

## SpartaPay: Micropayment Technology

Sparta is proud to offer complete solutions to merchants and corporate users for micropayment collection and settlement. The following document gives a more detailed outline of the technology and services provided by SpartaPay.

### What are Micropayments?

Micropayments can be defined as low value transactions, commonly under the value of £5.00. As the availability of low value goods and services increases, organisations are finding current services provided by large financial institutions are not well equipped for such transactions. Sellers often find much of their profit eaten up by heavy credit card and processing fees which can often be of greater value than the goods originally sold. In addition, customers can find themselves accepting a high level of risk by exposing highly sensitive data such as credit card details through a range of insecure mediums; online, telephone etc.

Sparta believes this is unacceptable for both parties and is dedicated to providing new ways of carrying out business transactions.

### Application Areas

Micropayments lend themselves to a wide range of online areas including:

- Journals
- News Articles
- Music Downloads
- Online Games
- Online Gambling
- Music Videos/Films

Furthermore, if enabled with our latest smartcard technology they open up a wealth of additional services:

- Micropayments for low value goods e.g. newspapers, food, drinks etc
- Where PIN numbers systems not applicable or suitable
- Transport payment systems
- Access to leisure facilities and e-tokens
- None discriminatory school meal services and more
- Visually impaired

### Technology

Sparta are currently working closely with leading industrial partners integrating the latest technology into its payment systems.

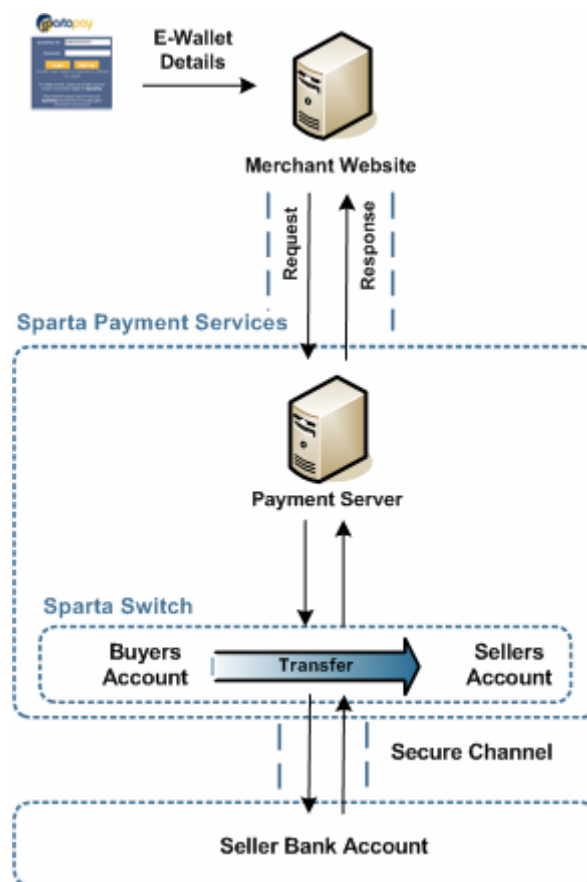
*SpartaPay* – Sparta's innovative payment gateway which can be used for micropayment transactions as low as £0.40.

*Smartcards* – Using the latest Philips Mifare smart cards and e-wallet technology. Safe, Secure and mobile, smartcards are the ideal micropayment companion to access online or offline services and make payments.

*(See Downloadable Smartcard PDF for more details)*

## Architecture

SpartaPay is based upon a central authentication & transaction server which is contacted for carrying out the necessary transactions between buyer and seller. The key aspect of SpartaPay micropayment solutions is that of aggregation. Once a customer has selected the desired products / services payment is carried out using their SpartaPay e-wallet details. The merchant then contacts Sparta Payment Services and authorises the transaction with the provided details. Funds are then deducted from a customers available balance and 'reserved' for the merchant. At close of business the merchant simply connects to Sparta Payment Services and all funds are transferred from customer accounts to the merchants SpartaPay account. As a result, all funds are transferred as cash in one quick and simple transaction. (Figure 1 – Micropayment Collection).



**Figure 1 - Micropayment Collection**

1. Transaction initiated by customer
2. Seller authenticates and authorises transaction via Sparta Payment Services
3. Cost of goods/services deducted from e-wallet
4. Sparta Payment Services logs transaction in server/system
5. At close of business seller contacts Sparta payment server
6. Server authenticates seller
7. Server uses Sparta Switch to transfer necessary funds from buyer accounts to seller account
8. Switch replies to server with success of transactions
9. Server sends response stating success of transaction



### **Settlement / Reconciliation**

By adopting the collection and redemption method shown in Figure 1, sellers avoid the traditional heavy credit card and processing fees normally charged on each transaction. Instead the seller simply pays SpartaPay a small fee and Sparta switch transfers all of his daily transactions to his account as cash. The seller may then use the online management tools provided by SpartaPay to withdraw funds to a specified bank account, or even use the funds to buy from other SpartaPay members.