

First Article about the  
<<Connected Mobile Power>>  
System, published in Germany in  
January 2019 in "Medizin und  
Technik"-Magazine, put through a translation site - which may help  
understanding the meaning of the solution



## On the way to an intelligent wheelchair

### ANSMANN presents new connectivity solutions for MedTech devices

Whether Bluetooth connection to smartphone, connection in cloud and internet of things on mobile radio standard basis or satellite-supported communication - also in medical technology it often makes sense to stay in touch with the batteries of your device.

Self-monitoring, Bluetooth networked, connected to the cloud via GSM and app-controlled - the drive of electric wheelchairs, electric vehicles or external battery-powered drives for wheelchairs of future generations will have a multitude of intelligent functions according to the battery experts of the Ansmann group of companies. Following its pioneering role with intelligent Bluetooth battery packs, Ansmann AG is currently presenting the first battery system with integrated GSM and GPS interface. If required, several connection standards can be installed and used simultaneously on the battery control board.



If the manufacturer of the electric mobility aid then combines these connectivity solutions with a particularly lightweight drive and battery solution, as recently successfully used by Ansmann E-Bikes, he can make a very demanding

clientele happy. - For comparison: the entire light battery drive solution of the e-bikes in question

weighs less than four kilograms - and thus less than a conventional stand-alone bike drive - even without batteries.



Since, similar to conventional bikes, the mobility aid with electric drive usually depends less on the range than on lightness and flexibility, lightweight batteries would be a welcome support for more freedom of movement. The "light battery" plus intelligent bike app then provide even more comfort and optimum support for the user: the near-field connection via Bluetooth to the smartphone helps the user to monitor the charge status of the battery and charge it in good time. Mobile radio standards such as GSM are of interest if the manufacturer wants to monitor the functionality of his devices for warranty reasons or because they are rented out. The satellite-based GPS positioning system makes it possible to always know where the device is.

The latter serves on the one hand as theft protection. A problem that is well known from many e-bikes - often the battery pack is worth more than the rest of the bike. On the other hand, this function could be integrated into an emergency call system that can automatically track the origin of the emergency call up to a few meters. The precision in case of emergency depends on the chip and system used and can vary between about 10 m and less than 1 m depending on the application.

### **Comfortable app for a modern driving experience**

The battery app solution consists of an intelligent, standardized combination of rechargeable battery cells, a highly integrated control board and an operating system neutral smartphone app. It is based on Ansmann's "Bluetooth Direct-Connect" industrial solution, which is also used in various other sophisticated electronic devices with smart drive monitoring and control requirements (e.g. electric scooters or electric lawnmower robots).

The free standard version of the battery app shows all important features in a visually neutral way. However, they can also be individually branded or extended by the equipment manufacturer for marketing purposes. The drivers of the electric mobility aids equipped with intelligent batteries and equipped with suitable apps benefit from precise, situation-adapted charge status and range displays. For example, the app warns drivers if they need to drive more energy-efficiently to reach their destination, or if the battery threatens to overheat in bright sunlight. Even if a new battery becomes necessary after winter or a longer period of use, this is indicated. In addition, the driver can at any time remotely check whether the level of his battery is sufficient for the next planned stage, whether in his apartment, on a trip to the countryside or in the cosy beer garden next door. This comfort is far greater than what a solution fixed to the vehicle instead of the battery could offer.

### **Support support for the manufacturer**

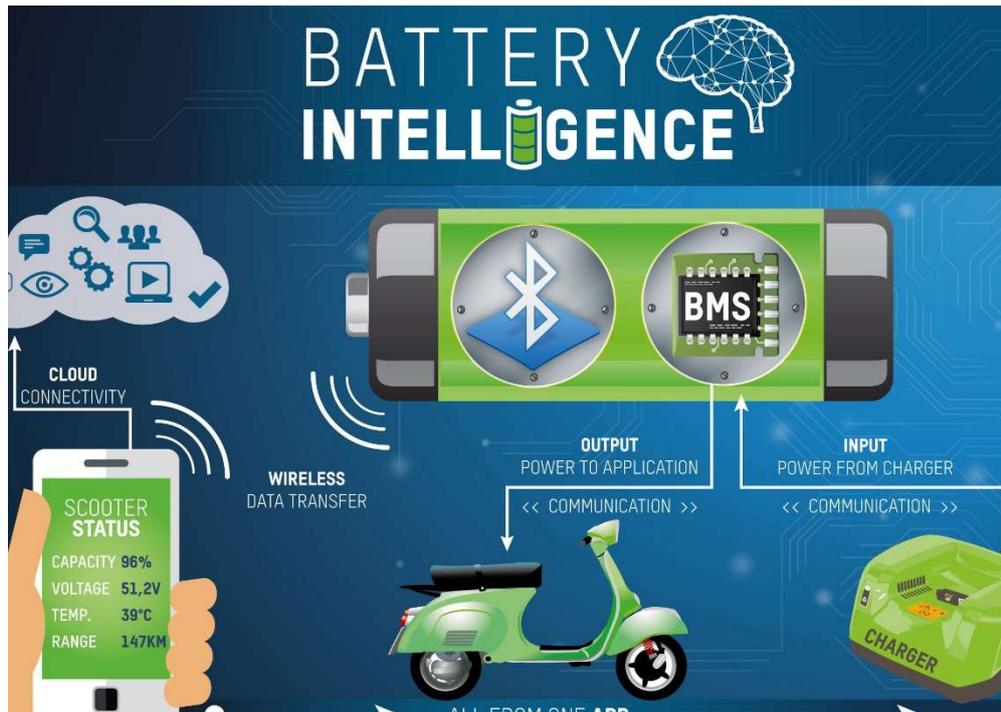
The use of connectivity solutions also offers great advantages to manufacturers or rental companies of connected devices. She welcomed Ansmann to the "Internet of mobile Things" at the end of 2018. Beyond app solutions, which always require a terminal device close to the reader, professional fleet operators and suppliers of high-quality vehicles with electric drive were looking for solutions to remain seamlessly connected to their vehicles in the market.

With an appropriate business model, intelligent connectivity enables you to continuously monitor the batteries of your vehicles in the pool. It recognises the serial number and date of manufacture as

well as the number of charging cycles and the wear and tear, as well as the performance still available in the battery, and can thus guarantee in the medium term that no customer will suddenly be left



behind after a few kilometres - in the truest sense of the word. After the winter break or even during heavy use of the bikes, such as city bikes, there is probably no way around such a remote warning function in the medium term anyway. The first rental partners have already successfully tested the Ansmann solution.



The <<<Connected Mobile Power>> Pack was presented for the first time at Electronica 2018 last November. It offers manufacturers who want to network their electric vehicles all the standard interfaces they need for

tracking, security functions and remote maintenance of the batteries in their customers' vehicle fleets - without them or the users having to deploy an app. If an app is nevertheless required, the app and mobile cloud solution can also be easily combined in the device.

Thilo Hack, Head of Industrial Solutions at Ansmann: "Of course, these new radio-based functions are not only interesting for eMobility. We are in favor of solutions for <<Connected Mobile Power>> as already mentioned in discussions on topics such as the remote maintenance of electrically operated wheelchairs - but also the use in a variety of other mobile medical devices would be conceivable. Ultimately, there are many battery-powered devices in every conceivable industry that can gain great new features, security and service quality by integrating their batteries into the Internet of Mobile Things - IoMT". The new functions can be integrated into packs of all performance classes and, thanks to the rapid development and ever better integration capability of the appropriate communication chips, even in combination, are far cheaper today than the inquiring customers would expect.