

Q&A

Talking with **Nebo Djurdjevic**, Executive Vice President at Cardis Enterprises International, about the big benefits of micropayments.

Q. Firstly, could you explain the benefits that your micropayments solution offers shoppers and retailers, as well as how it works?

A. The two most important requirements for a successful micropayment payment method, from the consumers' perspective, are speed and wide acceptance at places where they make their everyday small cash purchases. At the same time, the retailers are looking for speed and acceptable transaction fees. Acceptable fees are directly linked to wide acceptance. If a micropayment product has a cost structure that results in fees that are too high for the low-ticket retailers, they will refuse to accept the cards, which will have major negative impact on the value proposition to the consumers.

The Cardis Solution provides for unparalleled transaction economics and convenience in making small payments. Unique technology aggregates small value cash transactions into larger value debit/credit card transactions, which can be cost effectively processed through the existing infrastructure. It allows for a contact or contactless EMV payment system to replace cash transactions in a broad spectrum of merchant segments delivering significant cost reduction to the retailers. The consumers enjoy speed and convenience with small payments processed offline, without PIN.

The Cardis Solution is implemented as an added value application for EMV cards and POS terminals. The card application uses a small stored-value purse to hold the unused portion of a previous debit or credit transaction. At the point-of-sale, if the purse balance on the card is higher than the purchase amount, the transaction is completed by transferring the stored value from the card to the POS terminal (off-line, no PIN, optional receipt). If the purchase amount is higher than the purse balance, the consumer is prompted to authorize a credit/debit load transaction (e.g. €40) with his/her PIN, and the difference between the load amount and the purchase amount is returned to the purse.

For example, if the purse balance is €3 and the purchase amount is €5, a debit load transaction for €40 is completed and a stored value of €35 (€40-€5) is returned to the purse. As a result, the ending balance in the purse is €38.

The economic effect of this front-end aggregation is distribution of the fixed transaction costs over the load amount (e.g. €40). The issuers and acquirers experience the low-value payment volume on aggregated basis through standard debit/credit load transactions. Individual low value transactions are local stored value transactions between the POS terminal and the card. They are aggregated offline, and are not part of any processing or

settlement in the backend system. Accordingly, a stored value transaction carries only a portion of the processing cost of the original load transaction. For example, a €4 stored value transaction bears only 10 percent of the transaction processing cost of the original €40 load transaction. As a result, processing of even the smallest transaction is profitable for issuers and acquirers with fees acceptable to the retailers. With the average ticket in this segment being below €4 and the average load of €40, the cost structure is reduced almost 10 times enabling fees that allow for wide acceptance by low-ticket retailers, which is the key requirement for the consumer acceptance.



Q. What is the fundamental difference between your solution and others such as PayPass?

A. PayPass and other transaction-based payment systems are attempts to take an existing product and tweak it for micropayments. Some of the requirements of a micropayment system can be met by, for example, waving customer identification, making the transaction offline for speed etc. Unfortunately the transaction is still fundamentally a Mastercard or Visa transaction (debit or credit). It is still subject to Interchange and each small ticket has to be

“The Cardis Solution is implemented as an added value application”

cleared and settled individually and must appear on a consumer's statement. All of these represent fixed (transaction amount independent), significant costs, which must ultimately be paid by the retailer.

Retailers of small ticket items have repeatedly demonstrated that these fees are not acceptable. Current trials in the UK are being implemented at no cost to the retailer. This is clearly not sustainable. The Cardis product, as I have explained, aggregates all small tickets into a standard debit/credit transaction, which is profitable for both issuers and acquirers and processed through the existing infrastructure. The result is a system with modest fees acceptable to the retailer, which is fast, simple, and efficient.

“We see the product being used extensively at such low-ticket locations as QSR”

Q. Is it aimed at anyone in particular or will it appeal to the wide spectrum of shoppers looking to make small transactions without cash?

A. One of the significant benefits of the Cardis approach is that it is not specific to any retail segment although, of course, the benefits are very substantial in, for, example, the QSR market. Because the product is implemented as an additional software component on the acquirer's existing EMV POS systems we anticipate that, for the sake of simplicity, the acquirers will include the software as a standard offering and it will be activated as needed. This is consistent with the strategy of most acquirers today – they have sophisticated POS systems but each retailer is configured to have only the features they require activated at their locations. Typically when a retailer needs a change, the features can be turned on or off remotely.

In the same manner, we do not expect that issuers will try to determine whether a specific consumer will have the applet, which would create unnecessary complications in the card production processes and make it difficult to react quickly to changing consumer requirements. The incremental cost at card production time to include the Cardis applet is so small that it is insignificant for the issuers. All issuers we have spoken to will put the applet on all or most cards and leave the decision to use it where it belongs, with the consumer.

Consequently we see the product being used extensively at such low-ticket locations as QSR and occasionally at locations with typically larger tickets but that also sell low-ticket items.

Q. What is the incentive for card issuers to include your application on their cards? Why would they incur that cost?

A. When I described the process I explained that the card issuers never see the individual small ticket transactions, they only see the result of these small transactions as they are aggregated into profitable debit/credit transactions processed through existing systems. As these transactions are EMV transactions, they are, for the most part, non-repudiable. So the issuers will see a significant increase in profitable business at no cost to them. The cost of including the applet on an EMV card is very small, and amortised over the life of a card, it becomes trivial.

Q. Is your aim to get people to do away with money altogether?

A. I have been hearing of the cashless society for many years and I do not believe we are any closer to it today than we were in the 1960s. The wealth of nations has been steadily increasing and the spending power of citizens has, in general, kept pace. Add to that the effect of inflation and the result is that, had no action been taken, the management of cash today would be overwhelmingly difficult. Fortunately the major players in the payments industry have not been idle. The introduction of the credit card, then the debit card has reduced the dependence on the supply and distribution of cash. Cash is still, however, a problem today because it is so expensive. The

EPC has estimated that the cost of cash to the society in the European Union is 0.5 percent of the GDP. Nobody expects that cash will go away but most major Financial Institutions have recognised that cash is a problem, and also that cash for small payments represents an opportunity. Cardis is uniquely positioned to help exploit that opportunity.

Q. Do you foresee convincing people to adopt this method of payment as being a problem? Isn't it a bit complicated for the uninitiated?

A. On the first glance it may appear complicated, but in reality, it is extremely simple. Market research in Canada, Ireland, and the UK, as well as a successful field trial in Canada has demonstrated that consumers “get it” very quickly. The concept is very intuitive, and the user interface is simple and straightforward. For adoption, of course, efficient communication to the cardholders is vital. The major issuers we have spoken to recognise the importance of good communication but anticipate that this will not be inordinately difficult.

Q. Do you think that this technology could be a success across the world or are there cultural differences between shoppers that prevent it from penetrating different markets?

A. We do not see many cultural differences in any market that will negatively affect deployment. Remember this is a cash replacement. Some markets may be averse to such payment options as cheques but there are very few which are cash averse. Poor telecommunications in some areas of the world will make implementation difficult but modern communications technology is improving this situation substantially. We have had enquiries from many countries including Germany, Australia, Switzerland, Austria, Ireland, Pakistan, Brazil, etc., and we are dealing with them as fast as we can.

Q. What challenges did you face in developing this micropayments solution and how did you overcome these obstacles?

A. The innovation behind the Cardis Solution is very clever and simple. There was no technology risk in developing the product. Our strategic advantage of piggybacking on EMV was our biggest challenge at the same time. As a result, the commercial rollout has been outside of our control and this was something that we had to manage very carefully from the corporate perspective.

Q. Finally, how do you foresee card payments developing over the next five to ten years? Will paying for goods with notes and coins become a novelty?

A. Forecasting the future is always difficult. We do not foresee cash disappearing in the near future. We do believe however, that there is now a degree of saturation of transactions completed with the familiar debit and credit cards. These cards are still being used typically for larger purchases and there is a limit on how far down the transaction size they can go economically. We, therefore, definitely see a move towards a card product to replace cash for small ticket transactions. In five to ten years we will not be surprised to see 25 percent of transactions below US\$15.00 transferred from cash in markets where an efficient system such as Cardis is introduced. ■

Nebo Djurdjevic has 16 years of experience in senior technical and business management roles in electronic payments, e-commerce and telecommunications with major high-tech companies such as Intellect and Ericsson, as well as three technology start-ups.

In the mid 90s, Nebo was actively involved in several smartcard projects in Canada and Europe including all major e-purse schemes and early multi application solutions. In 2001 Nebo joined Cardis International and lead a successful implementation of the Cardis Micropayment Solution as part of Scotiabank's multi application pilot in Canada, market research and business case studies that have been validated by major financial institutions and retail organizations in Europe and Canada. Nebo holds a degree in electrical engineering from University of Belgrade.