



Cross-Channel Attribution with Federated Data

2021 ANA Data & Analytics Conference

Motivation: Managerial Operating System



- ERP and Budgeting
- Media Platform selection and evaluation
- Agency integration and individual media and creative tactical planning

Motivation: Practical Data Challenges

1) Uncertain Availability

- Household Privacy
- Firm Market Power
- Government Legislation

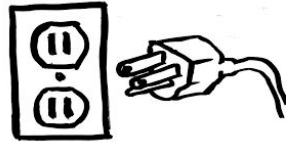


2) Confinement

- Zero to limited access to the data about media investment
- Limited access to consolidate data for enterprise resource planning (ERP)



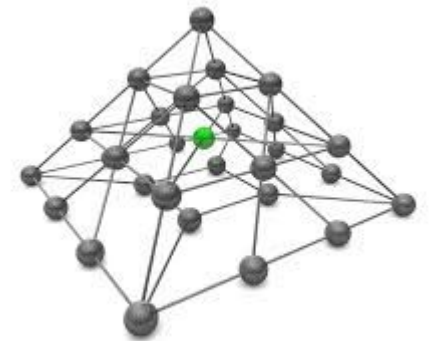
3) Incompatibility



- Mix Modeling (MMM) ignores consumer media consumption and targeting required for media planning and unbiased measurement
- Multi-Touch Attribution (MTA) requires media exposure identity resolution data to measure media influence and omits media that isn't

Defining Data Federation

Data Federation is an aspect of data virtualization (Making Data Accessible) where the data stored in a heterogeneous set of autonomous data stores are made accessible to data consumers as one integrated data store by using on-demand data integration.



Citation: Rick F. van der Lans, in [Data Virtualization for Business Intelligence Systems](#), 2012

A Few Significant Data Walled Garden HUBs



Product Name

Ads Data Hub

Cloud Infrastructure

GCP BigQuery

Screen Rule

50> User IDs

Media Data

Media Served by Google Campaign Manager (formerly DCM) including: YouTube & Google Ads



Product Name

Amazon Marketing Cloud

Cloud Infrastructure

Various AWS Products

Screen Rule

50> User IDs

Media Data

Amazon Advertising



Product Name

FB Insights (Beta)

Cloud Infrastructure

FB internal TBK

Screen Rule

30> User IDs

Media Data

All FB Media

Three Ways To Federate HUB data with First Party and Other Data for Cross Channel Measurement

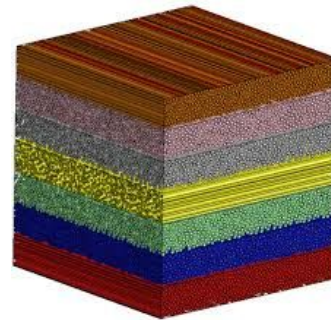
Intuitive 1

- Inject first party data into the privacy securer HUBs and join use PII based IDs
- Give up on Cross-Channel Measurement
- Post Measurement Cross-Channel Composition



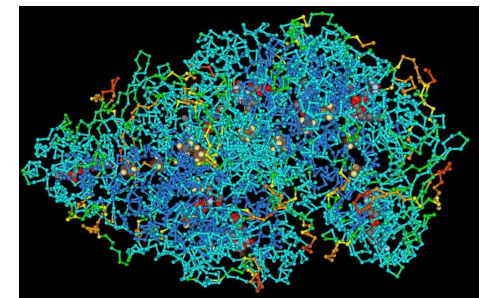
Intuitive 2

- Extract aggregate data from HUBs
- Give up on Touch Attribution
- Use Mix Modeling and Attribution without touch
- Sequential Measurement Bottom into Top



Inductive

- Extract aggregate data from HUBs
- Fuse models of consumer exposure and response federate data (polymerize)
- Simultaneously measure exposure and response



Risks and Remediation

Intuitive 1

Risks

- Joining data with 1st or 3rd party identifiers has limited viability for measurement
- Media Planning with isolated analysis introduces waste and lost opportunity

Remediation

- More random experiments to control for neglected media and brand interaction

Intuitive 2

Risks

- Privacy Filters Change Aggregation Levels
- Audience, Journey, Sequency, and Timing of exposure ignored

Remediation

- Use consistent methods and experimentation
- Add additional solutions for consumer/audience insights

Inductive

Risks

- Hard to do without software for federation during impact measurement
- Still the same data just more efficient use

Remediation

- Leverage financially smart experimentation to enhance data information content

Summary

1. Introduced three practical data challenges facing all data driven advertisers invested in walled garden media platforms
2. Defined data federation in media impact measurement and planning use case
3. Reviewed three approaches to federate walled garden data with first-party and other data sources
4. Identified major risks and potential paths for remediation for each approach

Conclusion

Intuitive approaches fail to overcome the data confinement and compatibility challenges because they ignore consumer behavior. The inductive approach addresses both issues and further reduces risks resulting from volatile data availability.

Thank you