

2008

PayPal® Integration Strategies

eBay Developers Conference 2008

Chad Hoffman
Technical Integration Manager
PayPal Merchant Integration

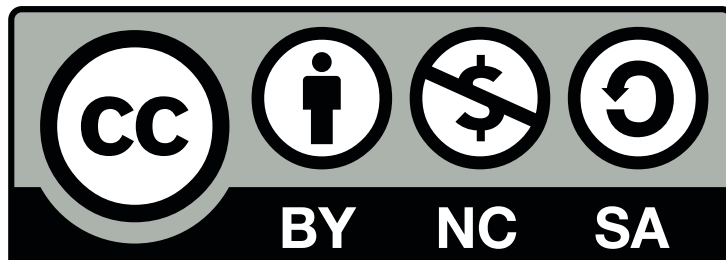
Kurt Kellberg
Integration Engineer
PayPal Merchant Technical Support



Share, reuse, and remix this talk

2008

These slides are available under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.



You can blog, photograph, and share this information with others. Don't forget to tag it **ebaydevcon** and **ebaydevcon08**.

© 2008 eBay Inc. Some rights reserved.

eBay and the eBay logo are among the registered trademarks of eBay Inc., PayPal and the PayPal logo are trademarks of PayPal, Inc., Skype and the Skype logo are trademarks of Skype Limited Corp., Shopping.com and the Shopping.com logo are trademarks of Shopping.com Ltd., and ProStores is a registered trademark of ProStores, Inc.

Other trademarks and brands are the property of their respective owners.

Express Checkout and PayPal APIs

API Interfaces: NVP vs. SOAP

2008

- Both API Interfaces are fully supported
- Use SOAP only if you really know SOAP
- NVP is simple and straightforward

Request:

```
https://api-3t.beta-sandbox.paypal.com/nvp?VERSION=51.0  
&SIGNATURE=***&USER=***&PWD=***  
&METHOD=SetExpressCheckout&RETURNURL=http://ebay.com  
&CANCELURL=http://paypal.com&AMT=100.00&PAYMENTACTION=Sale
```

Response:

```
TOKEN=EC-21H43324T1124670K&TIMESTAMP=2008-04-30T20:10:15Z  
&CORRELATIONID=7dfdb5fbe56ac&ACK=Success  
&VERSION=51.0&BUILD=548868
```

API Credentials

2008

Signature vs. Certificate

- API Certificate Credentials
 - Username, Password in API Request and PayPal-issued cert installed on server
 - Safer and better endpoint control
 - **Required for large merchants**
- API Signature Credentials
 - Username, Password, Signature in API Request
 - Easier but more risk

Error Handling

2008

- ACK parameter indicates the API Call status
 - **Success**—It worked!
 - **SuccessWithWarning**—Worked but you are probably doing something wrong
 - **Failure**—Either you did something wrong or there is a problem on the PayPal side
- Check the Error Code
- Expect and handle declines
- Retry risk declines

Timeouts

2008

- Many APIs respond in less than one second
- 95% of all API Responses under five seconds
- APIs that move money take the longest
- Retry timing should depend on the API Call
 - Informational (GetEC, TransactionDetails, etc.) should be retried quickly (ten or 15 seconds)
 - Transactional (DoAuth, DoCapture, etc.) should wait as long as possible.
 - If customer is waiting, probably no more that 20 to 30 seconds
 - Otherwise, 60 to 120 seconds

- At the minimum, you should log the **CorrelationID** from the API Response
- Ideally log the entire API Request and Response
 - Make sure to strip out sensitive data (credentials, credit card #s)
- The SDKs have examples of what to do

Placement & Logos

2008

ECS vs. ECM

- Express Checkout **Shortcut** (ECS)
 - **Location:** On the Cart—before Address Collection
 - **Usage:** Clickable button—must redirect to PayPal
- Express Checkout **Mark** (ECM)
 - **Location:** On Payment page with other payment options
 - **Usage:** Just a graphic—use with radio buttons or a drop-down menu
- Graphics should be hosted at PayPal
 - Express Checkout Button: <https://www.paypal.com/express-checkout-buttons>
 - Acceptance Marks: <https://www.paypal.com/us/cgi-bin/webscr?cmd=xpt/cps/general/OnlineLogoCenter-outside>



PayPal



Controlling the EC Pages

2008

PP Account Business Name

Review Your Information



Please review the information below. If correct, click **Continue** to complete your payment on the **PP Account Business Name** website.

[Learn more](#) about PayPal policies and your payment-source rights and remedies.

Continue

Payment Method:

PayPal Balance

Instant Transfer : Chase Manhattan Checking (Confirmed) xxxxxx5731

PayPal will use Visa XXXX-XXXX-XXXX-4671 to fund this transaction if your bank does not have enough funds.

If funds are added to your PayPal balance before this transaction completes, the additional balance may be used for this transaction. [Learn more](#)

[Change](#)

Shipping Address:

1 Main St
San Jose, CA 95131
United States
[Change](#)

Contact Information:

sbprod-c1@ebay.com

Continue

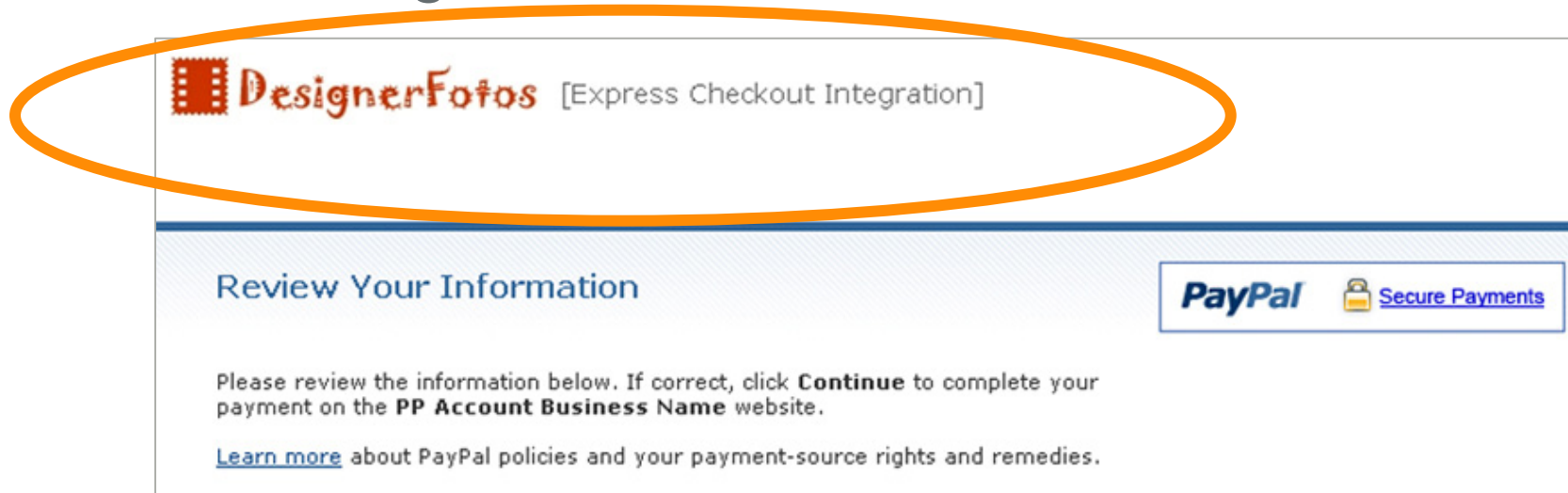
Cancel and return to [PP Account Business Name](#).

- Header Image
- Business Name
- Return and Cancel URLs
- Eliminating Order Review
- Phone Number
- Billing Address
- Shipping Address

Controlling the EC Pages

2008

Header Image



On the SetExpressCheckout API Call add:

HDRIMG=https://www.paypalmerchantservices.com/
demo/img/ec_logo.jpg

Controlling the EC Pages

2008

Return and Cancel URLs

The screenshot shows a PayPal checkout page. At the top, it says "United States" with a link to "Change". Below this, the "Contact Information" is "sbprod-c1@ebay.com". A light blue bar contains a "Continue" button, which is circled in orange. Below the bar, the text "Cancel and return to [DesignerFotos.](#)" is circled in orange. To the right of this text, the words "CANCEL URL" are written in blue. At the bottom, there is a footer with the PayPal logo and text: "PayPal. The safer, easier way to pay. For more information, read our User Agreement and Privacy Policy."

United States
[Change](#)

Contact Information: sbprod-c1@ebay.com

RETURN URL

Continue

Cancel and return to [DesignerFotos.](#) CANCEL URL

PayPal. The safer, easier way to pay.
For more information, read our [User Agreement](#) and [Privacy Policy](#).

On the SetExpressCheckout API Call add:

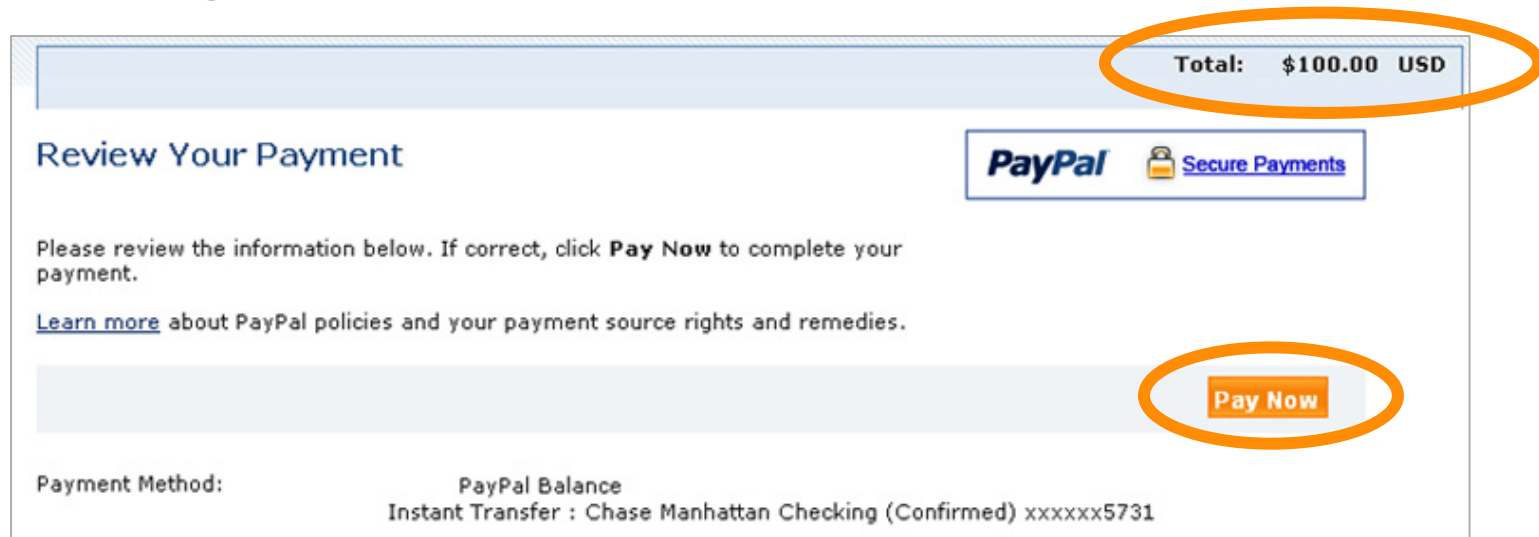
RETURNURL=http://yoursite.com/checkout

CANCELURL=http://yoursite.com/cart

Controlling the EC Pages

2008

Eliminating Order Review



Total: \$100.00 USD

Review Your Payment

PayPal Secure Payments

Please review the information below. If correct, click **Pay Now** to complete your payment.

[Learn more](#) about PayPal policies and your payment source rights and remedies.

Pay Now

Payment Method: PayPal Balance
Instant Transfer : Chase Manhattan Checking (Confirmed) xxxxxx5731

- Review Page shows the Amount from the SetEC call
- Button changes from “Continue” to “Pay Now”
- You must still make the DoExpressCheckoutPayment API Call
- Add **useraction=commit** to the Redirect URL
 - `https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=_express-checkout&useraction=commit&token=`

Controlling the EC Pages

2008

Business Name

Please review the information below. If correct, click **Continue** to complete your payment on the **DesignerFotos** website.

[Learn more](#) about PayPal policies and your payment-source rights and remedies.

Continue

Payment Method: PayPal Balance
Instant Transfer : Chase Manhattan Checking (Confirmed) xxxxxx5731
PayPal will use Visa XXXX-XXXX-XXXX-4671 to fund this transaction if your bank does not have enough funds.
If funds are added to your PayPal balance before this transaction completes, the additional balance may be used for this transaction. [Learn more](#)
[Change](#)

Shipping Address: 1 Main St
San Jose, CA 95131
United States
[Change](#)

Contact Information: sbprod-c1@ebay.com

Continue

Cancel and return to [DesignerFotos](#).

Can be
changed by
PayPal Account
Management

Controlling the EC Pages

2008

Phone Number

Contact Information: sbprod-c1@ebay.com
408-678-0945
[Change](#)

☐ Share this phone number with DesignerFotos

Optional

Contact Information: sbprod-c1@ebay.com
408-678-0945
[Change](#)

(DesignerFotos requires a phone number to complete this order.)

Required

Under the **Profile** tab, go to **Website Payment Preferences**,
Change the **Contact Telephone Number** setting

Contact Telephone Number

When you activate this option, your customers will be asked to include a Contact Telephone Number with their payment information. [Learn More](#)

Note: Selecting **On (Required Field)** could have a negative effect on buyer conversion.

Contact Telephone ☐ On (Optional Field)
☐ On (Required Field)
☒ Off (PayPal recommends this option)

Controlling the EC Pages

2008

Requiring Billing Address

Shipping Address: 1 Main St
San Jose, CA 95131
United States
[Change](#)

Contact Information: sbprod-c1@ebay.com
408-678-0945
[Change](#)

To process this transaction, DesignerFotos requires your billing address and phone number.

[Continue](#)

- This is a vetted feature and must be enabled
- On the SetExpressCheckout API Call add:
 - **REQBILLINGADDRESS=1**
- The billing address is returned on the GetEC API Call

Controlling the EC Pages

2008

Shipping Address

On the SetEC
API Call add:

ADDROVERRIDE=1

used for this transaction. Learn more	
Change	
Shipping Address:	Address Override 123 Better Place San Jose, CA 95131 United States
Contact Information:	sbprod-c1@ebay.com 408-678-0945 Change

On the SetEC
API Call pass the
Address and add:

NOSHIPPING=1

used for this transaction. Learn more	
Change	
Contact Information:	sbprod-c1@ebay.com 408-678-0945 Change

Immediate vs. Delayed Settlement

2008

- PAYMENTACTION=**Sale**
 - Immediate settlement of funds
 - No flexibility but very simple
- PAYMENTACTION=**Authorization**
 - Funds are held (three days)
 - Limited flexibility (one Reauth, ten captures, 29-day capture window)
- PAYMENTACTION=**Order**
 - No funds are held until DoAuthorization API Call
 - Flexible
 - Multiple Auths, multiple Captures
 - Captures: ten by default, configurable up to 99
 - Capture Window: 29 days by default, configurable up to 365
 - Honor Period: three days by default, configurable up to ten

Honor Period Math

2008

- Days are counted in the PST time zone
- Days end at midnight
- Auth honor periods end at 11:49pm PST
- The day the Auth is created counts as Day One
- Sundays are not counted

Auth On	Honor Period Ends
Monday 11:59pm PST	Wednesday 11:49pm PST
Tuesday 12:00am PST	Thursday 11:49pm PST
Tuesday 1:00am PST	Thursday 11:49pm PST
Saturday 1:00am PST	Tuesday 11:49pm PST
Sunday 1:00am PST	Wednesday 11:49pm PST
Tuesday 3:30am EST	Friday 2:49am EST
Tuesday 1:00am EST	Thursday 2:49am EST

**For a three-day
Honor Period**

eBay

**Developers
Conference**

Invoice ID

2008

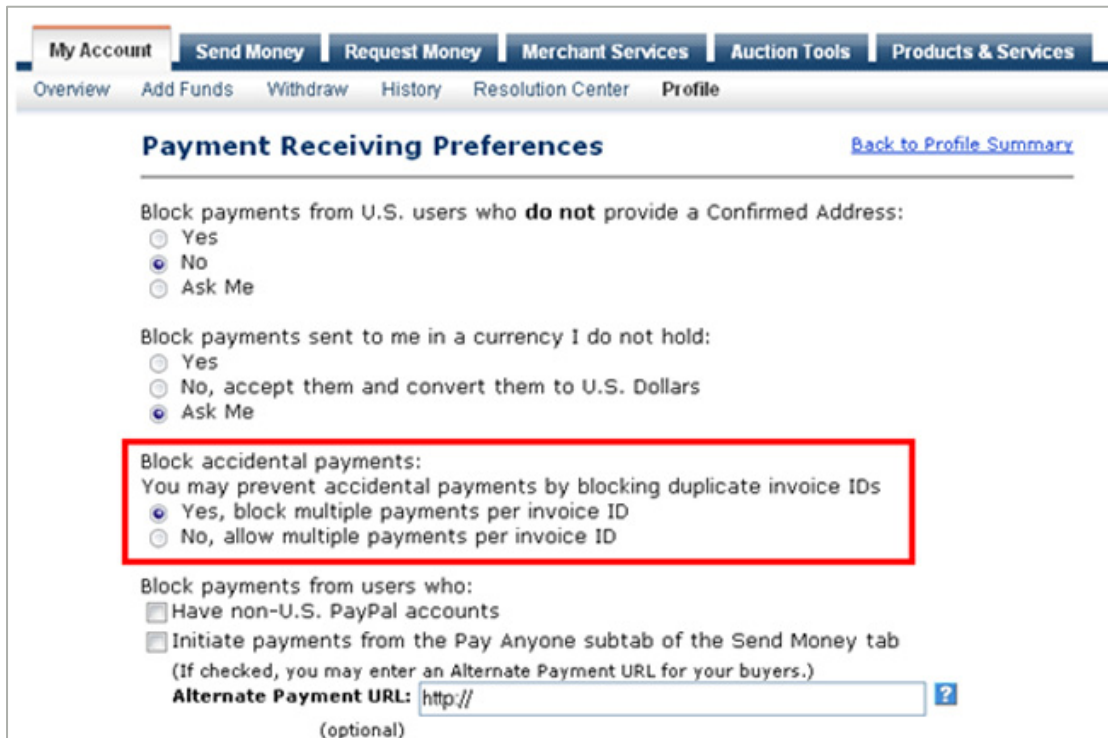
- InvoiceID can be provided on Orders and Captures
- InvoiceID is inherited, so Auths and Refunds may have them as well
- By default, PayPal checks InvoiceIDs for duplication. An Order and all its child Captures:
 - Must all have the same InvoiceID
 - Or must all have different InvoiceIDs
 - If no InvoiceID set on Order, each child Capture must have unique InvoiceID
- Duplication checking can be turned off
- TransactionSearch supports InvoiceID

Invoice ID

2008

Profile Setting for Duplication Checking

- Under the **Profile** tab, go to **Payment Receiving Preferences**
- Change the **Block Accidental Payments** setting



The screenshot shows the PayPal 'My Account' page with the 'Profile' tab selected. The 'Payment Receiving Preferences' section is visible, with a link to 'Back to Profile Summary'. The 'Block accidental payments' section is highlighted with a red box, showing the option 'Yes, block multiple payments per invoice ID' selected. Below this, there are checkboxes for 'Have non-U.S. PayPal accounts' and 'Initiate payments from the Pay Anyone subtab of the Send Money tab'. The 'Alternate Payment URL' field is also visible, with a placeholder 'http://' and a question mark icon.

My Account | Send Money | Request Money | Merchant Services | Auction Tools | Products & Services

Overview | Add Funds | Withdraw | History | Resolution Center | **Profile**

Payment Receiving Preferences [Back to Profile Summary](#)

Block payments from U.S. users who **do not** provide a Confirmed Address:

☐ Yes
☒ No
☐ Ask Me

Block payments sent to me in a currency I do not hold:

☐ Yes
☐ No, accept them and convert them to U.S. Dollars
☒ Ask Me

Block accidental payments:
You may prevent accidental payments by blocking duplicate invoice IDs

☒ Yes, block multiple payments per invoice ID
☐ No, allow multiple payments per invoice ID

Block payments from users who:

☐ Have non-U.S. PayPal accounts
☐ Initiate payments from the Pay Anyone subtab of the Send Money tab
(If checked, you may enter an Alternate Payment URL for your buyers.)

Alternate Payment URL: ?
(optional)

Refunds

2008

- Only against CaptureIDs
- Full and Partial Refunds are supported
- Timing is important. If you have settlement withdrawal, Refunds could fail or be pending depending how you bank account works

Batch 2.0

2008

- CSV file uploaded to a PayPal sFTP server
- Captures and Refunds in one file
- Multiple batches (99) in one file including third-party batches
- 1000 files per day, 10,000 records per file
- Three files involved:
 - **Batch-Input**—you upload
 - **Validation-Receipt**—returned in five-15 minutes, validates input file)
 - **Processing-Results**—returned after all processing, shows results including TransactionIDs and any Errors per record

Sandbox Tips

2008

- Use same password for all your accounts
- You can change that long email address from creating Preconfigured Accounts
 - Log into the account and go to Email under the Profile tab
 - Add a new shorter email address
 - Confirm it (check the Test Email section of Dev Central for the email)
 - Make it the Primary email address

Q&A

Chad Hoffman – choffman@paypal.com

Kurt Kellberg – kakellberg@paypal.com

2008

Thank you!

Questions?

To learn more, visit

www.ebay.com/devcon

