



CeDaR NEWS

ALLROUND Mobile Solutions volume 4 > issue 2 > May 2005



Dear All,

This May, the TADIG working group of the GSM Association holds its 59th plenary meeting in Budapest, Hungary. It is going to be a special occasion for ALLROUND, since we are the proud hosts of the event. We sincerely hope that the delegates – who will turn up in record numbers – will have a fruitful meeting and also remember this event as something special. May also occupies a special place in the calendars of mobile operators – TAP3.11 arrives. In our article on page 2 we take a closer look at the changes this new format brings compared to TAP3.10 and also discuss the strategies operators may choose to handle the challenge TAP3.11 poses. You'll find more details on TAP management in our TAP At a Glance insert.

Welcome

This edition's special feature is a new product: the ALLROUND Management Console. It is a process-oriented application that effectively manages CDR processing tasks – we have a case study to show how simply these often problematic tasks can be solved. Our second insert introduces the Problem Prevention Platform – a new approach to support CDR handling. PPP acts as a company-wide framework for testing, validating and diagnostic tasks – bringing the same level of added value to CDR processing that spreadsheet applications brought to office work. We hope you'll find this year's second edition of CeDaR News interesting, informative and ... somewhat special! ♦

Welcome to TADIG plenary #59

As a proud host of the event, ALLROUND would like to warmly welcome all delegates attending the TADIG #59 plenary in Budapest, 10-12 May 2005. We sincerely hope that we will have a memorable event and you will have a great time during the meeting, the evening entertainment events and our workshop following the meeting on 13 May.



[ALLROUND Mobile Solutions]



[Special feature]

ALLROUND Management Console (AMC)

Following the successful launch of AMC at the 3GSM World Congress in Cannes this February, it is imperative that we introduce the latest addition to our product portfolio. Our live product demonstrations at our stand generated genuine interest among participants, which was

a clear indication that the market needs a product like this. Since then several mobile operators have expressed their strong interest in AMC. Field trials are planned for May.

>> Please turn to page 3 for more details.

TAP3.11 on the horizon


One of the upcoming changes mobile operators have to address on the technical side is the introduction of the TAP3.11 format in May. In our article on page 2 we evaluate the changes that were introduced to the new TAP format and also outline possible strategies for mobile operators to tackle this challenge.

>> For more details on our views on TAP management please read our insert TAP At a Glance.

Interconnect Bypass Detector

"IBD provided a very good first hand insight in some of the problems associated with bypass detection. ALLROUND's staff showed quick and quality response during the whole period of our test." Peter Jensby, Director of Risk Management, TDC

>> For more information on how we perform bypass detection tests on CDRs with IBD, please turn to page 4.



What has changed?

The new **TAP3.11** format contains significant differences compared to **TAP3.10**. After years of relatively small changes between TAP 3.3, 3.4 and 3.9, TAP 3.10 was the first really "revolutionary" TAP3 version. Many parties involved in TAP data exchange were expecting only smaller modifications and updates in the new format. But these expectations proved to be wrong and TAP 3.11 is going to bring major changes again.

We might divide the modifications of the new version into three groups:

- >> 1. Changes that simplify the new format
- >> 2. Clarification of already existing elements
- >> 3. Implementation of new services

The main simplifications are aimed at the removal of information that was not necessary for most of the parties who participate in the TAP data transfer. With these simplifications the amount of information transferred in the TAP communication was radically decreased, while the regularly used ("rating-critical") elements remained untouched.

The main changes aiming this purpose are:

- Value Added Service record type removed
- Fraud Monitor Indicator removed
- CalledNumAnalysis removed
- ChargeType removed from TaxInformation
- EquipmentInformation removed

- DualServiceRequested removed
- Used/Requested Radio Channel Info removed
- No SS info in Mobile Terminated Calls
- CalledCountryCode removed
- Daycategory, Timeband removed
- TypeOfControllingNode group removed
- RemotePdpAddressList removed
- Qos info removed from GPRS

Some of the simplifications limit the amount of transferred information, but the items were not removed completely, also in some cases the possible values were extended or clarified:

- CallType group now transferred for GPRS
- New possible values in CallType group to describe details of GPRS and WLAN calls
- NonChargedParty group replaced by a simple value
- Simplified info transferred about the Camel Service used
- UMTS service details transferred in GPRS
- GprsChargeableSubscriber group simplified
- HSCSDIndicator transferred (instead of detailed info)
- AuditControllInfo simplified (Total Charge Values and Refunds)

With the passing of time, the implementation of new services has also become necessary. In some cases the amount of details about the used service

was extended, and other smaller changes took place but we feel that the main difference in this area is the introduction of **IMS** (IP Multimedia Subsystem) into TAP3.11. This is an important step forward because using IMS (that provides IP transport in the core network, enabling many new end-to-end IP Services) seems to be the best way towards the easier adoption of instant messaging and real-time conversational services in the roaming area.

The main differences moving into this direction are:

- SMSOriginator, SMSDestinationNumber created, to define more details about SMS calls
- Taxation group: ChargeType is now possible to transfer in this group
- The new element, DiscountableAmount in DiscountInformation makes it possible to apply a discount only for part of the charge
- The new NetworkAccessIdentifier makes it possible to identify the subscriber using user@host (instead of IMSI) for WLAN usage records
- New element: IMSSignallingContext in GPRS to represent IMS signalling connection

Summarizing the above info, **TAP3.11** is more versatile, it is a significantly better match for the real needs of roaming partners, so it is undoubtedly worth to move to the new format. ♦

TAP3.11 on the horizon

What to do?

One of the upcoming changes mobile operators have to address on the technical side is the introduction of the TAP3.11 format in May. There are of course different strategies to approach the problem from early adoption to staying with the current TAP format. Some operators will continue using data clearinghouse services for TAP file conversion, while others might upgrade their billing system to the latest TAP version.

- >> If an operator is on TAP2, now is the chance to upgrade its billing system to the latest

TAP3 format. The next changes to the TAP format are only due in a couple of years' time, so the window of opportunity is there for these companies.

- >> If an operator uses TAP3.9 or below, it is recommended for them to purchase a converter solution since data clearinghouse costs are likely to increase with the introduction of TAP3.11.
- >> If an operator is on TAP3.10 at the moment, it is for them to decide based on data clearinghouse costs if it is worth staying with

the DCH or it's better to purchase a TAP Converter to have a solution in-house.

ALLROUND's suggested approach is the introduction of a solution in-between the billing system and the DCH. This can either be a simple **TAP Converter** or a more sophisticated integrated TAP handling application (**TAP Solution**) with a complete roaming management system (**All-Roamer**) at the high end of the spectrum.

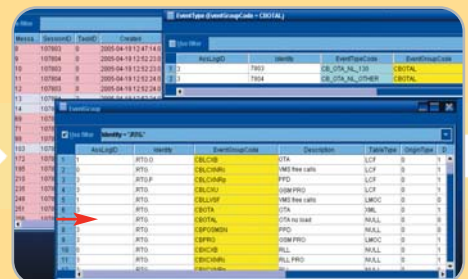
- >> For details of how ALLROUND addresses this issue please read our TAP At a Glance insert. ♦

[AMC Case study]

It is a regular daily practice for IT and service development teams to find and track specific files and CDRs. It is especially the case when testing a new service. In the following case study we show with the help of screenshots how AMC simplifies this complex task and guide you through the procedure step-by-step.



- >> CDRs from a new service are generated by the MSC and sent to the IT dept. for checking.
- >> Using AMC IT experts trace the files and CDRs through the whole workflow.



- >> The drill down function guides them through all involved subsystems (mediation, rating, etc.) displaying the relevant parameters, status and error messages, log files, etc.

[Special feature]

ALLROUND Management Console [AMC]



➤ The ALLROUND Management Console is an application that makes the complexity of parallel processes transparent and flexibly manages several system components at the same time. It provides an extendable framework that integrates not only ALLROUND's applications but the surrounding environment as well – exactly matching customer demand.

The application is made up of 3 main functions. The **format testing** function allows the viewing of any incoming or outgoing CDR files and gives thorough understanding of the processes. It provides users with the necessary control and helps them to **find errors** by automatically highlighting any inconsistencies. The complexity and large variety of CDRs are no problem: due to its unique **format flexibility** AMC supports more than 60 standard based and vendor specific Call Detail Record formats.

The **drilldown** function enables users to comfortably find the information for diagnostic work even in heterogeneous and distributed environments: you can see log files, customizable reports about the data processed or about the system itself and full documentation of the running applications.

The **management console** function helps read what was previously unreadable, collects and presents information that was formerly unknown and makes processes that were untraceable before, transparent.

Who should benefit from AMC?

- Mobile operators (testing, operations, development)
- System integrators
- ISVs
- Data clearinghouses

What makes it stand out from the rest?

- It digs deeper than any other product
- Gives visible control over processes
- Able to perform CDR processing tasks
- Has low hardware and software requirements
- Platform independent
- Has a small footprint
- Little initial investment required for achieving significant results
- Intuitive, user-friendly GUI

What is there to gain?

There are various benefits AMC provides its users with. First and foremost, it **helps keep up the seamless operation** of systems. Also, it improves **work process optimization** significantly. Furthermore, with AMC **response time** will be **faster** – both to other departments and to the management. Its process oriented approach guarantees the **transparency** and **traceability** of processes that are often lacking at the moment.

CDR handling tasks are really complicated and their complexity is constantly increasing. With AMC these tasks will be much simplified, since they can be automated. What was previously

done manually requires now less time and effort. Problems can be resolved quicker and to a greater effect as well. Also, those experts who waste their time looking for one faulty CDR in a million could be freed for other critical assignments.

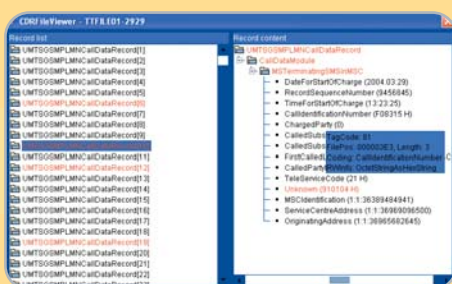
Features

- Flow-based view of processes
- Graphical representation of components
- Flexibility
- Customizable and extendable look & feel – “skins”
- Easy manageability
- CDR file displaying possibility (more than 60 formats supported)
- Reporting: log reporting, summary & progress reports
- Pre-defined and customizable reports
- Reporting on processed data as well as information on operation
- Creation of user profiles with saved settings
- Problem alerts
- Integration to existing business management system
- XML based configuration files
- Graphical HELP system
- SNMP Management.

Interested?

Book for an online presentation and demo at sales@allround.net ♦

Track CDRs through the processing workflow



➤➤ The format tester function informs them about possible errors in CDRs going down to the binary level. In this case the file contains unknown tags, marked in red.



➤➤ After they've found the erroneous CDRs they send a trouble report to the MSC Support collecting the relevant parameters, log files and error messages generated by the system components.

And this is that simple. Just a few mouse clicks and you are able to dig deep into CDRs and find errors in them in no time! This way, the earlier you recognize problem points, the easier it is to tackle them.



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 iForce (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. ♦



business partner



[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:

Alcatel 5.2
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
R11

Nokia DX200 M10 BCD/HEX

Nortel GSM 15

Nortel GSM 16

Siemens CS1.0 MSE

Siemens D900 SR8.0

GPRS formats:

Ericsson GSN 2.0, 2.1, 3.0

GPRS UTX, UTX 2

Nokia GPRS CG 1.1, 2.0

Nortel GPRS 3.2, 3.6

Billing System formats:

BSCS 6.0 UDR

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)

3.11 (TD.57 3.11.02) > **NEW**

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

MAF5 > **NEW**

MPC 3.0

MNET (Cisco)

Pacific Ocean (Location Based Services) 2.0 PA8

Nokia Operator Wireless LAN 2

Textpass SMS router ♦

Can you handle bypassers yourself?



ALLROUND's Interconnect Bypass Detector – IBD is an application designed to identify primarily GSM Bypass Fraud. IBD is a complement to the Fraud Management System – FMS, which can help fight this new type of fraud.

Several number of our negotiating clients – some of them we met in Cannes at the 3GSM World Congress, where we introduced our Bypass Klinik service – sent us a day's CDR files complaining for serious revenue loss. We analyzed the data and noticed some abnormal subscriber behavior.

- » long incoming calls – more than 22 hours per day for a single user,
- » very long international calls,
- » high percentage of DTMF calls made by some subscribers.

There are serious arguments for implementing IBD either into your existing fraud management system or operating it as a standalone solution. New fraudulent subscribers might surface, or the old ones might think of a new way of bypassing regular connections. Saving money is just one argument – still a strong one, but take into consideration that without the sufficient revenue from these bypassers the services and the network quality will drop instead of being improved.

Another 3G milestone

For our applications involved in the rating process a new 3G service was introduced: Circuit Switched UMTS video telephony. Complementing this, the rating of CS UMTS data service was also developed. Video telephony is now supported both in the home network and when roaming.



ALLROUND
PUTS YOU IN CONTROL

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