



## Letting the hordes in: third parties to have access to your bank account thanks to PSD2

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Classification: public  
Status: final



### Michael Salmony Personal Background

- Computer Science  
PhD in Computer + Networks = New Media 
- International Business  
Transformation of Industries through Technology 
- Banking  
New Services / New Processes 
- Payments  
Innovations, Regulation, Industry Relations 



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### PSD2: Banks to open up

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**  
on payment services in the internal market amending Directives 2002/45/EC, 2006/48/EC and 2009/110/EC and repealing Directive 2007/64/EC

**Article 58**  
**Payment initiation and use of payment account information by third party payment service providers**  
1. Member States shall ensure that a payer has the right to make use of a third party payment service provider authorised by the user to obtain payment services ... provided that he holds a payment account that can be accessed via online banking.


TPPs offer a **low-cost alternative to card payments** for both merchants and consumers and provide consumers a possibility to shop online even if they do not possess credit cards.

Account servicing payment service providers shall **treat payment orders transmitted through the services of a third party payment service provider without any discrimination**

**TPPs are allowed to access and use the information on the availability of funds on the payment service user account held with another payment service provider**

(§17a) A **payment initiation service** is a service provided by a third party payment service provider to a payer which aims at enabling the payer to provide comfort to a payee that the funds necessary for a specific payment transaction are available on the account, that the payment order is made and that it will be treated without discrimination vis-à-vis other payment orders


(§32) A **payment initiation service** means a service to initiate a payment order provided by a third party service provider at the request of the payers with respect to an account held at another service provider

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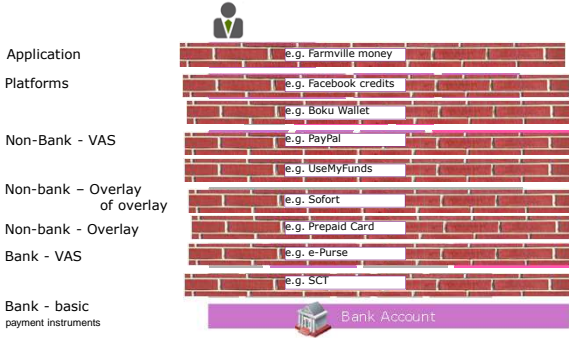
### Prerequisite: CAPS Controlled Access to Payment Services


Third parties:

- Are **regulated** (PSD)/certified
- Are **committed to joint legally binding arrangements** in an open, non-discriminatory way with bank, merchant to ensure liability partitioning, joined up user communication, dispute resolution, ...
- Are **secure** (cf SecuRe Pay), preserve **privacy**, reliably **identified** (no impersonation), ...
- Are fully under **user control** (allow who to see what)
- Pay **fee** (use of infrastructure, new service etc.)

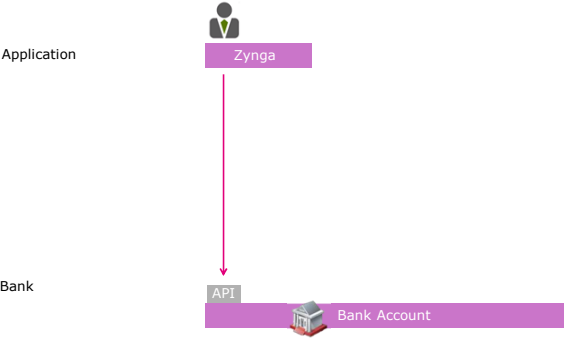
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### Banks are being disintermediated in Online



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### Direct to Bank Account !



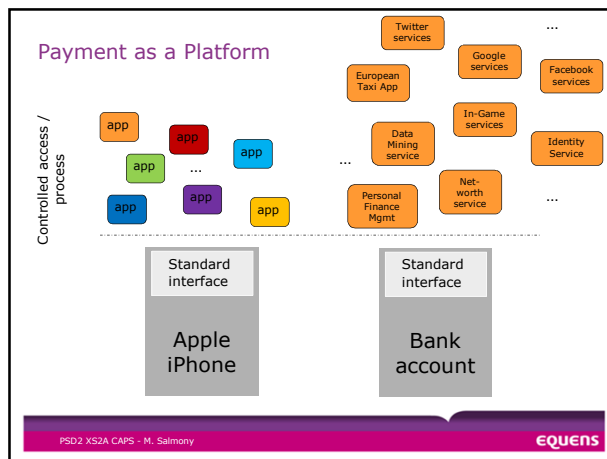
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### Possible Standard Interface to Bank Account

CAPS = Controlled Access to Payment Services

Service	Acronym	Parameters in	Result out
Payment initiation	CAPS-PI	from IBAN, to IBAN, amount	CT initiated /insufficient funds/other error
Sufficient funds	CAPS-SF	IBAN, amount	yes/no

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### API is not enough

Answers to be worked out by EPC, Coalitions, EBA, ...

Need not only technical interface/services but also

- Governance structure
- Brand
- Commercial model
- Business Rules
- SLA minimum requirements
- Fraud/misuse detection & mgmt
- Security regime
- ...

„Access Scheme/Framework/ ...“

Candidates: MyBank (EBA), eps/ePI (A), TM Forum/eTOM (FI), SEPAmail (F), iDeal (NL), giropay (D), Credit Agricole (F), EACHA, etc

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- ### EP Decisions of one day (3 April 2014)
- 63 Topics decided, each with resolutions, texts, decisions, annexes**
- Community regime for the control of exports, transfer and brokering of dual-use items
  - Greenhouse gas emission trading (international aviation emissions)
  - Interchange fees for card-based payment transactions
  - Payment services in the internal market – (201 PSD Amendments !)
  - European single market for electronic communications
  - Electronic identification and trust services for electronic transactions in the internal market
  - Statutory audit of public-interest entities
  - Statutory audits of annual accounts and consolidated accounts
  - Reduction or elimination of customs duties on goods originating in Ukraine
  - EU comprehensive approach and coherence of EU external action
  - 2012 discharge: European Commission and executive agencies (8 decisions and 1 resolution)
  - Court of Auditors’ special reports in the context of the 2012 Commission discharge
  - ...
  - Situation in Iran
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### Learn from Industry how to do this Pragmatically

PayPal – been doing this for years (Open Innovation)

**Opened up to Developer Community**

- provide API, tools, community (PP Innovate 2010 – the only developer conference dedicated to payments), ...
- leverage PP assets: merchants, customers, fraud prevention, brand, ...

**Result**

- Initiative to all developers to embed their apps directly on PP website
- Tools to allow design of apps across platforms: Android, iPhone, etc.
- One solution for laptop, mobile, tablet

Banks have much better assets !

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### Some Banks are already doing it

**#1** The opening to the data model of the bank through the provision of a secure SDK + the access to CA connect

**#2** Co-creation of services between our customers and the community of the Digiculteurs : 3 months from the idea till the product

**#3** A force for innovation, and the insurance that our customers will always be listened to and benefit from the best mobile apps

18 out of 28 applications had never been previously developed







[www.creditagricolestore.fr](http://www.creditagricolestore.fr)



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### Everybody now doing APIs

CES 2014





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### Controlled Access to Payment Services (CAPS) Even beyond Payment ?

Extended possibility:

Service	Acronym	Parameters in	Result out
Payment initiation	CAPS-PI	from IBAN, to IBAN, amount, [QoS] TPP cert	CT initiated w best effort [guarantee, real time, ...] /insufficient funds/other error
Sufficient funds	CAPS-SF	amt, reserve time, TPP cert	yes/no, reserved until <timestamp>
Balance information	CAPS-BI	IBAN, TPP cert [all accts=v] [past:n days/tail]	balance(s), [past statements]
Account verification	CAPS-AV	IBAN, TPP cert	yes/no account exists
Identity information	CAPS-II	type of info requested, TPP cert	age verification, identity verification, postal address, mobile number, ...
Sign service	CAPS-SS	IBAN, doc/mandate, TPP cert	confirmation (e.g. mandate number) or fail code
...	...	...	...





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### When is a Standard not a Standard ?

- Define what it is
- Define what it isn't



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### Some Use Cases

**Payment**

- An online room booking via AirBnB on mobile/tablet/PC invokes API to make **guaranteed payment** for room. Allows AirBnB to **accept customers from all banks**. Customers **don't have to set up separate wallets** and get **bank grade security**.
- cross/upsell: a consumer buys at a web shop an expensive TV and gets a payment options in installments. **In real time a personal loan is issued** (based on **name, address, income and date of birth** details as registered at his bank) and the merchant receives the full amount.


**Information**

- a consumer **aggregates** his payment information **from multiple banks** at a third party service. Recommendations are made how best to **balance funds** across accounts.
- Allowing a third party access to my accounts to **analyse** how much I am spending on **insurance per month**. Recommendations how to **optimise**.


**Identity**

- The bank API, verified by banking credentials/PIN/ thumbprint/voice/... **proves it is me** and allows **single sign in** to web sites (not different mechanisms and password for each), **access/opens doors**, ...
- A consumer buys at a webshop. Using his bank credentials, the consumer **does not need to fill out new forms**, the merchant can **rely on the data** provided (**automatic shipping address**, ...)
- A consumer **proves he is of age** and is granted access to age restricted material/services

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### Payment Card Use Case – Now




Mastercard, 5234 0034 6789 3412, security code 334, expires 12/08, address 56 Draycott Place, London SW3 3BP, ... can you speak a little louder ? Oh you need the number again ? ...

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### Use Case – New




Invokes  
**API-pay** (24.05, EUR, Court-Theatre-id, guaranteed, send\_user\_address)

- Paid
- Tickets sent to registered home address (or downloaded on mobile)

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### New Payment Instruments

Straight to bank account



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### Payment P2P Use Case



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### Huge Savings Potential: Reduce Cash

Total non-STP payment methods (cash, cheques, ...) cost Europe 84bn€/year  
[source: Retail Bank Research 2/10] + corruption, tax loss, black market, ...

UPDATE: Greece Plans EUR28 Billion Bank Bailout Package - Fin Min  
Link: Oct 10 2010, 10:07 GMT+1 (Dawn Jones)

**COST OF CASH IN GERMANY\***  
€12,5 BILLION/YEAR

WHO PAYS?

- BANKS € 4,4 BILLION
- RETAILERS € 6,7 BILLION
- CONSUMERS € 1,3 BILLION
- EACH GERMAN COIN € 150

Euro cash QUADRUPLED since introduction

Today, around 85% of all retail payment transactions are done with cash.

(not Sweden ...)

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### Identity Use Cases

**20M+ South Korean Credit Card Numbers Stolen (Jan 2014)**

**Breach of 40 million Target shoppers' data latest ID-theft disaster (Dec 2013)**

Cybercriminals hijacked credit-card and bank information from 40 million Target customers

**Target May Have To Spend \$100 Million To Prevent Future Data Breaches**

In Target Corp.'s case, that could amount to \$1 billion in losses over a single incident.

**16 million online accounts probably compromised, German government warns (Jan 2014)**

A list of 16 million email addresses and passwords has fallen into the hands of botnet operators, the German Federal Office for Information Security (BSI).

It remained unclear though to what these login credentials provide access. They could be logins for mail accounts, Facebook accounts, Amazon accounts or other online services

A case of large scale identity theft

**HACKERS HIT EBAY; MILLIONS WARNED**

Online auctioneer tells 14.5M users to change passwords

**Hack attack on European Central Bank jeopardises personal information**

The bank was the victim of a hacking attack which compromised some unencrypted data, including email and street addresses

**We need bank-grade Identity checks !**

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### Why does this happen?

Traditional Methods are Failing

The avg. Consumer

- has 26 accounts which require a uid/pw
- 31% use the same uid/pw across accounts
- 6.5 passwords/user
- 8 logins/day

=> Inconvenient for user

=> Expensive for merchants

- millions for hacker breaches, password resets, ...

CREATE PASSWORD

YOUR PASSWORD NEEDS TO CONTAIN 8 TO 25 NUMBERS, LOWER-CASE LETTERS, UPPER-CASE LETTERS AND SPECIAL CHARACTERS.

CONFIRM PASSWORD

**THE DEATH OF PASSWORDS**

Michael Barrett, CISM, CISSP  
Chief Information Security Officer  
PayPal™

PASSWORDS 1961-2013  
BEST IN PEACE

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Massive forms – with all infos already known to my bank

SignUp Today

Instead: Bank already knows your name, address, tel no etc (KYC) and can provide these correctly and securely. No need to register for each service individually. Bank credentials work everywhere across Europe

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Age Verification Today

WARNING: Diese Web-Seite enthält für Minderjährige ungeeignetes Material.

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ZUGANG VERLASSEN

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Already over 300 e-Payment Mechanisms in Europe – Innovation and competition will explode !

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Summary

**This may be the next big thing**

- PSD2 forces banks to open up
- May be most strategically disruptive development in payments yet
  - Major threats and costs to banks, cards, ...
- Opportunities for banks
  - Regain control over banking: credentials/bank security
  - Bank account in the center: direct bank-to-customer (less intermediaries, agents, in-game agencies, cards ...)
  - Unleash innovative power of third party developers
  - New services and new revenue opportunities
- New use cases
  - Payment/Identity/Information
  - Many more once creativity of the market unleashed
- Will likely lead to explosion of creativity, innovation and competition in Europe

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