Web Payment Tokens

A generic token for payments on the web

What is a token?

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- **The most overloaded jargon word in technology?**

Bearer token

Auth token   Gateway Token

Payment token

Network token

Token of appreciation

Payment tokens

- Represent the authorization of a payment(s)

- *"Redeemable"* by the payee on a **specific** network

- Produced by the payment authorization authority

- Network rules dictate how a token is redeemed

- Token data is mostly **opaque** to payee systems

Payment flow

Payment flow (tokens and networks)

- - -
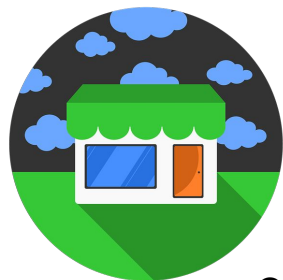
Please pay me $100. I accept payment tokens **for the BobPay, AlicePay and IanPay Networks**

Here's a token that proves I have authorised a $100 payment to you. **It's for the BobPay network**

Can I trade this token for $100?

Yes you can!

BobPay

???
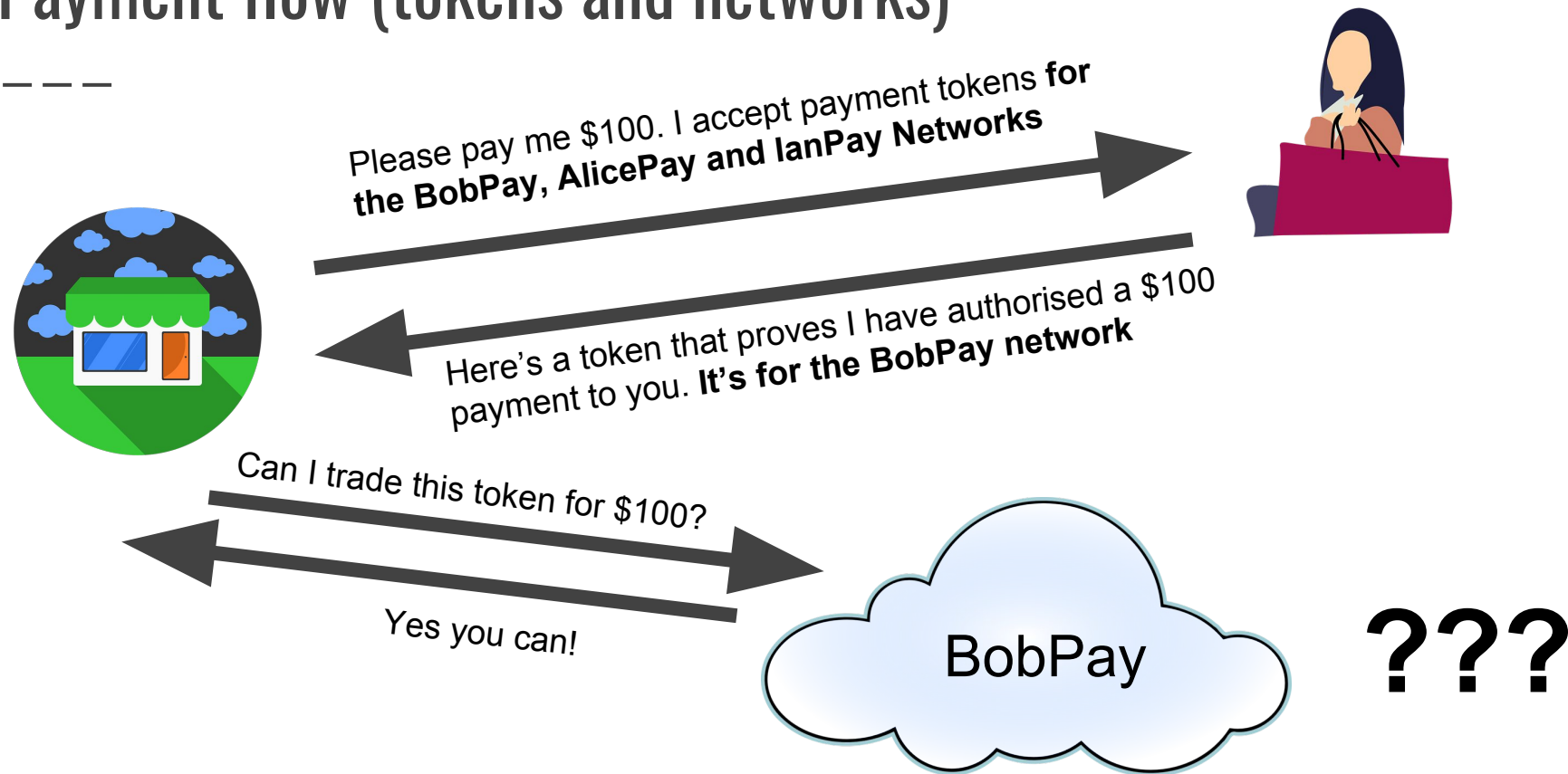
Push Payments Suck (almost as much as Pull)

- Merchants lose all control of flow

- No retry/cancel

- Integration at multiple places in the flow

- Recurring payments 😂

Pre-authorized push is the best!

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Push

- Customer authentication (secure or risk based)
- Push from source of funds (no reversals or disputes)

Pre-authorized (pull-like)

- Merchant controls flow
- Interop is simple at for intermediaries (browsers)

Tokenization spec (request)

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```javascript
const methodData = [{
  supportedMethods: ['token'],
  data: {
    supportedNetworks: ['mastercard','visa', 'amex', 'discover',
'jcb','unionpay','ideal','sofort','interledger','quirky-domestic-thing'],
    usageType: 'one-time',
    payeeID: 'https://best-pink-sock-store.com',
    keyProviderURL: 'https://pspKeyProvider.example/tokenizedCardPublicKey',
  }
}];
```

Tokenization spec (Response)

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```
{
    label: "Mastercard ***6789",
    network: "mastercard",
    details: "QWxobHZ4bU4yWkt1QUFFU05GWjRHb0FCRkE9PQ==",
}
```

Tokenization spec (Response)

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```
{
    label: "Mastercard ***6789",
    network: "mastercard",
    details: "QWxobHZ4bU4yWkt1QUFFU05GWjRHb0FCRkE9PQ==",
}
```

QWxobHZ4bU4yWkt1QUFFU05GWjRHb0FCRkE9PQ==

Network specific. Opaque to the merchant

Proposal

A single unified tokenization and encryption spec

Leverage existing web token standards (JWT, JWE)

Leave network specifics... to the networks

Make implementation by browsers simple