

CLAIMS

1. A card comprising:

a secure element (20);

5 at least one external interface (12, 14) configured to permit communication between the secure element and an external card reader (50);

a user interface (35);

a user interface processor (31);

10 an internal interface (38) between the secure element (20) and the user interface processor (31);

wherein the secure element (20) is capable of hosting a plurality of applications (23) each having an application identifier and the card is configured to allow a user to select one of the plurality of applications (23) for use when the card communicates with the external reader (50) by:

15 signalling, between the user interface processor (31) and the secure element (20) an indication (29) of a mode selected by the user at the user interface (35);

storing, at the secure element, the mode indication (29);

20 storing, at the secure element, response data (26) for use when responding to interrogation by the external card reader (50), the response data (26) comprising a set of records or templates associated with the applications (23) hosted by the card respectively, each record or template including the application identifier of a respective application;

25 storing, at the secure element, correspondence data (28) which indicates, for each of the modes, a correspondence between the mode and a record or template to be sent for that mode;

30 upon receiving an interrogation command from the external card reader (50), retrieving one of the records or templates stored in the secure element, based on the selected mode as indicated by the stored mode indication, and returning the retrieved record or template to the external card reader thereby forcing the latter to select the application associated with the returned record or template.

2. The card according to claim 1 wherein the correspondence data (28) is a table and the mode indication (29) is an index value which indicates an entry in the table of correspondence data (28).

3. The card according to any one of the preceding claims wherein the at least one external interface comprises at least one of a contact-based external interface (12) and a contactless external interface (14).

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4. The card according to claim 3 wherein the table of correspondence data (28) comprises:

first correspondence data which indicates, for each of the modes, a correspondence between the mode and the particular record or template, thereby a specific application, for use with communication via the contact-based external interface (12);

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second correspondence data which indicates, for each of the modes, a correspondence between the mode and the particular record or template, thereby a specific application, for use with communication via the contactless external interface (14).

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5. The card according to claim 3 or 4 which is configured to signal, between the user interface processor (31) and the secure element (20), an indication (29) of whether the contactless external interface (14) is to be used.

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6. The card according to claim 4 or 5 wherein the first correspondence data is for a Payment System Environment, PSE, and the second correspondence data is for a Proximity Payment System Environment, PPSE.

7. The card according to any one of the preceding claims wherein the secure element (20) is configured to only send the record or template corresponding to the user-selected mode via the external interface (12, 14) and not to send the records or templates corresponding to the non-selected modes when the secure element (20) is interrogated by the external card reader (50).

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8. The card according to any one of the preceding claims wherein the secure element (20) is configured to perform authentication with the external card reader (50) when a change is made to the records or templates via the external interface (12, 14) and wherein the secure element (20) is not configured to perform authentication with

the user interface processor (31) when a new mode is signalled to the secure element (20) via the internal interface (38).

9. The card according to any one of the preceding claims which is also configured
5 to operate in a default mode of operation in which the secure element (20) is configured to retrieve and return, upon receiving the interrogation command from the external card reader (50), the records or templates corresponding to all of the applications supported by the card.

10. The card according to any one of the preceding claims wherein the secure
10 element (20) is configured to, subsequently to the returning of the retrieved record or template, receive an application selection command from the external card reader to select an application in the secure element, the application selection command including the application identifier of the application associated with the retrieved and
15 returned record or template.

11. A method of operating a card comprising a secure element (20), at least one
external interface (12, 14) configured to permit communication between the secure
element and an external card reader (50), a user interface (35) and a user interface
20 processor (31), the method comprising:

hosting a plurality of applications (23) on the secure element, each having an
application identifier; and

signalling, between the user interface processor (31) and the secure element
(20) an indication (29) of a mode selected by a user at the user interface (35), the mode
25 corresponding to one of the plurality of applications to be used when the card communicates with the external reader (50);

storing, at the secure element, the mode indication (29);

storing, at the secure element, response data (26) for use when responding to
interrogation by the external card reader (50), the response data (26) comprising a set
30 of records or templates associated with the applications (23) hosted by the card respectively, each record or template including the application identifier of a respective application;

storing, at the secure element, correspondence data (28) which indicates, for each of the modes, a correspondence between the mode and a record or template to be sent for that mode;

upon receiving an interrogation command from the external card reader (50),
5 retrieving by the secure element one of the records or templates stored in the secure element, based on the selected mode as indicated by the stored mode indication, and returning by the secure element the retrieved record or template to the external card reader thereby forcing the latter to select the application associated with the returned record or template.

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12. The method according to claim 11 further comprising:

only sending the record or template corresponding to the user-selected mode via the external interface (12, 14) and not sending the records or templates corresponding to the non-selected modes when the secure element (20) is interrogated
15 by the external card reader (50).

13. The method according to any one of claims 11 to 12 wherein the at least one external interface comprises a contact-based external interface (12) and a contactless external interface (14) and the table of correspondence data comprises:

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first correspondence data which indicates, for each of the modes, a correspondence between the mode and the particular record or template, thereby a specific application, for use with communication via the contact-based external interface (12);

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second correspondence data which indicates, for each of the modes, a correspondence between the mode and the particular record or template, thereby a specific application, for use with communication via the contactless external interface (14).

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14. The method according to any one of claims 11 to 13 further comprising a default mode of operation where the secure element (20) retrieves and returns the records or templates corresponding to all of the applications supported by the card when receiving the interrogation command from the external card reader (50).

15. The method according to any one of claims 11 to 14 further comprising, subsequently to the returning of the retrieved record or template, receiving by the secure element an application selection command from the external card reader to select an application in the secure element, the application selection command
- 5 including the application identifier of the application associated with the retrieved and returned record or template.