# Environment

Production

# Issue Description

A few sellers have reached out to eBay that they are being charged for items that do not belong to them. Some ItemIds in PLA charges are incorrect resulting in erroneous charging since Sept 15 (started with 40 to now 5k clicks daily). Some sellers are being over charged while some are not being charged for their clicks.

# Incident timeline

| **Event** | **Event description** |
| --- | --- |
| 2023-09-15 | Incorrect charging started on PLA. |
| 2023-09-28 7:00 AM MST | Ads Attribution Team is notified. |
| 2023-09-28 7:30 AM MST | Ads Tracking, Campaign Teams are notified. |
| 2023-09-28 11:00 AM MST | Click Fraud CCOE team is notified with pagerduty. |
| 2023-09-29 2:00 PM MST | Pricing team has also released a fix that check itemId and seller id. |
| 2023-09-28 3:00 PM MST | Ads Attribution Team has deployed a mitigation code patch to drop mismatched itemid and sellerid to charging. |
| 2023-09-29 3:00 AM MST | Click fraud team release the hot fix |
| 2023-09-29 10:40 AM MST | 2023-09-28 data is generated, there is no problem with data |
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# Root cause

Recs Promoted Listing landing page url contains item(itm) information. The landing page url turns into a referer infoin Client Data when a buyer clicks on a Promoted Listing item. Moreover, each Promoted Listing click event has a click Payload that also contains item(itm) information. In addition, URL param name (itm) and Soj tag name (itm) happen to be the same name.

Soj process inserts referer in ClientData column and Playload in Soj column in UBI table and Client Data and Payload are combined and parsed together by the click fraud system. Since item info (itm) is present in both columns, the click fraud system reads item id from ClientData, rather than the click Payload(Soj) that contains the correct item id.

Since the click fraud system has read the incorrect item id, the charging file generated by the click fraud system contains click events with incorrect item id. Then, the attribution charging process ingests the file and sends the charge request to plutus for charging. This result in incorrect charging.

**Sample data with combined ClientData and Click Payload information**

| Script=ads\_tracking\_collection&Agent=Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/116.0.0.0 Safari/537.36&chUaModel=""&Server=adstrackingcollection.vip.ebay.com&RemoteIP=86.169.184.246&corrId=2186776f4aee9e72&Referer=https://www.ebay.co.uk/itm/134224845598?\_trkparms=amclksrc=ITM&aid=1110006&algo=HOMESPLICE.SIM&ao=1&asc=20201210111314&meid=0dc8d892faca40e287e2aea9d80dd8ee&pid=101195&rk=2&rkt=12&sd=133395175833**&itm=134224845598**&pmt=1&noa=1&pg=3458402&algv=SimplAMLv11WebTrimmedV3MskuWithLambda85KnnRecallV1V2V4ItemNrtInQueryAndCassiniVisualRankerAndBertRecallWithVMEV3CPCAuto&brand=Unbranded&\_trksid=p3458402.c101195.m1851&meid=bc0cb6c464fc4862a39a563d45e003d8&flgs=AA\*\*&botFlags=7&bamt=0%3BUSD&auct=sp&icf=00&plmtgp=REC&dt=1&serviceEventId=01HB0ZHKNRVKKJC11VYZ0S31C4&ul=en\_GB&plpCampId=14186871010&callingpagename=viexpio\_\_experience\_listing\_details\_v2\_view\_item\_GET&cpamt=3.99%3BGBP&alg=1110006&mtsts=2023-09-23T12%3A17%3A03.132Z&efam=ADV&plpAdGroupId=5111756050**&itm=224852922380**&plpBid=6%3BGBP&optl=lfcat%3D20349&medi=UNKNOWN&ciid=%2BM7HZgI\*&cflgs=AA\*\*&itpos=1&actionKind=NAVSRC&slr=1801000050&trackprov=PLP&issq=0&eactn=ACTN&ssit=1695471408669&seqid=201609363630&rq=2186776f4aee9e72&amclksrc=ITM&siid=A%2BFj0OI8\*&eventSource=colsvc%7Cv%3A25951%7Ccli%3Ar1vinode&schemaversion=null&pltid=101195&mech=1&lsid=3&bs=3&bu=871185618&akbot=false&id=PLP\_CLK |
| --- |

*\*Duplicated* ***itm*** *attributes in a single tracking payload. Click fraud detection system will get the wrong value of item field after parsing the tracking payload. The red part is the incorrect item ID contained in the referrer field, which should be encoded usually. The green part is the right one.*

# Impact

Total impact clicks count from xxxx to xxxx is about

Revenue Impact: TBD from Analytics; Current estimate 0.6% of our PLA daily clicks (approximately $3k in revenue).

Revenue recovery: pending refund strategy from Product, GTM and PMM once impacted data is available.

# Opportunities:

1. More rigorous QE process, Junit test/regression as well as End to End process of major product releases.
2. Improved click fraud parsing logic with better error handling, monitoring and alerting.