CASE STUDY
CHECK THIS OUT: A DIGITAL LIBRARY CARD

Kiosk
Authentication

Patrons of Stadtbibliothek Dorsten (Dorsten City Library) have a new option when it comes to self-checkout. Instead of pulling out a library card, they can now check out books using their mobile phone—no app required

CHALLENGE: MOVING TO MOBILE CREDENTIALS FOR LIBRARY SELF-CHECKOUT

The library card has unlocked a world of reading and other resources for generations of library patrons. However, in the digital era, many people would prefer to streamline their physical wallets and use mobile credentialing systems instead. Stadtbibliothek Dorsten wanted to give their patrons the option of using their smartphones for self-checkout of library materials. Moving to smartphone checkout would streamline library operations and reduce the costs associated with distributing and managing physical cards. It would also be more convenient for self-checkout users, eliminating the need to carry a separate card. The library had thousands of existing patron records that they wanted to transition to digital passes. To ensure an easy transition from RFID cards to smartphone checkout, the new system would need to use the same data format for user credentials. The system also needed to be highly reliable and secure to protect both library materials and user data.

BENEFITS

+ Supports both traditional RFID cards and mobile credentialing using NFC

+ Fast and easy configuration via SimpleProtocol API

+ Configurable remotely via contactless card and direct host communication

+ Cost optimized

REQUIREMENTS

Stadtbibliothek Dorsten wanted a digital pass system that gave them control over the digital pass layout and data formats to ensure compatibility with their existing records, processes and self-checkout terminals. For data security, the only customer data stored on the smartphone would be a simple identification number. The system also needed to be easy for end users to adopt—ideally, a digital pass that could be integrated into the smartphone with one click without downloading an app.

idVATION: SEAMLESS SYSTEM INTEGRATION

To complete the solution, ELATEC worked with long-time partner idVation GmbH. idVation is a system integrator specializing in all aspects of securing digital identities. They helped implemented the NFC wallet pass for the digital library card solution.

SOLUTION

ELATEC and idVation developed a two-part solution for Stadtbibliothek Dorsten: an RFID reader integrated into their self-checkout terminals and a digital wallet pass that acts as the user credential. Together, the two technologies act as a lock and key to unlock access to library materials.

The mobile wallet pass works on both Android and iOS devices using Near-Field Communication (NFC) technology. NFC supports the same data types and formats as an RFID card and operates at the same frequency as HF RFID (13.56 MHz). It thus acts as a card emulator, enabling patrons to use their smartphones for contactless authentication at self-checkout. NFC's short read range (just a few centimeters) is ideal for secure data transmission.

The digital passes were configured to match the same data formats used in existing library cards, simplifying the implementation and enabling the library to easily import legacy user data. ELATEC's software tools, SimpleProtocol API and Director.exe, allow the required user information to be easily extracted from patrons' existing RFID cards. Afterward, the library was able to adjust their requirements with the AppBlaster tool.

The ELATEC TWN4 MultiTech 2 HF reader was integrated into the library self-checkout terminals. The single-frequency reader supports virtually any 13.56 MHz technology, including NFC. That provides flexibility for the library, allowing them to easily transition from existing RFID cards to smartphone authentication or to support both at once for different user groups.

Getting started with digital wallet passes is easy for end users, too. Patrons can obtain a pass with just one click via a QR code at the library front desk or through a link sent by email. To install their pass initially, they simply authenticate themselves at the front desk using their existing library card. There is no separate app to download; the mobile credential just sits in the user's digital wallet on their smartphone. Checking out books and other library materials is now as simple as waving their phone at the self-checkout terminal.

The digital wallet system is easier for both the library and its patrons. Eliminating physical cards reduces administrative time and costs associated with member management. Users can easily set up their own accounts to further minimize bureaucracy and enhance efficiency. The digital library card system is the first of its kind in Dorsten and is still a novelty among libraries globally. But with user adoption and satisfaction high in Dorsten, other library systems are sure to follow.

ELATEC TWN4 MULTITECH 2 HF

A versatile single-frequency reader for 13.56 MHz technologies supported by robust software that enables fast and easy configuration and customization. Comes with 18 kB onboard flash storage and onboard Secure Access Module (SAM) socket. Available as PCB or with housing.

Want to know more about RFID for library systems?
Talk to our application experts.

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