

Training and services, tailored to your needs

Integri provides test tools but also test services.

Integri provides an extensive range of testing solutions for payment, smart card and mobile applications, based on its INQ Open Platform. Next to this product offering, Integri can offer you also the following services where the involvement in your project is entirely up to you:

- Training and consulting
- Independent Testing
- Tailor Made Test Suites
- Conformance Test Lab

The new INQ End-to-End Payment platform was officially presented last year at Cartes. It is designed to make the life of a user even easier when defining tests configuration and setting the parameters of their test environment. The easy-to-use user interface allows the user to see in a glance the details of their current test configuration.



From the moment the enriched payment platform was presented to the public a lot of new features were included in order to make it even a more powerful test tool. Dedicated utilities to view log files, extensive reporting, interface with a real smart card, currency conversion tools etc. are only some of the wide range of enhancements.

In order to give customers the opportunity to develop them selves further on this INQ End-to-End Payment platform or to build their own test suites, the following trainings can be followed at the Integri training centre in Brussels:

- **End-to-End Basic Training:** The End-to-End Basic training will train a user to understand the concepts and terminology of the End-to-End Platform. The training also covers the usage of the End-to-End user interface. After this training, the user will have sufficient knowledge of this test platform to perform tests and even build new test cases.
- **End-to-End Advanced Training:** The End-to-End Advanced training will prepare a user to create a project on the End-to-End platform or to maintain and update an existing project. The End-to-End platform is designed in such a way that dedicated objects represent the aspects that are important for testing a financial protocol. In order to be able to develop an End-to-End project, the programmer needs a good knowledge of the End-to-End framework. An in-depth view on this framework will be given during this training.

Besides the trainings that are offered about this platform that is specific to the payment market, there is a wide range of other programs that can be followed in the training centre as well. Some of them are:

- **Training in the Black Box methodology:** Testing software implementations in embedded systems. This course offers the basic elements of the black-box methodology for testing software implementations in various environments.
- **Training in EMV:** The basic principles of EMV are explained and illustrated by making use of Integri's test suites.
- **Training in Test Management:** This deals with the questions how the test activity can be organized in such a way that the strict commercial time restrictions are respected while the focus is kept at the same time on quality assurance for the future of the product.
- **Training in Smart Card Testing:** The focus of the course is to give insight into the use of the smart card test suites for organizing acceptance testing on cards.

INTEGRI NEWS

CONTENT • Integri present at Cartes 2006 [page 2] • Announcing the launch of the American Express Test Suite [page 2]
• Stress test tools [page 3] • Integri a key partner of the EPAS consortium [page 3] • Training and services, tailored to your needs [page 4]

November 2006

Newsflash

Berlin Group Test Suite

Integri provided a test environment to test the Acquirer-and-Issuer Gateways according to the standard defined by the Berlin Group for both authorization and clearing. The Berlin Group is an association of the major financial players in Europe who defined several bilateral and multilateral agreements. This was done in the context of Single European Payment Area (SEPA).

Integrated solutions with Rohde & Schwarz

Rohde and Schwarz (R&S) is a leading supplier of solutions in the fields of test and measurement, broadcasting, radio-monitoring and radio-location as well as mission-critical radio-communications. Integri and R&S offer together the following integrated solutions for the mobile market in which are in the process of being referenced by the GCF:

- **LU1** is a package that makes use of Integri's 3GPP TS 11.14 SIM Simulator in "full pass-through" mode
- **GC19** is based on Integri's 3GPP TS 11.14 SIM Simulator and parts of the 3GPP TS 51.010-4 STK Mobile Station Test Suite
- **GC20** uses Integri's 3GPP TS 11.14 SIM Simulator and parts of the 3GPP TS 51.010-1 MS Conformance Test Suite
- **GC24** includes Integri's 3GPP TS 11.14 SIM Simulator and parts of the 3GPP TS 51.010-1 MS Conformance Test Suite



Integri opens new office in Dallas, "Integri Americas"

September 1st marked the launch of a new Integri office, i.e. "Integri Americas", expanding Integri's premier service offering into the Western Hemisphere.

The offices are located in Allen, a thriving suburb of Dallas, Texas. The Integri Americas team is responsible for direct sales, marketing, support and in the future also for development of the Integri product line to both North and Latin America. "Our charge is to expand the Integri footprint by building strong brand awareness through a direct grassroots effort with high profile industry influentials," states Tony Rodriguez, President of the America's division. "By leveraging Integri's global reputation as a leader in the test tools and services in the field of smart cards, security and transactional systems coupled with our intimate knowledge of the American market, we are confident that we can realize great success for our company." Tony most recently participated to various events that were organized in the United States where he met with several key representatives of some of the most elite companies in the smart card industry. The team continues to diligently cultivate a database of vital contacts in the Americas and make strong positive first impressions on prospective companies. Recently, Integri Americas has become a member of ACT Canada to gain entry into that market.

In order to truly embrace what the Integri experience is all about, Dennis Minnihan, Vice President of Integri Americas, attended several product review sessions at Integri, Belgium headquarters during the month of September. The team was confident that this meeting coupled with the opportunity to experience the Integri culture was of vital importance for the success of Integri Americas sales and marketing efforts. "I was most impressed with the professionalism of the Integri staff and their level of product knowledge," stated Dennis. "It is truly an honor to be associated with such a fine organization".

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Integri present at Cartes 2006

Also this year Integri will be represented by a team of more than 10 people at Cartes, the world-leading event for smart card and identification. This exhibition takes place from Tuesday the 7th of November till Thursday the 9th of November.

With more than 450 exhibitors, 18,000 visitors, 1,700 congress delegates and over 130 countries represented, Cartes is the world's number one trade show for the smart card and identification industries. Integri, being one of the most important players for offering test tools to these industries, exhibits also this year at this important event. You can find us close to the main entrance at booth 3E01.

Integri is specialized in providing test tools and services in the field of smart cards, security and transactional systems for the payment, mobile, and transport sector. At the annual Cartes exhibition, we seize the opportunity to present our latest developments and product portfolio to the market.



This year we would like to put the following test suites in the spotlight, developed on your demand:

- **EMV CCD L1, EMV CCD L2 and EMV CPA Test Suites.** The EMV CCD L2 Card Test Suite, optimally suited to perform regression testing and testing of the application layer of a smart card, has most recently successfully passed the EMVco qualification process. The EMV CCD L1 Card Test Suite and EMV CPA Card Test Suite to test respectively the protocol layer and the Common Payment Application of a smart card are in a final stage of development and will soon be officially released.
- **ePassPort L1 and ePassPort L2 Card Test Suites.** With the shift from paper passports and identity cards towards electronic, and more particular, a contactless variant, the need for dedicated test tools definitely exists. Having an established reputation as test tool provider for, amongst others, test suites to test both contact and contactless smart cards, Integri now also presents test tools to verify the compliance of an electronic passport. These will verify on both the protocol layers 3 and 4 as well as the application layer the compliance with the ICAO standards.
- **Card personalization validation test suite.** The personalization phase of a smart card becomes more and more important. In order to strive for lower set up costs and a faster time to market, it is key to have dedicated test tools to verify the correctness of the personalisation of a smart card. Integri will demonstrate how their technology can be used in this context.

Announcing the launch of the American Express Test Suite

Integri has further enhanced its product line to include the American Express Test Suite.

Based on the American Express ISO 8583 specification, this Test Suite is designed to simulate the acquirer to issuer interface for both ATM and POS initiated transactions and runs on top of the INQ platform. It also supports different types of encryption methods. One of the robust features of the product is support to generate transactions from either a customer-defined set of cards or the use of an external card reader and a card (smart card, swiped or contactless). The initial version of the product was installed in October and is currently being used by one of the world's largest banks and credit card issuers in United States.

It brings the testing of Visa and American Express transactions under one common platform, the INQ End-to-End Payment Platform. Most customers supporting various card types must train users, install and maintain simulator software from different vendors. Customers using a common interface can reduce training time, cut product and maintenance costs associated with using multiple simulators and hardware platforms. Additionally, it simplifies the process of upgrading and contacting numerous vendors for support.

Stress test tools

In a market where 24x7, zero fault tolerance is paramount, the need for tools to stress test authorization and payment collection systems is unquestionable.

A couple of years ago, Integri decided to extend its product range with tools that are dedicated for testing the behaviour of acquirers, issuers or security modules under stress. Ever since, the product range for this specific market was extended gradually with more protocols and the demand from the market continues to grow. The off-the-shelf solutions are typically developed when there is a demand from the market for a stress test tool based on a generic standard (MasterCard, VISA, JCB, etc.). However, sometimes clients have very specific requirements and proprietary protocols for which they would want to test in stress conditions as well. In these cases, Integri develops a tailor-made solution.

Integri's INQ® Stress Platform is designed to test for doomsday scenarios like electronic payment systems that fail during peak shopping times. It is possible to generate millions of transactions with the Stress Test Tools with transaction speed of up to 1,200 transaction per second (tps). When testing an Acquirer, the tool is able to simulate up to hundreds of terminals in parallel

per test agent. A major step forward in host testing, it provides an easy way to simulate sending high volumes of messages from the payment network. The number of PCs (Stress Test Agents) that can be used in parallel is unlimited, which makes it possible to achieve higher throughput. It goes beyond the requirements of functional certification to give you the reassurance that your host is truly up to the demands of today's electronic world.

Integri has for the moment about 20 different protocols available in their stress test portfolio, implemented as off-the-shelf solutions or customized to the client's needs. With this variety of protocols, around 30 different interfaces are tested in production, at the client's site. Most recently, companies like Credit Mutuel in France installed successfully the CB2A Authorization stress test tool on their system. In addition, one of the world's largest banks just completed using the stress test suite to bench mark their systems in preparation for a merger. We have a large customer base of users in Europe, North America, and Asia to name a few.

Integri a key partner of the EPAS consortium

In the light of the transition to a Single European Payments Area (SEPA), the EPAS consortium was founded which aims at developing a series of data protocols to be applied in a Point-of-Interaction (POI) environment. Integri is member of this initiative and provides expertise in the domain of test tools.

The European financial services marketplace is opening up, with the SEPA Card Framework, the largest payment infrastructure project ever undertaken in Europe. The aim is to replace the complex network of national debit systems currently in place across the Euro zone by a single open payments market in which all electronic payments are considered as domestic and where a difference between national and international payments does not exist.

EPAS (Electronic Protocols Application Software) is a non-commercial cooperation initiative launched in Europe, which aims at developing a series of data protocols to be applied in a POI environment. The initiative groups several players in payment systems, terminal manufacturers, service providers and test tool providers. Integri is part of this consortium and cooperates in the definition of these standards.

The project intends to address the three following protocols:

- A terminal management protocol
- A retailer application protocol
- An acquirer protocol.

The main objectives common to the three protocols are:

- **Protocol interoperability:** Each protocol is designed in such a way as to be independent of the external device and the POI;
- **Independence of the system architecture:** The integration level of the POI within the retailer application protocol;
- **Independence of the communication support and low level protocols:** Each protocol is independent of the network connection and will address both wire and wireless connections.

