SPC Pilot Update – September 23th

Douglas Fisher, Visa



Not a W3C Submission

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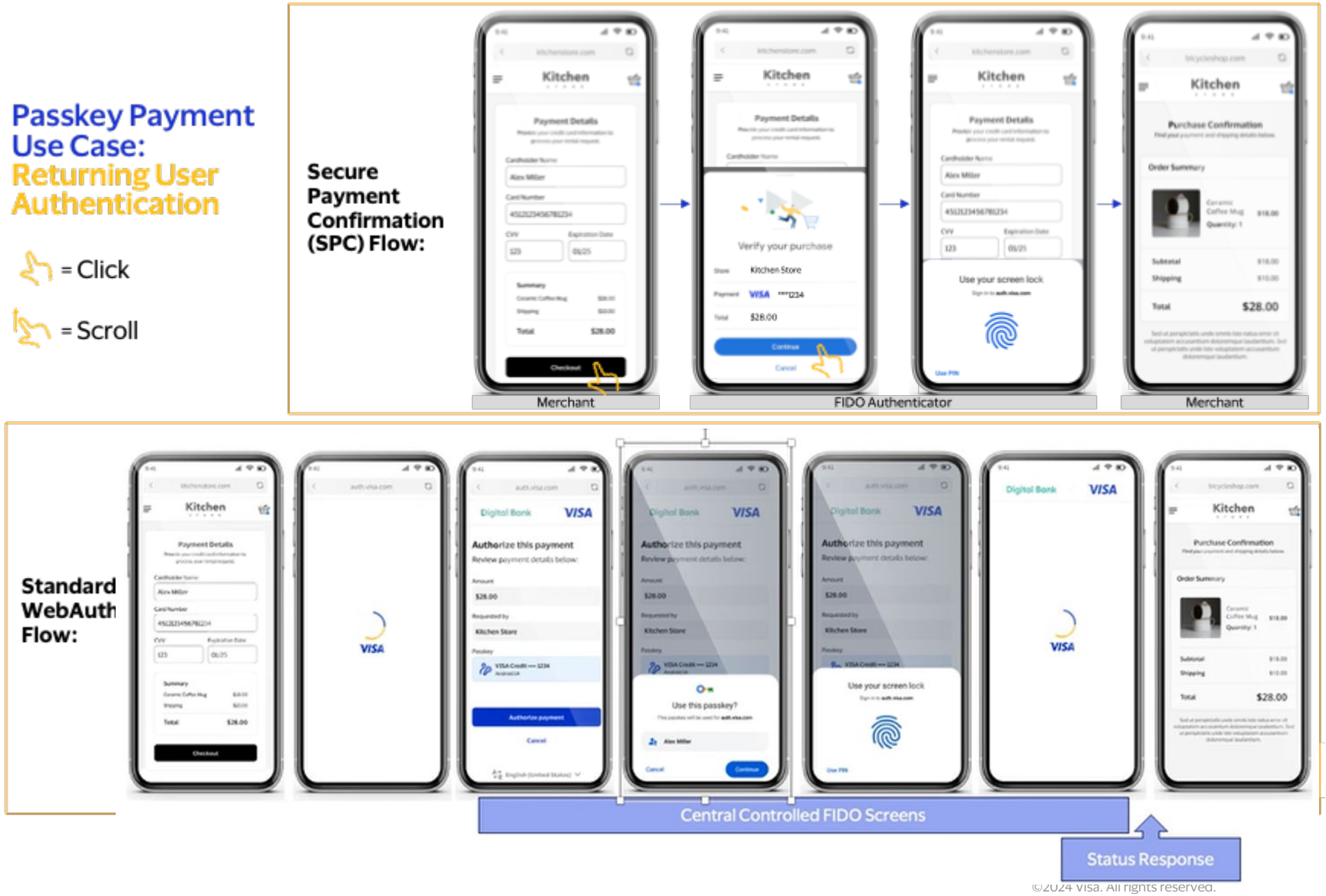
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SPC provides an enhanced FIDO user experience compared to standard WebAuthn

Better for merchants
- No user redirection; Accessible by a third party without an iframe

Better for consumer
- Less friction, faster

Better for Issuers
- SPC enables RP to validate credentials without disrupting the merchant checkout process thereby increasing adoption



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Visa is currently conducting production pilots of SPC with 3DS in the EU

- Visa is piloting SPC to obtain implementation experience with the SPC Candidate Recommendation
- The pilots cover the payment use case with 3DS and with merchant initiated SPC where the issuer is the relying party
- The objective is to obtain feedback on any barriers that would prevent SPC from scaling globally from the consumer and technical perspectives
- Pilot 1 - PLUSCARD is participating (issuer processor) along with Sparkasse Neunkirchen (issuer) and DKB (issuer). On the PSP side, Amys-IT (Germany) is participating along with a merchant, Tariso. Netcetera is providing 3DS 2.3.1.1 components and FIDO server
- Pilot 2 - S-Pankki (issuer) is participating. Entersekt is providing a 3DS 2.2 components with a Visa custom extension along with a FIDO server















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SPC Pilot : Technical Feedback (1/2)

1. SPC support via an EMV 3DS v2.2 message extension is feasible and was successfully implemented in production. Implementation effort is straight forward:
   - Assuming the issuer has implemented support for SPC flow in v2.3.1.1, translating support for that to v2.2 SPC message extensions should be straightforward. The same should be true if issuers implement support on v2.2 first, then switch to v2.3.1.1.
   - Implementing merchant support for SPC should also be straightforward, but it can be made even easier if PSPs/3DSS providers can provide an API that merchants can call
   - Implementing RP operations from scratch is a big effort for issuers/ACS operators. There is a space here for FIDO server providers to make adoption easier
2. It will be difficult to have wide-spread adoption of SPC authentication given the current support levels of the different OS's (Windows, Mac, Android, but not iOS/iPadOS) and browsers (only Chrome and Edge). Additionally, there have been issues encountered on Android devices in general and on specific Android device models/OS versions.
3. Will SPC be able to make use of the proposed new error codes under Explainer: New Error Codes (2024 Edition)? These codes would provide valuable signals to the ACS/RP (https://github.com/w3c/webauthn/wiki/Explainer:-New-Error-Codes-(2024-Edition)).

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SPC Pilot : Technical Feedback (2/2)

4. To support card life cycle management, it would be helpful to have an API that would allow RPs to "signal" credential/passkey providers which credential to delete: https://github.com/w3c/webauthn/wiki/Explainer:-WebAuthn-Signal-API-explainer

5. Given RP's/ACS providers have no prior indicator over the presence/absence of credentials on a device, RP's/ACS providers will need to devise their own strong device/browser ID mechanisms to prevent a poor user experience

6. Server side WebAuthn libraries are now gradually working on SPC support (e.g. https://github.com/Yubico/java-webauthn-server/issues/285 on Yubico's java-webauthn-server, and https://github.com/go-webauthn/webauthn/issues/123 for the go-webauthn library), suggest encouraging developers of server side WebAuthn libraries to support SPC.

7. It seems contradictory that while passkeys can be synced across devices, the SPC third party payment bit (indicator that the credential is an SPC credential) is still fixed to the browser, at least on Chrome desktop. Suggest developing consensus on how the third party payment bit should be stored (i.e. OS?)

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Research Objectives



- Do participants feel comfortable with the **SPC process**? What questions do they have?
  - Do participants know the roles that the merchant, browser, issuer, and card network play in the SPC process? Are they comfortable with it, based on their understanding?
- Do participants feel comfortable with **enrollment**?
  - After enrolling, do participants know that the credential can be used with that PAN, device, and browser at any accepting merchant?
- How do participants feel about the **enrollment process**? Is it quick and intuitive?
  - Do participants want any additional information during authentication?
  - Is the information shown clear?
- How do participants think **error messages** should appear when authentication fails?
- Do participants think SPC is ready for **consumer testing**?

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What we've heard so far...

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I'd most likely enroll for SPC whenever I have the option to as the authentication process is faster and easier than any other method.

— PLUSCARD employee



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“SPC will definitely add value to whole payment ecosystem, as it removes friction of authentication-process and reduces abandonment. I truly believe that SPC will improve the competitiveness of card-based payments in emerging payment market.”.

— S-Pankki employee



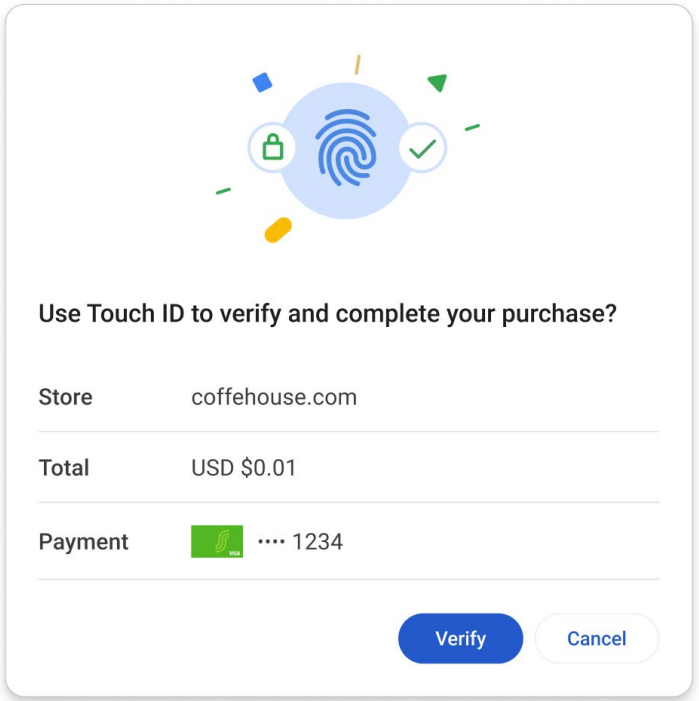
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UI Dialog Options

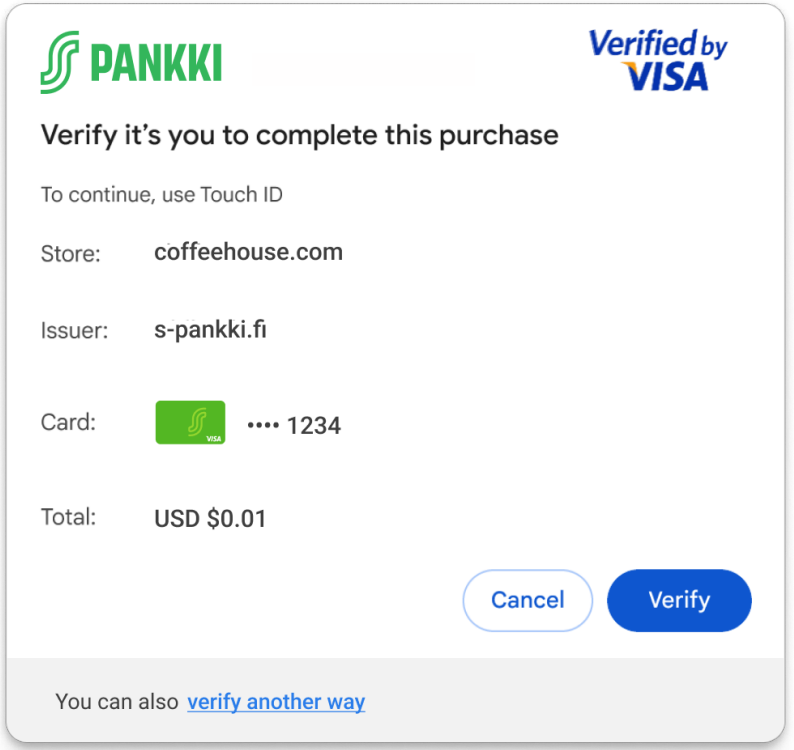
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UI Dialog options shown to participants

A (current)



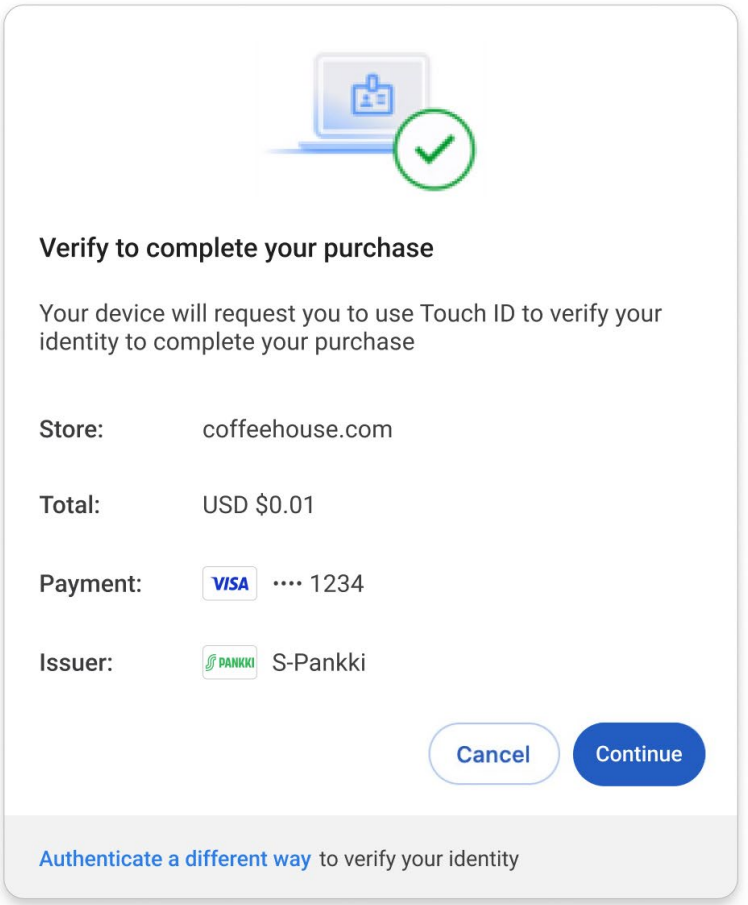
B







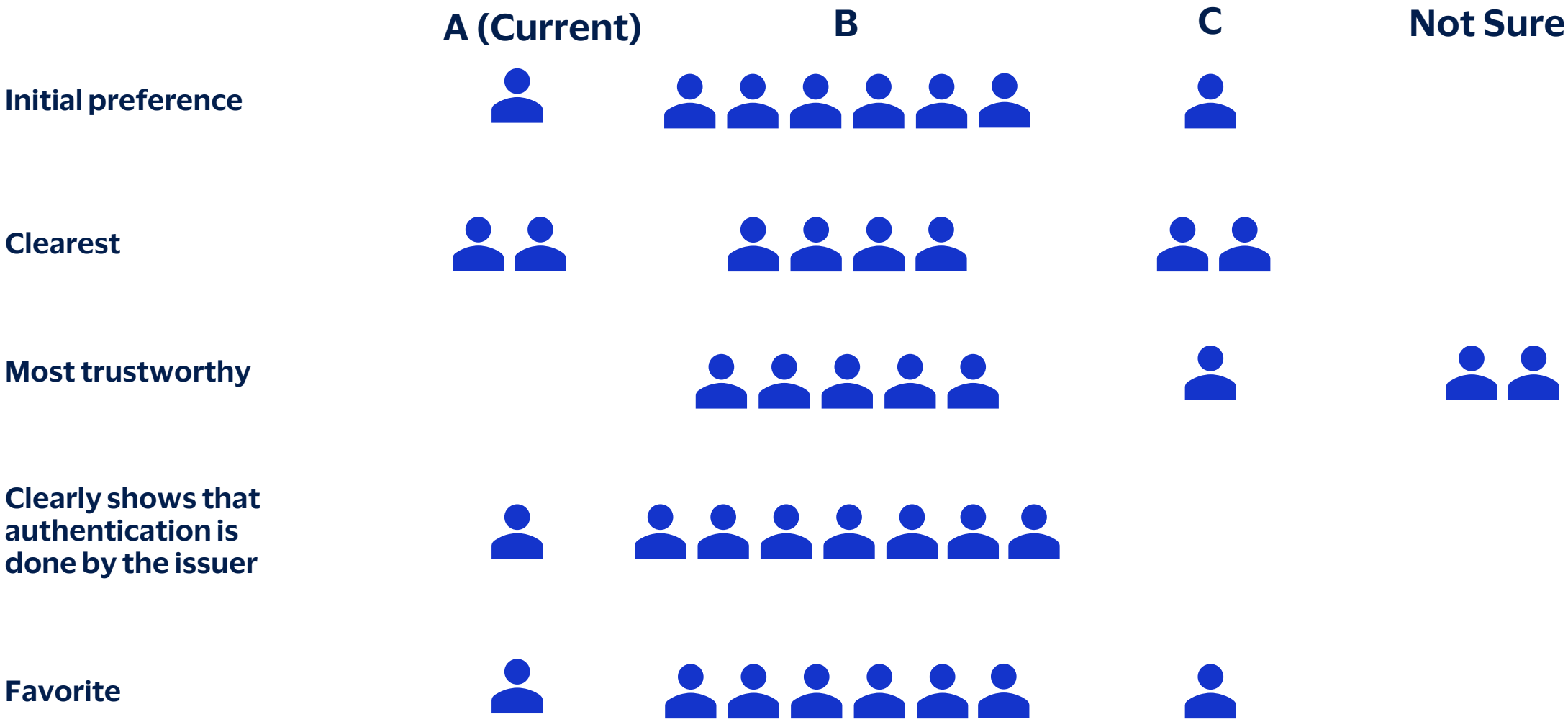
C



Note: Chrome design team supported UI A/B testing by creating a prototype that allows switching the SPC UI displayed. In the B option the network and issuer logos are aligned with the EMVco UX/UI design guidelines

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Feedback on UI Dialog Options



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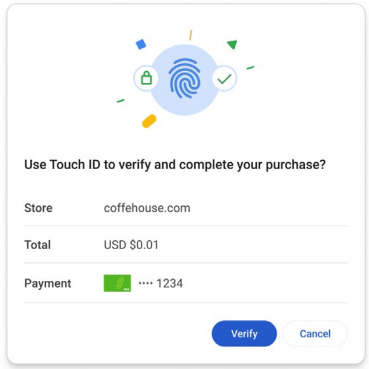
Most participants preferred option B

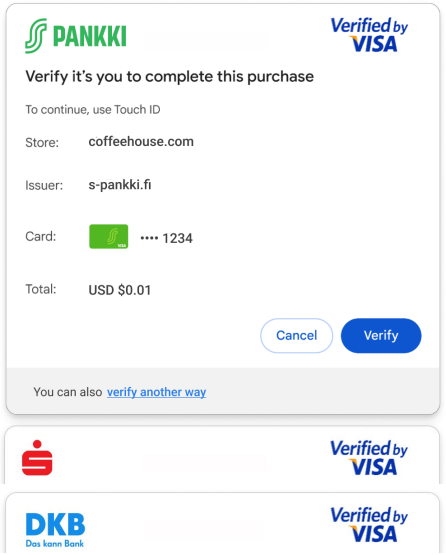
"Because I see the Sparkasse logo and the familiar Screen from 3DS" – PLUSCARD employee

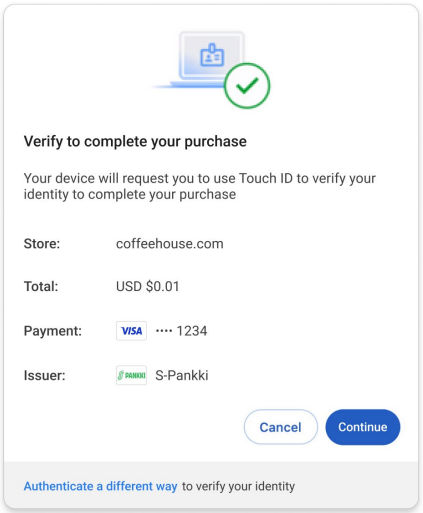
"Logo of issuer and Verified by issuer should raise level of trust" – PLUSCARD employee

"I prefer seeing The S-Pankki logo on the top of The screen to build trust and show bit more S-Pankki look & feel." – S-Pankki employee

	A (Current)	B	C	Not Sure
Initial preference	1	6	1	







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Participants shared ideas for improvement …

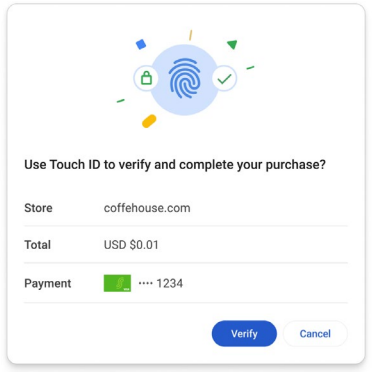
"Show the device name entered by the cardholder during enrollment" – PLUSCARD employee

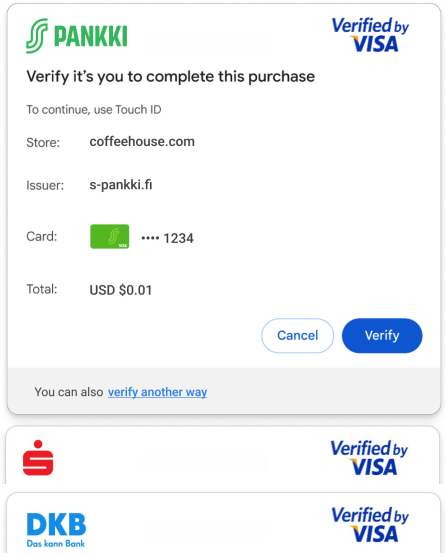
"Text instructions could be more clear" – S-Pankki employee

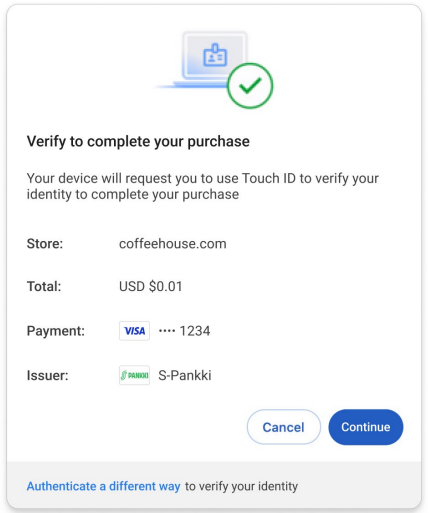
"Verify -button should be the first one from the left" – S-Pankki employee

"To continue, use Touch ID" is potentially confusing as what the consumer has enabled on device won't be known. Also. currency notation unusual with "USD" and "$" - Visa employee

	A (Current)	B	C	Not Sure
Favorite				







Note:

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