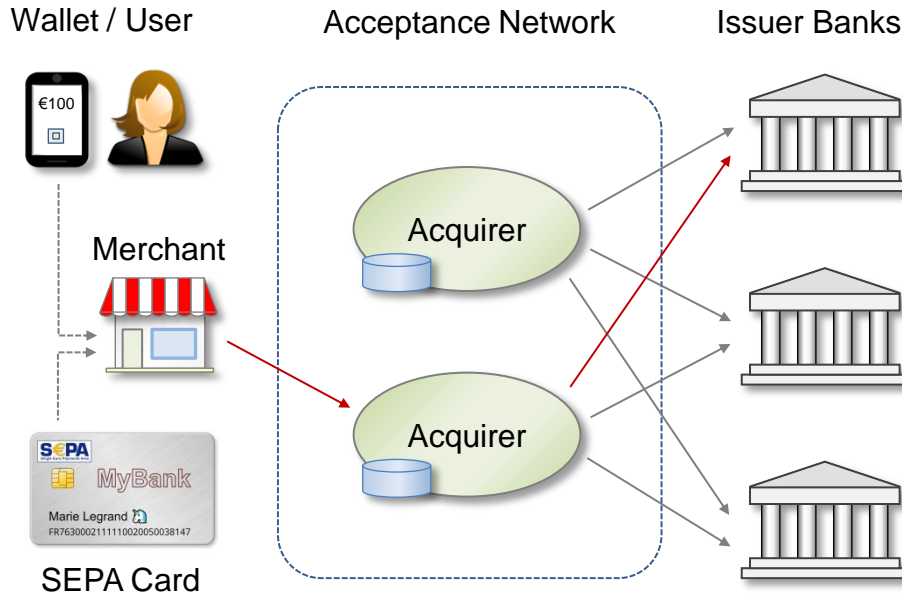


Presumed EPI “Front-end” Architecture



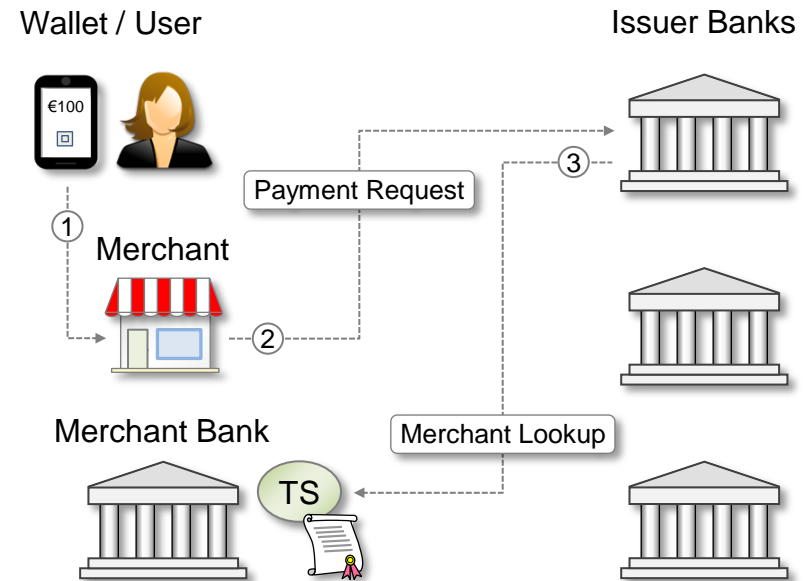
In the traditional architecture for card-based payment authorizations, Merchants are connected to Acquirers who handle the communication with the Issuer Banks (or card networks). An Acquirer is usually the entity that has the business agreement with a Merchant as well.

The infrastructure needed to support card transactions depends on a *huge number of statically configured security parameters and paths*, illustrated by the arrows in the diagram.

This model also relies on *databases* holding card-number to Issuer Bank “routing” tables.

Acquirer services are covered by *additional fees* on top of the fees required by the Banks running the payment scheme like SEPA Inst.

Due to *technical and commercial challenges*, the EPI acceptance network would most likely result in an *oligopoly*.



In the [Saturn](#) architecture a Merchant has a business agreement with their account-holding Bank which also provides a simple *public trust service* (TS), that vouches for the Merchant’s validity including its claimed account number.

The data provided by a TS is *digitally signed* by the Merchant Bank and is thus to be trusted by all Banks sharing a specific payment schema like SEPA Inst.

Security with respect to payment requests [2] is maintained through *mutually signed digital contracts* resulting from the Merchant and User authorization step [1], combined with TS Merchant lookups [3].

The arrows in the diagram are *transient*; there is no need for *externally configured security, path, or routing information*.

The actual payment business remains in the hands of the *fully decentralized network* of Banks running a specific payment scheme.