

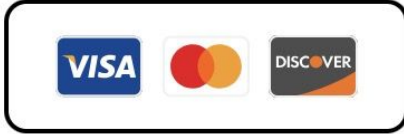
Autofill + iframes

smcgruer@google.com & schwering@google.com

2023/08/03



PAYMENT METHOD



Name on card

Card Number

 1234 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

123 Test St

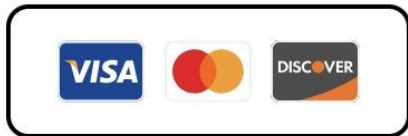
Testville, G644DD

UNITED KINGDOM

Contact Number

+441360622666

PAYMENT METHOD



Name on card

Card Number
1234 1234 1234 1234

Expiration Date
MM / YY

CVV 

Billing address same as delivery

Mr Test Address

123 Test St
Testville, G644DD
UNITED KINGDOM

Contact Number

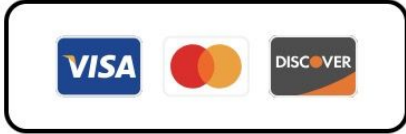
+441360622666



PCI DSS

Ok, but what's the problem?


PAYMENT METHOD




Name on card

Card Number

Expiry Date


 My Real Visa
Visa ••••1234, expires on 07/23

 Stephen McGruer
Mastercard ••••3923, expires on 07/28



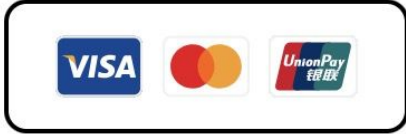
Billing address

Mr Test Addr
123 Test St
Testville, G644DD
UNITED KINGDOM

 Manage Payment Methods...

er

PAYMENT METHOD



Name on card

My Real Visa

Card Number

 1234 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

123 Test St

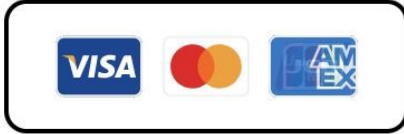
Testville, G644DD

UNITED KINGDOM

Contact Number


+441360622666

PAYMENT METHOD



Name on card

Card Number

 4000 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

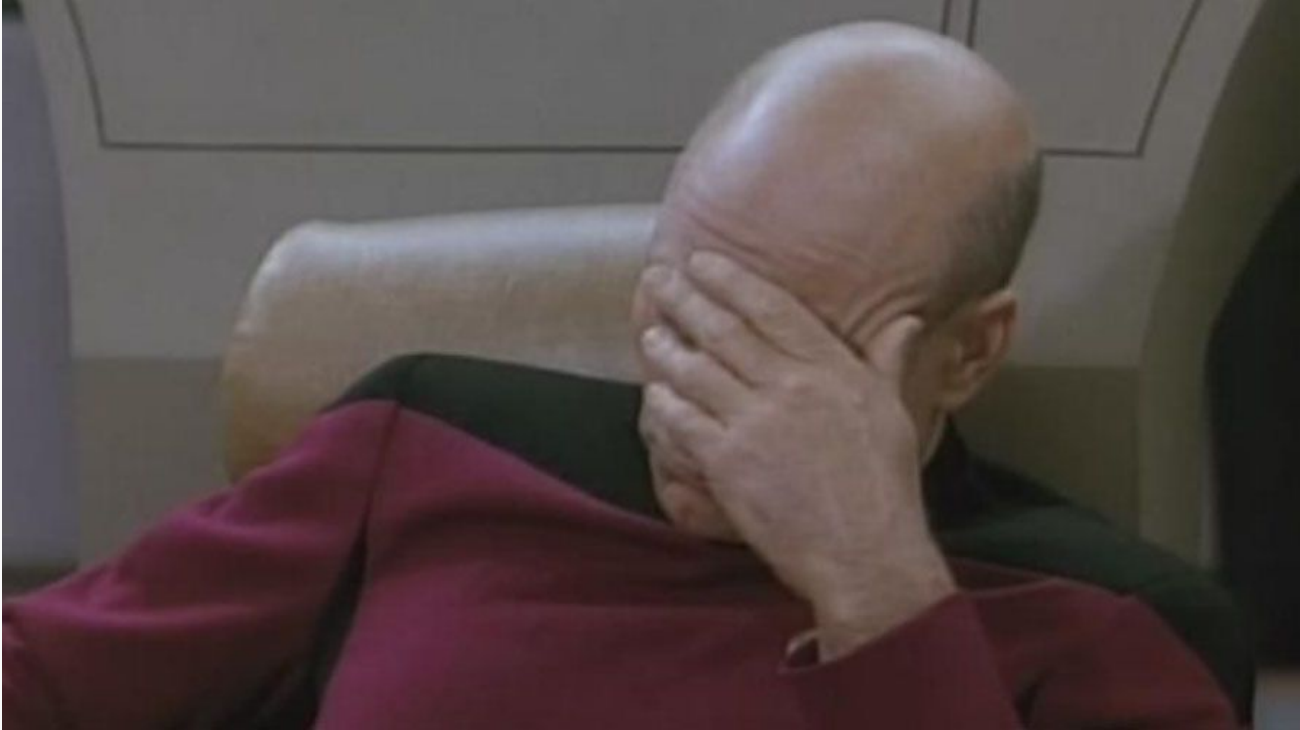
123 Test St

Testville, G644DD

UNITED KINGDOM

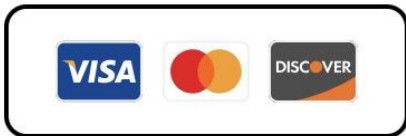
Contact Number

+441360622666

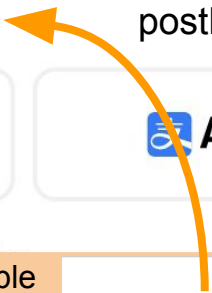


Solving it in JavaScript

PAYMENT METHOD



postMessage!



Name on card

Card Number
1234 1234 1234 1234

Expiration Date
MM / YY

CVV 

Billing address same as delivery

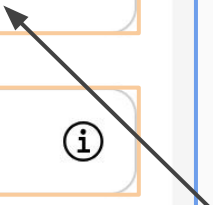
Mr Test Address

123 Test St
Testville, G644DD
UNITED KINGDOM

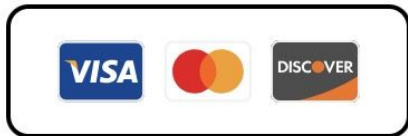
Contact Number

+441360622666

+ a bunch of invisible fields



PAYMENT METHOD



Name on card

Card Number
1234 1234 1234 1234

Expiration Date
MM / YY

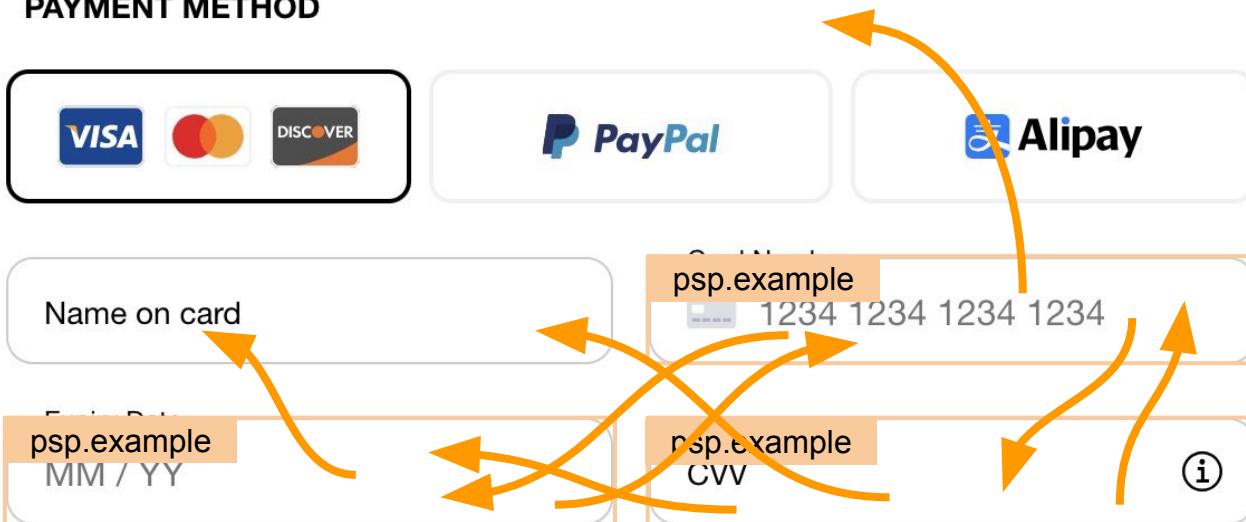
CVV
CVV

Billing address same as delivery

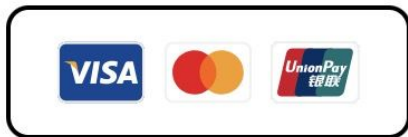
Mr Test Address

123 Test St
Testville, G644DD
UNITED KINGDOM

Except... you end up with this mess. (Also, browsers aren't super fond of invisible fields!)



PAYMENT METHOD



Name on card
My Real Visa



Card Number
1234 1234 1234 1234

Exp. Date
MM / YY

CVV 





Billing address same as delivery

Mr Test Address

123 Test St
Testville, G644DD
UNITED KINGDOM

If the user fills the name field, you still don't want to capture PCI information in merchant frame - so can't fill down!

PAYMENT METHOD

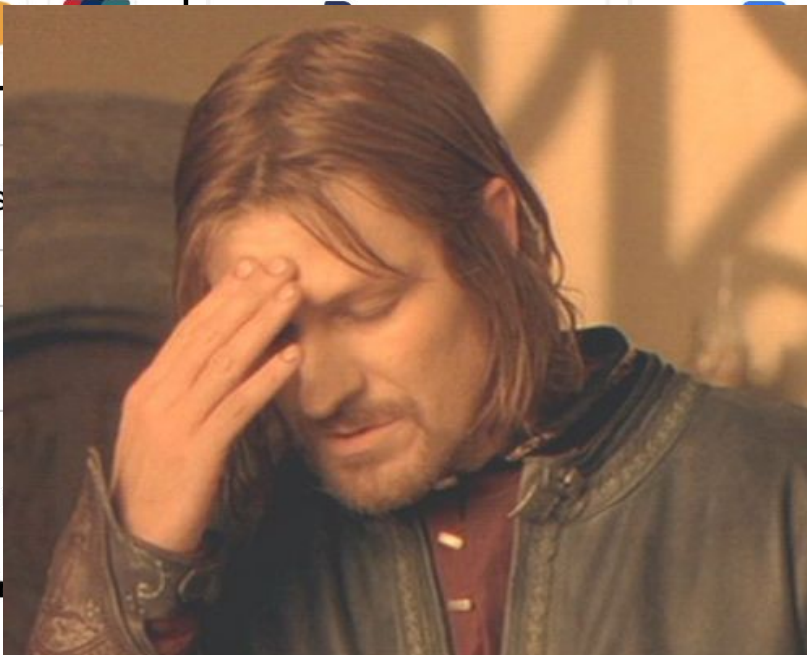
   

Name on card
My Real Visa 1234

Expiry Date
MM / YY 

Billing address

Mr Test Address
123 Test St
Testville, G644DD
UNITED KINGDOM



Doing it right - browser support

#1 - Fill across same-origin frames

PAYMENT METHOD



Name on card

Card Number



1234 1234 1234 1234

Expiry Date

MM / YY

CW



Visa 1234

Expires on 07/23



Mastercard 3923

Expires on 07/28



Manage Payment Methods...

Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact Number

+441360622666

PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number

1234 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact Number

+441360622666

PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number



4000 1234 1234 1234

Expiry Date

07 / 23

CVV

123



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact

+441360

No invisible fields or
postMessage required!

#1 - Fill across same-origin frames

- **Already shipped** in Chrome M116!
- Hoping to spec as part of <https://github.com/whatwg/html/pull/8801>

#2 - 'Upwards' fill of less sensitive info

PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number



1234 1234 1234 1234

Expiry Date

MM / YY

CW

VISA

Visa 1234

Expires on 07/23



Mastercard 3923

Expires on 07/28



Manage Payment Methods...

Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact Number

+441360622666

PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number

1234 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact Number

+441360622666

PAYMENT METHOD



Name on card

My Real Name

Card Number

4000 1234 1234 1234

Expiry Date

07 / 23

CVV

123



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact
+441360

Cardholder name considered 'less sensitive', automatically fill 'up' into the main frame origin.

#2 - 'Upwards' fill of less sensitive info

- **Already shipped** in Chrome M116!
- Maybe spec as part of <https://github.com/whatwg/html/pull/8801>

#3 - 'shared-autofill' permission policy

PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number

1234 1234 1234 1234

Expiry Date

MM / YY



My Real Name

Visa •••• 1234, expires on 07/23



Stephen McGruer

Mastercard •••• 3923, expires on 07/28



Billing address

Mr Test Address

123 Test St

Testville, ABC DEF

UNITED KINGDOM



Manage Payment Methods...

er

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PAYMENT METHOD

VISA



PayPal

Alipay

Name on card

Card Number

1234 1234 1234 1234

Expiry Date

MM / YY

CW



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact
+441360

Main frame sets
allow="shared-autofill" on the
PSP iframes.

PAYMENT METHOD



Name on card

My Real Name

Card Number

 4000 1234 1234 1234

Expiry Date

07 / 23

CVV

123



Billing address same as delivery

Mr Test Address

123 Test St
Testville, ABC DEF
UNITED KINGDOM

Contact

+441360

Browser fills 'down' into the trusted iframes.

#3 - 'shared-autofill' permission policy

- **Not yet shipped** (available behind AutofillSharedAutofill flag in Chrome M116)
- <https://github.com/schwering/shared-autofill>

My asks to you

- If you're a merchant/PSP, help me understand - why do you make cardholder name part of the main frame and not another PSP iframe?!
 - (And sometimes the expiration date is in the main frame too - why?)
- If you're supportive of these ideas, let us know! (Planning to send a summary of WPWG support to W3C TAG thread).
- If you have concerns about the ideas, let's talk :).