

5th Annual

3G/HSPA Evolution and Optimisation Forum

Examining Drivers, Strategies and Solutions for 3G Optimisation in the Evolution towards Next Generation Networks

Prague, Czech Republic

28–30th January 2009

Including an Interactive Pre-Conference
Half Day Workshop

Planning and Optimising HSPA Networks

Led By:

Dr. Konstantinos Stavropoulos

Product Manager

Arieso

Hear the Latest Case Studies and Critical Strategies
from Leaders in the Industry

- **Telia Denmark** examines mobile backhaul strategies for improved mobile broadband delivery
- **Cosmote presents** a case study on delivery 3G in low frequency bands with UMTS 900
- **Bité** assesses the business challenges for UMTS 900
- **Telecom Italia** explores the challenges in evolution to LTE networks

Attending this Premier **marcus evans** Conference will Enable you to:

- **Understand** the fundamentals of 3G optimisation
- **Review** HSPA optimisation and migration strategies
- **Examine** indoor coverage solutions
- **Understand** the spectrum challenge and the impact 900MHz refarming
- **Evolve** to next generation mobile networks
- **Explore** the backhaul challenge and capacity restraints
- **Guarantee** QoS for real-time services
- **Learn how** subscribers can drive 3G/HSPA optimization

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The **INCREASED DESIRE** for mobile data usage combined with growing pressure to **IMPROVE** and **CLARIFY** budget management means that a new breed of optimisation tools are **REQUIRED.**

Despite increased spending operators are rapidly exhausting the capacity on their existing networks. In order to remain competitive, they must optimise their 3G networks.

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In the Chair

Karim Taga

Managing Director

A D LITTLE

Your Expert Speaker Panel:

Erol Hepsaydir

Director of Radio Solutions

3

Erik Stilling

RAN and Geo Marketing Strategy
Manager

Telia Denmark

Horst Pertl

Director NW Planning Division

Mobilitel

Richard Ziola

Project Manager

Safaricom

Dr. Dalius Radis

Network Planning Manager

Bité Group

Konstantinos Halkiotis

Broadband Access Networks System

Section, Senior Engineer

Cosmote S.A

Rob Bratby

Partner

Olswang

Giovanni Romano

Technology Plan and Standards
Coordinator

Telecom Italia

Antonio Guerra

Wireless Technologies Transmission and
Access

Sonaecom

Alessandra Fratini

Partner

Fratini Vergano

Dr. Wolfgang Geisselbrecht

Senior Associate

Oliver Wyman

Frederic Berti

Marketing and Strategy Unit Manager

Belgacom

Charalampos Almpanis

Senior Engineer Technology

Vodafone

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Product Manager

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Day 1

28th January 2009

PRE-CONFERENCE HALF-DAY INTERACTIVE WORKSHOP

Planning and Optimising HSPA Networks

13.30 Registration and Coffee

14.00 Workshop Leader's Opening Remarks

Dr. Konstantinos Stavropoulos
Product Manager
Arieso



14.10 **Evaluating Capex Drivers and Inhibitors**

- Will capacity upgrades in access network be the main driver pushing capex faster than revenue growth?
- The impact of long-term investments of WDM and dark fiber for backbone
- Meeting the capex challenge: reviewing solutions to counteract the necessary massive capex required for infrastructure upgrades and investment

14.50 **Optimising HSPA for Increased Speed, Service Quality and Capacity**

- Troubleshooting and optimising the network to target KPI's
- Examining uplink and downlink speeds currently achievable with HSPA
- Understanding the necessity for HSPA optimisation to guarantee speed and service quality
- Migrating to HSPA+: challenges and performance indicators
- Overview of HSPA testing solutions

15.30 Afternoon Tea and Networking

15.50 **Meeting Demand: Prioritising Voice and Data Traffic**

- Developing models for network behaviour over peak periods
- Assessing the effect of prioritising voice in multi-layer networks: GPRS, EDGE, 3G and HSPA
- Why do we need to prioritise voice and data traffic?
- Evaluating traffic grooming mechanisms and prioritisation methods and solutions for distributing voice and data traffic
- How do you optimise a heavily used HSPA network – cost implications and ensuring adequate capacity for hungry services?

16.30 Workshop Leader's Closing Remarks

16.40 End of Workshop

Sponsor Profile

Arieso (www.arieso.com) is a world-leading provider of subscriber experience geo-location, capital budget management and automatic network optimization solutions for wireless networks. Arieso's innovative solutions have delivered significant cost savings and enhanced network performance consistently. Arieso's clients include AT&T, Nortel, O2, Ofcom, Qualcomm, Sprint, Telefonica, and Vodafone.

29th January 2009

08.30 Registration and Coffee

09.00 Chair's Opening Remarks

Karim Taga
Managing Director
A D LITTLE

3G EVOLUTION AND OPTIMISATION

09.10 Operator Case Study

Optimising HSPA to meet Customer Demand and Expectations

- Meeting customer demand with optimised networks
- Assessing the challenges in migrating to HSPA+
- Identifying the impact of femtocells on improved indoor coverage
- Identifying KPIs that characterise the quality of the network
- Troubleshooting and diagnosing networks to meet target KPIs

Antonio Guerra
Wireless Technologies Transmission and Access
Sonaecom

09.50 Solution Provider Case Study

Geo-locate, Evaluate, Optimise: a Subscriber Driven Approach to 3G/HSPA Optimisation

- Why a different 3G/HSPA optimisation approach is needed
- How to consider the subscriber experience in 3G/HSPA optimisation
 - Geo-locate mobile voice/data call records quickly and accurately without additional hardware
 - Evaluate the spatial network performance in detail through a rich set of KPI maps and reports
 - Optimise the network by focusing on the actual performance issues wherever they may occur
- What the subscriber driven 3G/HSPA optimisation approach has achieved in practice

Dr. Konstantinos Stavropoulos
Product Manager
Arieso

10.30 Morning Coffee and Networking

INBUILDING AND QOS

10.50 Operator Perspective

Indoor Coverage Optimisation Solutions

- How can femtocells and picocells help to optimise radio access network?
- Assessing the advantages and disadvantages of femtocells
- Evaluating solutions for improving indoor coverage

Charalampos Almpanis
Senior Engineer Technology
Vodafone
(subject to final confirmation)

11.30 Solution Provider Perspective

Reviewing Methods of Measuring QoS and QoE

- What are the KPIs?
- Evaluating the need for region specific KPIs to ensure optimum coverage
- Understanding QoE and metrics for measurement
- How can we guarantee QoS for voice and other real-time services?

Senior Representative
Flash Networks

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UMTS 900

12.10 Operator Case Study

Delivering 3G in Low Frequency Bands with UMTS 900

- A Case Study

- Looking at the advantages and challenges of UMTS 900
- Assessing the impact of UMTS 900 on coverage and quality of service and CAPEX
- Reviewing the impact of spectrum liberalisation to free up GSM 900 spectrum for UMTS services
- Addressing the migration challenges: can GSM 900 and UMTS 900 still work together
- Developing independent optimisation solutions for GSM 900 and UMTS to minimise interference and maximise coverage and capacity
- Lessons learned from pilot trials

Konstantinos Halkiotis

Broadband Access Networks System Section, Senior Engineer
Cosmote S.A.

12.50 Lunch

13.50 Coffee and Networking Break

14.10 Operator Perspective

Assessing the Business Challenges for UMTS900

- Providing an overview of the market potential of UMTS 900
- Understanding the drivers and restraints in deploying UMTS 900
- The impact of UMTS 900 on CAPEX
- Examining the commercial strategies in offering UMTS 900: creating new revenue streams
- Who are the main market players and what are the best in breed solutions for smooth migration today?
 - Forecasts and challenges ahead

Dr. Dalius Radis
Network Planning Manager
Bité Group

THE IMPACT OF REGULATION

14.50 Understanding the Spectrum Challenge

- Understanding the importance of spectrum availability and allocation to deliver next generation mobile broadband
- Assessing operator expectations from spectrum auctions
- Opening spectrum as a driver for fair competition
- How will this impact LTE developments and operator mobile broadband roadmaps?

Rob Bratby
Partner
Olswang

15.30 Afternoon Tea and Networking Break

15.50 The Impact of the EU Telecoms Reform and Spectrum Refarming 900MHz on Operator Strategies

- Exploring the new EU telecoms rules on spectrum management
- Technological neutrality and service neutrality: towards an optimal radio spectrum use?
- Access to spectrum: unlicensed use and secondary trading
- Reviewing operator strategies to reform and deploy UMTS 900 to leverage 3G services and facilitate migration towards 4G
- Highlighting the challenges for incumbents and newcomers
- What does this mean for emerging markets?

Alessandra Fratini
Partner
Fratini Vergano

16.30 Panel Discussion

Automated Network Optimisation: What does this Mean for Radio Networks?

- Theory of Automated Network Optimisation
- Importance and limitations of modelling approaches
- Manual versus automated planning
- Trends for the near future

The Panel will be joined by key speakers from both days

17.10 Chair's Closing Remarks

17.20 End of Day Two

30th January 2009

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08.00 Registration and Coffee

09.00 Chair's Opening Remarks

Karim Taga
Managing Director
A D LITTLE

OPTIMISATION DRIVERS AND INHIBITORS

09.10 Operator Perspective

Understanding the Drivers for Optimisation

- Ensuring quality of service
- Meeting customer demand
- How do you expand capacity and coverage of optimised networks?
- Developing different strategies for optimum coverage: UMTS refarming, dual frequencies

Richard Ziola
Project Manager
Safaricom

3G RAN SHARING

09.50 Building a Business Model for RAN Sharing

- Reviewing the advantages and disadvantages of RAN sharing
- Looking at different solutions for network sharing
- The impact of RAN sharing strategies on CAPEX and OPEX
- The arguments for RAN sharing as the solution for increased coverage and better QoS

Dr. Wolfgang Geisselbrecht
Senior Associate
Oliver Wyman

10.30 Morning Coffee and Networking

THE CAPACITY CHALLENGE AND MOBILE BACKHAUL

10.50 Operator Case Study

Evolving from 2G/3G Backhauling Solutions - Ethernet and its Evolution as a Key Element for Cost Efficiency in Mobile Backhauling

- Can ethernet offer a cost effective solution to meet operators' mobile backhaul needs?
- Improving the rate, reach and reliability of ethernet in the first mile to deliver next generation services to the base station
- Solutions for delivering high-speed ethernet backhaul over existing copper infrastructure
- Analysing the role of pseudowire technology to deliver ethernet services and the impact on capex and opex

Frederic Berti
Marketing and Strategy Unit Manager
Belgacom

11.30 Solution Provider Case Study

Comparing Different Backhaul Solutions for Next Generation Mobile Networks

- Correlation of network statistics towards the user experience
- Detection of bottlenecks: in lub, ISHO, HSPA-R99 transitions
- Identification of inefficiencies in ATM or IP backbone
- Consideration of different effects to different applications such as browsing, streaming, online gaming

speaker to be confirmed

BACKHAUL

12.10 Operator Perspective

Addressing the Mobile Backhaul Bottleneck

- Exploring the limitations of current mobile backhaul technology: capacity, cost, efficiency
- Assessing the backhaul solutions for better data throughput and service quality: microwave, ethernet
- Understanding the challenges in expanding 3G backhaul capacity without cannibalising 2G revenues
- Optimising the core network to improve backhaul traffic

Horst Pertl
Director NW Planning Division
MobilTel

12.50 Lunch

13.50 Coffee and Networking Break

14.10 Operator Case Study

Mobile Backhaul Strategies for Improved Mobile Broadband Delivery

- Understanding the role of mobile backhaul in mobile broadband service delivery
- The need to optimise mobile backhaul to ensure service quality and meet customer demand
- The advantages of a mobile backhaul solution:
 - reducing OPEX
 - limiting CAPEX
 - scalable services
 - future-proof infrastructures

Erik Stilling
RAN and Geo Marketing Strategy Manager
Telia Denmark

EVOLVING TO NEXT GENERATION MOBILE NETWORKS

14.50 Operator Case Study

Exploring the Optimal Upgrade Plan for 3G Migration

- When should operators migrate to HSPA+?
- Discussing use cases and challenges in integrating LTE and making it interoperable with legacy networks
- Reviewing various migration paths to LTE
- Identifying cost implications and timelines for migration

Erol Hepsaydir
Director of Radio Solutions
3

15.30 Afternoon Tea and Networking Break

15.50 Operator Case Study

Evolving to LTE Networks

- Comparing LTE with 3G standards
- Reviewing current status of LTE standards, performance measures and timescales for deployment
- Reviewing feedback from current trials: challenges, speed, interoperability, capabilities and systems performance
- Concluding with strategies for LTE deployment

Giovanni Romano
Technology Plan and Standards Coordinator
Telecom Italia

AUTOMATED NETWORK OPTIMISATION

16.30 Panel Discussion

Developing Parameters for Automated Optimisation

- What should be optimised and why?
- How do we benchmark the optimisation results?
- Optimisation parameters for static models
- Optimisation targets and functions
- Auto-tuning of RRM Parameters in UMTS Networks

The Panel will be joined by key speakers from both days

17.10 Chair's Closing Remarks

17.20 End of Day Three

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What this Conference Aims to Achieve

3G wireless networks will need to deliver high speed, high capacity wireless data applications while simultaneously coping with an exponential growth in voice traffic. Meanwhile the wireless communications industry is already faced with increasing competition, which puts additional emphasis on capacity, quality and costs. Given the limited spectrum available for these new applications, considerations have to be given to optimising current networks.

The **marcus evans 3G/HSPA Evolution and Optimisation Forum** will give delegates a chance to explore the limitations of 3G and examine different strategies and solutions for 3G RAN optimisation. This Forum will take a closer look at the potentials of **network sharing** for improved service and **femtocells** for better indoor coverage. Through case studies by expert speakers we will discover different methods for **measuring** quality of service, the impact of regulation on 3G services as well as the limitations of **backhaul** capacity for optimum data traffic flow.

For further information on this conference and special discounts please contact **Sumreen Rizvi** on +44 (0) 203 002 3277 or email SumreenR@marcusevansuk.com

Who Should Attend?

- CTO
- COO
- Vice President Network and Strategy
- Head of Coverage
- Head of Unit Voice Quality Measurement
- Quality Director
- Head of Testing
- Technical Director – UMTS
- Head of UMTS Network Planning
- R&D Engineer
- QoS Fault Management Manager
- Optimisation Engineer GPRS
- Head of Technical Quality Department
- Manager – Capacity Planning
- Manager Data Transmission
- Director of Business Unit Technology
- Network Planning Team Manager
- Manager Mobile Optimisation
- Head of Network Optimisation
- Director Network Service Optimisation
- Head Network Performance
- Head Radio Planning and Optimisation
- Network Testing Manager
- Manager of Transport Networks
- Director of Transport Networks