



PAYMENTS INNOVATION ON STEROIDS

How Software Development Platforms Will Transform the Payments Industry

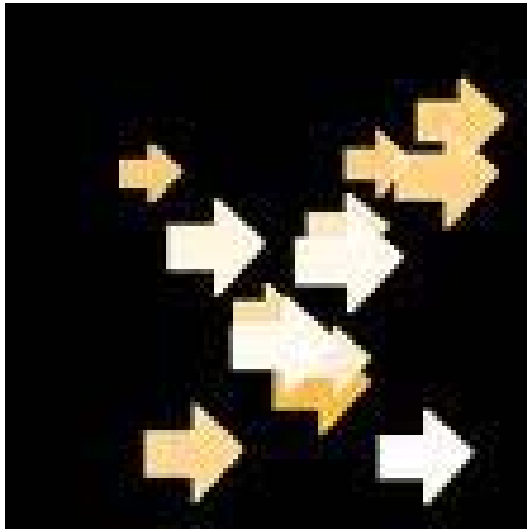
David S. Evans

Market Platform Dynamics

University of Chicago and University College London

May 20, 2010

Federal Reserve Bank of Chicago Conference on Payments Innovation in the Wake of the Financial Crisis, May 20-21, Chicago, IL



The Acceleration of Innovation and the Reasons Behind It

INNOVATION IN PAYMENTS IS ACCELERATING

YOU SEE IT IN THE PRODUCTS

Square:

A New Way For Merchants to Accept Payments Using Smartphones



INNOVATION IN PAYMENTS IS ACCELERATING

YOU SEE IT IN THE BUYOUTS

Big Transactions ... Even During the Financial Crisis

PayPal Buys Online Credit
Provider BillMeLater for
Almost \$1 Billion

October 6, 2008

The PayPal logo, featuring the word "PayPal" in a stylized, italicized blue font with a registered trademark symbol.

Visa Buys Payments Gateway
CyberSource for nearly

VISA \$2 Billion

April 21, 2010

**American Express Buys New
Payment Player Revolution Money
for \$300 Million**



November 18, 2009

INNOVATION IN PAYMENTS IS ACCELERATING

YOU SEE IT IN THE PRESS RELEASES

About Five New (Big) Innovations Announced Each Month

MasterCard Joins Forces with Next Jump

April 9, 2010



Chase Rolls out New Card Offerings to Help Mid-Size Companies



May 12, 2010

TSYS INTRODUCES THE HYBRID CARD

February 11, 2010



Visa and DeviceFidelity Collaborate to Accelerate Adoption of Mobile Contactless Payments

February 11, 2010



PayPal's New iPhone App Sends Money with a "Bump"



March 17, 2010

MasterCard Makes Payment Innovation Move with MasterCard Labs



April 15, 2010



mFoundry: Power to the People at the Point of Sale

November 18, 2009

PAYMENTS INNOVATION GRADUAL IN PAST

SO BURST OF ACTIVITY SURPRISING

Rapid innovation not the norm

- Payments industry unlike IT or pharma
- System interdependencies and chicken-egg problems create inertia

Innovation has occurred very slowly

- Paper check going strong after 700 years
- Plastic card for half century, mag stripe for 30 years

Banks and innovation not exactly synonymous

- Payment products (credit/debit/checks) commodities
- Heavy on marketing, light on innovation (see Amex Blue)

PAYMENTS INNOVATION INFLECTION POINT

INTERNET AND MOBILE HAVE IGNITED INNOVATION

Mobile devices are ubiquitous

- Rapid increase in super smart phones (great UI+computer+wireless)

Online is everywhere

- All devices become connected to internet so “off-line” disappears

Software moves to cloud

- Software applications move from local devices to cloud

Payments bundled with transaction-related services

- Technologies make mashups cheaper and better

Payments data more valuable for behavioral targeting

- Online advertising/data analytic technologies make result in premium value for payments data and opportunities for mashups

“App Stores for Payments”

- Square is a free app for the iPhone/iPad but there are many more

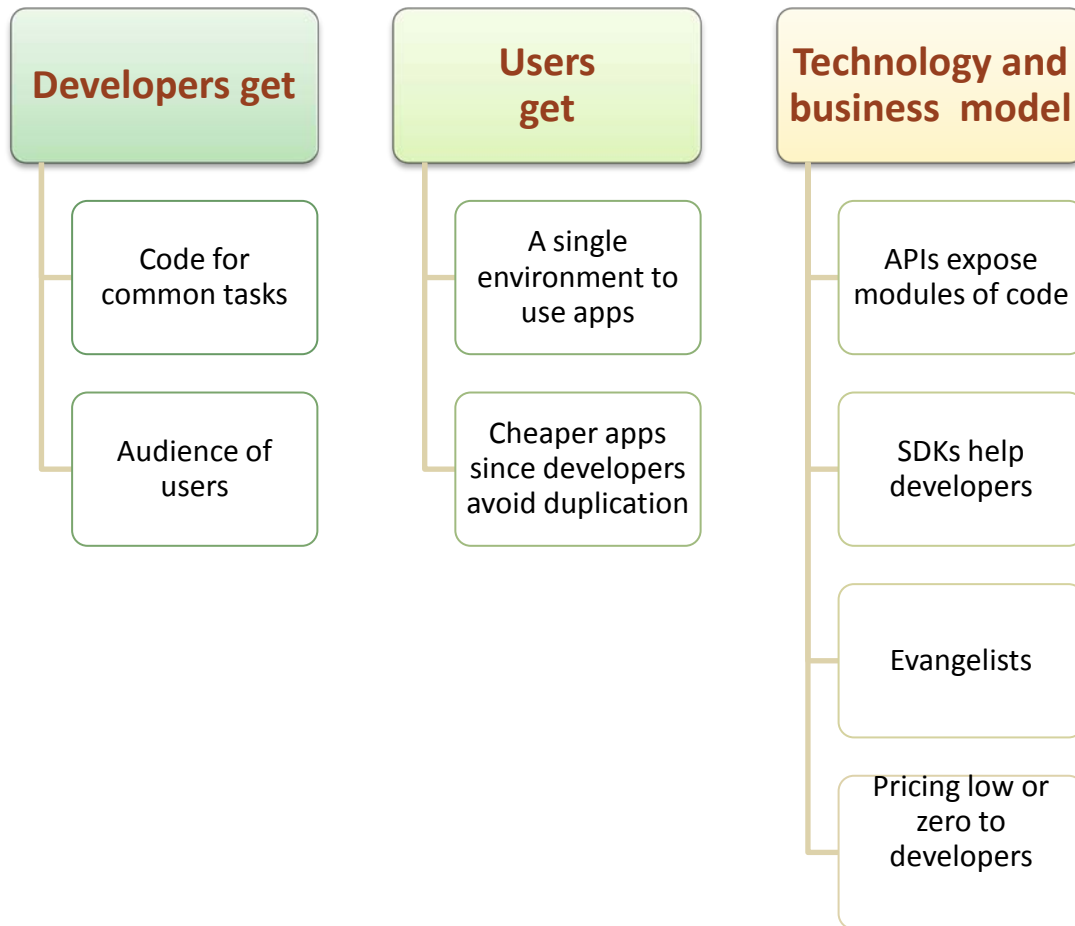
How Software Platforms Will Help Spawn Innovative “Payments Apps”



INVISIBLE ENGINES

INNOVATION AT THE EDGE BY EMPOWERING DEVELOPERS

Software platforms put users and app developers together



Successful Models:

- Windows
- Facebook Connect
- Android

New Building Blocks:

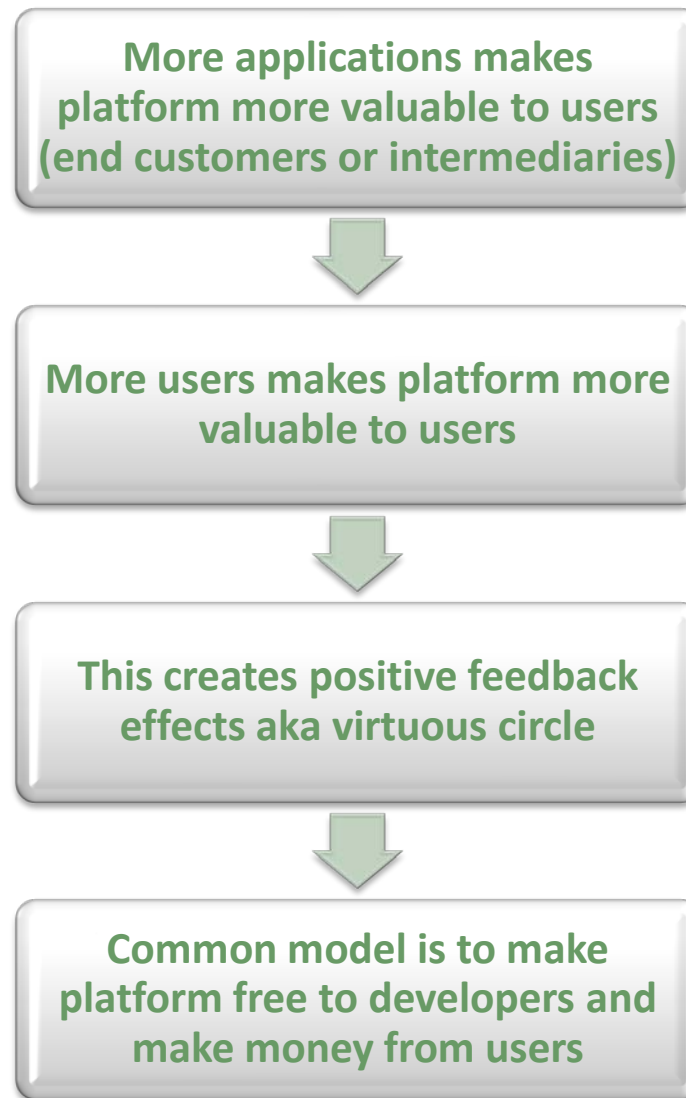
- Web 2.0
- Connectivity
- Cloud Computing

Cloud Computing:

- Applications on “server farm” connected through Internet (e.g. iPhone)
- Software platform may be in cloud too (FaceBook Connect, PayPalX)
- Software changes in cloud, not on device

EXPLOSIVE GROWTH FOR SOFTWARE PLATFORMS

SUCCESSFUL ONES SECURE POWERFUL NETWORK EFFECTS



IPHONE SOFTWARE PLATFORM FOR DEVELOPERS HAS RESULTED IN MORE 100,000 APPLICATIONS

Apple - iPhone - Download thousands of iPhone applications.

5/15/10 10:51 AM

Features Why iPhone Apps for iPhone Gallery How To Tech Specs Buy iPhone

Your iPhone gets better with every new app.

Applications for iPhone are like nothing you've ever seen on a mobile phone. Explore some of our favorite apps here and see how they allow iPhone to do even more.



Apps for Everything

Apps for Cooks

12 Featured Apps

iPhone knows its way around the kitchen. And vice versa.

[View all the featured apps](#)



Apps for Keeping Current

24 Featured Apps

If it's in the news, it's on your iPhone.

[View all the featured apps](#)

Apps for the Great Outdoors

15 Featured Apps

Lewis had Clark. You've got iPhone. Ready to explore?

[View all the featured apps](#)

Apps for Music

11 Featured Apps

iPhone makes beautiful music wherever you go.

[View all the featured apps](#)

Browse Staff Picks

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PICK OF THE WEEK

Jobs Business

Add clients, track your time, and export invoices.



Aera Games

Fly classic biplanes through 3D skylines.



CNN Mobile News

Catch up on the news and submit your own.



Zipcar Lifestyle

Find and reserve Zipcars on the go.



Zombie Pizza Games

Race to feed ravenous, organ-loving Zombies.



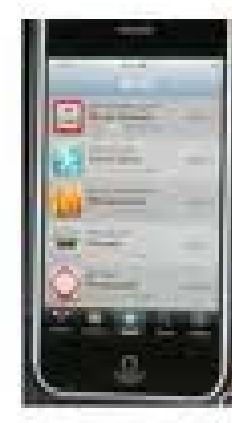
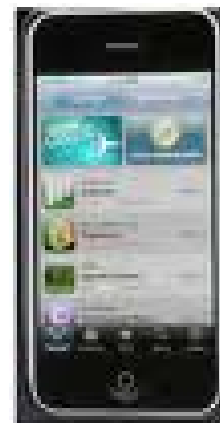
Shop the App Store.

Browse the App Store in categories from games to business, education



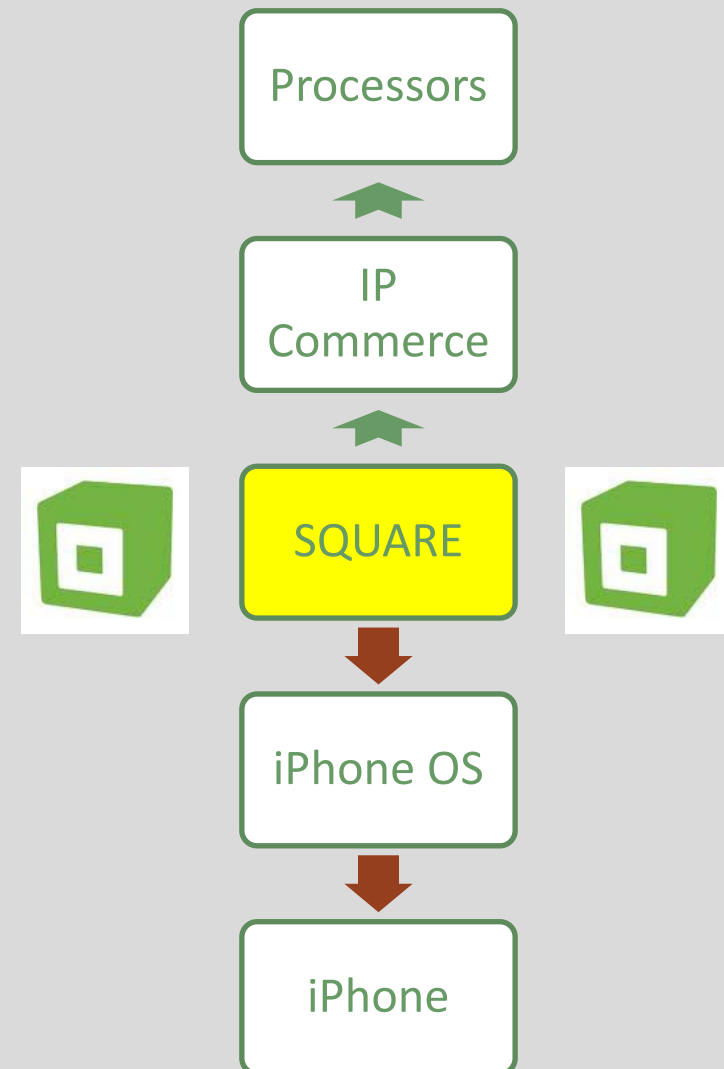
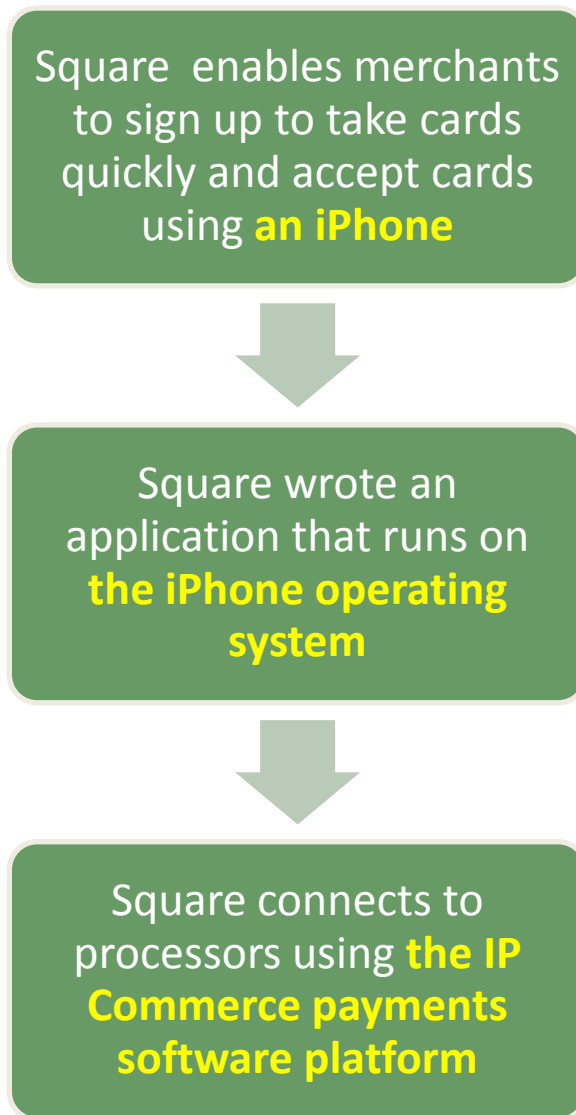
<http://www.apple.com/iphone/apps-for-iphone/>

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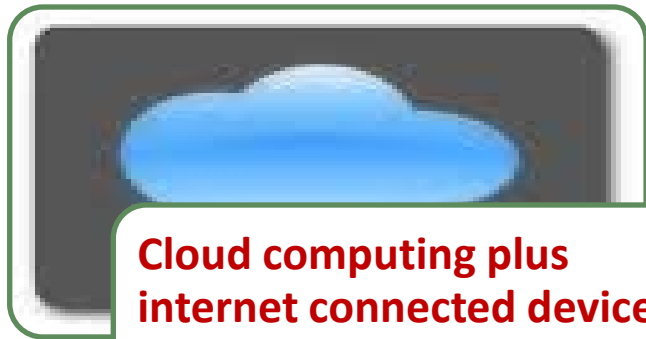
SQUARE INNOVATED FAST USING SOFTWARE PLATFORMS

QUICK ROLLOUT USING IPHONE OS AND IP COMMERCE



THE RACE TO OWN THE PAYMENTS SOFTWARE PLATFORM

WHOEVER OWNS THE "APP STORE" WILL GET NETWORK EFFECTS



Cloud computing plus internet connected devices provides opportunity to move innovation "to the edge"



Owner of successful platform increases transactions and size through network effects

- **Away from** innovation within devices or within proprietary software applications run by firms

- **Towards the** edge where "platform" can connect to payments plumbing (devices, processors, networks, etc.)

- **More applications** generates more transactions from more uses

- **Grows customers** through network effects

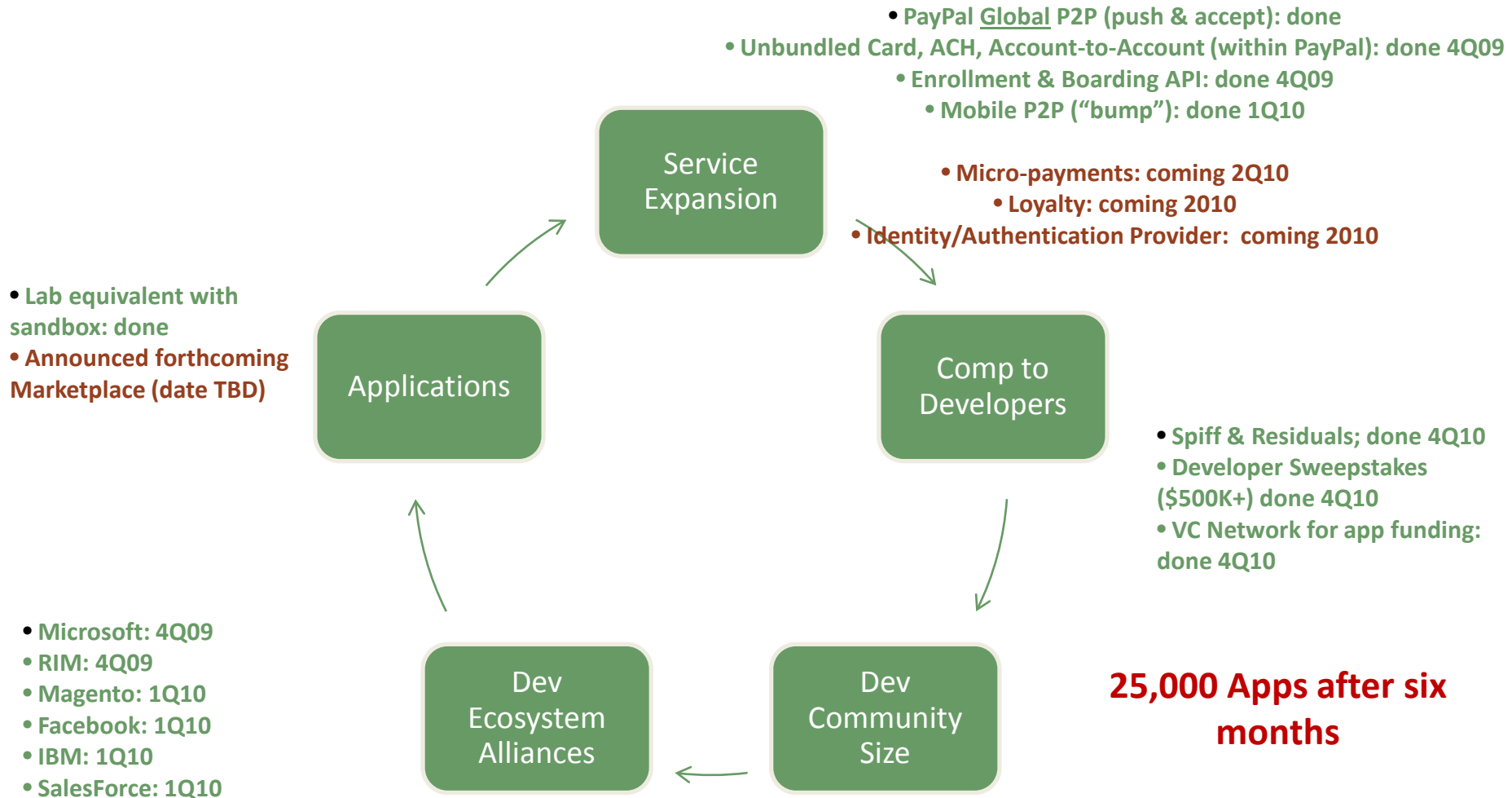
PAYPAL X

NEW PAYMENTS PLATFORM WITH APIS, SDKS, AND EVANGELISTS

The screenshot shows the PayPal X Developer Network website. At the top left is the logo "PayPal X Developer Network". On the top right, there are links for "Welcome Guest | Login" and a "REGISTER" button. Below the header is a navigation bar with links for "Home", "Dev Tools", "App Showcase", "Global", and "XSpaces", along with a search box and a "SEARCH" button. The main content area features a large central banner for the "PayPal X DEVELOPER CONFERENCE INNOVATE 2010" held from "October 26-27" at "Moscone West, San Francisco". A "GET MORE INFO" button is located at the bottom of the banner. To the left of the banner are four vertical panels: "PayPal X Innovate 2010 Dates Announced!", "PayPal X Developer Spotlight MyStoreCredit", "New Mobile Payments Library Get Paid!", and "Check it out! IBM Cloud BETA". To the right of the banner is a "Get Started" sidebar with four categories: "Learn", "Build", "Connect", and "Launch", each with an icon. Below these categories are two links: "Read the latest newsletter" and "Send us your feedback".

PAYPAL X HAS CREATED NEW ECOSYSTEM QUICKLY

25,000 APPS AFTER SIX MONTHS



Note: SPECIAL THANKS TO CHIP KAHN, IP COMMERCE FOR THE DATA ON THIS SLIDE

PAYPAL X LETS DEVELOPERS PAYMENT-ENABLE APPS

SPURS INNOVATION FOR BOTH SIDES OF THE PLATFORM

Rentalics wins PayPal X 2009 Best Application Contest



- Rentalics is an eBay for renting things like your lawnmower
- Winning bidder gets code they give person they are renting from
- After they inspect item the renter gives code to owner and then a deposit is charged to the renter's PayPal account
- Rentalics involves an online payment system being used for offline transaction—***that's the future!***

IP COMMERCE

A SOFTWARE PLATFORM THAT SITS ON TOP OF PAYMENT PLUMBING

CommerceLab™
The Source for Payment Application Developers

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Payment Processing Simplified

Processing payments in your application has never been easier. Access multiple payment types, security services and workflow modules in one simple API – It's as easy as copy, paste, transact.

[View Tutorial Application](#)

Simple Payments Integration

Quickly and easily integrate payment services into your existing application. Access development APIs, Toolkits and specs to efficiently integrate services and deploy your application in the market.

[Determine the best integration method](#)

- ▶ [.NET based development](#)
- ▶ [JAVA, PHP & other languages](#)
- ▶ [Hosted Payments Page for shopping carts](#)

[View Available Payment Services](#)

Security as a Service

The Commerce Safe™ provides organization infrastructure including compliance programs

[Commerce Safe: Security-as-a-Service](#)

[How Commerce Safe](#)

[PA-DSS Rapid Compliance Program](#)

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[Get Started Now](#)

Simple Payments Integration

Quickly and easily integrate payment services into your existing application. Access development APIs, Toolkits and specs to efficiently integrate services and deploy your application in the market.

[Determine the best integration method](#)

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Security as a Service

The Commerce Safe™ security as a service program provides organizations a flexible managed security infrastructure including tokenization, PCI and PA-DSS compliance programs.

[Commerce Safe: Security-as-a-Service](#)

[How Commerce Safe aids PCI Compliance](#)

[PA-DSS Rapid Compliance Program](#)

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40 people needed for this deal


Genuine Gemstone Bracelet Stack in Blue




\$110.00 (msrp: \$230.00 - you save 52%)

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Time Remaining: **0 days 0 hours**
(Saturday, April 10, 2010 6:59 PM)

getta! this 

MySpace Users Love Shopping with getta!



"To me it is the power of group buying. Retailers who use getta! can sell larger quantities of their stuff at a much better price. I don't have to wait for the sale to get the price I want."

- John

Advertise Here

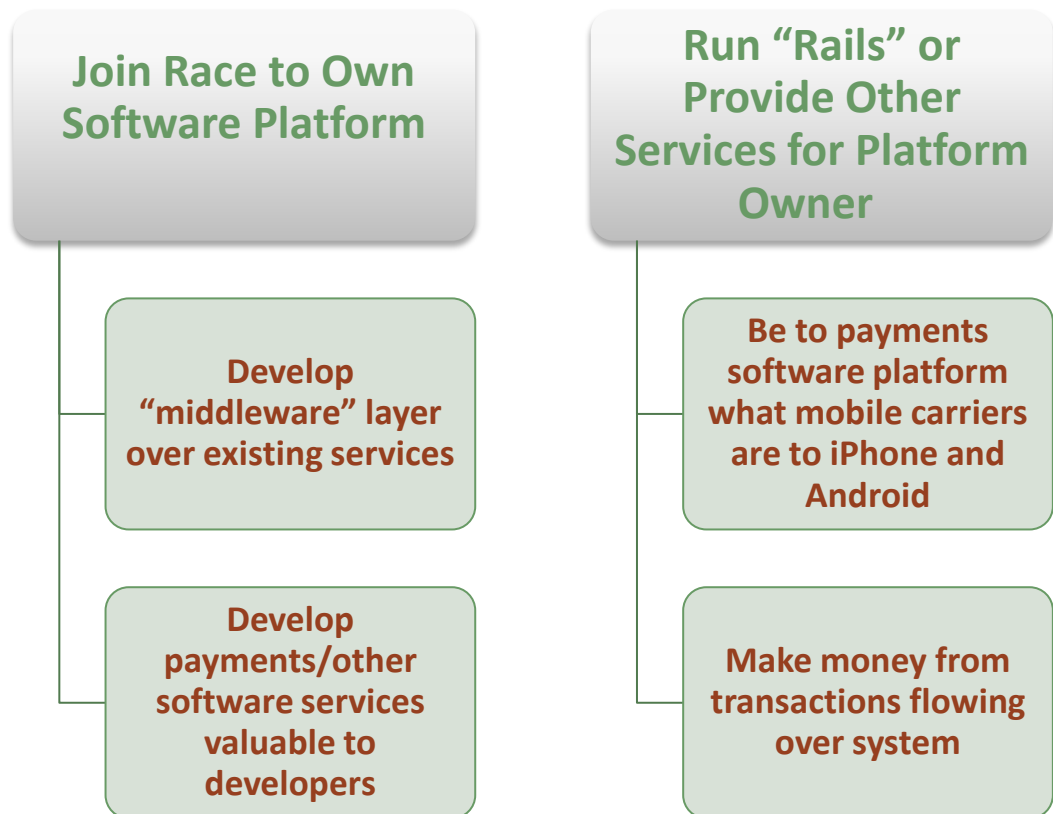
Getta! an Online Power to your shopping | [Getta! Co](#)



Software Platforms Will Drive Innovation and Transform the Payments Industry

THE ROLE OF INCUMBENT PAYMENTS FIRMS

SOFTWARE PLATFORMS WILL HELP SOME, CHALLENGE OTHERS



Risks and Rewards

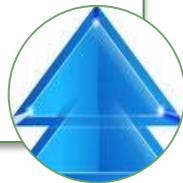
- Network effects and desire for standards will limit number of successful platforms. Only some will succeed and they will win big.
- Business power could move to platform owner. See iPhone which moved power in mobile ecosystem from carriers to software platform providers.

PAYMENTS TO BE TRANSFORMED BY APPS ON PLATFORMS

INNOVATION ENGINE THAT WILL SPEED CHANGE

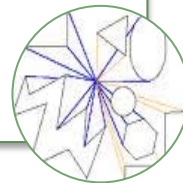
- **Already many developers working on PayPal X**
- **Significant apps already out there like Square and Bump**

Rapid increase in innovation



- **Payments platforms most useful to developers focused on applications that need payments**
- **Advertising/marketing**
- **Location-based services**

Mashups of payments and other services



- **Could lead to significant differentiation among existing networks**
- **He who controls the app store controls innovation**

Change in competitive dynamics



PAYMENTS IN 2020

IT'S ALL ONLINE

Massive increase in value of payments to consumers and merchants as a result of decade of innovation



**All devices internet connected.
No such thing as “offline”.
Bricks and mortar stores have
web-based POS devices.**



**Payments innovation driven by
applications that work with
major payments software
development platforms.**

Thank you.

david.evans@marketplatforms.com

PYMNTS.com
WHAT'S NEXT IN PAYMENTS

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Home News Commentary Briefing Room Pitches Intel Events Industry Insider Journal Paying with Plastic Karen Webster Logout

Latest News Soft Economy Hasn't Grounded Summer Travel Plans; Average Family of Four Will Spend \$4,000 on a Vacation According to American Express Sp...

Facebook Faces Payment Feud Down on the Farm(ville)
There's a feud taking place on Facebook. And, it's about money. And, like most feuds over money, it's about who pays whom and how much. [Read more](#)

Hottest Pitches
Your first stop to amass innovation in the global payments industry, Rocket Pitches boast candid, one-on-one video pitches with key executives and core company information from emerging companies.

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MasterCard inControl
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pymnts.com/how-software-development-platforms-will-drive-innovation-and-transform-payments