



Stability Testing

Executive Summary

Testing, validation and auditing –

The balance between the high-cost proactive and the high-risk reactive strategies

As the telecom industry is becoming a mature business more and more stakeholders, politicians and regulatory bodies feel themselves authorized to control and monitor telecom operators' internal processes such as metering, charging and billing.

New business and regulatory obligations impose **strict requirements**, especially when it comes to revenue assurance and the **accuracy and validity of billing**. Furthermore, the number of **business processes** and the complexity of the systems that operators run are increasing – assuring and proving their accuracy is a growing headache.

Even if an operator's systems are fulfilling the highest subscriber needs this **must be officially proved**. If operators fail to do so the **consequences are hard**: for example **ranging** from a fine of 1-3 percent of the total revenue up to losing the frequency concession **in case of regulatory non-compliance**.

Finding the balance between the high-cost proactive and the high-risk reactive strategies is a serious concern. "Testing", "validation" and "auditing" **are key players** serving diverse goals but even the terminology is confusing and lacks consistency: their definition, separation and integration are not always clear.

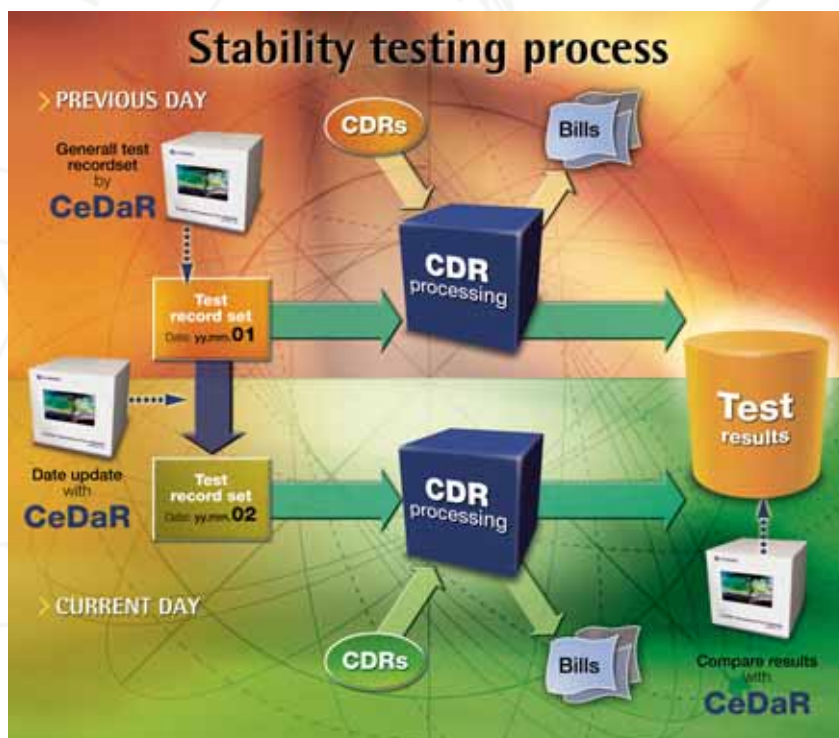
If we are talking about **testing**, it is usually applied when novelties are introduced: new services, new systems, new tariff plans. Efficient and comprehensive testing shortens time to market. But currently, even if

there are well-established methods, there is an extremely high resource need to execute extensive testing. Past test scenarios are lost and forgotten due to the fact they are so difficult to repeat. Does it serve efficiency? Definitely not.

We can find the same situation in case of **validation**, which is used for verifying the correctness of running systems. There is a lack of methods and methodology, even the execution is barely established.

Contrarily, **auditing** – inspection typically executed by an independent party – is supported by excellent methods, but the services are incredibly expensive. Besides, there are a lot of disadvantageous factors: due to its one-off and reactive character it does not support the continuous monitoring and improvement.

Furthermore, a common problem regarding billing system testing, validation and auditing is that the coverage is not sufficient. Increasing it requires enormous resources and the reusability is not solved. **Problems are mainly concentrated in the execution and evaluation phase**: test execution is never perfect. Failed and repeated calls, imperfect timing and unsatisfactory call identification make testing both a difficult and involved task. All the problems noted at test execution roll over to evaluation. As a whole, there are two critical points: **the production of test data and the evaluation of the results**. Neither of them has been fully automated previously.



Billing and Charging

- » More obligations imposed
- » Insufficient test coverage
- » Lack of automation
- » Increasing resource needs

Fortunately a new method is coming to town bringing solution for the problems above: **stability testing**.

Stability testing – time based regression testing – is a focused, efficient and cost-effective method ensuring that the tested system preserves its quality level over time.

Stability testing for billing and call detail record processing is based on a representative test record set that is actualized and submitted to the rating system for each test run. In this case evaluation means the automated comparison of the recent and previous results. Only the differences are investigated – errors are corrected, foreseen changes are approved and consequently reference results are updated. Therefore, maximal **efficiency of test evaluation** is assured.

The automated nature of stability testing allows dramatic increase in test coverage at a reasonable cost.

But how to overcome that manual call initiation and automated call generators lack accuracy and efficiency? The solution is a **test Call Detail Record generator tool** instead of **test call generator**.

The test CDR generator solves the test data production issues and the stability testing methodology removes the resource barriers of the test evaluation.

Sounds encouraging – doesn't it? But an important remark still applies: if the role of a solution is to prove the correctness of your systems it must be at least one magnitude more reliable than the object of monitoring. Deploying any testing solution that has no attestation of an accredited, independent authorization body? Don't try this at home...

Stability testing as a methodology and the solutions built on it has so many advantages – make sure that your Legal Compliance, RA and QA managers know about it!

How does Allround support revenue assurance and legal compliance with stability testing?

Allround has the proven methodology and a BAPT attested tool to target regulatory obligations and business objectives at the same time.

The viability of the solution is shown by the fact that a common project with one of our operator clients was **named finalist for the World Billing Awards 2006 in the Best Revenue Assurance/Management Project category**. The project is an excellent example of proven billing accuracy, targeting efficient revenue assurance and legal compliance at the same time.

The business advantages you can reach by stability testing and the solutions built on it are:

- » Proven legal & regulatory compliance
- » Effective testing, supporting service and tariff development
- » Automated execution, higher testing efficiency and wider coverage with less resources
- » Decreased revenue assurance and legal non-compliance risks
- » Seamless evolution from a project to a process-based approach

The methodology covers traditional services, international roaming, data and 3G as well.

Stability testing supported by Allround's flagship product, CeDaR introduces high-level automation and the improvement of testing efficiency, while meeting the highest quality standards as the application is the world's first billing system testing solution attested by the British Approvals Board for Telecommunications (BAPT).

For more information please visit www.allround.net/stability.php or contact Mr. Attila Nagy at nagya@allround.net.

Stability testing

- » Full automation
- » More effective usage of human resources and competence
- » Consistent information, extensive reporting
- » Continuous improvement of processes and methodologies
- » More time to act – by increased ability to recognize any unwanted or unidentified changes before billing
- » Improved co-operation with other departments – by providing almost immediate feedback about their work



Company Profile

ALLROUND puts telecom operators in control with applications for Billing System Testing, CDR Handling and Analysis, TAP Conversion, Roaming Management, Fraud Detection, and Revenue Management. Allround's flagship product, CeDaR is the world's first billing system testing solution approved by BAPT. ALLROUND is an ISO 9001:2000 certified, profitable, private European company with a global customer base. The company has been an Associate Member of GSM Association since April 2002.



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