice for rural Wyoming on the Senate Commerce Committee.

CCA: You have been a leader on the issue of securing America's telecommunications networks by fully funding the "rip and replace" program at the FCC. How is the success of the Secure and Trusted Communications Networks Reimbursement Program critical to our national security?

Sen. Lummis: Earlier this year, the American people became gravely concerned over the Chinese Communist Party (CCP) deploying spy balloons to spy on the American people. But what they might not know is that the CCP could already be in their own backyards, as wireless providers incorporated Chinese manufactured Huawei and ZTE technologies in some of our next-gen equipment. In 2019, Congress recognized how the presence of Chinese equipment in America's networks posed a national security threat, first passing rules to disincentivize companies from using this equipment in their networks and then later banning the import of new equipment. Congress passed funding to rip and replace this technology, but, unfortunately, the funding did not go far enough. Now small, rural network providers throughout the country are faced with difficult choices about the future of their services. If any of their equipment breaks, they could be forced to go offline as the cost to replace is more than they can afford. I am rarely one to advocate for more government funding, but in this case, it is necessary to fulfill this obligation. Congress, for national security reasons, required a costly change for small businesses across the country, so it is our responsibility to help shoulder that burden.

CCA: What are some of the barriers to deployment facing wireless carriers that Congress can help address?

Sen. Lummis: Recently, the National Telecommunications and Information Administration (NTIA) announced state funding allocations for the Broadband Equity Access and Deployment (BEAD) Program, which was established as part of the *Infrastructure Investment and Jobs Act* that President Biden signed into law in 2021. This program provides $42.45

billion to expand broadband internet access in all 50 states, Puerto Rico, the U.S. Virgin Islands, Guam, America Samoa, and the Commonwealth of the Northern Mariana Islands. I have been an outspoken advocate that this and other broadband funding needs to be spent in a way that is technology neutral. If we hope to connect people in the hardest to reach places, we cannot rely solely on fiber-optic cable. Instead, we must use all available technologies that can reliably connect people in hard-to-reach places where fiber is not cost effective. In southwest Wyoming, fixed wireless broadband is widely used to effectively connect people that would otherwise be without access to internet services. An expansion of fixed wireless and other technologies would provide the greatest benefit to connecting more people in Wyoming to the rest of the world.

CCA: As a member of the Senate Commerce Committee, how important is it to hear from CCA and CCA members when crafting national telecommunications policy for all Americans?

Sen. Lummis: There's nothing that highlights the urban and rural divide more than access to reliable high-speed internet. For folks living in cities, it might sound unheard of to hear about areas within the United States where wireless connectivity and broadband are not available, but it's a reality people in Wyoming struggle with each and every day. It's important that telecommunications policy doesn't have a one size fits all approach, because what works in Wyoming might not work in New York City. Rural areas have drastically different needs than large cities, and it's important that rural areas are not overlooked. cca

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