

Title: **Efficient vehicle stock-taking**
Customer: **CASIO Europe GmbH** 22848 Norderstedt, PO Box 3147, Germany
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File: **_Casio_IT-G500 MDE bei JACOBS Automobile EURO**

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Information logistics:

Efficient vehicle stock-taking

The obligation for listed companies to evaluate their stock quarterly led Aachen-based Jacobs Group to introduce a mobile ID technology that efficiently records all stock vehicles across 16 locations. The focus of the solution, custom designed by system house Identass, is the versatile IT-G500 handheld terminals from Casio. In addition to high-speed inventory data capture, these devices offer many other features, including photographic documentation of damage. Having a paperless stock-taking process and automated data processing has reduced the associated outlay by around 90% and the system paid for itself within a year.

By Karl-Heinz Mingers

Vehicles are everywhere you look, ranging from low-priced compact cars to glossy luxury limousines, transporters and estate cars, to off-road vehicles and sports cars. There is also a wealth of different models to choose from in every category. Several thousand cars—including new vehicles, lease returns and used cars from primarily Volkswagen, Audi, Skoda and Maserati—wait at the Jacobs Group's premises in Aachen for detailing, relocation and, of course, a new owner.

For over 90 years, the name Jacobs has been synonymous with tradition, experience and progress in all things relating to cars and vehicle engineering in the regions of Aachen, Düren, Heinsberg, Eifel and Rhine-Erft. And Jacobs continues to set the benchmark today: Around 700 employees and 190 apprentices currently contribute to annual sales of approx. 27,000 new and used cars and a turnover of EUR 550 million, meaning that the Jacobs Group ranks among the top ten largest VW/Audi dealers in Germany.

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To generate enough capital for its expansion to date, the founding Jacobs family sold around half of the company shares to US company Penske Automotive Group in 2005. After ten successful years of cooperation, the Penske Group finally became the majority shareholder in Jacobs in 2015. Today the company trades under the name “Jacobs Group — Penske Automotive”.

Four times the effort required for stock-taking

With the growing success of the Group came increasing requirements from the US investors regarding organisation and management at the German holding. For example, the previous arrangement of stock-taking once per year was no longer sufficient for the NYSE-listed company. All vehicle stock must now be recorded and reconciled every quarter. “In previous years, it was manageable for a few employees to be engaged in stock-taking for about two weeks each year”, recalls Jens Christian Werner, Managing Director of the Jacobs holding. “However, the effort required for stock-taking four times a year can no longer be maintained, which is ultimately what made us decide to find a better solution.”

The company quickly identified that the volume of work was down to the conventional paper system that the company was using to organise its stock, along with the associated lack of flexibility, a greater risk of errors and the unavoidable effort required to make bookings and amendments. The inventory counting lists for the different locations were being printed centrally and distributed to the responsible employees. The main problem for recording the vehicles was the inflexible order of the vehicles on the lists and the tedious and time-consuming process of searching for the right one. The unavoidable risk of errors associated with the subsequent task of transferring the recorded data from the lists to the EDP system was another problem. “We saw enormous potential for making savings by optimising the stock-taking process and having efficient information logistics in place”, remarks Jens Christian Werner. “In addition to rapid payback, we knew that investing in state-of-the-art IT systems would improve our stock data because all of our vehicles would be registered online and in real time in the shortest possible time.”

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A customised mobile data capture solution

A data capture system for cost-effectively recording vehicle stocks can be compared with a conventional inventory system, but there are also quite a few non-standard conditions to consider. Based on a recommendation, the company turned to Giessen-based system house Identass GmbH & Co. KG for the development of a data capture solution tailored to the specific requirements of the Penske Group with an interface to a primary Dealer Management System (DMS). Identass proved to be a competent partner and worked with the project team in Aachen to develop a paperless solution for recording the relevant vehicle data reliably using robust handheld terminals.

Many factors had to be taken into account when selecting a suitable mobile data capture (MDC) device. First of all, the focus was on achieving the highest level of robustness possible to ensure that the device could be operated outdoors—in rain, in freezing cold or even in searing heat—and to prevent the device from being damaged if dropped. The ergonomics of the device were also an important factor if it was to be accepted by the staff. The device needed to be lightweight and offer a comfortable grip, a high-contrast display that can be read easily in sunlight, and a long battery life for at least the length of one shift. Some of the other requirements included a high-performance system architecture for future-oriented software solutions, an integrated digital camera with flash and data communication via WIFI and mobile radio network.

Chris Schmidt, CEO of system house Identass, recommended the current tried-and-tested handheld terminal from Casio: “No other handheld terminal combines functionality, ergonomics and robustness as impressively as the IT-G500 series from Casio.” “After comparing various different devices, Casio was the clear choice”, remarks Pascal Patej, sales advisor at the Aachen Audi Centre. The handheld terminals are now used by the Jacobs Group in 16 locations.

Acceptance is important

To ensure that an IT solution like mobile data capture with a handheld terminal is integrated smoothly into existing operations and can be operated

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accurately even by untrained temporary staff, it is helpful for the software to set out each step simply and clearly.

Pascal Patej, who has already used the new solution for stock-taking, explains: “It was important for us that the solution is easy to use because in the future we would like stock-taking to be conducted outside of business hours and preferably at weekends, perhaps by students.” The latest experiences with the solution has demonstrated that: “Familiarising yourself with how to use the device takes only a few minutes. The software is self-explanatory and allows you to enter only meaningful or permissible data. The imager on the handheld terminal captures the ID code quickly and accurately, and there is virtually no risk of errors.”

Mobile stock-taking in practice

The primary aim of introducing the new solution was to record vehicles efficiently, quickly and securely without having to search extensively. In addition, the error-prone paper process needed to be replaced.

The company now generates a data record in the DMS for all locations. This data record is transmitted via the Identass interface as an inventory list to the MDC handheld terminals. The list contains all stock vehicles assumed to be available, comprising more than 6000 units. All vehicles—regardless of whether they are customer vehicles or Group-owned vehicles—are now systematically recorded line by line at each location. During this process, the handheld terminals are used to read a barcode label on the windscreen showing the vehicle identification number. If no barcode is available, the vehicle identification number can be entered manually. The MDC handheld terminal uses this information to check whether the number is already recognised or needs to be recorded. Once all of the information has been recorded, the data from the mobile terminals is transmitted via WIFI or the network across the Identass multi-link interface back to the primary DMS for consolidation and analysis.

If new damage happens to be found when the stock-taking data is being recorded, the damage profile can be documented using the integrated digital camera.

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Multiple benefits — rapid payback

Anne Reul, a Scheduler at the Aachen Audi Centre, is very pleased with the new stock-taking solution: “The way we used to transfer the data recorded on lists to the EDP system and manually compare the two sources was very time-consuming, tedious and unproductive. Now everything works automatically and the effort involved in processing is limited to clarifying differences.” Considering that the current effort involved in recording the data is a maximum of two hours per location along with the fact that the data can now be processed automatically, the new solution has delivered a 90% decrease in the outlay required for stock-taking. The total cost for the handheld terminals and processing software remained feasible because Identass was able to adapt its modular standard software to the Jacobs Group's requirements with minimal programming effort. For this reason, the investment almost entirely paid for itself within the first year of use.

However, the Casio handheld terminal still has a wealth of other features that have not yet been fully utilised, meaning that there is scope to consider additional applications. For example, alongside the photographic documentation feature already mentioned, the integrated GPS module could be used to register location data for parked vehicles. As the handheld terminals also have NFC/RFID functionality, they could also be used to record transponder data (tags) as needed.

The company will initially start using the MDC handheld terminals in the spare parts warehouse to support the stock-taking process.

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Note for editorial staff:

Photos in this Word document are scaled down and compressed preview images. Large images for further processing (with a resolution of 300 dpi) are attached as separate JPEG files or are available on request.



Image 01

Karl-Heinz Mingers (author)

(Image: Casio Europe)

Karl-Heinz Mingers is the Sales Manager at the Jacobs Group Audi Centre in Aachen.

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Image 02

Pascal Patej

(Image: Casio Europe)

Pascal Patej is a Sales Advisor at the Jacobs Group Audi Centre in Aachen:
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Image 03

No more searching

(Image: Casio Europe)

Vehicles can be recorded in any order, meaning that the tedious process of searching for vehicles on paper lists is no longer necessary because the MDC handheld terminal automatically matches the vehicle ID code against the saved list.

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Image 04

Record data in any weather

(Image: Casio Europe)

The Casio IT-G500 can withstand being dropped onto concrete from a height of 1.5 metres and offers the IP67 protection rating. This robust handheld terminal can also be used without limitations in rain or sunshine.

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Image 05

Handheld terminal records vehicle identification numbers

(Image: Casio Europe)

A barcode label showing the vehicle identification number is placed on the windscreen and is read by the imager. If there is no barcode, the vehicle identification number can be entered using the keypad.

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Image 06

Ergonomic handling

(Image: Casio Europe)

The Casio IT-G500 2-D imager is set at an angle of 25° to enable easy and effortless barcode reading.

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Image

07

Photographic documentation of damage

(Image: Casio Europe)

Damage or unusually heavy soiling can be documented in photos. The integrated camera on the Casio IT-G500 produces sharp 5 megapixel images that can be transferred via mobile radio along with the vehicle data.