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RAILSCONF EUROPE

Add E-Commerce to Your Website in Less Than One Week Using ActiveMerchant

Chris Hobbs
CTO, Spongecell

4 September 2008
Berlin, Germany

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RAILSCONF EUROPE

Add E-Commerce to Your Website in One Day Using PayPal

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Outline

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- E-commerce overview
- Service Considerations
- Implementation
- Security
- Examples: Gateway API, Google, Amazon, PayPal

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E-Commerce

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- Buyer pays online
- Goods are delivered
- Cash is received

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Types of Transactions

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- Products
- Services
- Subscription
- Third Party

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Shopify

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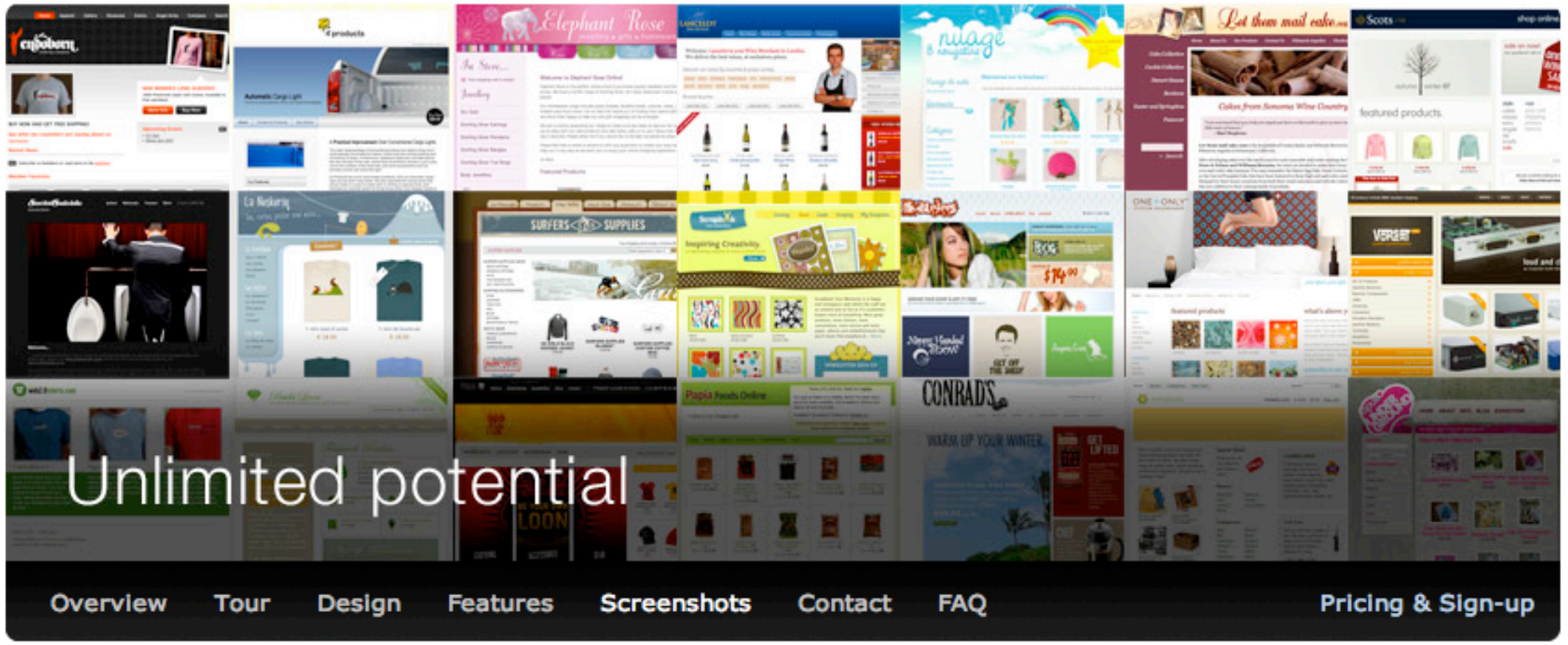
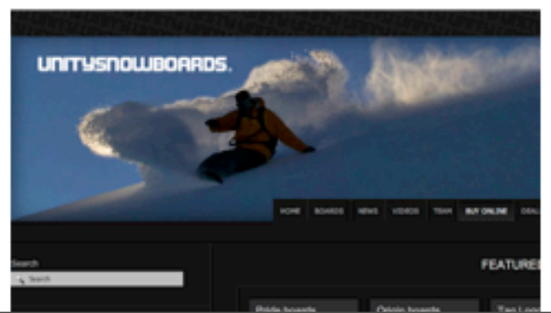
shopify

a shop in minutes, a business for life.



Recently launched stores

Check out the administration interface



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Products

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Services

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Spongecell E-Commerce

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Help | Feedback | Sign out

Events | Contacts | Account

Account Info | Billing | Settings | Sharing

Purchasing additional Email credits

You currently have **14,305** remaining Email credits.

Your Purchase

I would like to order ...*

Email credits

The rate for the bundle is...

per Email

Total cost:

Proceed to Checkout

You'll have a chance to review your order before it's final.

Email Rates

1 to 24,999	**$0.010 each**
25,000 to 99,999	**$0.009 each**
100,000 to 149,999	**$0.008 each**
200,000 to 199,999	**$0.006 each**
500,000 to infinity	**$0.005 each**

Did you know?
After you upload your SMS contacts, you must send a welcome message, and then wait 24 hours before you can send your first SMS blast. [?]

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Service Considerations

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- Price
- Regulations
- Branding
- Usability
- Banking
- Accounting

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Credit Card Processing Price

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Service	Transaction	Monthly	Setup
Trust Commerce + BofA (ActiveMerchant)	2.54% + $0.25	$30	$190
PayPal Website Standard	4.9% + $0.30	$0	$0
Google Checkout (US & GB only)	2% + $0.20	$0	$0
Amazon Checkout	2.9% + $0.30	$0	$0

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Regulations

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- High profile payment services have more rules
  - Limit products offered
  - Restrict content on page
- Regional banking laws

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Branding

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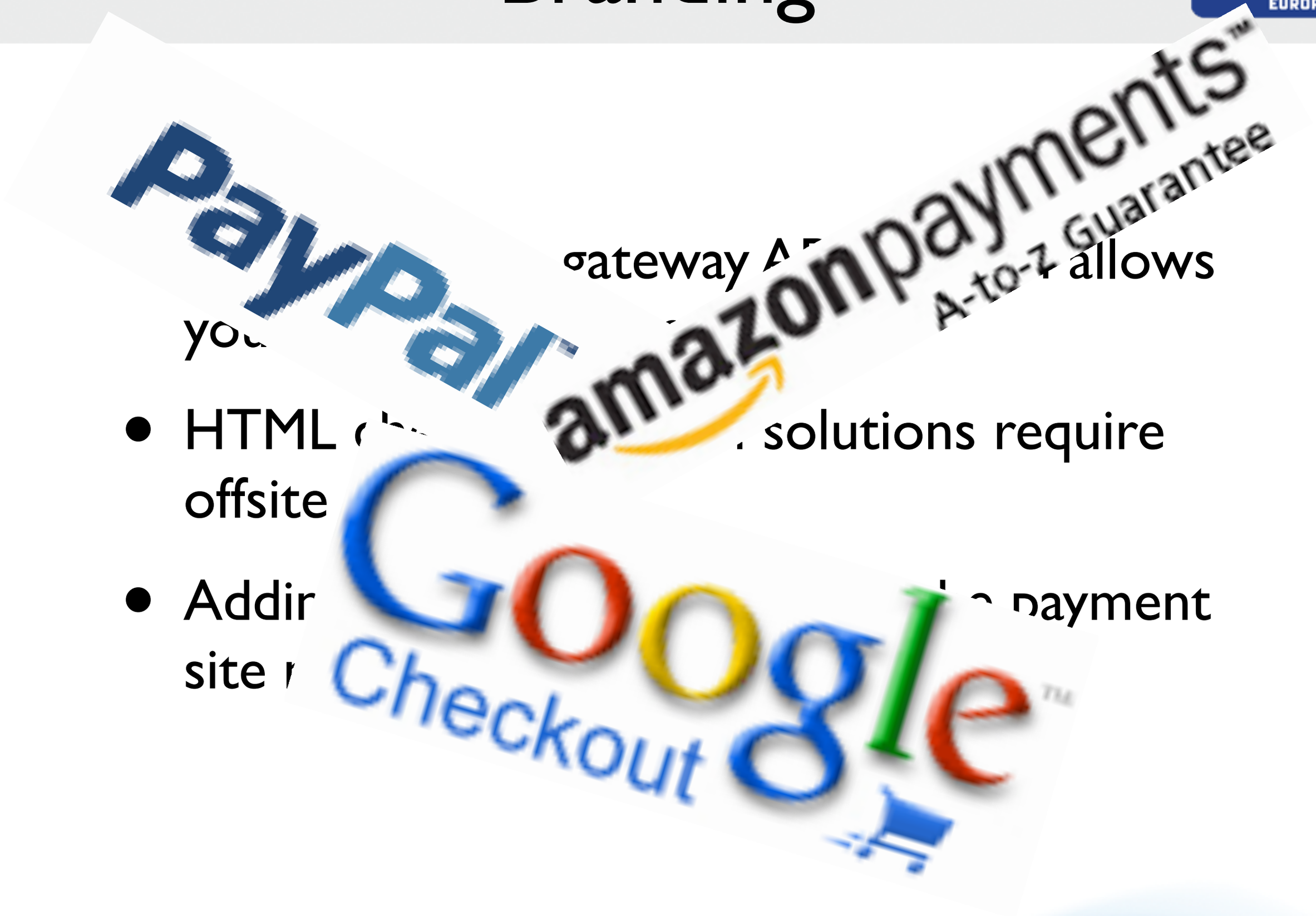
- Implementing a gateway API solution allows you to keep your branding
- HTML checkout button solutions require offsite navigation
- Adding your logo or colors to the payment site may be possible

Branding

gateway A allows
you

- HTML solutions require offsite
- Addir payment site



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Usability

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- Offsite navigation may confuse or decrease trust
- Allowing the use of existing financial accounts may ease payment

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Banking

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- Reputable payment solutions require bank accounts
  - Verification
  - Payment
- Gateway solutions require merchant accounts
- Setting up bank accounts takes time

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Merchant Account

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- Merchant accounts provide a line of credit so credit card payments can be accepted
- **Many** banks provide merchant accounts

Gateways to use with merchant accounts

Authorize.net (US)	USA ePay (US)
LinkPoint (US)	Protx (GB)
TrustCommerce (US)	WorldPay (*World)

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Accounting

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- Larger payment services offer accounting
  - Shipping
  - Taxes

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Implementation

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- HTML solutions are easy to implement
  - PayPal Website Standard
  - Google Checkout
- Callbacks are difficult to test (ssh tunnel)
- ActiveMerchant gateway solutions are well tested
- Gateways may require additional libraries

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Learning the Ropes

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- All gateways or other payment solutions should have a **sandbox** or other test environment

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Sandbox

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- You want experience, testing, fun
- Shovel + sand = sand castles

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Sandbox

RAILSCONF EUROPE

- You want experience, testing, fun
- Shovel + sand = sand castles
- In reality sandboxes are not good schools
- Rocks + turds = no fun

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Implementation sandboxes
brought to you by

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Sandbox

RAILSCONF EUROPE

- You want experience, testing, fun
- Shovel + sand = sand castles
- In reality sandboxes are not good schools
- Rocks + turds = no fun

Implementation sandboxes brought to you by

Mr. Hankey

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Security

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- SSL
- Escape log files
- API callbacks
- Don’t store credit card numbers

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Storing Credit Card Numbers

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Storing Credit Card Numbers

- Pay someone else to do it (e.g. Citadel)

Storing Credit Card Numbers

- Pay someone else to do it (e.g. Citadel)
- Payment Card Industry Data Security Standard (PCI DSS)

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RAILSCONF EUROPE

- Pay someone else to do it (e.g. Citadel)
- Payment Card Industry Data Security Standard (PCI DSS)
- 12 Step policy for data security

spongecell Storing Credit Card Numbers

RAILSCONF EUROPE

- Pay someone else to do it (e.g. Citadel)
- Payment Card Industry Data Security Standard (PCI DSS)
- 12 Step policy for data security
- $25,000 fine or liability

spongecell Storing Credit Card Numbers

RAILSCONF EUROPE

- Pay someone else to do it (e.g. Citadel)
- Payment Card Industry Data Security Standard (PCI DSS)
- 12 Step policy for data security
- $25,000 fine or liability
- Don’t do it!

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- Implemented by gateway
- Seller decides what information to verify
  - Address
  - Zip code
  - CVV
  - Expiration date
- Shoddy sites can have shoddy verification

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Examples

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http://RailsVendor.com

- ActiveMerchant Gateway
- PayPal Website Standard
- Google Checkout
- Amazon Checkout

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ActiveMerchant Gateway Look

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RailsVendor

A limited selection of medium quality photographs at bargain prices

First Name | Last Name

Daytime phone | Email address

Credit Card Type: Visa | Credit Card Number

Expires on: 8 2008 | CVV

Street

City | State

Postal Code (Zip) | Country: United States

Submit

populate form with dummy data

<< Back

Register Now

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Berlin, Germany

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Add to Calendar
Set a Reminder
Invite Friends
Add to Facebook
Buy Tickets

Spongecell Rich Media

RailsVendor is open source at GitHub • Your cart currently has 4 items. View Cart

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ActiveMerchant Gateway Look

RAILSCONF EUROPE

This is your site!

RailsVendor

A limited selection of medium quality photographs at bargain prices

First Name | Last Name

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spongecell ActiveMerchant Gateway Look

RAILSCONF EUROPE

This is your site!

OMG DHH!

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spongecell PayPal Website Standard Look

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RailsVendor

Hand Rail **Total: $4.14 USD**

Pay with Credit Card or Log In

PayPal Secure Payments

Learn more about PayPal - the safer, easier way to pay.

Enter your billing information

Country: United States

First Name:

Last Name:

Credit Card Number:

Payment Type VISA MasterCard DISCOVER AMEX

Expiration Date: mm / yy CSC: What's this?

Billing Address Line 1:

Billing Address Line 2: (optional)

City:

State:

ZIP Code:

Home Telephone: 555-555-1234

Email:

Review Order and Continue

Already have a PayPal account?

Please log in

Email:

Password:

Log In

Forgot email or password?

Return to RailsVendor.

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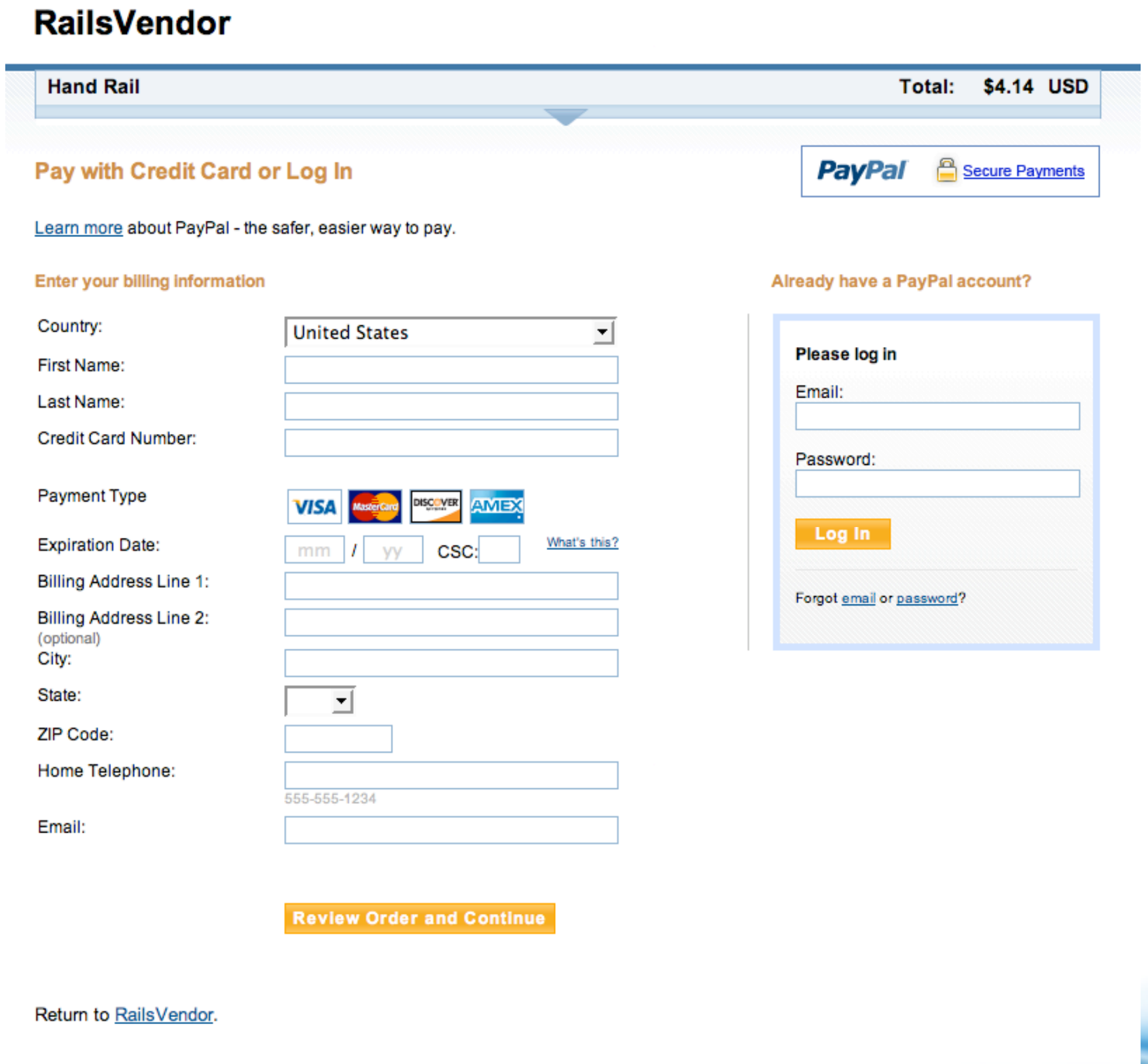
This is not your site.



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Google Checkout Look

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Google Checkout

Help

Change Language English (US)

Order Details - Rails Vendor, 5 Lucerne Street, San Francisco, CA 94103 US

Qty	Item	Price
4	**Hand Rail** - Helps with balance while navigating stairs	$2.28
2	**Trolley Rail** - Serves light trains and street cars	$1.86

Subtotal: $4.14
Shipping and Tax calculated on next page

Create a Google Account to complete this purchase

Shop faster with Google Checkout
Sign up now to buy quickly and easily from stores across the web, and track all your orders in one place.

Your current email address:

Choose a password:
Minimum of 8 characters in length. [?]

Re-enter password:

Location: United States

Card number:

Expiration date: mm / yyyy CVC: What's this?

Cardholder name:

Billing Address:

City/Town State Zip [?]

Phone number:
Required for account verification.

My shipping address is:
- My billing address
- A different address

I agree to the Terms of Service.

Agree and Continue

You can still make changes to your order on the next page.

Or sign in

If you already have a Google Account

Email:

Password:

Sign in and continue

I cannot access my account

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Google Checkout Look

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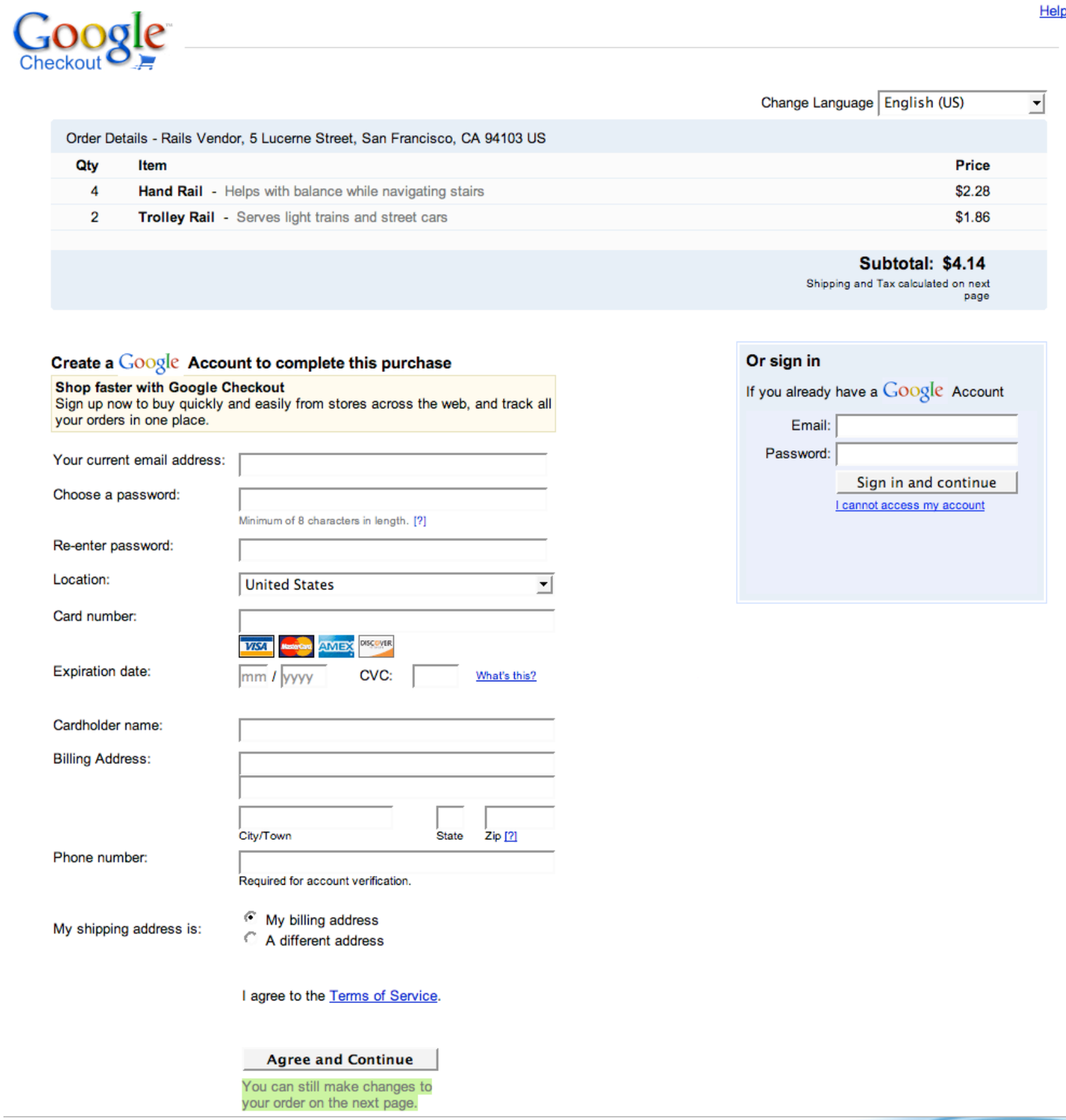
This is not your site.



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Your current email address:
Choose a password:
Minimum of 8 characters in length. [?]
Re-enter password:
Location: United States
Card number:
Expiration date: mm / yyyy CVC: What's this?
Cardholder name:
Billing Address:
City/Town State Zip [?]
Phone number:
Required for account verification.
My shipping address is: My billing address / A different address

I agree to the Terms of Service.

Agree and Continue

You can still make changes to your order on the next page.

Or sign in

If you already have a Google Account

Email:
Password:
Sign in and continue
I cannot access my account

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Amazon Checkout Look

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amazonpayments™
A-to-z Guarantee

Important Message

We're sorry, but there's a problem with this order. Please contact the merchant directly for assistance in completing this order.

User Agreement | Amazon Payments Privacy Notice | Amazon Payments A-to-z Guarantee
©2008 Amazon.com, Inc. or its affiliates

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Amazon Checkout Look

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amazonpayments™
A-to-z Guarantee

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©2008 Amazon.com, Inc. or its affiliates

This should not be anyone's site.

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ActiveMerchant Gateway Code

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```
gateway = ActiveMerchant::Billing::TrustCommerceGateway.new :login,:password

authorize_response = gateway.authorize(cents, active_merchant_credit_card)

capture_response = gateway.capture(cents, authorize_response.authorization)
```

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Authorization Response

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Trust Commerce Specific Responses

- `response.params['offenders']`
  - “cc” means invalid credit card
- `response.params['declinetype']`
  - “cvv” means invalid CVV or expiration date
- `response.params['avs']`
  - “A” means invalid zip code, street match only
  - “Z” means zip code match only
  - etc.

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Other Functions

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Trust Commerce Specific Functions

- recurring(money, credit_card, :frequency)
  - make a recurring payment e.g. monthly
- store(credit_card)
  - store a credit card for future transactions
  - can use authorization in capture()

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PayPal Website Standard Code

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HAML for generating HTML Checkout Button

```
%form{:action => PaypalController::FORM_URL, :method => "post"}
  = hidden_field_tag :cmd,"_cart"
  = hidden_field_tag :upload,1
  = hidden_field_tag :business, PaypalController::ACCOUNT
  = hidden_field_tag :currency_code, "USD"
  = hidden_field_tag :no_shipping, 1
  - #iterate across all items in the cart
  - i = 1
  - for purchasable in @cart.to_a
    = hidden_field_tag "item_name_#{i}", purchasable.human_name
    = hidden_field_tag "amount_#{i}", fmt_money(purchasable.unit_price)
    = hidden_field_tag "quantity_#{i}", purchasable.quantity
    - i += 1
  = hidden_field_tag :notify_url, notify_url
  = hidden_field_tag :cancel_return, url_for(:action=>"checkout",:only_path=>false)
  = hidden_field_tag :return, url_for(:action=>"purchase_success",:only_path=>false)
  = paypal_submit #the submit button generated from PaypalHelper
```

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Google Checkout Code

RAILSCONF EUROPE

HAML for generating HTML Checkout Button

```
%form{:action => "https://checkout.google.com/api/checkout/v2/checkoutForm/Merchant/
#{ENV['GOOGLE_CHECKOUT_MERCHANT_ID']}", :method => "post", :accept_charset => "utf-8"}
  - i = 1
  - for purchasable in @cart.to_a
    = hidden_field_tag "item_name_#{i}", purchasable.human_name
    = hidden_field_tag "item_description_#{i}", purchasable.short_description
    = hidden_field_tag "item_price_#{i}", fmt_money(purchasable.unit_price)
    = hidden_field_tag "item_quantity_#{i}", purchasable.quantity
    - i += 1
  = hidden_field_tag "_charset_"
  - image_src = "http://checkout.google.com/buttons/checkout.gif?
merchant_id=#{ENV['GOOGLE_CHECKOUT_MERCHANT_ID']}&w=180&h=46&style=white&variant=text&
loc=en_US"
  %input{:type=>"image", :name=>"Google Checkout", :alt=>"Fast checkout through
Google", :src=>image_src, :height=>"46", :width=>"180" }
```

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Amazon Checkout Code

RAILSCONF EUROPE

HAML for generating HTML Checkout Button

```
%form{:action => "http://payments.amazon.com/checkout/", :method =>
"post", :enctype => "multipart/form-data"}
  - i = 1
  - for purchasable in @cart.to_a
    = hidden_field_tag "item_merchant_id_#{i}", "A1TDXY6XJ7JAMX"
    = hidden_field_tag "item_title_#{i}", purchasable.human_name
    = hidden_field_tag "item_price_#{i}", fmt_money(purchasable.unit_price)
    = hidden_field_tag "item_quantity_#{i}", purchasable.quantity
    /= hidden_field_tag "item_description_#{i}", purchasable.short_description
    - i += 1
  = hidden_field_tag "currency_code", "USD"
  %input{:alt=>"Checkout with Amazon Payments", :src=>"https://
payments.amazon.com/gp/cba/button?
ie=UTF8&color=orange&background=white&size=medium",  :type=>"image"}
```

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Magic Quadrant

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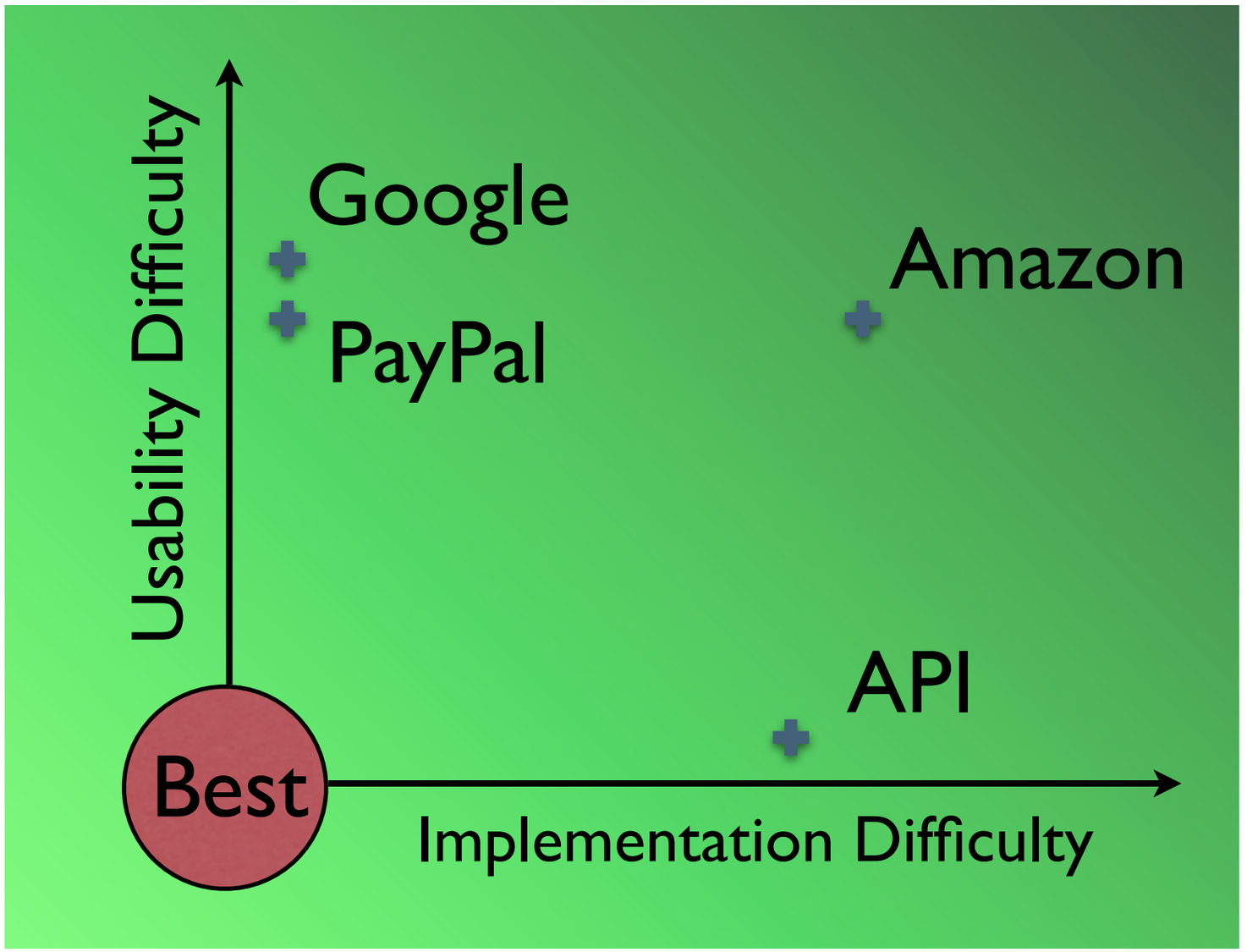

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Magic Quadrant

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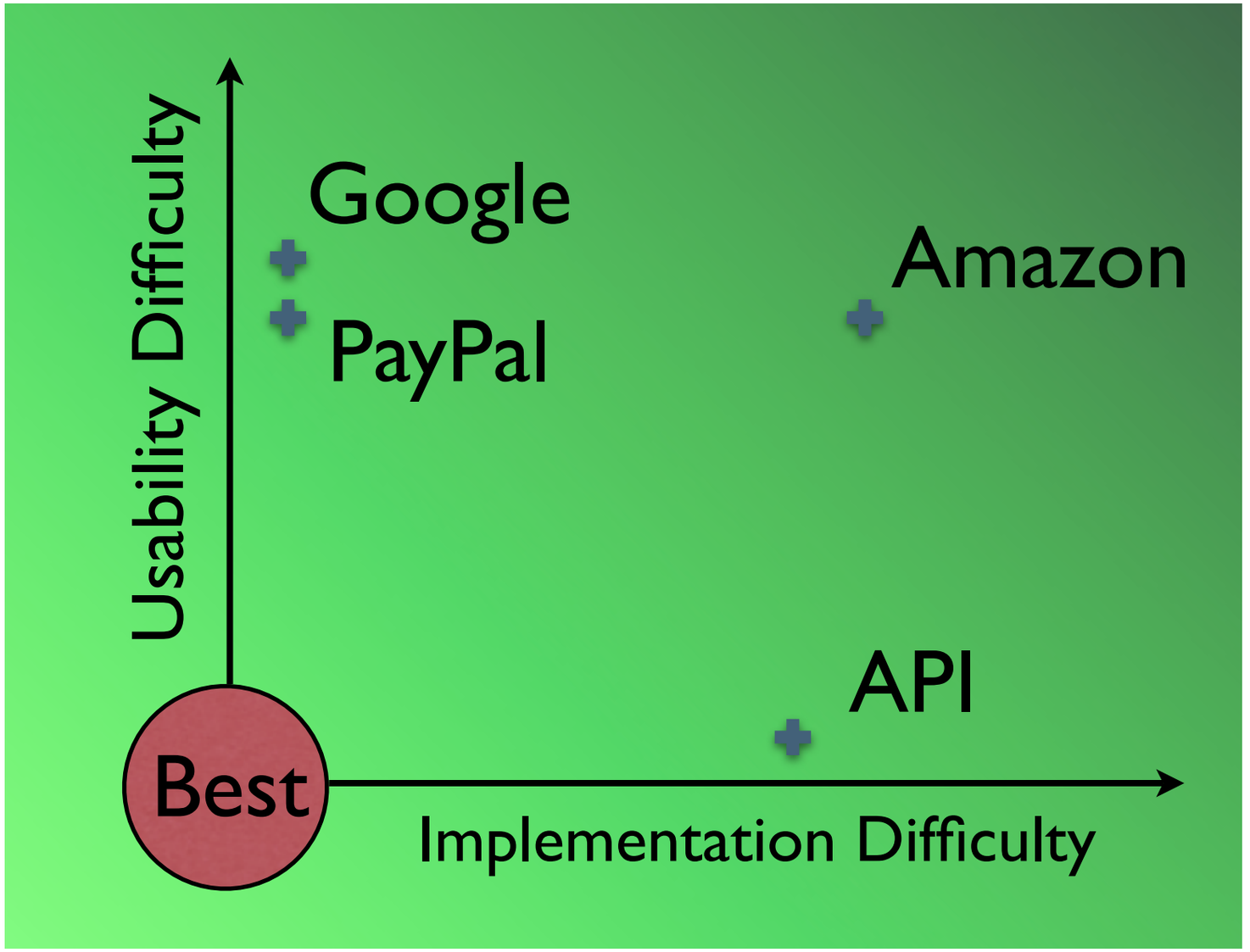
- Usability is scored lower for offsite navigation
- Google requires account creation
- An API implementation requires more work



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Feature Grid

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	Branding	No Merchant Account	Secure Callback	Third Party Billing	Recurring
ActiveMerchant Gateway	X		X		X
PayPal Website Standard		X	X		X
Google Checkout		X	X		
Amazon FPS		X	X	X	X
Amazon Checkout		X	X		

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European Support

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- ActiveMechant support? No. Except for PayPal
- Protx supported in Great Britain
- Challenge: create WorldPay support in ActiveMerchant
- Demand more API support and less regulation!

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Thank you!

http://activemerchant.org
Examples: http://railsvendor.com
Rich Media Ads: http://spongecell.com

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