



# CeDaR NEWS

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Dear All,

## Welcome

This edition of CeDaR News is dedicated to some key issues of importance to mobile operators: **Testing, Revenue Assurance and Roaming**. All these areas are pivotal to the success of mobile operators, and ALLROUND offers comprehensive solutions in each of them.

**CeDaR** – ALLROUND’s flagship product – is unique for its ability to generate, filter, view, edit and fix CDRs. In this edition’s special feature we will discuss this in more detail particularly as related to testing.

Following our participation at the Mobile Billing Systems conference and exhibition in Budapest, we will be hosting a free 1-day workshop on CeDaR, and how it is used for testing for revenue assurance. **AllRoamer** – ALLROUND’s latest addition to its product portfolio – provides a complete and integrated solution to all roaming business needs. You will find more details on AllRoamer in the insert to this edition of CeDaR News. We hope you will enjoy reading our newsletter!

### ALLROUND wins Software Export Award

We are delighted to announce that ALLROUND was given the “**IVSZ Software Export Award**” for excellence in converting IT R&D results into sales of innovative products in the global marketplace. It is the first time IVSZ, the Association of Hungarian IT companies, has made the award to leading export-oriented companies. ♦

## Visit ALLROUND at Mobile Billing Systems

ALLROUND will be an Associate Sponsor and exhibitor at one of EMEA’s leading billing events, **Mobile Billing Systems**. The conference will be held together with Prepaid

Mobile. The event will take place at the **Marriott Hotel, Budapest** between **27-29 September**.

>> See page 3 for further details.

## Partner Program Announcement

ALLROUND is now inviting **business partners** from around the world to join us as we expand into new markets. If you or your firm have a proven record in mobile communications and are interested in representing ALLROUND please contact us at:

Tel: **+361-206-6280**

E-mail: [partners@allround.net](mailto:partners@allround.net) ♦

## Re-pricing A new challenge in roaming

If global mobile operators wish to maintain or expand their stake in the lucrative roaming market they have to react quickly to changes that take place in the industry. They also need to have the proper tools to fight with in the roaming arena.

**AllRoamer**, ALLROUND’s complete roaming management solution offers a remedy for all roaming-related wounds. It helps operators cope with pre-paid and GPRS roaming if they are still using TAP2 by offering **TAP2-TAP3 conversion**.

AllRoamer also handles the new challenge of **re-pricing**. This is the recalculation of charges by the home network for calls made in international roaming scenarios. Without having to modify the billing system or requiring expensive DCH services, AllRoamer provides mobile operators with a flexible solution.

>> For more information on AllRoamer, please refer to the CeDaR News insert. ♦

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## [ ALLROUND Mobile Solutions ] Special feature – CeDaR for Testing

CeDaR – our current flagship product – is a comprehensive solution for CDR/TAP handling, test data generation and mediation.

>> The article on page 2 will discuss how effective a tool CeDaR can be when it comes to Testing.



## [ ALLROUND Mobile Solutions ]

# Special feature – CeDaR for Testing

Automatically test your CDR processing systems to maximize revenue, minimize losses and improve quality

Without CeDaR it is difficult to thoroughly test your billing system. Randomly selected subscriber calls do not ensure a comprehensive testing of a mobile operator's systems and tariffs. Test calls and automatic call generators cannot provide enough data, particularly as the whole process must be repeated at every testing interval.

CeDaR is a high performance test-CDR generator, though it does not test the network by making real calls, it tests the entire CDR lifecycle – from switch through to rating, mediation and billing system. Mobile operators can generate huge

numbers of test CDRs with just a few mouse clicks. Consider multiplying one outgoing call for all the countries around the world, then these by the number of possible billing scenarios. Within seconds, CeDaR can write this entire test suite of CDRs, exactly in the same format as they would be written from an MSC for example.

To separate real and test data, a "Digital Watermark" can be applied to all test-CDRs to ensure they are uniquely identifiable and cannot be confused with actual CDRs. With CeDaR it is easy to build up a test set of CDRs – numbering

millions – that consist of both real and algorithmically generated calls.

You can also use CeDaR to regularly change dates in CDRs according to your bill cycles. By processing these CDRs and comparing the results to previous runs a mobile operator can quickly and easily identify any differences. CeDaR also provides flexible statistical features to identify any kind of loss or misinterpretation of CDRs in the mediation device or billing system. ♦



## CeDaR for Testing and Revenue Assurance Workshop

### Description

This is a 1-day event that has as its prime objective the exchange of information so that attendees can define and assess benefits that can be derived from working with CeDaR, specifically in the area of testing.

### Topic

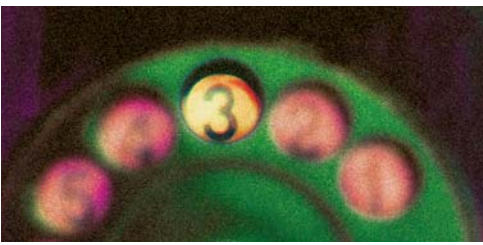
Effective Testing for Revenue Assurance / Revenue Management

Revenue Assurance is a very broad topic touching on many disciplines within a mobile operator's business. A comprehensive Revenue Assurance program is complex and likely to cost several million Euros in technology and resource investment. CeDaR, as an application suite, is designed to address a number of areas in Revenue Assurance, but in a way that is fast, practical and inexpensive.

One of these areas is testing. CeDaR offers a "platform" for creating a wide range of re-useable test suites. By analyzing systems and business

rules, we can identify errors resulting from the introduction of a new service, network device, format change, or billing system upgrade.

As service offerings, business relationships, and technologies advance mobile operators are faced with new challenges. Effectively managing the growing complexity of this environment, and the business rules it supports, is a difficult task. This Workshop will explore, on a one-to-one basis, specific areas where proper and effective testing can benefit your organization by identifying problems that could result in revenue leakage. ♦



## [ ALLROUND Mobile Solutions ]

# ALLROUND TAP Solution

ALLROUND has recently developed a **complete roaming solution** to address the need of mobile operators to make use of the key revenue streams roaming could provide them.

In order to meet the challenges of roaming, mobile operators require a **flexible architecture** that enables them to **keep up with the latest TAP releases** and thus fulfill the demands of their own roaming standards. This will also allow mobile operators to **quickly implement new services** for their roaming subscribers in order to gain the competitive edge they need to maintain to stay ahead of competitors.

A clear advantage of the ALLROUND's solution is that there is **no need to change legacy billing systems**. Changing a billing system usually takes longer – operators can save valuable time with using ALLROUND's solution. Furthermore, the **comprehensive reporting feature** of the application gives operators **greater control over its roaming operations** allowing the operator to offer competitive roaming packages for its subscribers.

ALLROUND has implementations worldwide in territories that include Europe, North and South America, and the Middle East. Also, ALLROUND's active participation at the TADIG and BARG working groups of the GSM Association is a clear indicator of the company's expertise in the roaming field.

## The Solution

*Description of the diagram:*

**TAP Out phase** – rated CDRs from the billing system are converted to valid TAP3.10 files

**TAP In phase** – validation is executed including RAP file creation. The handling and processing

of RAP files also takes place, while the valid TAP3.10 files are converted to the proprietary billing system format.

**In both directions** – comprehensive reports and statistics are generated in order to facilitate the full control over the roaming processes. ♦

Here are the **key benefits** mobile operators are able to achieve with the ALLROUND TAP solution:

- » Easy TAP upgrades
- » Billing System integration
- » Flexible architecture
- » RAP handling solution included
- » Comprehensive Statistical reporting



Mobile Billing Systems takes an operator perspective on the technical and business evolution options for service providers as they move into the age of mobile data communications. Besides exhibiting, our Technical Sales & Support

Manager, Gábor Lakatos will speak on "Employing pro-active testing strategies and methods to reduce time to market for new billing services". The session is to start on day 2 (28 September) at 12.10 pm. If you attend this conference make sure you listen

## Visit ALLROUND at Mobile Billing Systems

to his speech and also visit our stand to see our applications in action. Our experts will be ready to discuss whatever needs and questions you may have regarding CDR handling, Roaming, Revenue Assurance and Fraud Detection. ♦

# About us

- » ALLROUND is an ISO 9001:2000 certified company specialized in software development and consulting.
- » The company was established in 1991, it is a Microsoft Certified Solution Provider since 1995, Oracle Alliance Partner since 1997 and Oracle Certified Solution Partner since 1999.
- » Member of the Sun Developer Connection(SM) Partner Program since 2001.
- » The company joined HP's Developer & Solution Partner Program in 2004
- » ALLROUND is an Associate Member of the GSM Association since April, 2002, listed under the categories Security Systems Supplier and GSMA Standards Supporter. ALLROUND is represented in the following working groups of the GSMA: BARG, TADIG, the File Specification Subgroup, and TTS. ♦



## CDR formats

### Supported formats by CeDaR Interactive and CeDaR Utilities at present

» As the CeDaR product line is an extremely format flexible range of interactive software products, handling both ASN.1, XML and sequential formats, it's of no surprise it supports various MSC, Billing System, GPRS and other vendor specific formats.

#### MSC formats:

Ericsson CME20 R7, R8 (Rev.G),  
R8 XML (Rev.F), R8 PCS (Rev.E),  
R9.1 PCS (Rev.B),  
R9.1 (Rev.C),  
R10, R10 PCS  
Nokia DX200 M10 BCD/HEX  
Siemens CS1.0 MSE  
Siemens D900 SR8.0  
Nortel GSM 15  
Nortel GSM 16

#### GPRS formats:

Ericsson GSN 2.0, 2.1, 3.0  
GPRS UTX, UTX 2  
Nokia GPRS CG 1.1, 2.0

#### Billing System formats:

Jupiter CCCF, CCCL, CTRL Ver 2.2 Rev 0.3  
Rating DUMP2

#### Multimedia Messaging formats:

Multimedia Messaging Service 4.0.0  
Multimedia Messaging Service 5.0.0

#### TDMA formats:

Ericsson AS147, AS160

#### Standard formats:

GSM 12.05 (v7.0.1)  
GSM 12.15 (v7.6.0)

#### Roaming data exchange formats:

TAP1 (TD.01 3.12.1)  
TAP2+ (TD.17 3.13.0)  
TAP3  
3.2 (TD.57 3.6.0), (TD.57 3.6.2),  
3.3 (TD.57 3.7.1),  
3.4 (TD.57 3.8.1), (TD.57 3.8.2),  
3.9 (TD.57 3.9.0),  
3.10 (TD.57 3.10.1)  
RAP 1.1 (TD.32 3.5.1)  
for TAP3.2 (TD.57 3.6.2),  
for TAP3.3 (TD.57 3.7.1),  
for TAP3.4 (TD.57 3.8.2),  
for TAP3.9 (TD.57 3.9.0)  
RAP 1.2 (TD.32 3.6.2)  
for TAP3.9 (TD.57 3.9.0),  
for TAP3.10 (TD.57 3.10.1)

#### CIBER 2

Near Real Time Record Data Exchange  
(NRTRDE) 3.0.0, 3.1.0

#### Other formats:

CMG SMSC 3.5, 4.0, 4.6  
MPC 3.0  
MNET (Cisco)  
Pacific Ocean (Location Based Services) 2.0 PA8  
Nokia Operator Wireless LAN 2 ♦



ALLROUND's Interconnect Bypass Detector (IBD) is an application designed to identify Interconnect and GSM Bypass Fraud. IBD does not replace your Fraud Management System (FMS) but rather complements it in order to combat these new types of fraud. If you are not sure that bypass fraud exists at all in your network, or your FMS is not able to detect it, ALLROUND is ready to offer you an on-site Bypass Detection Audit. Relying on our extensive experience in this area and using IBD's capabilities, ALLROUND will help you identify and prevent these potentially massive revenue leaks. For more information on Fraud, IBD and the Bypass Detection Audit, please contact us at [bypass@allround.net](mailto:bypass@allround.net). Remember that you can download a free trial of IBD from our website: [www.allround.net](http://www.allround.net).

### Visit our new and improved website [www.allround.net](http://www.allround.net)

We are delighted to announce that our company website has gone through some redesign and restructuring to improve navigation, provide easier access to information and initiate interactivity. You will be able to register directly for an on-line CeDaR demo, download applications and product documentation, and get a clear view of our company and product portfolio. We hope the new design and structure will make our website a more attractive and information-packed place to visit.

### Contact us

» For more information on commercial issues regarding ALLROUND Mobile Solutions, please contact us at [sales@allround.net](mailto:sales@allround.net).

» For information on our products please contact us at [solutions@allround.net](mailto:solutions@allround.net)



**ALLROUND**  
PUTS YOU IN CONTROL

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