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## Future Store for Jewellers

Electronic labels open up new opportunities to retail market

Metro has already had the Future Store for a long time. The retail giant has been experimenting with the new technologies for five years and opened a futuristic shop to the public in Rheinberg, Germany, in 2003 based on the gained experience.

In the Metro Future Store intelligent shelves record products that were wrongly sorted and report the items for reordering when falling short of a minimum quantity. The customer anticipates the checkout procedure while shopping thanks to a mobile computer which is installed on the trolley. Therewith the person then actuates the payment operation at a self-pay-checkout – without any checkout personnel. Science-fiction seems to have become reality in the Future Store for trade in the field of food and consumer products.

The main feature of this technology now implements smaRT))-Inventory for the requirements of the jewellery and watches industry. On the occasion of the jewellery fair in Basel, the software house AEB IT-Systeme and Ferdinand Eisele, specialist for labels and identification technology, will present with smaRT))-Shop their version of the Future Store for jewellers on a joint booth.

„The groundbreaking innovation with our smaRT))-Shop“, says Alex Schickel, General Manager of Ferdinand Eisele GmbH, Birkenfeld, „is the fact that each piece of jewellery in the shop is electronically monitored. We call this „Stock Monitoring““.

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„Stock Monitoring“ is made possible by innovative labels with built-in electronic features, the smaRT)))-Tags. (see picture with ring and smaRT)))-Tag ) They are not larger than ordinary labels and consist of a plastic coating which safely surrounds the electronic core. The smaRT)))-Tags are attached to the jewellery by safety threads which additionally protect against manipulations due to their tear strength and a special closure. The necessary data for the sales talk such as price, weight of material and stones etc. are printed on a self-adhesive label which is especially custom-built to the smaRT)))-Tags and bonded to the outer surface of the plastic coating. Therefore, a smaRT)))-Tag almost looks like an ordinary label for marking – but only at first glance.

Encrypted inside the tag there is a number code which is world wide unique and which exclusively belongs to this smaRT)))-Tag. It is read out via a magnetic field by the smaRT)) antennas (see picture SmaRT)))-Pad and -Reader). The smaRT)))-Reader decrypts the code and therefore can definitely identify the tag. Moreover, a smaRT)))-Tag can be re-used in an almost unlimited way. After having sold the first article it can be attached to another one, just marked with a new self-adhesive label.

All these features do not yet make smaRT)) a ground-breaking innovation. Only when integrated into the structures of a modern merchandise management system the smaRT)))-Tag unfolds its entire proficiency.

The necessary link is supplied by AEB IT-Systeme, Bensheim, with the software smaRT)))-Connect. smaRT)))-Connect allows the customer to implement smaRT)) technology directly without being limited to a specific merchandise management system. With this module, the merchandise movements are registered and stored. Detailed information is available via the info centre. Other involved software houses can access the defined existing interfaces and use smaRT)) technology in

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their applications. General Manager Hans Aland says: "As a software forge we know exactly where smaRT)) technology has to come in to make "Stock Monitoring" out of the stock management of a modern merchandise management system."

„Crystal Works“, AEB's own merchandise management system representing one of the leading products for the jewellery and watches industry on the German market, is an example which implements some of the new opportunities.

The main feature of smaRT)) technology is the contactless recording of several articles at a time without single scanning. Implemented in the smaRT))-Shop this means that when a sales tray completely filled with merchandise is positioned on the smaRT)) sales counter, all articles in the lade together with the requested data from the merchandise management system such as product photos and descriptions are immediately displayed on the obligatory screen in the smaRT)) shop (see picture screenshot with watches). The same effect can be obtained by a short pan shot with the mobile antenna (see picture SmaRT))-Frame), even with an entire shop window. – It is obvious that stocktaking is like a walk-over then and can easily be done every day thanks to this new technology.

But smaRT))-Inventory becomes a true "tuning" for stocktaking only if the means of merchandise display are also smaRT)) compatible. So, on one hand, smaRT)) compatible display material such as lades, busts or trays have to present their contents in such a way that the tag can be read out by the antenna. On the other hand, all elements of merchandise presentation are equipped with smaRT)) technology themselves. (see picture watches lade with detail watch). A first collection of smaRT)) compatible presentation material made by Kling, Birkenfeld, monitors what it depends upon. The leading specialist for merchandise

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presentation throughout Europe has elegantly integrated smaRT))-Tags and electronics in a series of trays.

SmaRT)) compatible merchandise presentation material alone already allows it to also use the position of an article at the POS as a systematically manageable storage location within the stock management. Therefore, short-term conclusions can be drawn from the merchandise movement and be turned into entrepreneurial reactions accordingly, e.g. the selection of “top sellers” and “slow sellers” in the line of goods.

As today repair administration is obligatory for an up-to-date merchandise management system like “Crystal Works“, AEB has transferred the advantages of smaRT)) technology also to this field: innovative transparent bags with a zip closure serve as repair pockets. Via a bonded smaRT) tag the bag obtains a code which the stock management system can link with a repair operation. When the bag containing the merchandise to be repaired is put on the sales counter in the smaRT))-Shop, the electronic repair card is displayed at the screen together with the documentation of the whole operation without any further action. As soon as the customer picks up the repaired piece, the operation is completed and the bag can be reassigned to a new reparation order together with its code.

The beneficial aspects of smaRT)) technology in the field of security are a future vision and not yet integrated in the smaRT))-Shop today. But it is obvious that a fully developed smaRT))-Inventory will be able to locate any article at the point of sale at any time. So if an article is missing in its assigned storing location, the system reacts. Which reaction should follow can be defined ad lib. Anything is conceivable, from a silent alert in the form of an optical signal up to the closing of a lock door – of course also stagelessly increased depending on the time of absence. „Stock Monitoring“ then turns into „SHOP Monitoring“.

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„With smaRT)) there are no limits to fantasy,” Alex Schickel describes the dimensions of this ambitious co-operation project. „Even developing intelligent shop equipment is possible: e.g. a showcase that knows its correct contents, that registers any inventory changes as well as their originator and that reacts accordingly upon offences against these specifications“. But first of all, the two companies intend to concentrate on what users can implement with the least possible effort. „Our customers should be in a position to take advantage of the new technology step by step“, Hans Aland explains the intention of the smaRT)) partners. Therefore, the concept of the smaRT)) starter package is deliberately limited to observe a defined selection of articles. Should smaRT)) be convincing at this stage, the system will automatically be extended.

The two companies wish to co-operate with more software houses in this field in Germany as well as abroad in view of implementing smaRT)) technology. They can make their own merchandise management systems smaRT)) compatible via the software module smaRT))-Connect in order to allow also their customers to enjoy the advantages of Future Store for jewellers. You can find the smaRT))-Shop at the Basel Fair in hall 3.2, booth C18.



smaRT))-Tags are hardly larger than ordinary labels and additionally re-usable in an almost unlimited way. For the necessary information during the sales talk they are marked with self-adhesive labels accordingly printed.

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With the positioning of an article on the antenna which is integrated in the sales counter, the data for this article which have been entered into the stock management system including photos are immediately displayed on the screen.



Stocktaking with smaRT)) linked with the stock management system CrystalWorks by AEB IT-Systeme: When placing the completely assorted sales tray on the antenna, CrystalWorks displays all items and reports which of them have already been recorded in the inventory.

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The antenna, handheld or as a pad, receives all data from the smaRT))-Tags and the reader then transmits them to a PC with a stock management system.



Watches tray, especially developed for the application of smaRT))-Tags.