Eckoh Payment Request and Android Pay on the web

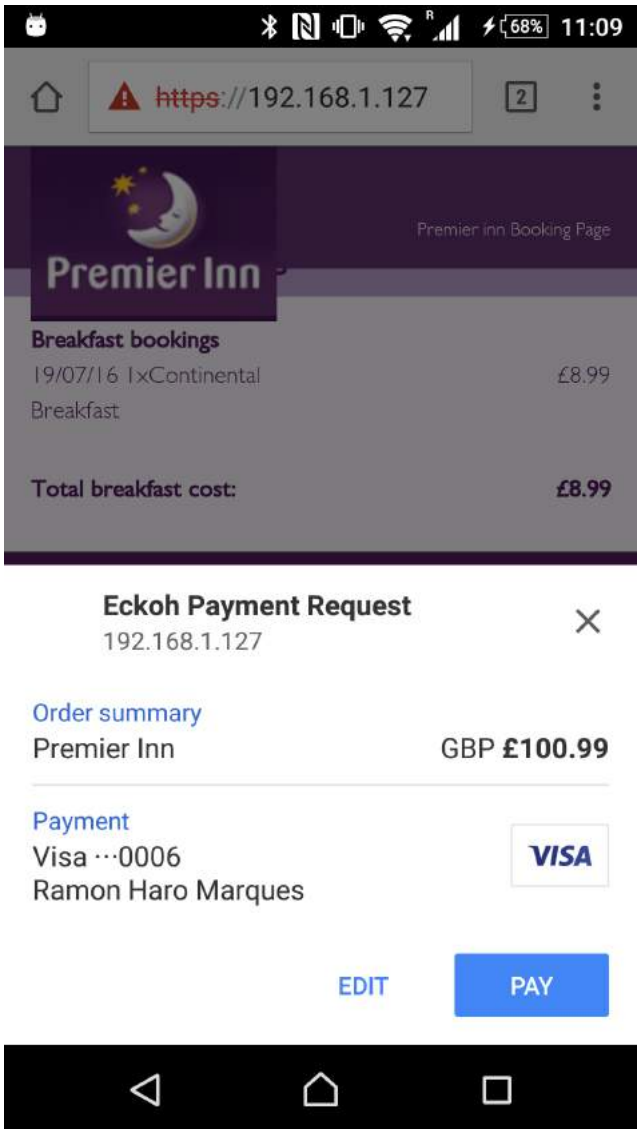
1. *Introduction*

Eckoh Payment Request is a custom implementation of the 'Payment Request API' available right now for **chrome versions greater than 53** and for **Android platform**. It also supports the implementation for Android Pay on mobile browsers.

The aim for this component is to make easier and faster all the payment forms by minimizing the time and the steps required. It's expected that 'Payment Request API' replace all the current payment forms.

This component does not processes any payment, it only return the information for processing it.

Android Pay at this moment is unavailable on chrome server site.



2. *Implementation*

2.1. Declaration

.HTML

```
<!--PAYMENT REQUEST SCRIPT-->
<script src="js/eckoh_pr/eckoh_payment.js" id="eckohPRApi"></script>
```

Note: The ID value must not be changed as the "eckoh_payment.js" loads other files and that value is needed for all these processes.

.JS (function that handles all the payment request)

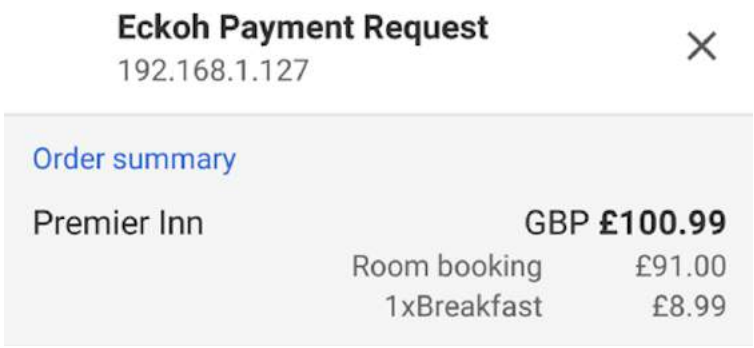
```
//Button functions
function onBuyClicked(){
    getRequestDetails();
}

/*Recursive function for getting the payment request with billing address*/
function getRequestDetails(){
    var result = initRequestPayment(JSON.parse(paymentJson));
    result.then(function (paymentResult){
        console.log('The Result:');
        console.log(paymentResult);
        if(paymentResult.status==='success'){
            processPayment(paymentResult);
        }
        else{
            alert('Error...'+paymentResult.message);
        }
    })
}
```

This implementation calls the function that handles all the process and calls for the component to return the response array (see later).

The value that needs to be sent is "paymentDetails" and it is a JSON Object with the following fields:

a) **merchant_id:** ID for processing Android Pay requests. Not that one.
b) **currency:** Code for the currency that payment is going to be make (USD, GBP, EUR…).
c) **card_method:** All the type of cards accepted. The same list of card types are used for Android Payment Requests.
d) **payment details:** Billing information for displaying as follow:



e) **android:** Gives you the possibility of adding Android Pay into the request or not. It will be added as another "type of card".
f) **public_key:** Key needed for Android Pay Tokenization process. Needs to be sent to paymod when making payment using Android Pay.
g) **address_required:** Option for expressing interest for getting the billing address too. If it's not set up the component will ask for it (NOT YET).


```
{
    "merchant_id": "Eckoh LTD.",
    "currecny": "GBP",
    "card_method": ["amex", "diners", "discover", "jcb", "maestro", "mastercard", "unionpay", "visa"],
    "payment_details": {
        "organisation": "Premier Inn",
        "total": {
            "label": "Premier Inn",
            "amount": "100.99"
        },
        "list_items": [{
            "label": "Room booking",
            "amount": "91.00"
        }, {
            "label": "1xBreakfast",
            "amount": "8.99"
        }]
    },
    "android": false,
    "public_key": "BH/umPQSrEwYDRBoqpCaCADESOgkk4Kwj9MNCuESXWuyVnht7lfhauk5+TuhssMGz7lGD0maBwQWaS+Um4O0Fdg=",
    "address_required": true
}
```

2.2. Callback

2.2.1. Visa Payment Request

If the process has been successful and the details are fully filled, the Callback response is as follow:

- With billing address


```
{
    "status": "success",
    "method": "visa",
    "card_details": {
        "full_name": "John Smith",
        "pan": "4929000000006",
        "expiry_month": "01",
        "expiry_year": "2020",
        "ccv": "123"
    },
    "billing_address": {
        "address": "Telford House / Corner Hall",
        "postcode": "HP39HN ",
        "city": "Hemel Hempstead ",
        "country": "GB"
    }
}
```


- No billing address


```
{
    "status": "success",
    "method": "visa",
    "card_details": {
        "full_name": "John Lewis",
        "pan": "4929000000006",
        "expiry_month": "01",
        "expiry_year": "2021",
        "ccv": "123"
    }
}
```

2.2.2. Android Payment Request


```
{
    "status": "success",
    "method": "android",
    "tokenization_detials": {
        "encryptedMessage": "ZW5jcnlwdGVkTWVzc2FnZQ==",
        "ephemeralPublicKey": "ZXBoZW1lcmFsUHVibGljS2V5",
        "signature": "c2lnbmF0dXJl"

    },
    "billing_address": {
        "address": "Telford House / Corner Hall",
        "postcode": "HP39HN ",
        "city": "Hemel Hempstead ",
        "country": "GB"
    }
}
```


In this scenario, the "tokenization_details" is an encrypted message that needs to be decrypted in the server site by using the public key provided in the initial configuration JSON object. See more.
http://apps.cybersource.com/library/documentation/dev_guides/Android_Pay_SO_API/html/wwhelp/wwhimpl/js/html/wwhelp.htm#href=ch_androidAPI.html#1119770

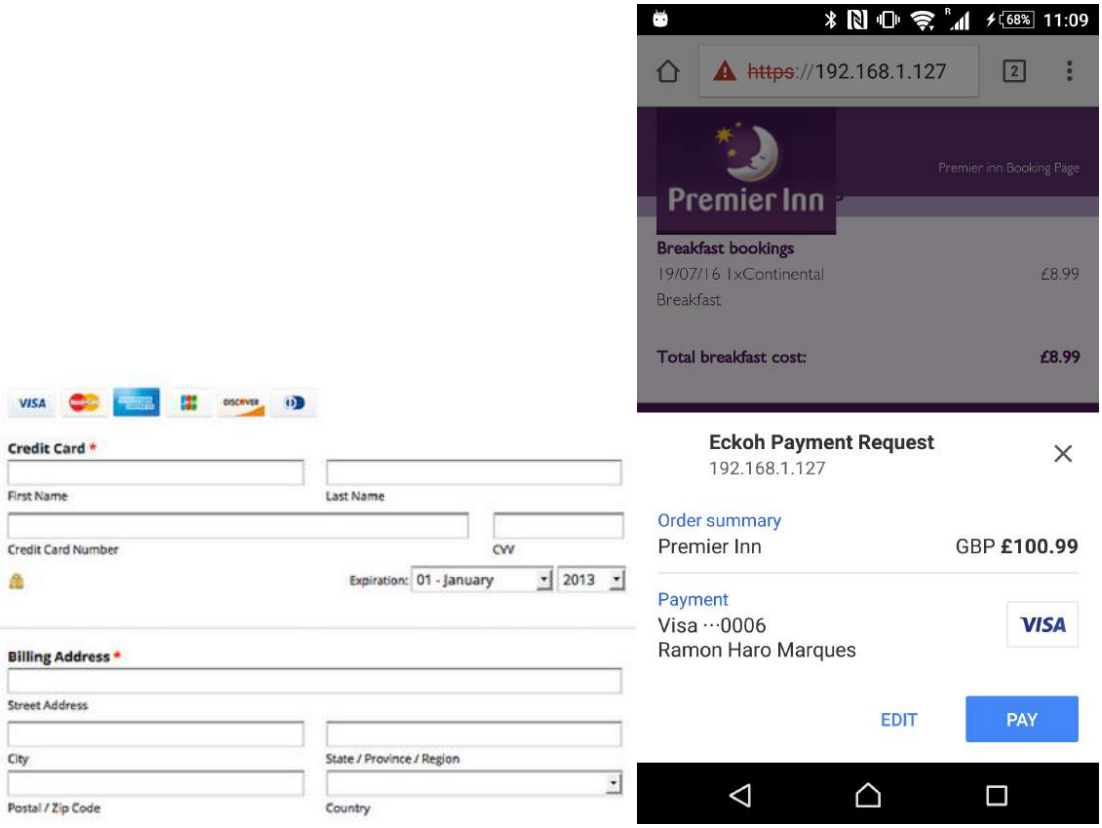
NOT IMPLEMENTED YET ON THE CHROME SERVER SITE.

2.2.3. Error handler


```
{
    "status": "error",
    "message": "Error processing the payment Request cancelled"
}
```

3. ***Customer Journey***

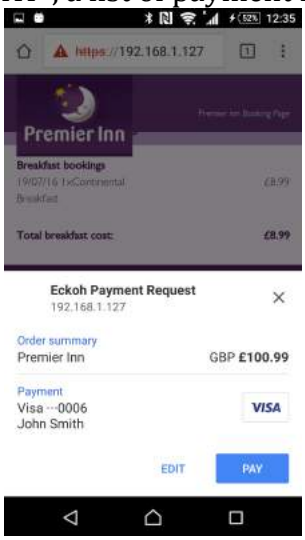
As said before, the main aim for Eckoh Payment Request is to make easier and faster all the checkout process. In the customer online account cards might be stored for making payments. If not, a new card can be used for a single payment and added to the customer account if whished.



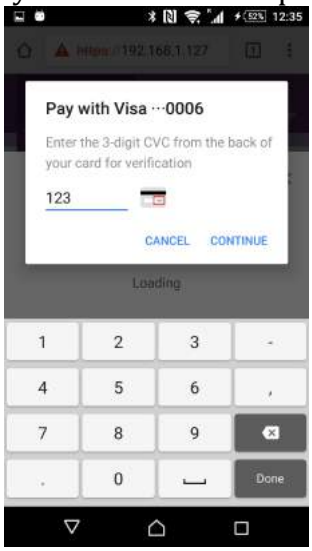
3.1. The process

1. The customer is the confirmation page.

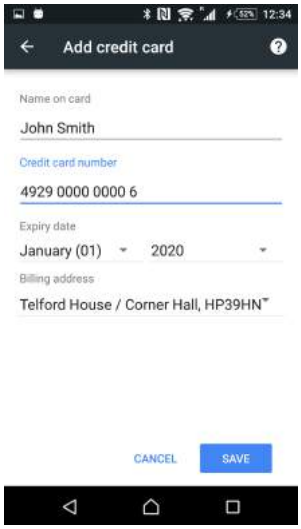
2. When the user clicks “PAY”, a list of payment methods is displayed.



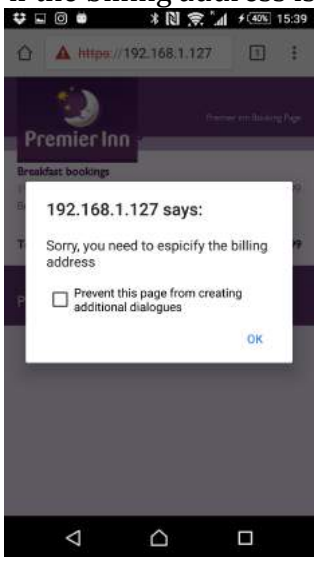
3. The user chooses the payment method and press “PAY”. CCV is required.



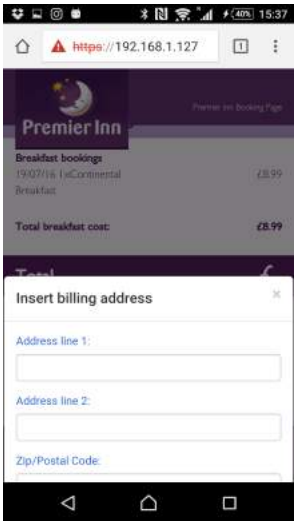
4. If no cards are stored, the user needs to add one manually.



5. The component checks if the billing address is required and if it is available.



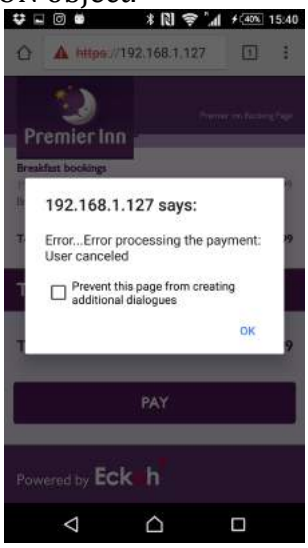
6. If the billing address is not available and it is required, the process for getting it starts.



7. When all the details required have been entered, the component returns the JSON object response.


```
{
    "status": "success",
    "method": "visa",
    "card_details": {
        "full_name": "John Smith",
        "pan": "4929000000006",
        "expiry_month": "01",
        "expiry_year": "2020",
        "ccv": "123"
    },
    "billing_address": {
        "address": "Telford House / Corner Hall",
        "postcode": "HP39HN ",
        "city": "Hemel Hempstead ",
        "country": "GB"
    }
}
```


8. If during the process an error has occurred, the component throws an error and returns an error JSON object.



Eckoh Payment Request is useful if, previously, credit cards have been stored into the browser. If not, the customer will be prompted to add a new one manually and automatically stored after the process.

4. Availability and things considered

Currently:

- Eckoh Payment Request only works for:
  - Chrome versions equal or greater than 53.
  - Android platforms.
- The component has a method for previous availability check.
  - If requisites are matched, the payment request process pops up.
  - If not, the component returns a message error. An alternative checkout process needs to be handled from the organization website.
- Android Pay on Payment Request not tested yet as it is unavailable on chrome server site.
- If the billing address is not declared with the credit card information, the Payment Request API doesn't offer a friendly way to add. Solutions:
  - Go to chrome settings and modify card information.
  - Add a new card and add billing address using payment request API.
  - Custom pop up message using autocomplete API.
- BUG: When a new card is added, the screen does not refresh. Start process again.