The Evolis Quantum plays a key role in European freight management

Managing traffic flows, especially those of heavy goods vehicles (HGV) throughout the EU is an increasingly complex domain. There are currently 6.5 million HGVs in circulation on Europe’s roads and of these at least one million travel long distances\(^1\), causing maintenance and environmental concerns for public and private authorities. To offset the costs generated by road transport, tolls and taxes are applied according to information provided by the trucks’ on-board units (OBUs). In Austria, United Access has been using the Evolis Quantum printer to manufacture the crucial Secure Access Modules (SAMs) that protect the OBU’s communicative functions.

The Challenge
HGVs carry an estimated 80% of goods in volume (tonnes) across Europe. It is big business, and as it expands so do management complications for administrators. One issue for example, is the need to control HGV CO2 emissions by enabling trucks to pass through toll gate sectors without stopping or queuing. Once the OBU and road side beacons or gantries are connected via microwave signal, the toll can seamlessly be applied. The first generation OBUs relied on DSRC (dedicated short range communication) signals, however second generation OBUs maintain permanent contact with the HGV. GPS and GSM technologies enable reception and transmission of data such as distances travelled on a particular road, measurement of the number of axles in order calculate the emissions class, the time of journey and the type and weight of the HGV. Thus client requirements for the SAM mounted inside the OBU are growing ever more sophisticated. United Access meets the challenge by specializing in the production of personalized high security controller chips embedded into the Evolis Quantum-printed ABS card.

The Solution
United Access purchased its first Quantum, distributed in Austria by EDV-Beratung Grassl, in 2007. Since then, the company has increased its fleet to 10 and more than 500,000 SAMs have been produced and electronically initialized. According to United Access Directors Gerhard Teuschl and Peter Klein, “We chose Evolis because of the large input and output hopper – considering the long personalization time. Therefore it is a very cost efficient way to handle the demands of such a process.”

The Benefits
A provider such as United Access must adapt quickly to meet the requirements of such a rapidly evolving environment. The goals of the recent European Electronic Toll Service, which include the interoperability of different hard and software systems and the provision of real-time traffic information resulting from the harvest of OBU data, highlight the continuing demand for precision technology. With a reliable yet flexible hardware partner such as the Evolis Quantum, United Access is on solid ground to accommodate growth in the road toll sector across Europe in the years to come.

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G. Teuschl, United Access.

(1) www.eubusiness.com/topics/transport/safer-lorries