



First- and Last-Touch Attribution

CoolTShirts

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1. Introduction

2. Getting familiar with the company

- How many campaigns and sources does CoolTShirts use and how are they related?
- What pages are on their website?

3. What is the user journey?

- How many first touches is each campaign responsible for?
- How many last touches is each campaign responsible for?
- How many visitors make a purchase?
- How many last touches on the purchase page is each campaign responsible for?
- What is the typical user journey?

4. Optimize the campaign budget

- CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

5. Conclusions

Introduction

Attribution is the foundation marketing. Marketing teams use attribution to optimize and prove the ROI of their campaigns. In this context UTM (Urchin Tracking Module) tracking parameters become very helpful.

UTM parameters are simply tags that you add to a URL. When someone clicks on a URL with UTM parameters, those tags are sent back to you so you can analyze them.

Example of a UTM parameter:

`&utm_medium=email&utm_source=Newsletter&utm_campaign=Autumn+Newsletter`

Collecting the UTM parameters will allow you to tie conversion events to your marketing campaign or activities. This is valuable in that you can immediately measure performance and calculate ROI on your campaigns.

Getting familiar with CoolTShirts

- **utm_source**: it identifies where exactly did your ad appear. That can be a specific portal name, social network name or similar, like Facebook or your email newsletter.
- **utm_campaign**: the name of the campaign. A group of ads through various mediums (banners, newsletters, articles) that cover the same topic.

```
SELECT DISTINCT utm_source AS 'Sources', utm_campaign as  
'Campaigns'  
FROM page_visits;
```

Sources	Campaigns
nytimes	getting-to-know-cool-tshirts
email	weekly-newsletter
buzzfeed	ten-crazy-cool-tshirts-facts
email	retargetting-campaign
facebook	retargetting-ad
medium	interview-with-cool-tshirts-founder
google	paid-search
google	cool-tshirts-search

What pages are on CoolTShirts' website?

```
SELECT DISTINCT page_name AS 'CoolTShirts - website pages'  
FROM page_visits;
```

CoolTShirts - website pages

1 - landing_page

2 - shopping_cart

3 - checkout

4 - purchase

What is the user journey?

How many first touches is each campaign responsible for?

UTM Source	UTM Campaign	Total First-touches
medium	interview-with-cool-tshirts-founder	622
nytimes	getting-to-know-cool-tshirts	612
buzzfeed	ten-crazy-cool-tshirts-facts	576
google	cool-tshirts-search	169

```
WITH
first_touch AS (
  SELECT user_id, MIN(timestamp) AS
first_touch_at
  FROM page_visits
  GROUP BY user_id),
ft_attr AS (
  SELECT ft.user_id,
         ft.first_touch_at,
         pv.utm_campaign,
         pv.utm_source
  FROM first_touch ft
  JOIN page_visits pv
    ON ft.user_id = pv.user_id
   AND ft.first_touch_at = pv.timestamp
)
SELECT ft_attr.utm_source AS 'UTM Source',
       ft_attr.utm_campaign AS 'UTM Campaign',
       COUNT(*) AS 'Total First-touches'
  FROM ft_attr
 GROUP BY 1,2
 ORDER BY 3 DESC;
```

How many last touches is each campaign responsible for?

UTM Source	UTM Campaign	Total Last-touches
email	weekly-newsletter	447
facebook	retargeting-ad	443
email	retargeting-campaign	245
nytimes	getting-to-know-cool-tshirts	232
buzzfeed	ten-crazy-cool-tshirts-facts	190
medium	interview-with-cool-tshirts-founder	184
google	paid-search	178
google	cool-tshirts-search	60

```
WITH
last_touch AS (
  SELECT user_id, MAX(timestamp) as
last_touch_at
  FROM page_visits
  GROUP BY user_id),
lt_attr AS (
  SELECT lt.user_id,
         lt.last_touch_at,
         pv.utm_source,
         pv.utm_campaign,
         pv.page_name
  FROM last_touch lt
  JOIN page_visits pv
  ON lt.user_id = pv.user_id
  AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_source AS 'UTM Source',
       lt_attr.utm_campaign AS 'UTM Campaign',
       COUNT(*) AS 'Total Last-touches'
FROM lt_attr
GROUP BY 1,2
ORDER BY 3 DESC;
```

How many visitors make a purchase?

Visitors that purchased

361

How many last touches on the purchase page is each campaign responsible for?

UTM Source	UTM Campaign	Nr. of Purchases
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-campaign	54
google	paid-search	52
buzzfeed	ten-crazy-cool-tshirts-facts	9
nytimes	getting-to-know-cool-tshirts	9
medium	interview-with-cool-tshirts-founder	7
google	cool-tshirts-search	2

```
SELECT COUNT(DISTINCT user_id) AS 'Visitors that
purchased'
FROM page_visits
WHERE page_name = '4 - purchase';
```

```
WITH
last_touch AS (
  SELECT user_id, MAX(timestamp) as last_touch_at
  FROM page_visits
  WHERE page_name = '4 - purchase'
  GROUP BY user_id),
lt_attr AS (
  SELECT lt.user_id,
         lt.last_touch_at,
         pv.utm_source,
         pv.utm_campaign,
         pv.page_name
  FROM last_touch lt
  JOIN page_visits pv
  ON lt.user_id = pv.user_id
  AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_source AS 'UTM Source',
       lt_attr.utm_campaign AS 'UTM Campaign', COUNT(*) AS
Nr. Of Purchases'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

Based on the 1979 total users that visited CoolTShirts' website I would describe their journey as:

**Total Users**

1979

Website Page	Nr. of Users	User journey	
1 - landing_page	1979	100.00%	↓
2 - shopping_cart	1881	95.05%	↓
3 - checkout	1431	72.31%	↓
4 - purchase	361	18.24%	↓

```
SELECT COUNT(DISTINCT user_id) AS 'Total Users'  
FROM page_visits;
```

```
SELECT page_name AS 'Website Page',  
COUNT(DISTINCT user_id) AS 'Nr. of Users',  
ROUND(100.0 * (COUNT(DISTINCT user_id) /  
1979.0), 2) AS 'User journey'  
FROM page_visits  
GROUP BY 1;
```

Optimizing CoolTShirts' campaign budget

UTM Source	UTM Campaign	Total First-touches	Re-investment
medium	interview-with-cool-tshirts-founder	622	1
nytimes	getting-to-know-cool-tshirts	612	2



UTM Source	UTM Campaign	Total Last-touches	Nr. of Purchases	Re-investment
email	weekly-newsletter	447	115	3
facebook	retargeting-ad	443	113	4
email	retargeting-campaign	245	54	5

Given that CoolTShirts marketing budget allows them to only re-invest in 5 campaign I would suggest to do so as follows:

- Campaigns that attract the most users to the website:
 - *interview-with-cool-tshirts-founder* (1)
 - *getting-to-know-cool-tshirts* (2)
- Campaigns responsible for the most last touches and conversion into purchase:
 - *weekly-newsletter* (3)
 - *retargeting-ad* (4)
 - *retargeting-campaign* (5)

```
/*Data provided in both tables at the right is a partial  
extraction from queries shown previously in slides 9, 10 and 11*/
```

Conclusions

Re-investing in a mix of campaigns that contribute to both first and last touch ensures that the two most important elements of the attribution model receive a portion of the credit and budget. This means recognizing the importance of the campaigns that generated the most traffic and introduced your brand to the customer as well as the campaigns that eventually drove them to convert.

Thank you cademy