

Combining FIDO®/CTAP2 with a Payment Wallet

This presentation outlines how the FIDO®/CTAP2 API and the W3C WebAuthn standard could be augmented with meta data holding virtual payment cards.

The authorization system builds on an enhanced EMV® concept, where a card can represent any account based payment scheme, including the international card networks and SEPA, as well as national networks.

Although not shown here, a card is after registration, also intended to be usable for payments at the counter (POS). P2P payment support is also in scope.

A detailed description of the actual data exchanges and wallet data is available at:
<https://fido-web-pay.github.io/>

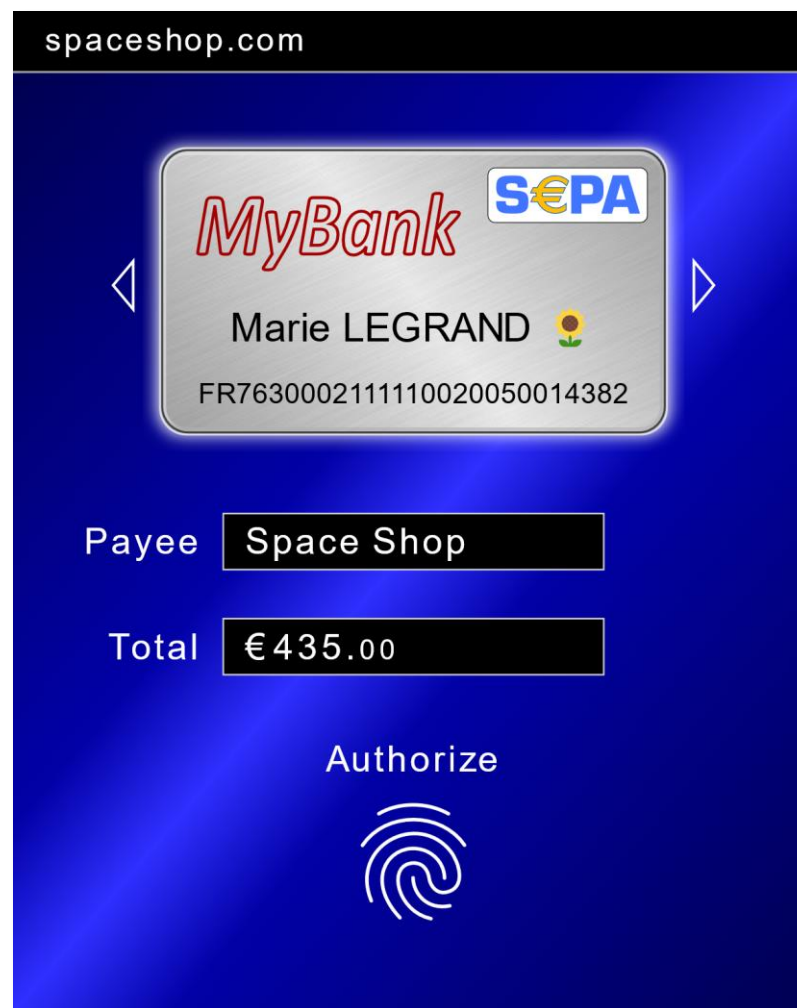
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Wallet – Non-normative UI Sample

Integrated payment experience
extending the UI compared to
current payment terminals.

The very same UI and security
solution is used regardless if
paying online or locally.



← Merchant host name

← Swipeable list of virtual cards *

← Merchant common name

← Amount to pay

← Activates the authorization key

* Only cards matching the payment networks supported by the merchant will be shown

Wallet – Enhancement of EMV Card Data

EMV Account ID (PAN) nnnnnnnnnnnnnnnnnnnn

FIDO Web Pay “Decomposed” Counterpart

Account ID	Account Identifier String	Payment network compatible account identifier. Examples: FR7630004003200001019471656 for a French IBAN and 4111111111111111 for a VISA card.
Payment Network ID	URL or Specfic String	Payment network identifier. Examples: https://banknet2.org for a bank network and visa for the VISA network.
	Issuer ID URL String	URL to an issuer endpoint like: https://mybank.fr/payment. This solution eliminates Account ID to issuer URL lookup databases.

That is, the only thing that separates card authorizations from authorizations of account-to-account payments are the variables above. However, from the users’ perspective, only card images differ.

Wallet – Virtual Card Enrollment

