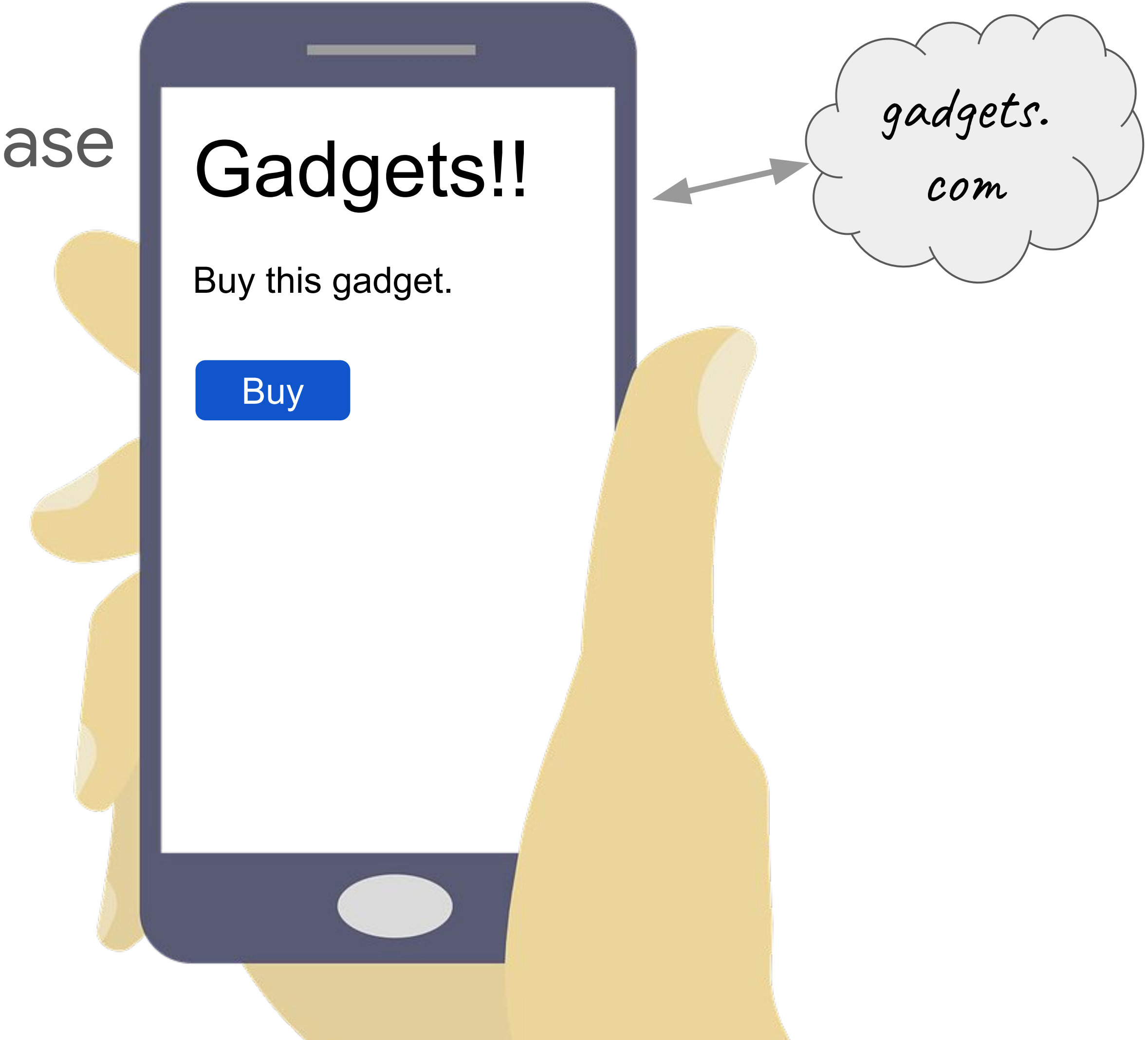
3P Credential Creation in Webauthn

Lisbon Plenary
2020-02-05

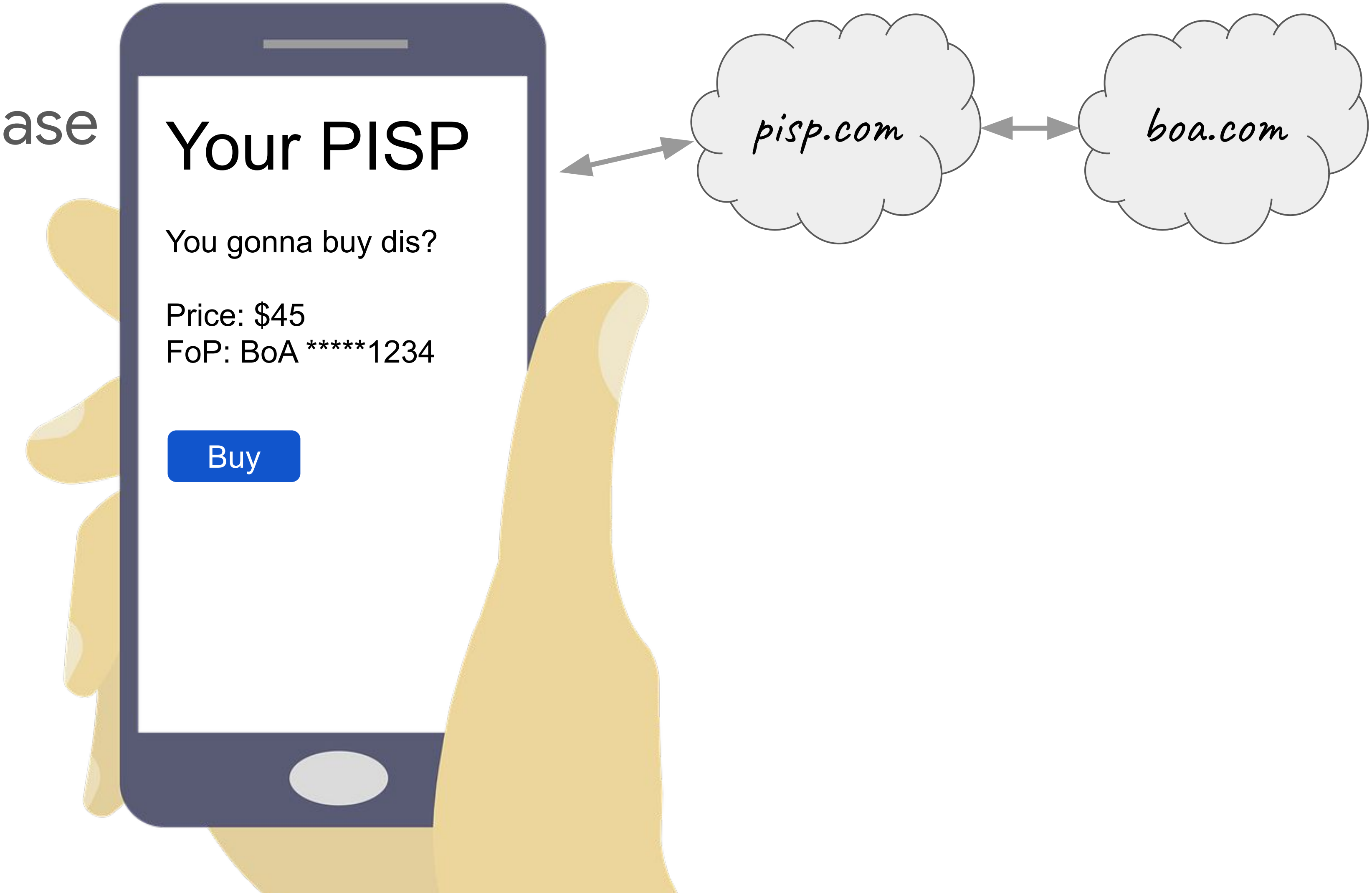
Use case



Gadgets!!

Buy this gadget.

Use case

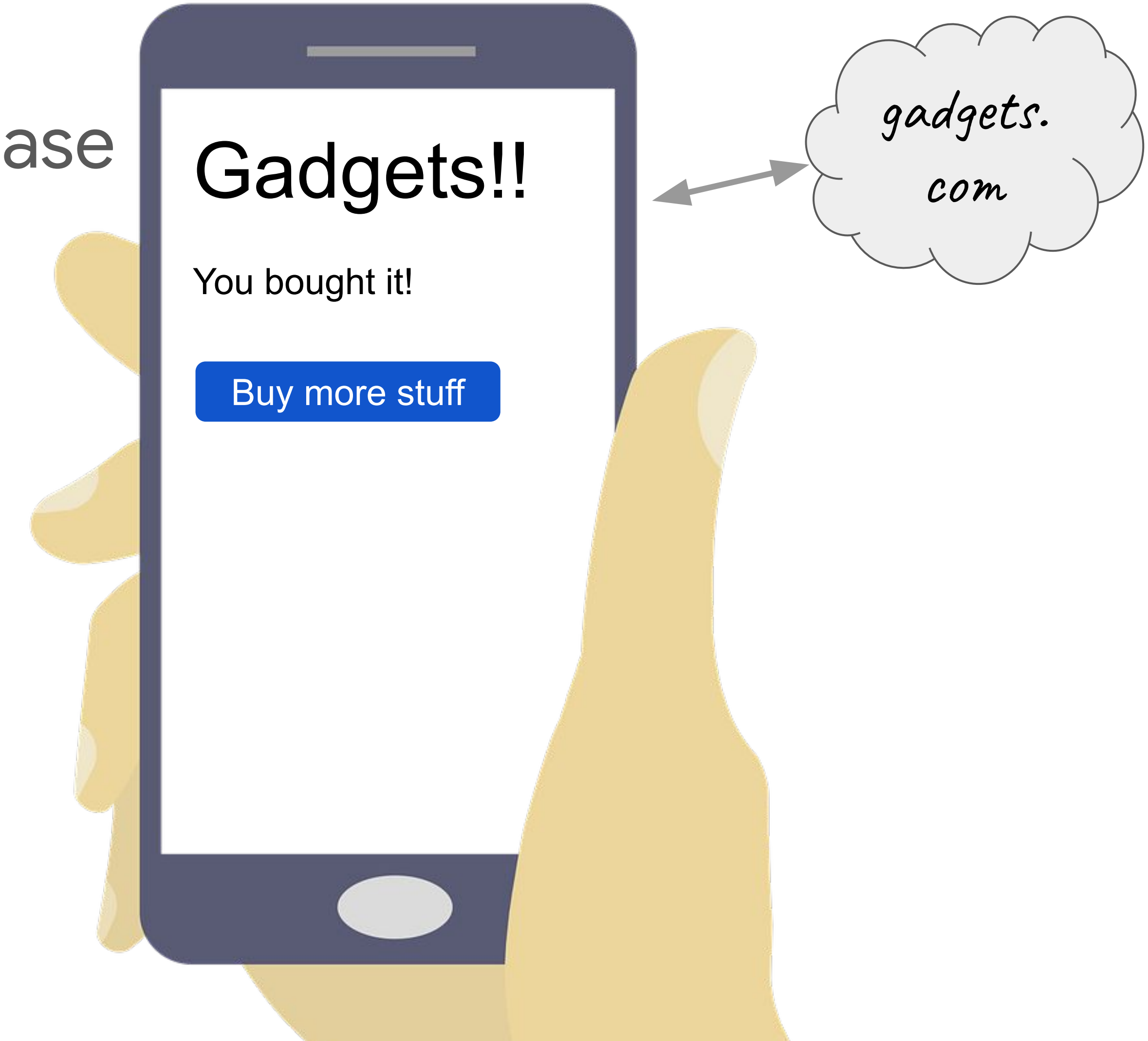


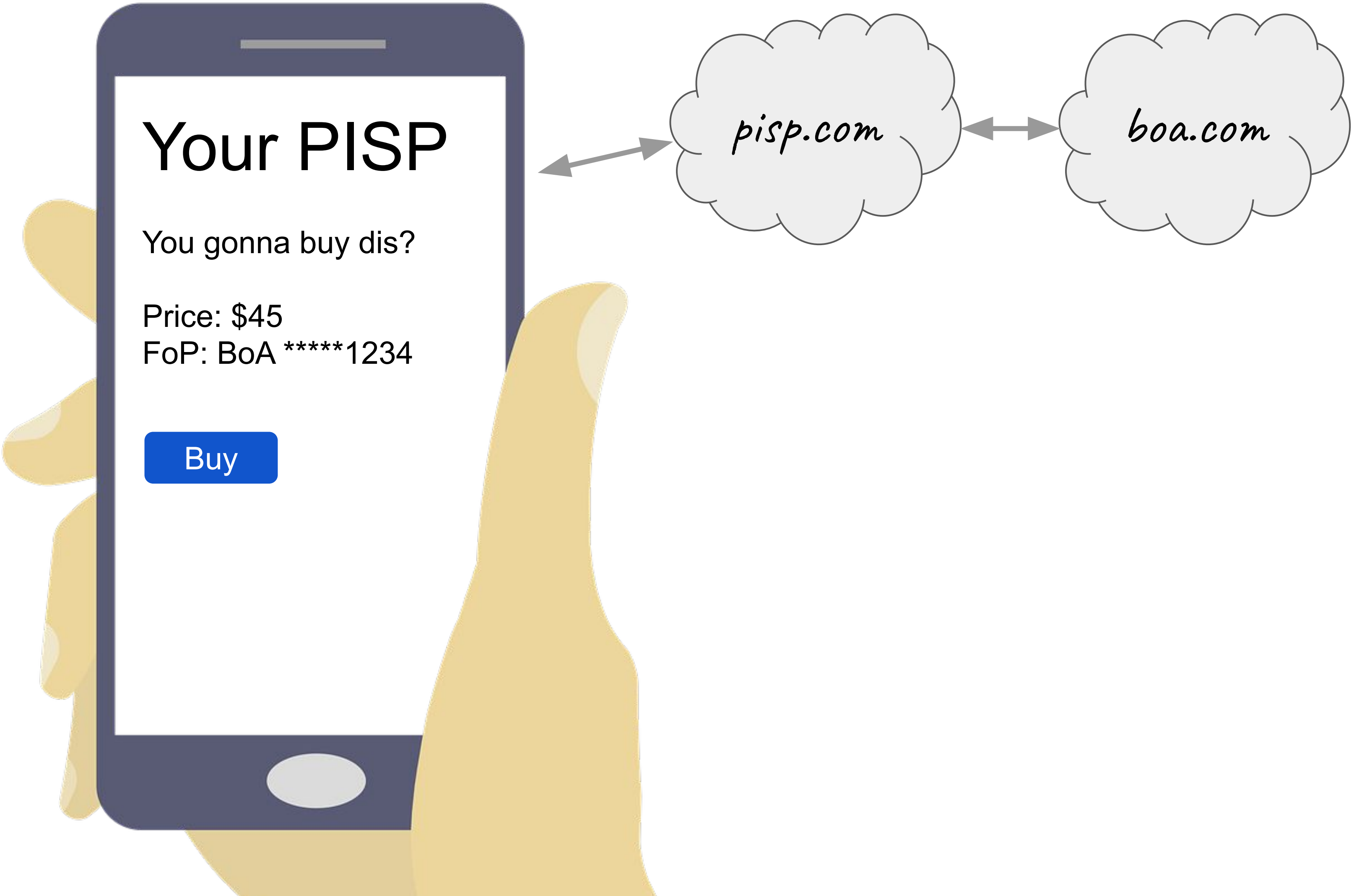
Your PISP

You gonna buy dis?

Price: $45
FoP: BoA *****1234

Use case





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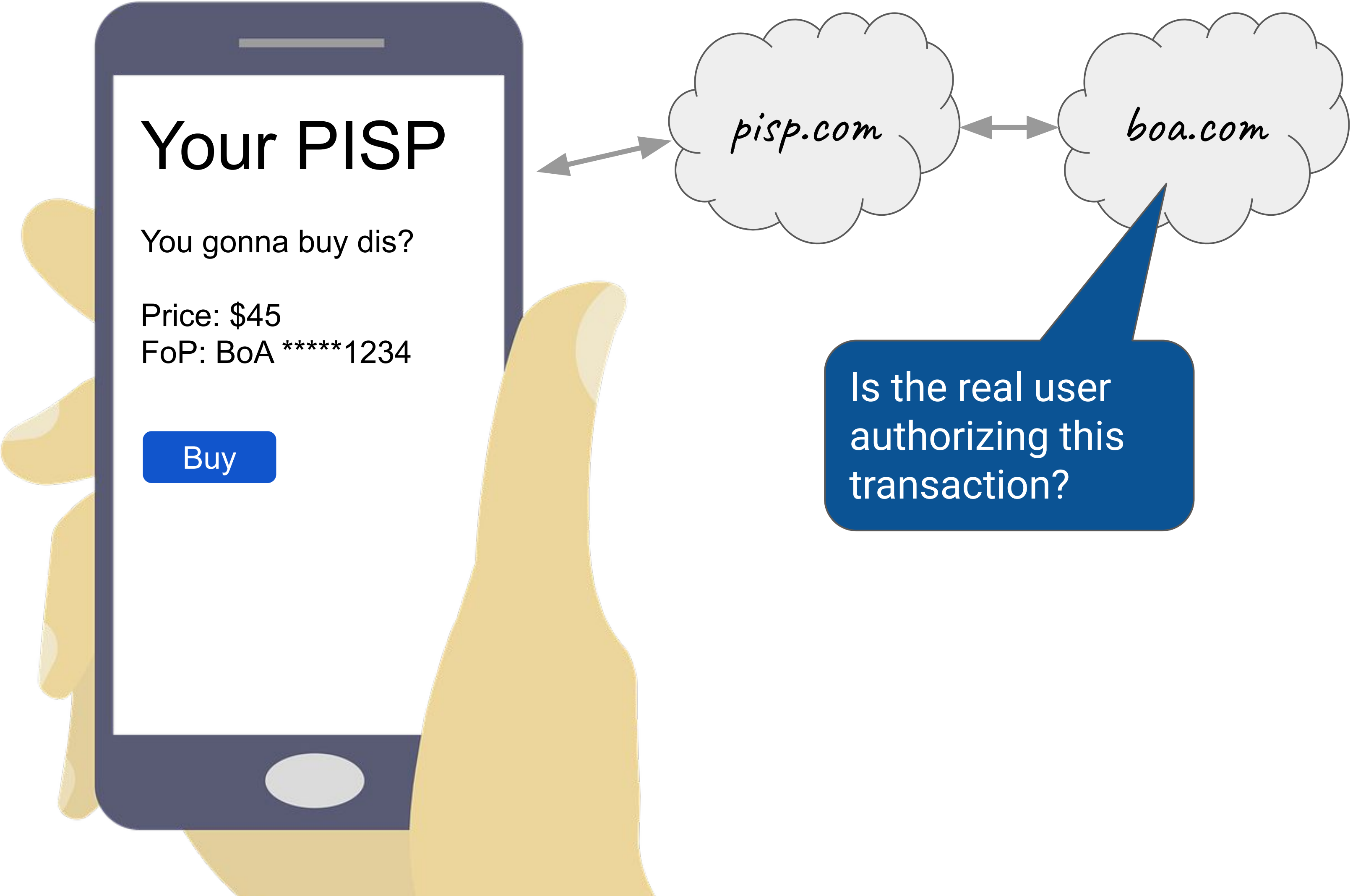

Your PISP

You gonna buy dis?

Price: $45
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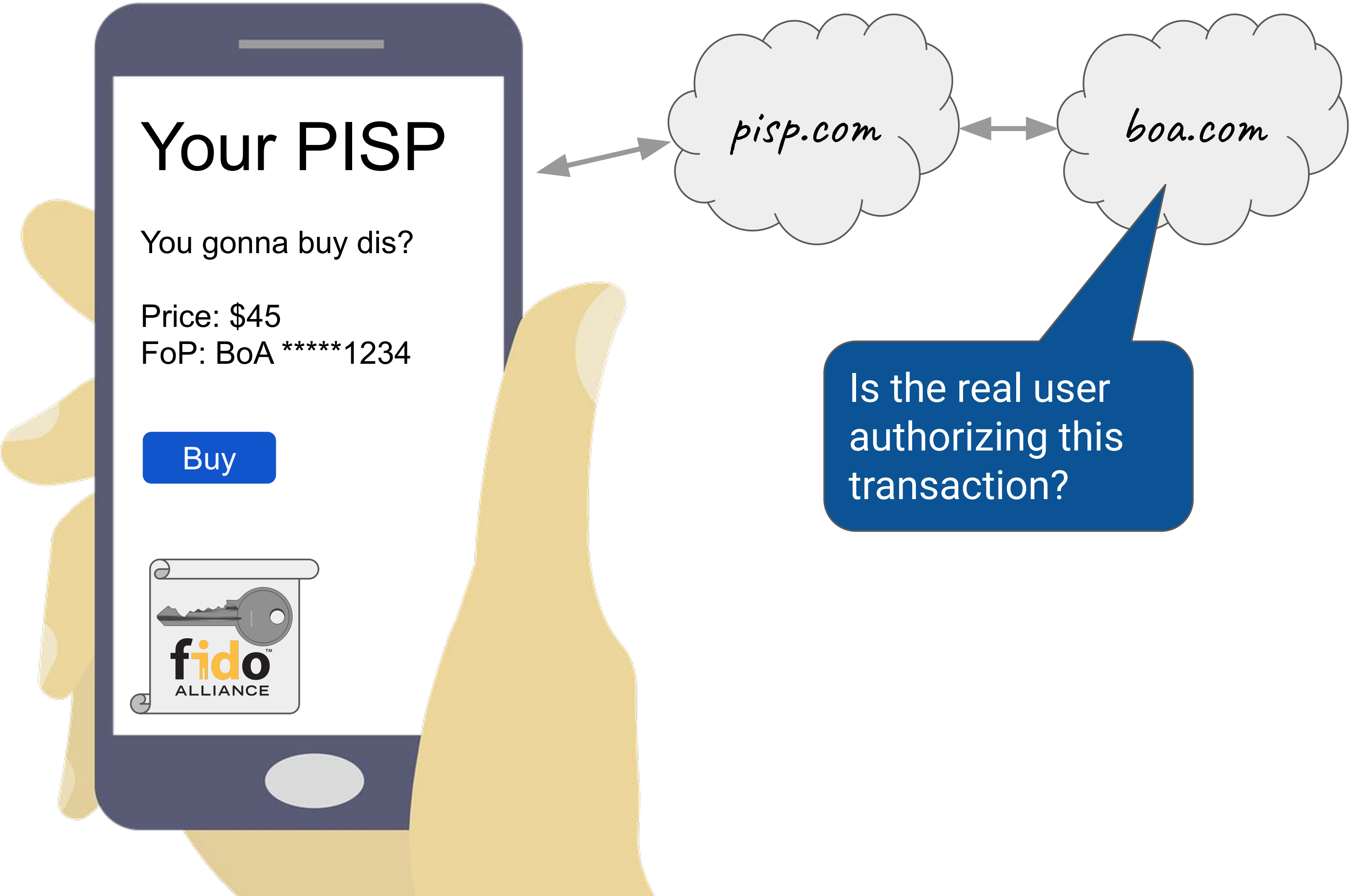
Is the real user authorizing this transaction?



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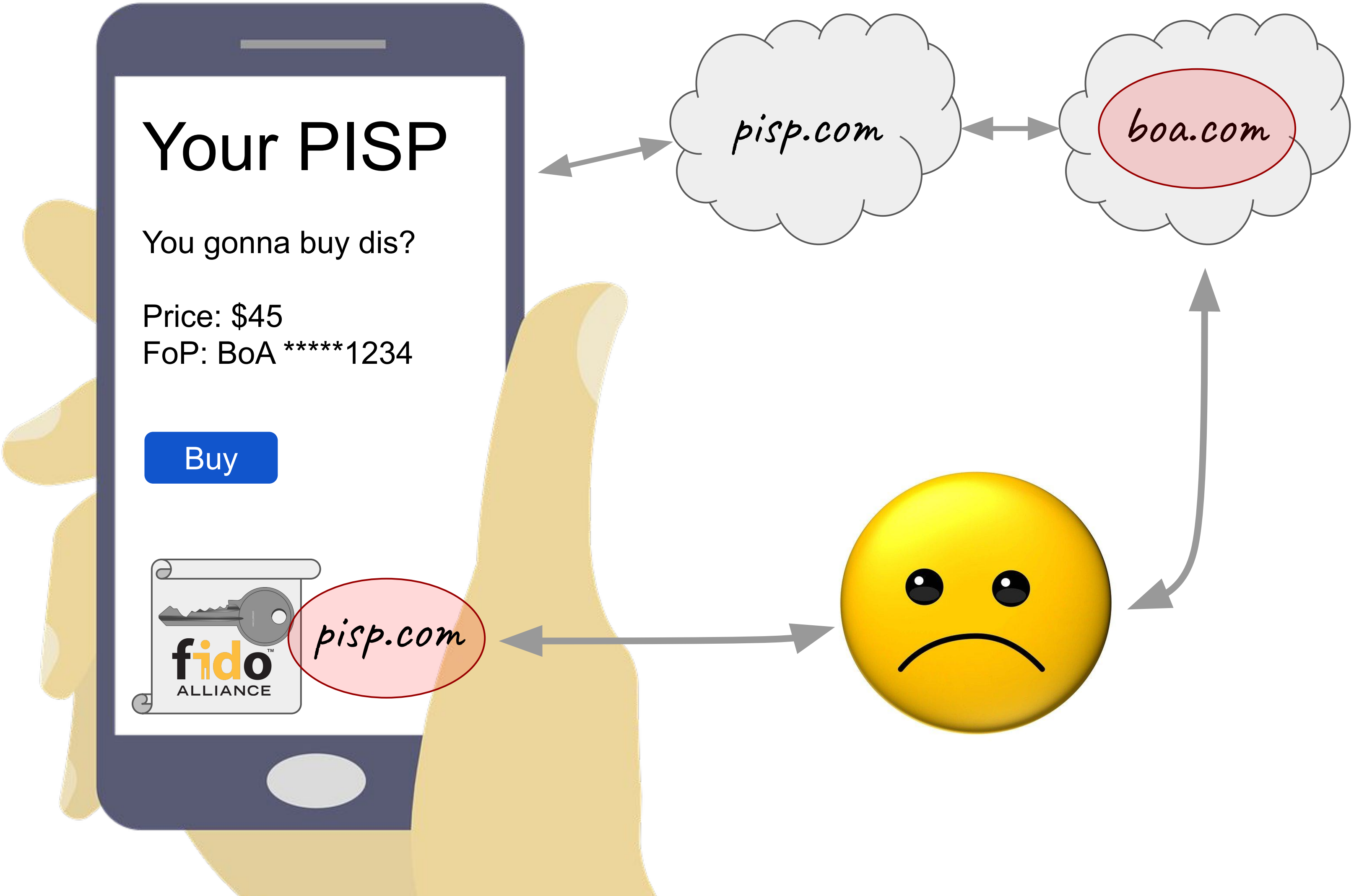

Your PISP

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Price: $45
FoP: BoA *****1234

Buy

Requirements

- No pre-existing trust between PISP and “bank”
- “Bank” wants to directly authenticate endpoint.
- No additional network connections (other than to pisp.com)

Proposal:

“Bank” directly creates FIDO credential at client,
but ***scoped to PISP...***

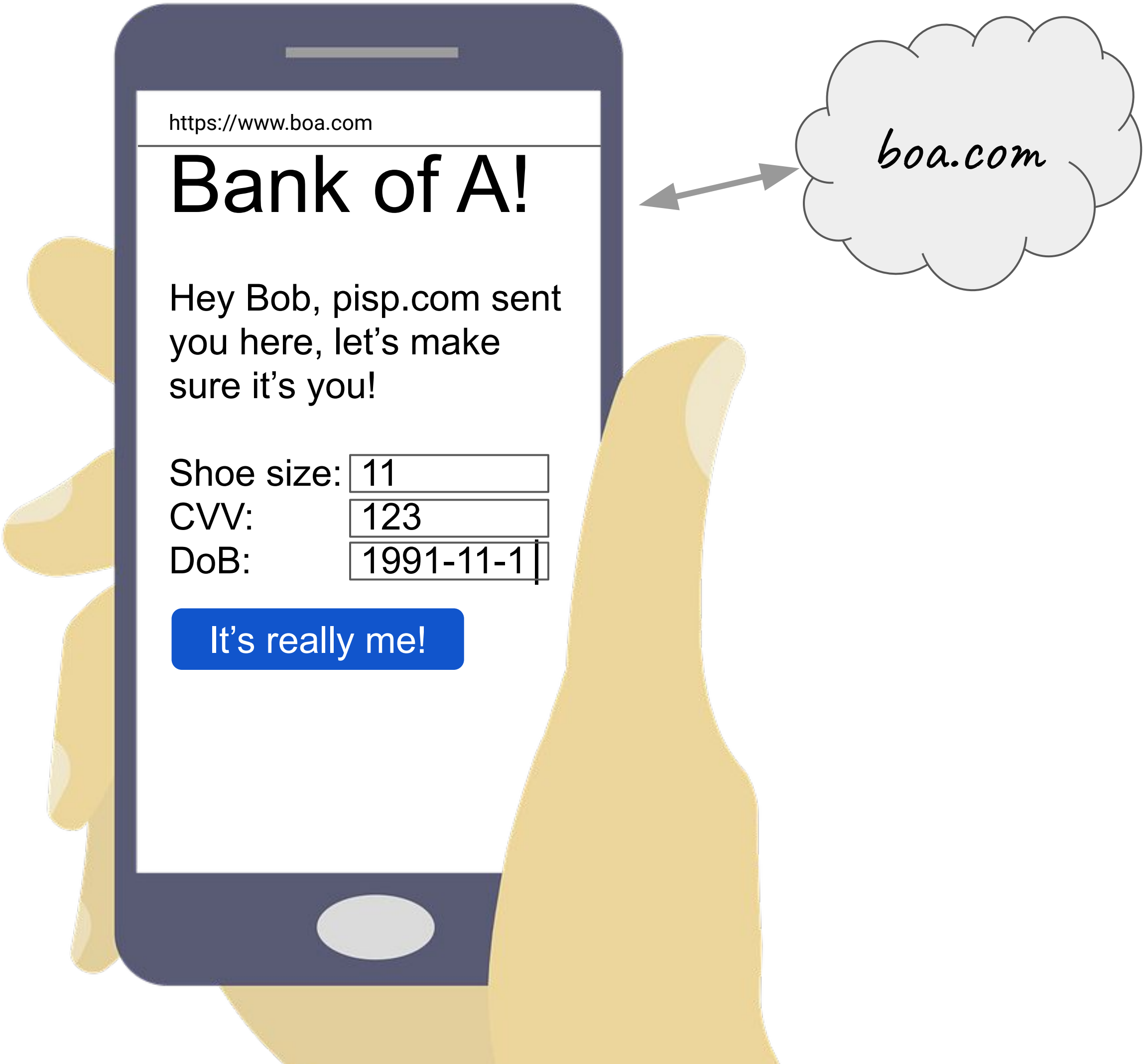
...at KYC-time.

Your PISP

Welcome to your brand new PISP!

Let’s get started!

Name:	Bob Smith
Bank:	BoA
Acct#:	87611234



https://www.boa.com

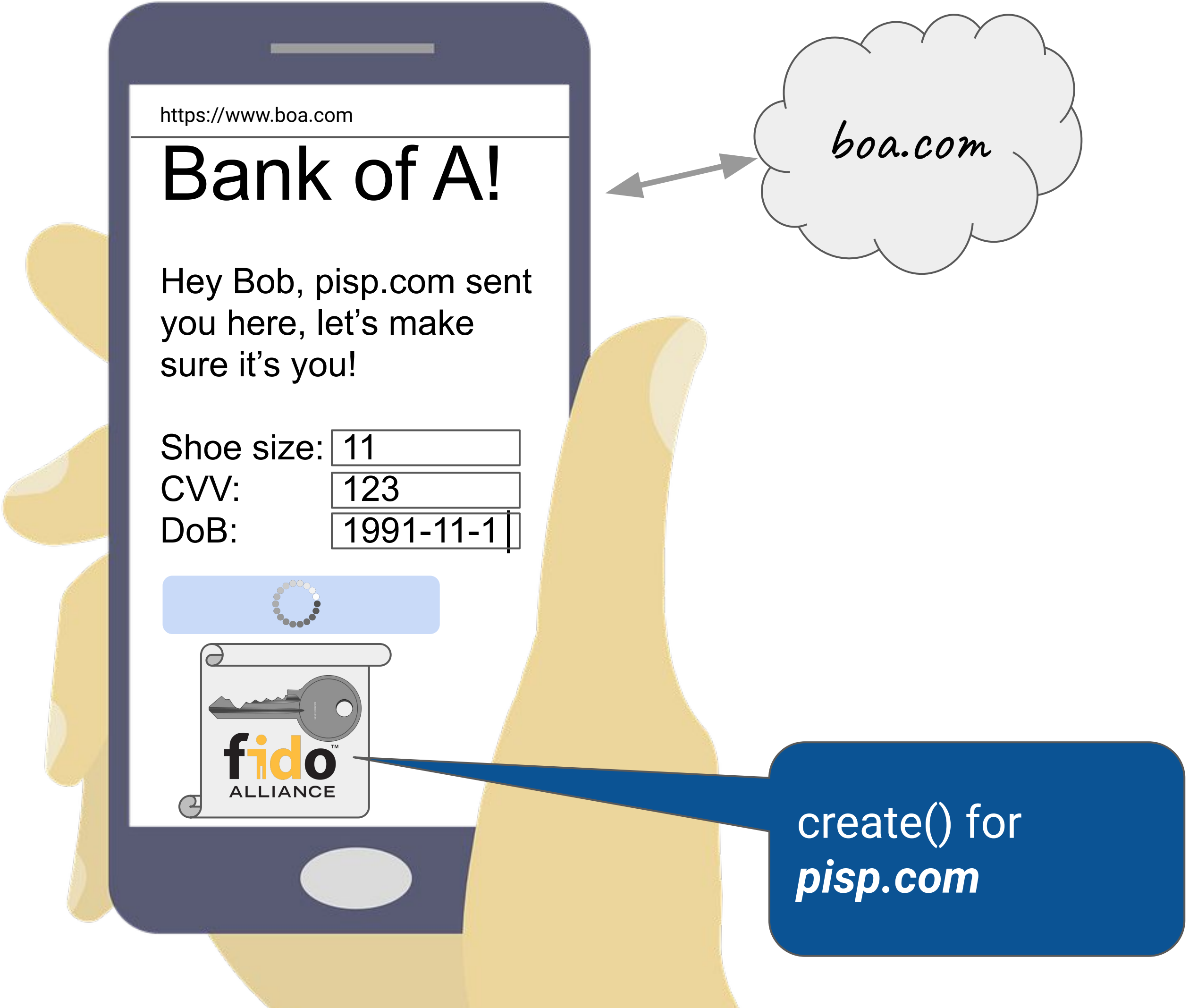
Bank of A!

Hey Bob, pisp.com sent you here, let’s make sure it’s you!

Shoe size: 11

CVV: 123

DoB: 1991-11-1



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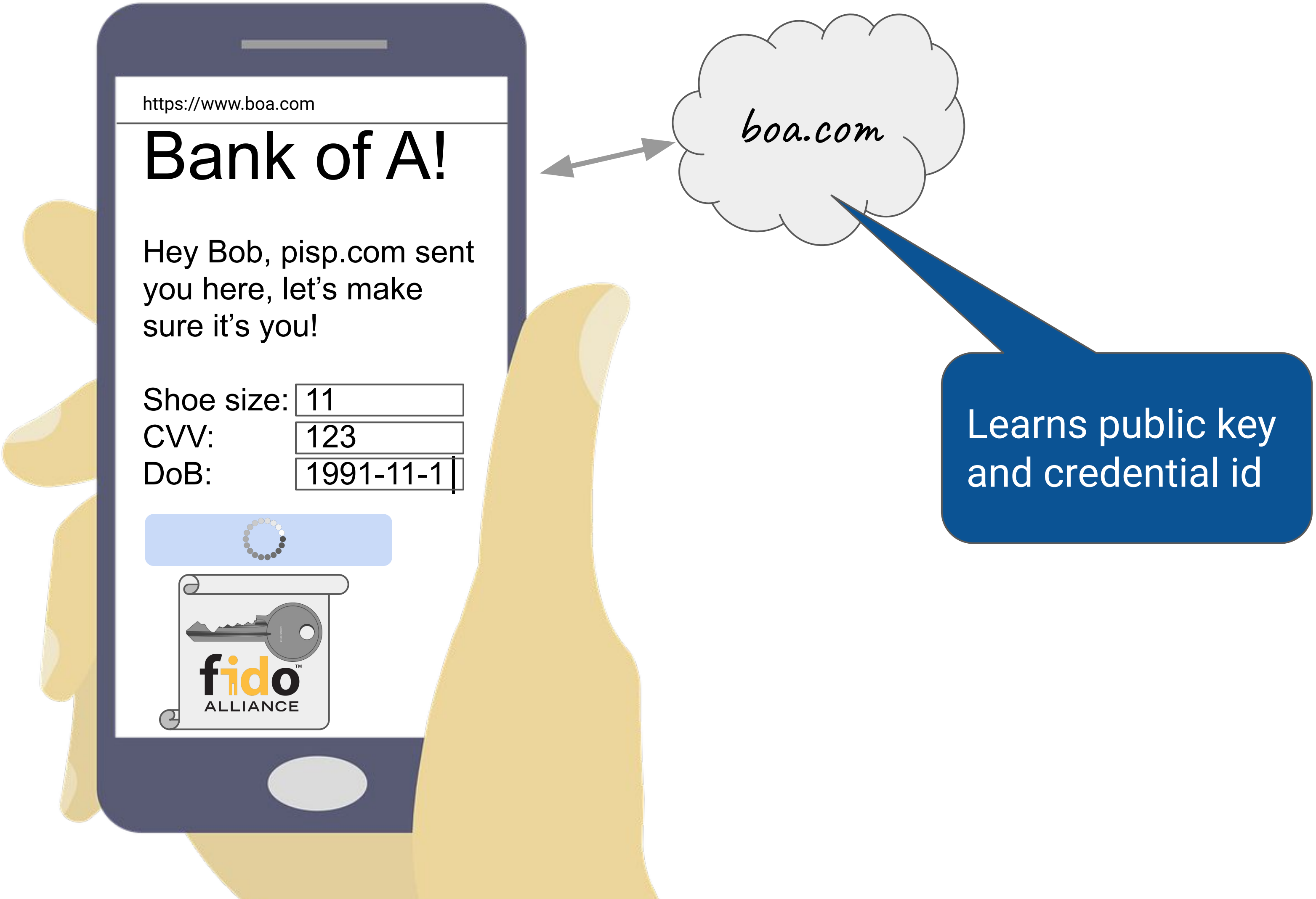
Bank of A!

Hey Bob, pisp.com sent you here, let’s make sure it’s you!

Shoe size: 11
CVV: 123
DoB: 1991-11-1

create() for ***pisp.com***



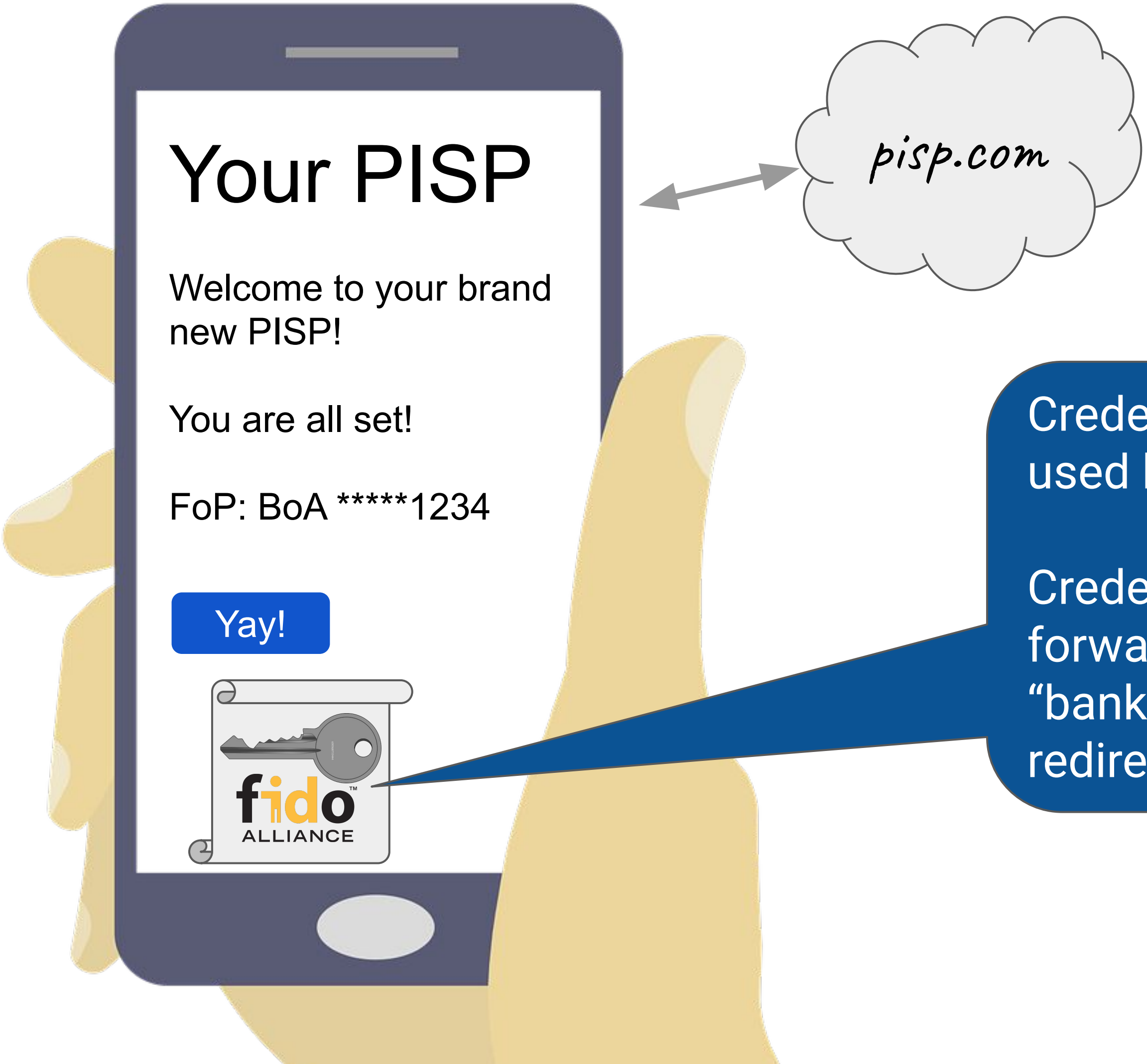
https://www.boa.com

Bank of A!

Hey Bob, pisp.com sent you here, let’s make sure it’s you!

Shoe size: 11
CVV: 123
DoB: 1991-11-1

Learns public key and credential id



Your PISP

Welcome to your brand new PISP!

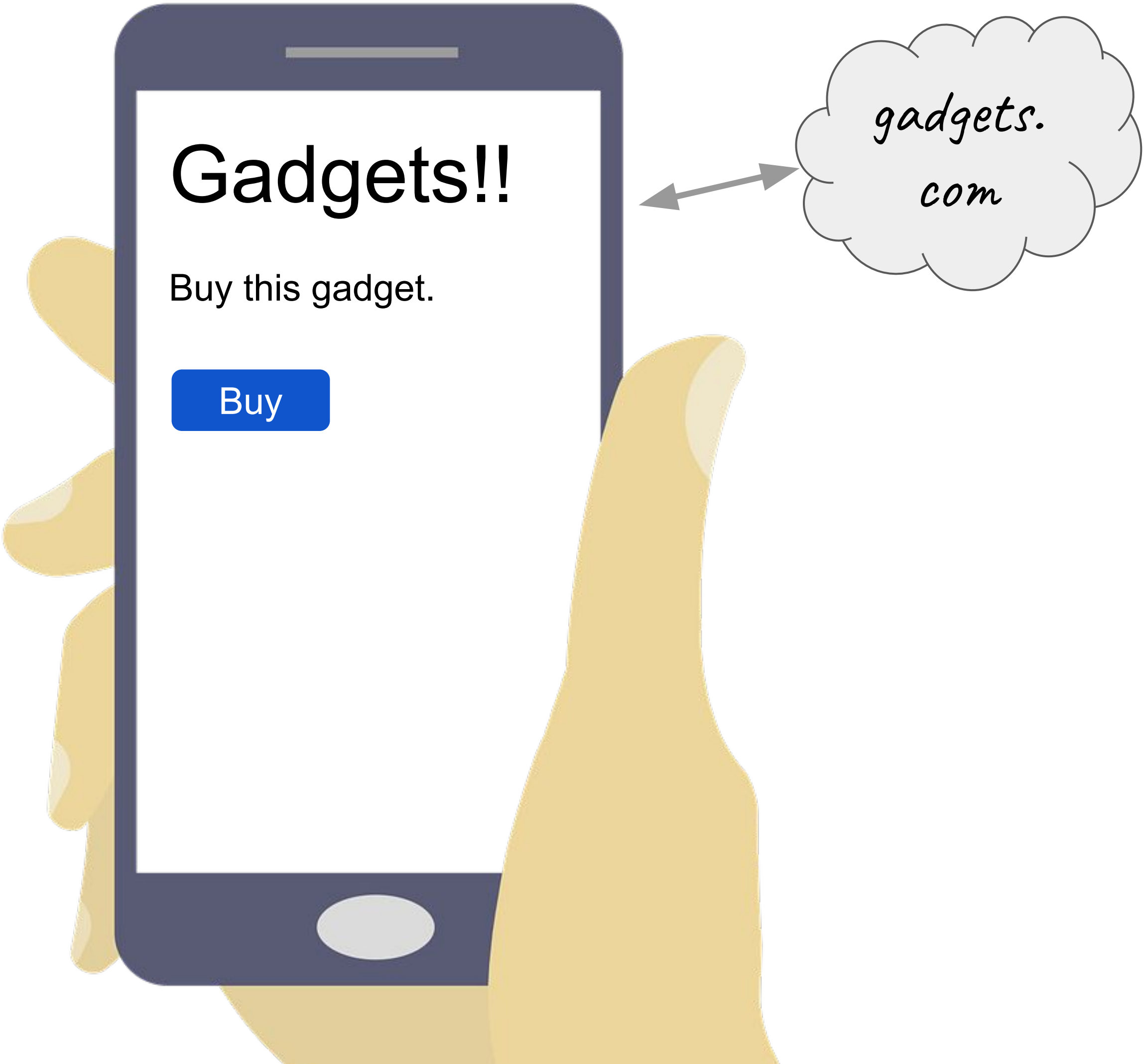
You are all set!

FoP: BoA *****1234

Credential can be used by PISP.

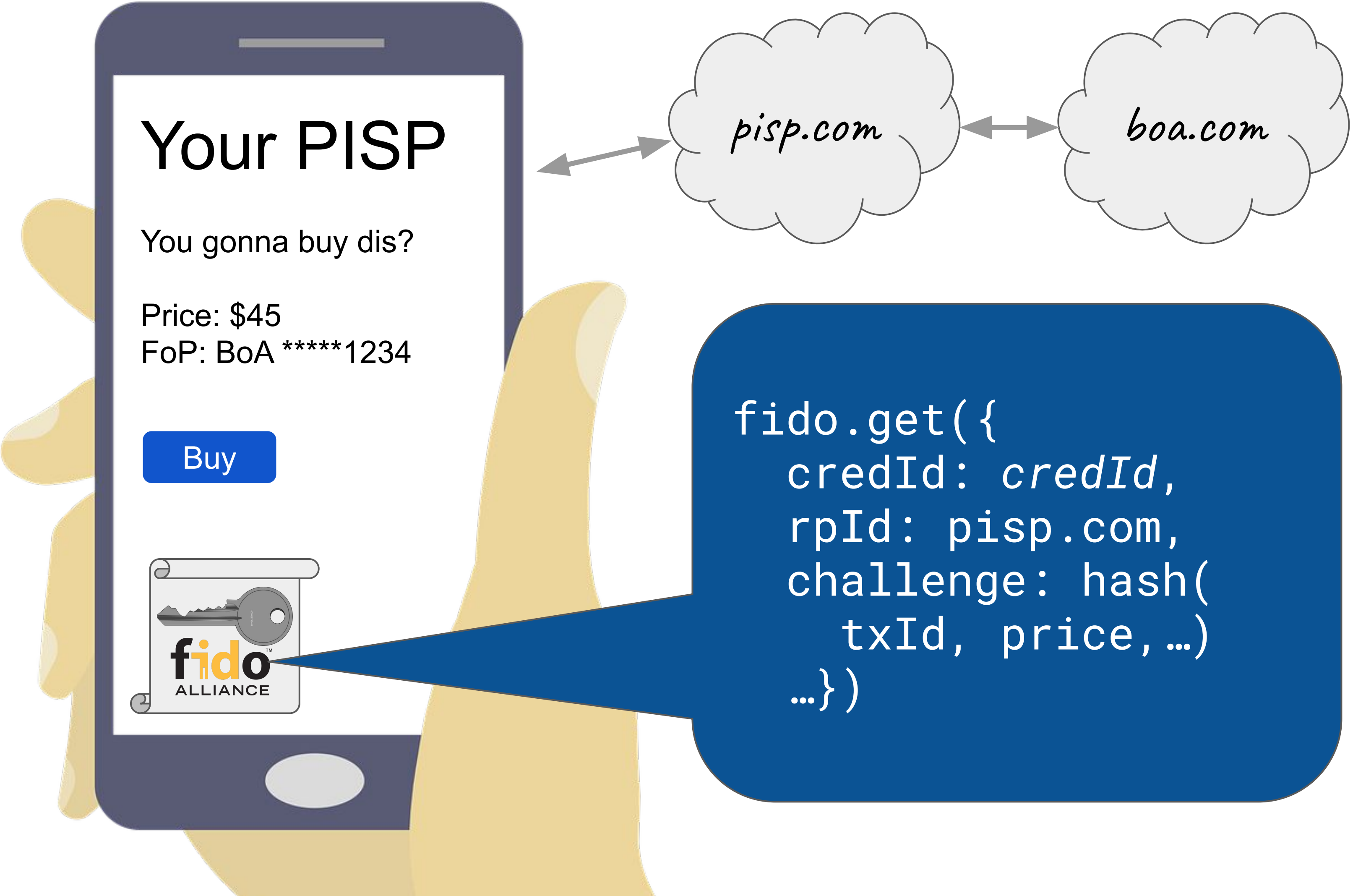
Credential ID was forwarded by “bank” during redirect.

at transaction time...



Gadgets!!

Buy this gadget.



Your PISP

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Price: $45
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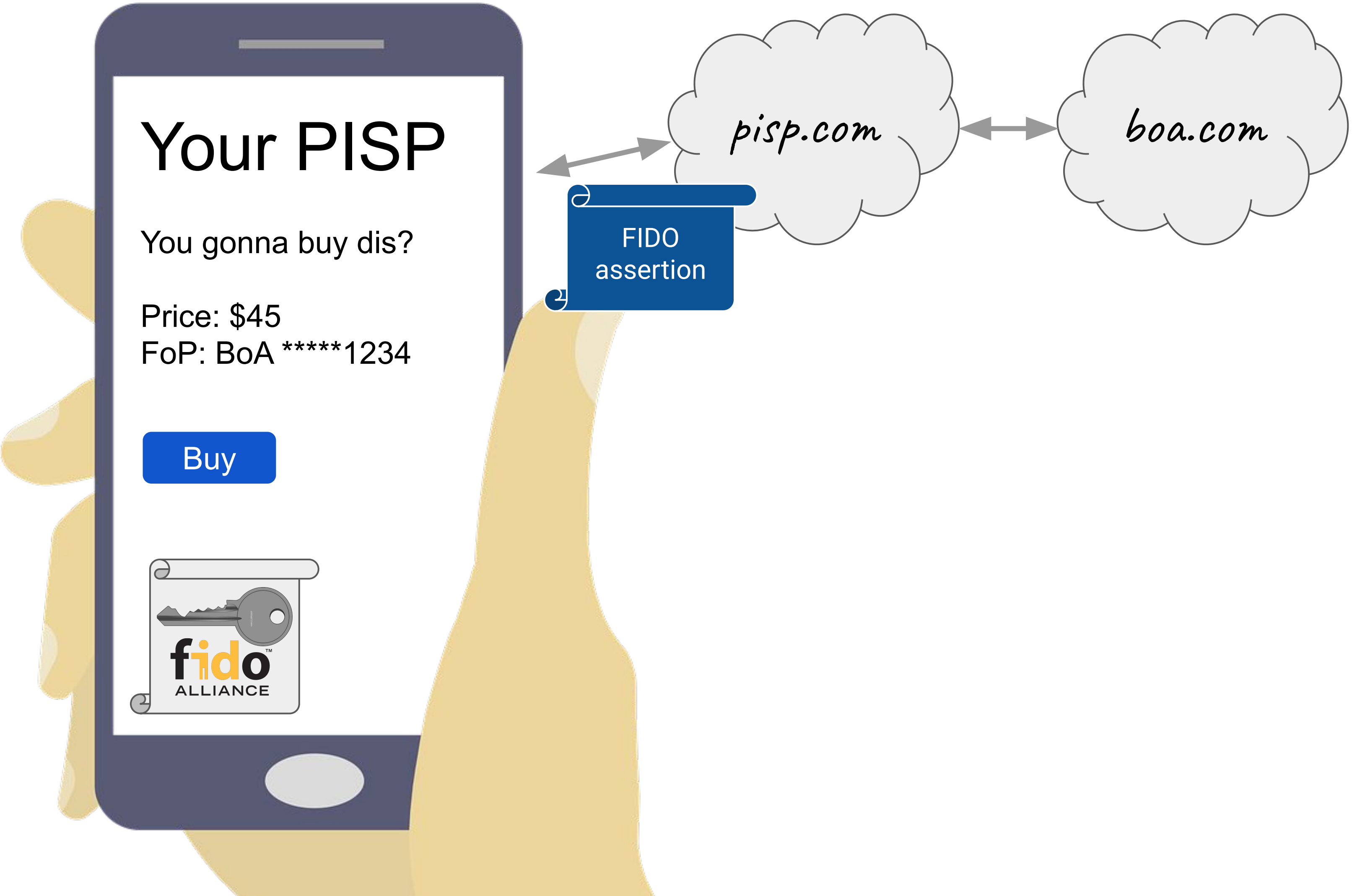
Buy

```
fido.get({
  credId: credId,
  rpId: pisp.com,
  challenge: hash(
    txId, price,…)
  …})
```



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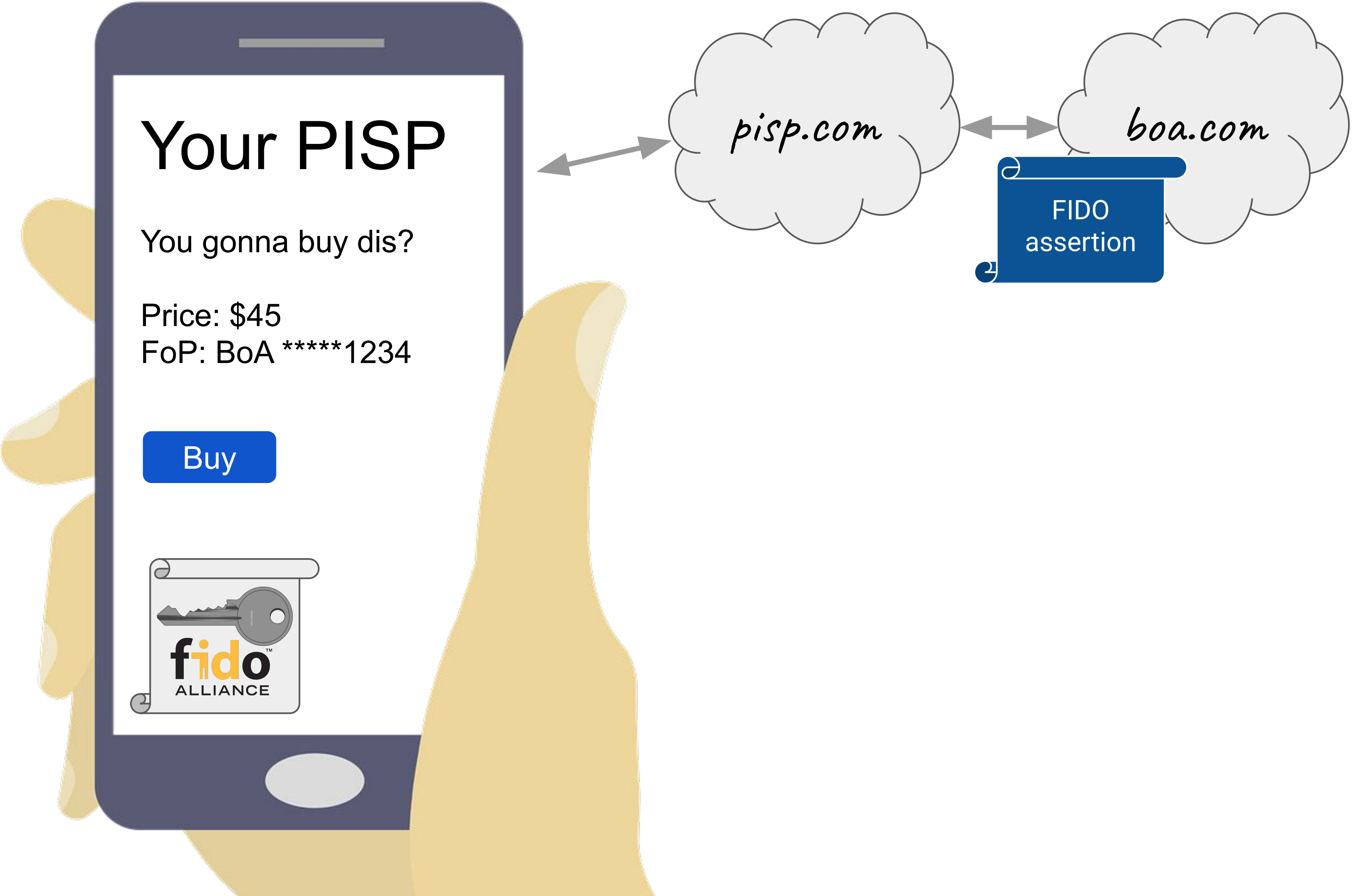

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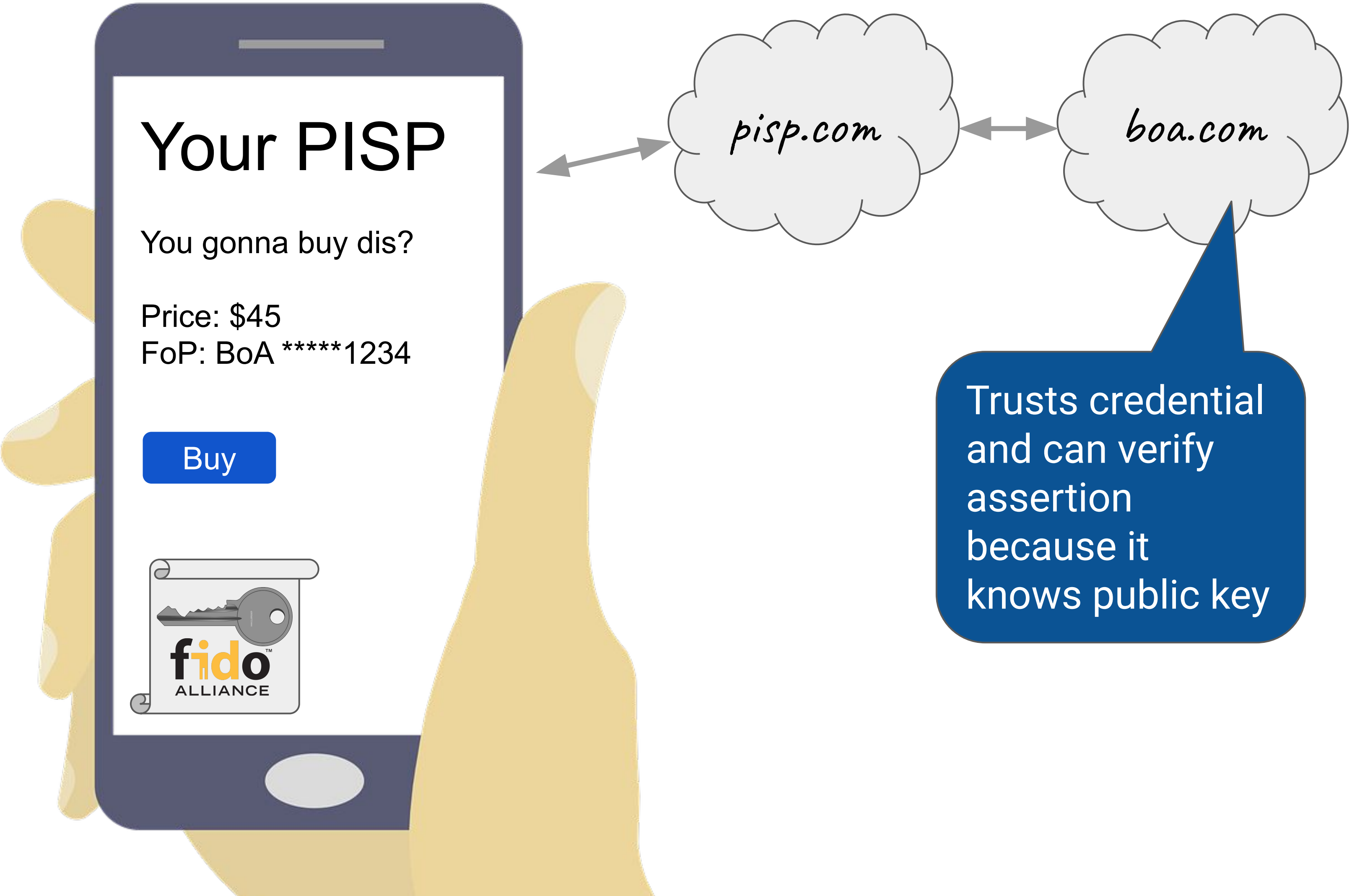

Your PISP

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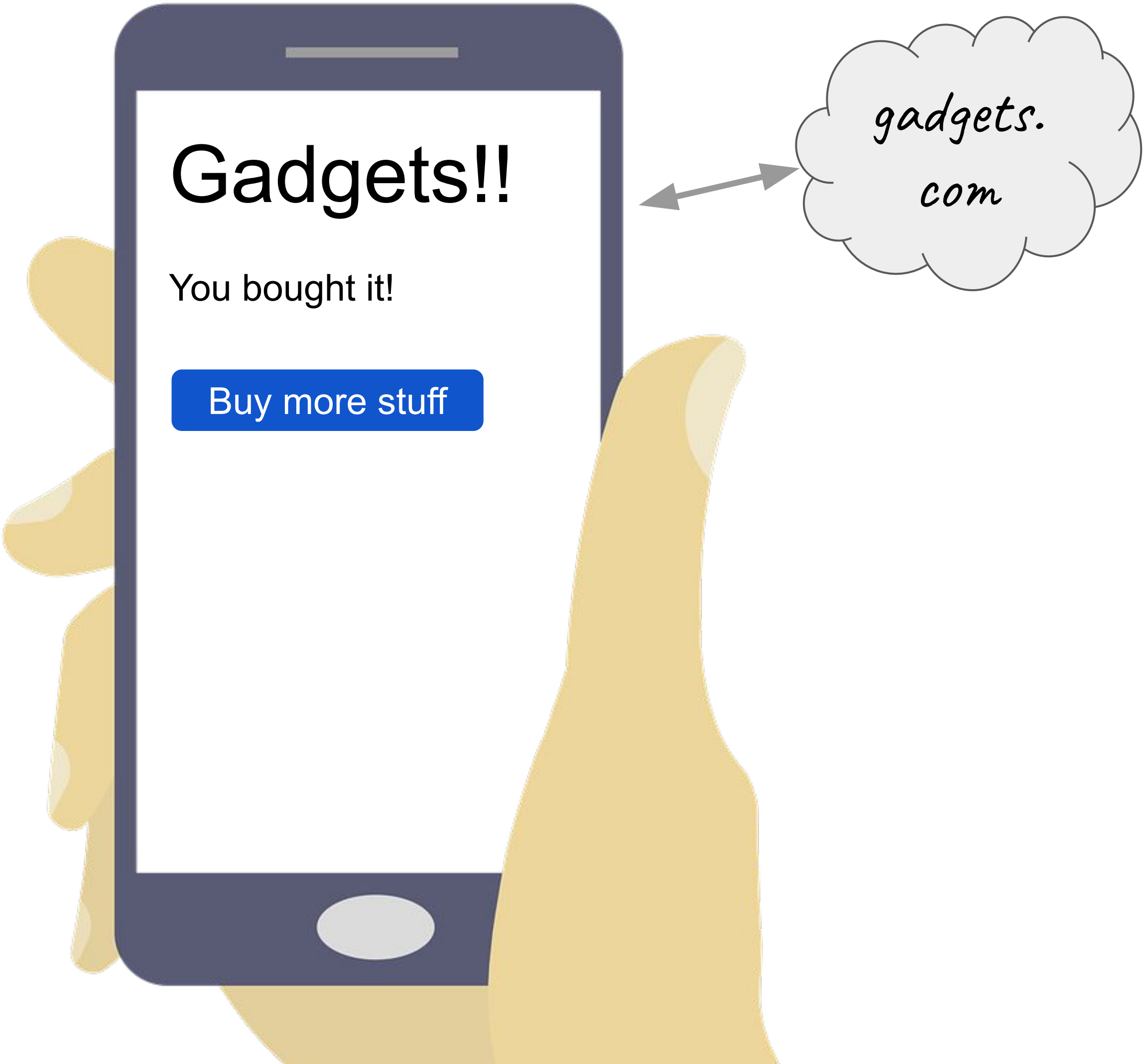
Trusts credential and can verify assertion because it knows public key



Gadgets!!

You bought it!

Proposal:

RP A can create a FIDO credential **for RP B**.

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Whoa! - what about tracking/correlation???

Proposal:

RP A can create a FIDO credential **for RP B**. But:

- RP A can’t exercise the credential afterwards. Only RP B can.
- Credential must not be resident-key.
    - This ensures that no *new* channel is created between A and B

Proposal:

RP A can create a FIDO credential **for RP B**.

Can be done through extension or simply by relaxing the spec.

Benefits of the proposal

- Meets the requirements
  - No pre-existing trust between PISP and “bank”
  - “Bank” wants to directly authenticate endpoint.
  - No additional network connections (other than to pisp.com)

- No change in CTAP/authenticators needed
  - (just change in platform)

- “No resident-key” requirement has side effect of precluding DoS attacks

What’s next?

- Feedback from WG
- PR to webauthn spec