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EMV® 3-D Secure

Revolutionizing Digital
Payment Experience
Through
Customer-Centric
Authentication



ACCOSA IVS™



Enabling Digital Transactions to Be Simple, Effortless, and Secure

Payment authentication plays a crucial role in fraud detection and prevention for digital transactions. In a world where customers make transactions on the go, this becomes all the more important. Users want the freedom to make payments from any part of the world and from multiple devices, without any compromise in transaction security. They want convenience, speed, and safety. While this has been made possible over the past few years, digital fraud has also evolved, making it difficult to distinguish between genuine payments and fraudulent ones.

Ineffective authentication systems put transactions at risk, severely affect customer engagement, and result in business losses. Issuers, globally, are looking for effective payment authentication solutions that offer both security and seamless transaction experience irrespective of how and from where the payment is being made. This paper talks about how EMV® 3-D Secure delivers exactly that.

The Origin and Journey

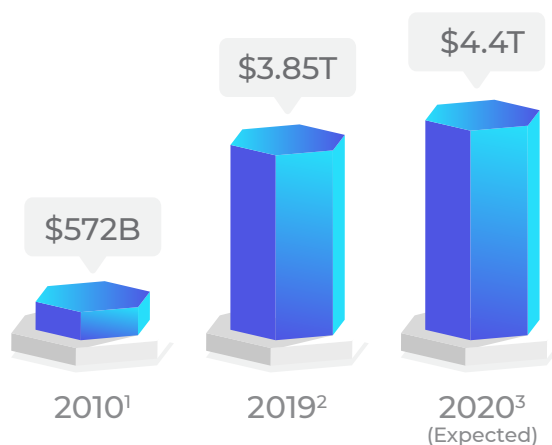
The 3D Secure protocol, or 3DS 1.0.2 as it is popularly known, was first introduced in the early 2000s. Many other credit cards implemented these protocols to safeguard online transactions as well. But as technology evolved to include mobile phones and other devices, the protocol couldn't cater to the latest authentication requirements.

Apart from this, the growth rate of e-commerce has exploded over the past decade. Global value of digital payments in 2010 were \$572 billion¹ compared to \$3.85 trillion in 2019². It is expected to reach \$4.4 trillion by the end of 2020³ (however, given the current pandemic, this level of sales may not be possible).

This called for a newer and upgraded authentication solution that not only offered stepped-up security but also a frictionless payment journey for the customer. This is precisely what EMV® 3-D Secure also known as 3DS 2.0 developed by EMVCo® is designed to offer. It enables smooth and highly secure digital transactions on multiple devices and not just laptops and personal computers.

This paper talks about the important aspects of EMV® 3-D Secure. These include:

- ◆ The need for EMV® 3-D Secure
- ◆ Salient features of the protocol
- ◆ Its role in enabling PSD2 initiatives
- ◆ The benefits it offers
- ◆ What an issuer should look for in an EMV® 3-D Secure service provider



Global Ecommerce Sales

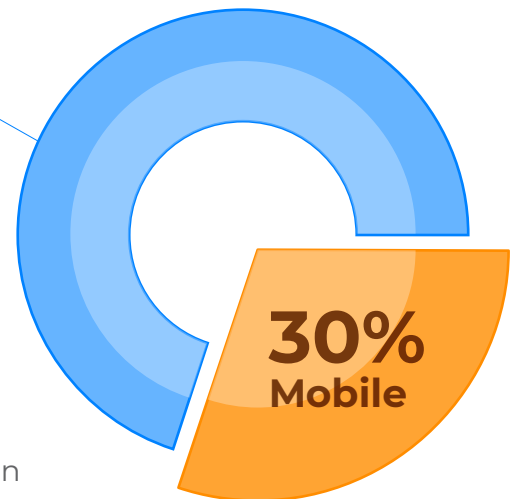
The Real Need for EMV® 3-D Secure

3DS 1.0.2 had shortcomings which resulted in a negative customer experience.

Listed below are some of them:

- ◆ Only-browser support
- ◆ Mandatory customer enrolment with the issuer
- ◆ The cardholder must personally authenticate each transaction (this leads to friction)
- ◆ Use of static passwords for customer authentication
- ◆ Use of only 15 data elements for decisioning

30% of the [global digital commerce volume in 2017](#) came from mobile phone apps⁴. The use of mobile and tablets for transacting online, presented a problem for the browser-only 3DS 1.0.2 protocol. Furthermore, the fact that the customer has to go through an authentication process for every transaction became cumbersome. This reduced the speed of transacting.



With 3DS, the issuing bank will take customers through an enrolment process. After the card details are entered, they are then taken to another page where they authenticate their transaction with a password. This process of redirecting customers to other pages is counter-productive, increasing the time per transaction.

In a world where speed and security are what customers are looking for, inefficient authentication often leads to abandoned carts. Additionally, fraudsters hack into the process and redirect customers to phishing pages looking exactly like bank web pages, leading to online theft.

On the other hand, static passwords and answers to security questions can be forgotten quite easily. This led to customers having to reset their passwords every time it happened. And with fewer data elements being exchanged between the issuer, cardholder, and merchant, the risk being assessed was not adequate.

These limitations led to the development of EMV® 3-D Secure – a dynamic, risk-based authentication solution built to overcome the limitations of its predecessor. It helps prevent unauthorized card-not-present (CNP) transactions and offers merchants protection from exposure to fraud.

The protocol supports app-based authentication and can be integrated with digital wallets as well. Offering multiple step-up authentication options, and enabling risk-based dynamic decision-making, EMV® 3-D Secure is a feature-rich specification that provides optimum security and a frictionless digital transaction experience.

Salient Features of EMV® 3-D Secure

This protocol is designed to make customers' digital payment journey as smooth and effortless as possible while protecting them from fraudulent attacks. It prioritizes user authentication, detecting and preventing fraud from taking place. It overcomes the limitations of 3DS 1.0 by balancing payment security and the convenience of transacting online.

Multi-Device Support and Enhanced Functionality: This new specification helps customers have a seamless experience irrespective of the device they are using. Merchants can integrate the authentication process on both browsers as well as mobile-based applications. From desktops to mobile apps to wearables, users can now make purchases with the least interaction. What's more, users can now store card details on digital wallets as well. Overall, it extends complete support for IoT commerce.

No More Customer Enrolment: No more redirection to other pages, no more pop-ups, and no more card registration. Customers are free from this obligation. The issuer will ensure that all the cards it issues are registered when they partner with a 3DS service provider. This means lesser customer friction during the payment process.

Dynamic Risk-Based Analysis for Decision-making: Now, ten times more data as compared to 3DS 1.0.2 is exchanged between the stakeholders in an online transaction. As customer behavior and fraud patterns evolve, the protocol constantly studies these changes and adapts itself. This enables it to provide real-time verification and stepped-up authentication if needed. The exchange of rich data helps in staying one step ahead of fraud.

Improved and Stepped-Up Authentication: Customers don't have to use fixed passcodes anymore. This protocol features enhanced security measures which enable the use of biometric authentication (such as fingerprinting) and OTPs (one-time passwords). It also allows users to authenticate using the out-of-band option.

Support for Non-Payment Activities: EMV® 3-D Secure offers cardholder verification support for non-payment related transactions as well, such as registering a card on a digital wallet.

Enhanced Customer Engagement: The improved security and authentication measures ensure minimal risk of fraud and a much better payment experience for the customer. This speeds-up the transaction journey, leading to a reduction in abandoned carts and increased revenue for merchants.

PSD2 Compliant: EU is all set to implement its PSD2 (Payment Services Directive 2) initiative, with SCA or strong customer authentication as the main feature. Many of the authentication requirements of PSD2 are identical to those offered by EMV® 3-D Secure. Digital payment service providers who use this new specification will be able to comply with PSD2 and SCA requirements a lot easier.



EMV® 3-D Secure and PSD2

PSD2 is designed to enable better digital payment experience and security, increase competition, and expand business possibilities in the European Union (EU) and the European Economic Area (EEA). It relies on the exchange of customer data between merchants and payment service providers to offer consumers unique and enhanced digital transaction experiences.

PSD2's backbone is SCA (Strong Customer Authentication), based on consumer preferences. It requires customers to authenticate using any two of the following elements:

- ◆ Something that only the customer knows – a PIN or a password.
- ◆ Something that only the cardholder has – a mobile phone or a hardware token
- ◆ Something that only the customer is – voice/facial match or fingerprint

To provide an improved online payment journey, PSD2 has certain SCA exemptions. These include:

- ◆ Payments made to trusted beneficiaries/merchants
- ◆ Payments at unattended parking and transport terminals
- ◆ Recurring payments
- ◆ Low-value transaction below EUR30
- ◆ Payments below EUR50 made at point-of-sale
- ◆ Low-value transactions below EUR500 made via a PSP with effective transaction risk analysis procedures in place
- ◆ Payments made via secure corporate protocols

EMV® 3-D Secure incorporates authentication processes that seamlessly satisfy PSD2 and SCA requirements. This will go a long way in enabling faster, smoother digital transaction with optimal security.

Benefits of Using EMV® 3-D Secure

The benefits of adopting this new and improved protocol extend to all the stakeholders in a digital transaction – Customers, Merchants, and Issuers.

Benefits for Consumers

Enhanced security to efficiently authenticate user identity and detect and eliminate fraud

Highly improved digital payment experience with least customer interaction

The convenience of using multiple devices to make purchases online

Benefits for Merchants

Authenticating customers in real-time and reducing loss due to fraud

Ability to offer trusted cardholders faster payments by circumventing 3DS authentication

Offering a seamless experience, building customer trust, and reducing cart abandonment

Benefits for Issuers

Rich data exchange enabling frictionless cardholder authentication

Ability to offer the merchant opt-out feature and reduced false positives

Increased customer retention by offering support across multiple channels and devices

While there are numerous benefits of migrating to this new platform, issuers will be able to make use of them only if the service provider offers reliable, end-to-end support.

What to Look for In an EMV® 3-D Secure Service Provider

Choosing an authentication provider can be a tough task given that there are quite a few of them. Here are a few questions you can ask while making your decision:



Do They Offer Support for Both 3DS 1.0.2 and EMV® 3-D Secure

Although the new version is here and has been implemented across the globe, the older version is still very much in use. It will continue to be used till it is eventually phased out. So, getting an authentication provider that offers support for both the versions is important.



Is the Provider Offering Reliable Mobile-Ready Support

Given that mobile commerce has grown by leaps and bounds, it is essential that the provider offers reliable mobile-ready support. Increased mobile transactions means higher chances of fraud. Therefore, having a robust mobile authentication strategy is vital. Make sure they offer an easy-to-integrate mobile SDK as well.



What Are the Types of Authentication Being Offered

Customers want convenience without any reduction in security. That said, it is important to offer multiple authentication options so that customers enjoy utmost convenience. Most users, today, prefer biometric authentication. Apart from this, what other options do they provide and are they reliable?

ACCOSA IVS™ – A PSD2-Ready EMV® 3-D Secure Solution

As a pioneer in the digital payments industry, Wibmo has been offering solutions such as ACS, risk engine, 3DS support, etc., for about twenty years now. ACCOSA IVS™ (Identity Verification System) is a comprehensive, data-driven, customer-centric authentication solution that allows issuers to authenticate cardholders.

Built on the EMV® 3-D Secure protocol, it also supports the 3DS 1.0.2 platform. The solution is integrated with a risk-based authentication (RBA) engine which enables real-time risk analysis and fraud detection and prevention.

Wibmo's ACCOSA IVS™ is designed to offer optimum security for digital payments while ensuring a smooth and frictionless customer experience. Compliant with all pertinent regulatory requirements, it enables authentication-based decision making. In addition to this, it is compliant with SCA requirements of EU's PSD2 initiative.

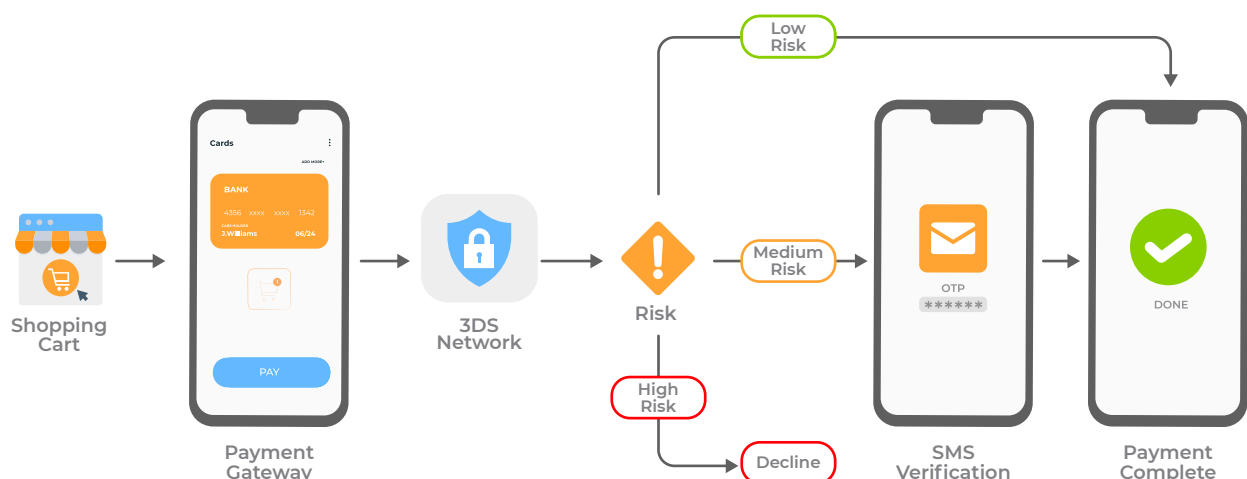
This customer-centric solution incorporates the exchange of rich data between the consumer, merchant, and issuer. The risk engine studies and adapts itself to evolving customer behavior and fraud patterns. Based on this, it scores every transaction. The risk score helps decide whether a transaction must be accepted, sent back for stepped-up authentication, or denied.

ACCOSA IVS™ enables multi-factor authentication and incorporates options such as biometrics, OTP, and out-of-band verification. It offers both in-house as well as hosted options and can be customized according to the issuer's requirements. The solution can be scaled up to meet the authentication needs of growing number of transactions, without any downtime, since Wibmo's support architecture is available 24/7.

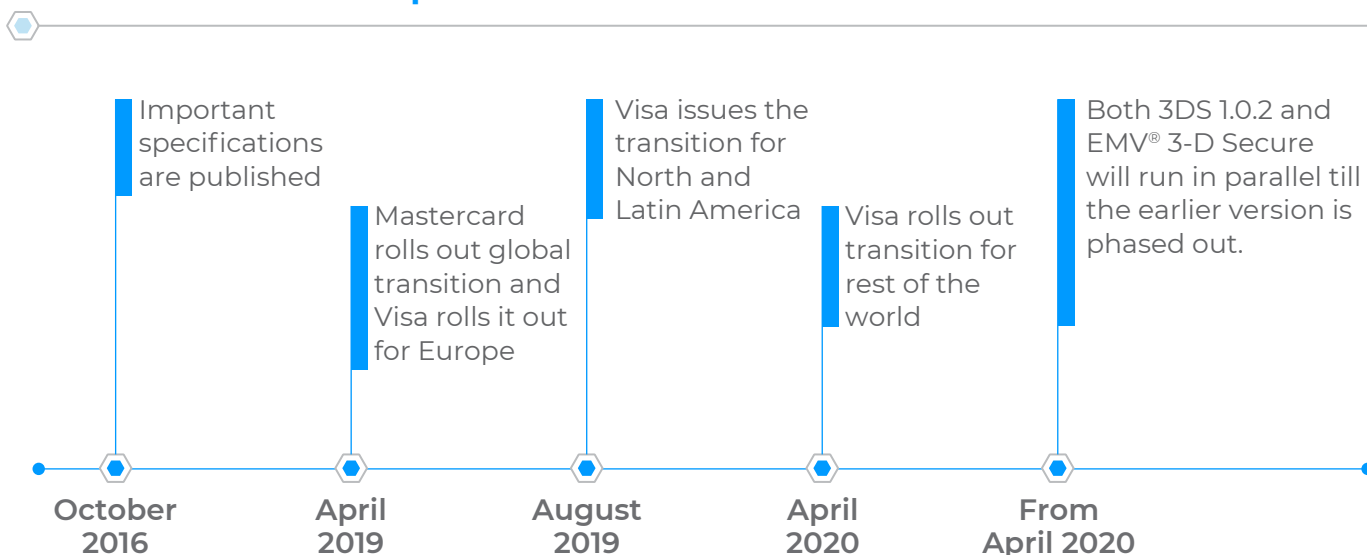
A few additional features:

- ◆ Supports in-app purchases
- ◆ Non-payment customer authentication
- ◆ Eliminates the need for enrolment and accommodates merchant self-onboarding
- ◆ Real-time dashboard and strong reporting tools

How ACCOSA IVS™ Works



EMV® 3-D Secure Implementation Timeline



Conclusion

As customer patterns and needs evolve, offering digital payment convenience without compromising on security has also become a reality due to enhanced authentication solutions. EMV® 3-D Secure from EMVCo® is a dynamic risk-based authentication solution aimed at enabling issuers to offer greater transactional security while letting customers experience a seamless online journey. Customers can now transact from any corner of the world using a device of their choice, effortlessly and reliably.



Wibmo, with over two decades of experience in the digital payments industry, partners with multiple global banks, offering ACS, 3DS, and other payment solutions.

To know more about how you can achieve a smooth migration to the EMV® 3-D Secure platform, please visit <https://www.wibmo.co/accosa-ivs/> or send an email to sales@wibmo.com

Sources:

¹ Red Stag Fulfilment – The 2010s: A Decade of ECommerce Growth

² Statista – Digital Payments (worldwide)

³ Statista – Digital Payments (worldwide)

⁴ McKinsey & Company – Global payments 2018: A dynamic industry continues to break new ground