2024 RIC FORUM

March 26 to 28, 2024

RIC Forum Booklet

The RIC is a virtualized radio access network (RAN) Intelligent Controller in an Open RAN network. RIC Applications (Apps) manage network functions in near-real time (xApps) and non–real time (rApps) providing network programmability to maximize performance.

This RIC Forum provides a venue for the demonstration of viable RIC Apps and their use cases, for the purposes of technical knowledge sharing. Presenters will showcase RIC App demonstrations (not simulations) that measure and display the effects of their xApps and rApps on a 5G Open RAN network.

Authentic xApp and rApp demonstrations to showcase the current state of Open RAN RIC xApps and rApps.

In collaboration with the U.S. Department of Defense's FutureG Office, the National Telecommunications and Information Administration's Institute for Telecommunication Sciences (NTIA/ITS) is hosting this RIC Forum where RIC App vendors and universities can demonstrate the current state of the Open RAN RIC App market.

Thomas Rondeau
Principal Director for FutureG
U.S. Department of Defense

Alan Davidson
Assistant Secretary of Commerce for Communications and Information and NTIA Administrator

Day 1 Agenda

Tuesday, March 26, 2024

Time	Event	Speakers
7:45	Check-in	
8:15	Logistics	Jeremy Glenn (NTIA/ITS), emcee
8:20	Keynote: RIC capabilities, now and in the future	Thomas Rondeau (DoD)
8:30	Live App demo by TIP	Olli Andersson (TIP) Murali Ranganathan (Meta) Richard MacKenzie (BT) Arnaud Polster (Accelleran) Richard Kateley (Amdocs CT) Ian Wong (VIAVI Solutions)
9:10	Live App demo by Mavenir	Sridhar Rajagopal (Mavenir)
9:50	Break	
10:05	Live App demo by Capgemini	Subhankar Pal (Capgemini) Ian Wong (VIAVI Solutions)
10:45	Live App demo by Microsoft	Xenofon Foukas (Microsoft)
11:25	Live App demo by SUTD *Energy efficiency and interference management rApps across indoor-outdoor environment*	Tony Quek (SUTD) Binbin Chen (SUTD) Ngo Van Mao (SUTD) Lian Xian Loong (SUTD) Hariz Yet (SUTD) Le Thanh Long (SUTD)
11:55	Lunch	
1:00	Panel discussion on military use cases and requirements	Dan Massey (DoD), moderator Carl Kustche (INL) Dinesh Bharadia (UCSD) Jeff Davis (FutureG) Mark Kahn (Lockheed Martin)
2:00	Lightning Talk by Cohere Technologies *Universal Spectrum Multiplier with Mobility*	Prem Gopannan (Cohere Technologies)
2:15	Lightning Talk by NEU and GMU *IMPACT: Interference Mitigation with Power Adaptation and Classification of Traffic xApp*	Kaushik Chowdhury (NEU) Azuka Chiejina (GMU) Vijay Shah (GMU) Joshua Groen (NEU)
2:30	Lightning Talk by Novowi	Guevara Noubir (Novowi)
2:45	Lightning Talk by UCSD and TAMU *EdgeRIC: Delivering real-time RAN intelligence*	Dinesh Bharadia (UCSD) Srinivas Shakkottai (TAMU)
3:00	Poster Session	TIP, Mavenir, Capgemini, Microsoft, and SUTD
5:00	End / Networking	

Day 1 Details

Tuesday, March 26, 2024

Logistics

Jeremy Glenn, RIC Forum Deputy Program Leader, NTIA/ITS
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Keynote: RIC capabilities, now and in the future

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Live App demo by Telecom Infra Project (TIP)

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Murali Ranganathan, Meta co-lead in TIP Open RAN Project Group
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Richard MacKenzie, Distinguished Engineer, Wireless Networks, BT Research Manager
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Arnaud Polster, Accelleran Head of Business Development
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Day 1 Details

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Live App demo by Telecom Infra Project (TIP)

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xApp Use Case
- Energy saving: Cell level control (on/off)
- Wild card: mMIMO GoB configuration

The energy saving App will shut down cells that are not required to support expected traffic during low usage periods. The use case will further demonstrate that the coverage aspects of the network were not compromised due to cell shutdown. Cell shutdown commands will be sent to the RU. When the traffic resumes, the cells will be restored to the previous state.

The mMIMO SSB configuration App will show predicted traffic and user locations and configure SSB beams to provide coverage of these areas. The difference in SSB configuration and the savings will be shown through dashboards.

Live App demo by Mavenir

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Day 1 Details

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Live App demo by Mavenir

rApp Use Case
- Efficiency KPIs – Spectral efficiency
- Mobility KPIs – Mobility Robustness
- Bearer KPIs – E-RAB setup
- Wild card: Root cause of performance problems

Mavenir will demonstrate rApp use cases of its RAN Intelligent Controller deployed in live sites of a Tier 1 commercial network operator. Mavenir will show how their operations team is using the tool to derive AI-enabled insights about network performance using FCAPS data exposed via O-RAN interfaces. These Key Performance Indicators (KPIs) include examples of efficiency, mobility and Bearer KPIs. Mavenir will demonstrate insights such as AI-based data correlation, causation, forecasting and imputation using inference engines in rApps and associated recommendations for performance improvement. Mavenir will also demonstrate genAI based offline techniques for core dump and log analysis to help identify root cause of performance problems.

Live App demo by Capgemini

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Ian Wong, Director of RF and Wireless Architecture, VIAVI Solutions
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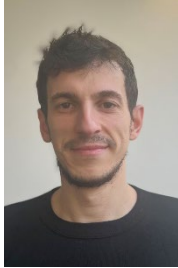
xApp/rApp Use Case
- Energy saving: Use-case specific

Capgemini Engineering will highlight xApps/rApps demonstrating energy saving for a network of different RAN types like backpack RAN, mobile RAN, pole-mounted RAN, etc.

Day 1 Details
Tuesday, March 26, 2024

Live App demo by Microsoft

Xenofon Foukas, Microsoft
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Microsoft bio

xApp Use Case
- Spectrum management: Interference detection

Microsoft will demonstrate improved spectral efficiency of 5G vRAN by detecting external wireless interference (including jammers) generated by unauthorized transmissions of 3rd parties in a licensed spectrum. The demonstrated xApp leverages data collected in a flexible and lightweight manner by introducing codelets into the RAN L1 using an E2 dynamic service model.

Live App demo by Singapore University of Technology and Design (SUTD)

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Ngo Van Mao, Systems Architect, SUTD
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Liang Xian Loong, Communications Testbed Engineer, SUTD
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Day 1 Details

Tuesday, March 26, 2024

Live App demo by Singapore University of Technology and Design (SUTD)

Hariz Yet, Communications Testbed Engineer, SUTD
SUTD bio

Le Thanh Long, Communications Testbed Engineer, SUTD
SUTD bio
Remote presenter

rApp Use Case
- Energy saving: RU transmit power control
- Spectrum management: Inter-cell interference reduction

The Future Communications Connectivity Lab (FCCLab) at SUTD developed a suite of rApps to address energy efficiency and interference management that we identified on our end-to-end 5G testbed deployed in SUTD campus, covering both indoor and outdoor environment. Leveraging Open RAN architecture, a suite of ML-based rApps infer important information (including location—which floor the UE is on—and predicted traffic demand) about individual user equipment (UEs), and based on this turn off/on selected O-RUs or adjust their transmission power.

Panel discussion on military use cases and requirements

Moderator: Dan Massey, U.S. Department of Defense
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Carl Kutsche, Chief Technologist, CISR, INL
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Day 1 Details
Tuesday, March 26, 2024

Panel discussion on military use cases and requirements

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Lightning Talk by Cohere Technologies

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xApp Use Case
- Spectral efficiency with cohere universal spectrum multiplier

Universal Spectrum Multiplier (USM) xApp use case is increasing spectral capacity via MU-MIMO using 4G or 5G waveforms in both FDD and TDD spectrum while maintaining full compatibility with all relevant 3GPP devices and infrastructure. In lab and field trial settings, we have proven spectral efficiency gains in dense urban, suburban, and rural network settings. This is a very important and unique capability because FDD spectrum is probably the most important spectrum in today's cellular networks and increasing its spectral capacity has significant benefits.

Day 1 Details
Tuesday, March 26, 2024

Institute for Telecommunication Sciences
Boulder, Colorado

Lightning Talk by Northeastern University (NEU) and George Mason University (GMU)

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xApp Use Case

- Spectrum management: Interference mitigation via traffic classifier

Our use case involves showcasing the IMPACT (Interference Mitigation with Power Adaptation and Classification of Traffic) xApp within the RIC (RAN Intelligent Controller). It leverages traffic and interference classification information and performs traffic steering and energy savings via jointly taking appropriate RAN control actions with an end-to-end implementation on the world's largest hardware-in-the-loop emulator, the NSF Colosseum.

Day 1 Details

Tuesday, March 26, 2024

Lightning Talk by Novowi

Guevara Noubir, Novowi
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NEU bio

xApp Use Case

- Spectrum management: Spectrum sharing, interference detection and mitigation

Novowi will describe a traffic steering solution that provides interference avoidance and spectral sharing. It is designed to work in a variety of use cases such as untethered 5G deployments in adversarial settings, and in or around military installation that uses 5G. This solution combines Novowi's REDCLIP technology for detecting and classifying a range of RF emissions over wideband spectrum in real-time, with a lightweight security-focused RIC and an xApp designed for incumbent signal avoidance.

Day 1 Details

Tuesday, March 26, 2024

Lightning Talk by University of California San Diego (UCSD) and Texas A&M University (TAMU): EdgeRIC: Delivering real-time RAN intelligence

Dinesh Bharadia, UCSD
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UCSD bio

Srinivas Shakkottai, TAMU
TAMU bio
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xApp Use Case
- Wild card: Real-time MAC scheduler control for improving QoE

UCSD will present an innovative RIC platform designed to operate in real-time, functioning at the granular level of the Transmission Time Interval (TTI), approximately 1ms, which is a critical time frame in cellular networks. This demonstration involves the deployment of a Real-Time Application (RTApp) alongside an xApp, collaboratively working to enhance user scheduling at the MAC layer—a process executed at each TTI.

The primary focus lies in enhancing the Quality of Experience (QoE) for end-user applications through the introduction of an application-aware, reinforcement learning-based MAC scheduler. This novel approach brings intelligent control to the lower-layer RAN functionalities, the first of its kind.

2024 RIC FORUM

Day 2 Agenda
Wednesday, March 27, 2024

Time	Event	Speakers
7:45	Check-in	
8:15	Keynote: What is dual-use technology, really?	Martin Weiss (DoD)
8:30	Live App demo by Northeastern University *Network slicing xApp using O-RAN Cell Configuration and Control (CCC) Service Model*	Salvatore D'Oro (NEU) Tommaso Melodia, (NEU) Michele Polese (NEU) Pedram Johari (NEU) Leonardo Bonati (NEU) Hai Cheng, NEU
9:10	Live App demo by AT&T and Nokia	Tracy Van Brakle (AT&T) Matti Hiltunen (AT&T Ramzi Barghouthi (Nokia) James Brunson (Nokia)
9:50	Break	
10:05	Live App demo by Juniper *Cooperative multi-vendor Energy Savings and Traffic Steering use case*	Arda Akman (Juniper) Pablo Oliver (Vodafone) Michael Jones (Keysight) Joe Thome (AirHop Comm) Marcin Hoffmann (Rimedo Labs)
10:45	Live App demo by Radisys	Ganesh Shenbagaraman (Radisys) Michael Jones (Keysight)
11:25	Live App demo by Accelleran	Arnaud Polster (Accelleran)
11:55	Lunch	
1:00	Panel discussion on how the RIC can provide security	Carl Kutsche (INL), moderator Philip Porras (SRI) Steve Vogelsang (Nokia) Scott Poretsky (Ericsson) Yongdae Kim (KAIST)
2:00	Lightning Talk by Compal and NYCU *Green O-RAN by Network Digital Twin*	Aaron Chuang (Compal) Sau-Hsuan Wu (NYCU)
2:15	Lightning Talk by Rimedo *O-RAN Hierarchical Traffic Management in Advanced Vehicular Scenario*	Pawel Sroka (Rimedo Labs)
2:30	Lightning Talk by ONF *RAN Energy Saving with Traffic Steering*	Sarat Puthenpura (ONF) Ian Wong (VIAVI Solutions) Intel, I14Y Labs, and Rimedo Labs
2:45	Lightning Talk by Rakuten	Madhukiran Medithe (Rakuten) Pankaj Agrawal (Rakuten) Seshashayi Thalluri (Rakuten)
3:00	Poster Session	NEU, AT&T, Juniper, Radisys, and Accelleran
5:00	End / Networking	

Day 2 Details

Wednesday, March 27, 2024

Keynote: What is dual-use technology, really?

Martin Weiss, Director for FutureG Applied Research, U.S. Department of Defense
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Live App demo by Northeastern University (NEU): Network slicing xApp using O-RAN Cell Configuration and Control (CCC) Service Model

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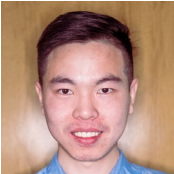
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Day 2 Details
Wednesday, March 27, 2024

Live App demo by Northeastern University (NEU): Network slicing xApp using O-RAN Cell Configuration and Control (CCC) Service Model

xApp Use Case
- Wild Card: O-RAN E2 CCC network slicing use case

In this demo, we will showcase what—to the best of our knowledge—is the first demonstration of the O-RAN RAN slicing use case following the O-RAN E2 Service Model for Cell Configuration and Control (E2SM-CCC). We will demonstrate an xApp (hosted on an actual near-real-time (Near-RT) RIC) computing in real time effective RAN slicing policies that follow the E2SM-CCC use case and adaptively govern radio resource management strategies to simultaneously satisfy QoS requirements of different users and applications running on the network. We have implemented the required RAN slicing procedures and functionalities in OpenAirInterface and OSC Near-RT RIC, as well as the E2SM-CCC service model to support dynamic RAN slicing control using xApps. This is the first demonstration of such a system on an over-the-air testbed hosting an end-to-end Open RAN network including 5G disaggregated RAN, 5G core, Near-RT RIC, xApps and COTS 5G UEs.
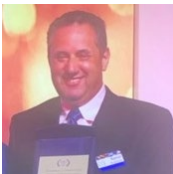
Live App demo by AT&T and Nokia

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Day 2 Details

Wednesday, March 27, 2024

Live App demo by AT&T and Nokia

xApp Use Case
- Energy saving: Cell level control
- Traffic steering: Load balancing and interference mitigation
- Wild card: Application aware RAN, mission critical video and app policy

AT&T and Nokia will demonstrate three standalone applications: traffic steering; energy savings; and application-aware RAN, which identifies application types, creates user groups based on the types, and applies policies such as scheduling, traffic steering, etc., toward defined user groups to prioritize and improve user experience.

Live App demo by Juniper

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Day 2 Details

Wednesday, March 27, 2024

Live App demo by Juniper

xApp/rApp Use Case
- Energy Saving: Cell-level control
- Traffic Steering: Policy-based

RIMEDO's Traffic Steering xApp is a unique solution that balances the load and the quality of service across the network nodes and cells. It uses internal intelligence and policies from the A1 interface to steer the traffic to the most suitable cells based on various factors, such as user radio conditions, cell types, cell load, service types, and QoS profiles. By supporting A1-P Traffic Steering Policy (TSP) it can work in tandem with other apps (i.e., rApps) for various scenarios (e.g., Energy Saving or Traffic Management).

AirHop Communications Energy Saving for dynamic Multi-Carrier (ESMC) rApp is an innovative solution that aims to reduce the power consumption of the network by switching off or on some cells depending on the traffic demand. The rApp uses a deep reinforcement learning AI/ML model to learn the traffic patterns and adapts the thresholds for each cell to enter or exit the Energy Saving mode based on the traffic utilization levels. This way, the rApp can optimize the energy efficiency of the network while preserving the quality of service for the end-users.

Live App demo by Radisys

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xApp Use Case
- Energy saving: Cell level control
- Traffic steering for energy saving

Radisys will demonstrate controlling energy utilization in base stations and radios while still ensuring the appropriate service performance to connected users and saving network operation expense costs.

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Live App demo by Accelleran

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xApp/rApp Use Case
- Energy saving: Cell level control
- Traffic steering: Handover triggered for energy savings

Accelleran will demonstrate use of the dRAX RIC and x/rApp SDK to implement an energy saving algorithm. RAN data is gathered to create an insight into the network. The energy-saving algorithm will decide when a 5G cell can be turned off or turned back on to save energy, while at the same time conserve the QoS of the UEs. The traffic patterns of UEs are monitored, as well as their utilization of the 5G cells' capacity to enable energy saving based on different conditions in the network. During low traffic periods, 5G cells become candidates to be turned off to save energy, as their capacity is not needed. As the traffic patterns in the network change, and more capacity is needed, the powered down 5G cells are turned back on to preserve the QoS. Using this algorithm enables lower energy consumption by the network.

The handover command in the dRAX RIC is one of the building blocks for a traffic steering use case to move traffic on demand. By moving the control of the handover trigger to the x/rApps, the decision making process is moved away from the UEs to the RIC. Since the RIC has a global overview of the network, a global optimization algorithm could trigger handovers to balance the network and optimize QoS.

Panel discussion on how the RIC can provide security

Moderator: Carl Kutsche, Chief Technologist, CISR, INL
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Day 2 Details
Wednesday, March 27, 2024

Panel discussion on how the RIC can provide security

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Lightening Talk by Compal and National Yang Ming Chiao Tung University (NYCU): Green O-RAN by Network Digital Twin

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Day 2 Details

Wednesday, March 27, 2024

Lightening Talk by Compal and National Yang Ming Chiao Tung University (NYCU): Green O-RAN by Network Digital Twin

rApp Use Case

- Energy saving: Transmit power control
- Energy saving: CU/DU power control

The application is to establish a green 5G open RAN that not only can substantially reduce the operating energy but is also able to maintain the quality of service (QoS) to users. With this application, we want to demonstrate the feasibility of an open, sustainable, yet high-quality 5G network empowered by advanced artificial intelligence (AI) and digital-twin technologies. An O-RAN is installed physically at the Electrical Engineering Building of NYCU, and is built based on a Druid Raemis 5G Core, along with Compal's 5G O-CU/DUs, O-RUs, and NYCU's rAPPs running on a RAN intelligent controller (RIC). In parallel, a digital twin of the O-RAN is created to visualize the system's operation conditions, geolocational distributions of base stations (BSs) and user equipment (UEs), and their corresponding energy consumptions and QoS in cyberspace. By real-time system feedbacks and our data analytics and AI technologies, the RIC is able to predict UEs' location distributions and their service requests, and then accordingly controls the on-and-off of DUs and RUs and their energy consumptions in order to meet UEs' QoS with the least possible system energy consumption. Important features of our O-RAN testbed and RIC functions are described as follows:

1. Openness and Readiness: The entire 5G open RAN is constructed with commercial off-the-shelf (COTS) products from Compal's Open RAN solutions, including one O-CU, two O-DUs, and several O-RUs.
2. AI-empowered Network Energy Saving: AI-assisted rAPPs to improve network energy efficiencies across various time scales and multiple functional layers of O-RAN. Not only the radiation power of RUs, but also the computation power consumptions on O-CU/DU are optimized.
3. QoS Optimization: AI/ML algorithms and statistical analysis are used to best optimize the network energy consumption and meanwhile maintain the QoS across the network. QoS requirements will be estimated and predicted to ensure the QoS satisfaction degree before and after O-RAN's reconfigurations for energy saving purposes.

Lightening Talk by Rimedo Labs: O-RAN Hierarchical Traffic Management in Advanced Vehicular Scenario

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Day 2 Details

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Lightening Talk by Rimedo Labs: O-RAN Hierarchical Traffic Management in Advanced Vehicular Scenario

xApp Use Case

- Traffic steering: Policy-based

Our application is focused on aspects of traffic management (TM) and traffic steering (TS) in the vehicular scenario, with an xApp running in Near-RT RIC responsible for TS, and an rApp in Non-RT RIC performing TM. The whole solution relies on dynamic adaptation of the TS policies based on the observed network conditions, which is performed by the rApp utilizing the Enrichment Information from external databases to predict future situations in the network and proactively make decisions. The TS-xApp, following specified policies, can simultaneously distribute the load between network nodes and off-load specific traffic to dedicated cells, intelligently applying the service-based traffic steering scheme and/or focusing on the load balancing principle.

Lightening Talk by Open Networking Foundation (ONF)

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Ian Wong, Director of RF and Wireless Architecture, VIAVI Solutions
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This work is also supported by Intel, I14Y Labs, and Rimedo Labs

Day 2 Details

Wednesday, March 27, 2024

Lightening Talk by Open Networking Foundation (ONF)

xApp/rApp Use Case
- Energy saving: Cell level control
- Traffic steering: Load balancing

This unified implementation demonstrates how a RAN energy saving application (implemented as rApp) and a traffic steering application (implemented as xApp) can be well coordinated under the O-RAN architecture to optimize RAN energy savings, at the same time maintaining quality of service, in a closed control loop setup. It demonstrates all key O-RAN entities (Near-RT RIC, Non-RT RIC and SMO) and O-RAN defined interfaces (O1, E2, A1, and R1 interfaces) in an integrated manner. The demo also presents AI/ML model based approaches for RAN energy saving; models trained on actual RAN data from a major mobile operator and various AI/ML models for energy saving are compared.

Lightening Talk by Rakuten Symphony

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xApp/rApp Use Case
- Energy saving: Cell-level control, small cell shutdown
- Energy saving: RF channel reconfig

AI-ML driven rAPP and xAPP on Rakuten RIC-Platform for optimization of the RAN energy-consumption by changing the RF-channel configuration based on traffic conditions. AI-ML driven energy-saving rAPP for small-cell shutdown during low traffic periods.

Day 3 Agenda

Thursday, March 28, 2024

Time	Event	Speakers
7:45	Check-in	
8:15	Logistics, schedule overview	Jeremy Glenn (NTIA/ITS), emcee
8:20	Keynote: Reflections on RIC App demos from Days 1 and 2	Ted Woodward (DoD)
8:35	NTIA opening remarks, recorded	AS Alan Davidson (NTIA)
8:40	Business case for RIC and Open RAN	Tim Krause (Deloitte)
8:55	Panel discussion on RIC use cases now and in the future	Richard MacKenzie (BT), moderator Anil Umesh (DOCOMO) Adam Loddeke (AT&T)
9:55	Break	
10:10	Keynote: Next-generation xApps in the Cloud	Tommaso Melodia (NEU)
10:25	Panel discussion on Open RAN market and deployment use cases	Sean Kinney (RCR Wireless), moderator Patrick Lopez (Core Analysis) Shuvo Chowdhury (NVIDIA)
11:25	Operators who have deployed Open RAN	Abbas Khan (Dish Wireless)
11:40	Case study: Enterprise 5G private network deployment	Sangit Rawley (JLA Advisors)
11:55	Lunch	
1:00	Panel discussion on international Open RAN cooperation	Kate Dimsdale (NTIA), moderator Andreas Gladisch (i14Y Lab/Germany) David Gibson (Canada) Maggie Chao (ITRI/Taiwan) Tom Rumbelow (DSIT)
2:00	Panel discussion on Open RAN vendors' vision for full deployment	Sean Kinney (RCR Wireless), moderator Dritan Kaleshi (Digital Catapult) Gil Hellmann (Wind River) Mike Murphy (Ericsson) Rakesh Misra (VMWare / Broadcom)
3:00	Vision for Open RAN deployment	Thomas Rondeau (DoD)
3:05	Closing remarks	Charles Cooper (NTIA/ITS)
3:10	End / Networking	

Day 3 Details

Thursday, March 28, 2024

Logistics, schedule overview

Jeremy Glenn, RIC Forum Deputy Program Leader, NTIA/ITS
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Keynote: Reflections on RIC App demos from Days 1 and 2

Ted Woodward, Technical Director for FutureG, U.S. Department of Defense
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NTIA opening remarks, recorded

Alan Davidson, Assistant Secretary of Commerce for Communications and Information and NTIA Administrator
NTIA bio

Business case for RIC and Open RAN

Tim Krause, Specialist Executive—Telecommunications, Deloitte
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Deloitte bio, LinkedIn bio

Panel discussion on RIC use cases now and in the future

Moderator: Richard MacKenzie, Distinguished Engineer, Wireless Networks, BT
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Day 3 Details
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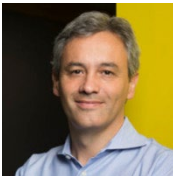### Panel discussion on RIC use cases now and in the future

Anil Umesh, Director of ORAN Solution Sales, NTT DOCOMO, INC.
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Adam Loddeke, AVP – RAN Technology, AT&T
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Next-generation of xApps in the Cloud

Tommaso Melodia, NEU
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Panel discussion on Open RAN market and deployment use case

Moderator: Sean Kinney, Editor-in-Chief, RCR Wireless
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Shuvo Chowdhury, NVIDIA
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Patrick Lopez, CEO, Core Analysis
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2024 RIC FORUM

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Operators who have deployed Open RAN

Abbas Khan, Head of RAN Engineering Dish Wireless
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Case study: Enterprise 5G private network deployment

Sangit Rawlley, Sr. Advisor, JLA Advisors
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Panel discussion on international Open RAN cooperation

Moderator: Kate Dimsdale, Telecommunications Policy Specialist, NTIA
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Andreas Gladisch, Consortium Lead, i14Y Lab, Germany
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David Gibson, Director, ISED Canada
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RIC 2024 FORUM

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Thursday, March 28, 2024

Institute for Telecommunication Sciences
Boulder, Colorado

Panel discussion on international Open RAN cooperation

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Tom Rumbelow, DSIT
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Panel discussion on Open RAN vendors' visions for full deployment

Moderator: Sean Kinney, Editor-in-Chief, RCR Wireless
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Gil Hellmann, VP. Global Telecom Solutions Engineering, Wind River
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Mike Murphy, CTO, North America, Ericsson
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Dritan Kaleshi, Director of Technology 5G and Digital Infrastructure, Digital Catapult
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Rakesh Misra, Director, R&D, VMWare (Broadcom)
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Day 3 Details

Thursday, March 28, 2024

Vision for Open RAN deployment

Thomas Rondeau, Principal Director for FutureG, U.S. Department of Defense
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DoD bio

Closing remarks

Charles Cooper, Acting ITS Director, NTIA/ITS
NTIA bio
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