

PRESS RELEASE

A study on meal vouchers in the year 2015

NFC technology brings virtual vouchers at your fingertips

Leuven (Belgium), 8 March 2010 – IBBT, a research institute of the Flemish government, has completed a study on the possibilities of replacing paper vouchers such as meal vouchers, discount coupons and gift vouchers by an electronic alternative based on Near Field Communication (NFC) technology. The research was conducted in collaboration with Clear2Pay/Integri, Keyware and Accor Services. For two years the partners analyzed different aspects of this electronic alternative such as: usability, legal aspects, security, applications and business model. The results of the so-called NFC Voucher study are promising and indicate that commercial implementation is feasible.

The current paper meal vouchers bring several disadvantages: not only is the printing and processing time-consuming and expensive, the ecological impact is not to be underestimated. NFC is a short range communication technology which enables wireless transaction of data between electronic devices. This technology enables consumers to pay at the cash desk with meal vouchers they received earlier via MMS on their NFC-enabled mobile phone.

The consumer awaits a new, richer paying experience. Paying is easier and faster as one doesn't have to search for meal vouchers or wait for change. In addition, the received meal vouchers can be forwarded to another NFC-enabled mobile phone and balances can be checked at any time. Dealers can also benefit from NFC technology. They don't have to collect and send the paper meal vouchers manually and, moreover, queues at the cash register are avoided by faster payments.

These are the most important result of the research project:

- The **usability research** indicates that consumer interest exists and that NFC Vouchers are perceived as user friendly, especially thanks to the speed of payment and the fact that the application calculates how many meal vouchers need to be spent. The functionalities of the application correspond to the needs and expectations, though some improvements are still possible here.
- The **legal research** shows that electronic meal vouchers are not considered as electronic money so there is no bank license required for the issuers.
- NFC Vouchers are transferred to the consumer from the issuer, which creates a direct liaison between the two parties. The **research concerning the privacy issues** unveils that the common opt-in conditions for advertising and data mining apply.
- It goes without saying that **security aspects** were a special point of interest in the research. It was decided to store the NFC vouchers offline on a phone. This approach bears close resemblance to the current paper meal voucher model and allows the transfer of NFC vouchers from one mobile phone to another without the intervention of a third party and without additional costs. Because all transactions take place offline, without interaction of a host, the safety of the NFC Voucher system lies completely within the NFC phone. The NFC Vouchers are secured by a cryptographic signature, similar to the one used in the current Belgian electronic identity card. Because of the high security demands, the current available technology is pushed to its limits, resulting in relatively modest transaction speed, when looking at it from a commercial viewpoint. More recent cryptographic algorithms, which were not yet available on the demonstrator's mobile phone at the time of the study, and a better integration of components in the mobile phone, will considerably decrease the transaction times and make the technology demonstrated in this project suitable for commercial purposes.

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The research is unparalleled. It illustrates that, subject to adjustments in the proposed model and availability of the new technology, offline NFC Vouchers are a feasible alternative for paper meal vouchers with numerous benefits for all parties involved: consumers, dealers and issuers. The project partners also developed an end-to-end demonstrator, providing a truthful simulation of the NFC Voucher ecosystem.

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About IBBT

IBBT, the Interdisciplinary institute for BroadBand Technology, is a research institute founded by the Flemish government, aimed at Information and Communication Technology (ICT) in general, and the development of broadband applications in particular. IBBT's primary mission is to develop highly competent human capital and to carry out multidisciplinary research on behalf of the Flemish business community as well as the Flemish government. IBBT receives a yearly budget of 23.2 million euro. Since its foundation in 2004, IBBT has started over 80 projects with more than 300 organisations. These projects strive for the joint development of innovative applications in several domains, as there are health care, mobility, new media and e-government.

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About Clear2Pay

Clear2Pay is an innovative financial technology company focused on delivering globally applicable solutions for secure, timely electronic payments. Headquartered in Brussels, Belgium, the company facilitates banks and financial organizations in their provision of payments services. Clear2Pay's technology helps to reduce transactions processing costs, and to deliver new, compelling payment services in a competitive way. Clear2Pay's payment solutions offer organisations easy, branded ways for their customers to pay online: from complex trade-supporting business-to-business environments, through e-commerce applications, to retail payments and remittance services. Functions embrace payments origination, reporting, linkage with back-office processing systems, clearing, netting and settlement. Clients include global and major regional financial institutions such as ING, Banco Santander, Crédit Agricole, VISA, MasterCard, BNP Paribas, The Federal Reserve, PBS (Denmark), The People Bank of China (PBOC), Bank of East Asia, ANZ and Commonwealth Bank. Clear2Pay operates out of Belgium, France, the Netherlands, Poland, Spain, United Kingdom, United States, Australia, China, Malaysia and Singapore and currently employs over 500 staff. For more information, please visit www.clear2pay.com.

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Keyware (EURONEXT Brussels: KEYW), which is based in Zaventem, Belgium, is a leading supplier of solutions for electronic payment, loyalty systems, identity applications and associated transaction management. You can find further information on Keyware at www.keyware.be

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About Accor Services

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