



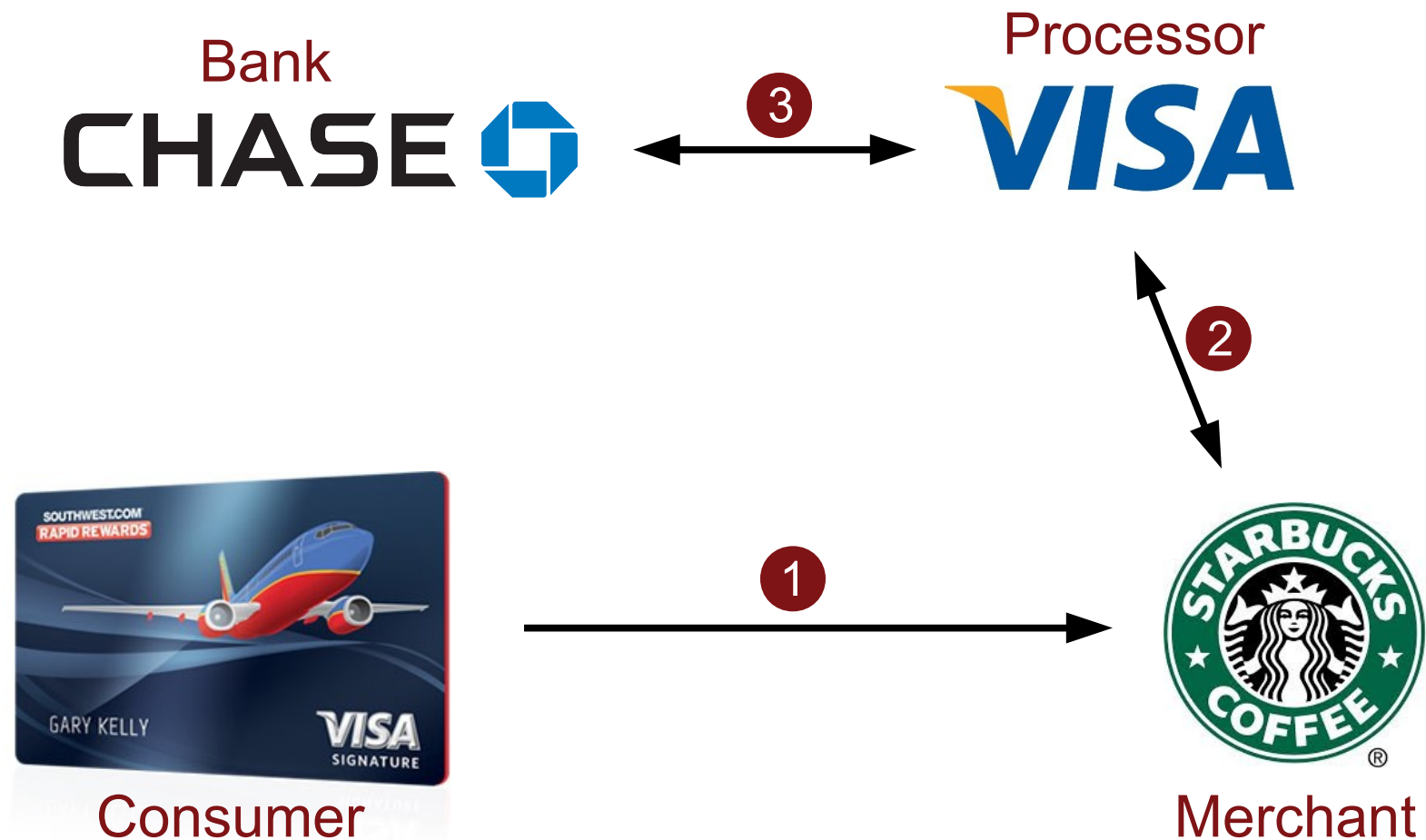
# **Direct Digital Payments An Executive Overview**

**Derk Norton  
Founding Partner  
Crater Dog Technologies™**

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# Traditional Payments





# Key Observations

Currently:

- The processor charges the merchant an *interchange fee* of 1.5% to 3% plus 10 cents on each sale.
- The processor and bank take several days to *settle* their accounts with the merchant.
- Refunds add additional *incidental fees* to the sale.
- The merchant passes along all these costs to the consumer via higher prices.

What if we got rid of credit cards, cash, and perhaps even the banks...



# Direct Digital Payments



Consumer



Merchant



# A Much Better Solution

## Key benefits:

- Only involves the consumer and merchant.
- Allows instantaneous settlement.
- Actual processing costs are around 1/10,000<sup>th</sup> of a cent per transaction.
- Can be done in a way that prevents *all* fraud.

Wait a minute, this sounds *too* good to be true, is this another *Bitcoin* pitch...



# No Bitcoin Required!

In fact, Bitcoin won't work:

- It uses one *gigantic* shared digital ledger that cannot possibly handle large scale use.
- Its *maximum* possible transaction rate is only *three* transactions per second across the entire world.
- On average, it takes between *10 minutes* and *an hour* to verify a bitcoin transaction. Do you want to wait that long to get your Starbucks coffee?



A whole lot of VC's that invested in Bitcoin related startups are feeling pretty stupid right now...



# Digital Transfer of Value

Anything of value can be transferred between two different parties:

- reward points
- cellular minutes
- fiat currencies
- ownership rights

How is this possible? Technically speaking, its called "public/private key cryptography".



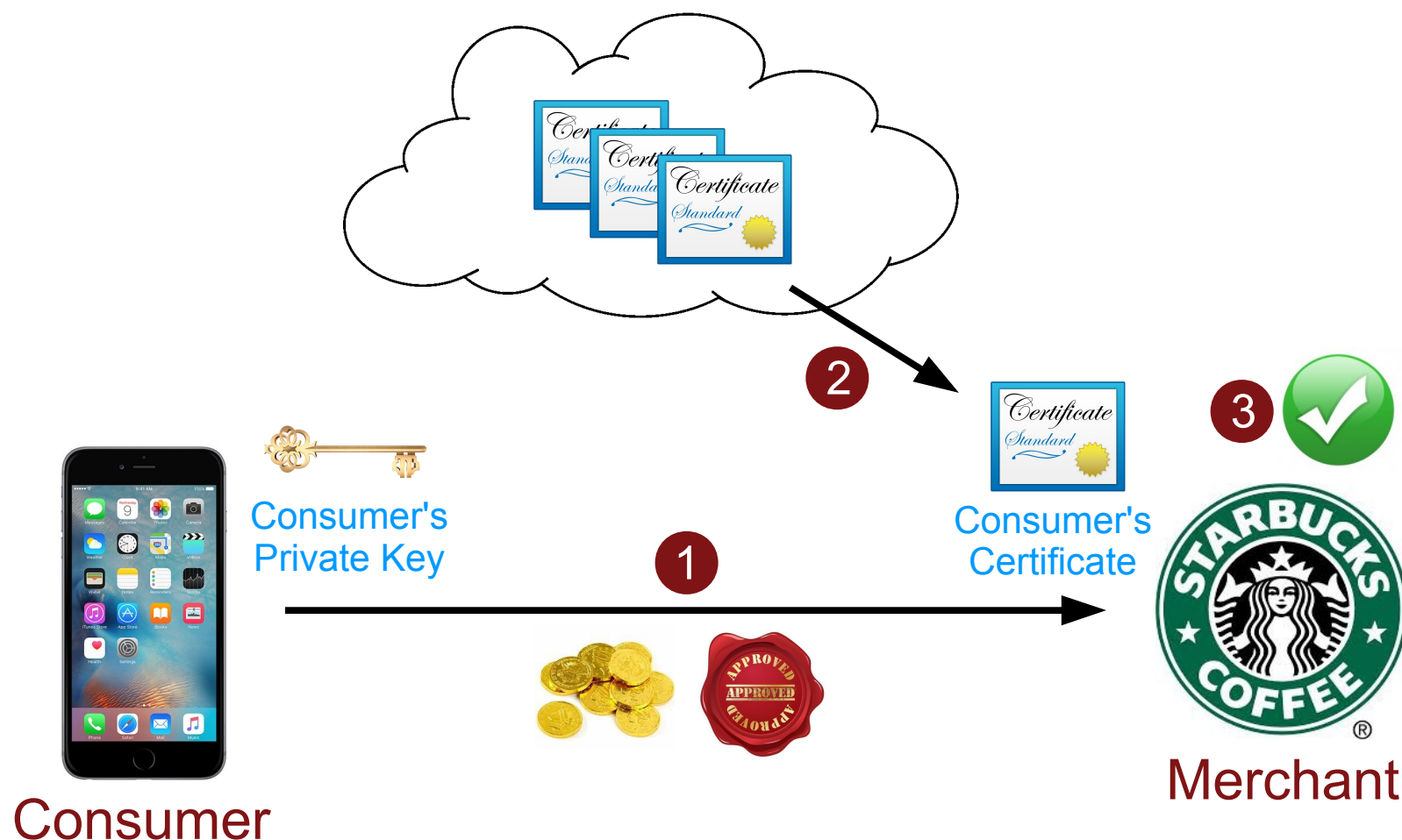
# The Key Roles Involved

- Guarantor (Bank)
  - Digitally signs a token of value guaranteeing its value.
- Provider (Consumer)
  - Digitally signs a transaction transferring part or all of the token of value to the receiver.
- Receiver (Merchant)
  - Verifies the digital signatures of both the token of value and the payment transaction before accepting them.





# Direct Digital Payments Made Easy





# Benefits to All

- Banks
  - Can guarantee value that cannot be forged or stolen.
- Consumers
  - Eliminate their credit card fees and interest payments.
  - No more lost or stolen credit cards or cash.
  - Offered lower prices from the merchants.
- Merchants
  - Save a lot of money on each transaction.
  - No more fraudulent payments to worry about.
  - Enjoy instantaneous settlement.
  - Digital ledgers allow much simpler and more accurate bookkeeping.



# For More Information

- Contact
  - [derk.norton@gmail.com](mailto:derk.norton@gmail.com)
- Crater Dog Technologies™ - Crypto Payment Framework Open Source Projects
  - <https://github.com/craterdog-crypto-payments>
- Technical Deep Dive Presentation
  - <https://github.com/craterdog-crypto-payments/java-digital-marketplace-example/blob/master/docs/presentations/DigitalCurrency.pdf>