

IN THE LOOP

WELCOME TO IN THE LOOP, A NEWSLETTER FOR ADTRAN EMPLOYEES. PLEASE FORWARD ANY COMMENTS OR SUGGESTIONS TO InTheLoop@ADTRAN.com



BROADBAND AND BUSINESS SOLUTIONS SUMMIT

Brings Key Sales Prospects to Huntsville

More than 150 service providers, consulting engineers, Cable MSOs, utilities and municipal operators packed the Mark C. Smith Conference Center the week of April 18 for ADTRAN's semi-annual Broadband & Business Solutions Summit. During this event, our top sales prospects learned more about ADTRAN's Gigabit, NG-PON2, G.fast and other software-defined access solutions that are defining the future network.

"The goal of the BBSS is to provide carriers, service providers and key IT decision makers with

the tools required to deliver a transformative Gigabit broadband experience for their customers that will spur entrepreneurship and economic growth," said Mitch Fleming, vice president, service provider sales, ADTRAN. "These events are designed to initiate and develop life-long deep relationships with our current and future customers. Once these operators step on the ADTRAN campus and spend several days visiting our labs, touring our campus and meeting our employees, they are ADTRAN fans for life."

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ADTRAN Senior Vice President of Technology & Strategy Jay Wilson addresses customers at the Broadband and Business Solutions Summit.



INNOVATION AND IMPROVEMENT WEEK a Global Success

ADTRAN hosted its second Innovation and Improvement (I&I) Week February 23-29. The event was a huge success with more than 80 teams totaling 277 employees in the United States, Germany and India participating. Building off the momentum from the event in 2015, this event went global, with teams participating concurrently at all of our R&D facilities.

The purpose of I&I Week is three-fold: innovate, improve and inspire. Innovate by creating something new, exploring a new idea, developing a new feature or expanding a current feature; improve something by developing a new tool or process or fixing something; and inspire by encouraging entrepreneurship by building business awareness within our technical teams and working with someone new.

"I&I Week grew out of an idea to encourage collaboration and creative thinking among our R&D teams," said Tim Schlichter, one of the event organizers. "The first I&I week was so successful that we wanted to make it a global event. We were very pleased with the level of participation we received in India and Germany. Based on feedback from the event, we hope to make this a semi-annual event moving forward."

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It Takes People to Connect with People

2016 Sales Meeting

ADTRAN's annual sales meeting took place in late January at the Corporate Headquarters in Huntsville, Alabama. The theme for the event was "It Takes People to Connect with People" stressing the importance of our relationships with our customers as well as one another, and how ADTRAN is enabling those connections through a variety of next-generation technologies.

Day one was filled with general sessions highlighted by presentations from ADTRAN Chairman and CEO Tom Stanton,

and Windstream Executive Vice President of Engineering and Chief Technology Officer Randy Nicklas. Throughout the day, the group also received updates from Marketing, Technology & Strategy, Services & Support, Research & Development and a special update on Software Defined Networking and Network Function Virtualization.

That night, the annual sales awards dinner took place at the Westin. Following are the winners for each of the sales groups.

Award Recipients

LATAM

Top Service Sales Award	Josè Arana Velázquez
Sales Engineer of the Year	Francisco Gómez-Vite
Above & Beyond Award	Chuck Rehage
EMEA & APAC	
Salesperson of the Year	Eyal Goshen
Sales Engineer of the Year	Nam Khong Siauw
Above and Beyond Award	Alexander Klotz
Quota Achievement	Matthias Albrecht
	Eyal Goshen
	Janne Kettunen
	Avi Peled
	Markus Ranner
	Volkmar Schützhold
Sales Team of the Year Saudi Telecom:	Abdulaziz Alanazi
	Faud Al-Khatib
	Béla Czipó
	Emary Saud
	Shahzaad Tayyab

Business Solutions & Cloud Services

Salesperson of the Year	Ken Wiginton
Sales Engineer of the Year	Eddie Leck
Above & Beyond Award	Erik Herring
<i>Cloud Services</i>	
Top Service Sales Award	Joe Trammell
Impact Award	Kathleen Cecchini
	Susan Cook
	Lee Coriell
	Michael Flerl
	Erik Fosdick
	Brent Frederick
	Kim Lerner
	Alex Raskin
	Will Stetson
	Joe Trammell
Quota Achievement	Ken Wiginton
	Eddie Leck

Service Providers

Top Services Sales	Matt Hirsch	Quota Achievement	Steve Belcheff
Top Services Sales Team	Team Windstream		Brent Cancienne
Salesperson of the Year	Tommy Harmon		Mike Fox
<i>Sales Engineer of the Year</i>		Jeff Kirchbaum	John Gibbs
		Troy Guckiean	Jeff Kirchbaum
Quota Achievement	Brian Efimetz		Joe Lapos
<i>North Region</i>		Harley Alexander	Greg Luhman
		Josh Bailey	Jim Supsky
	Dustin Coffel	Sales Team of the Year	Brent Cancienne
	Jim Denton	<i>Windstream</i>	
	Mike Dunne		Brian Ledbetter
	Troy Guckiean		Jeff Kirchbaum
	Matt Hirsch		Jay Letchworth
	Rick Keyes		
	Ab Quinlivan		
	Andrew Soldano		
<i>South Region</i>		Tom Strangi	
		Chad Cates	
		Charlie Compton	
		Tommy Harmon	
		Brian Ledbetter	
		Jay Letchworth	
		Diron Lusk	
		Steve McPherson	
		Grady Neely	
		Noah Southerland	
		Brian Thompson	
		Erik Vazquez	



Congratulations!

Award Recipients



EMEA & APAC Sales Team of the Year



Eyal Goshen



Nam Khong Siauw



Alexander Klotz



EMEA & APAC Quota Achievement



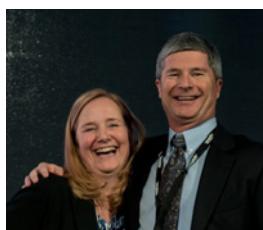
Ken Wiginton



Eddie Leck



Erik Herring



Joe Trammell



Business Solutions &
Cloud Services - Impact Award



Business Solutions &
Cloud Services Quota Achievement



Matt Hirsch



Service Providers Sales Team of the Year



Service Providers North Region Quota Achievement



Troy Guckiean



Service Providers South Region Quota Achievement



Service Providers Quota Achievement

"Being in India, we often feel disconnected from the rest of the company," said Engineering Director Gouri Gunda. "Participating in I&I Week made our employees feel like they were part of the team. We were able to share our ideas

and outcomes with colleagues in other parts of the world. It was a very well-received event."

Each team was invited to complete an innovation canvas for their project. This collaborative tool helps to

build a broader view of an idea, moving beyond problem/solution. It also helps to test and validate project assumptions, determine customers and how you will reach them with your idea, estimate the return on your idea and build

a great presentation for the project showcase.

At the end of the event, each team presented their project and winners were selected by peer vote. A list of the winners is below.

Location	Team	Members	Description	
Best Customer Value				
India	SBT	Sarada Katragadda Prasad Badisa Malli Kosuri	SBT Regression Compactor	
Germany	High Endurance	Holger Hildebrandt Frank Below	Take over PPPoA Implementation From ngVDSL IU to Legacy WIN IU	
HSV – Fountainview	Phaeton	Andrew Little Chris Nelson Evans Hall	Jason Brock Munaf Musani	New Package Handling per ONT Exception Counters
HSV – Islandview	MVT 2	Casey Small	CLI Search Mechanism	
Best Improvement				
India	Nucleus	Chandra Telkapally Chandra Mouli Sriram Tejesh Santosh Jena	Nanda Peddi Prashant Patel Meghana Karka Abhijit Bhalekar	Automate Setup of PMA & DPU
Germany	BuddyBears	Thomas Moschcau	Make Process Improvement for DPU Builds - Make It Non-Recursive	
HSV – Fountainview	Ain't Nobody Got Time For That	Matt Tomlin Michelle Mosier Nathaniel Anderson	Digitize Wall-Mounted Planning Boards Based on JIRA Data to Allow for Better Plan Communication with Remote Teams	
HSV – Islandview	Z06	Jared Oldacre	Attempt to Optimize the 10G-PON OLT's Defragmentation Engine to Increase Small Packet Performance and Reduce the Amount of External Memory Needed.	
Best Innovation				
India	Bug Zappers	Mohammed Abdul Rasheed Shravan Jadala Chandra Shekhar Reddy	Diagnostic Tool for AOE	
Germany	Utes Beste	Mirko Deckert Benjamin Otto Alexander Fritsch Damian Gutierrez	Managing hiX System with YANG- Based Interface Without hiX Source-Code Changes	
HSV – Fountainview	Dynamite	Tom Detwiler David Patterson Jason Bridges Preston Jett	Port 602 ONT Code to a Xilinx Zynq SoC	
HSV – Islandview	Slice of Pi	Bruce Groves Foster Lux Joey Morgan Jordan Cox Kurt Brunton	Kyle Johnson Sunil Ramegowda Geoff Oltmans Michael Guo	Raspberry Pi on SFP Card with Apps.

INNOVATION THAT MATTERS

Continuous Delivery Promises Positive Impact on Software Release Cycle

By Peter Kerr

"THE CORE OF CONTINUOUS DELIVERY IS A TEST AND DEVELOPMENT PIPELINE THAT REDUCES THE PAIN AND RISK ASSOCIATED WITH RELEASING SOFTWARE."

Continuous Delivery revolutionizes software delivery by drastically decreasing cycle time: the interval between idea recognition and delivery of business value. The core of Continuous Delivery is a test and deployment pipeline that reduces the pain and risk associated with releasing software.

The benefits of successful Continuous Delivery processes are many and measurable. Developer productivity is increased due to lower support burden, automated testing and up-front design improves quality, time to market shrinks as releases become smaller, and iterative design with faster feedback increases customer satisfaction.

The telecom industry is undergoing a shift as our largest customers drive toward open networks and software-driven architectures. ADTRAN will be competing with startup companies and open source rivals alongside our traditional competitors. Companies already using Continuous Delivery pipelines are advertising release cycle times under 15 minutes. With ADTRAN's current cycle time extending six to nine months, there is an opportunity for great improvement.

A common reaction to hearing that ADTRAN is now targeting 15 minute cycle times is disbelief. Much internal testing takes longer than that in isolation, and many of our customers refuse frequent updates, relying on their own lengthy approval processes. The answer to these issues is to rethink what a release means. A large release that rolls up six months of development does require a lengthy and diligent test cycle. And any customer is sensible to question a release that includes that much change. However, on a pipeline in which potentially every check-in is releasable, each release can become much smaller in scope and quality assurance becomes an ongoing, continuous process. Likewise, customers, too, can accept releases more often when they know that changes from the previous version are controlled and few. Indeed, they can see advantage in faster feedback cycles resulting in features that meet their needs more closely. The larger, bundled releases will still happen, though this time knowing that the changes within have been undergoing testing since their inception.

ADTRAN is already working on integrating Continuous Delivery into

several products. The new Network Management System and Solutions and Applications projects were started with this in mind. Every check-in will result in a Virtual Machine (VM) that is deployable to the field in under an hour. The Central Office Reimagined as a Data Center (CORD) and Virtualized Network Functions (VNF) programs are investigating their integration into the pipeline. Team Catalyst is incorporating unit and integration testing into new Service Kits. Some older products, like AOE and the Total Access 5000 (TA5K) have also looked into improvements that can be realized by adopting Continuous Delivery principles. The "90 wide" prototype by the TARP team in DevOps showed that it could reduce TA5K build times by over half.

For more information on this topic, several book clubs recommend Continuous Delivery: Reliable Software Releases through Build, Test, and Deployment Automation (Addison Wesley, 2010). Several copies are available for your use. The company is also considering a video training series. Please contact Peter Kerr, Rick King or Michelle Mosier for more information.



Skype for Business Coming Your Way

Following positive user feedback from the recent pilot, Skype for Business has been adopted as a new company resource. With this tool, you will be able to instant message, conduct meetings and present desktops from a single application. IT plans to roll out this tool company-wide in the coming weeks, so watch your email for details.



FTTH Conference in Luxembourg

By Axel Schalt

Each year, the FTTH Council Europe hosts an annual conference to exchange knowledge on fiber networks. This year, more than 3,000 people filled the conference rooms and exhibition areas where more than 100 vendors from around the world displayed their latest products. ADTRAN was the Gold Sponsor for the event. Josef Wiendl, Jeremy Harris and Eric Joyce manned the ADTRAN booth and were further supported by product management and sales. We showcased ADTRAN's XGS-PON demo as we met with a wide variety of major service provider customers.

The conference program was filled with the latest technology updates, carriers sharing their recent deployment experiences and the role of FTTH for the digital agenda of Europe. The opening keynote was presented by the

prime minister of Luxembourg. The country is leading the charge for greater bandwidth in Europe and has announced a target of 1 Gbps bandwidth capacity available for all households by 2020. Yet despite all the focus around fiber, much of the discussion centered on the potential of G.fast as the real alternative.

One of the highlights of the event was a session by CTO for APAC and EMEA Regions Ronan Kelly who spoke about future networks, stressing ADTRAN's position on the disaggregation of the traditional central office into a virtual OLT following the principles of SDN and NFV, similar to those used in data centers. He also moderated a panel on the evolution of cable to DOCSIS 3.x.



MOBILE WORLD CONGRESS SUCCESS

By Werner Heinrich



For the second year in a row, ADTRAN was present at Mobile World Congress. This year's event drew almost 101,000 attendees, making it one of the industry's largest events.

The event presents a prime opportunity to meet with key customers like Deutsche Telekom, Turk Telekom, Telekom Italia, Proximus and TDS. This year, ADTRAN hosted two meeting rooms in the executive meeting area. Company representatives included: Chairman and CEO Tom Stanton, Senior Vice President of

R&D Eduard Scheiterer, Associate Vice President of Portfolio Strategy Robert Conger, and CTO for APAC and EMEA Regions Ronan Kelly.

Discussions in most of the customer meetings focused around the telecom industry's transition toward SDN- and NFV-based open programmable networks. We discussed ADTRAN's approach and full commitment to open architectures. We received a great deal of positive feedback highlighting our thought leadership in this area. Our customers are showing strong interest in gaining understand-

ing of the benefits these new architectures can create and how they can smoothly transition existing networks to these new technologies.

We also met with partners including Broadcom, Benu, Aricent and Metaswitch to discuss ongoing and potential future projects. In addition, we explored future cooperative opportunities with a variety of other companies.

Planning for the 2017 Mobile World Congress is already underway. This event will take place February 27 through March 2, 2017, in Barcelona.





ADTRAN SPONSORS MATH OLYMPIAD

By Fridjof Bandt

On February 26-27 the state level Math Olympiad took place in Greifswald. Some 57 students in grades seven through 12 from various schools throughout the Eastern region of the state Mecklenburg-Vorpommern joined to meet the challenge of puzzling over complex mathematical problems in a four-hour, non-stop exam. In keeping with tradition, the event was hosted by the Alexander-von-Humboldt-Gymnasium, a secondary school in Greifswald and was sponsored by ADTRAN.

When ADTRAN acquired the Nokia Siemens Networks BBA Division in 2012, the company made the decision to continue the tradition of sponsoring this event. In addition to the overall sponsorship, ADTRAN also presents a special award each year to the most successful female participant. As the sponsor, we were given the opportunity to inform participants about ADTRAN. In addition to a company overview, the students were presented with information about internships, co-op positions and positions for new graduates. ADTRAN was a topic of great interest to this group of intellectual students. They asked a variety of questions about the company, the technology behind their own fast internet connection at home, what our people do, how we work, as well as the development of future technology.

You can learn more about the Math Olympiad by visiting:
www.humboldt-greifswald.de/web_drive/hpnew/index.php5?ctg=comps&page=lmo_sieger_oz&nav=1

ADTRAN GmbH Employees Give Back

One of our most common methods to donate to non-profit organizations is Schulengel.de, a fundraising-portal. Through the use of the website, ADTRAN GmbH was able to collect almost 1,400€ (\$1,600) and donated those funds to Zora e.V. in Greifswald – a non-profit organization which cares for children and their family who need support.



Germany Hits the Street For a Good Cause

Employees in Germany will once again take part in the company runs in Leipzig (June 9), Munich (July 14) and Berlin (September 14). Each race is six kilometers or about 3.7 miles. Entry fees for the team will be sponsored by ADTRAN. Proceeds from the event will benefit non-profit organizations. If you are in Germany and are interested in participating, please email hrgermany@adtran.com.

Wir  Laufen.

ADTRAN BERLIN

Enabling Communities, Connecting Lives

"IT WAS NICE TO GET THE FEELING THAT WE COULD HELP THE FAMILIES TO HAVE A PLEASANT EVENING, PERHAPS ALLOWING THEM NOT TO FOCUS ON THEIR DAILY SORROWS FOR A FEW MOMENTS."

In early March, team members at ADTRAN's Berlin location stepped up to the challenge of preparing and serving dinner at the Ronald McDonald house in Berlin Wedding. The Ronald McDonald house is a donation-based temporary residence for families with children suffering from serious illnesses who are undergoing lengthy treatment at the Berlin Cardiac Center or the Charite Campus Virchow Clinics. This unique facility enables many families to be near their children during this difficult period. It also allows them to share their experiences with other parents in similar situations.

Nadine Buchman, Gerhard Langer, Gunnar Wilsdorf, Torsten Thieme and Michael Pagenkopf volunteered to take on the task of cooking for a group of 40. Nadine and her daughter, Emmi, took on the job of shopping. They started preparing the various courses, somehow mastering the distribution of the work without doing extensive planning (a little like



following the Scrum process). The meal was a great success and enjoyed by all.

An added benefit for the ADTRAN team was the time spent talking with the Ronald McDonald House guests. "A mother from Cyprus told us that she had already been living there for three months and would likely be there for an additional nine months," said Pagenkopf. "That's really quite a long time to be away from home staying at a medical facility for both mother and child."

"We really enjoyed cooking together, it's kind of fun observing your colleague using a different kind of 'tool,'" said Pagenkopf. "It was nice to get the feeling that we could help the families to have a pleasant evening, perhaps allowing them not to focus on their daily sorrows for a few moments."

Thanks to all the Berlin colleagues and ADTRAN who contributed toward this worthwhile effort!



ENABLING COMMUNITIES, CONNECTING LIVES

Westlawn Middle School



Westlawn Middle School has struggled for many years and the school has repeatedly been on the failing schools list. Huntsville City Schools enlisted the help of Teach for America to put new teachers in critical areas at the school. The teachers have had a dramatic impact and the school is now on the road to recovery. On March 18 members of the Marketing Team

assisted with an event at the school in recognition of Westlawn being removed from the failing schools list. As a partner with Teach for America, ADTRAN hosted a pizza party for approximately 100 students who had met or exceeded two benchmarks. After the pizza party, the students were treated to a teacher-student basketball game.



*Continued from Page I
BBSS*

"I want to learn more about 10G PON and NG-PON2 said Daniel Martin, OSP director, New Hope Telephone. "We want to design our GPON network to stand the test of time. The technologies being discussed at this conference will help us accomplish this."

"As a telco, it is easy to focus on your current applications. This event helps us to see other applications that are possible," said Andrew Griffin, network operations manager, Farmers Mutual Telephone. While Gigabit broadband was a primary interest for Farmers Mutual, they also expressed excitement about ADTRAN's role in

helping service providers to transition to SDN and NFV.

"I love coming to these events," said Sean Thompson, CO technician, Farmers Mutual Telephone. "It's great to get here and see how we are progressing and how ADTRAN can keep us moving forward."

HydroBoost™ Stations GOOD FOR YOU AND THE ENVIRONMENT

By Kimberly Gaddes



Some features of the stainless steel bottle filler are:

- No-touch, sensor-activated operation.
- Auto 20-second shut-off.
- Meets ADA guidelines for wheelchair access.
- Filters remove lead, class 1 particulate, chlorine, taste and odor.

We hope you are enjoying the newly renovated North and South Towers. Last year during that project the Facilities Department replaced 12 original and worn drinking fountains with new water bottle filling and filtered water fountains.

These Halsey Taylor HydroBoost filtered water fountain and bottle filling stations complement the interior renovation and promote sustainability by reducing plastic bottle waste and encouraging wellness via water consumption.

These have been well received by employees. "We really like the new drinking fountains and appreciate the filtered water and ease to refill our reusable bottles," said Director of Product Qualification Steve Shipley.

Health experts recommend that people drink clean water throughout the day to promote wellness and hydration. Even mild dehydration can drain your energy and cause ailments including headaches.

One of the most innovative features is the visual display "Green Counter" that shows the quantity of plastic bottles saved from the solid waste stream.

From December 2015 to February 2016 ADTRAN employees eliminated over 22,691 plastic bottles from the landfill through the use of the HydroBoost stations. The Facilities department has been authorized to replace and upgrade the East Tower's 16 water fountains this year.



6 East Welcomes New Collaborative Wing

A ribbon-cutting ceremony was recently held to officially open the 6 East collaborative wing. This area was specially designed to facilitate development and interaction in agile teams. The wing features collaborative workspace, heads-down areas, collaborative meeting areas and much more.

While this is not the first collaborative area to be used in the company, it is the first space designed as a collaborative area. Several teams piloted the collaborative concept in temporary areas. With the success of that pilot, this area was designed and constructed to take collaboration to the next level. The next time you are in the East Tower, take time to drop by the northeast wing and check out this state-of-the-art workspace.

Workplace Violence A.L.I.C.E. SAFETY TRAINING

By Brad Dunkerley

We live in a world of ever-increasing risk. Workplace violence is a prevalent and complex problem and no workplace is immune. Our best chance of survival if the unthinkable happens is to be prepared, have a plan and take action.

The FBI and law enforcement agencies continue to learn from each active shooter response. As they improve and evolve their response methods, we too can learn how to improve and better prepare our employees on how to respond at ADTRAN or wherever our employees may be when an unwanted intruder arrives on the scene.

Approximately 800 ADTRAN employees attended Alert, Lockdown, Inform, Counter, Evacuate (A.L.I.C.E.) Training at the corporate headquarters in February. This training was developed from FBI and Homeland Security's Run, Fight, Hide concept. The training was presented by three Huntsville police officers who are experienced in active shooter training and are experts on the A.L.I.C.E. methodology.

"A.L.I.C.E. Training prepares individuals to handle the threat of an active shooter and teaches individuals to participate in their own survival, while leading others to safety," said ADTRAN Senior Training Manager Becky Hacker.

This safety training emphasizes the employee's role in being prepared to take action. It covers the importance of awareness and alerting someone when things just don't look right. Officers described how to lockdown and shelter in place and demonstrated methods for barricading doors. They emphasized how the continuous stream of information assists the police as they search for the person trying to cause harm. They also covered various methods to disrupt the intruders thought process and when it is appropriate to take physical countermeasures. They also stressed that if you have the opportunity to evacuate safely, run!



"With this important training, we are able to give our employees tools that we hope they never need to put into use. Unfortunately, these concepts are relevant in today's world, and they can be used anywhere. They apply not only in the workplace but also in schools, universities, movie theaters, shopping malls and other public places. We are grateful to the Huntsville Police Department for working with us to complete this training," said ADTRAN Senior Vice President of Global Operations Mike Foliano.

ADTRAN Service Awards

25 Years

Stacy Murphree

Darryl Nesmith

Timothy Rochell

10 Years

Jeremy Bradford

Brad Burks

Danny Cartee

John Coyle

Earl Erickson

Matt Harris

Matthew Johnson

Robin Kemp

Ravindranath Kodi

Jeff Livingston

Linda Matthews

Jennifer Michelle Mosier

Ike Mustafa

Randy Myers

Johnny Nash

Corey Salata

Justin Stroud

Jed Walker



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