

## PR article

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File: Casio PR article — The digital entry ticket

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Information logistics

## The digital entry ticket

### CASIO in the growing live events market

Events is one of the most dynamic growth areas in the entertainment and leisure industry. According to the bdv (Bundesverband der Veranstaltungswirtschaft — German federal association for the events industry), music fans alone spend around EUR 3 billion on admission tickets in Germany per year. Parallel to this, a market for reliable ticket management systems has developed — from pre-sales through to digital ingress control. A new start-up in this area is the Hamburg-based **grandticket.de**, with its innovation:

### grandticket.de CheckIn



#### Start-up with "grandticket.de CheckIn"

In Hamburg in mid-2016, Ole Harms and Fabian Simroth began developing their admission ticket service system, [grandticket.de](https://www.grandticket.de). Ole Harms had good contacts from his many years of experience in events technology, while Fabian Simroth developed the basic software. In the first year, around 30,000 tickets were sold through the self-developed system in the northern region of Germany.

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## **Growing live concert market**

The number of public events has steadily increased over the past ten years. The growing impact of this trend is particularly clear in the music industry, where physical sales of audio carriers continue to decline. According to a study of the German music industry, music consumers now spend almost twice as much on live music concerts as they spend on purchasing audio carriers and digital music files.

One example of the extent of these changes: In 1986, MADONNA sold 25 million records of her "True Blue" album. With the associated tour, she earned USD 25 million from 2.5 million concert-goers. Not even 4000 copies of the 2015 live album "Rebel Heart" were sold in the USA. In contrast, the "Rebel Heart" tour in the same year generated revenues of USD 305 million.

Today, more than one third of revenues within the music industry come from ticket sales. In addition to the big music events, many other kinds of live events, from techno club nights to folk festivals, have become progressively more popular. With more than one hundred million tickets of varying prices and for all types of events sold each year in Germany, the admission ticket business has become a key service area in Germany, increasingly requiring state-of-the-art, high-performance digital systems.

## **The hardware of choice**

Alongside the development of a software application for their project, the founders of grandticket.de began their search for suitable hardware components that could cope with the demanding requirements of the tough events environment early on. The young start-up also came into contact with CASIO's sales partner, DataIdent GmbH in Seevetal, which was able to showcase suitable products from the CASIO portfolio and communicate their particular advantages.

"We have tested several different products for our purposes extensively, both from well-known manufacturers and from very inexpensive unbranded products. In the end, we ultimately chose CASIO. Essentially, the IT-G400 persuaded us in all

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respects: In addition to the robustness of the device and many other practical features, it was the unrivalled battery life that really won us over. The programming-friendly Android system was another convincing argument for our choice," says Fabian Simroth on the decision to go with CASIO. He also mentions further compelling advantages in everyday working life:

"For some of the events we manage, the admission scanner needs to work throughout the entire day — that's no problem at all for the CASIO IT-G400's batteries. Another advantage is the extremely short start-up time of the scanner and data transfer."

## The "grandticket.de CheckIn" — software

The ultimate ambition of the "grandticket.de CheckIn" system developer is to create a 100% digitised entry ticket management process for use as a full service for the organiser. The algorithm, as it is used today, goes through the following steps: **Customer data is collected** via the [grandticket.de](https://www.grandticket.de) Internet portal. The customer selects from the events on offer and begins the **ordering process**, which leads to the **payment process** via a cashless payment option of the customer's choice. After payment, the customer can select **the way in which the ticket is to be delivered** (email, PDF, post etc.). Incidentally, over 60% of all ticket transactions currently take place via smartphones, and that with a continual upward trend.

The end-to-end identification for all transactions is a combination of letters and numbers that is automatically generated when the ticket is purchased. It is then converted into a **QR code**. This code is sent to the buyer as a component of the ticket. At **ingress control**, the visitor presents this code (as an admission ticket for the event, as a printed PDF or as an image file on the smartphone display).

Using the "grandticket.de CheckIn" software on the CASIO IT-G400, the QR code is scanned and transferred into the system. The codes of all sold tickets are stored in the system memory, meaning that they are synchronised with the database during the scanning process. As a result, it is not possible to present the same ticket twice.

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Due to the timestamp recording of each scan, additional statistical data can be recorded, such as visitor behaviour.

The scanned QR codes at ingress control can be compared with the data either by means of a single handheld device, with a completely self-sufficient offline Wi-Fi server case developed by grandticket.de for conditions without network connectivity, or with GSM via a cloud server. The access data is synchronised over the network simultaneously across all the handhelds in use at ingress control.

The mobile computers used must therefore ensure universal networking capability in all technical environments — another reason that the CASIO IT-G400 is the perfect tool for entry ticket management.

## Image attachments

### Image 01 Growing live events market



### Image 02 The hardware of choice: CASIO IT-G400

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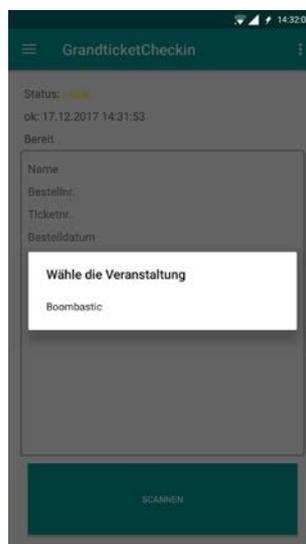
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The IT-G400 is a robust handheld with full-touch display and Android 6.0.1 universal operating system, which supports the use of various applications. This portable computer features a powerful ARM® Cortex® A53 quad-core processor (1.2 GHz), a bright touch-screen display and a high-speed imager as a reliable code reader. It supports all current standards of data communication, such as NFC/RFID, GPS, WLAN, Bluetooth® (4.1) and LTE WWAN. Based professional hardware quality offering optimum availability, and with first-class product support, this handheld is a sound investment for years of service.

## Image 03 “grandticket. de CheckIn” in use

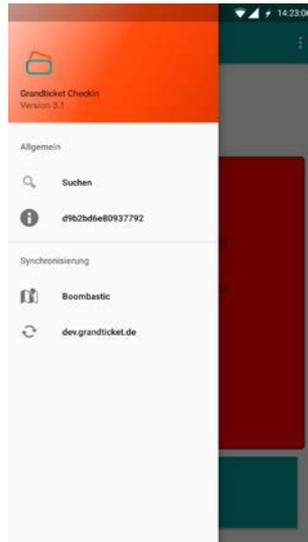


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Minimalist and practical **front-end** at ingress control: Selection of events from the grandticket.de data pool

## Image 04 Scanned



The overview menu during the scan: With the additional search function, the actual registration for attendance to the event can be found even if the QR code is not available (unreadable, smartphone problem etc.).

## Image 05 Check-in successful



"All clear"

All order and event check-in details are synchronised with the system.

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## Image 06 Check-in failed



"Alarm status red". During synchronisation with the database, a double check-in attempt using a single QR code has been immediately detected and signalled.

## Image 07 and 08 Ticket scan at the event entrance



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The end-to-end identification for all transactions is a combination of letters and numbers that is automatically generated when the ticket is purchased and then converted into a QR code. This code is sent to the buyer as a component of the ticket. During ingress control, the visitor presents this code (as an image file on their smartphone display, as an admission ticket or as a printed PDF).

The CASIO IT-G400 features perfect image recognition for reading QR code graphics with reduced quality.

## Image 09 CASIO sales partner DataIdent



DataIdent GmbH is the first port of call for all information on CASIO mobile computer systems — including the emerging field of admission ticket management.

More information is available here:  
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