



MERCHANT
PAYMENTS
ECOSYSTEM

Upcoming technologies to improve the checkout experience

Network Tokenization and Secure Remote Commerce

01.07.2020

netcetera

Introductions



Alan Moss (Moderator), VP of Marketing @ Miura Systems Ltd

Alan Moss is currently working as VP of Marketing at Miura Systems, a leading global provider of secure mobile acceptance technology. In parallel, Alan is Head of Fintech and Payments at the consulting company, BluSpecs Innovation.

Alan has over 20 years' experience in the electronic payments business, working with industry leaders such as Hypercom, Thales and Verifone, in a variety of roles from business development and product marketing to global relationship management. Alan also worked in international sales for De La Rue's security holographics and security print divisions.

Prior to working for BluSpecs, Alan was VP of Business Development at Verifone, where he was responsible for the deployment of new value-add applications and services in Europe. Whilst at Verifone, Alan was also a board member and Chairman of the General Assembly of Nexo, a leading pan-European standardization initiative promoting the interoperability of card payments. Alan holds an International MBA from Madrid's leading business school, Instituto de Empresa, as well as a bachelor's degree from the University of London.

Introductions



Andreas Halbmayr

Senior Product Manager Secure Digital Payments @ Netcetera

Andreas Halbmayr started his career two decades ago in the telecommunication industry. Enriching project teams in the field of mobile paying at this time he could earn first knowledge in the field of mobile payment.

After 7 years working for a telecommunication provider he changed to the financial industry and worked in different fields for mobile payment, acquiring and issuing. Last year Andreas changed to the supplier side and complement the Digital Payment & Security department at Netcetera with his broad knowledge in the financial and mobile payment area.

Introductions



Kurt Schmid

Marketing & Innovation Director Secure Digital Payments @ Netcetera

Since 2020 Kurt Schmid is Marketing & Innovation Director Secure Digital Payments at Netcetera. Previously he has been responsible for the Digital Payment Division of Netcetera since the beginning of 2017. This resulted from the takeover of NexPERTS GmbH, an Austrian mobile payment and NFC specialist founded by Kurt Schmid, who was CEO. Previously, he was the CEO of Omnikey and Ultimaco Safeware, and has been active in the fields of smartcards and security in Germany, Austria, and Switzerland for over 25 years.

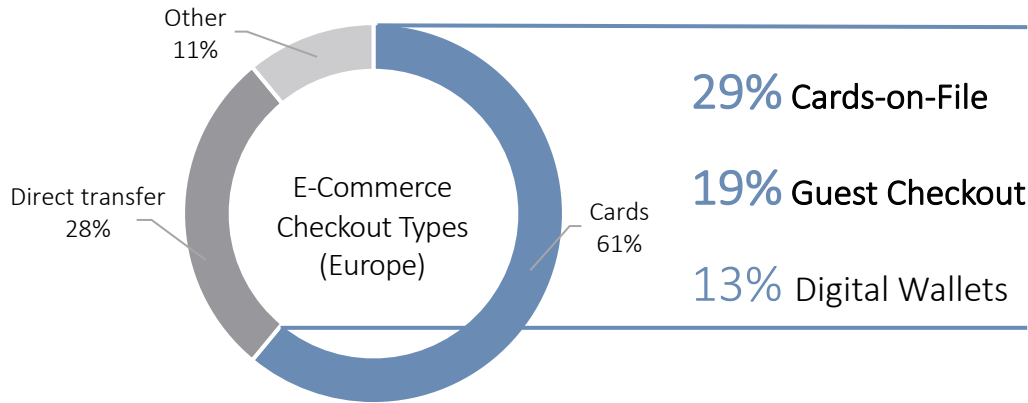
Kurt Schmid studied Business and Management Computer Science at the Johannes Kepler University in Linz, and spends his rare free time in his house and garden

An overhead, top-down view of a group of business professionals sitting around a large wooden conference table. The image is dimly lit with a blue tint. Several individuals are using various digital devices: smartphones, tablets, and a laptop. The text 'E-Commerce Payment Landscape' is centered over the image in a white, sans-serif font, with a short horizontal line underneath it.

E-Commerce Payment Landscape

E-commerce checkouts

61% of checkouts are card based and, therefore, face abandonments, declines and fraud



24% Abandonment & decline rate when 3DS (1.0) is used

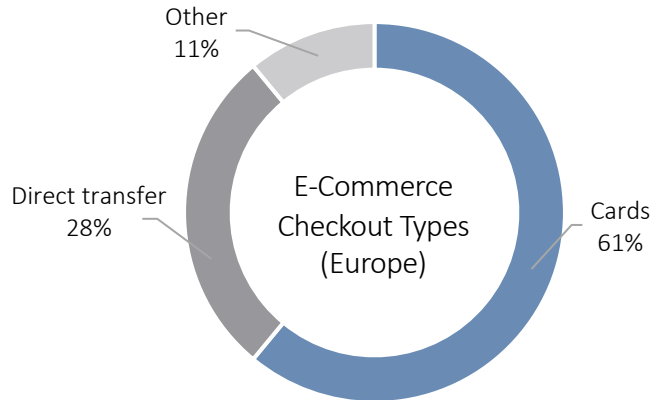
17% Decline rate when 3DS is not used

1 in 4 Customers abandon cart due to long /complicated checkout

4-10 Times higher fraud rate of CNP compared to CP

How to solve this?

How network tokenization and SRC can help increase conversion, convenience and security



Cards-on-File 29%

- ▶ Replace PAN by token to reduce risk
- ▶ Use EMV cryptogram to improve security
- ▶ Use lifecycle information
 - to keep credentials up to date
 - to avoid abandonments
 - to provide a more seamless UX



Cards in guest checkout 19%

- ▶ Same as above plus
- ▶ Improve usability for customer



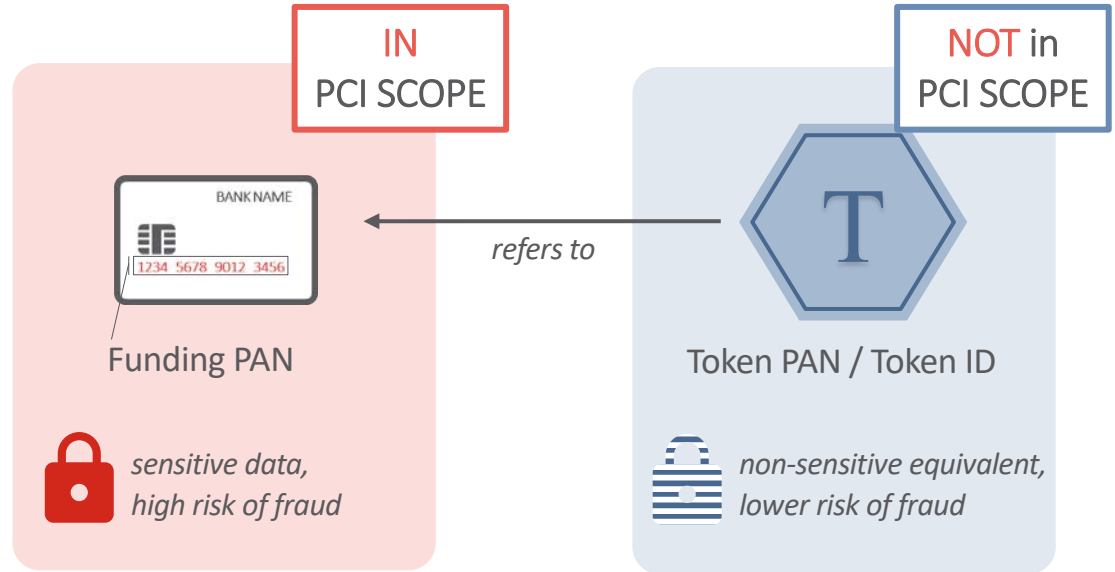
Secure Remote Commerce
(SRC)

Network Tokenization

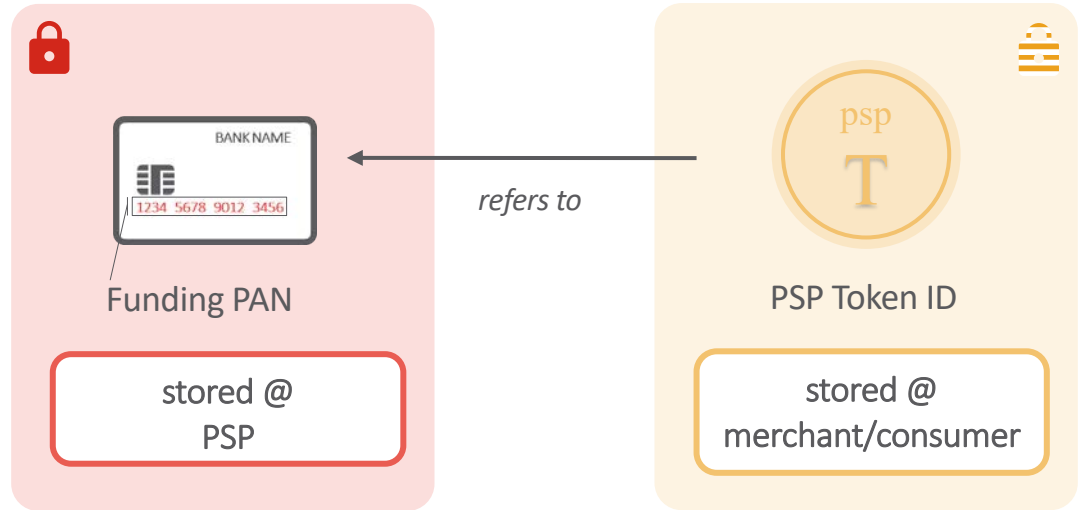




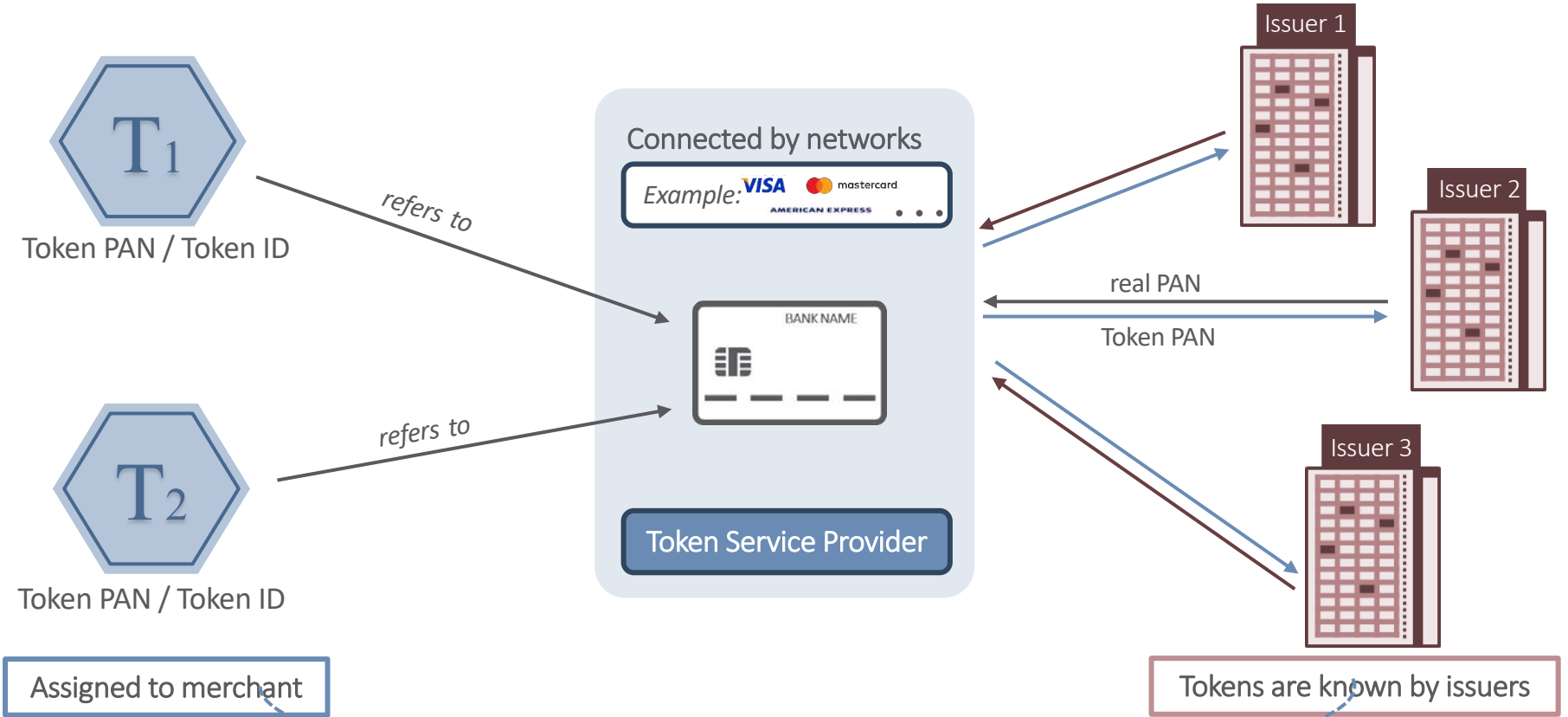
Tokenization principles



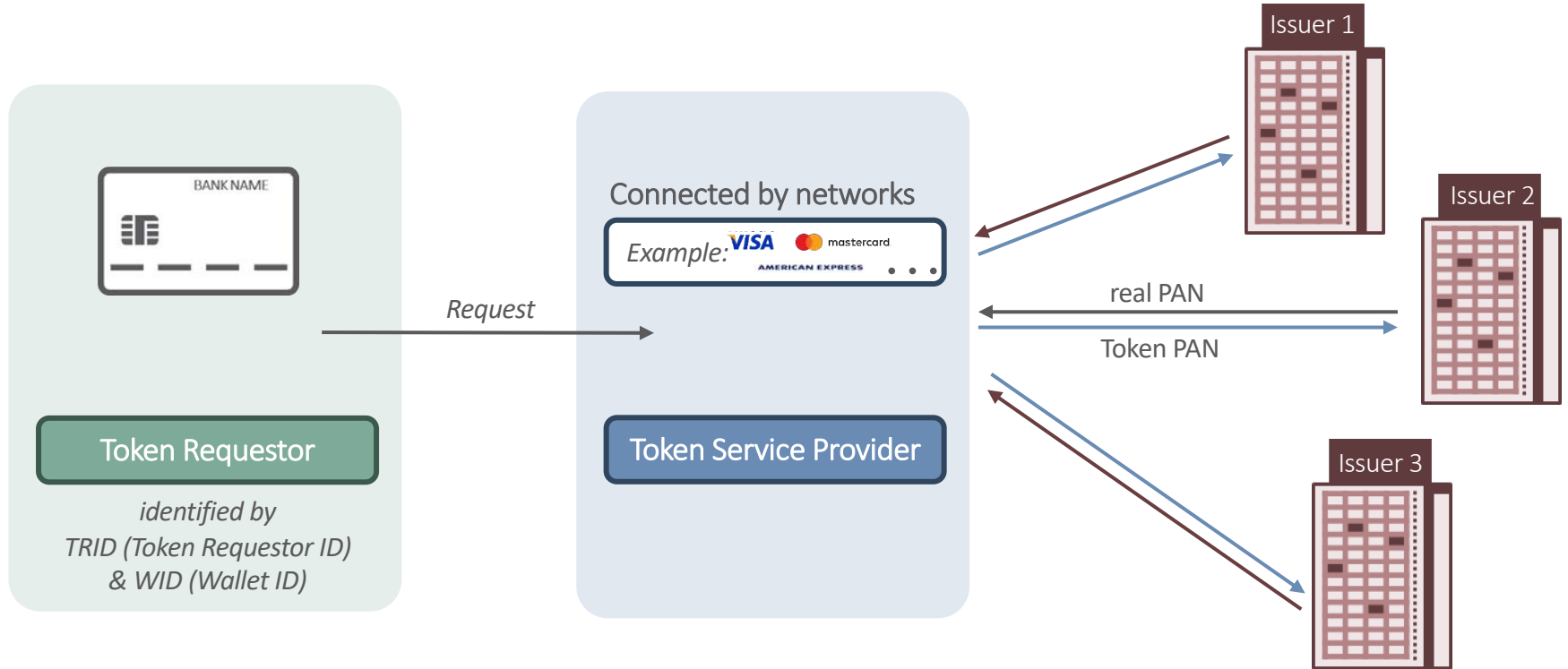
(Proprietary) Tokenization already used by PSPs



Network tokenization principles



Network tokenization principles



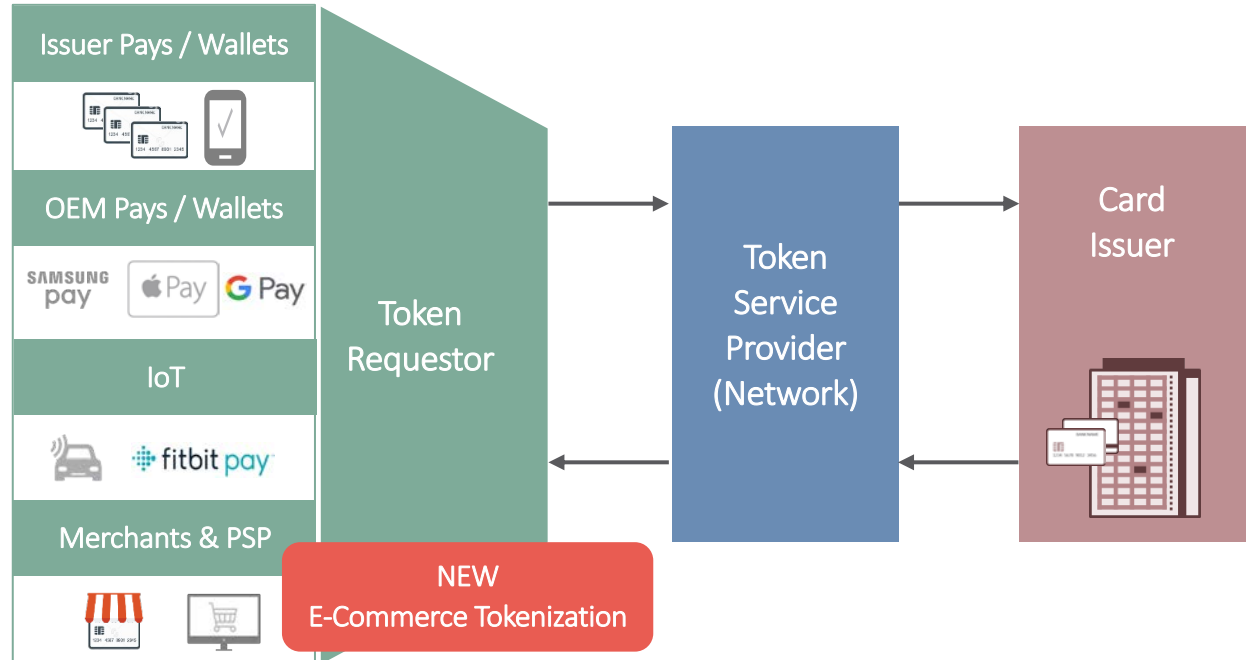
... extended to E-Commerce Tokenization

TRID = Issuer TRID
WID = Issuer Wallet

TRID = Apple Pay
WID = Apple Wallet

TRID = Merchant X
WID = 327 (eCom)

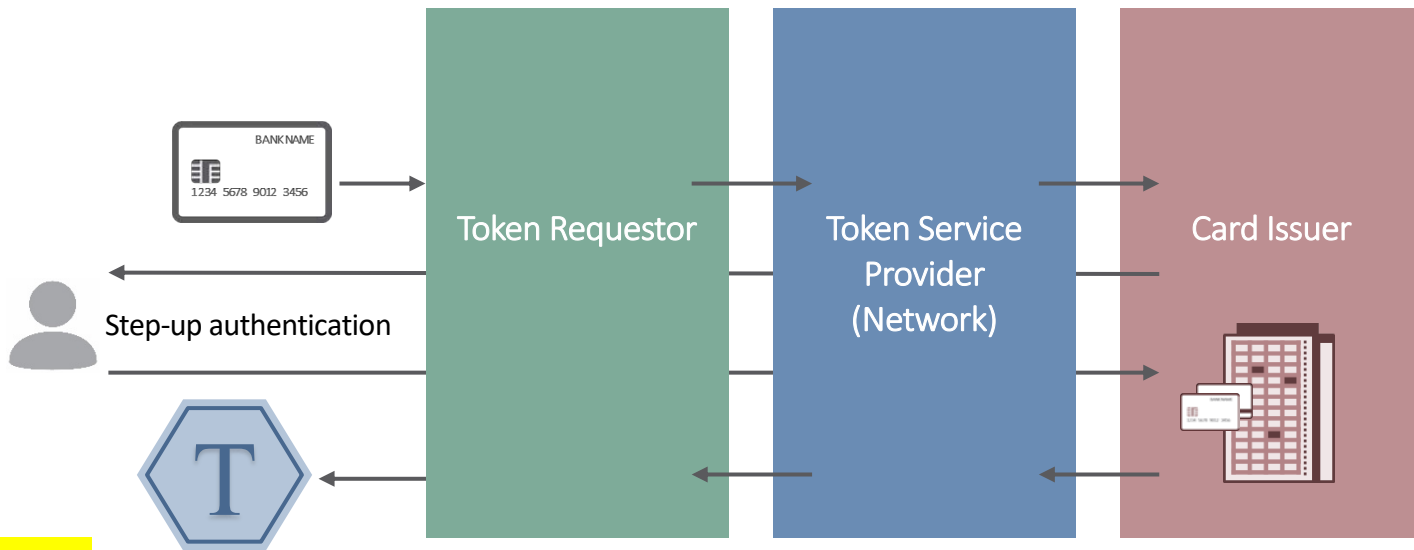
TRID = Merchant Y
WID = 327 (eCom)



Yellow: Step-up authentication when requesting a token

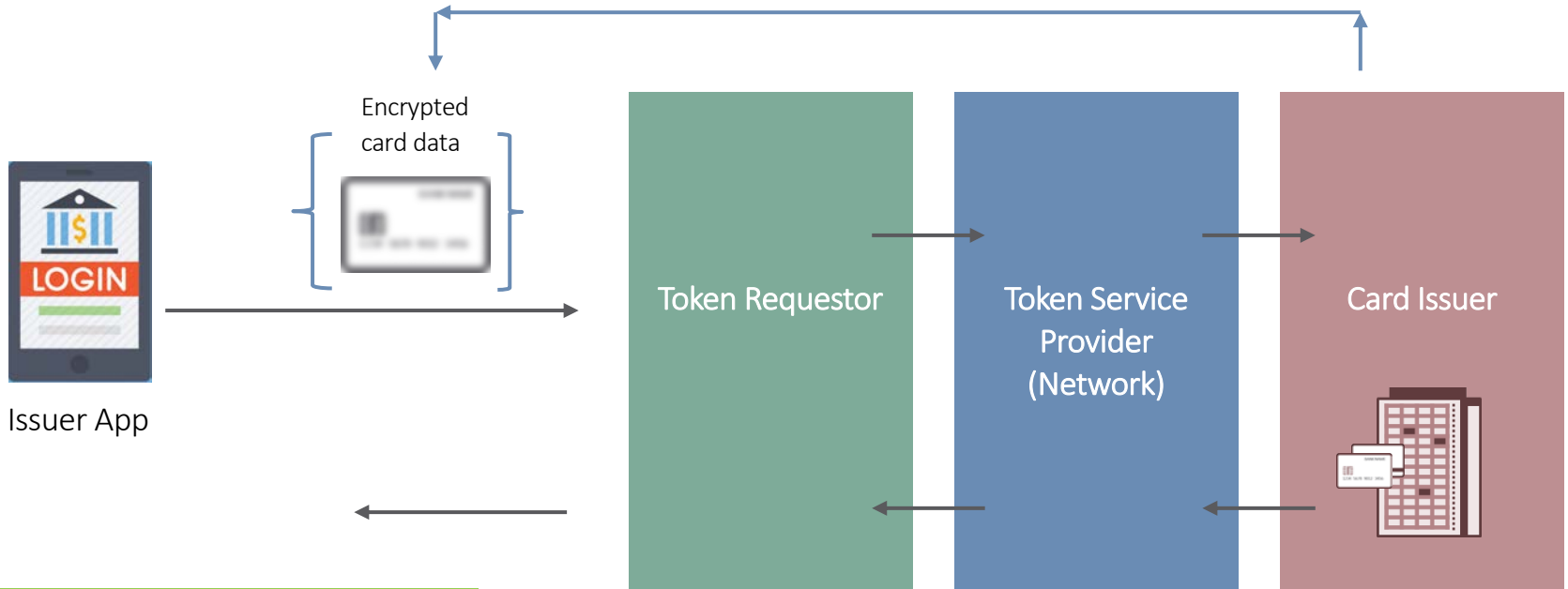
Step up Methods:

- OTP sent via SMS
- Code via bank channel
- Call center activation
- Issuer App validation
- 3DS Non-Payment flow



Yellow path: requires step up

Green: Requesting from Issuer



Green path: Request from Issuer App

Requesting a network token in e-commerce

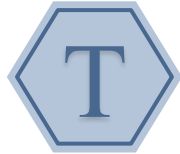
PAN Entry: Step up on enrollment or first transaction



2. from CoF



CoF: Step up on first transaction



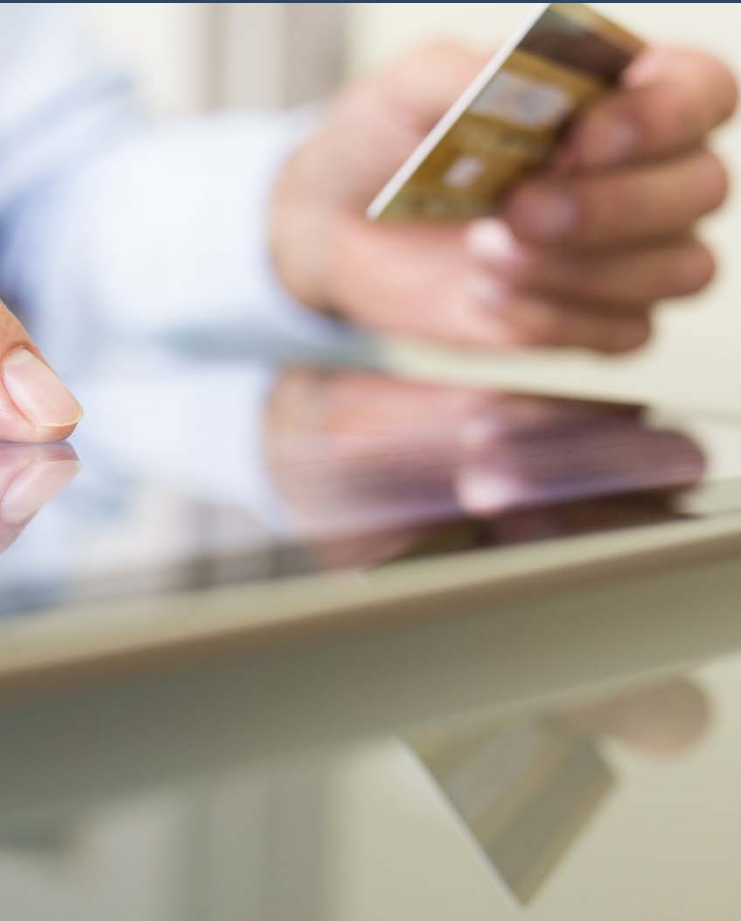
Token Requestor

Token Service
Provider
(Network)

Card Issuer



Requesting the token is only the first use case



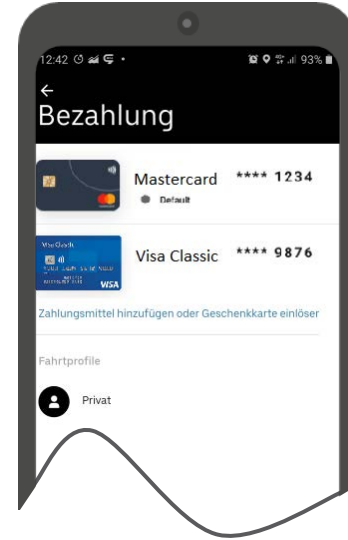
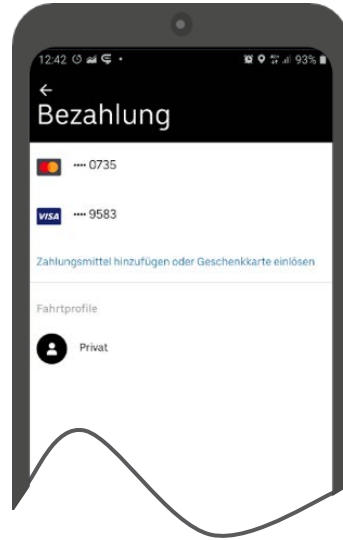
After requesting a token **further use cases** are relevant:

- Get card art and card name
- Sign a transaction
- Get status updates from the issuer
- Manage the token by the user (suspend/unsuspend)

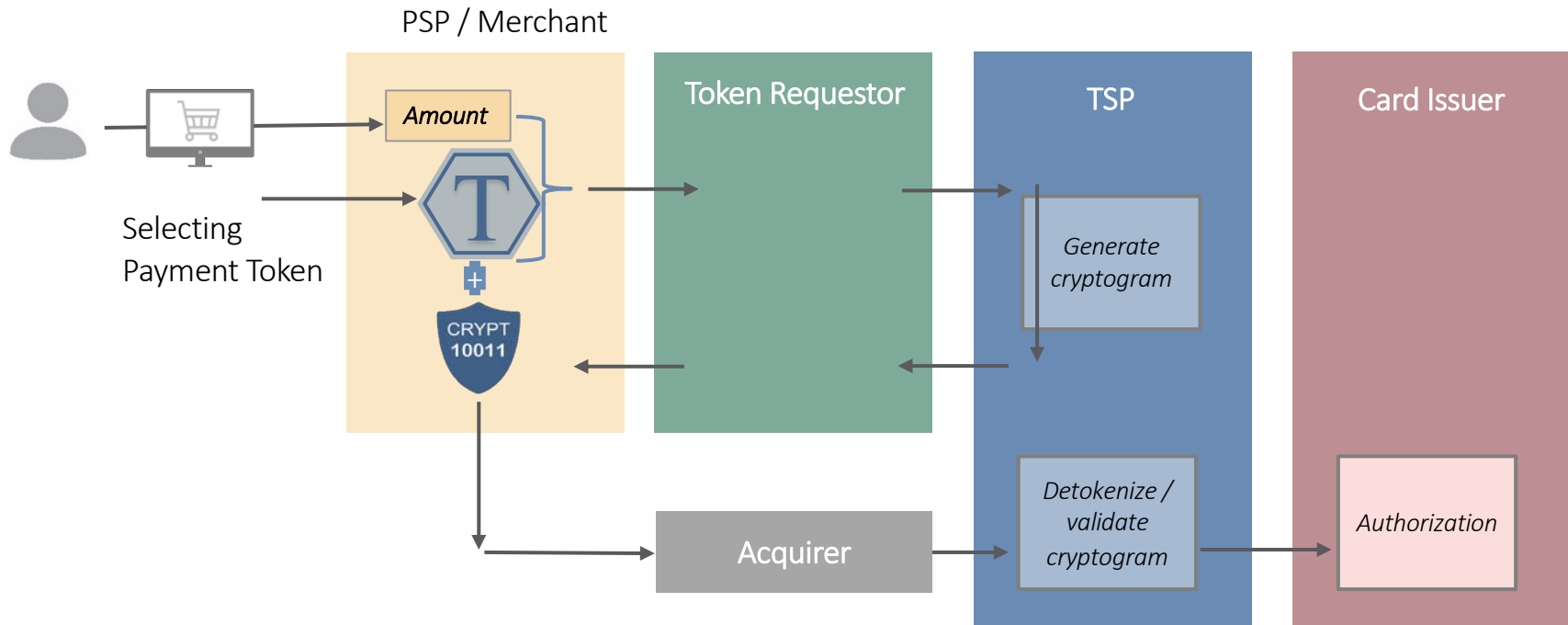
Card art

Real card art is delivered from issuer back to the merchant

- More user trust
- Feels like X-Pays

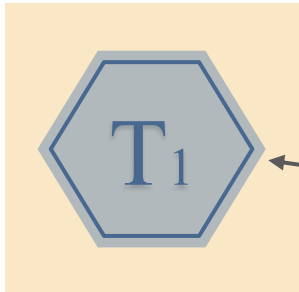


Transacting

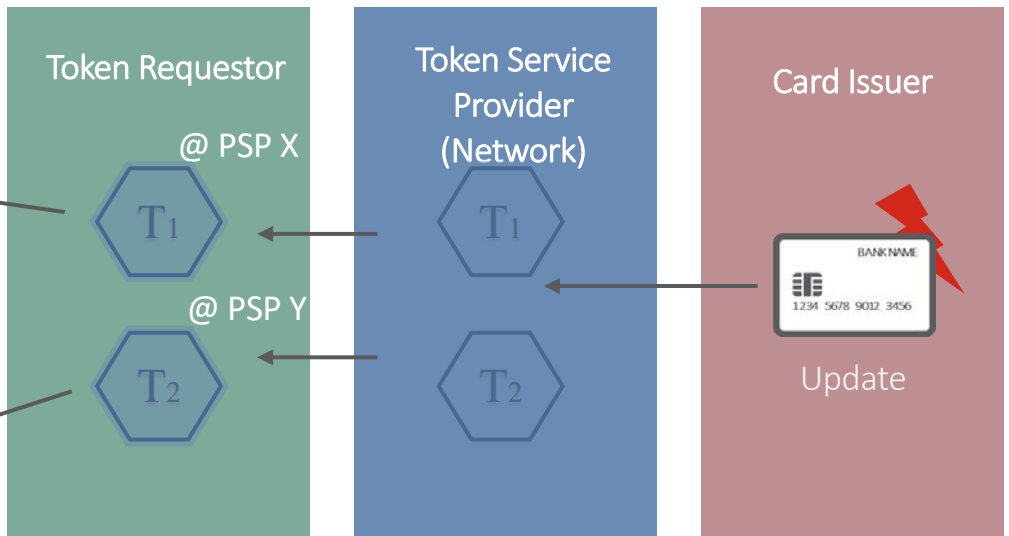
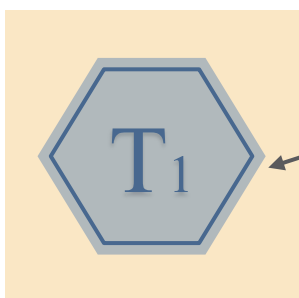


Lifecycle management

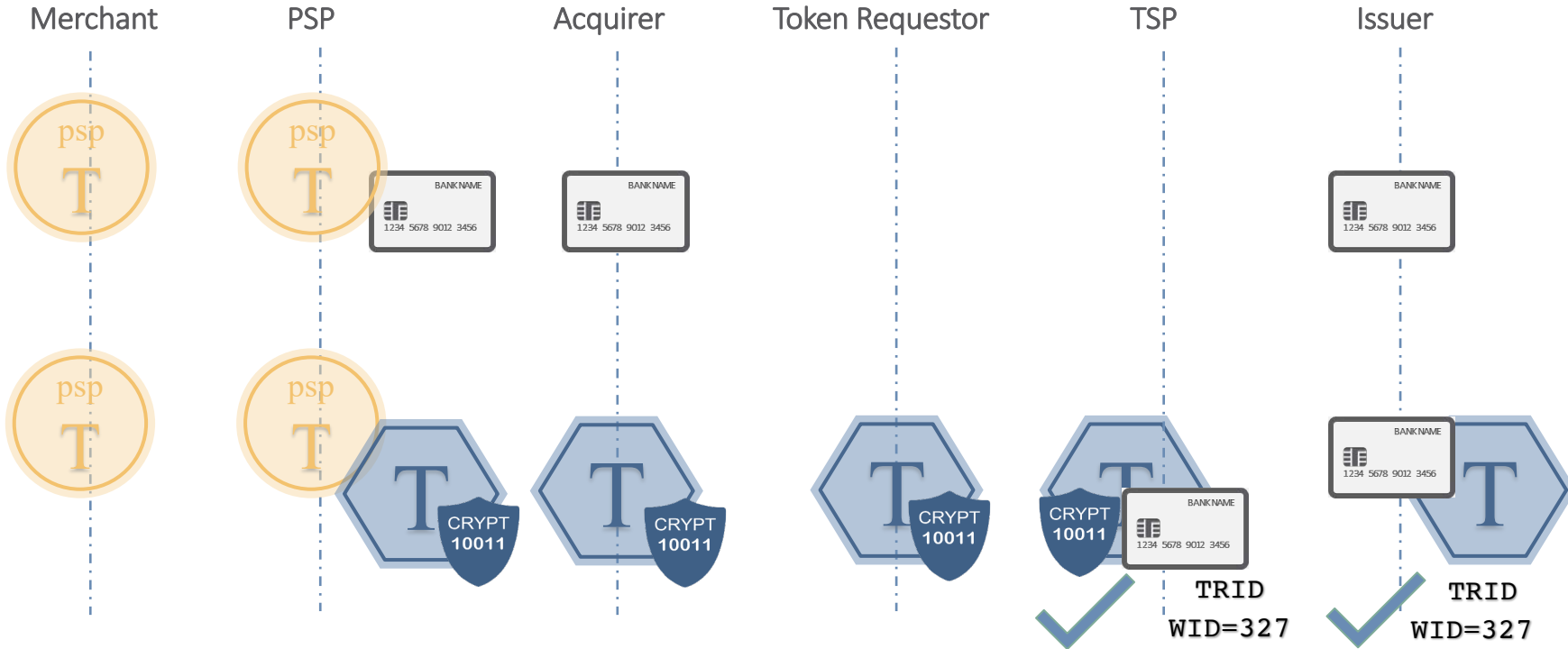
Merchant A / PSP X



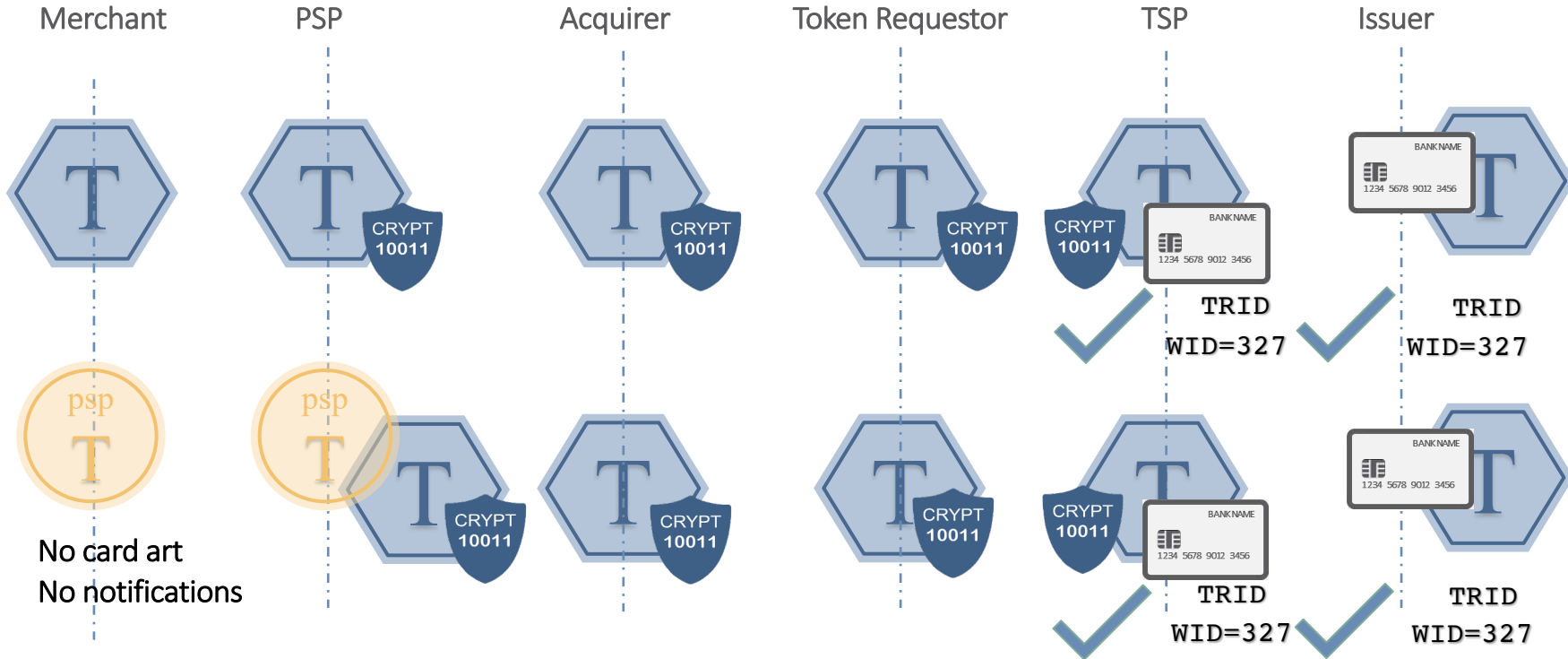
Merchant B / PSP Y



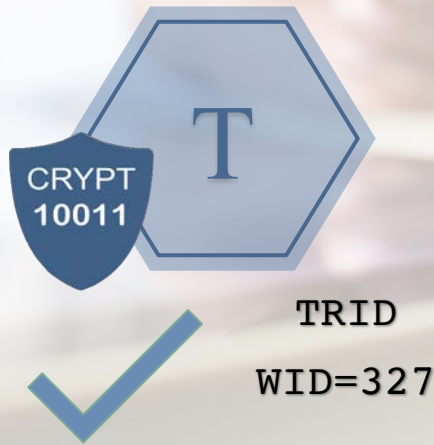
Network and PSP tokenization combined



Network and PSP tokenization alternatives



What is the benefit for the authorization process?

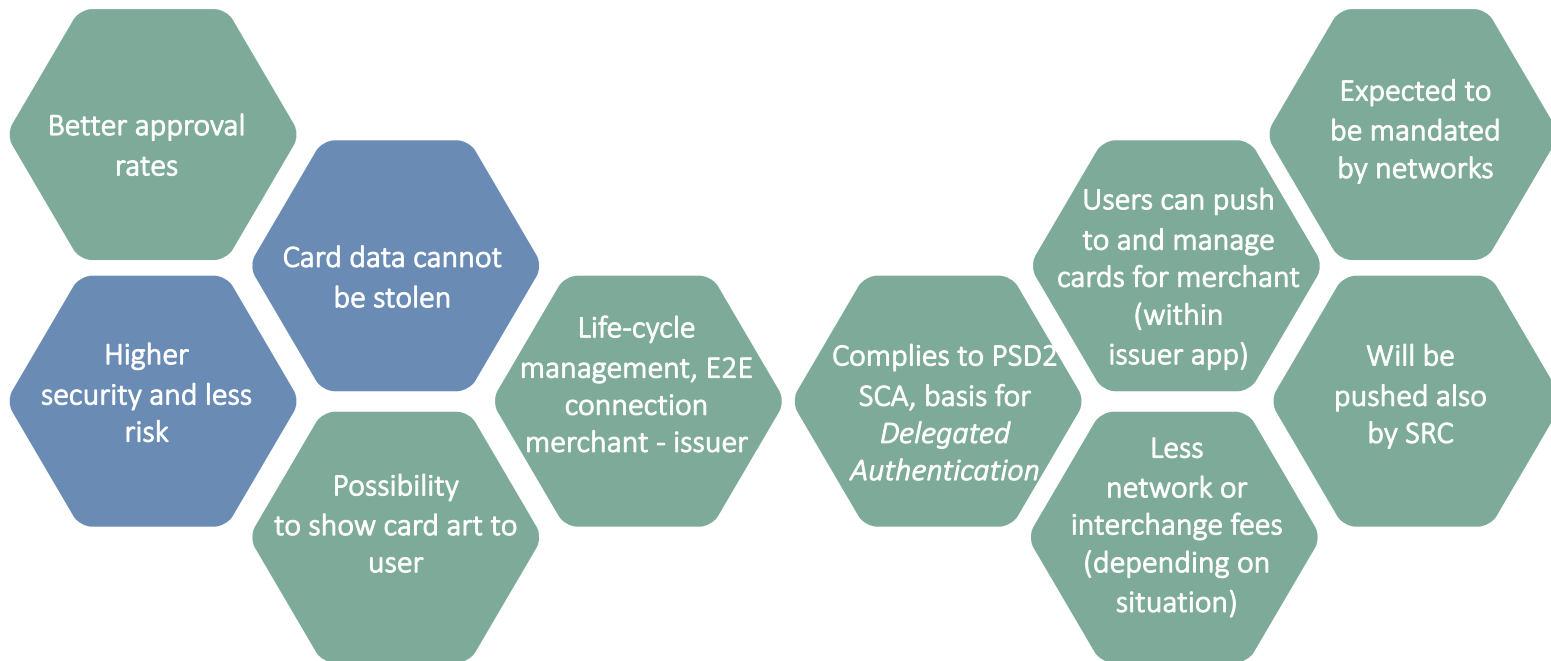


The issuer gets more assurance on the transaction

- He sees that the transaction is based on network tokenization
- He knows the outcome of the cryptogram validation
- He can identify the merchant by the TRID
- He can validate that the token belongs to the merchant

➔ Resulting in better approval rates

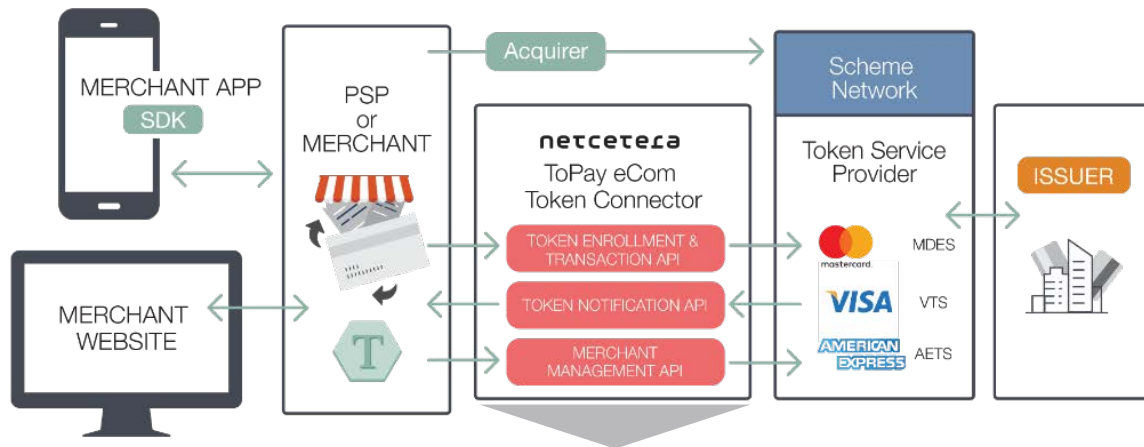
Comparing network tokenization with PSP tokenization



Advantage compared to PSP proprietary tokenization

ToPay eCom Token Connector

One interface to connect to multiple networks with unified flows



- Technical platform to connect merchants / PSPs with multiple network token services
- One single, API-based interface with unified flows
- Network-agnostic platform operated as a service

Benefits of network tokenization

Helps to increase security, approval rates and conversion

EMV cryptogram

Protects against fraud from relay and replay



PAN replacement

Reduces risk & PCI scope of Token versus PAN

Lifecycle management

Keeps credentials up to date, avoids abandonments & provides a more seamless user experience

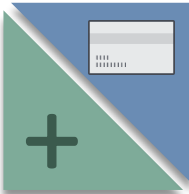


Token/cryptogram assigned to merchant

Results in better risk scores at issuers and drives increased approval rates

Card art

Builds familiarity & can drive conversion

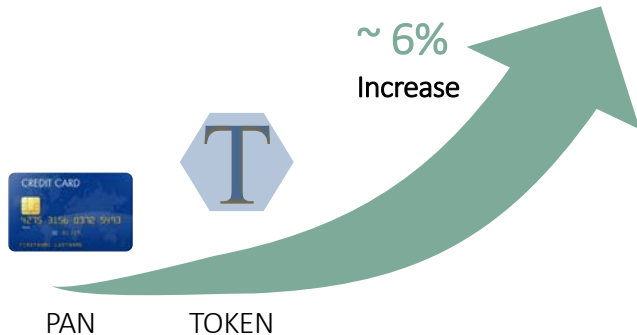


On-top «features»

PSD2 SCA compliant: basis for *Delegated Authentication & Push Provisioning*

First results

Approval rate of Tokens vs. PAN at benchmarked samples



- ▶ ~ 6% increase in approval rates communicated by two networks
- ▶ 4 - 9% increase in approval rates in randomized comparison between Token- and PAN-based authorizations at a global PSP (Sept. 2019)

Approval rates vary by country, merchant and issuer

- Network 1: Sample of over 50,000 transactions across participating online merchants during 2019, compared to overall e-commerce transactions during the same period 2018.
- Network 2: Lift of authorization rate from decline codes within a sample of 17 merchants.

Secure Remote Commerce



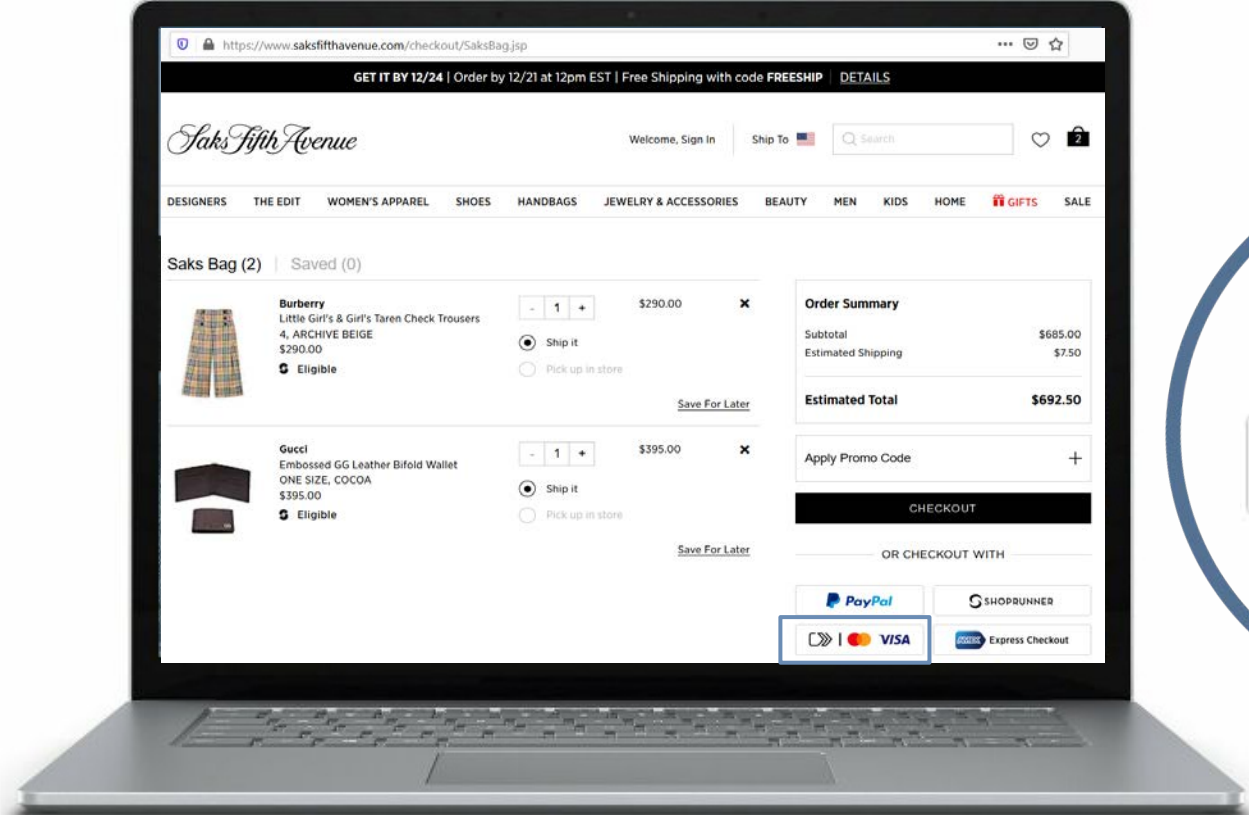
A person's hands are shown holding a smartphone. The screen of the phone displays a stylized icon of a credit card with a chip, rendered in a light blue color. The background of the image is a soft, out-of-focus blue and white gradient.

EMV[®] Secure Remote Commerce:

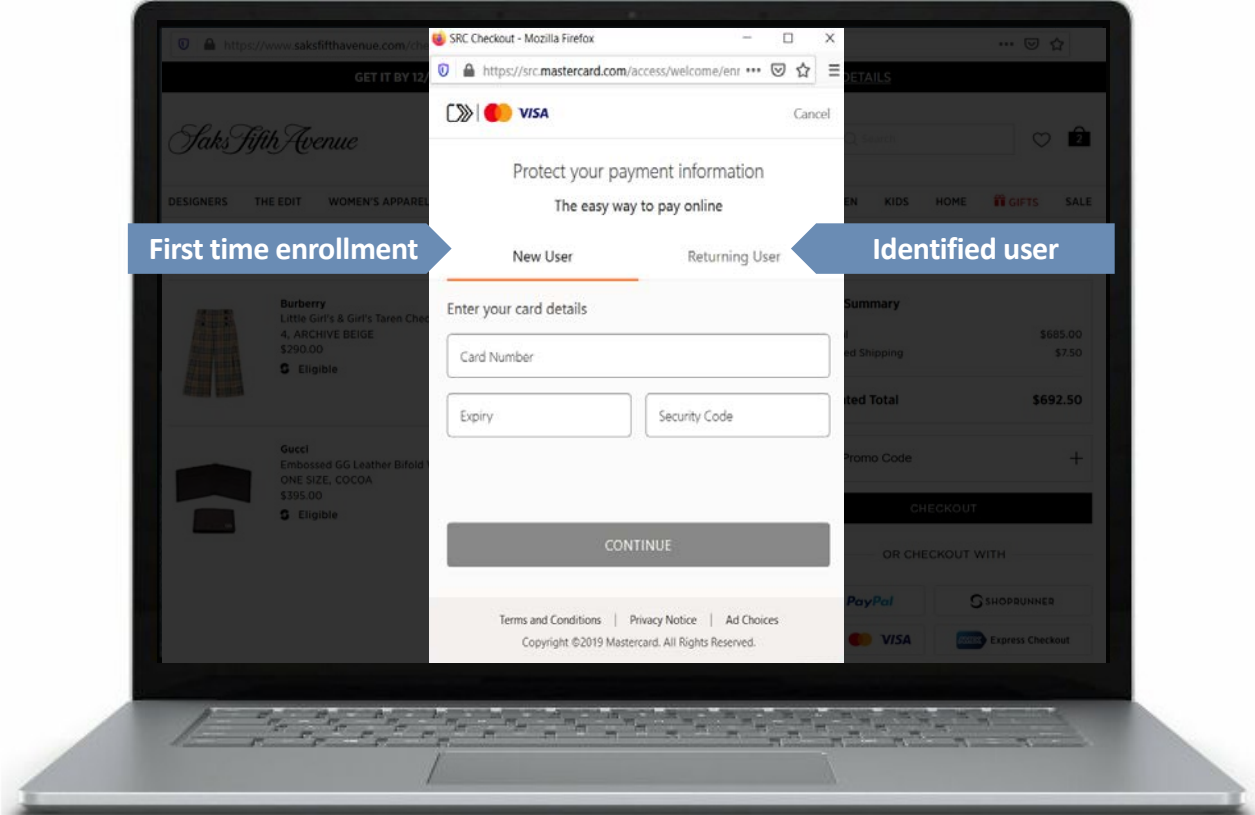
Key points of EMV SRC framework

- ▶ Future standard to make **card based e-commerce checkouts** more **seamless and secure**
- ▶ Pay securely via single, **consistent SRC checkout button**
- ▶ **Scheme neutral (EMVCo)** successor of Masterpass & Visa Checkout to help **interoperability**

What it looks like: See it live in the US

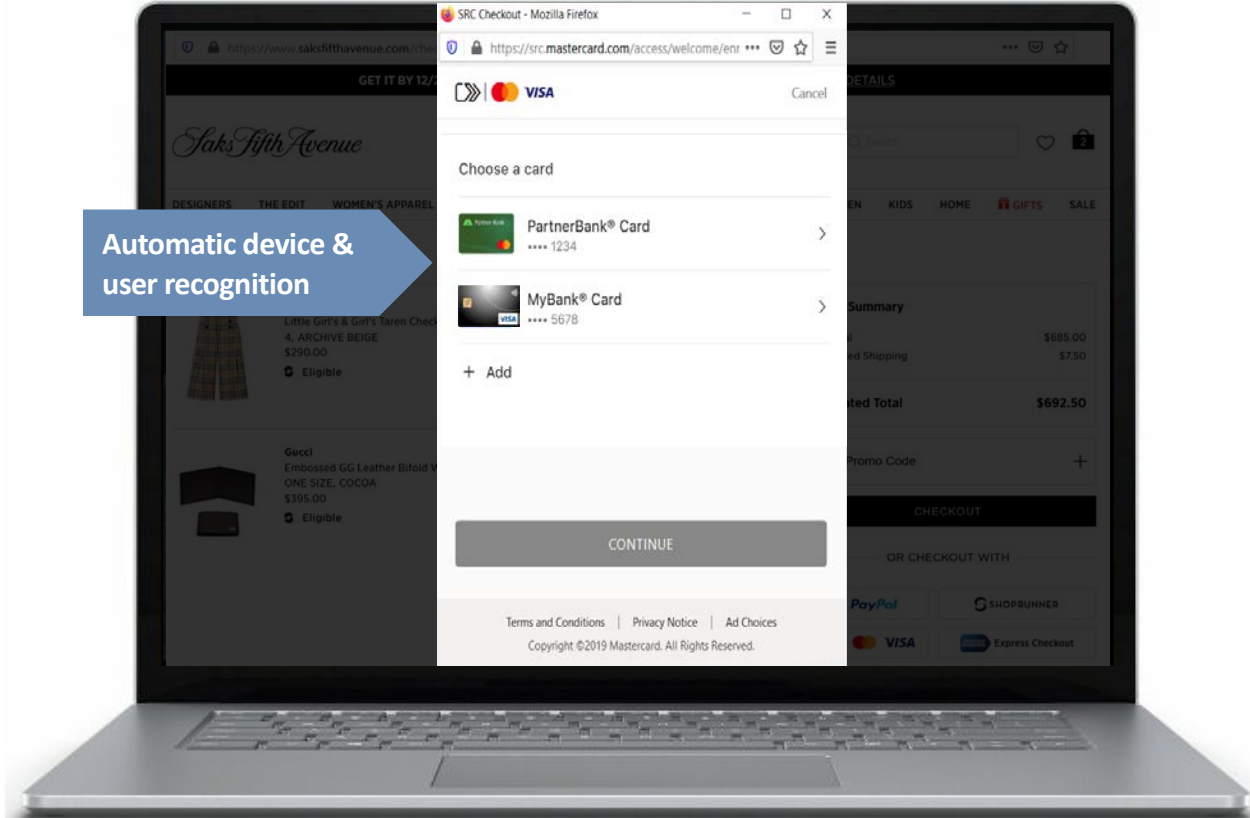


What it looks like: See it live in the US



What it looks like: See it live in the US


Automatic device & user recognition



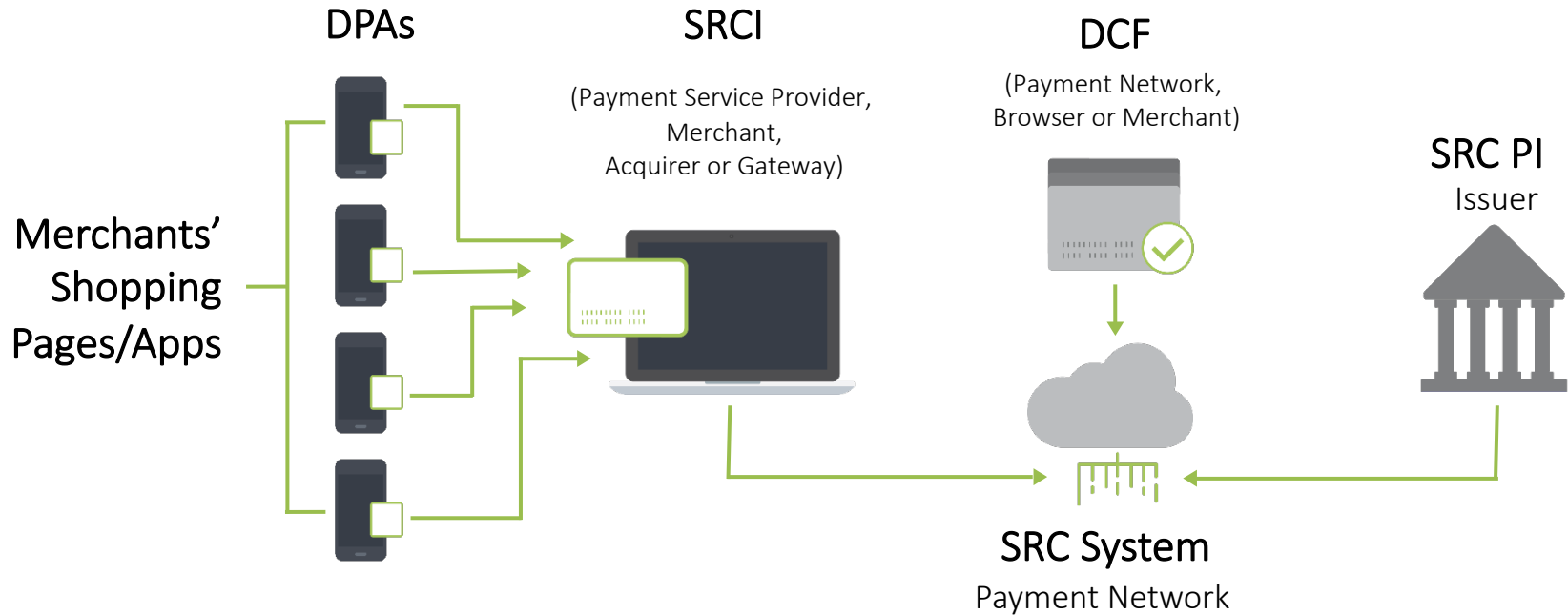
EMV[®] Secure Remote Commerce Framework



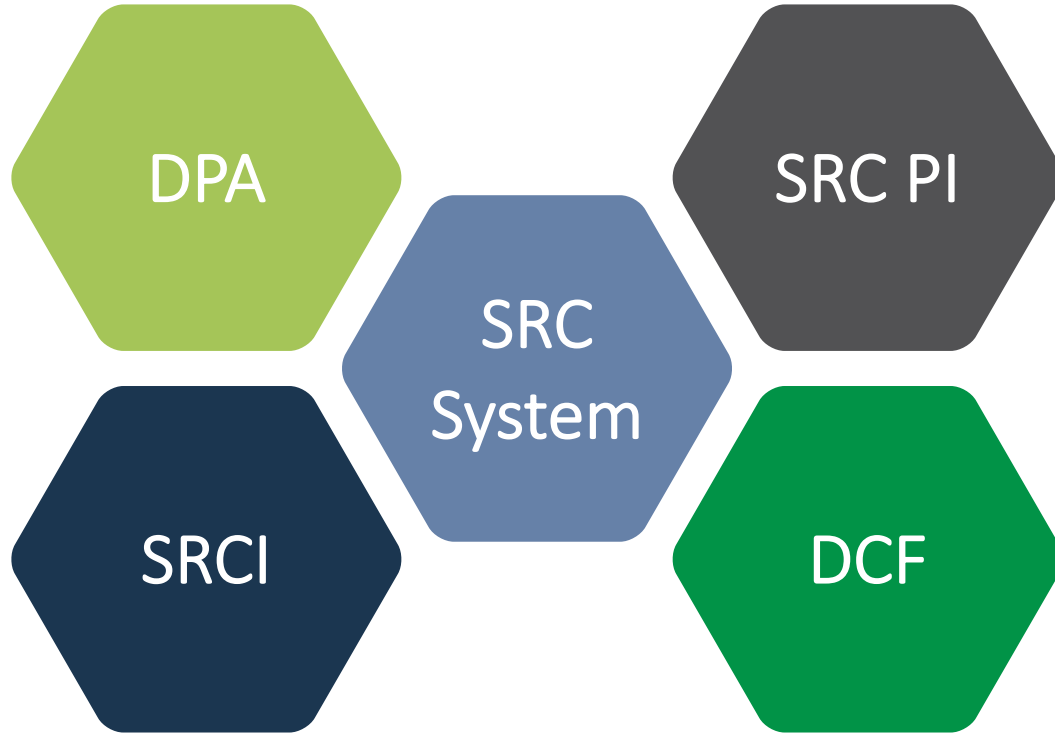
Secure Remote Commerce

- Standardized by EMVCo (<https://www.emvco.com/emv-technologies/src/>)
- Scheme agnostic to help interoperability
- Branding guidelines and SRC symbol 
- Embracing other EMVCo standards like tokenization and 3DS 2.x

What are the Various Roles in SRC?



EMV SRC Participants and New Roles



DPA

Digital Payment Application

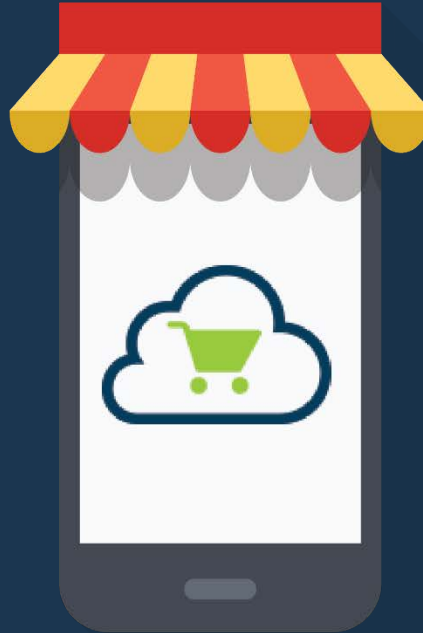
Merchant shop on browser
or in app – but also Alexa,
Facebook Messenger or the
fridge
(formerly DSA)



SRCI

SRC Initiator

Provides the SRC Software to the merchant (or its PSP) and connects the DSA to the SRC System



SRC System

SRC System(s)

Stores the digital cards and other (meta) data and orchestrates the interactions of the other SRC participants in the purchase process



SRC PI

SRC Participating Issuer

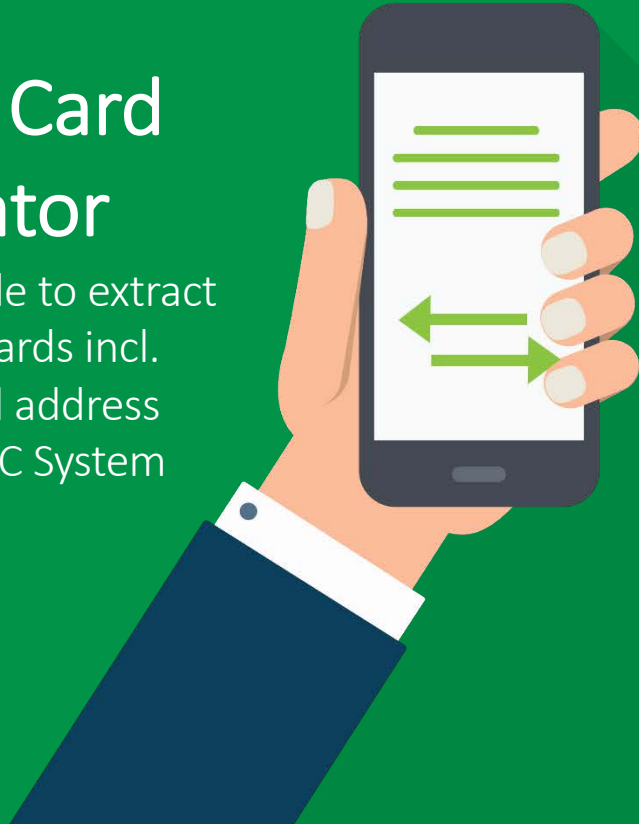
Enrolls the cards and cardholders in the respective SRC Systems, stipulates the authentication priorities, and tells the DCF where to find the card art



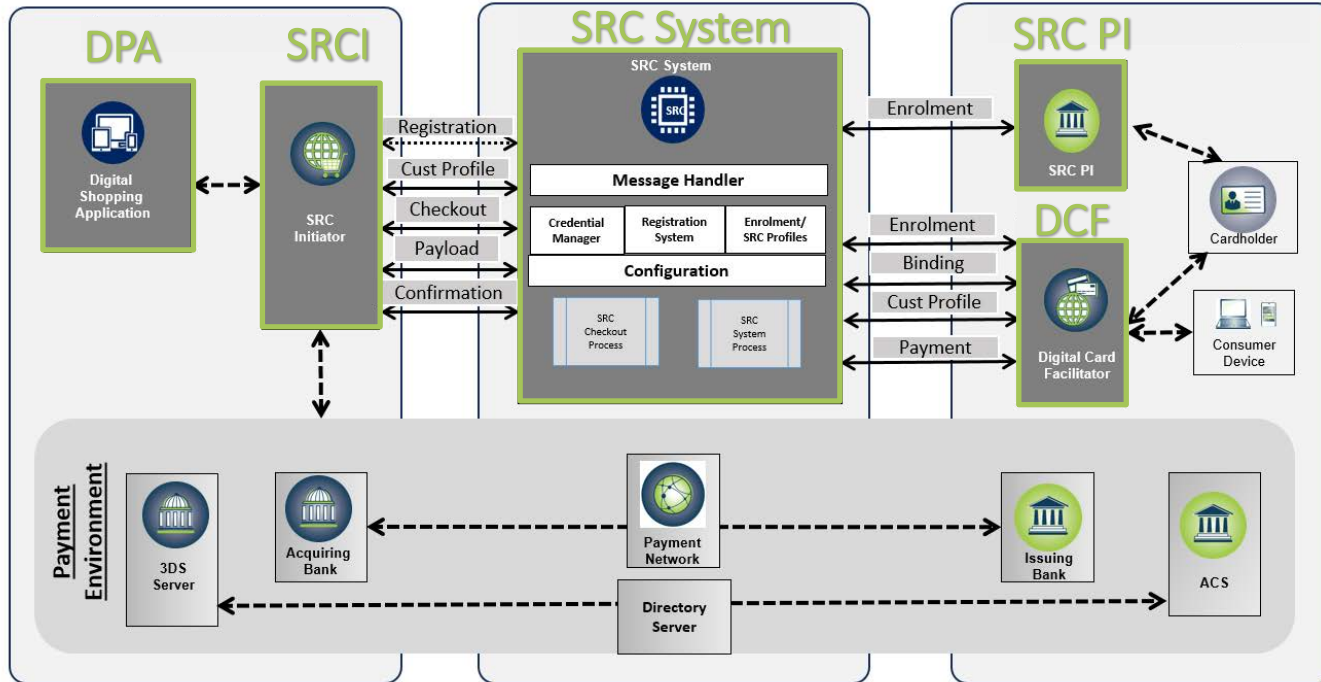
DCF

Digital Card Facilitator

Interface role to extract the digital cards incl. card art and address from the SRC System



The EMV SRC Architecture








↔ SRC Data Messages

↔ Proprietary Interfaces not part of SRC Specifications

This is How EMVCo Sees the New Roles



Roles and Common Processes / Participants

Role	Description	Common Processes	Examples of Participants
 SRC System	<ul style="list-style-type: none"> Orchestration of all technical and business relationships between participants 	<ul style="list-style-type: none"> Binding Consumer Identification SRC System Software 	<ul style="list-style-type: none"> Payment Network
 Digital Shopping Application (DSA)	<ul style="list-style-type: none"> Integrate SRC Client Software into their Consumer Checkout Experience 	<ul style="list-style-type: none"> Registration 	<ul style="list-style-type: none"> Merchant Marketplace Hosted Order Page Provider
 Digital Card Facilitator (DCF)	<ul style="list-style-type: none"> Facilitate the storage and display of Digital Card data for selection (card art, descriptor and others) 	<ul style="list-style-type: none"> Registration Onboarding Digital Card Selection 	<ul style="list-style-type: none"> Third party wallet Browser Issuer Merchant
 SRC Initiator	<ul style="list-style-type: none"> Distributes code to DSA and manages the API integration with the SRC system Provide Checkout Data to the SRC System at the time of a transaction 	<ul style="list-style-type: none"> Registration Onboarding Common UX 	<ul style="list-style-type: none"> Merchant Acquirer Gateway PSP
 SRC Participating Issuer (SRC PI)	<ul style="list-style-type: none"> Enrolment of cardholder and source of Digital Card data including Card Art, Cardholder Assurance Optionally create and validate Dynamic Data 	<ul style="list-style-type: none"> Registration Onboarding Enrolment 	<ul style="list-style-type: none"> Issuers

Benefits of SRC

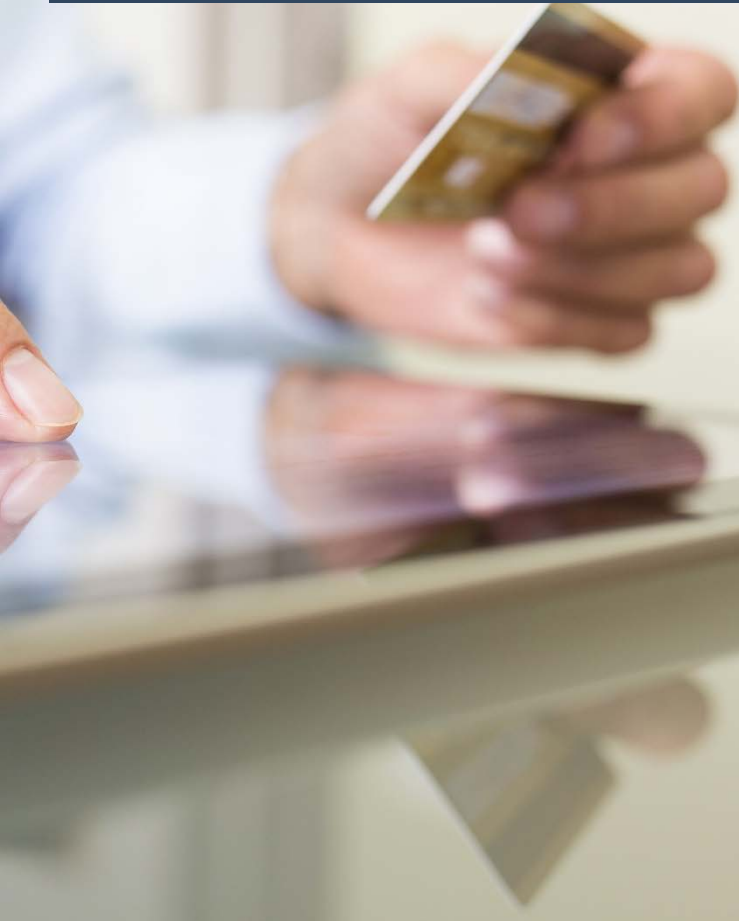
Consistent and seamless checkout experience

- ▶ SRC works the same for all schemes
- ▶ No tedious card data entry: enrolled and returning consumer and device are recognized

Enhanced security and reduced complexity

- ▶ Every card is digitized: dynamic data improve security
- ▶ Consistent, simplified integration
- ▶ Integration options for EMV 3DS & scheme tokenization

Key Findings – Summary



- Network Tokenization improves the user journey and increases the conversion rate – a win for merchants, PSPs and issuers
- The end-to-end connection between merchants and issuers will be the basis for even new payment experiences push and pull provisioning, token control etc.
- Secure Remote Commerce will simplify the user experience on guest checkout in a standardized way, like we are used today to pay at the POS seamless with any payment card

Contact us

Andreas Halbmayr



Senior Product Manager Secure Digital Payments
andreas.halbmayr@netcetera.com

Connect on [LinkedIn](#)



Kurt Schmid



Marketing and Innovation Director Secure Digital Payments
kurt.schmid@netcetera.com

Connect on [LinkedIn](#)



Q&A

Please raise your hand or
use the question section



THANK YOU FOR ATTENDING!

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Recording and presentation will be provided via e-mail
and all videos are available on trends.netcetera.com