THE FUTURE OF AUTOMATED TRADING

7th OCTOBER 2019
I’VE BEEN WORKING IN PROGRAMMATIC SINCE 2010
A BIT ABOUT ME...

- One of the earliest UK users of programmatic
- Ran programmatic for Dentsu Aegis in the UK
- Founded The Programmatic Advisory in 2016 to provide impartial expert consulting
- Work with multi-national advertisers to further their programmatic sophistication
THE NEXT 19 MINUTES...

User First – GDPR & Browsers

Machine Driven Buying

Transparency & Blockchain

In-housing vs Service Layer
USER FIRST

HOW GDPR AND BROWSER’S ARE IMPACTING MEDIA BUYING
IMPORTANT TO DIFFERENTIATE BETWEEN PRIVACY AND BROWSER DECISION MAKING (BUT IT’S LINKED AND BOTH IMPORTANT)
A MIXED BAG OF GDPR INTERPRETATION TO DATE
ICO (UK DATA REGULATOR) HAS PROVIDED SOME UPDATED GUIDANCE

Update report into adtech and real time bidding
20 June 2019

- Data supply chain is reliant on contracts/agreements – this does not seem sufficient given the nature of data being shared
- Identifying a lawful purpose for processing data in RTB remains challenging – lots of the industry are using legitimate interest as opposed to one of the other purposes (consent, contractual, vital interests, public interest or legal obligation)
- Privacy notices lack clarity and do not provide clear reasons for processing data
- Scale of data used in RTB seems disproportionate to the value that the user receives, therefore making it unfair
- RTB participants do not know the scale of which they need data for it’s intended purpose
Chrome and Safari dominate market share in UK

Chrome: 49%
Safari: 31%
Edge: 5%
Firefox: 4%
Other: 11%

BROWSERS ARE TAKING DIFFERENT STANCES TO THE USE OF TRACKING

<table>
<thead>
<tr>
<th>SAFARI</th>
<th>CHROME</th>
<th>FIREFOX</th>
<th>EDGE/IE</th>
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<tbody>
<tr>
<td>ITP 2.3</td>
<td>Promoting classification of 1\textsuperscript{st} and 3\textsuperscript{rd} party cookies</td>
<td>Enhanced Tracking Protection</td>
<td>Continuing as is...</td>
</tr>
<tr>
<td>1\textsuperscript{st} party cookie has a 24hr lifetime</td>
<td>No time constraints on cookie lifetime</td>
<td>No time constraints on cookie lifetime</td>
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<tr>
<td>Developing their own ad click attribution solution</td>
<td>Removed unique ID for third party tracking</td>
<td>No obvious moves around 1\textsuperscript{st} party analytics</td>
<td></td>
</tr>
<tr>
<td>Blocked 3\textsuperscript{rd} party cookies by default</td>
<td>Want to give users more control and visibility</td>
<td>Blocked 3\textsuperscript{rd} party cookies by default</td>
<td></td>
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REDUCTION IN USERS TO BE TARGETED AND MEASURED

Source – Data availability report from a leading DSP
BECAUSE OF THE INABILITY TO RECOGNISE AND MEASURE A USER, PUBLISHERS ARE EXPECTED TO LOSE REVENUE

![Revenue Loss Distribution (Top 500 Publishers)](https://services.google.com/fh/files/misc/disabling_third-party_cookies_publisher_revenue.pdf)
REMOVAL OF USER ID’S FROM OPENRTB?
MUCH MORE STRINGENT APPROACH TO COLLECTING/PROCESSING USER DATA

- User must provide consent for advertising and analytics purposes and that consent must be informed, specific, freely given and unambiguous

- The request for consent needs to be prominent, concise, separate from other terms and conditions, and in plain language. If the request for consent is vague, sweeping or difficult to understand, then it will be invalid

- Cookies (or other identifiers) cannot be dropped until they have given that consent
INCREASE IN CONTEXTUAL TARGETING
UNIFIED ID TO BE COMMODITISED
MACHINE DRIVEN BUYING

SHOULD BUYERS HAND OVER THE KEYS FOR THEIR MEDIA DECISION MAKING TO MACHINES?
GIVEN THE INCREASE IN TARGETABLE ELEMENTS IN A DSP, CAMPAIGN STRUCTURES COULD GET UNMANAGEABLE FOR A HUMAN TRADER WITHIN USUAL TIME CONSTRAINTS.
BID FACTORS/MULTIPLIERS WERE INTRODUCED TO ENABLE THE MANAGEMENT OF LOTS OF OPTIMISATION COMBINATIONS

EXAMPLE ELEMENTS TO BID FACTOR AGAINST

- Domains
- Apps
- Time of Day
- Day of Week
- Audience List
- Geographic Location
- Device Type
- Category
- Above/Below Fold
MACHINE LEARNING IS PLAYING A ROLE IN PROGRAMMATIC OPTIMISATION, BUT IT IS IMPORTANT TO NOTE THE DIFFERENCE BETWEEN AI, MACHINE LEARNING AND DEEP LEARNING

**Artificial Intelligence**
Any technique that allows a machine to mimic human behaviour.

**Machine Learning**
AI techniques that give machines the ability to learn without being explicitly programmed to do so.

**Deep Learning**
A subset of machine learning which makes the computation of multi-layer neural networks possible.

Any technique that allows a machine to mimic human behaviour.
HOW IS MACHINE LEARNING BEING USED IN PROGRAMMATIC?

01 Campaign Optimisation

02 Contextual Targeting

03 Personalised Creative

04 Fraud Detection & Brand Safety
## COMPARISON OF MANUAL VS ALGORITHMIC OPTIMISATION (OFF-THE-SHELF ALGORITHMS)

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<thead>
<tr>
<th></th>
<th>Manual Optimisation</th>
<th>Algorithmic Optimisation</th>
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<tbody>
<tr>
<td>Optimisation frequency</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Ability to manage high volume of line items</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Transparency of optimisations</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Ability to analyse large sets of data to carry out in depth decision making</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Ability to work towards multiple KPIs</td>
<td>High</td>
<td>Low</td>
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<tr>
<td>Ability to leverage learnings from past campaigns or pre-empt future events</td>
<td>High</td>
<td>Low</td>
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WHAT’S THE ROLE OF HUMANS WITH AN INCREASE USE FOR MACHINE LEARNING?

• REDUCTION IN LOW VALUE/REPETITIVE TASKS SUCH AS REPORT BUILDING, TRAFFICKING & LINE ITEM SETUPS

• HUMANS TO CREATE FRAMEWORKS FOR ACCEPTABILITY FOR BRAND SAFETY

• HUMANS TO PROVIDE MORE STRATEGY AROUND SUPPLY, DATA PARTNERSHIPS, FORMAT USE, KPI APPLICABILITY ETC.

• SOME CAMPAIGNS WILL STILL BE BETTER OFF WITH MAINLY MANUAL SETUP BUT LONGER TERM WE EXPECT THIS TO REDUCE AS SOPHISTICATION IN MACHINE LEARNING INCREASES IN OUR INDUSTRU
TRANSPARENCY AND BLOCKCHAIN

IS BLOCKCHAIN OVERKILL FOR THE INDUSTRIES TRANSPARENCY PROBLEM AND WHAT OTHER THINGS CAN IT SOLVE FOR?
FOUR POTENTIAL CHALLENGES IN PROGRAMMATIC WHERE BLOCKCHAIN CAN BE APPLIED

- Transparency
- Payments & Reconciliation
- Ad Fraud
- Reaching Audiences
WHAT ARE SOME OF THE BARRIERS TO USING BLOCKCHAIN SOLUTIONS?

- Isolation
- Speed
- Added Value
- Infrastructure Costs
- Incentives
- Adoption & Inclusion
IN-HOUSING VERSUS SERVICE LAYER

WHERE SHOULD TALENT AND COMMERCIAL RESPONSIBILITY SIT?
BRANDS HAVE ADOPTED DIFFERENT OPERATING MODELS

*In-house* – entire ownership of all contractual and resource commitments

*Hybrid* – some ownership of contractual and resource commitments and some outsourced

*Outsourced* – all contractual and resource commitments are delivered by a third-party company
THERE ARE DIFFERENT FUNCTIONS THAT FALL WITHIN THAT

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<th>STRATEGY AND PLANNING</th>
<th>IN-HOUSE</th>
<th>HYBRID</th>
<th>OUTSOURCED</th>
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<td>TECHNOLOGY OWNERSHIP</td>
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<td>CREATIVE/ASSET PRODUCTION</td>
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<tr>
<td>MEASUREMENT AND ANALYTICS</td>
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39% of European advertisers plan to in-house.
BIGGEST REASON FOR THIS IS COST EFFICIENCY
GENERALLY ADVERTISERS NEED TO FOLLOW THREE STEPS TO NAVIGATE NEW OPERATING MODELS

HAVE A CLEAR STRATEGY

ENSURE FEASIBILITY AND HAVE A PLAN

WORK WITH PARTNERS TO GET YOU THERE (AND IT’S NEVER FINISHED)
WHAT DOES THE FUTURE LOOK LIKE FOR AUTOMATED TRADING?
SUMMARY

CONSENT DRIVEN/BROWSER RESTRICTED TARGETING & ANALYTICS WITH (HOPEFULLY) A UNIFIED ID

GREATER RELIANCE ON MACHINE LEARNING FOR MEDIA BUYING

TRANSPARENCY CONTINUES TO IMPROVE INDUSTRY CREDIBILITY, USE CASES FOR BLOCKCHAIN EVOLVE

CONTINUED FLUX IN OPERATING MODELS FOR BRANDS AND THEIR SERVICE PARTNERS AS THE INDUSTRY EVOLVES SO DOES THE MODEL
THANK YOU
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