

LEGIC

NEWS ²⁰₁₇

When the table speaks
to the employee –

SMART OFFICES

make modern and flexible
work easier

Erste Group

A new identification
system for Erste Group

ExtraPlatz

More storage space at
the push of a button

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Dear readers,

2017 has been an intense year for LEGIC: Growth in new markets, new products, additional staff and larger office spaces, including a showroom, keep us busy. We are also celebrating our 25-year anniversary and have completely revised our corporate design. Not only do the website and our logo have a new image, but also flyers, brochures and this edition of the LEGIC News magazine, which are being published in a new splendor.

The top story for this edition has to do with the topic of 'Smart Office' and the opportunities that LEGIC opens up. The issue of security also plays a decisive role. The opening of a company's internal infrastructure and systems for third parties makes access to sensitive data easier, and this is where LEGIC enters the stage. You may ask yourself: How? See for yourself from page 4!

We have also put together some very interesting and informative case studies for you. In line with the topic of Smart Office, ExtraPlatz also relates to the use of a smartphone instead of a smartcard for certain applications.

We also present to you another LEGIC team in this edition. Simon Gübeli tells us about his responsibilities as Head of Field Application Engineering and introduces himself and his team. From challenging client queries and technical support to personal advice, the work of an FAE is varied and interesting...

I wish you an entertaining read!

A handwritten signature in blue ink, appearing to read 'C. Beckenbauer', written in a cursive style.

Yours, Christoph Beckenbauer
General Manager
LEGIC Identsystems Ltd

When the table speaks
to the employee –

SMART OFFICES

make modern and flexible work easier

Groups cooperate with start-ups, project partnerships are set up over just a few months, external service providers go about their work each day with alternating staff, in-house staff work at different locations and guests are granted access to printers, projectors and coffee machines.

Such scenarios certainly differ in the complexity of the operation, but they all play a role in a common topic – the flexible use of office infrastructure by a changing number of people – the Smart Office.



Today, those who think of the use of an employee ID to open connecting doors, getting a cup of coffee or follow-me printing when hearing the term Smart Office are merely resting on the tangents of possibility. Currently, there are different trends in the use of office infrastructure:

- To enable the use and administration of office infrastructure (with a cost of around 10,000 Swiss francs per workstation, including IT and a utilization rate of 50-60%), companies are increasingly fitting shared desks that enable individual employees to store away personal work equipment and documents in the form of roller containers or cabinets.
- Striving for flexibility in the use of workstations by project teams for development sprints, and the opportunity to integrate external workers or a start-up are forcing some companies to soften their regulations on the allocation of access media.
- In order to guarantee internal employees, their families and third parties access to their own mobile and immobile assets, groups are opening up car and bicycle fleets for private use, making their car parks accessible at night and creating free space to sublet to external partners.
- Shared office providers are offering very flexible ways of using office spaces, from traditional leasing to business membership with access to thousands of sites at a monthly fixed rate. The market for this method of using office infrastructure is rapidly growing locally by over 50% each year.

Security is often neglected

However, it is surprisingly the case in the flexible usage scenarios described that security is only rarely put at the center of a discussion, although the opening of internal infrastructure and systems to third parties makes access to sensitive data easier, and its protection should therefore also be the focus of considerations.

At LEGIC, security is key

LEGIC has endeavored for 25 years to protect client systems from unauthorized access. With the LEGIC technology, the new, flexible and mobile business models and application scenarios can also be protected with the same security standard. As well as the optimal utilization of workstations, the shared use of communal areas and vehicle fleets, and the occasional use of free spaces, the security of a company's own values and IP cannot play a subordinate role. Transformation to a shared office or the construction of a shared office is mostly based on already existing infrastructure, which is why changes are carried out step by step, and compatibility and learning effects play an important role.

Smartphone access medium

The very general application scenarios described should be continued in each company insofar as, for example, a registration at any workstation does not just trigger personal work profiles as regards table height, heating regulation or communications settings, but that the new flexibilization also requires and enables the localization of the employee. When external employees are granted access to the Smart Office, the use of smartphones as an access medium enables the extremely precise management of access rights to rooms, office material and IT infrastructure.

Incidentally, the use of smartphones in access control is by no means a future scenario; large companies are evaluating this option currently as an easier and more cost-efficient opportunity for access control for internal cross-site staff, in the field of body leasing, and for day-to-day service providers such as postal workers, cleaning companies and coffee suppliers.

In effect, mobile access enables more slender administration of rights and is not based on the one-time issuing of a physical access medium.



Management system challenge

There are great challenges in the structuring of management systems that have to accommodate the different use case logics:

The access control solution manages access to buildings, rooms, parking slots, etc., while the fleet management system must also ensure a sharing platform with a clear separation of business and private journeys, as well as vehicle management. The use of desks, the opening and closing of roller containers or cabinets with work equipment, and personalized IT infrastructure use, however, resemble a complex booking system including personal preferences, as we know from modern hotels.

As a consequence, the Smart Office does not mean a modernization of the Facility Management department; instead, it is a combination of different services with mutual dependencies and different integration levels. In order to realize the potential mentioned at the beginning such as use efficiency and profitability, flexibility and openness towards temporary collaboration or external companies, the sensible collection of usage data and its specific analysis, as well as the establishment of (admittedly) complex administration, offers itself for further optimization. While LEGIC components in the past were mainly located in the field of aforesaid access solutions or, at best, in personalized roller con-

ainers, LEGIC Connect provides the opportunity to securely manage almost every functionality of a Smart Office.

BLE opens up new opportunities

The flexibilization and opening of the access solution by the integration of BLE (Bluetooth Low Energy) compatible ICs that enable the opening of rooms, boxes, containers and specially assigned areas via smartphones is certainly a start. The deployment of the corresponding datasets (credentials), of which the content and specification can be freely selected, takes place with the aid of LEGIC Connect, whereby the LEGIC Software Development Kit (SDK) creates a secure environment for the storage of sensitive data in the corresponding app.

As well as the topic of efficient building usage, the profitability of mobile goods such as cars, trucks or even bicycles is mostly item number two on the optimization lists within larger companies. In this case, the integration of LEGIC components enables a two-factor authorization for the separation of access and use, as well as the unlocking and locking of vehicles – in this use case, both existing RFID smartcards can be deployed or the credential deployment via smartphone and its use via the BLE interfaces or, if available, an NFC interface in the mobile



device. Thanks to integrated BLE technology, vehicles equipped with LEGIC technology can also be used in peer-to-peer sharing (sharing between private people) and employee vehicles, for example, can be integrated into the fleet pool – in each case without having to forego end-to-end security during use.

Personalization and individualization

A very complex, but in terms of user orientation the most important task in the transformation to a Smart Office is the personalization of services and their opening to third parties. And in this matter especially, security is no longer optional, but a must.

No matter whether the Smart Office operator inspires the market with functions such as personalized facility profiles or previously undefined people are to be granted access to dedicated servers, copiers, printers or rental equipment by downloading an app, the protection of personal data is essential for acceptance by employees and external users. As a result, it is appropriate to decouple the corresponding credentials from personal data, in order to fulfil data protection requirements – but as soon as personal profiles influence the use of services to offer more customer-specific services, this decoupling is only possible to a limited extent.

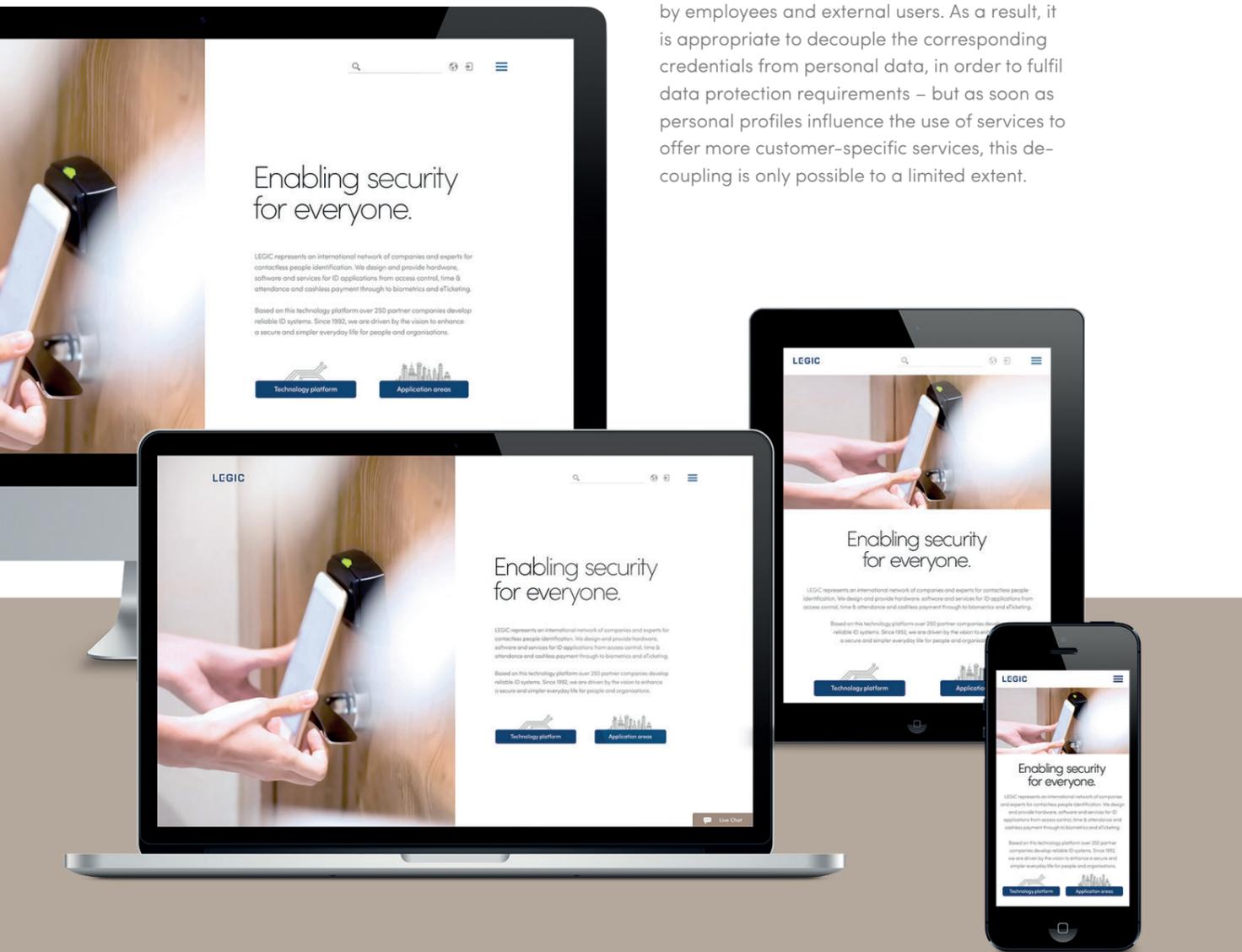
LEGIC Connect – Security and service

LEGIC Connect enables new, mobile services and their users to guarantee data security and convenience. Communication form LC Message, also reversely aligned, ensures an exchange of data between device and app, with the result that, for example, credits can be balanced or, depending on the use case, information can be securely written back to the app. Here, there is a key difference to other BLE compatible services that can only deliver one set of predefined commands to the reader in the device.

With LEGIC Connect, LEGIC ensures that client-specific datasets can be sent securely and leaves the interpretation of the data to the client, who can activate various different functions via over-the-air communication. Another decisive function for the individualization and optimization of mobile services lies in the ability of the LEGIC reader IC to act as a sensor in the device and, with the aid of the SDK, to securely transfer this sensor data via LEGIC Connect to the client's management system, as a router. With each transfer, the management system of the service provider can better understand and check information about the behavior of users and interaction with the devices, and optimize the stored operating logic accordingly.

Equipped for the future

With LEGIC, Smart Offices are equipped for the future and even functionalities that are not yet at the center of business models are being implemented already, at least in individual cases: Meeting rooms can therefore be booked in the future on an ad-hoc basis personally via apps, visitors and employees can unlock parking slots and navigate themselves in rooms and, once they have arrived, can securely introduce their own devices into the company's IT systems.





A new identification system for Erste Group

When Erste Group Austria decided to introduce an electronic access control system in 2000, the era of RFID ID cards dawned for the company, together with LEGIC. This decision was based on facts such as a technology platform with higher acceptance and standardized encryption algorithms, which have already been available on the market for a long time.

At this time, we could only guess at the real extent of this decision and the resulting future possibilities. So, it was immediately clear, that we as a bank on the one hand for safety reasons, and on the other hand due to dependency on manufacturers, urgently needed our own operating license. This was the birth of our own card production. Due to the integration of our numerous locations in Austria and abroad, over the course of time, the various segmentations of the cards increasingly gained in importance.

Changeover to CTC

Due to the ever-increasing requirements and the associated security risks, in 2013 we decided to change over to the Smartcard-IC CTC4096 in order to operate a medium in future, which guarantees long term use. This changeover gave the locations the possibility of a soft technological migration from LEGIC prime to LEGIC advant.

New headquarters open up new possibilities

Due to the move to our new headquarters planned for the start of 2016, we were given the unique opportunity both to redefine the whole layout and to decide which functions should be associated with our company IDs in future. In mid-2015 the area wide roll out of more than 10,000 ID cards started.

One ID card - countless applications

Today, our employees have a uniform company ID card for personal identification, and the operation of many different applications. The employees use their company ID for identification on locks, turnstiles, doors, lifts, cloakroom cupboards, personal lockers, generally accessible storage lockers, the in-house restaurants, sometimes at time recording terminals and in high security areas at personalized singulari-

zation combined with biometric ID (template on card). Depending on the security level of the area, either online or offline components are used. Secure printing with the accompanying, cross-location follow-me function is a further function of the company ID card.

Visitors and customers benefit equally

Our customers and visitors receive their application specific access cards via extensive receipt management software, which also authorizes them to use special lockers of various sizes for the duration of their visit, free of charge.

Benefits for the end-user:

- ✓ One card for all requirements
- ✓ High security standards
- ✓ Easy migration from prime to advant

With LEGIC we have a reliable technology partner on our side, who completely fulfills all of the security standards that we require.

Michael Schneider,
Projectmanager Physical Security,
OM-Objektmanagement GmbH

LEGIC technology in this project:

Cross-Standard smartcard ICs CTC4096, 4000 series reader ICs

LEGIC partners in this project (Reader manufacturers / System integrators):

DATASEC Electronic GmbH, Gantner Electronic GmbH,
PCS Systemtechnik GmbH, dormakaba Holding AG

Learn more about Erste Group:

www.erstegroup.com/en/home

More storage space at the push of a button

If the cellar is too small, too full, or the attic too narrow, you need a piece of "ExtraPlatz" – a different type of storage space. Thanks to Fruchtlänge 7, LEGIC and dormakaba, everyone can acquire additional storage space within minutes, whether for luxury sport equipment, valuable children's toys, permanent winter clothing or large musical instruments: there is no limit to the ideas and possibilities.

There has never been anything like ExtraPlatz in Switzerland before. The vision of Fruchtlänge 7 AG is as follows: additional storage space, which uses the advantages of mobile communication, simple and quick storage. ExtraPlatz is ideal for people who don't have enough space at home. Who doesn't have cherished things at home that they don't use every day, or perhaps only rarely, but would never give them away?! Pushchair, bike trailers or the old toy train collection of your grandfather: ExtraPlatz offers just the right extra storage space for such things. You can rent storage spaces between 1 m² and 10 m².

An app as a key

Thanks to LEGIC and dormakaba, the solution could be flawlessly integrated into the ExtraPlatz system. An app which is based on the LEGIC Software Development Kit, and was developed together with dormakaba, acts as a key to open the storage spaces. You register on the ExtraPlatz website, download the app, verify your mobile number via

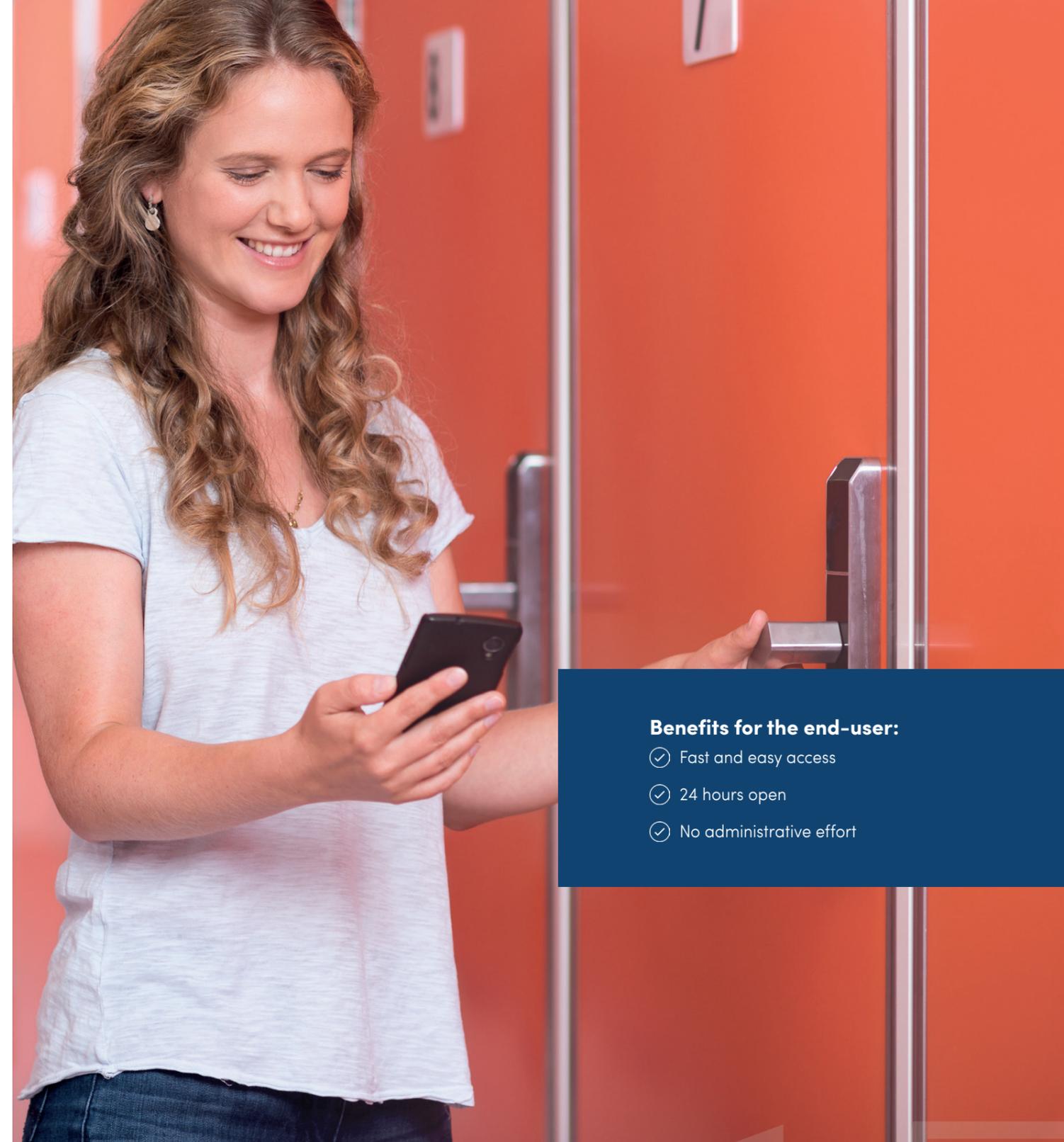
the trusted service LEGIC Connect, and you already have the right to enter your additional storage space. Due to the fact that the key is directly on your smartphone, and not stored somewhere, you have access to your 'ExtraPlatz' 24/7 and always have the key with you. The app can also be shared with someone, so that for example you can give further family members access to your space.

Security is a priority

We searched for the perfect solution for a long time. The clever solution from dormakaba and LEGIC was convincing. Security was planned into every detail right from the start. At ExtraPlatz, the same security standards are used as for online banking. In addition, the storage spaces are opaque and have video surveillance, and are monitored by trained security personnel. ExtraPlatz uses simple processes: reserve online, check in, log in, book and unlock with your own mobile phone and store objects. A completely successful project!

We have been looking for the perfect solution for a long time. The clever and yet simple solution from dormakaba and LEGIC convinced us.

Hans Peter Zutt
Founder ExtraPlatz
Fruchtlänge 7 AG



Benefits for the end-user:

- ✓ Fast and easy access
- ✓ 24 hours open
- ✓ No administrative effort

LEGIC technology in this project:

LEGIC Software Development Kit, LEGIC Connect, 4000 series reader ICs

LEGIC partner in this project (Reader manufacturer / System integrator) :

dormakaba Holding AG

Learn more about ExtraPlatz:

www.extraplatz.ch



Uniform registration and payment system for Wageningen University & Research Institute

Till January 1st, 2015 students and employees of Wageningen University and Research (WUR) often used the Chipknip. When this payment option was discontinued, a desire arose for the WUR to find a suitable replacement.

Wageningen University and Research Institute is located in the province of Gelderland. This institute accommodates 6500 employees and 10,000 students from 100 countries. Together, they focus on the domain of healthy food and living environments. Many of the lecturers, researchers and staff are housed at the Wageningen Campus. This campus has been designed as a meeting place and is a venue with a wide range of catering, sports facilities and soon a variety of shops.

End of the familiar Chipknip system

Till January 1st, 2015 students and employees often used the Chipknip (electronic payment system from the Netherlands). When this payment option was

discontinued, a desire arose for the WUR to find a suitable replacement. Focus of the call for tenders was a payment system for students and staff that could be integrated with the services offered by WUR. Important conditions for the two separate tenders for multi-functional printers and hot drinks vending machines, was that they could be integrated with Inepro's payment system. "In addition to coffee and other vending machines, we have also connected a plotter to Inepro's system," says René de Koster, IT project manager at WUR. The 4000 series reader ICs from LEGIC met all requirements and have therefore been integrated into the systems.

Functionality independent payment system

Meanwhile, the payment and registration system has been implemented and the users can deploy their WUR card for various services offered by the institute. Visitors can also buy a prepaid card to print, scan or copy documents or buy something from the vending machine. "For our guests, we introduced the Inepro mini-client in the library, so they can print with a prepaid card," says René de Koster. "We have also developed 'PrintOnBehalf', enabling members of student groups to print at the expense of a research group cost centre. With 'Business Objects' building managers can consult records and management reports."

"Simple fast printing and scanning has been made easier by the Inepro options and we have less paper wastage because of fewer unnecessary prints." According to René de Koster, "Inepro's 'One stop' solution means different services are connected. Therefore, our students and staff only need one card. Partly for this reason, the Inepro solution has been very well received by everyone."

Topping-up with the MyInepro app

Last year, WUR introduced the new MyInepro app to their students. For more than 7200 students who used the e-wallet last year, it will now be easier to top-up their balance, monitor transactions and manage print documents. According to René de Koster, the MyInepro app has been well received, is straight-forward and easily gives insight into transactions.

Benefits for the end-user:

- ✓ Straight forward
- ✓ Ease of use
- ✓ Less wastage
- ✓ Insight

Simple fast printing and scanning has been made easier by the Inepro options and we have less paper wastage because of fewer unnecessary prints.

René de Koster, IT Project Manager
Wageningen University and Research Institute

LEGIC technology in this project:

4000 series reader ICs

LEGIC partner in this project (Reader manufacturer / System integrator) :

Inepro B.V.

Learn more about Inepro:

www.inepro.com/en

Flexible access control at SCHOTT

Schott has introduced a cross-site access control with a multi-functional ID card, not least because increasing numbers of employees are repeatedly working at different sites.

SCHOTT is a leading international technology corporation in the fields of special-purpose glass and ceramic glass. The company employs 5200 employees in Germany, of which approx. 2600 work in Mainz with the remaining at sites in Jena, Grünenplan, Müllheim, Landshut and Mitterteich. Over time, collaborations with other sites have become more and more intensive as a result of joint projects. This led to the idea of introducing cross-site access control. A 24-hour system was required, due to production shifts, which needed to offer reliable exterior security, e.g. through image comparison. It had to be possible to use a wide range of access components. Changes in authorizations needed to be effective immediately.

Decision for Kaba exos

In the end, the company chose the Kaba exos access management. The functions of the individual personnel management, ID management and visitor management software modules met the requirements. "The authorization management of Kaba exos was especially convincing together with the simple operation of the system," explains Lutz Bessler, IT service manager of SAP/HR.

Global and specific rights on ID card

The system was introduced gradually. First, the software was installed in the company headquarters in Mainz. Then, exterior security was provided in the Mainz parent plant through barriers and turnstiles with online readers. After this, the individual production sites within the factory were secured and, finally in several stages, the other German sites. Within the building, important areas and rooms, such as production plants and high-security areas, are either secured online or using digital components. Every employee has a central right for all building entrances on their company ID card (global profile for exterior) and specific rights for inside doors. In addition, each employee can use their LEGIC ID card to pay in the canteen. SCHOTT also manages visitors and external service providers using the system. They use the same ID card medium, but with a different design.

Benefits for the end-user:

- ✓ The company was able to significantly increase its security
- ✓ One central system instead of several
- ✓ Cross-site access authorizations can be allocated without problems



We are completely and utterly satisfied with the product, the components used and the upgradability of the system in the future.

Lutz Bessler
IT-Service Manager SAP/HR
SCHOTT Schweiz AG

LEGIC technology in this project:

prime smartcard ICs, 2000 and 4000 series reader ICs

LEGIC partner in this project (Reader manufacturer / System integrator) :

dormakaba Holding AG

Learn more about dormakaba:

www.dormakaba.com/en

Locking system for the municipality of Oensingen

We no longer actually knew who had which keys.

Andreas Affolter, Head of Construction
Municipality Oensingen

It is a milestone for Oensingen: Thanks to the initiative and vision of the authorities and administrative department, the municipality has decided on the gradual acquisition of an electronic locking system for all its properties.

Relieving a municipality of unmanageable locking plans and kilos of keyrings has far-reaching consequences for anyone that needs access to the buildings. The actual catalyst is the elimination of mechanical keys and improved controls.

One badge instead of twelve keys

With the new Siaxma solution, a small, round badge will replace the individual keys, which previously hung by the dozen on keyrings. "The new locking system can do even more," explains Mathias Vogt, the divisional manager of domestic services. "The new multi-functional hall is actually the masterpiece of Siaxma", beams Vogt. With the badge on the control panel on the staircase, only doors for which the user has authorization will be opened. In simple terms, what will be the case for all properties is this: The outer shell is online, meaning authorizations are controlled centrally. The internal doors are operated with offline readers. Authorizations can be collected by users on an update reader. But

mechanical keys will not be eliminated entirely, as they will still be used for emergency interventions, for example. However, a locking plan in the central database will contain all the information about key holders and to which doors they have access. And the few keys that remain can be safely stored in the electronic key depot.

Management utilities incidents

Most of the management utilities are also integrated into the access control, meaning the head caretaker's mobile will buzz when there is an incident. If someone forgets to lock a door in the evening, the system does this at a preprogrammed time. Inspection rounds by security services can be greatly reduced or even eliminated completely



Benefits for the end-user:

- ✓ One ID card for all properties
- ✓ High cost savings
- ✓ Central administration with individual allocation of rights by user, building, day and time frame
- ✓ Clear responsibilities
- ✓ Immediate change of access rights possible at any time

LEGIC technology in this project:

advant smartcard ICs, 4000 series reader ICs

LEGIC partner in this project (System integrator):

Siaxma AG

Learn more about Siaxma:

www.siaxma.ch

PRODUCT NEWS



MADA Marx Datentechnik GmbH

New RFID ceVoBLE key transponder combines RFID with Bluetooth

Compared to classic, passive RFID technology with 13.56 MHz, Bluetooth Low Energy (BLE) works actively at 2.4 GHz.

In addition to the button, a three-color status LED also interacts with the user. It is possible for the key fob to indicate whether access is permitted or refused. With a range of several meters, which can also be reduced depending on the project requirements, convenient wide-range solutions can be elegantly realized – and always combined with all LEGIC technology. The BLE technology is optimized for the energy-efficient transmission of small data volumes.

Depending on the requirement and user intensity, the battery can last for several years.



Kontroll-Systeme SB AG

pRoFicio top – the elegant desktop reader for cashless payment with LEGIC and MIFARE

We present our new desktop reader pRoFicio Top. Fitted with the latest reader IC technology, this RFID reader can be used in various areas of use, e.g. at the till or on a coffee machine as a payment system.

Paying by smartphone is becoming increasingly popular. For this reason, the BLE-interface is already prepared in the reader. An accompanying payment application as an addition to the known card solutions was presented last summer. With a space requirement of 95 x 125 mm, the new pRoFicio Top fits excellently into every environment, and complies with the high standards of the catering and vending sectors.

The reader is available with or without Matrix display. It can easily be connected to your system, whether via USB, RS232 or MDB. Of course, there is also a suitable DLL available for Windows or Linux systems. This means that the elegant device can be integrated into your software application even faster.

PRODUCT NEWS



Elatec GmbH

Tag analyser for more than 60 LF and HF RFID technologies

The proximity reader TechTracer Lite LEGIC by Elatec offers a cross-technology recognition of proximity technologies (RFID / NFC). The 4000 series reader ICs based compact tool helps with the analysis of unknown RFID tags or labels. It can be used in the early phases of customer acquisition in order to recognize the RFID technology at the customer's site. This makes obsolete sending unknown transponders to a solution provider for recognition by physical mail and saves time.



Zucchetti Axess S.p.A

SuperGLASS7: Design to show, technology to use

Elegant design, innovative technology and ease of use: These are the hallmarks of SuperGLASS 7, the new terminal by Zucchetti Axess that adds elegance and style to any environment. SuperGLASS 7 is the first time & attendance terminal with capacitive touchscreen display with fully customizable functions to meet the most complex access control and security needs of any organization. Thanks to the new flexible graphic interface, the user interface can be tailored on users' needs also adding advanced or informational messages.



Hug-Witschi AG

DeDesk RFID reader

Fitted with the LEGIC SM-4500, the compact desktop reader DeDesk, processes any RFID data carriers from your host system, reading and writing. So, till applications or other PC applications can easily be integrated into any new or existing RFID environment. The DLL provided can very quickly be built into a Windows-PC supported host system. The variants USB, RS232 and OEM expand the possible uses of this elegant reader.

PRODUCT NEWS



Uhlmann & Zacher GmbH

The electronic door handle and door fitting from Uhlmann & Zacher

The electronic door handle CX6172 and door fitting CX6174 impress due to the until now unique compact design, in which the whole electronics, mechanics, power supply and LED signaling fit into the smallest space in the door handle. The products are available in a variety of variants and combinations. This includes the door fitting in wide and narrow design, and rosette shapes in oval and round. As a round rosette, the door handle is also suitable for use on complete glass doors, combined with special glass door locks. This range of variants allows an individual adjustment to the relevant door situation, and the aesthetic of the architectural situation. Of course, the electronic door handle and fitting supports the LEGIC transponder technology.



Evis AG

Evis Transfer Station - Compact and simple

Plastic not paper: Cashless payment is becoming even easier. The necessary technology is being dramatically upgraded. So that companies can keep up with this, we are providing you with a simple tool that allows you to effortlessly migrate to new cashless payment systems. The Evis Transfer Station, a compact device, will help you stay up to date at all times. Installation and operation are simple: Plug in the power cable and the device is immediately ready to use. It works with data carriers of all kinds and all transactions are recorded continuously.



STiD

Architect® – Upgradable secure access touch screen reader

Architect® readers are based on a common smart RFID and Bluetooth Smart core to which various interchangeable modules can be connected, such as card reader, keypad, touch screen, biometric device, etc.

The readers work with Bluetooth enabled smartphones. It brings the access badge onto smartphones. You can now open a door without getting your phone out of the pocket. Tap your smartphone twice in your pocket. Alternatively, simply swipe your hand across the access reader, even while you are making a phone call or when your phone is in your pocket or bag.

NETWORK NEWS

3CityElectronics

3City Electronics Sp. Z o. o. (Poland):

Reader manufacturer, Transponder manufacturer

- Access Control
- Biometric solutions
- OEM products

3City Electronics was established in 2013. They offer a wide range of services in design, development, manufacturing and testing of electronic devices.



ACTICON GmbH (Germany):

Reader manufacturer, System integrator

- Access Control
- Time & Attendance
- Biometric solutions
- Locking systems

Since 1992, ACTICON develops and manufactures system solutions for time & attendance and access control. Thanks to a modular design its system solutions are compatible with existing and future functions and can be integrated into every existing environment.



Fulterer GmbH (Austria):

Reader manufacturer

- Access Control
- OEM products

Fulterer develops its products in accordance with end users so that their products provide an added value. Continuous investment in production facilities and tool technology guarantee high quality.



Nauka i Technika Sp. Z o.o. (NiT) (Poland):

Reader manufacturer, System integrator

- Access Control
- Cashless payment systems

NiT has specialized in industrial automation since 1992. Its products are used in monitoring, directing technological processes, with special attention being paid to distributed and mobile systems.



Shanghai Mark Intelligent Technology Co., Ltd. (China):

Reader manufacturer

- Access Control
- OEM products

Shanghai Mark focuses on security, access, control of product design, sales and production. They provide professional customized services and support for customers and partners.

LEGIC ORBIT –

New key and authorization management

Key generation

For over a year, LEGIC has been offering the reader chipset SC-4300M, the LEGIC Connect trusted service and the software development kit for smartphone apps forming a powerful technology platform for an easy integration of BLE mobile credentials into a broad range of applications, such as access control or follow-me printing.

The LEGIC BLE solution provides end-to-end security from LEGIC Connect to the reader chipset. There are no keys on the smartphone to decrypt the credential data stored in neon files.

So far, the application-specific keys for the LEGIC neon files had to be managed manually, i.e. entered manually in LEGIC Connect and loaded into the LEGIC reader, e.g. with a hand-held configuration tool made by the customer. With LEGIC Orbit, this manual key management and the associated drawback of having to deal with visible keys, that are difficult to protect from unauthorized usage, has been eliminated. It is now possible to generate in the Hardware Security Module (HSM) of LEGIC Connect random keys that are never visible to anyone.

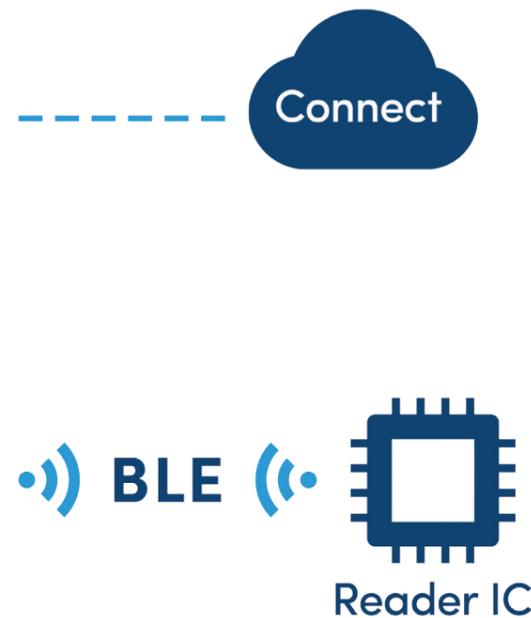
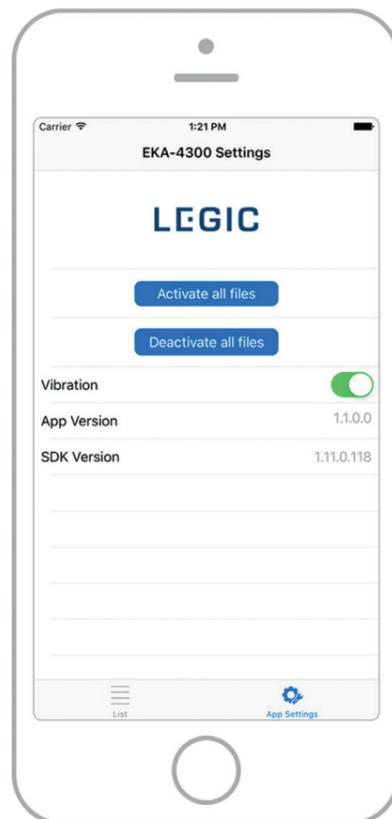
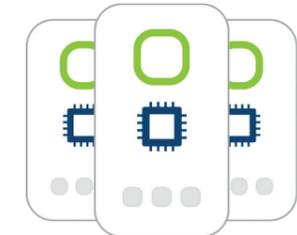
1. GENERATE VCP



2. DEPLOY VCP



3. LOAD VCP via BLE or HCE into readers



Key distribution

Even more important than the generation of keys is their secure distribution to the readers. This has been realized by the new LEGIC Versatile Configuration Package (VCP). It serves to protect the security-critical application keys, i.e. the neon file keys, and optionally other configuration data on its way from LEGIC Connect to the reader. The VCP protection relies on an AES-256 key, which is different for each company working with LEGIC Connect. Besides the powerful AES-256 encryption, there are also built-in integrity checks.

Furthermore, when deploying a VCP to a mobile device, a LEGIC neon file is being created. So, the neon file with its security features (e.g. end-to-end encryption, key derivation, session keys) is providing an additional security layer for the critical VCP content.

Additional security aspects

LEGIC has paid high attention to the security architecture for LEGIC Orbit. Besides the above mentioned security features, each VCP is further protected with a user-defined password. This allows to prevent unauthorized usage of a VCP stored on a mobile configuration device, as the mobile configuration app based on the LEGIC Mobile SDK can be programmed to request the VCP password from the mobile user.

Another feature that LEGIC has implemented, is the traceability of the neon file keys transported via VCP. Along with the keys, there is the information of the originating LEGIC Connect project. So, the host micro-controller in the LEGIC reader can decide, based on this project information, whether to accept or reject the respective neon file keys.

The FAE Team introduces itself

In 2017, there are mainly managers and developers at LEGIC. But this is not all: An office occupied by supporters never ceases to accommodate the daily inquiries and requests of customers and does its utmost to support the LEGIC partner network with its suggestions.

United knowledge

The Support Office is in direct proximity to the product managers, development team and technical editors. Customer inquiries are answered quickly and comprehensively by means of cooperation and with the united knowledge of the individual sectors of our employees.

The information and suggestions from the handled support cases are discussed with the relevant product manager and technical editor. Suggestions and proposals by partners are incorporated into the documentation or the next release.

Function of the FAE

With the recognized job description of 'Field Application Engineer', Simon Gübeli and Daniel Ringgenberg deal with the diverse problems and questions of our LEGIC partners. The FAE forms the interface between the development team, customers and the LEGIC sales team.

With the aim of developing a competent solution for every problem and every request, their knowledge and experience is regularly put to the test. Through constructive communication with customers, the recognized and handled problems are incorporated into future software updates or documents, making them available to the entire partner network.

The diversity and complexity of the inquiries make the job very interesting, demanding and varied.

Simon Gübeli



Simon Gübeli manages the team as Head of Field Application Engineering. His many years of experience in the field of RFID technology help him to deal with complex and elaborate inquiries, which require lots of time and knowledge for their analysis and solution.

He came to LEGIC as a test engineer after graduating in electrical engineering from a university of applied sciences. After two years in testing, he changed to the role of Field Application Engineer. After five years in the support division, he knows many problems and inquiries from the past, enabling him to help quickly and competently. He looks forward to being able to support you successfully.



Daniel Ringgenberg

Daniel Ringgenberg has successfully supported the FAE Team since the end of 2016. After an intensive introduction, he now deals with the telephone and email inquiries of our partners. He makes direct contact with the relevant in-house developers and allocates the inquiries for processing.

With his training as an electrical engineer and his imminent higher educational qualification as a technician, he also works on internal hardware projects. A small part of his role is to check the accuracy of the documents, which are available to our partners on the Extranet. LEGIC has to thank him for many smiling customers, who are able to continue working and developing happily after his help.

25 years of LEGIC – A look back with longtime employee Marcel Plüss

When I began working at LEGIC in 2000, the Internet was in the process of fundamentally changing traditional sectors. It was the beginning of the first large wave of virtualization, which – based on the new opportunities of the Internet – enabled completely new business models and largely made existing ones redundant. A good and typical example of this is the music industry and the sudden decline of CD sales in favor of MP3 file downloads. However, it was more so the service and trade sectors that were affected by this phase of virtualization, and less so the industrial sector.



LEGIC was also going through a change at that time. It was namely in the process of developing from a start-up company to a professional provider of contactless smartcard technology. My first task as project manager was to promote the development of the second generation of LEGIC products.

The emergence of RFID

But let's go back to the early 90s first of all. The first mechatronic contact-based locking systems had just entered the market and contactless transmission options were starting to be tested in locking systems. A technical breakthrough soon happened in this field: The early version of the LEGIC RF standard appeared – the first RFID communication standard on a frequency of 13.56 MHz.

'LEGIC' brand

In 1992, the new technology under the LEGIC brand was presented for the first time at the CeBit trade fair in Hanover as a Swiss world first.

The words 'sorcery' and 'superweapon' were even mentioned in specialist articles. This trade fair appearance is officially known as LEGIC's hour of birth. However, it would take another two years for the first products to reach the market. The first reader IC ready for mass production was launched in 1994.

Competitors did not wait for long

The first competitors soon appeared on the market. The uniqueness of LEGIC, however, is that as well as the two base components for contactless entry (reader and transponder ICs), it also offers a unique system for secure and easy administration of contactless smartcard applications – the Master-Token System-Control (MTSC) authorization concept, tried and tested to this day.

Advances in product development

Eleven years after its first appearance, LEGIC presented its second product generation LEGIC advant in 2003, again at CeBit. The new products were not only more compact, better performing and multi-standard compatible in terms of readers, but they also reflected the older LEGIC prime generation in terms of security. For data encryption, modern DES and AES encryption algorithms were now being used. For the smartcard ICs, the introduction of the LEGIC card-in-card Java applet in 2007 was a significant milestone; this meant nothing less than the virtualization of the smartcard. The availability of the card-in-card Java applet

rounded off the range of second-generation products, and at the same time ended its development phase.

Move to new premises

The past seven years since I started at LEGIC were a challenge, not just from a product development point of view; they were also tough for the company's powerfully changing organization. The company had grown and the number of employees had doubled in just a few years. As well as modifications to the company structure, the consequences were the development of a professional quality management system and an increased need for space. This ultimately led to the procurement of new business premises in 2007, at the current location on Binzackerstrasse in Wetzikon. The solution was ideal. Not only were the new premises within eyesight of the old site, but they also offered enough potential for further growth – eventually, quite a bit happened at that time in terms of product innovation.

Bluetooth compatible reader ICs

In 2011, the LEGIC 4000 series reader ICs paved the way for offline applications, thanks to its small design (8 x 8 mm) and low energy consumption. Five years later, these reader ICs also became Bluetooth-compatible. Combined with the range of services expanded by the Mobile SDK and the trusted service LEGIC Connect, they have been able to successfully gain a foothold on the emerging market for mobile hotel applications. The secure and global allocation of access authorization via the Internet and the opening of doors via smartphones have thus become a reality.

A look into the future

The world is currently at the start of a further large wave of virtualization, by which the industrial sector in particular is affected this time. Phenomena such as Industry 4.0 and IoT, and the associated possibilities are changing demand. All of a sudden, guests are no longer wanting to open their hotel doors with a card, but with their own smartphone, and DIY enthusiasts do not want to buy or hire drills, but simply put a hole in their walls with the aid of a service. Whether it is smart offices, car sharing or mobile access, there are no individual products being focused on, rather services, connectivity and customer convenience.



LEGIC's technology platform

The current range of services, consisting of the five components LEGIC Connect, Mobile SDK, reader ICs, smartcard ICs, and key and authorization management, also form a solid technology platform for the countless ID and IoT applications of the future, even beyond the access control market.

I'm certain that with this harmonious range of products, we are well equipped to support our partners optimally for the next 25 years as well.

Marcel Plüss
Vice President Innovation & Technology
LEGIC

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LEGIC is a solution provider and expert for contactless identification by means of RFID, NFC, and Bluetooth Smart. Our open technology platform covers secure reader and smartcard ICs, the trusted service LEGIC Connect, an SDK for mobile apps as well as key and authorization management for the simple implementation and management of applications.

Our solution is characterized by scalable security, flexibility, simplicity, and investment protection. In the process, we accompany our customers with comprehensive consulting and support in use of the technology. Leading companies worldwide trust in our technology for employee identification, payment applications, campus cards as well as mobility and hotel solutions.

In the future, with our more than 25 years of experience, we will make the identification and communication of people and connected things in everyday life safer and less complicated.

Meet LEGIC in 2018

21.01. – 23.01.2018	Intersec	Dubai, UAE
27.02. – 01.03.2018	embedded world	Nuremberg, D
27.06. – 28.06.2018	SicherheitsExpo	Munich, D
25.09. – 28.09.2018	Security	Essen, D

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