OLS: A SWITCH WITH A DIFFERENCE

A transaction and payment switch that lowers payment cost and risk but also increases revenue, transactions, lift, and engagement for merchants

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It isn't often that one product saves money, reduces risk, and increases revenue, but properly deployed that's what the OLS switch promises. This switch can help marketing deliver new products, accept new payment types such as Alipay and WeChat Pay, while also integrating to existing back-end systems to enable new solutions and analytics. It processes and integrates complex point-of-sale (POS) transactions to enable manufacturer incentive programs, loyalty solutions, pharmacy insurance adjudication, and even automated fuel pump solutions. But what really sets OLS apart is the ability to deploy new financial products and services that drive increased visits and revenue safely and securely.

Introduction to the OLS Platform: Increasing Merchant Revenue

OLS, originally On-Line Strategies, was established in 1996 as a provider of online transaction processing systems (OLTP) and currently make connections for 20 of the Top 100 retailers in the United States. This architecture delivers numerous benefits for the merchants who use it today. It is valued for its reliability and the ability to manage almost any data structure or transaction size likely to be seen in a merchant's infrastructure, including basket and loyalty data.

OLS continued to make major investments in its platform and was an early adopter of analytics, adding data mining and analytics in 2001. In 2004, OLS rearchitected the solution as an open architecture technology platform, which it launched as a merchant switch. This platform continues as the basis for all OLS innovations (details of the platform are discussed later in this paper).

These investments were not driven by a desire simply to be first to adopt new technology. Rather, OLS is driven by the needs of its merchant clients, who needed a method for tracking sales, payments, and loyalty initiatives. OLS continues to deliver not only tight monitoring and controls on the processes executed on its platform but also innovative solutions that drive additional transactions and lift.

For example, OLS enables merchants to implement triggers that can drive custom processes at the point of sale, the POS. These might create various requests, for example asking the consumer to join a loyalty program, asking whether the consumer would like to spend loyalty points, asking the individual to rate the customer experience on social media, or any other activity the merchant requires. More recently, OLS, after being acquired in 2012 by InComm, a prepaid products and payments technology company, has also enabled merchants to accept cash to purchase or reload prepaid products from any supplier. The acquisition resulted in additional investment in the OLS platform, in large part to create one of the most secure payment platforms in the market.

Merchants' needs have changed dramatically over a short time and will continue to do so. OLS has remained current with these requirements by both extending support within its own platform and by enabling rapid integration to an ever wider range of third-party products.

The OLS platform supports an ever expanding set of cash-in mechanisms, payment types, and channels, all in a secure environment compliant with the PCI DSS security standards. The platform supports e-commerce, m-commerce, merchant wallets, card-on-file, kiosks, pay at-table as well as order-ahead solutions, and a wide range of specialized payment services such as IIAS, bill pay, prepaid, and top-up. All of these capabilities and others native to the OLS platform are shown in *Figure 1*, which is not all inclusive.

Figure 1: OLS Primary Capabilities List

Acceptance Includes:
- Traditional POS
- Tablet POS / Pay at Table
- Mag stripe (Swipe) and EMV
- NFC/Contactless
  - Google Pay
  - Apple Pay
  - Chase Pay
  - Samsung Pay
- PIN Entry
- eCommerce
- Barcode/QR Payments
  - Prepaid
  - Retailer App/Wallet
  - Etc.
- Credit, Debit, eWIC, ACH, eCheck, College card, Gift and Stored Value Prepaid
- Recurring Payments

Payment Services includes:
- Points (Accumulation and Redemption)
- Governmental Verifications
- Tolls and Transit
- Direct Integration with Financial Institutions
- Money Transfer
- Person-to-Person (P2P) Payments
- Offer Engine
- Digital Delivery Products
- Authorized Returns/ Product Control
- Fraud Detection
- Bill Pay
- Swipe Reload

Platform Services includes:
- Data Security and Protection
  - Reduced PCI Scope
  - E2EE / P2PE
  - Tokenization
  - Vault
- Reporting and Visualization
  - Big Data Analytics
  - Extracts and Reports
  - Points Accumulation and Redemption
  - Market Basket Adjudication
- Transaction Monitoring
  - Routing / Store and Forward
  - Message Transformation and Enrichment
  - Process Validation
  - Transaction Metrics
- Integration and APIs
  - RESTful APIs To All Services
  - Third-party Downtime Monitoring / Mitigation
  - Transaction and Reporting Data Feeds

Sources: OLS and Mercator Advisory Group

It is unlikely a retailer will find a POS or payment type that OLS doesn't support. A list of features, however, fails to demonstrate the most important feature of OLS. That is the highly focused services and people behind the platform, which are dedicated to helping retailers create new revenue, transactional lift, and partner more rapidly while reducing operational costs.

Why Merchants Need the OLS Features

Every merchant is interested in increasing revenue, yet at times that goal appears so difficult that the focus shifts instead to cost savings, which can improve earnings even when revenues remain steady. Traditionally, saving operational costs is what drives the acquisition of a payment switch. But, instead, why not consider installing a platform that not only reduces operational costs but also enables new consumer products to be brought to market, enables new consumer incentives and promotions delivered by card or mobile app that delivers greater consumer convenience, easier shopping and points redemption, and also enables acceptance of new payment types. In the following pages we investigates each of these individually.

Sell more, including financial services products

OLS can help retailers offer third-party gift cards from a wide range of categories including fine dining, fast food restaurants, big box, electronics, and digital online cards for gaming or music. The range of gift cards available is too broad to describe here, but OLS can help merchants sell gift cards available from its parent company InComm, or gift cards delivered through other distributors such as Blackhawk, Euronet's epay, and others.

Beyond gift cards, OLS can enable a range of financial services solutions that will increase the number of times a customer visits the merchant's stores and increase the average basket size. These products range from in-lane bill pay to general purpose reloadable (GPR) prepaid cards that customers use as a debit card similar to debit cards provided by banks—except that now the merchants' stores become the location for depositing funds. ***Figure 2*** demonstrates that GPR cards are a popular financial services tool expected to grow by 9% annually through 2021.

Figure 2: General purpose financial services prepaid cards continue to grow.
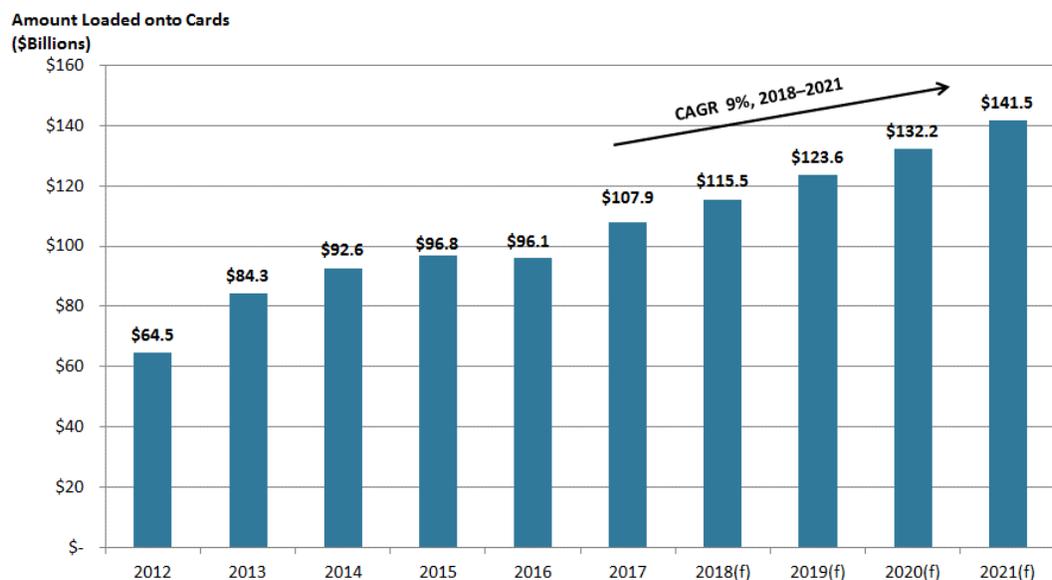

Source: Mercator Advisory Group

A new product recently introduced called VanillaDirect Pay makes it possible for consumers to pay their bills in-lane at a merchant's point of sale by simply presenting the bar code provided by the biller, typically printed on the bill itself. One utility that utilizes this approach was able to close a large number of walk-in centers because it quickly saw 20% of the traditional walk-in payments transition instead to retail stores that accepted VanillaDirect Pay—with almost 70% of those being repeat customers.

Accept more payment types, even Alipay and WeChat Pay

Merchants face a trade-off when deciding what types of payments they will accept. On the one hand, customers tend to prefer specific payment types and it is never a good idea to frustrate the customer. On the other hand, each payment type comes with costs—a cost for acceptance, a cost for maintaining card network compliance, and a cost associated with managing consumer disputes. OLS supports every major payment network in the United States and supports an increasing number of international payment types as well.

For example, although not all merchants have the location, goods, and services that draw a large Chinese consumer base, the number of Chinese tourists and college students entering the United States is rising rapidly, as shown in *Figure 3*. To maximize revenue from these visitors, it is appropriate to support their payment preferences, which in the case of Chinese nationals is likely to be the bar code-enabled mobile phone wallets from Alipay and WeChat Pay.

Figure 3: Visitors to the United States from China continues to increase (in millions).
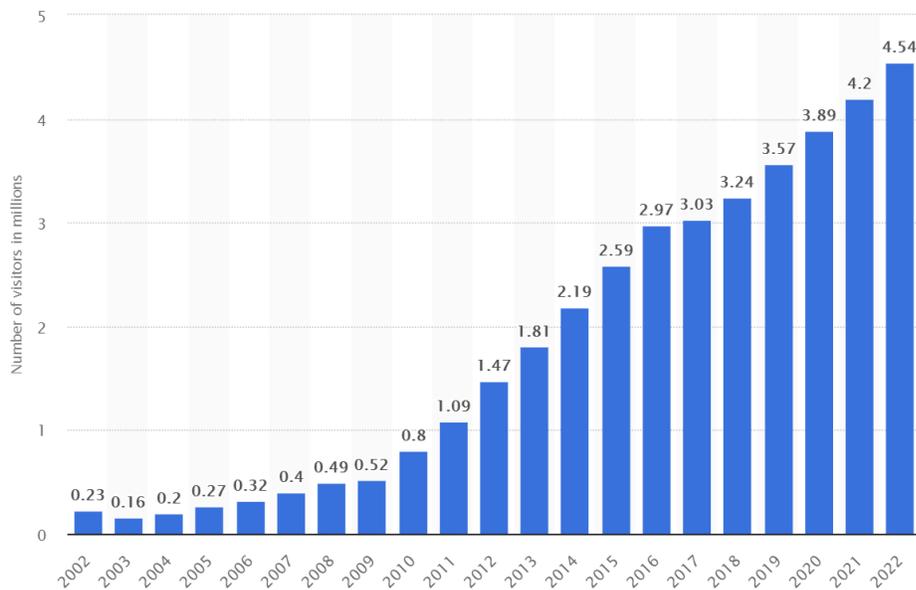
Sources: Statista.com and U.S. Travel Association

Besides connecting to every major card acceptance network, the OLS platform is capable of implementing private-label solutions that connect loyalty cards or mobile apps to cards on file or directly to an ACH payment solution. These solutions enable transactional savings that can be used to increase customer engagement.

For example, OLS merchants will find it easier to offer payment solutions similar to those available from large retailers. With OLS, a merchant can offer a decoupled debit solution similar to the Target REDcard or perhaps a loyalty card payment mechanism similar to that offered by Cumberland Farms, Circle K, CITGO, and Speedway. These retailers return the money saved on payments processing costs to fund consumer incentive programs. With Target REDcard, the customer benefit is 5% savings on all purchases, while the others, such as Cumberland Farms, offer 10 cents off every gallon of gas.

Clearly, convenience stores and gas stations are sweet spots for such loyalty programs due to consumers' frequent shopping habits, but consumers will always prefer to return to a store where they already have value available to spend. The programs mentioned above have been in operation for several years and are obviously generating positive benefits for the retailers. Mercator Advisory Group predicts that such decoupled debit programs will continue to expand (see the Mercator research report Decoupled Debit: The Start of Mainstream Adoption?, released in 2017). OLS can help you as a merchant to implement loyalty programs with the tools necessary to issue and manage your own gift, stored-value, and prepaid cards.

To understand how these solutions operate, it is valuable to look at Table 1 which shows the average cost for retailers when accepting different payment types.

Table 1: Examples of transaction processing fees paid by merchants

| | Mastercard, Visa | | | | | | |
	Tiered	Interchange Plus	PIN Debit	Amex	Discover	Chase Net	ACH
Merchant Discount	1.75% to 3.00% plus 0 to 30 cents per item	Interchange plus 0.20% to 0.80% plus 0 to 30 cents per item	0.50% to 2.00% plus 0 to 25 cents per item	2.55% to 2.95%	No higher than Visa or Mastercard merchant discount	Between regular network fee and ACH fee	$0.25 to $0.75, or less than 1% per transaction

Notes:

Merchant discount is the fee a merchant pays the acquiring bank or three-party network for facilitating credit, debit, or prepaid transactions. It can consist of interchange and/or processing fees, network assessments, and any other fees associated with the transaction. A merchant's category code and transaction volume determine the fee level; higher volume means lower unit fees, and more merchant business risk means higher fees.

Tiered merchant discount is based on volume and/or number of transactions, sometimes at specific interchange rates.

Interchange plus is interchange fees plus percentage rate for most other fees. An emerging model a Membership/Subscription construct, composed of interchange plus a fixed monthly fee.

Source: Mercator Advisory Group

The acceptance costs identified in Table 1 drop as you read from left to right, with ACH having the lowest acceptance costs. Of course, every payment network has its own rules for consumer onboarding, risk management, and dispute processing, which must be addressed, but one additional benefit of ACH that is shared with PIN debit is that a dispute must be negotiated directly between the merchant and the consumer, so funds are almost never arbitrarily credited back to the consumer by the bank.

Boost the frequency of shopping and average basket size from existing customers

The OLS platform is built as a transaction monitor and can support transactions of any size and enrich transactions with additional data. Consider, for example, the ability not only to manage a payment transaction but also to merge basket-related data associated with that payment, a trick that is easily performed by the OLS platform. In 2001, OLS added "bit data" analytics to its platform, and so all of the data available across multiple retailer systems can be consolidated and analyzed by the platform and converted into actionable programs that target existing shoppers. The ability for the OLS platform to act as a switch is, as they say in poker, table stakes. OLS believes that one of its key differentiators is the ability to collect all payment and transactional data and leverage that data through its native connection with parent InComm, to provide insights and offers by using a promotions and incentives engine.

A detailed evaluation of the OLS platform relative to loyalty and promotions is beyond the scope of this paper, but generally the platform can collect data from across the merchant's multiple solutions in order to apply that data to the OLS loyalty and promotions engine. Clearly, the ability to aggregate and associate data elements collected across an enterprise is fundamental, but it is useless unless action can be taken on that data analysis. The platform includes a flexible rules engine that can evaluate the data collected to generate events. These events are then used by the platform to request enrollment, to assign points, to recognize a points redemption, or to generate an offer from the merchant or a manufacturer.

Become less tethered to any acquirer

As with every other payment switch, the OLS solution provides a layer of abstraction between the merchant and its selected acquirer. This abstraction makes it easier to switch acquirers or to utilize least cost routing algorithms to route transactions to the acquirer that costs the least. However, the OLS payments switch is different from others because it also has a focus on increasing revenue for merchants. Certainly merchants need to accept card payments, but their primary mission is to provide consumers with outstanding products and services, which is also the mission of OLS. One example of this is that OLS supports acceptance of Alipay and WeChat Pay which isn't just a back-end function since both of these payment networks utilize mobile phones and Quick Response Codes (QR Codes) as the payment credential. The OLS switch supports the connectivity to these two payment networks, but OLS also has the product expertise that will help merchants enable their POS devices for this new payment type. This is the same expertise that enables merchants to sell gift cards and offer financial services at the point of sale, and it is now available to assist merchants that are interested in enabling their POS to accept Alipay and WeChat Pay. OLS adds the services and expertise needed to create an end-to-end solution, not just the payment switch.

Staying competitive using technology

To maintain a competitive platform and reduce overall costs, OLS transitioned its platform to Java early and took advantage of modern programming languages and techniques to improve the ability to share codes across modules and to reduce the challenges associated with maintenance. Based on this technical investment OLS is able to offer its solutions on every major platform and also as a hosted solution.

The platform implementation has tokenization and encryption built into its core architecture which, when properly installed, can significantly reduce costs associated with maintaining compliance. This reduced compliance cost is possible when the OLS switch is deployed with encryption pushed all the way out to the POS terminals. When all payment and personally identifiable information (PII) data is encrypted at the point of acceptance, the costs associated with PCI are significantly reduced because the encrypted data is no longer in-scope. As a result, the cost associated with proving that the implementation is compliant is significantly reduced.

Keep implementation and operational costs down

The OLS technology and support organizations were designed specifically to align with the operational needs of merchants. To achieve maximum deployment flexibility, the OLS platform is Java-based and operates within the Kubernetes container environment, an open-source system for automating deployment, scaling, and management of containerized applications. The Kubernetes implementation follows a microservices architectural approach by maintaining logically related functions within separate containers for easy management and discovery. To make it easy to integrate with existing and new solutions, the platform is exposed as a range of RESTful APIs that support integration to both incoming and outgoing platform transaction flows.

As a Java implementation, the OLS solution operates on every major platform, including UNIX, Microsoft Windows, and as a cloud-based solution. It can even operate with some components on premise and others in the cloud, which allows merchants to operate core components on premise while slowly moving to the cloud as their confidence in the cloud builds. Recognizing that the merchant environment often has constraints that were generated as multiple solutions and platforms were implemented over time, OLS has designed its approach to work within these constraints.

As just one example of how OLS can keep operational costs under control, consider the security technology that is built into the OLS switch that is typically separately licensed software. The OLS platform includes the security, encryption, tokenization, and compliance functions that merchants utilize to reduce scope associated with network PCI and PA-DSS certification. This can significantly lower operational and compliance costs.

The tokenization support built into the OLS platform supports a full range of tokenization use cases, including:

- Ability to register card for a permanent token
- Can support token generation on each transaction
- Card security code check for card authorization
- Capability to add or delete tokens

- Transaction lookup using token value

- Tokens can be customer-provided or system-generated

- APIs available to look up the real card value using the token

- PCI-compliant encryption for data storage

- Token value conversion for authorization

With these technologies built into the OLS platform, merchants will not need to acquire software solutions that require additional integration and maintenance costs. This is also true relative to adding traditional payment types, enhanced payment types, and a growing suite of software solutions that enhance the consumer experience and delivers new revenue-producing opportunities. One additional example of this broad support includes the built-in support for big data analytics. The OLS platform can deliver a range of metrics because the platform is able to capture and report on a greater level of transaction detail and metadata, and once captured this data can be exposed for analysis.

Conclusions

OLS strategy is distinct in being focused on building a switch and providing complementary services that will help merchants drive new revenue opportunities. This is not a common approach taken by switch competitors. It is likely such a strategy is difficult for others to follow because the functions that increase merchant revenue require significant investment in products and services that would not benefit the larger switch market, which includes financial institutions. Clearly a financial institution has little need for POS security, POS integration, or POS application development required to execute new acceptance types at the point of sale. One might argue that OLS "got lucky" that the solutions the company has worked on for years that are based on QR Code and bar code technology have become the core mechanism by which merchants deploy their own mobile applications and use for acceptance of Chase Pay, WeChat Pay, and Alipay. But that view fails to consider all of the technology OLS has integrated into its platform for security, card management and data access, all of which directly benefit merchants.

It is also possible that these advanced functions might not be needed by the largest merchants, which may have already acquired similar solutions. Yes, the wide range of deployment configurations made possible by implementing OLS software in containers makes it relatively easy to carve out unneeded functions and the wide range of APIs further reduces the effort required to integrate existing solutions into the OLS switch, but merchants are loath to change out something that is already working just to reduce costs, so OLS may find the high end of the market harder to penetrate despite being able to support the transaction load.

One aspect that would likely help OLS sales would be a more aggressive mobile app portfolio aligned with more merchant categories. OLS has already targeted several merchant categories with a special emphasis on the very complex needs of pharmacies, but today innovation is occurring in the mobile device and merchants, especially mid-sized merchants, need help not only building the mobile app but also constructing the acceptance and loyalty components required to deploy these advanced solutions that consumers love. It will be interesting to see where OLS goes in the next few years since it has access to all the resources it requires via its InComm parent.

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About OLS

OLS is a global payment technology company with unmatched expertise enabling expansive payment ecosystems for retailers, healthcare providers, financial services providers, and others around the world. We provide the engine that drives all forms of payments commerce, delivering and enhancing the full range of capabilities our partners need while simplifying and streamlining the entire process. We deliver integrated solutions to manage the simplest to the most complex payment transactions – efficiently and securely. With OLS, partners enjoy extraordinary speed to market, exceptional flexibility and modularity, and security that's built in – not an afterthought. So, they can embrace expanded opportunities and enhance their revenues.