Big Step to Mobile Payments

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Recently Palm and VeriFone announced an initiative that will let Palm users execute transactions by pointing a Palm device at a VeriFone point-of-sale terminal. During the transaction, the Palm device will transfer the user's credit card information over the infrared link. The amount of the purchase will then appear on the Palm device, and the user can authorize the transaction. Am I impressed? Absolutely. But not because I believe it's more convenient to pull out my Palm device, turn it on, and carefully aim it at the terminal than it is to simply pull out my credit card. I'm impressed because this is a clean, logical step on the tortuous path to new mobile commerce mechanisms, and one that opens up some very important options.

First, let's be clear. Mobile commerce will be successful to the extent it delivers convenience and peace of mind and actually saves people money. Let's see how this announcement stacks up. The convenience relative to pulling out my credit card is questionable. But at my local Safeway store, I also have to pull out my Safeway membership card. The wireless transfer could easily include both cards, so that helps. But where things get interesting is when the transaction integrates with expense tracking software on the Palm. Some people, like myself and other business travelers who hate dealing with expense reports, enter their expenses into Quicken, so that's a bonus. If hotels and rental car companies start supporting this, I expect business travelers, among whom Palms have a high degree of penetration, will jump all over this.

Now the peace-of-mind test. Are transactions secure? What if I lose my Palm device? Technical details are not yet available, and Palm declined to be interviewed, but it should be relatively easy to secure the infrared link with a Diffie-Hellman key exchange followed by encryption. This solves the problem of someone trying to eavesdrop on the link. The physical limitations of the infrared link actually help in this usage scenario by limiting who else can be in on the link. As for losing the device, users in the U.S. have a maximum liability of $50, just as when they lose their credit card. Plus there's an option of adding a password to the device. There might be some initial user concern, but I think users will accept the security model. Down the road I can imagine user certificates and subscriber identity modules providing additional authentication options.

Now, how does this save users money? When I described the mechanism to my wife, she yawned. When I told her the store could send her an electronic coupon during the transaction, offering her $10 of savings if she came back within a week, she said, "Sign me up." With the link, all kinds of promotional opportunities are enabled. This should help motivate merchants to install these new terminals. Moreover, VeriFone has cleverly designed the terminals so that the infrared link is transparent to all of the back-end payment infrastructure or protocols. This is why I consider this a clean and logical mobile commerce step.

Where does this lead? First, it's obvious that VeriFone, a division of Hewlett-Packard, will support other devices. The HP Jornada handheld comes to mind. Give VeriFone credit, though, for not favoring the HP platform and going for the larger Palm user base. Later, expect support for mobile phones and other devices using Bluetooth wireless connections. Also expect other forms of payment, such as debit-card support and eventually electronic cash.

For the moment, although the total number of people taking advantage of these terminals as they start appearing is tiny compared to the credit-card population at large, this is a significant and important step.