

Payment Devices, Methods for Controlling a Payment Device, and Non-transitory Computer-readable Media

FIELD OF INVENTION

[0001] The present invention relates broadly, but not exclusively, to payment devices, methods for controlling a payment device, and non-transitory computer-readable media.

BACKGROUND

[0002] Payment devices (for example payment cards such as credit cards or debit cards, or contactless payment devices such as fobs or wearable devices such as rings or wristbands or watches) provide a convenient way of effecting payment. However, there is a fraud risk associated with such payment device, in particular with payment devices which provide contactless payment. Contactless payment devices (for example payment cards) are convenient in that they are able to be used for transactions (typically up to a certain limit of transaction value and/or number of transactions within a given time window) without the cardholder needing to use a cardholder verification method (CVM) such as PIN (personal identification number) entry in order for the transaction to be approved. However, because no CVM is required, it is possible in the case of theft of the card for it to be used without the cardholder's consent.

[0003] A need therefore exists to provide methods and/or systems to address the above problem.

SUMMARY

[0004] In a first aspect, the present disclosure provides a payment device comprising: an accelerometer configured to determine acceleration data of the payment device; a determination circuit configured to determine based on the acceleration data whether the payment device is held or moved in a pre-determined way; and a function activation circuit configured to activate a pre-

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determined function of the payment device if it is determined that the payment device is held or moved in the pre-determined way; wherein the pre-

determined function comprises switching between accounts associated with the payment device.

[0005] In a second aspect, the present disclosure provides a method for controlling a payment device , the method comprising: determining acceleration data of the payment device using an accelerometer; determining based on the acceleration data whether the payment device is held or moved in a pre-determined way; and activating a pre-determined function of the payment device if it is determined that the payment device is held or moved in the pre-determined way; wherein the pre-determined function comprises switching between accounts associated with the payment device.

[0006] In a third aspect, the present disclosure provides a non-transitory computer-readable medium configured to storing instructions which, when executed by a processor, make the processor perform a method for controlling a payment device, the method comprising: determining acceleration data of the payment device using an accelerometer; determining based on the acceleration data whether the payment device is held or moved in a pre-determined way; and activating a pre-determined function of the payment device if it is determined that the payment device is held or moved in the pre-determined way; wherein the pre-determined function comprises switching between accounts associated with the payment device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

[0008] Figure 1A shows a payment device according to various embodiments;

[0009] Figure 1B shows a payment device according to various embodiments;

[0010] Figure 1C shows a flow diagram illustrating a method for controlling a payment device according to various embodiments

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[0011] Figure 2 shows an illustration of an exemplary flow of a payment device locking / unlocking method according to various embodiments.