Can Johnny be a whistleblower? A qualitative user study of a social authentication Signal extension in an adversarial scenario

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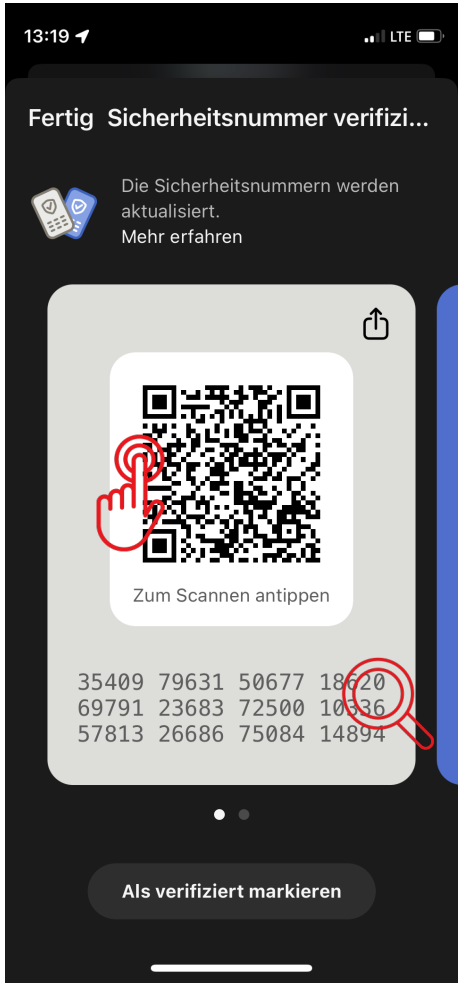
CURRENT AUTHENTICATION CEREMONIES

Current Authentication Ceremonies



AC = verifying the public key

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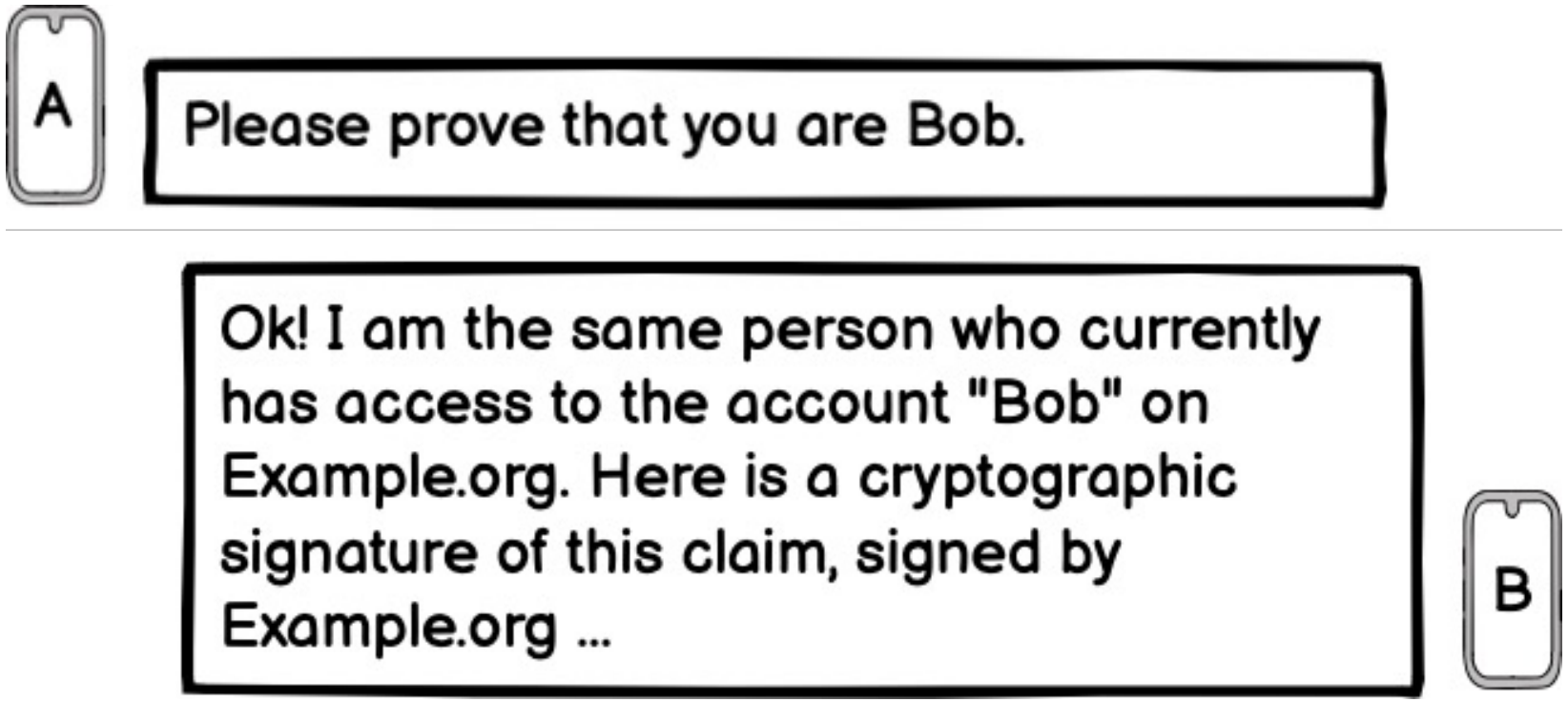
NEW: SOCIAL AUTHENTICATION

New Authentication Ceremony: Social Authentication



HOW SECURE IS SOCIAL AUTHENTICATION?

Study Design

- Lab study ~1h
- Whistleblower scenario
  - Participant should share files about corruption in the government
- 3 journalists – 3 possible ACs
- No-win scenario: PITM attack
- Compensation: additional money for correct decisions

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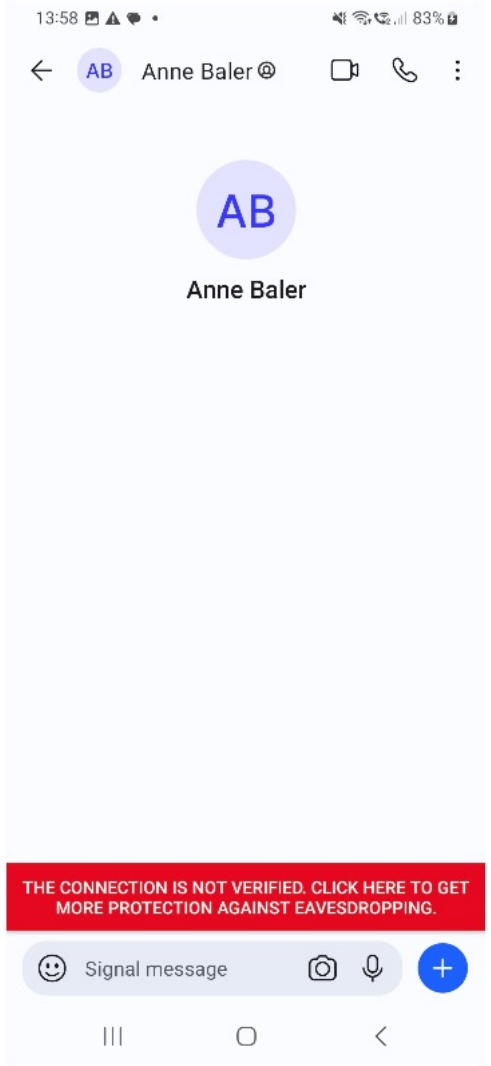
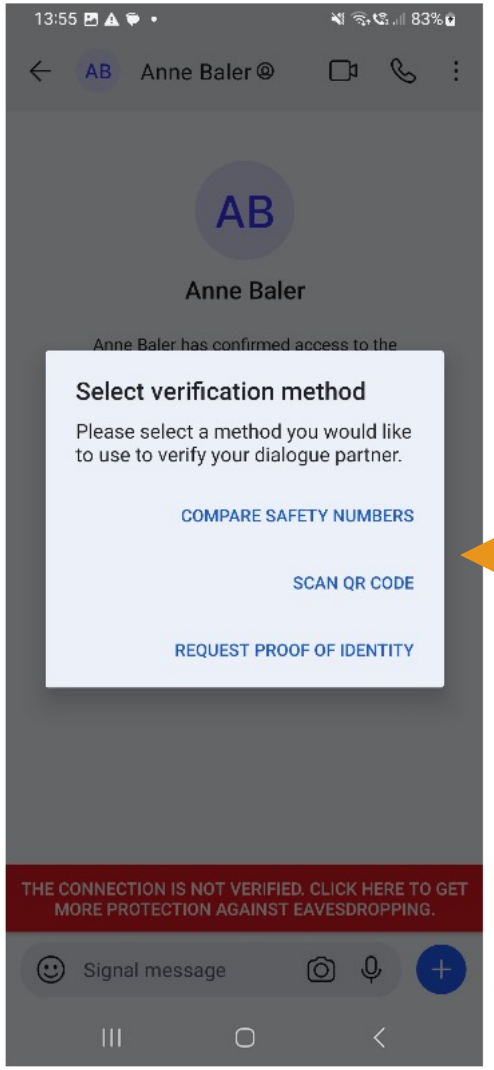
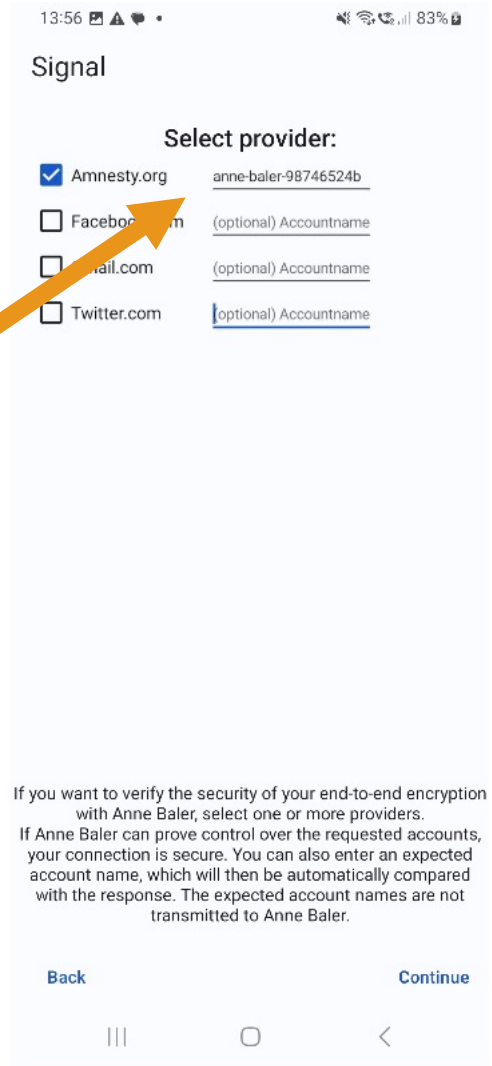
Social Authencation

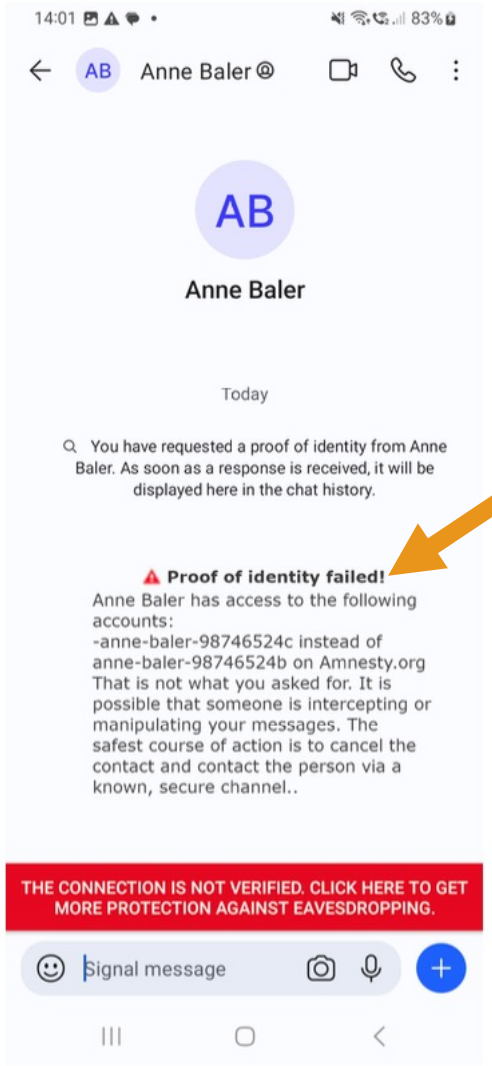
Leading the User to the AC





UI - Social Authentication





RESULTS - HOW SECURE IS SOCIAL AUTHENTICATION?

Results

- 18 participants
- 7 failed the scenario (send the data)
- Themes
  - In-band comparison (4x)
  - Gambling for more compensation (1x)
  - Stress during the study (1x)
  - **Fast-clicking (1x)**

What now?

- Scenario allowed participants to reason and decide
- Social authentication caused less failures then current ACs
- More research is needed on the perception of SA

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Any Questions/Comments?

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