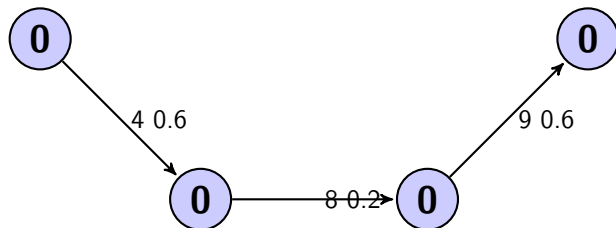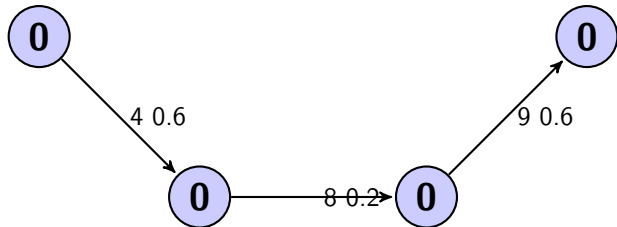# Insurance Ripple Network

trust graph

- ▶ Each edge represents a trust link
- ▶ Each trust link has 2 values, the first is the maximum insurance that the originating vertex will pay in case The terminating vertex defaults.
- ▶ The second is the exchange rate. ex. For 1 insured currency, he will pay 0,6 currency of his own.
- ▶ Each node issues his own currency and insures with that currency only.
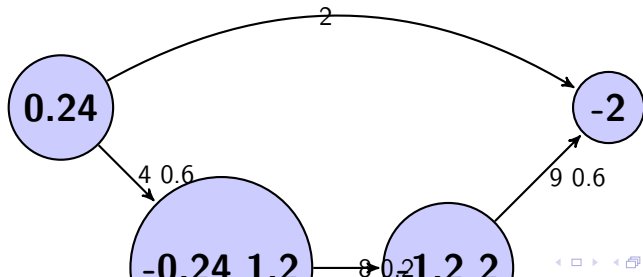
Ripple Network

trust graph

- Lets say that the first node wants to buy the currency of the forth

- This is impossible in the classic ripple, that is why Chris proposed the creation of a guaranteed society.
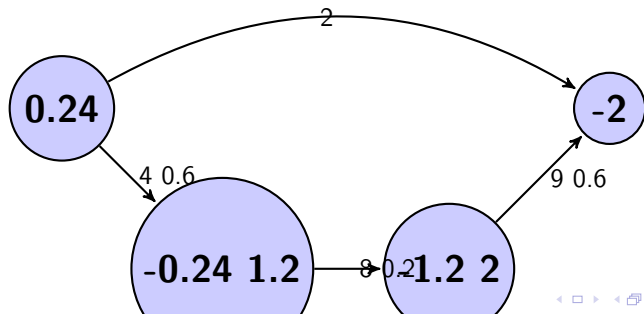
Ripple Network

- ▶ First node buys 2 units of forth's currrency.
- ▶ ripple finds a path of trust and creates the necessary insurance chain.
- ▶ Now the first node holds both a currency and an insurance chain fo this currency
- ▶ Noone can change the exchange rate of this specific insurance chain. It is a binding contract
- ▶ They can change the exchange rate for the future transactions only

Ripple Network

- ▶ The ripple balances are not real. They dont express an ownership of currencies.
- ▶ They express the currency that each one of us has pledged to insure.
- ▶ It is similar to the maximum amount of money that a car insurance company would have to pay if all the cars it insured broke.
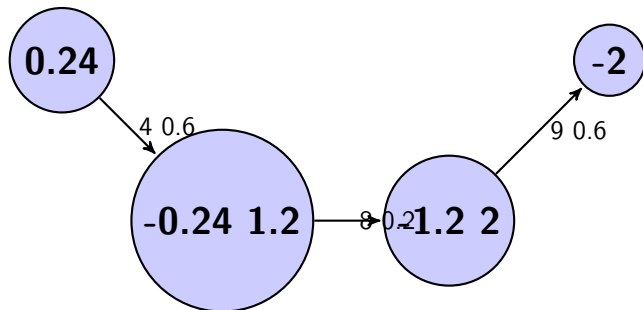- ▶ Right now, only the first node owns a currency and noone else.

Ripple Network

trust graph

- balances:
- first : 2 units of currency of 4ths currency.
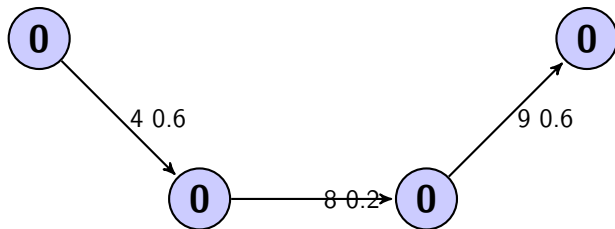- all others zero.

Ripple Network
trust graph

- the first node asks the forth to give him the commodity that his currency represents.
- the forth doesnt deliver
- The insurance is triggered

Ripple Network

trust graph

- ▶ Now, the first node holds 0.24 of seconds currency
- ▶ the second owns 1.2 of the thirds currency
- ▶ the third owns the currency that the first had before. This currency is probably fake.
- ▶ the insurance network is set to zero since it paid the insurance money to the interested parties.

Ripple Network

trust graph

- balances:
- first node: 0.24 of seconds currency
- second: 1.2 of the thirds currency
- third: 2 units of forths currency