



BUSINESS CASE

DIGITAL PRICE LABELLING AUTOMOTIVE RETAIL MARKET

PRICE UPDATES FROM THE CLOUD WITH JUST ONE CLICK



VISI | **ONE**[®] **EMBEVER** <>

INTRODUCTION

Founded in 1998, Germany based VISI/ONE became the market leader for price labelling in the stationary automotive retail market. To date, the company's core product has been an innovative adhesive wrap, which stands as a freely designable medium at the point of sale for communicating the brand and the brand message. The company's decision to offer cloud-based solutions for digital price labelling has finally marked a shift from analogue to digitally networked products in this field.

THE BEGINNINGS

VISI/ONE initially started developing a digital pricing system for car dealerships based on Salesforce in 2014. The CARSales Intelligence (CSI) system is designed to help car dealers save valuable time for their employees and reduce car immobilization times. It is a cloud-based platform that allows the prices for vehicles to be changed conveniently from a computer or app. The associated displays function with the help of the central software and a connected IoT hardware system architecture. Centrally installed routers feed a network of connected digital price tags based on ePaper via Wifi and radio.



PROOF OF CONCEPT

With Embever as the platform operator for the development and operation of cellular IoT products, VISI/ONE has found the ideal partner to bring an IoT product to market according to its own vision. A proof of concept of the new product generation could be developed and tested within a very short time.

Embever has expanded the hardware with its own board to enable mobile operation and connection to the Embever IoT Core. The IoT Device (an ePaper display) now contains the Embever Operating System, which controls the mobile communication and increases the battery life of the devices to a maximum. Embever's Cloud Middleware fits between the CSI Cloud and the NB-IoT enabled ePaper displays of VISI/ONE. Embever's Cloud middleware is endpoint agnostic and can send and receive data from any application to and from IoT devices.

POWER EFFICIENCY

The IoT devices are in Deep Sleep Mode most of the time during operation. The advantage of the ePaper displays used is that the displayed images do not disappear while the devices are in sleep mode and still do not use any power. After defined duty cycles the devices wake up from deep sleep and connect to the cloud server to ask for new data. If new data is available, it is sent from the cloud to the devices, which return to deep sleep mode after successful transmission and picture update. With its proprietary protocols and ingenious transmission mechanism, Embever guarantees the most energy-efficient data transmission possible and thus a battery life of several years.

THE RESULT

The success of VISI/ONE's IoT development was critical in transforming the company from a traditional manufacturer to a networked technology provider. The brand's core product has become an intelligent device thanks to a digital component: Price updates can now be performed from the desktop and the devices can be located via GPS. No cables, no servers, no access points to install. Thanks to the connection via Embever IoT Core, the new business model has become scalable. Each display can now be addressed independently via the cloud without installation effort. VISI/ONE has succeeded in further strengthening its innovation leadership through the joint development with Embever and setting new standards as the global market leader for digital pricing in the automotive retail market.



Figure 2: Visual representation of IoT application in a car dealer building. Source: Own creation

Are you also interested in developing a smart product?
We are looking forward to your request.

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