Web Settlement

Exchanging real value on the Web

Adrian Hope-Bailie
Evan Schwartz
Stefan Thomas

Ripple Labs
Agenda

• What is Web Settlement?
• Why is Web Settlement important?
• How do we achieve this vision?
• How can you get involved?
What is Web Settlement?
Payments are promises to pay.
Payments are promises to pay.

Settlement is the real exchange of value and the final resolution of those promises.
Payment is not settlement

Payment flow

Real-time

Bank A

Bank B

Settlement flow

Clearing & settlement mechanism

T + ?
Settlement is “an act that discharges obligations in respect of funds or securities transfers between two or more parties”

- Bank for International Settlements
Settlement is facilitated by a counterparty, such as a central bank or payment network.
The 5th party in the 4Corner model

- Transfer on Bank A ledger
- Central counterparty (record of balances)
- Transfer on counterparty ledger
- Bank A
- Bank B
- Transfer on Bank B ledger
Web Settlement involves using the Web to create an open marketplace for fast, low cost, and secure settlement.
Why is Web Settlement important?
Today: payment networks are siloed

Few counterparties provide inter-network settlement
Web Settlement can connect networks

Standards enable links between counterparties and ledgers
Today: slower, more costly settlement
Today: slower, more costly settlement

**Payment flow**
- Payment Matching & Instructions

**Fund flow**
- Correspondent Bank Relationship

**US**
- Sending Institution
  - sent $1000
  - $7.5 fee
  - ACH
  - Federal Reserve

**EU**
- Receiving Institution
  - receive €730
  - €15 fee
  - SEPA

**Payment flow**
- SWIFT
- Nostro Debit & FX
- 4% FX

**Today:**
- Slower, more costly settlement
Increasing speed increases the volume

Information exchange exploded because of the Internet’s speed and reach.
Using the Web as settlement rails

Standards enable many options for settlement

Account Provider

Counterparty Account

$102

Payer Account

Payment Direction

Account Provider

Counterparty Account

$100

Payee Account
Increasing competition to deliver settlement

Competition provides more options and brings costs down

Web Settlement
Web Payments standards increase choice among payment instruments.

Web Settlement increases links between payment instruments.
The Value Web

People and institutions can transact across the Web
How do we achieve this vision?
Learning from the Web’s history

First, infrastructure providers lay groundwork for the Internet

Phase 1: Infrastructure

ARPANET
Learning from the Web’s history

Second, networks develop and begin to federate

Phase 1: Infrastructure
 ARPANET

Phase 2: Federation
 AOL/Compuserv
Learning from the Web’s history

Third, the Web provides platform for all new types of services

Phase 3: Global Market
- World Wide Web

Phase 2: Federation
- AOL/Compuserv

Phase 1: Infrastructure
- ARPANET
The progression of the Value Web

History of the Web

Phase 3: Global Market
- World Wide Web

Phase 2: Federation
- AOL/Compuserv

Phase 1: Infrastructure
- ARPANET

The Value Web

- ???
- Payment Networks
- Financial Institutions
Challenge: the “double-spend” problem

Money is not just information, you cannot send it twice
Challenge: new regulatory frontier
More ledgers, more counterparties, more need for oversight

Who are the participants?
Challenge: lack of simple, open standards
Existing standards are not equipped to facilitate Web Settlement
How can you get involved?
Web Settlement Community Group

• Further build case for new settlement standards
• Incubate and prototype standards
• Bring in non-W3C members, including banks and payment networks
Web Settlement Task Force

• Liase with the W3C Web Payments activity
• Connect with other TFs on Credentials, Authentication, Payment Initiation, etc
• Develop charter for Web Settlement Working Group
Web Settlement: from anyone to anywhere
Linking networks enables faster, cheaper payments for everyone