Interledger
Internetworking for Money

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Payments are broken.
Accepting Payments in a Turkish Starbucks
Accepting Payments Online

Payment Methods Accepted By Prineta.com
The World Will Never Agree On One Ledger
Payment Networks Are Disconnected

Banks  Blockchain  Mobile Money  Online Wallets
Information networks were disconnected too
Internet
The interconnection of two or more networks so as to form a larger network.
How Do We Fix Payments?

Banks ❌ Blockchain ❌ Mobile Money ❌ Online Wallets
Internetworking For Money

Banks

Blockchain

Mobile Money

Online Wallets
Interledger
The protocol for connecting ledgers
Internetworking Ingredients:
1. Routers
2. Multi-Hop
3. Address + Packet
4. Routing Protocols
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Connectors Link Two Ledgers
Connectors: Exchange Currencies

EUR
Alice: 100
Chloe: 0

USD
Chloe: 107
Bob: 0
Bilateral Connections Don't Scale
Bilateral Connections Don't Scale

$O(n^2)$
Bilateral Connections Don't Scale

$O(n^2)$
Networks Do Scale

$O(n)$
But There Isn't Always A Direct Connection

$O(n)$
We Need Multiple Hops

$O(n)$
Internetworking Ingredients:
1. Routers
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4. Routing Protocols
Multi-hop is trickier with money than with data.
Correspondent Banking: Optimistic Execution
Correspondent Banking: Optimistic Execution
Interledger: Two-Phase Execution Secures Multi-Hop Transfers

REFERENCES
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Interledger In One Slide

```json
{
  destination_account: "us.usd.chase.bob.car"
  destination_amount: "5.99"
}
```
Internetworking Ingredients:
1. Routers
2. Multi-Hop
3. Address + Packet
4. Routing Protocols
Connectors Broadcast Rates to Populate Routing Tables

```json
{
  "ledger": "peer.-vcNd.eur.",
  "account": "peer.-vcNd.eur.KRixgcBCBd...",
  "data": {
    "method": "broadcast_routes",
    "data": [
      {
        "source_ledger": "peer.-vcNd.eur.",
        "destination_ledger": "peer.oTnBF.usd.",
        "points": [
          [0, 0],
          [100000000, 107195180]
        ],
        "min_message_window": 1,
        "source_account": "peer.-vcNd.eur.Y_luxphkAy..."
      }
    ]
  }
}
```
OUR INSPIRATION

The History & Architecture of the Internet
Interledger Architecture

Application

Transport

Interledger

Ledger

BITCOIN  ETHEREUM  RIPPLE

ILP

SPSP  HTTP-ILP  PAYTORRENT

SSP  PRP
Interledger
Internetworking for Money
Making an Interledger Payment
Broken payments are breaking the Web
When an online service is free, you're not the customer.

You're the product.

Tim Cook, CEO Apple
DEAR WIKIPEDIA READERS, We'll get right to it: This week we ask you to help Wikipedia. To protect our independence, we'll never run ads. We're sustained by donations averaging about $15. Only a tiny portion of our readers give. If everyone reading this right now gave $3, our fundraiser would be done within an hour. That's right, the price of a cup of coffee is all we need. We're a small non-profit with costs of a top website: servers, staff and programs. Wikipedia is something special. It is like a library or a public park where we can all go to learn. If Wikipedia is useful to you, please take one minute to keep it online and growing. Thank you.
Few Can Convince People to Pay with Credit Cards
Marketplaces Collect Payments, Take Large Cut of Profits
Peer to Peer Model Needs a Neutral (Micro)Payment Protocol
Internetworking increases *connectivity* and *competition*
Internetworking lowers costs to enable **new use cases**
Interledger Project

KEY FACTS

- Open Protocol
- Community Group @ W3C
- 220+ Contributors

- Banks
- Central banks
- Payments companies
- Tech giants
- Consulting companies
- Blockchain companies
Help Us Connect the World's Ledgers!

Banks
Blockchain
Mobile Money
Online Wallets

interledger.org
@interledger
Find Me After to Get an Interledger Sticker

And To Learn About “Dial-Up” Interledger