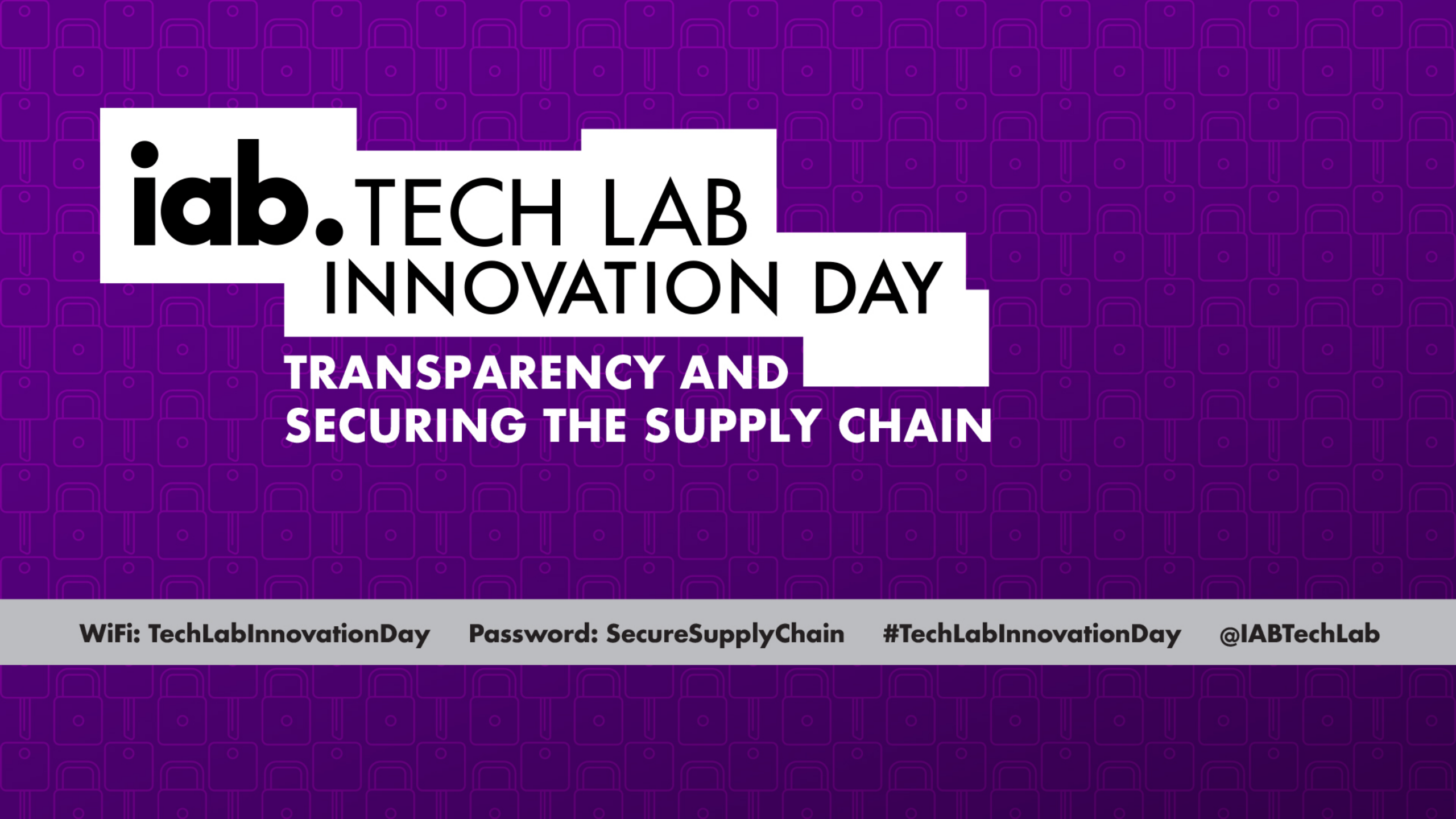


The background of the entire image is a repeating pattern of white padlock icons on a purple background. The padlocks are arranged in a grid-like fashion, with each padlock slightly offset from the others, creating a textured, digital feel.

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INNOVATION DAY

**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**

The background of the entire image is a repeating pattern of padlocks in a light purple color. The main text is overlaid on a white, multi-block background.

iab.TECH LAB INNOVATION DAY

TRANSPARENCY AND SECURING THE SUPPLY CHAIN

WiFi: TechLabInnovationDay

Password: SecureSupplyChain

#TechLabInnovationDay

@IABTechLab



DENNIS BUCHHEIM

SVP & GM
IAB TECH LAB

IAB Tech Lab

Global Standards Together



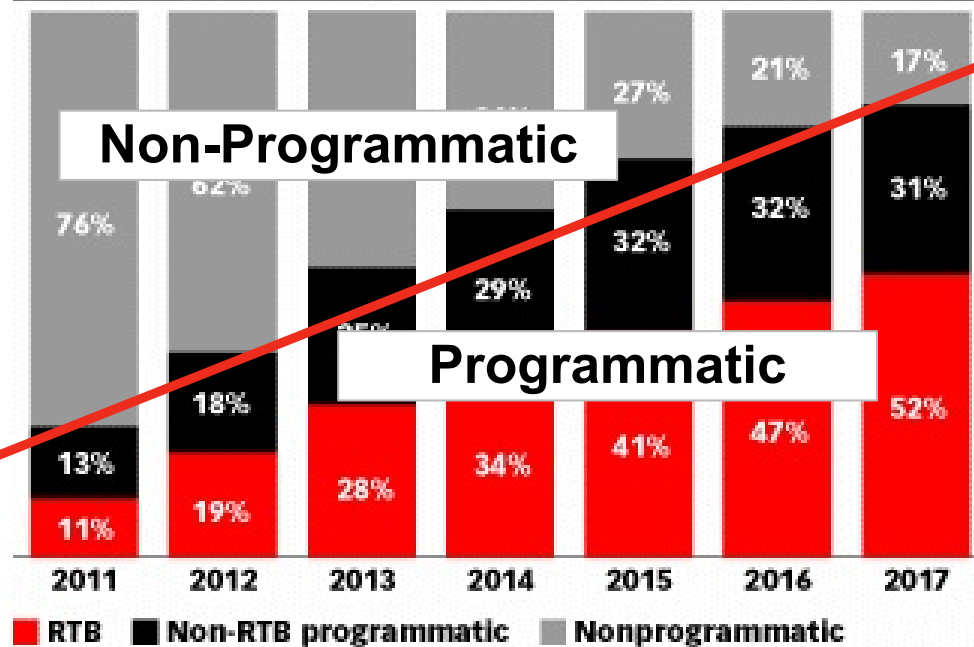
Why We're Here: A "Perfect Storm" of...Opportunities

Growth & evolution of automation...

...has come with challenges.

US Display Ad Spending Share, by Type, 2011-2017

% of total



- Power shift to the consumer
- Privacy regulation
- Infrastructure costs
- Brand safety
- Measurement
- Fraud
- Transparency
- And more

Source: eMarketer. And while this chart shows US growth, the pattern globally has been similar if not more dramatic.

How IAB Tech Lab Helps – Our Mission

Sharing the cost,
sharing the benefits

Member-driven,
member-developed

Engage a member **community** globally to **develop**
foundational technology and standards that enable
growth and **trust** in the digital media ecosystem.

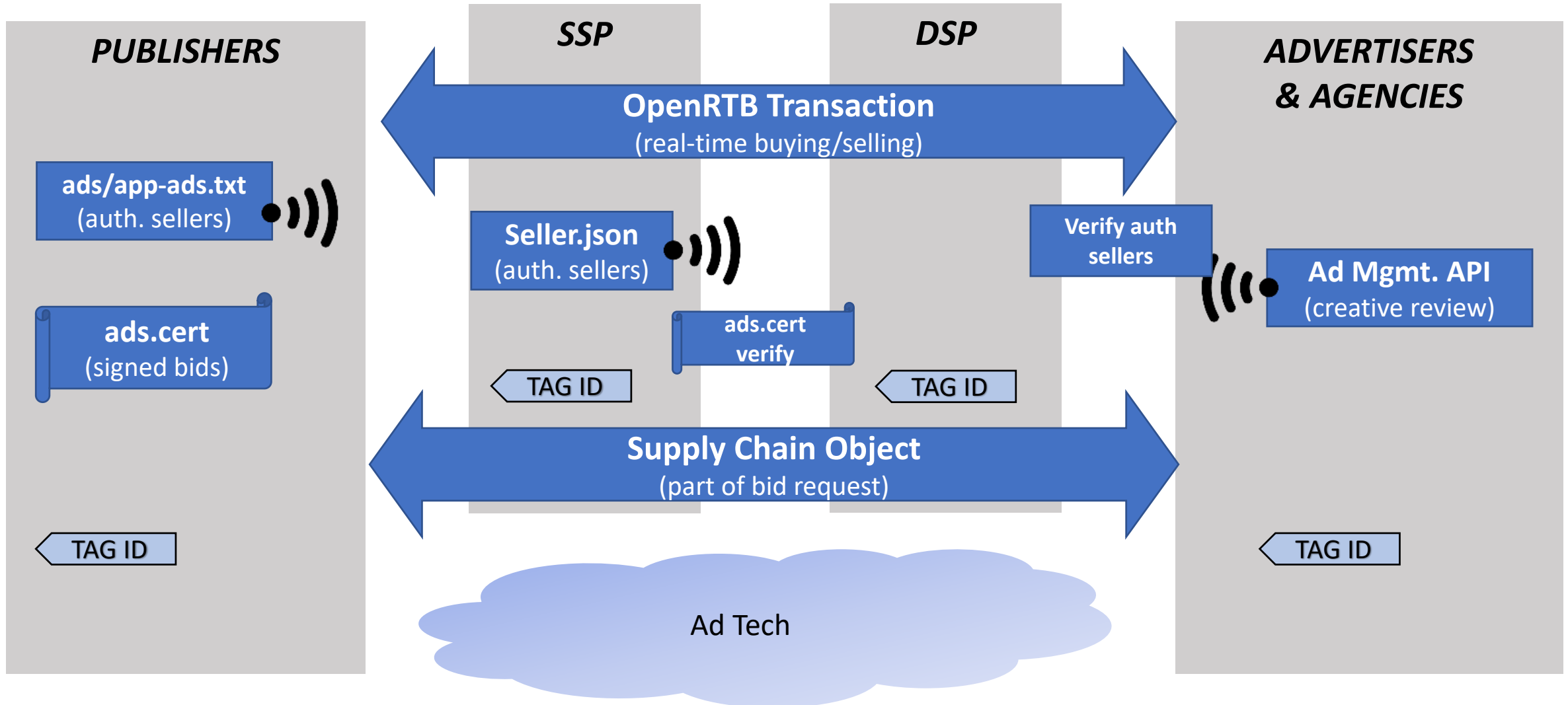
Broad availability
& utility, by design

We live this – as a neutral, transparent,
open-source, non-profit org

How Tech Lab Helps – Themes & Portfolio

| Themes | Portfolio |
|--|--|
| Brand Safety & Ad Fraud | <p>VPAID DataLabel.org OpenMedia app-ads.txt</p> |
| Identity, Data, & Consumer Privacy | <p>PrivacyChain ads.txt GDPR Transparency & Consent Framework</p> |
| Ad Experiences & Measurement | <p>VAST V-Suite OM SDK</p> |
| Programmatic Efficiency & Transparency | <p>OpenRTB MRAID Open Measurement OpenDirect DigiTrust ID Podcast Measurement Guidelines</p> |

Helping Advertisers & Publishers Work Together



Global Community, Creating Global Standards

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SECURING THE SUPPLY CHAIN



1,000+ companies
30 working groups
2,000+ people

* Local/regional IABs supporting Tech Lab

**Board
of
Directors**



IAB Tech Lab Working Groups – Get Engaged!

➤ Our working groups are comprised of the industry's best engineering and product minds. They engage hands-on to develop standards and software to realize Tech Lab's mission and agreed strategies.

- Ad Product Portfolio
 - Blockchain
 - Data Transparency Standards
 - Digital Video Technical Standards
 - DigiTrust ID
 - GDPR Technical Working Group
 - Header Tag Task Force
 - IAB Dynamic Content Ad Standards
 - Identity Standards
 - LEAN, DEAL & Experiences
 - Mobile Rich Media Ad Interface Definitions
 - Modernizing Measurement Task Force
 - MRAID Ads SDK Tester
 - Open Measurement
 - OpenData Task Force
 - OpenDirect
 - OpenRTB Native
 - OpenRTB
 - OpenVV
 - OTT Technical Working Group
 - Podcast Technical Working Group
 - SafeFrame Implementation
 - Taxonomy and Mapping
 - TV Convergence Technical Task Force
 - Video Tools & Best Practices
(sub-group of Digital Video Tech Standards)
- + *Tech Lab Council*
(interest group open to all TL members)

The Road to Programmatic Paradise

Or... How Do We Get Some
Supply Chain Satisfaction?

What Would Paradise Look Like?

ADVERTISERS
& AGENCIES

BRAND

Define campaign objectives, inputs, constraints, creative – and execute ...

AD TECH



... via *efficient, data-driven, brand-safe, real-time* decisions ...

PUBLISHERS



... that fund content & services by serving *relevant, high-quality* ads ...

CONSUMERS



BRAND
... to *real, interested* consumers.

Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

BRAND

Define campaign objectives, inputs, constraints, creative – and execute ...

AD TECH



... via *efficient, data-driven, brand-safe, real-time* decisions ...

PUBLISHERS



... that fund content & services by serving *relevant, high-quality* ads ...

CONSUMERS



... to *real, interested* consumers.

Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

C+

BRAND

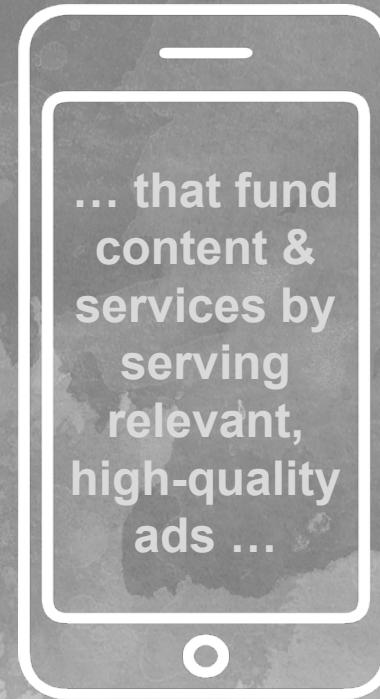
- *Brand safety*
- *Measurement challenges*
- *Ineffective spend*

AD TECH



... via efficient,
data-driven, brand-safe,
real-time decisions ...

PUBLISHERS



... that fund
content &
services by
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ads ...

CONSUMERS



... to real,
interested
consumers.

Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

C+

BRAND

- *Brand safety*
- *Measurement challenges*
- *Ineffective spend*

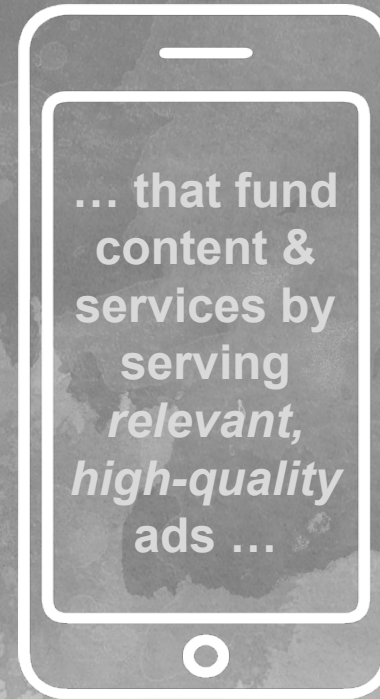
AD TECH

B



- *Data risk*
- *Competition*
- *Margins*

PUBLISHERS



CONSUMERS



Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

C+

BRAND

- Brand safety
- Measurement challenges
- Ineffective spend

AD TECH

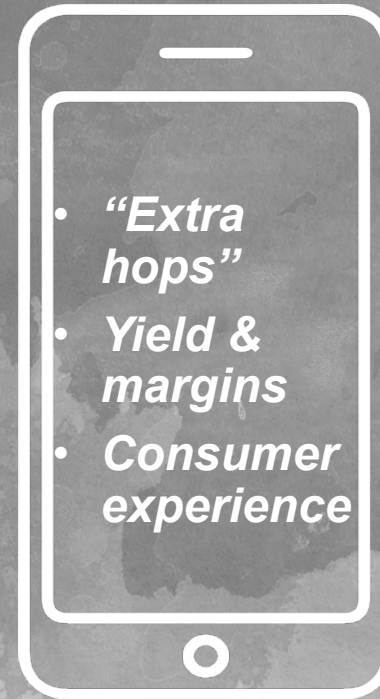
B



- Data risk
- Competition
- Margins

PUBLISHERS

C-



- "Extra hops"
- Yield & margins
- Consumer experience

CONSUMERS



... to real,
interested
consumers.

Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

C+

BRAND

- Brand safety
- Measurement challenges
- Ineffective spend

AD TECH

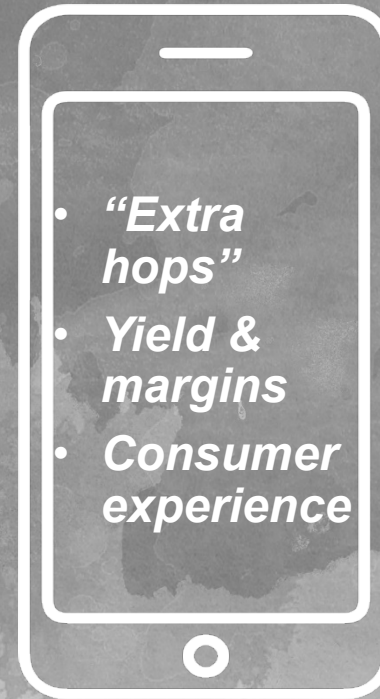
B



- Data risk
- Competition
- Margins

PUBLISHERS

C-



- "Extra hops"
- Yield & margins
- Consumer experience

CONSUMERS

B



- Privacy & "creepiness"
- Irrelevance
- Loss of choice

Community-Driven Automation Architecture

And Where Are We Now? Grading Our Progress...

ADVERTISERS
& AGENCIES

C+

AD TECH

B

PUBLISHERS

C-

CONSUMERS

B

We can and must do better!

- Brand safety
- Measurement challenges
- Ineffective spend

- Data risk
- Competition
- Margins

- *Field & margins*
- Consumer experience

- Irrelevance
- Loss of choice

Community-Driven Automation Architecture

“Tools” for Programmatic Supply Chain

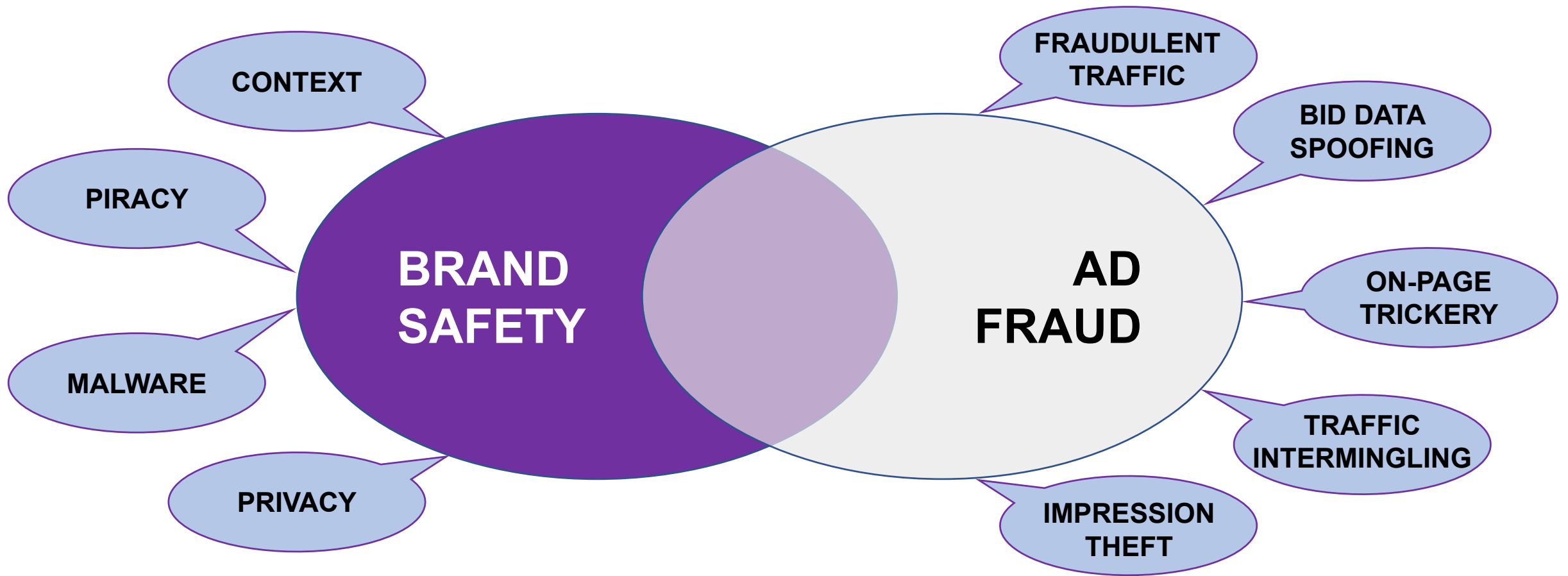
How do we solve for **brand safety**?

How do we reduce **ad fraud**?

How do we enable more **control**?

How can it all be more **efficient**?

Side Note: Brand Safety vs. Ad Fraud



“Tools” for Programmatic Supply Chain

How do we solve for **brand safety**?

How do we reduce **ad fraud**?

How do we enable more **control**?

How can it all be more **efficient**?

Transparency is the tool to improve our supply chain.

So, how do I use transparency as a tool?

| Who | What to look for... | What to do... |
|-----------------------------|---|---|
| Advertisers | Technology offering actionable data & insights for brand safety, fraud, performance | Utilize SupplyChain object & ads.cert |
| Publishers | Technology providing greater control, especially related to consumer experience | Implement ads.cert & OpenMedia specs (including OpenRTB 3.0) |
| Technology Providers | Meaningful transparency mechanisms to provide to your clients | Implement sellers.json & OpenRTB 3.0... and develop useful tools! |

Securing the Programmatic Supply Chain

“A system is secure if it behaves precisely in the manner intended – and does nothing more.”

Securing the Programmatic Supply Chain

“A system is secure if it behaves precisely in the manner intended – and does nothing more.”

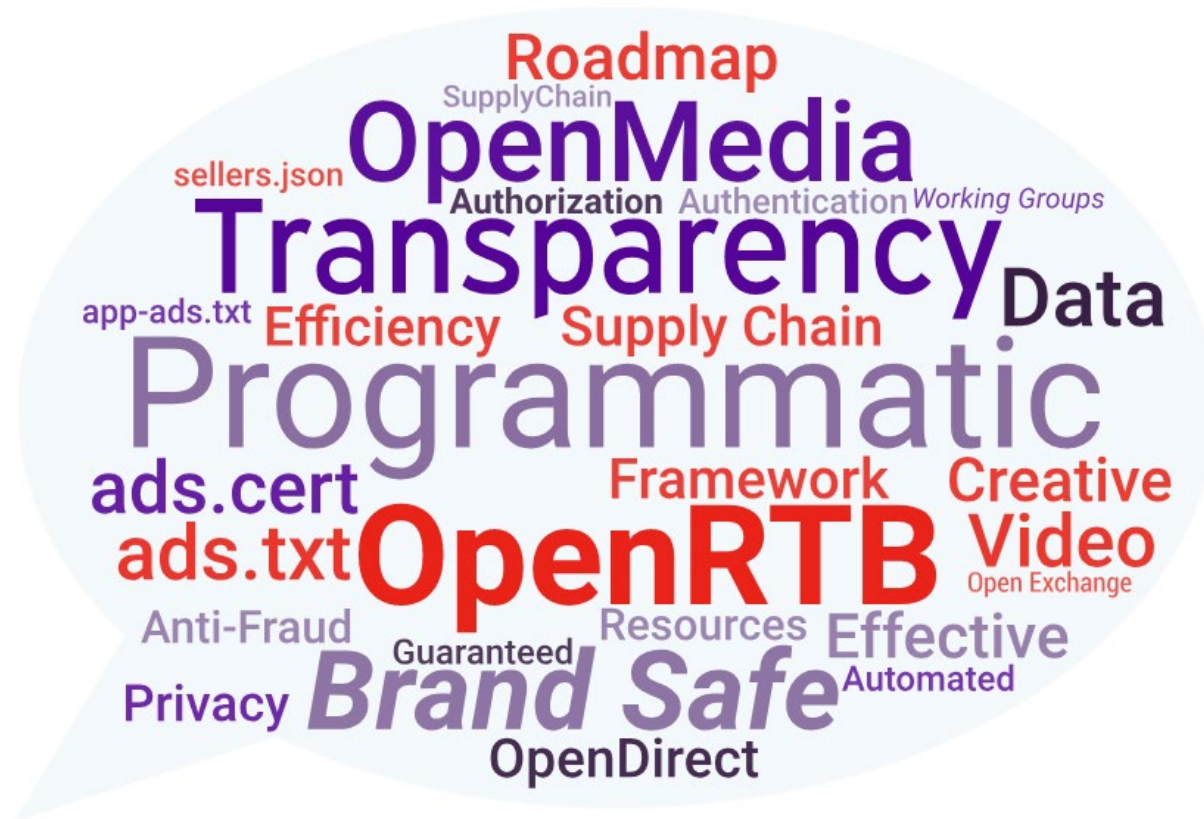
Ad tech has seen proliferation of **arbitrary JavaScript** and **ineffective supply paths**.

Tech Lab working groups have been hard at work to identify and address these vulnerabilities...

Summary: Reducing “Brand Danger”

| Brand Danger Cause | Solution | Standards |
|---|---|-------------------------------------|
| Misrepresented website inventory | Authorized digital sellers for sites | ads.txt |
| Inefficient software integration for verification & IVT | SDK/API for 3 rd -party viewability & verification | Open Measurement |
| Misrepresented mobile app & OTT inventory | Authorized digital sellers for apps | app-ads.txt |
| Multiple hops from Publisher to Advertiser | Increased supply path transparency | SupplyChain object OpenRTB 3.0 |
| Lack of trust between Publishers & Advertisers | Mechanisms to determine authenticity (signed bid requests) | ads.cert |
| Inefficient transactions & ineffective programmatic ads | More holistic tech standards stack | OpenDirect 2.0 Ad Management API |

What to listen for today...



Thank you for being here!

The background of the entire image is a repeating pattern of white padlock icons on a purple background. The padlocks are arranged in a grid-like fashion, with each padlock slightly offset from the others, creating a textured, digital feel.

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**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**



AMIT BHAWNANI

VICE PRESIDENT, ENGINEERING
MEDIA.NET



AMY OGAWA

DIRECTOR OF STRATEGIC DEMAND
PARTNERSHIPS
MEDIA.NET

Pathway to a Safer and Transparent Marketplace

Adopting Ads.cert & OpenRTB 3.0

a

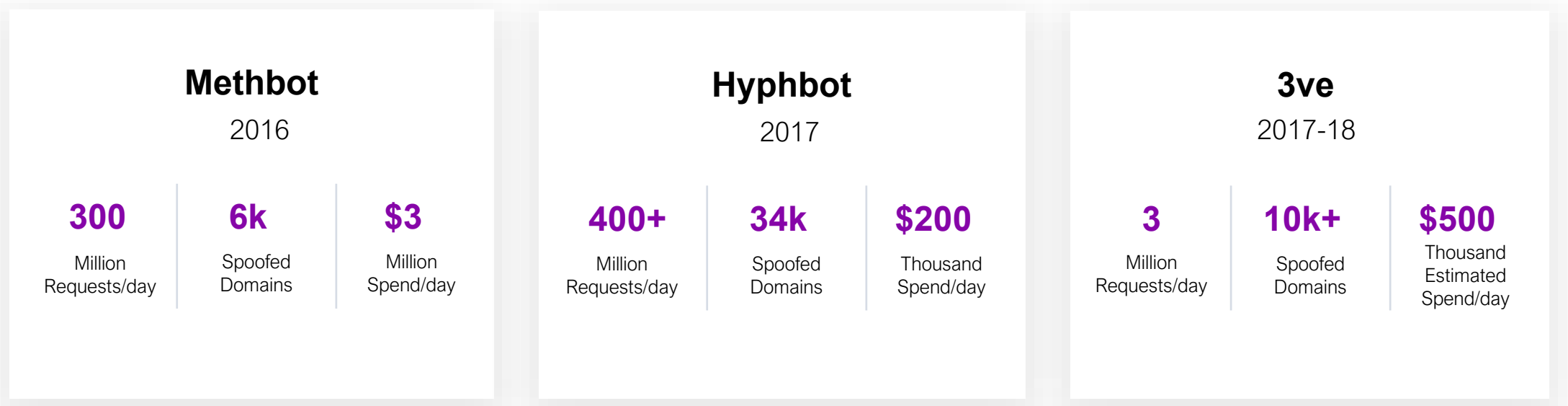
Amy Ogawa
Director, Strategic Partnerships

Amit Bhawnani
VP, Software Engineering



Ad Tech Fraud

a



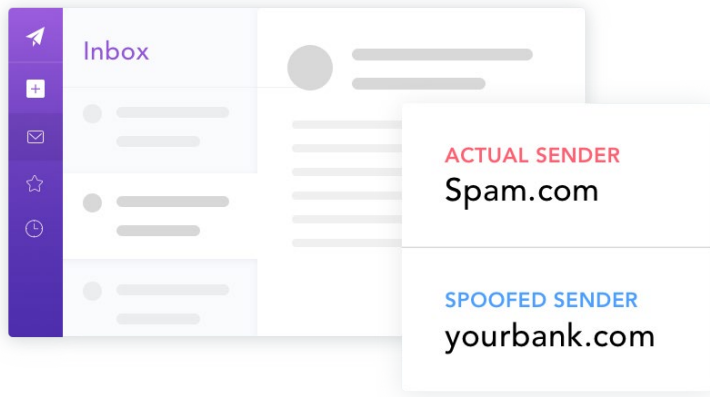
Industry Evolution

What have other industries done to solve for fraud?

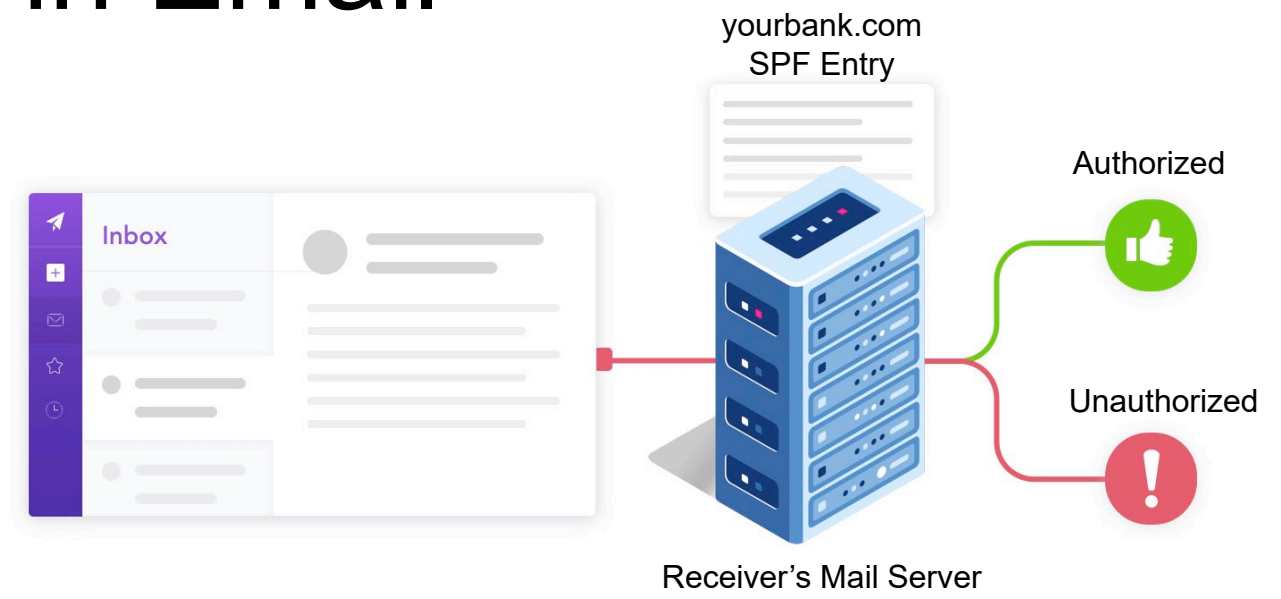
- 1
- 2
- 3

Domain Spoofing in Email

a



Problem: Spam email



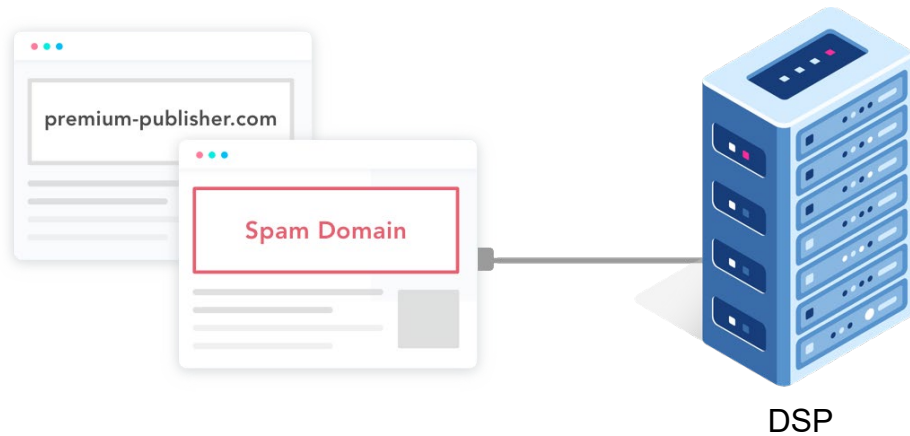
Solution: SPF
(Sender Policy Framework)



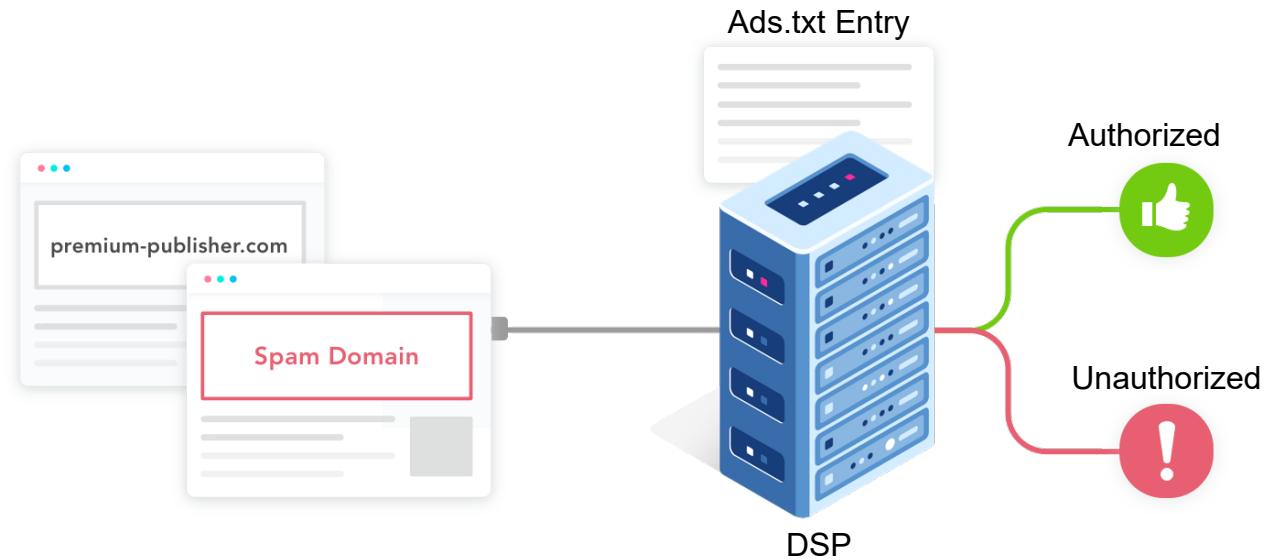
- 1
- 2
- 3

Domain Spoofing in Ad Tech

a



Problem: Spoofed impression



Solution: Ads.txt



- 1
- 2
- 3

Before Ads.txt was introduced

a



Fraudulent entity signs up with an Exchange and gets an account ID



Fraudulent entity spoofs itself as premium-publisher.com. It will pass its account ID in the bid request via an SSP



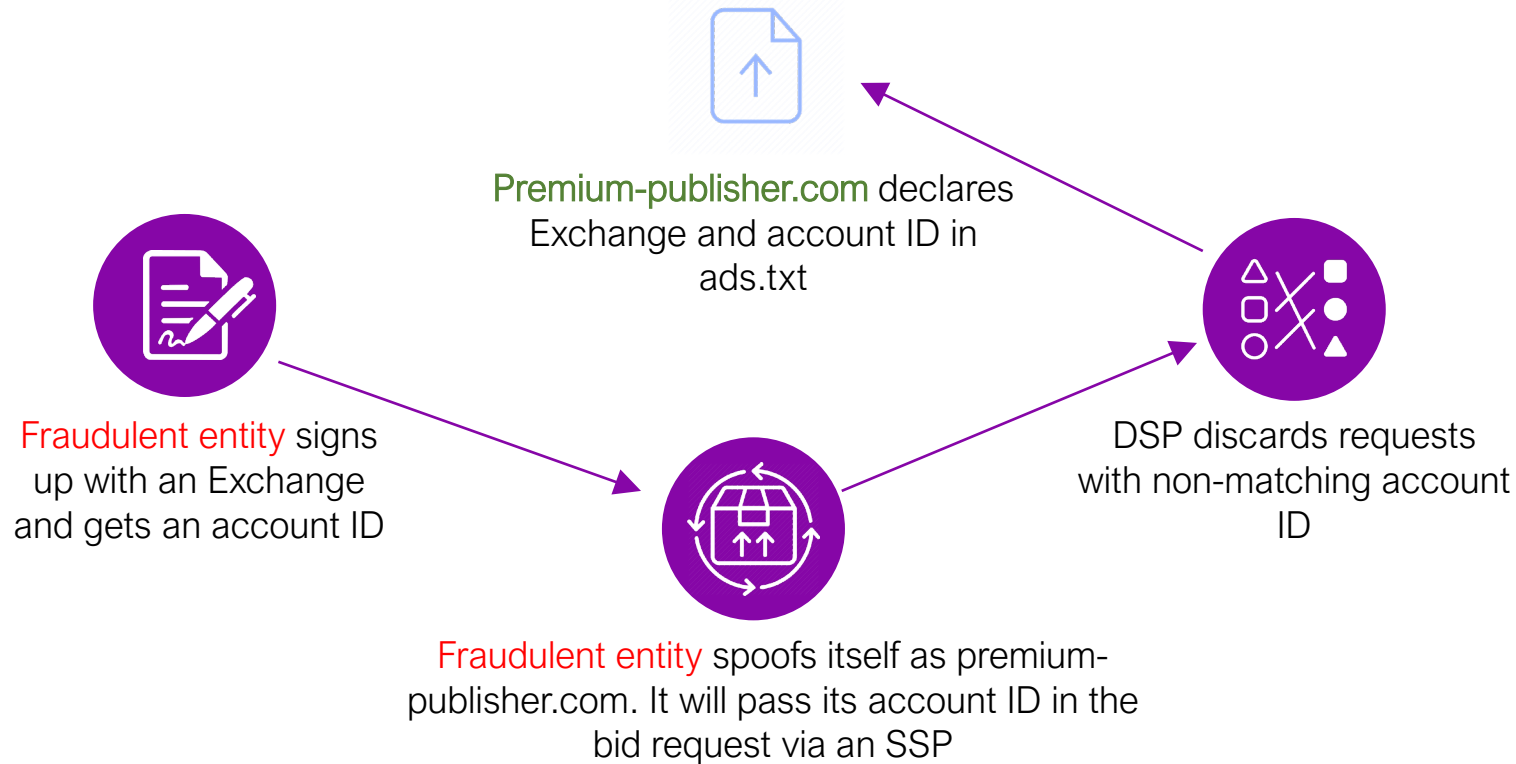
DSP pays the Fraudulent entity



- 1
- 2
- 3

Authorization with Ads.txt

a



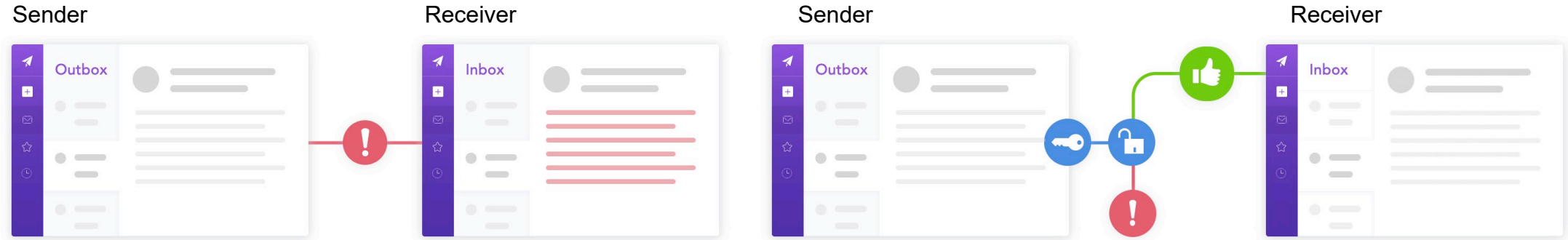
Benefits

- Money only paid to entities with verified account ID
- Publisher visibility into sellers
- Buyers can optimize on sellers vs resellers
- Infrastructure cost decision on number of Sellers



Message Spoofing in Email

a



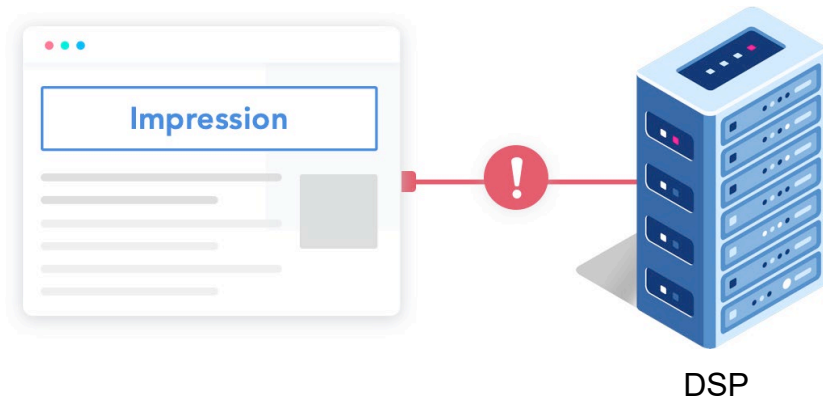
Problem: Message Spoofing

Solution: DKIM
(DomainKeys Identified Mail)

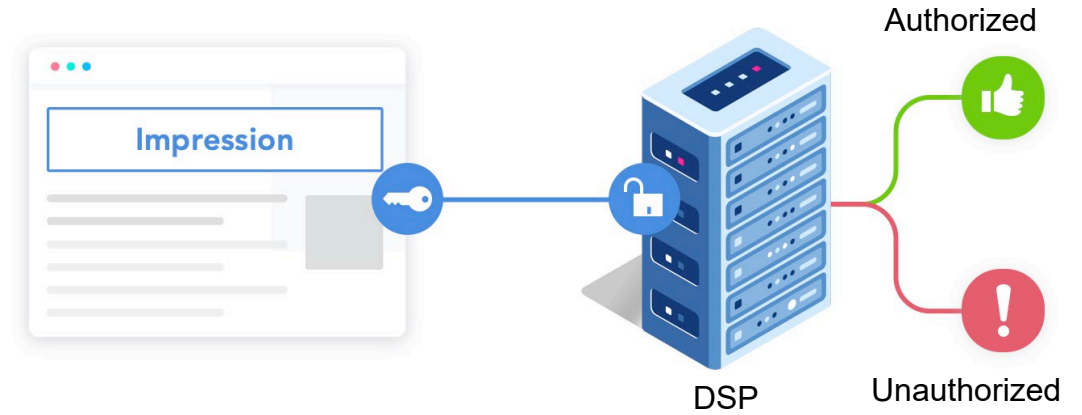


Inventory Spoofing in Ad Tech

a



Problem: Inventory Spoofing



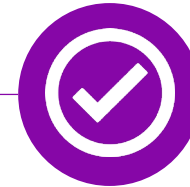
Solution: Ads.cert





Authentication with Ads.cert

a



Publisher generates a private, public key pair & hosts public key in ads.cert

Publisher generates a unique signature using impressions details & its private key

Signature is sent in the OpenRTB request through the supply chain

DSPs verify request using the signature & publisher's public key

Benefits

- Spam analysis
- Auction integrity
- Reduce inventory price inflation



SPF + DKIM + Feedback Loop

DMARC

(Domain Message Authentication, Reporting & Conformance)



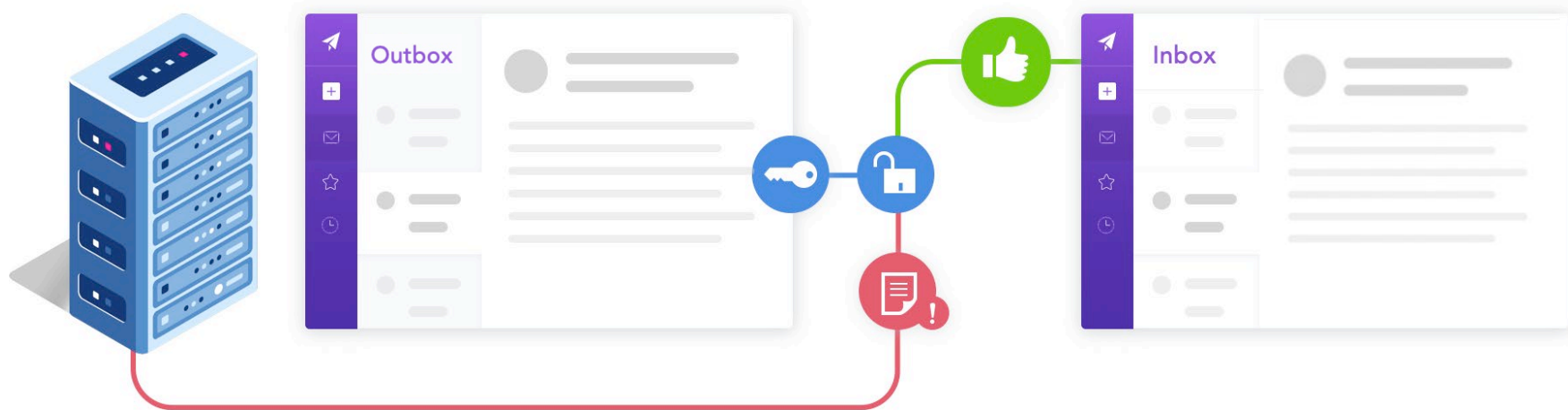
Feedback Loop

a

Allows the receiving mail server to directly **notify** the domain owner of any invalid SPF or DKIM entry

Problems tackled for the domain owner

- Determine if any genuine email from its domain is getting rejected because of configuration issues
- Determine if its domain is getting mis-represented by spoofing



Remaining problems in Ad Tech?

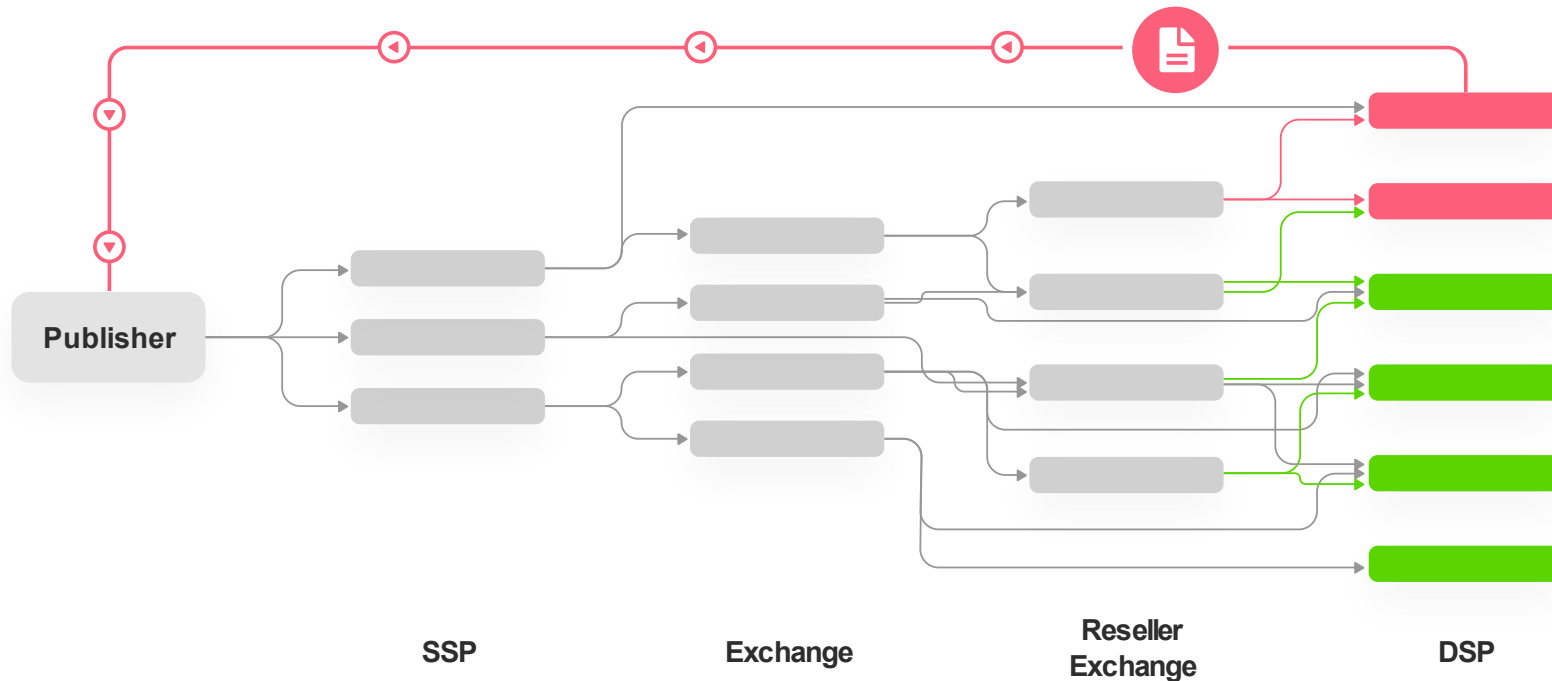
Learning from DMARC



Proposal: DMARC in Ad Tech

a

A bid request typically goes through a complex chain



Opportunity loss

- **Genuine bid requests rejected by DSPs**
Incorrect ads.txt entries
- **Domain Spoofing**
No direct mechanism for the publishers to detect if someone is trying to spoof their domain

We believe that a direct feedback loop between the DSPs and the publisher can solve these problems



Proposal



Supply Chain Error Report

a

DSPs will build a 'Supply Chain Error Report' and send it directly to the publisher

Simple report that contains the lists of errors like the ads.txt and ads.cert violations broken down by sellers in the supply chain

| | Error | Error Details | Sellers | |
|--|----------------------|---------------|--|--|
| | Ads.cert Unavailable | | Exchange1-acct_d2, ResellerExchange2-acc_id2 | |
| | Ads.txt Violation | sid2 | Exchange2-acct_d2, ResellerExchange8-sid1 | |
| | | | | |

Note* assumes that we have some sort of mechanism in place where exchanges and SSPs can declare consent for this direct communication between DSPs and the Publisher.



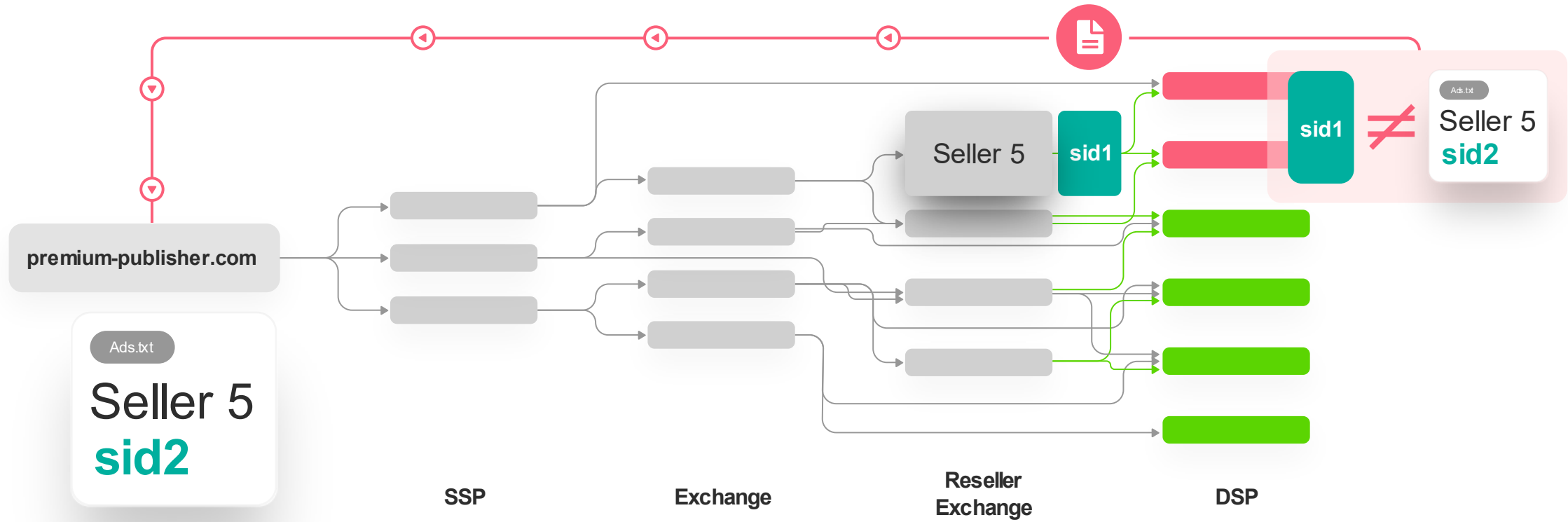
Proposal



Supply Chain Error Report: e.g. 1

a

Premium-publisher.com in their ads.txt file has incorrectly specified sid2 as the account ID for Seller5 instead of sid1



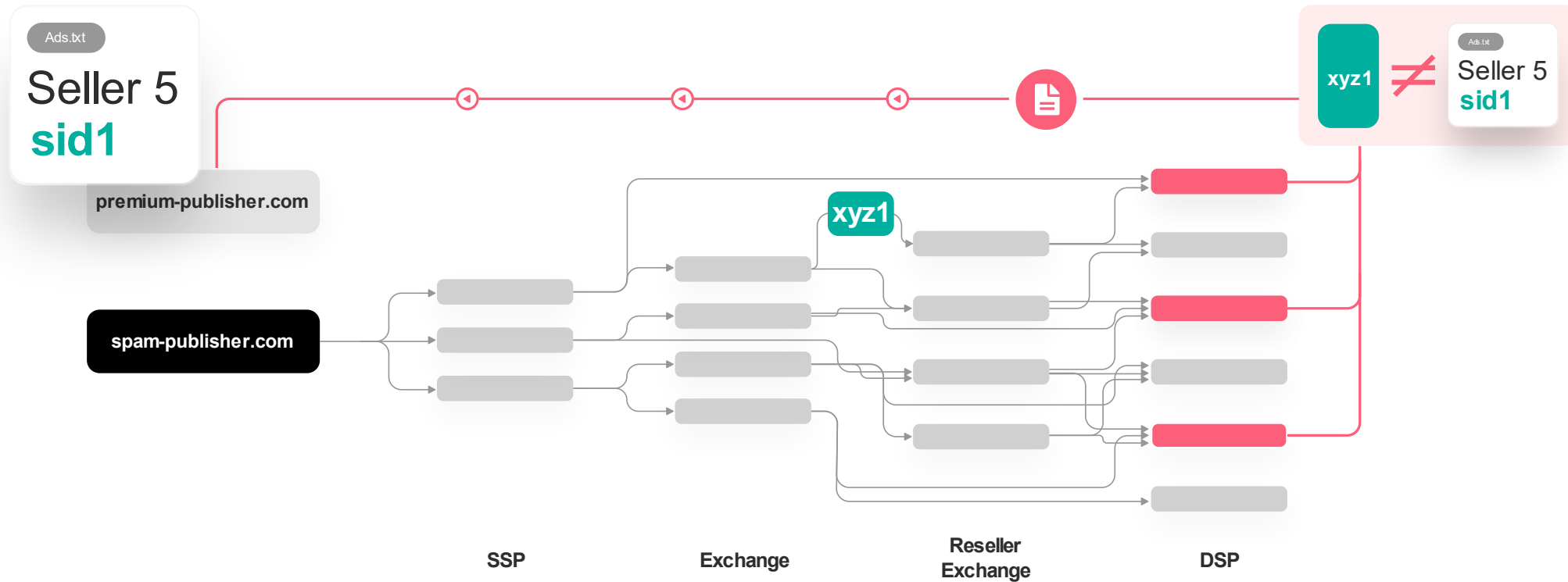
Proposal



Supply Chain Error Report: e.g. 2

a

We now have a spam publisher added to the mix who is portraying to be premium-publisher.com

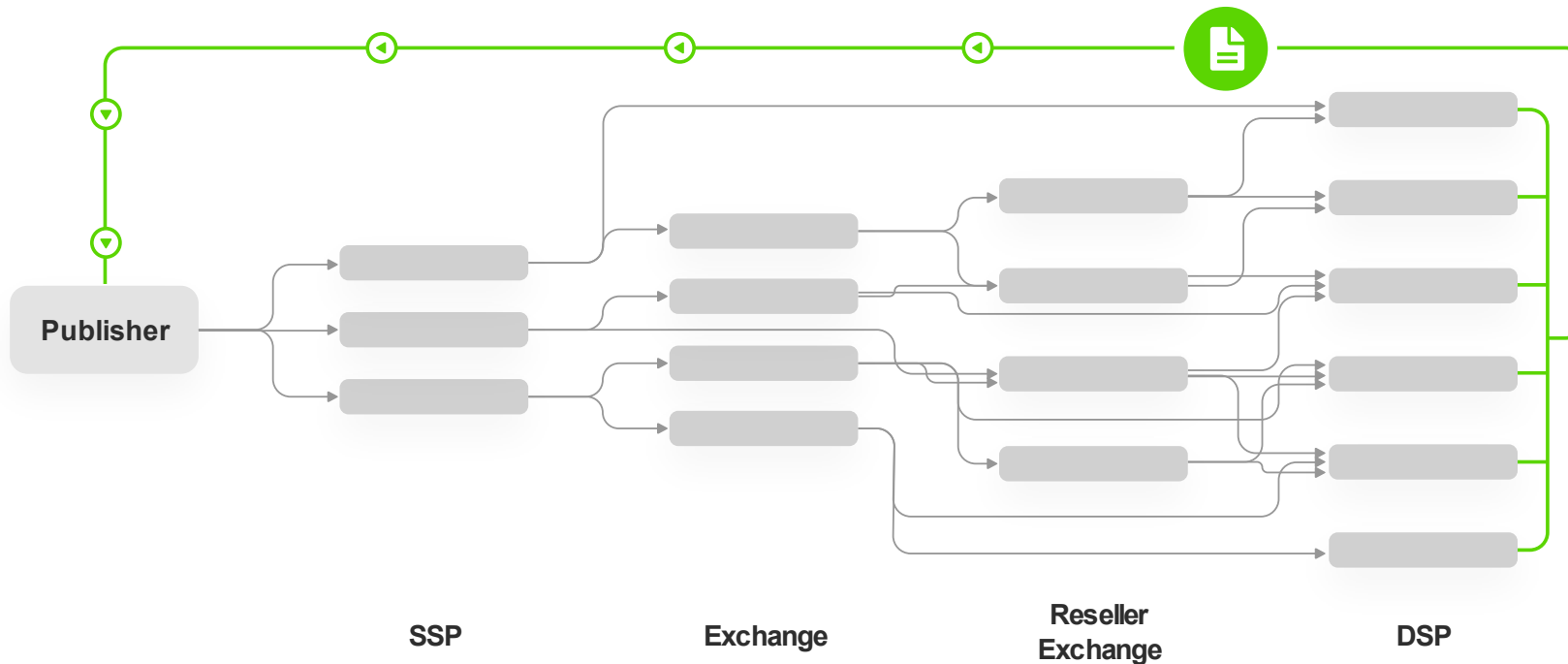


Anything else?

Transparency

Proposal: Supply Chain Audit Report

a



Summary of

- Impressions delivered
- Money spent
- Sellers in the supply chain

Problems tackled

- Gives the publisher full transparency
- Margins kept by the entities in the supply chain
- Ability to audit impressions and revenue numbers

Fast-tracking Adoption

Ads.cert Verifier and OpenRTB 3.0 Converter

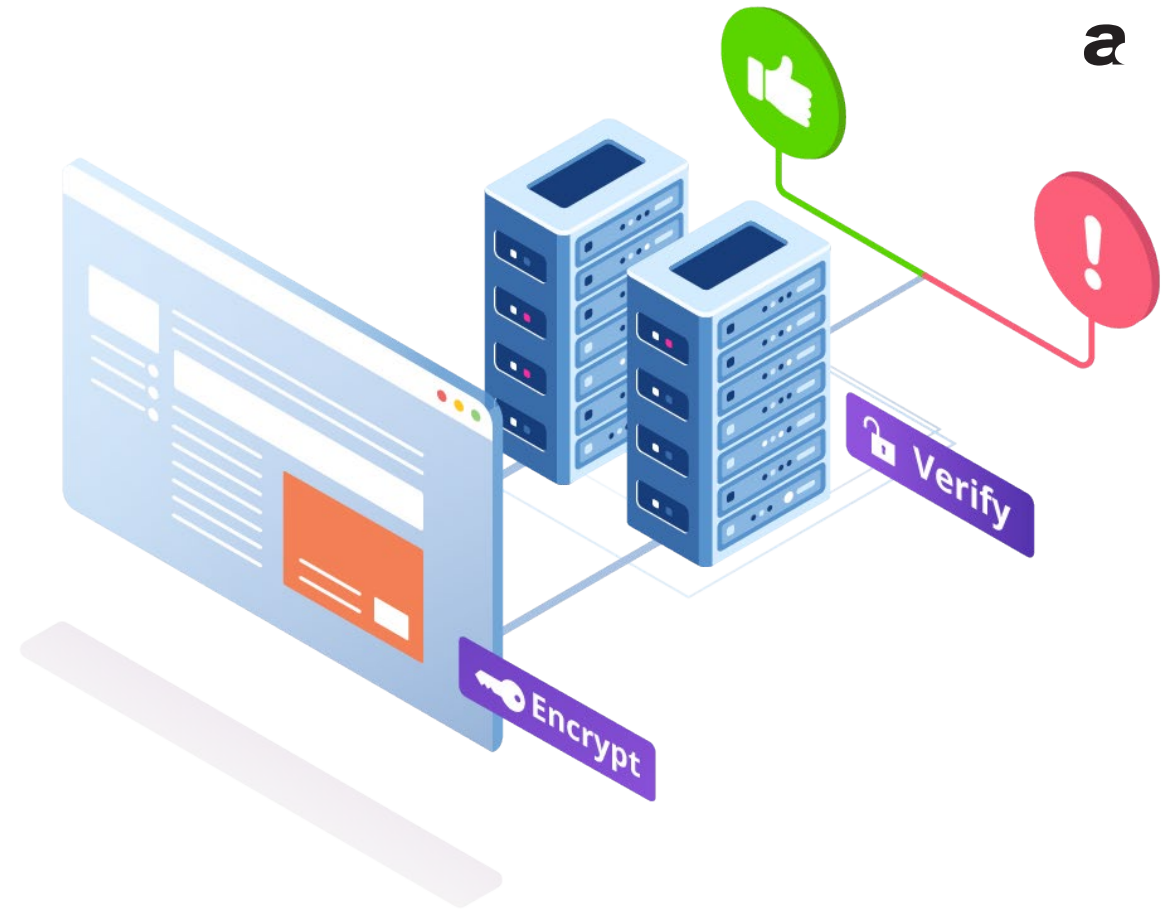
Ads.cert

Publisher side

Publisher or a trusted *signing authority* will be responsible for generating the signature and send it for every bid request

Demand side

Responsible for verification of these signatures and for filtering out unmatched requests



Ads.cert Verifier: Highlights

a



Crawl public key
and store in cache



Function to verify
signatures



Hooks and callbacks for
logging and reporting



In-built data
sampling



Real-time or offline
verification



OpenMedia and OpenRTB 3.0

a

Why?

To deal with the increased complexity of supply chain

To meet the demands for stronger transparency, security and ad quality

Outcome

Major overhaul

OpenRTB 3.0 not backward compatible

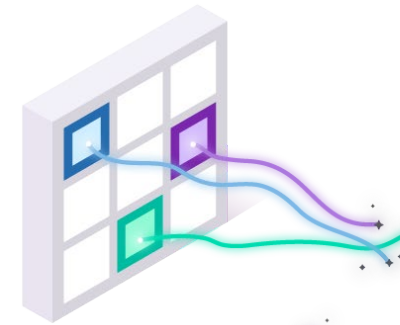
Problem

Different Exchanges and DSPs are going to implement this new protocol at different times

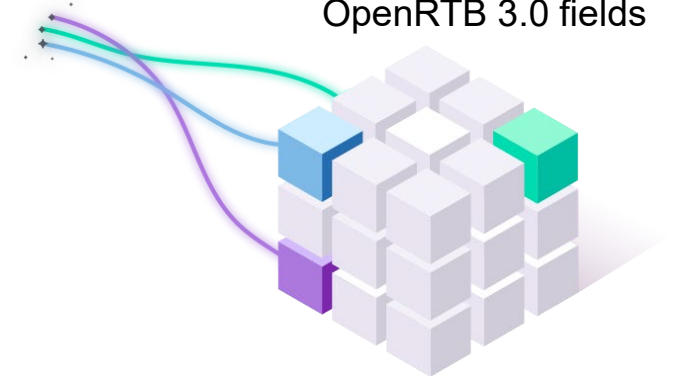
In the transitionary period there will be participants using 2 major versions

Communication among them will be a challenge

OpenRTB 2.x fields



OpenRTB 3.0 fields



OpenRTB Converter

a

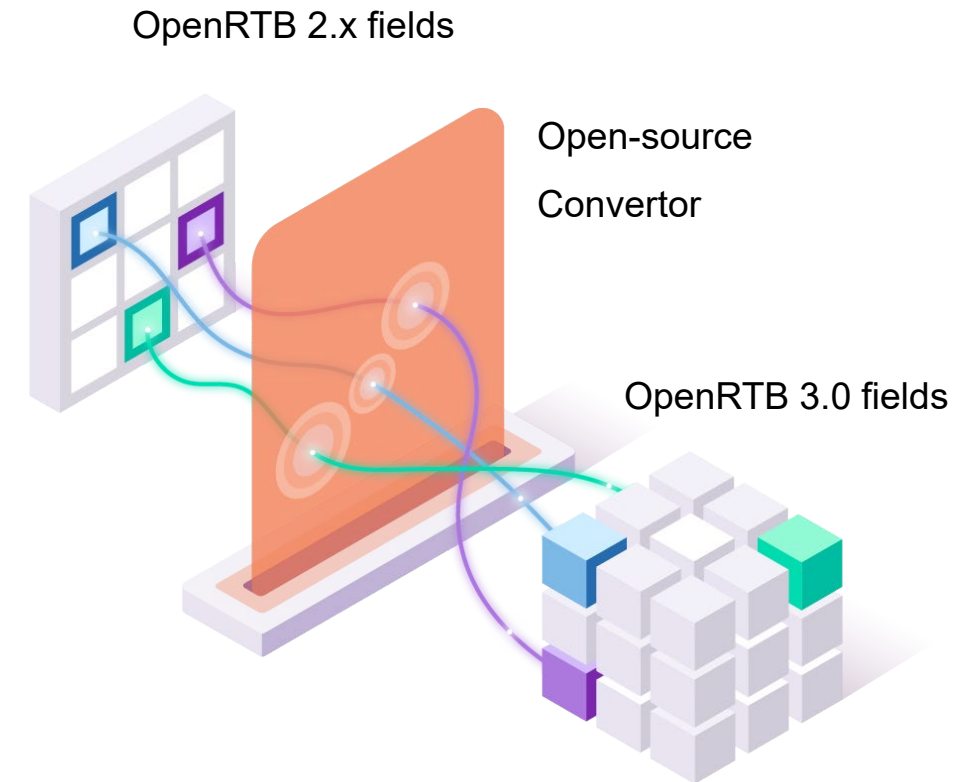
Standard mapping solution

OpenRTB 2.x & Native 1.1 to OpenRTB 3.0 & AdCOM 1.0 one-on-one mapping

More than 400 different fields and objects

OpenRTB Converter

Help facilitate smooth communication for all Exchanges and DSPs irrespective of their OpenRTB version



OpenRTB Converter

Key highlights



Compatible

Supports conversion from 2.3, 2.4 and 2.5 to 3.0 and vice versa



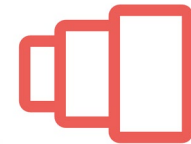
Complete

Does all the necessary transformations



Customization

Customization as per business needs



Consistent

Participants still on 2.x can use some of the newer features of 3.0



Links

a

Github Media.net Code bank

<https://github.com/media-net/>

Project Repos

[ads-cert-openrtb3-verifier](#)

[openrtb3-converter](#)



The background of the entire image is a repeating pattern of white padlock icons on a purple background. The padlocks are arranged in a grid-like fashion, with each padlock slightly offset from the others, creating a textured, digital feel.

iab. TECH LAB
INNOVATION DAY

**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**



J. ALLEN DOVE

CTO
SPOTX

Stacking the Specs: OpenMedia Framework



In the beginning...

Specs were
 without form
 and void...
OpenRTB 1.0

MADRSS 🤪

And the IAB said, "Let there be
 specs..."

VAST 1.0

VPAID 1.0

AXP 1.0

IES 1.0 / 2.0

MRAID 1.0

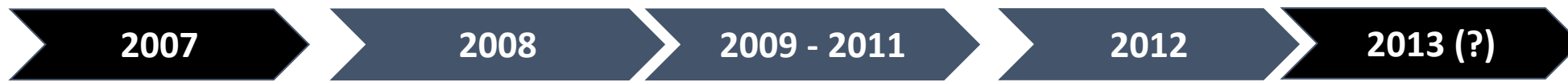
And there were
 specs.
 And they were...
 Not **Butlerized**.
OpenRTB 2.0!!!

VAST 2.x
VAST 3.x
VMAP 1.0

Or **Consistent...**

MRAID 2.0

At all.



So Many Independent Groups w/ Steering Committees!

DVT Steering Committee, ORTB Commit Group, and many more!



Advent: IAB Tech Lab

And the IAB divided the light from the darkness...



VAST 4.0

OpenDirect 1.0

ads.txt 1.0

OpenVV 1.x

DAAST 1.x

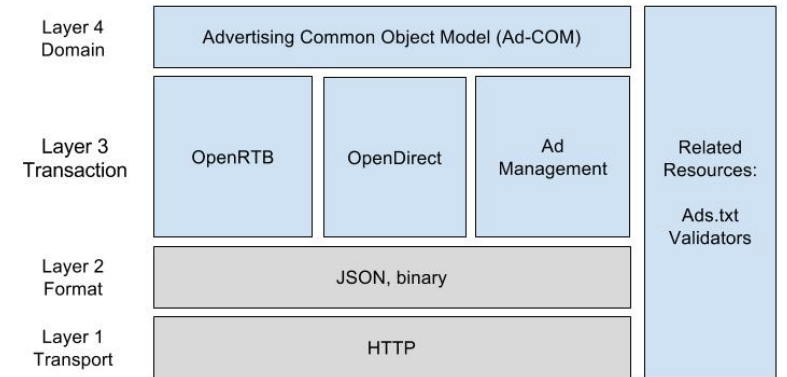
OpenRTB 2.x

VAST 4.1



OpenMedia

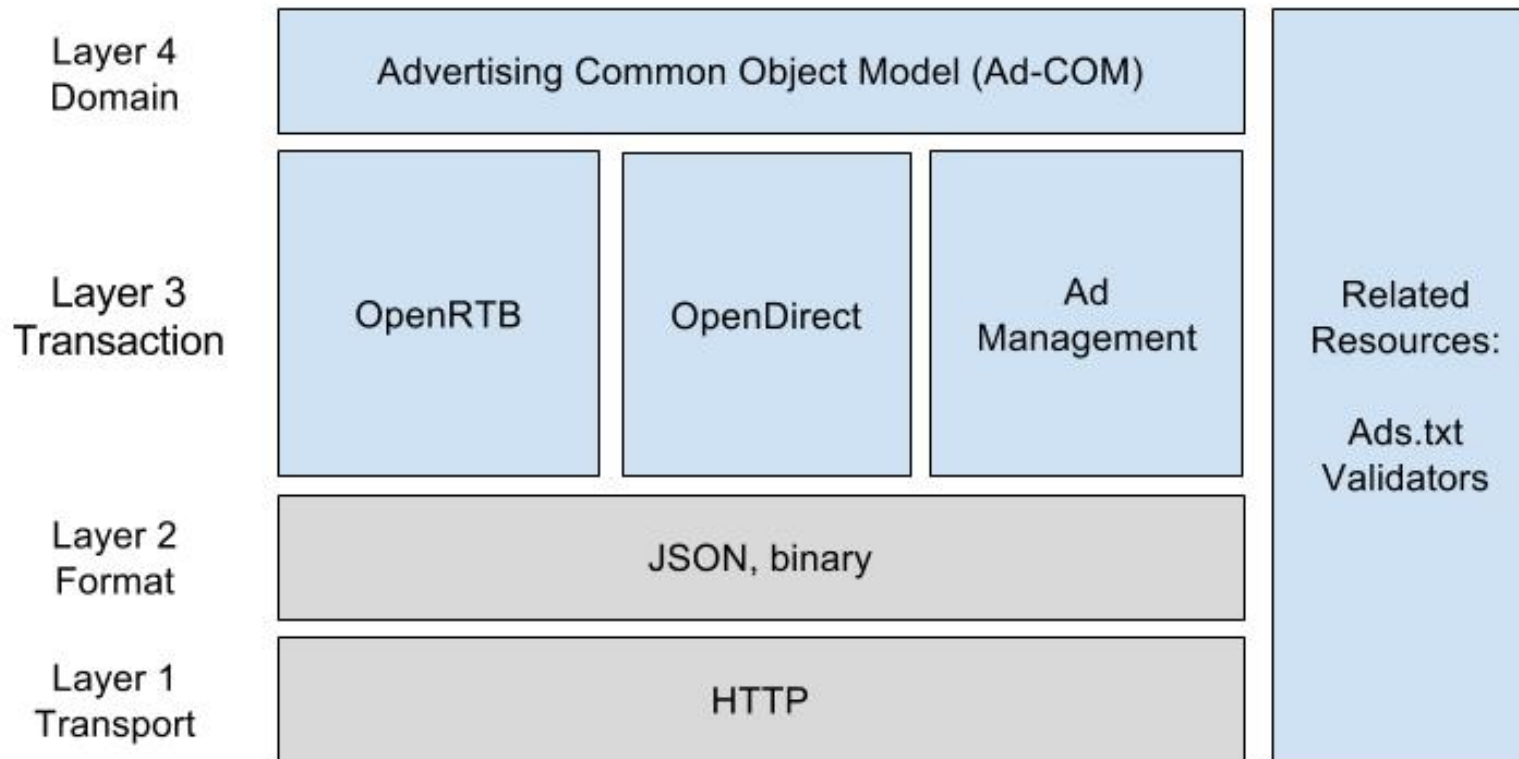
Open Media Specification Landscape



Unification of technical efforts and the ad ecosystem!



Open Media Specification Landscape



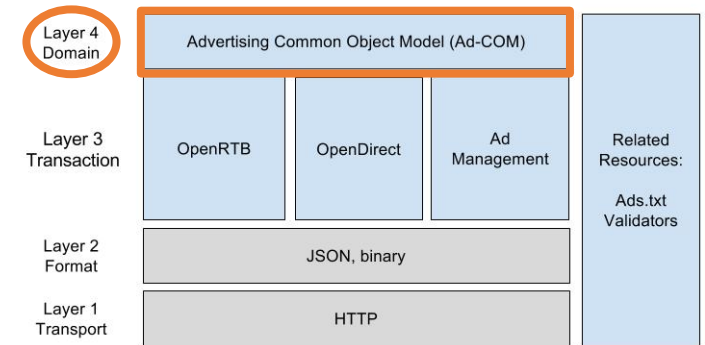
- ❖ FINALLY!
- ❖ Lives “above” the specs
- ❖ Unified modularity
- ❖ Stacks validation et. al.
- ❖ Still allows for specificity
- ❖ Accounts for validation
- ❖ Designed for interoperability
- ❖ Thank you OSI...
 - Hmmmm... ASI?

Wait, what?!?! Binary!! Save my bits!

AdCOM

- ❖ Stems from an AORTA and a COMA!
- ❖ Common advertising dialect - influenced heavily from RTB
- ❖ Media channels, native, display oh my!
- ❖ Can be versioned independently of transactional specs
- ❖ Core to consistency, unification and interoperability
- ❖ Sensible naming conventions - save my bits!
- ❖ Just waiting to be influence even more from VAST...

Open Media Specification Landscape



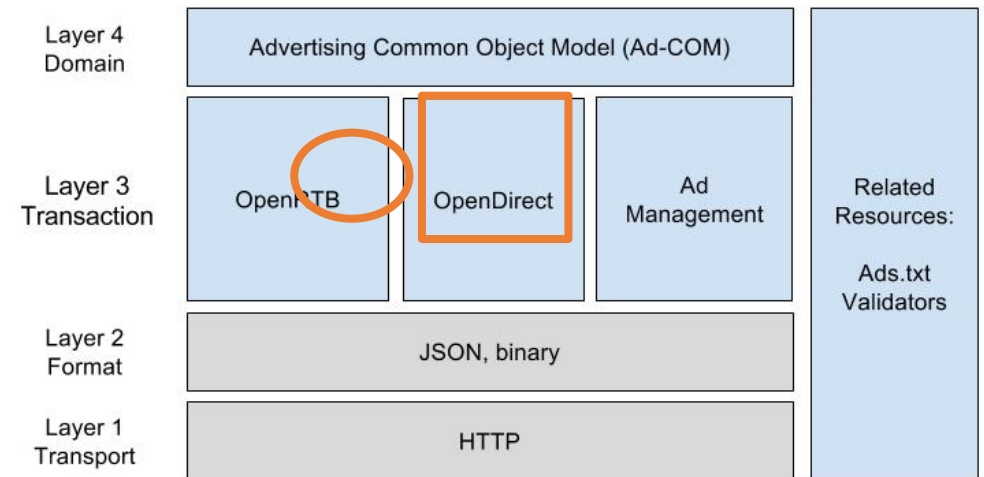
Hear ye, hear ye!

Open Ad Request is coming...

OpenRTB

- ❖ 3.0 was a purposely non-BC overhaul!
- ❖ 3.0 relies on AdCOM!
 - No longer the lone voice in the wilderness
 - Domain conventions available to all, refreshed for transparency
 - Transactional aspects isolated in ORTB only
- ❖ Can be versioned independently of AdCOM but still allow for growth
- ❖ Inventory assurance front and center

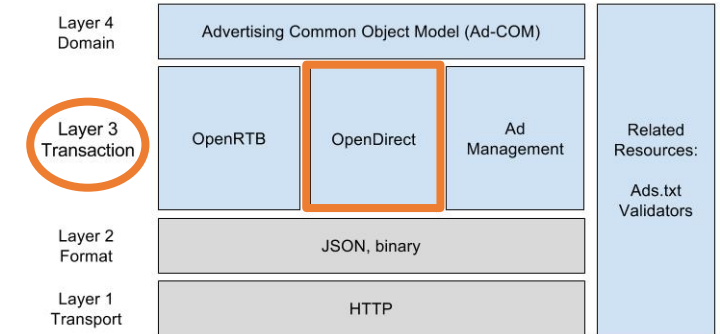
Open Media Specification Landscape



OpenDirect

- ❖ Enables automated buying and selling of premium guarantees
- ❖ Browse, manage, target and buy
- ❖ 2.0 relies on AdCOM!
 - Expanded media channels (i.e. video, OOH)
 - Transactional aspects isolated in OpenDirect
- ❖ It's not ORTB
 - ORTB == real time inventory transactions
 - OpenDirect == guaranteed inventory scheduling

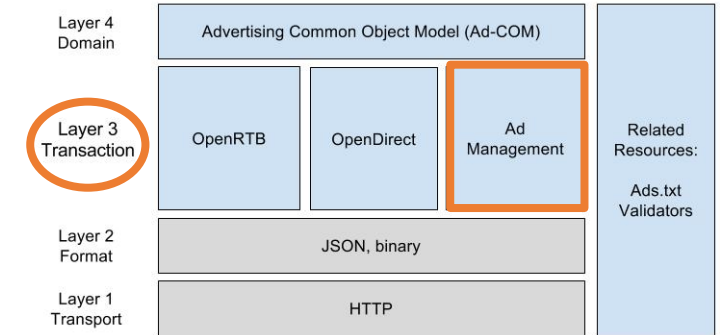
Open Media Specification Landscape



Ad Management

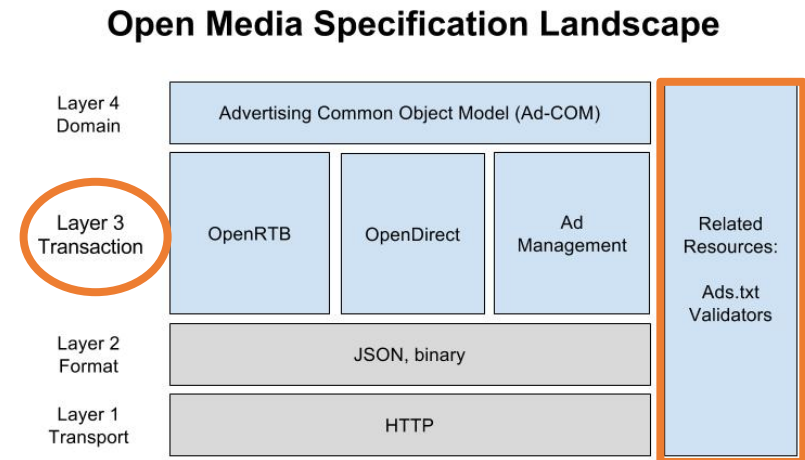
- ❖ Think “creative approval”
- ❖ But... why???
 - Reduce needs for proprietary APIs
 - No more “burn one” (or 60..)
 - Approval needs for quality or content
 - Needs for Live and OTT / premium video w/o question
- ❖ 3.0 relies on AdCOM!
 - Ad and Audit objects are AdCOM

Open Media Specification Landscape



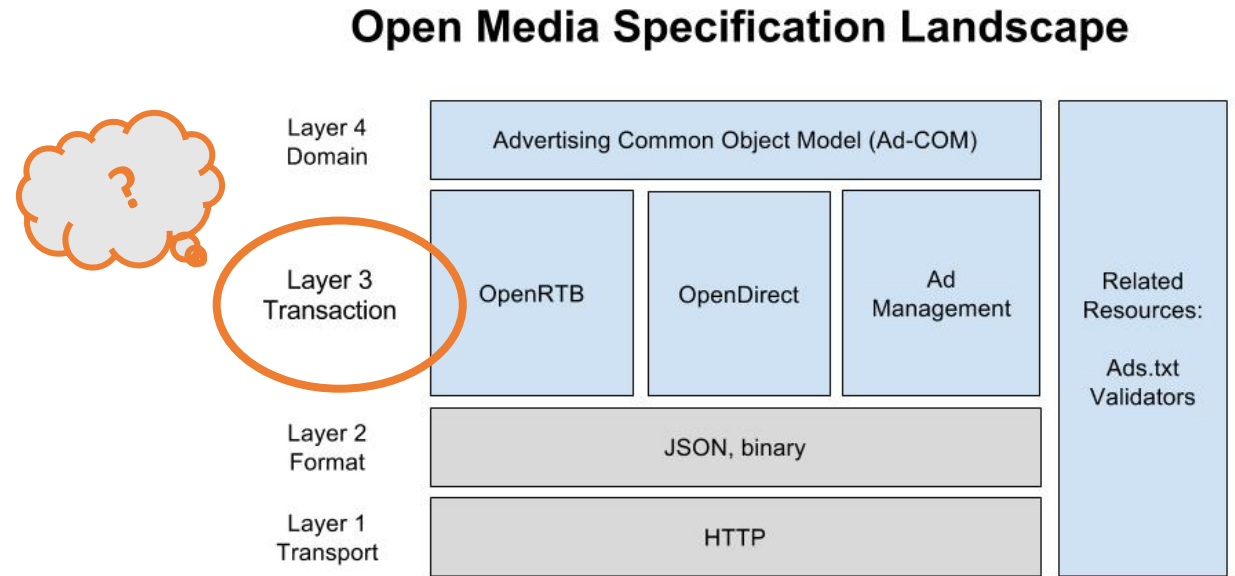
Related Resources?

- ❖ These transcend space and time... OK, well layers anyway
- ❖ ads.*
 - Authorization - ads.txt & app-ads.txt
 - Authentication - ads.cert
- ❖ Simple extensibility



What's Next???

- ❖ Open Ad Request
- ❖ VAST 5.0...
- ❖ Reconciliation?



Disclaimer: The view represented here do not necessarily reflect...

Well, I'm talking so.....

GET INVOLVED!!



The background of the entire image is a repeating pattern of white padlock icons on a purple background. The padlocks are arranged in a grid-like fashion, with each padlock slightly offset from the others, creating a textured, digital feel.

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**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**



JUD SPENCER

**PRINCIPAL SOFTWARE ENGINEER
TRADE DESK**

OpenRTB SupplyChain and Sellers.json

OpenRTB SupplyChain

Lists all of the sellers by business domain and seller id that are paid for the selling of an OpenRTB impression

Sellers.json

Reveals the identities of sellers based on publisher or seller ids in:

- OpenRTB Publisher object
- Ads.txt files
- OpenRTB SupplyChain object

What do they enable?

Three main goals:

- Transparency into the identities of intermediaries involved in resell “chains” for OpenRTB requests.
- Ability to discover and verify potentially fraudulent chains.
- Another input into SPO (Supply Path Optimization) models.

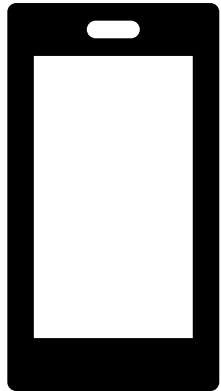
How do these complement ads.txt?

- Ads.txt only gives you the account ID of an authorized seller, not their identity.
- Ads.txt doesn't reveal the path that inventory takes before it gets to a buyer.
- SupplyChain and Sellers.json reveal every entity that is getting paid for a given bid request.

Direct-sold inventory

<http://x-weather.com/app-ads.txt>

bluessp.com, 100, DIRECT



BlueSSP Bid Request

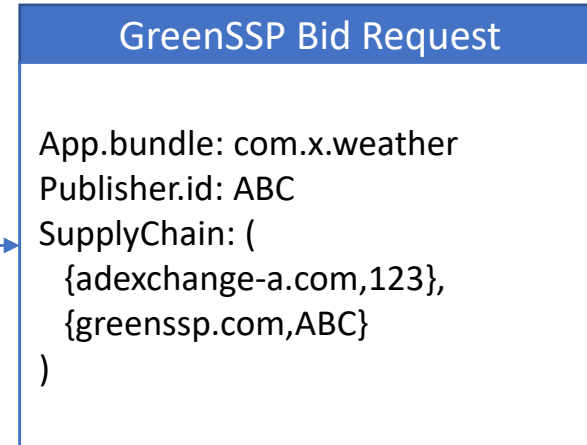
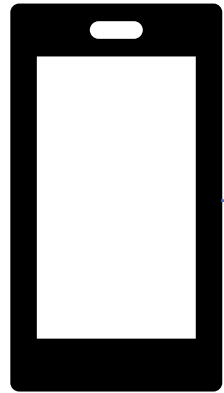
App.bundle: com.x.weather
Publisher.id: 100
SupplyChain: ({BlueSSP.com,100})

<http://bluessp.com/sellers.json>

100 = "X Weather", <http://x-weather.com>, DIRECT

<http://x-weather.com/app-ads.txt>

greenssp.com, ABC, RESELLER



<http://adexchange-a.com/sellers.json>

123 = "X Weather", <http://x-weather.com>, DIRECT

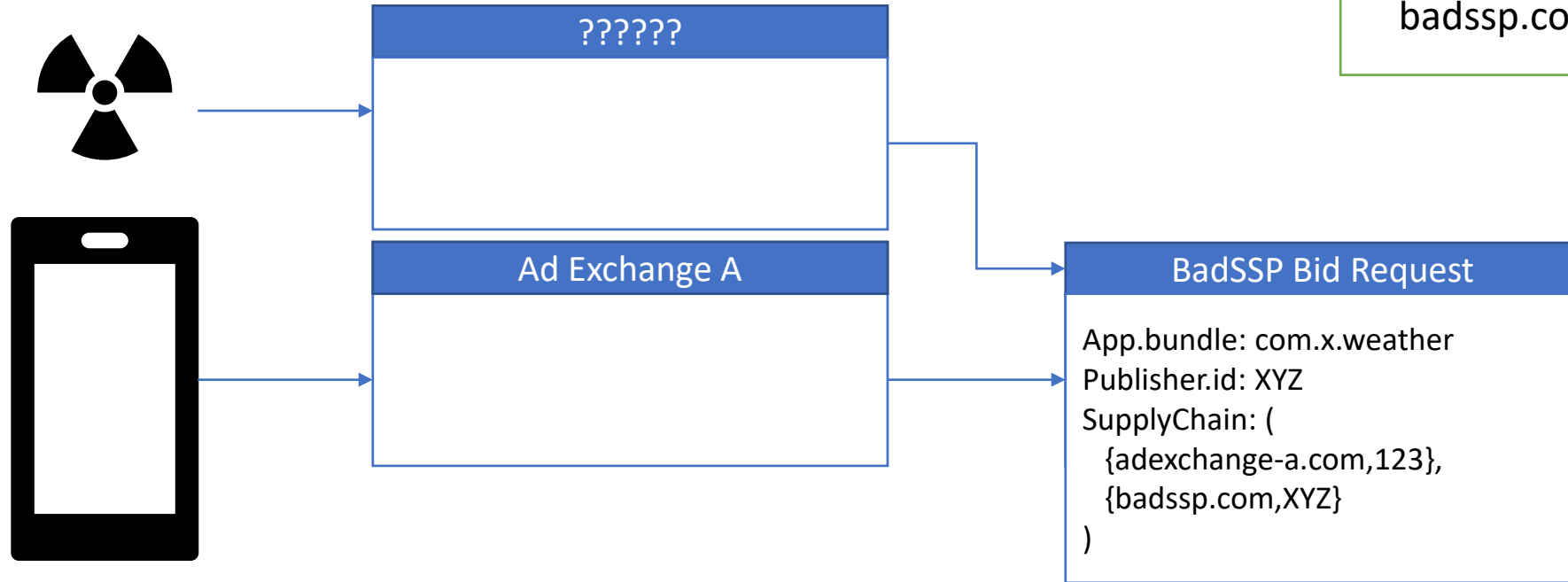
<http://greenssp.com/sellers.json>

ABC = "Ad Exchange A", <http://adexchange-a.com>, RESELLER

Resold Inventory w/Blending

<http://x-weather.com/app-ads.txt>

badssp.com, XYZ, RESELLER



<http://adexchange-a.com/sellers.json>

123 = "X Weather", <http://x-weather.com>, DIRECT

<http://badssp.com/sellers.json>

XYZ = "Ad Exchange A", <http://adexchange-a.com>, RESELLER
890 = <Confidential>, RESELLER

Benefits to buyers

- An understanding of where inventory is being sourced from
- The ability to create blacklists/whitelists of intermediaries
- The ability to optimize for having fewer intermediaries involved in the purchase of inventory
- Transparency

Benefits to Publishers

- Can more easily work with buyers to ensure that optimal paths are being followed
- The ability to conduct more accurate audits with buyers to more easily detect leakage.

How difficult to implement?

- Should be quite easy to implement both
- Sellers.json has the ability to make a seller confidential to accommodate contractual obligations

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SECURING THE SUPPLY CHAIN**



ROBYN PARKER

CHIEF INFORMATION OFFICER
ADSLOT

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ERIC CHERNG

DIRECTOR, PRODUCT MANAGEMENT
FREEWHEEL



ROBYN PARKER

CHIEF INFORMATION OFFICER
ADSLT

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SECURING THE SUPPLY CHAIN**



CURT LARSON

CHIEF PRODUCT OFFICER
SHARETHROUGH



IAN TRIDER

DIRECTOR, RTB PLATFORM OPERATIONS
CENTRO

Efficiency in the Creative Approval Process

Why do bad ads happen to good people?

Ian Trider

Director, RTB Platform Operations, Centro
Tech Lab Commit Group

Curt Larson

CPO, Sharethrough
Tech Lab Commit Group

SHOCK THE MONKEY™ AND WIN \$20!



Current state

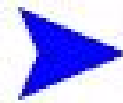
- Ad approval today:
 - Proprietary APIs
 - Via bidding
 - Or none at all!
- Silent rejection
- Custom scanning integrations

Why is this broken?

- Self-categorization is risky
- Proprietary protocols = problem
- “Every minute pending is a minute not spending”
- Filtered bids

1 Tip of a flat belly:

Cut down a bit of
your belly every
day by simply
following this one
1 weird old tip



Tip

The OpenMedia solution

- Ad Management API
- Supports pre-caching
- Designed to allow third parties
- Works for all creative types
- Reusable objects in AdCOM

The spec

```
POST https://api.sharethrough.com/admgmt/v1/bidder/34/ads  
  
{  
  "id": "557391",  
  "adomain": "centro.net",  
  "display": {  
    "native": {  
      "link": "https://www.centro.net/solutions/basis/dsp/",  
      ...  
    }  
  }  
}
```



The spec

```
{  
  "count": 1,  
  "ads": [  
    {  
      "id": "557391",  
      "audit": {  
        "status": 1 (Pending Audit)  
      }  
    }  
  ]  
}
```



The spec



```
POST https://api.basis.net/admgmt  
/v1/ssp/23/webhook
```




```
{  
  "count": 1,  
  "ads": [  
    {  
      "id": "557391",  
      "lastmod": 1528221112000,  
      "audit": {  
        "status": 3 (Approved)  
      }  
    }  
  ]  
  ...  
}
```



Basis
BY CENTRO



 **SHARETHROUGH**

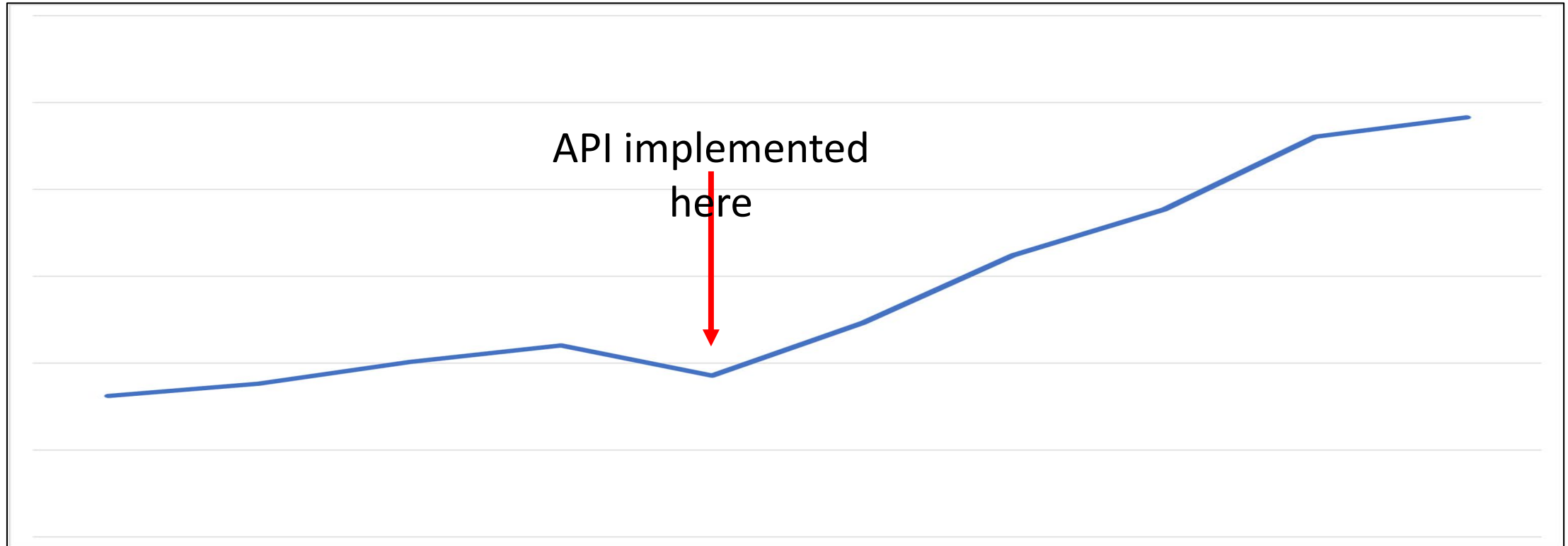
 **Congratulations!**  

You have won our hourly prize. [Click the "OK" button](#) to claim it before time runs out.

For DSPs

- Write once
- Show approval results in your UI/API
- Inform clients of rejection reasons
- Minimize time not spending
- Reduce filtered bids

Centro's Monthly Spend on Exchange



Ad By Brand



1 “Nasty” Trick to Correct Your Blood Sugar

For SSPs

- Publishers need a sustainable business
- Easier for DSPs
- Fewer filtered bids
- Less back and forth implementing things with DSPs or emailing them to shut down bad creatives

Opportunities for 3rd Parties

- Approval-as-a-service
- Approve once / use many

Don't let bad ads happen to you

- Standard is ready
 - Support it
 - CAN work independently of OpenRTB 3.0
- Ask your partners
- Enforce policy

The Average Driver Pays \$69/Mo* for Auto Insurance

Think You Pay Too Much? Find Out!



Click Your State

| | |
|----|---|
| AL | ▲ |
| AK | |
| AZ | |
| AR | ▼ |

[Get New Payment](#)

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J. ALLEN DOVE

CTO
SPOTX



ARON SCHATZ

DIRECTOR, PROGRAMMATIC SOLUTIONS
POWERINBOX



ANTHONY KATSUR

SVP DIGITAL STRATEGY
NEXSTAR MEDIA

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JENNIFER DERKE

DIRECTOR OF PRODUCT, PROGRAMMATIC
IAB TECH LAB



ISAAC SCHECHTMAN

DIRECTOR, SALES ENGINEERING
BIDSWITCH



STEVEN KATZ

SENIOR PRINCIPAL ARCHITECT
VERIZON MEDIA



ASWANTH VEMULAPALLI

SR. PRODUCT MANAGER
PUBMATIC

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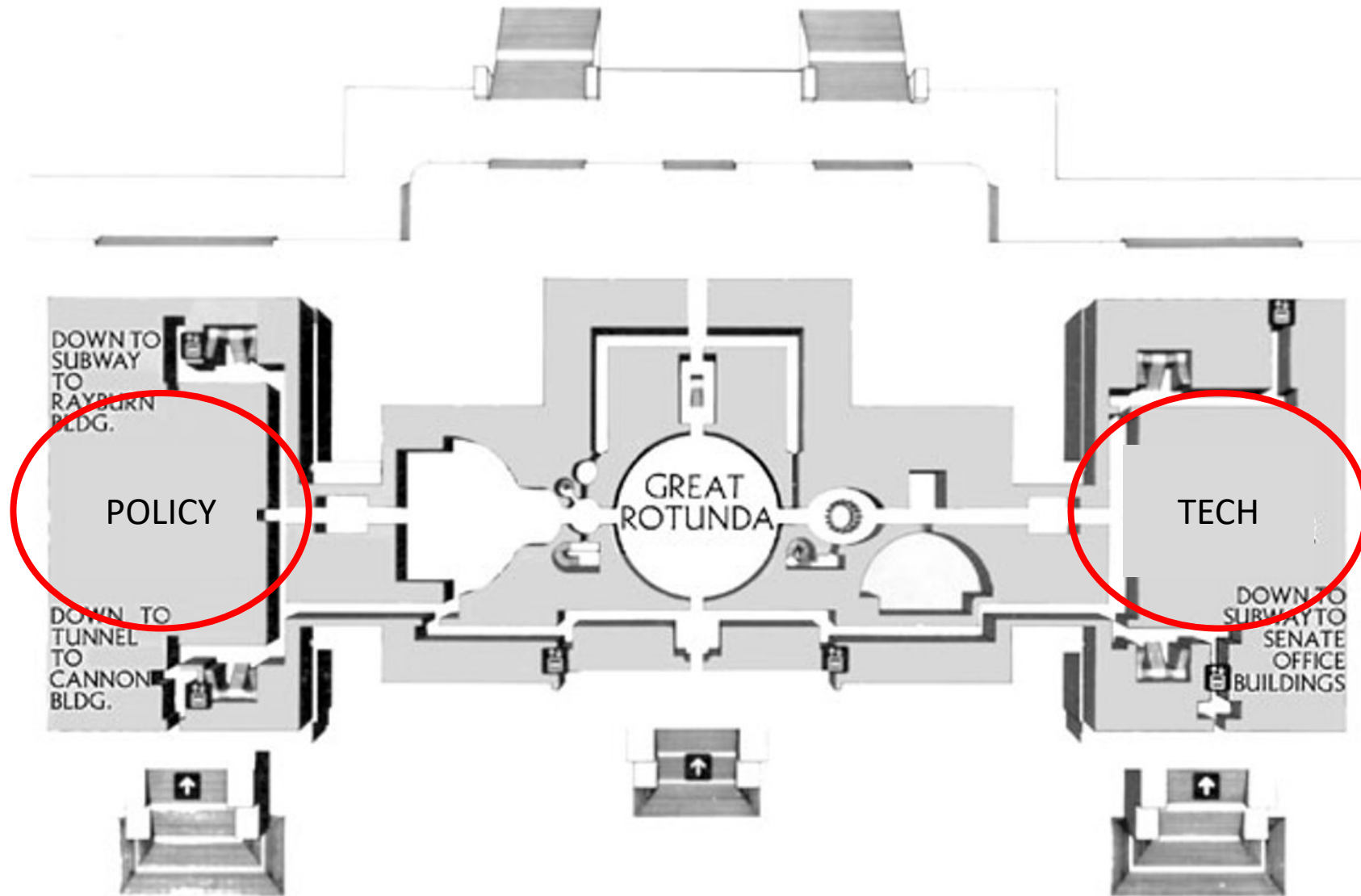


ALEX CONE

SENIOR PRODUCT MANAGER

XANDR



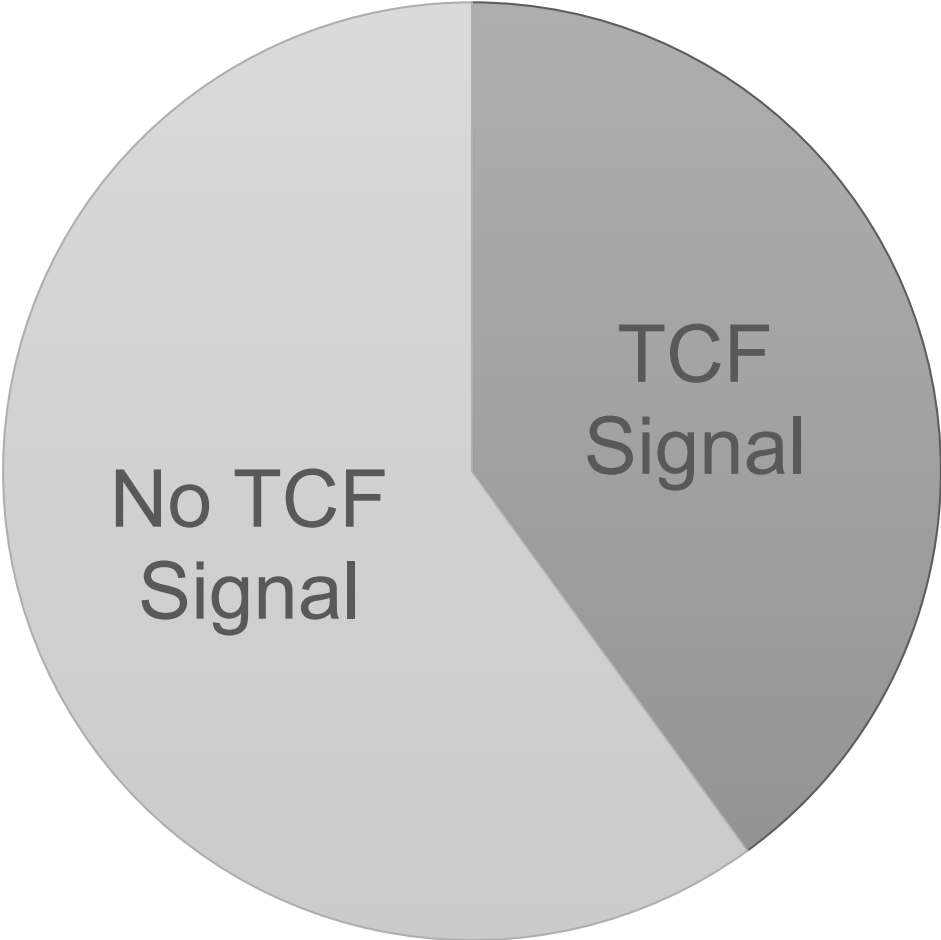




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TCF v 1.0



To close the gap...

- Major platforms
- Publisher voices
 - Purpose granularity
 - Legal basis
 - Flexibility
- Cleaner signaling

TCF v 2.0

May 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|------|----|----|----|----|----|----|
| | | | | | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |
| 29:○ | | | | | | |

June 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 6:● 13:● 20:● 28:○ | | | | | | |

July 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |
| 6:● 12:● 19:● 27:○ | | | | | | |

August 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |
| 4:● 11:● 18:● 26:○ | | | | | | |

September 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|-------------------|----|----|----|----|----|----|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | | | | | | |
| 2:● 9:● 16:● 24:○ | | | | | | |

October 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|------------------------|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |
| 2:● 8:● 16:● 24:○ 31:○ | | | | | | |

November 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |
| 7:● 15:● 23:○ 29:● | | | | | | |

December 2018

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |
| 7:● 15:● 22:○ 29:● | | | | | | |

January 2019

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |
| 5:● 14:● 21:○ 27:● | | | | | | |

February 2019

| Su | Mo | Tu | We | Th | Fr | Sa |
|--------------------|----|----|----|----|----|----|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | | |
| 4:● 12:● 19:○ 26:● | | | | | | |

March 2019

| Su | Mo | Tu | We | Th | Fr | Sa |
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| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |
| 6:● 14:● 20:○ 28:● | | | | | | |

April 2019

| Su | Mo | Tu | We | Th | Fr | Sa |
|---------------|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | | | |
| 5:● 12:● 19:○ | | | | | | |

3 problems

- 1 solved
- 1 idea
- 1 thought



Size

Security

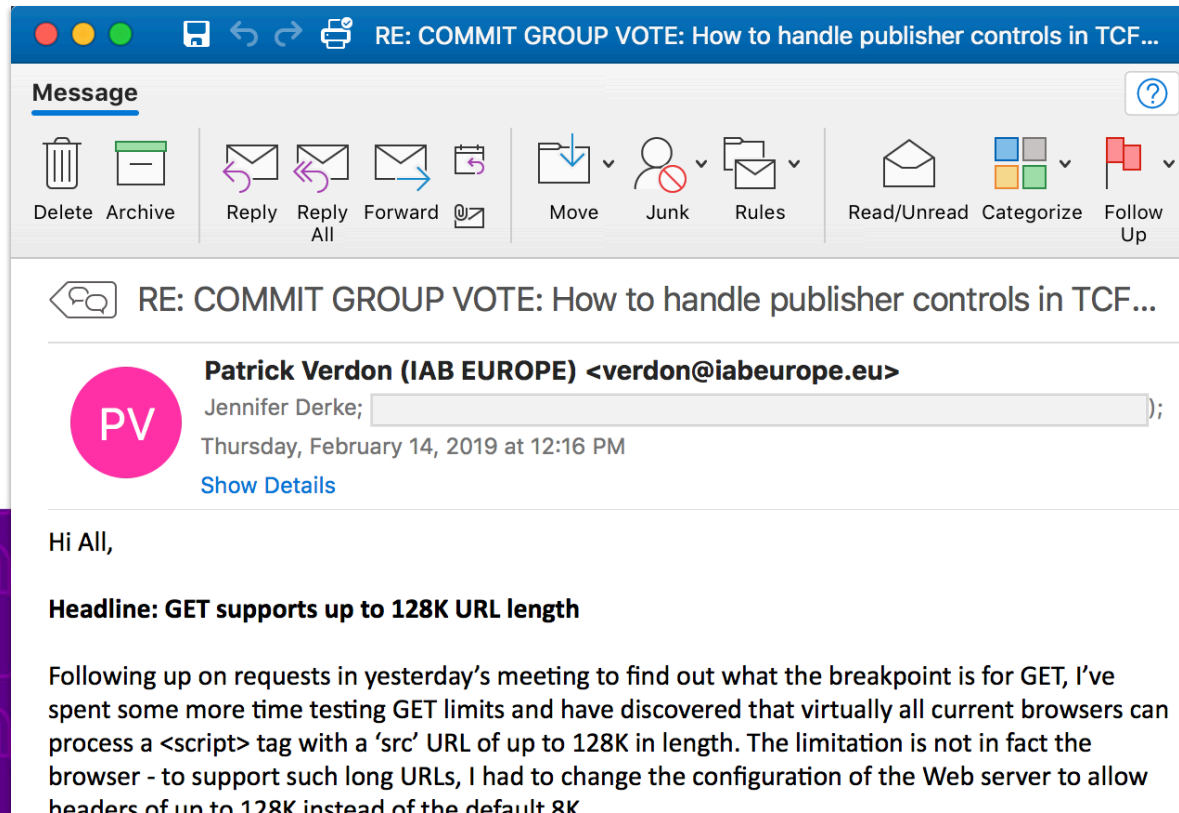
Structure



Size

Problem: publisher restrictions for vendors/purposes could make the string too big for browsers to send as GET

Solution: *yes*



RE: COMMIT GROUP VOTE: How to handle publisher controls in TCF...

Message

Delete Archive Reply Reply All Forward Move Junk Rules Read/Unread Categorize Follow Up

RE: COMMIT GROUP VOTE: How to handle publisher controls in TCF...

Patrick Verdon (IAB EUROPE) <verdon@iabeuropa.eu>
Jennifer Derke; Thursday, February 14, 2019 at 12:16 PM
[Show Details](#)

Hi All,

Headline: GET supports up to 128K URL length

Following up on requests in yesterday's meeting to find out what the breakpoint is for GET, I've spent some more time testing GET limits and have discovered that virtually all current browsers can process a <script> tag with a 'src' URL of up to 128K in length. The limitation is not in fact the browser - to support such long URLs, I had to change the configuration of the Web server to allow headers of up to 128K instead of the default 8K

Security

Problem: accuracy of data in “tcstring” passed around the ecosystem

- Checksum for now
- /ads.cert

Solution: *partial*

Structure

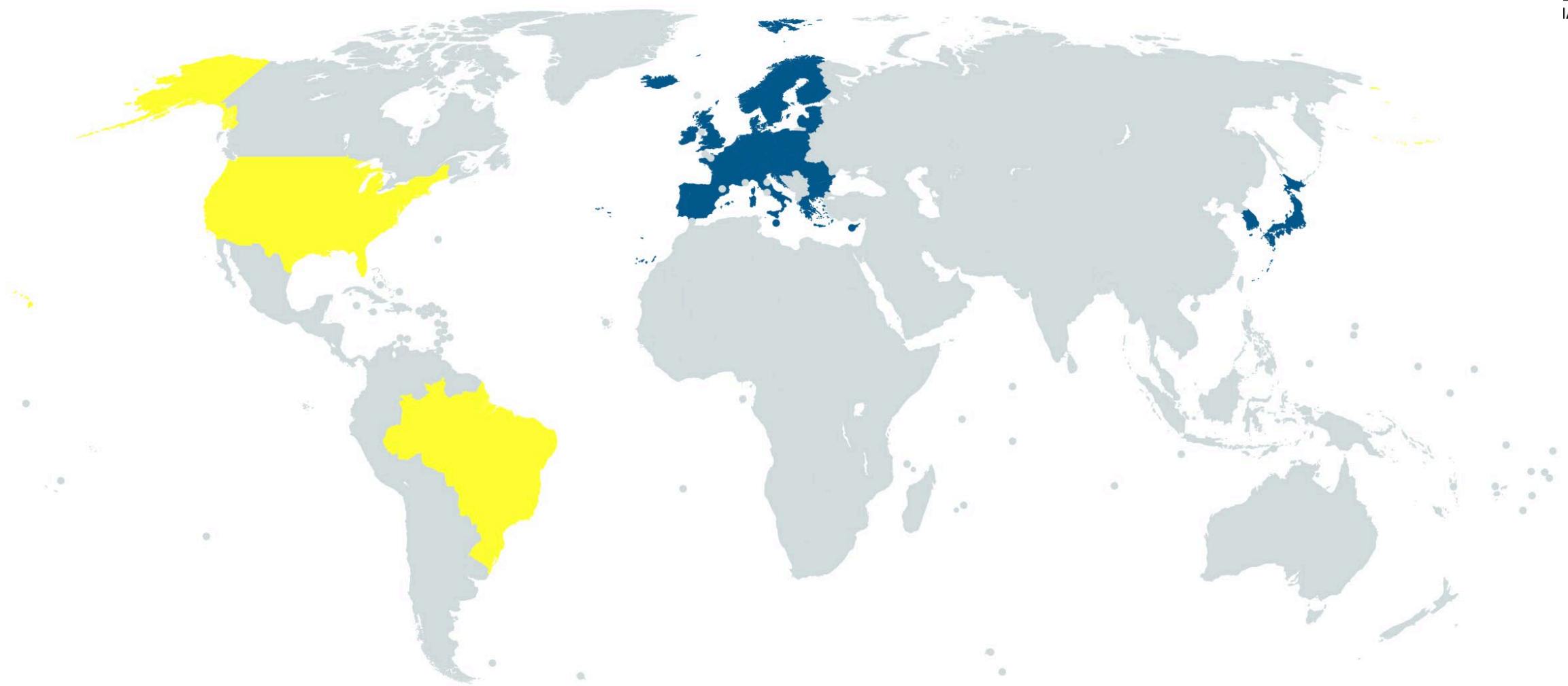
Problem: banner creatives (self-executing JS/HTML) can fire off requests to unknown vendors



AMP

or some equivalent

Solution: *it's Innovation Day*



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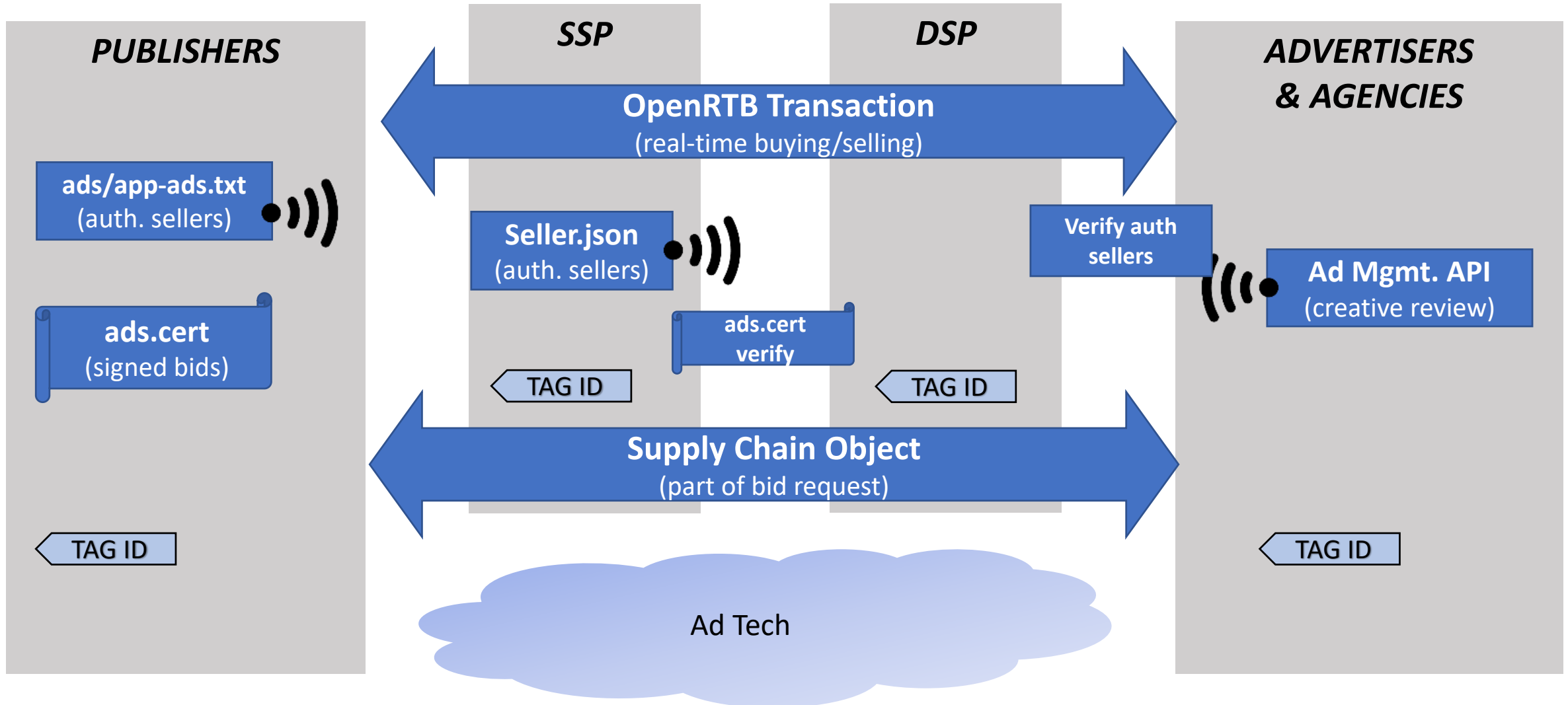
**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**

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**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**

Helping Advertisers & Publishers Work Together



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**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**



DENNIS BUCHHEIM

SVP & GM
IAB TECH LAB



MIKE ZANEIS

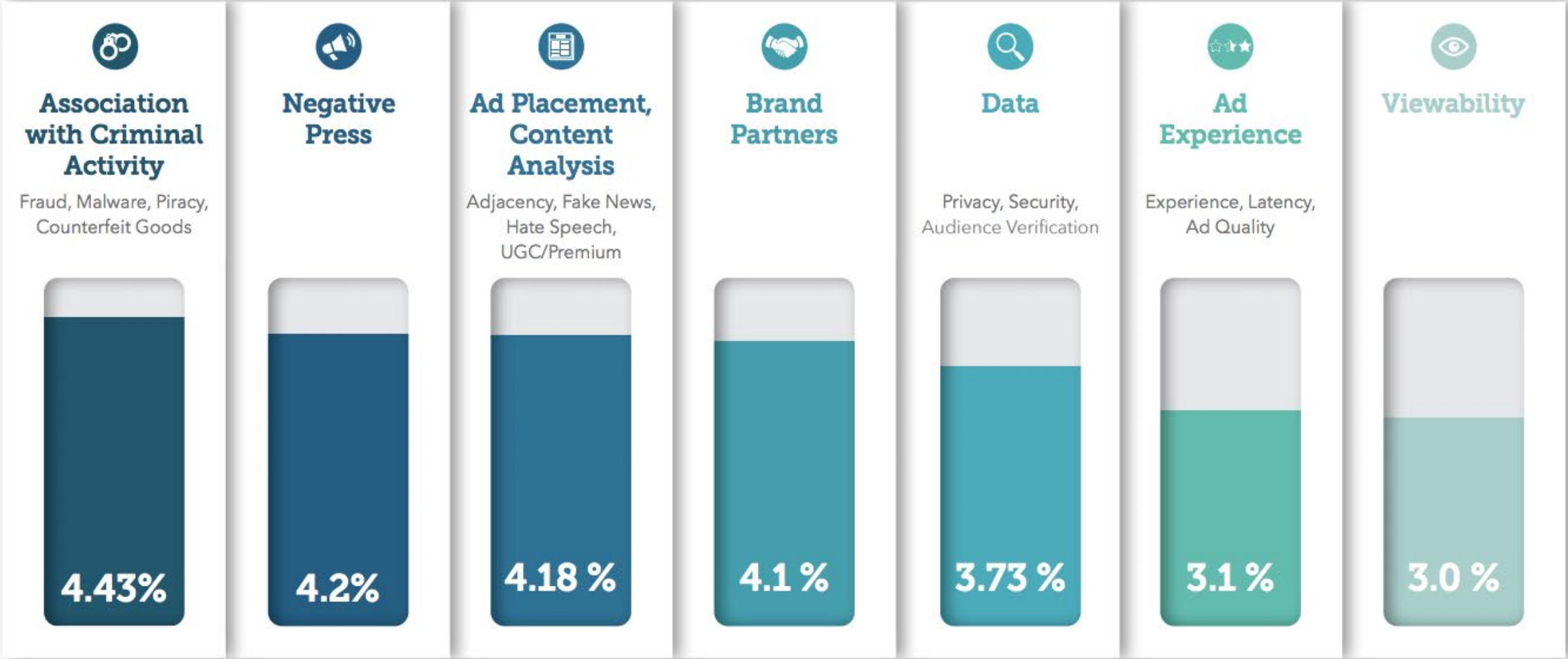
CHIEF EXECUTIVE OFFICER
TAG



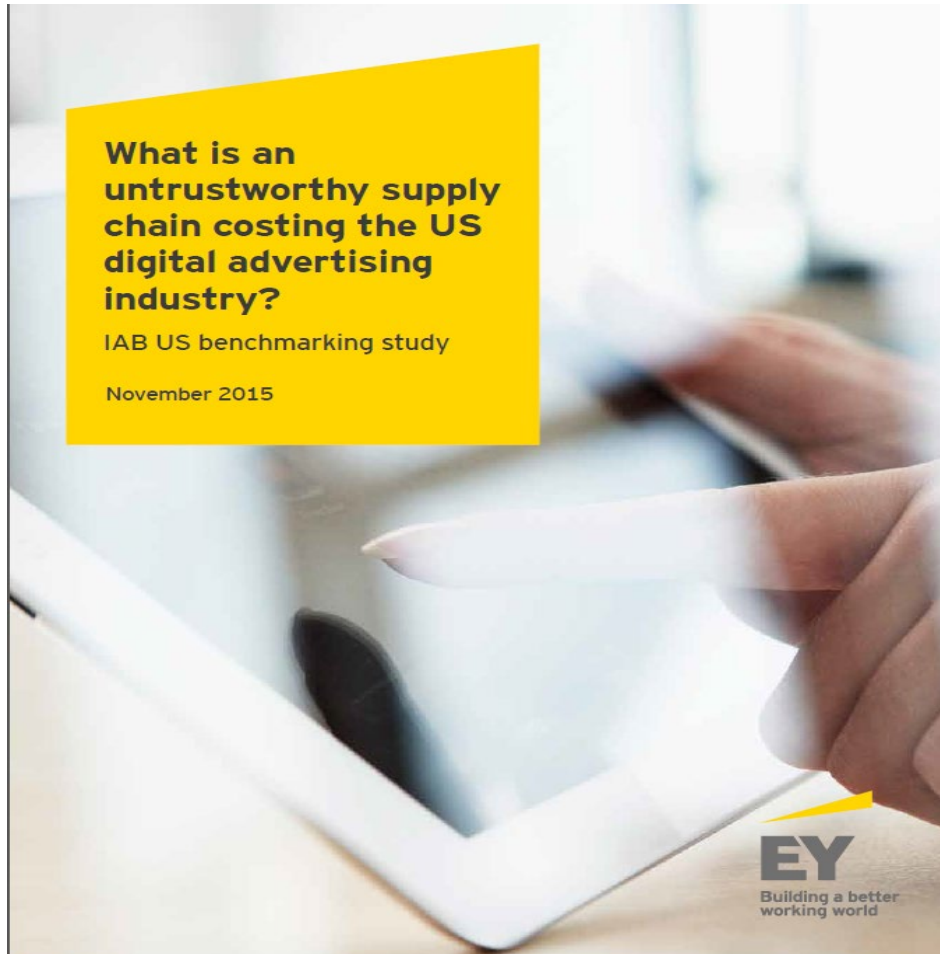
HOLISTIC APPROACHES TO SOLVING AD FRAUD: Defining Real Results

IAB Tech Lab Innovation Day | May 6, 2019

What is Brand Safety?



Cost of Criminal Activity in the Digital Ad Supply Chain



- Estimated total cost: **\$8.2 billion**
 - Invalid Traffic / **Fraud**: **\$4.6 billion** / 56%
 - Internet **Piracy**: **\$2.5 billion** / 31%
 - **Malware**: **\$1.1 billion** /13%
- The report encourages **industry-wide collaboration under the auspices of TAG** in order to forestall these criminal activities.

TAG's Mission

A joint marketing-media industry program created by the ANA, 4As, and IAB to fight criminal activity in the digital supply chain; TAG is organized around four core areas:

- Eliminating **fraudulent** digital advertising traffic
- Combating **malware**
- Fighting ad-supported **piracy** to promote brand integrity
- Promoting brand safety through greater **transparency**

A Simple Indicator of Trust

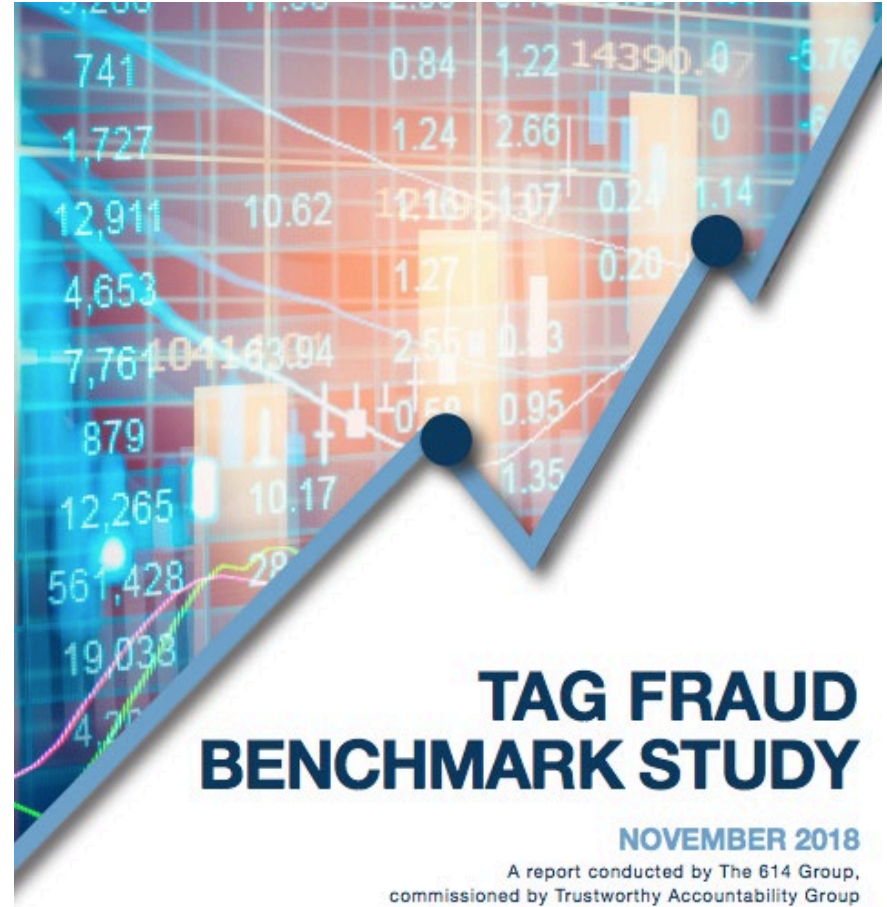




TAG Fraud Benchmark Study

DECEMBER 2017

A report conducted by The 614 Group, commissioned by Trustworthy Accountability Group



TAG FRAUD BENCHMARK STUDY

NOVEMBER 2018

A report conducted by The 614 Group, commissioned by Trustworthy Accountability Group



What is a TAG Certified Channel?



Fraud Rates In TAG Certified Channels

| | US | EUROPE |
|------|-------|--------|
| 2017 | 1.48% | N/A |
| 2018 | 1.68% | 0.53% |

PROGRAMMATIC

Why Ads.txt Alone Isn't a Silver Bullet to Cure Ad Fraud

DoubleVerify unveils bot network that bypasses IAB protocol to protect against domain spoofing

By Ronan Shields | 2 days ago



Requirements for TAG Certification

| Requirement | Scope | Direct Buyer | Direct Seller | Intermediary | Anti-Fraud & Measurement Services |
|--|----------------|--------------|---------------|--------------|-----------------------------------|
| Complete TAG Registration & be a TAG Member in Good Standing | Administrative | ✓ | ✓ | ✓ | ✓ |
| Have a designated TAG Compliance Officer | Administrative | ✓ | ✓ | ✓ | ✓ |
| Attend a Certified Against Fraud Training annually | Administrative | ✓ | ✓ | ✓ | ✓ |
| Comply with GIVT Detection & Filtration Requirements of MRC IVT Guidelines | Anti-Fraud | ✓ | ✓ | ✓ | ✓ |
| Employ Domain Threat Filtering | Anti-Fraud | ✓ | ✓ | ✓ | ✓ |
| Employ Data Center IP Threat Filtering | Anti-Fraud | ✓ | ✓ | ✓ | ✓ |
| Implement Publisher Sourcing Disclosures | Transparency | | ✓ | | |
| Implement Payment ID System | Transparency | | | ✓ | |
| Implement Ads.txt | Transparency | | ✓ | | |

It Takes a Village

DigitalNewsDaily

Trustworthy Accountability Group Reaches Milestone With 500th Member

by Wendy Davis @wendyndavis, Yesterday

The industry's Trustworthy Accountability Group, which aims to combat online fraud, piracy and malware, will register its 500th member this week -- nearly doubling its size from one year ago, when 269 companies had been verified.

The organization, which formed in 2015, got a boost in membership from the Interactive Advertising Bureau's **recent decision** to require its general members to join. When the IAB announced the requirement, only around 100 IAB members also belonged to TAG.





DENNIS BUCHHEIM

SVP & GM
IAB TECH LAB



MIKE ZANEIS

CHIEF EXECUTIVE OFFICER
TAG

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**TRANSPARENCY AND
SECURING THE SUPPLY CHAIN**



ANGELOS LAZARIS

CHIEF DATA SCIENTIST
PIXALATE



AMY KING

VICE PRESIDENT, PRODUCT MARKETING
PIXALATE

HIDDEN NUMBERS

New Data from OTT/CTV Fraud and the Rise of App Spoofing

pixalate

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PIXALATE: CROSS-CHANNEL QUALITY SOLUTIONS

Superior, cross-channel media quality growth solutions

We build full-scale risk protection solutions for fraud, viewability, and brand safety across display, in-app, and OTT/CTV media.

ANALYTICS

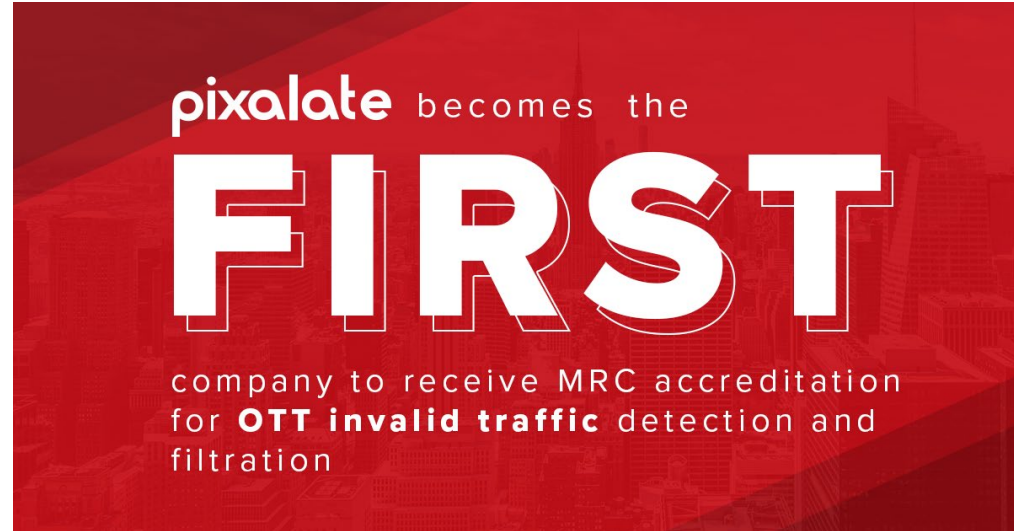
Post-bid monitoring

BLOCKING

Pre-bid lists and APIs

MEDIA RATINGS TERMINAL

Complete app and site vetting



Pixalate has been accredited by the MRC for 17 metric areas. We are the only company accredited for SIVT detection and filtration across desktop, mobile web, mobile in-app and OTT/CTV.



OTT/CTV

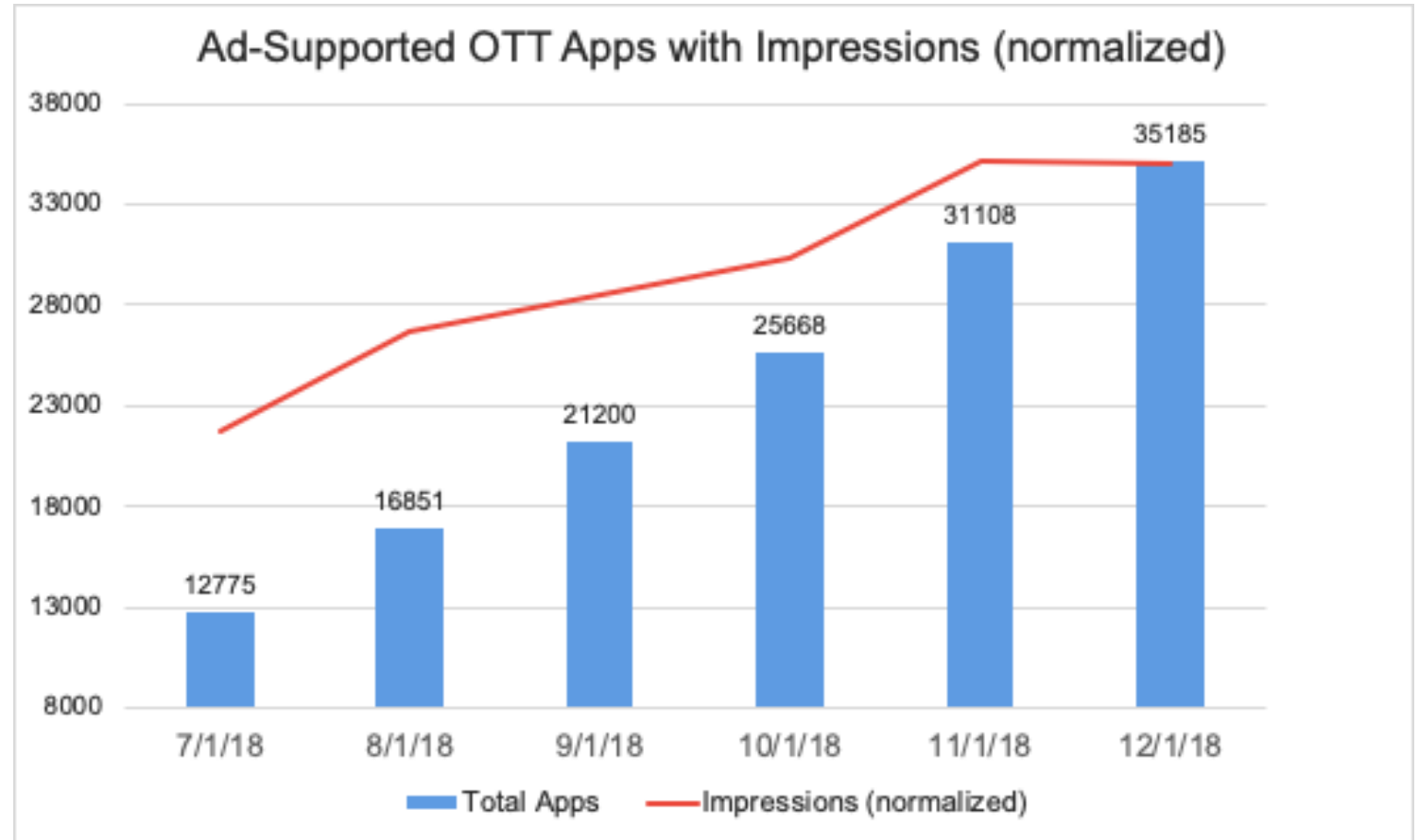
New Data Trends and Fraud Recommendations

pixalate

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TRANSPARENCY AND
SECURING THE SUPPLY CHAIN

MORE MONEY MORE FRAUD PROBLEMS

Rapid rise of OTT/CTV has created IVT challenges. We measure **fraud rates at 20%** or higher for OTT/CTV content.



CHALLENGES TO QUALITY IN OTT/CTV



LIMITED SOLUTIONS

More efficient IVT detection needed
Better coordination across stores
Lack of stores with quality metrics



HIGH FRAUD RATES



FRAGMENTATION

15 stores, 150 devices, 26K apps
Not enough data seen in ad chain
Challenges in User-Agent parsing



LACK OF COORDINATION



LACK OF STANDARDS

No standard naming for devices
Inconsistent Bundle IDs across stores
Little vetting of apps by the stores



EASY TO MASK INVENTORY



SSAI ISSUES

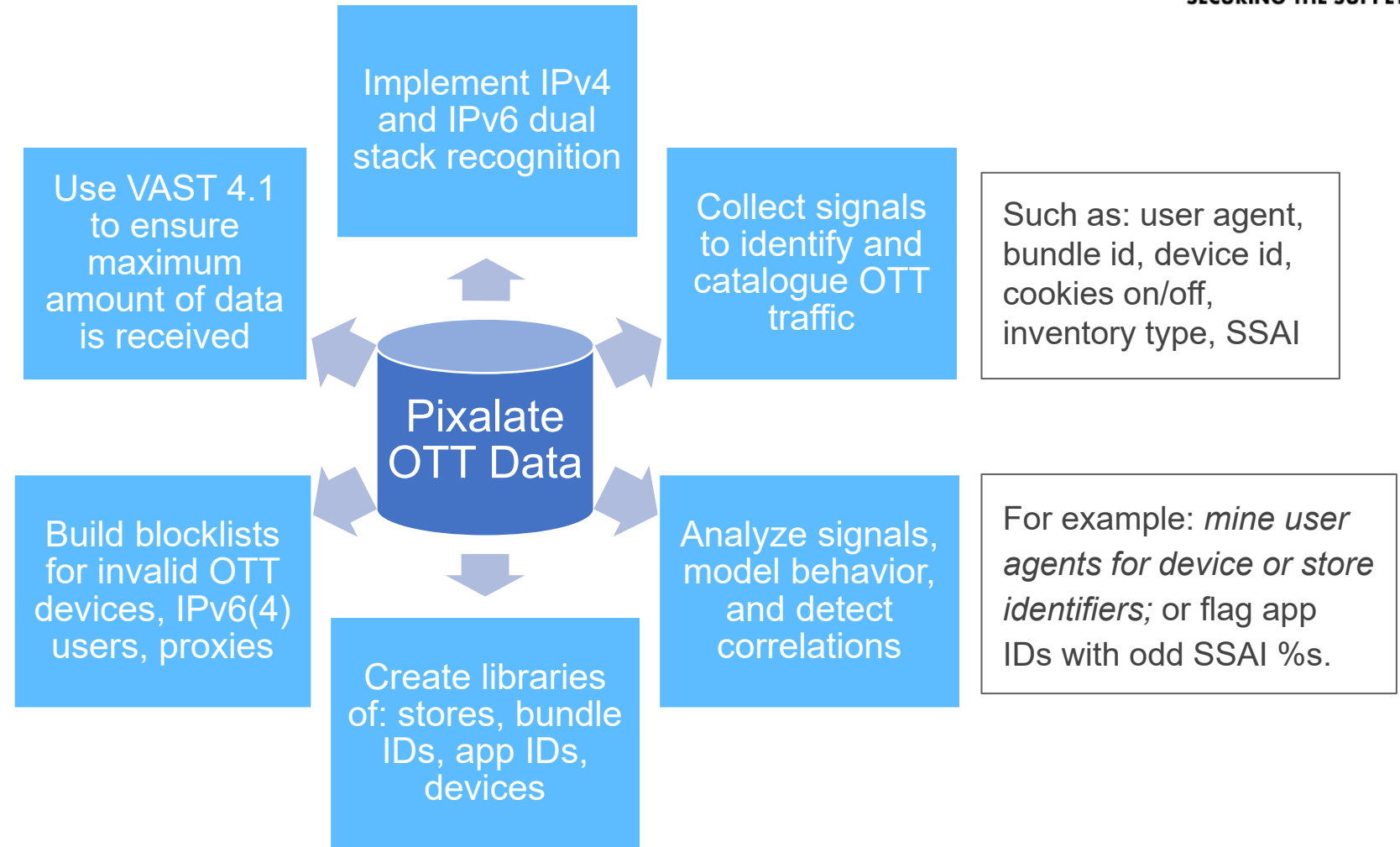
Abuse of seemingly safe proxies
No way to verify if the users exist
SSAI growth without shared proxy verification database



SSAI PROXY SPOOFING

PIXALATE: IDENTIFYING OTT/CTV AND FRAUD

There is **no single path** to OTT classification. To overcome the lack of shared identifiers, we analyze **30 signals** per impression.

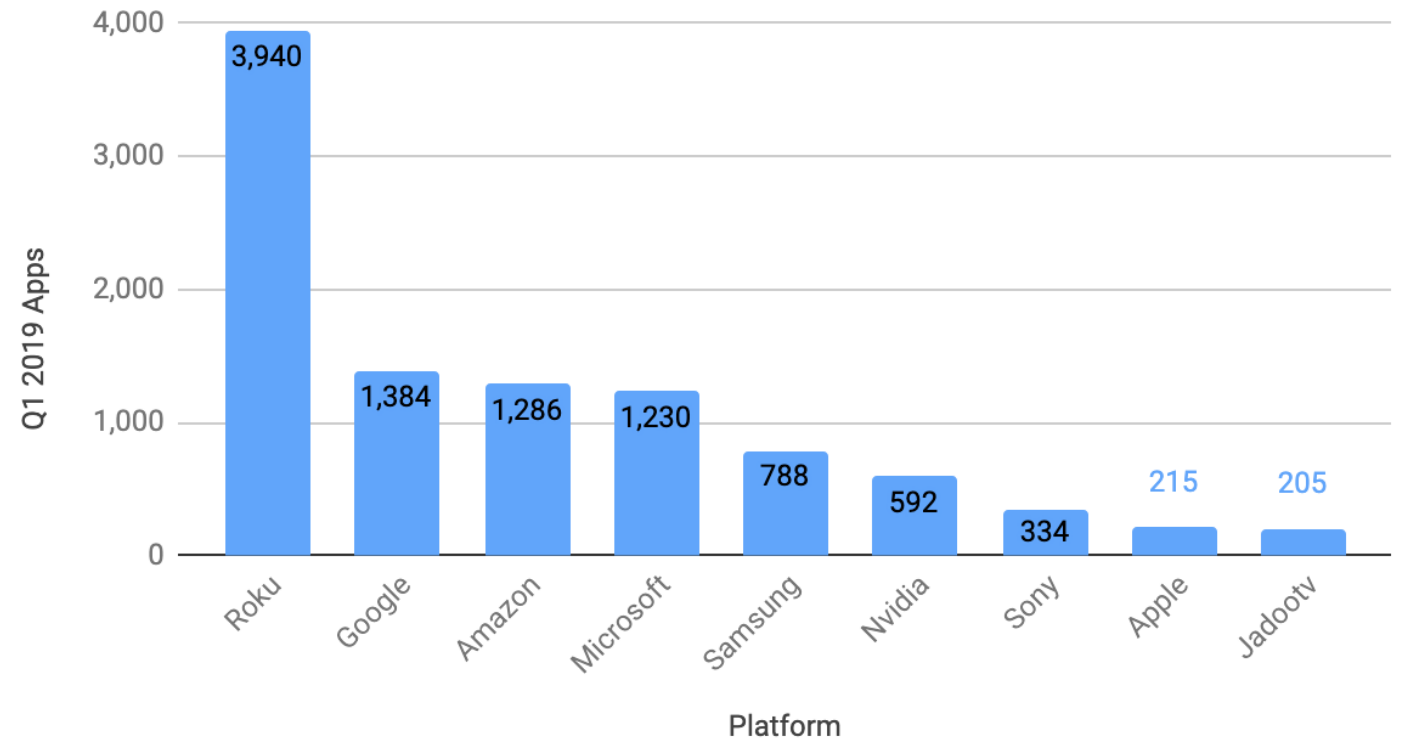


OTT/CTV FRAGMENTED LANDSCAPE

- Roku added **2500 apps** in 2018
- We saw **25,647** ad supported OTT apps in Q1 19
- There are often multiple bundle IDs used for a given app called “NAME”:

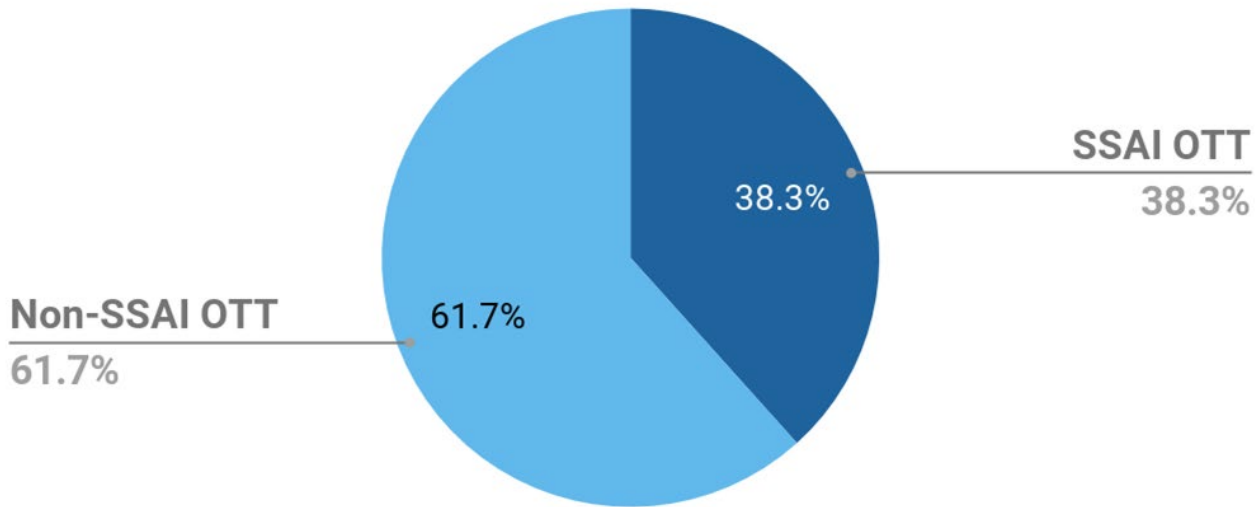
| bundleid variations |
|----------------------------|
| tv.[NAME].web |
| tv.[NAME].sonytv |
| tv.[NAME].sony |
| tv.[NAME].ios |
| tv.[NAME].roku |
| tv.[NAME] |
| tv.[NAME].samsung |
| tv.[NAME].android |
| com.[NAME].tv |

Q1 2019 OTT Ad-Supported Apps by Platform

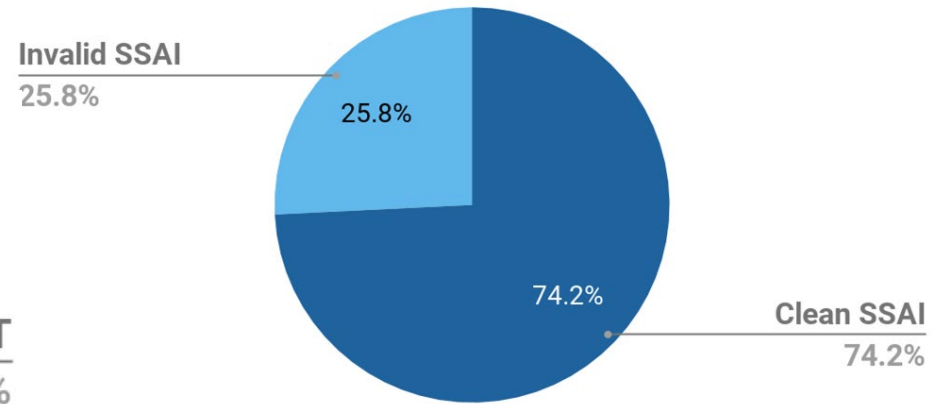


SSAI AND AN INVALID PROXY TRAFFIC

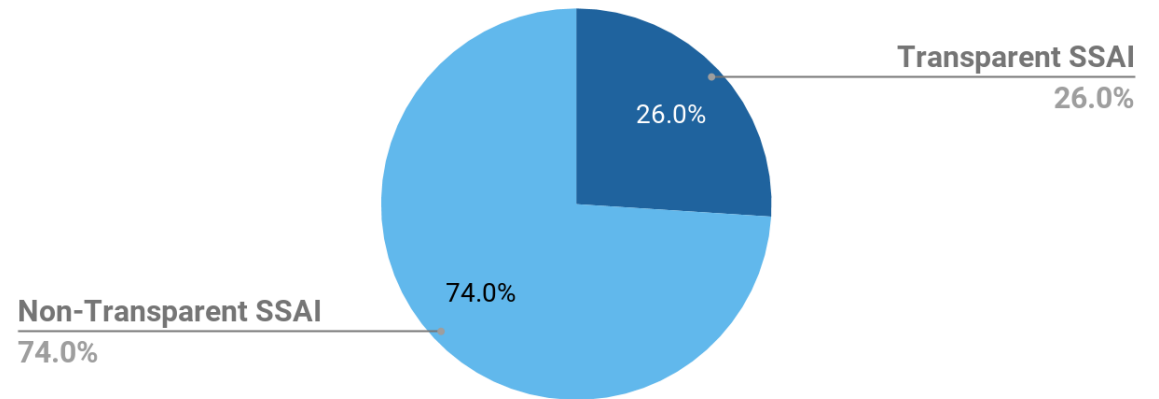
OTT Inventory Breakdown



SSAI OTT Inventory Breakdown



Clean SSAI Breakdown



SSAI CHALLENGES AND PROXY VERIFICATION

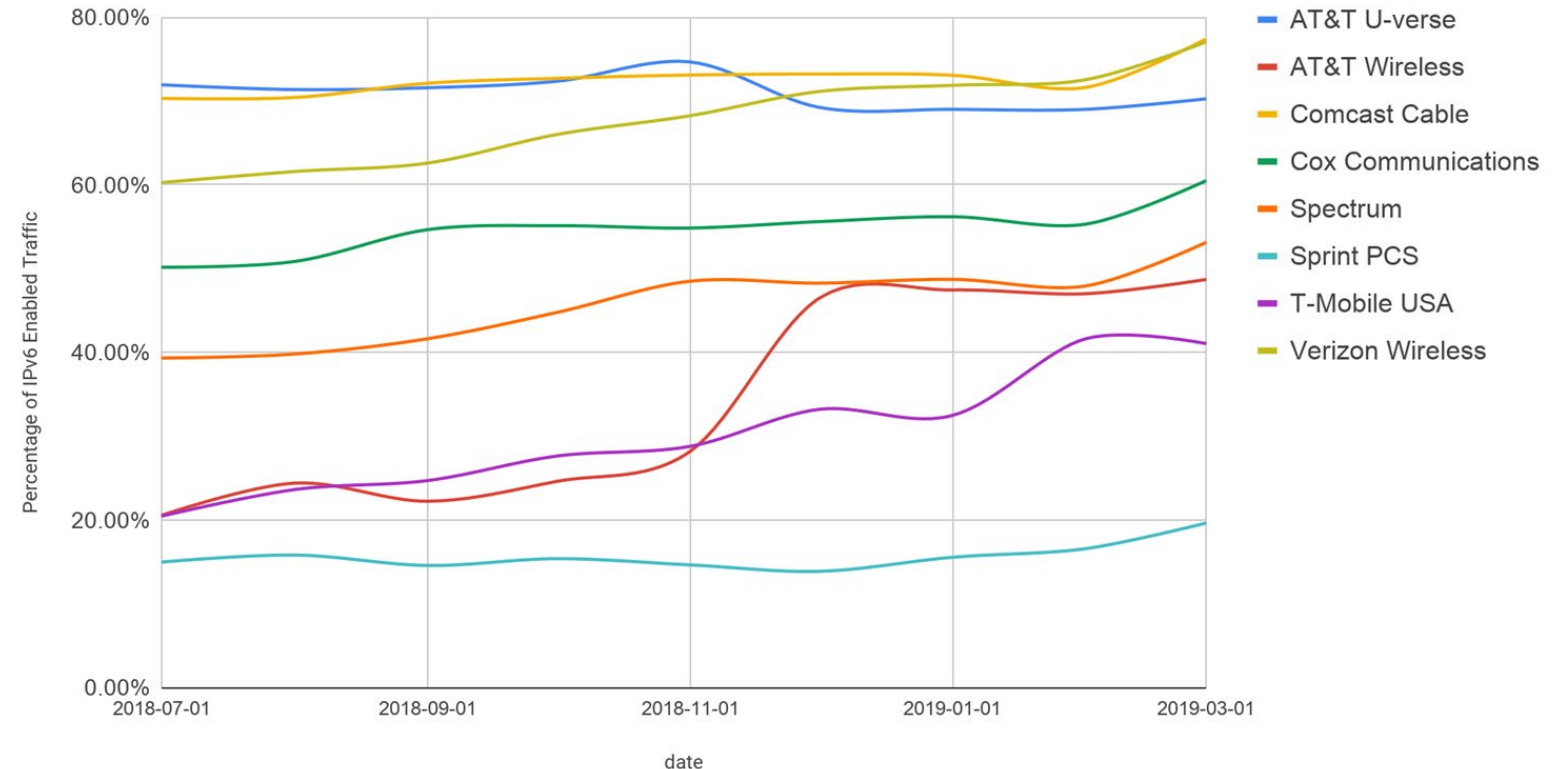
- There is **no deterministic** way to identify valid SSAI inventory other than “trusting” what the X-Forwarded-For header contains (i.e. user IP)
- Additional **HTTP headers** have been proposed for more **transparency** (e.g. VAST 4.0) to identify user’s
 - UA (i.e. X-Device-UA)
 - IP (i.e. FORWARDED HTTP extension)
- But they can be **spoofed** easily as well

An industry-wide
proxy
reputation
system needs to
be established

IPV6-ENABLED TRAFFIC INCREASING

- An 128-bit addressing effectively acts as a unique **device ID** (global unicast)
- Device ID, along with broad use of IPs, means IPv6 helps with spoofing, and other **user-based fraud** types
- IPV6 adoption particularly high for most **residential & cellular** ISPs
- For now, **dual-stack** is important

IPv6-Enabled Traffic (%) For Each Major ISP



IN-APP

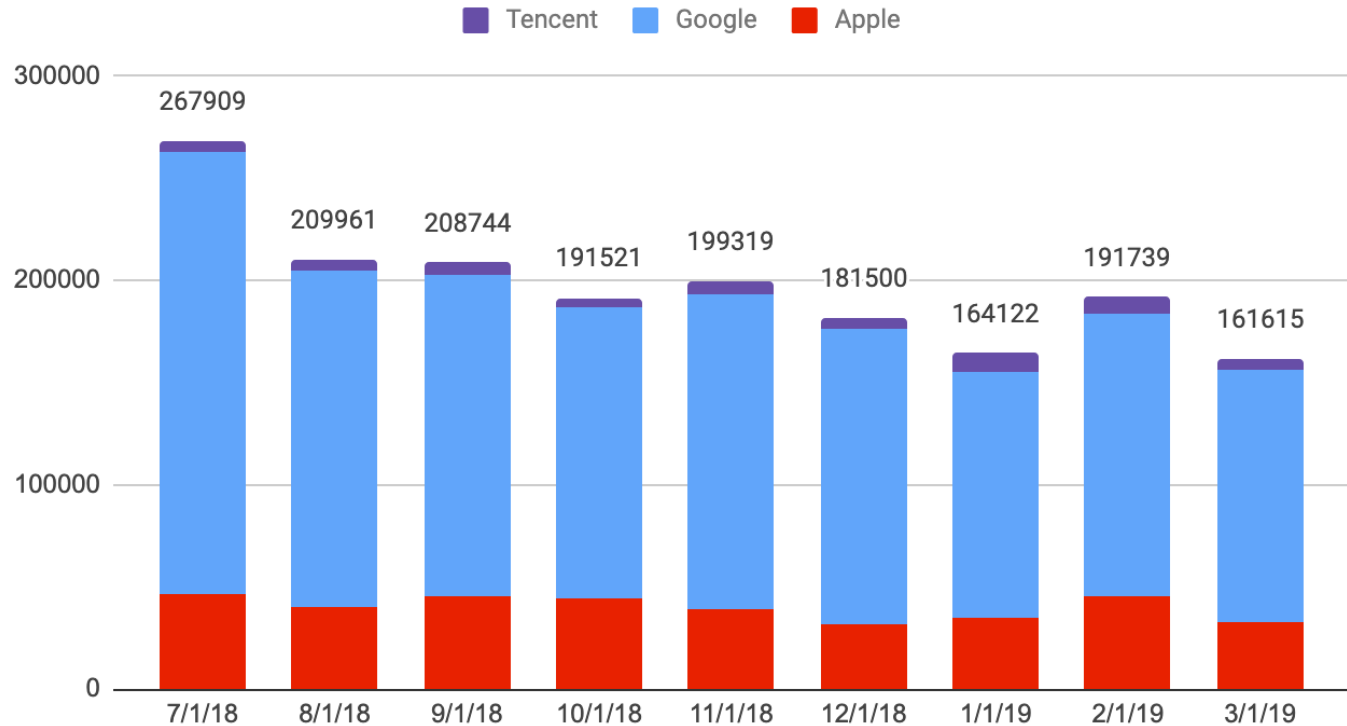
Market trends and the rise of spoofing

IN-APP LANDSCAPE: MORE VETTING NEEDED

High turnover ecosystem with little quality control remains an issue:

- Tencent app store grew by **10% in 9 months** (July 18-March 19)
- In Q1 2019 we saw **381,785** new apps in the Google store
- In 2018, due to GDPR clean up, we saw an **overall decline** in apps, but still recorded over **3.91m** ad-supported apps in the Google store

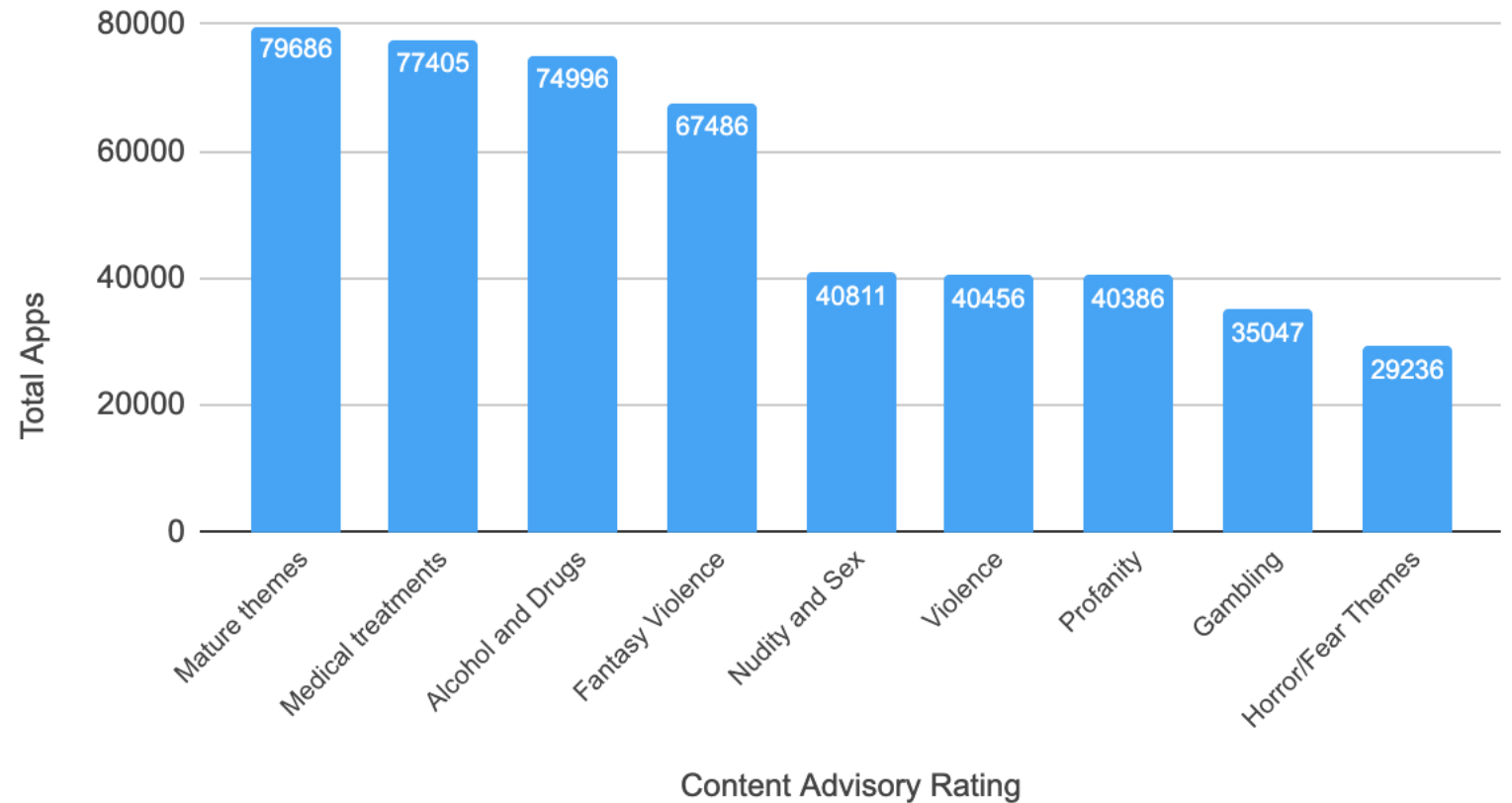
New Apps Seen Month to Month By Store



IN-APP BRAND SAFETY LANDSCAPE

In Q1 2019, the Google store had **48K apps** with a 17+ Mature rating
175K apps with Teen rating

Global App Totals by Content Warning (iOS)



APP PERMISSIONS: PRIVACY AND FRAUD RISK

Unnecessary and invasive permissions, besides being a privacy risk, can also be a fraud gateway. These charts illustrate how widespread the practice has become. The app numbers here represent popular ad-supported apps.

Google privacy “dangerous” permission status

| permissions | category | major apps |
|------------------------|-------------------|------------|
| READ_PHONE_STATE | Games | 1689 |
| ACCESS_COARSE_LOCATION | Games | 457 |
| ACTIVITY_RECOGNITION | Games | 413 |
| ACCESS_FINE_LOCATION | Games | 313 |
| READ_PHONE_STATE | Entertainment | 289 |
| ACCESS_COARSE_LOCATION | Entertainment | 174 |
| ACCESS_FINE_LOCATION | Entertainment | 165 |
| READ_PHONE_STATE | Tools | 159 |
| READ_PHONE_STATE | Books & Reference | 132 |

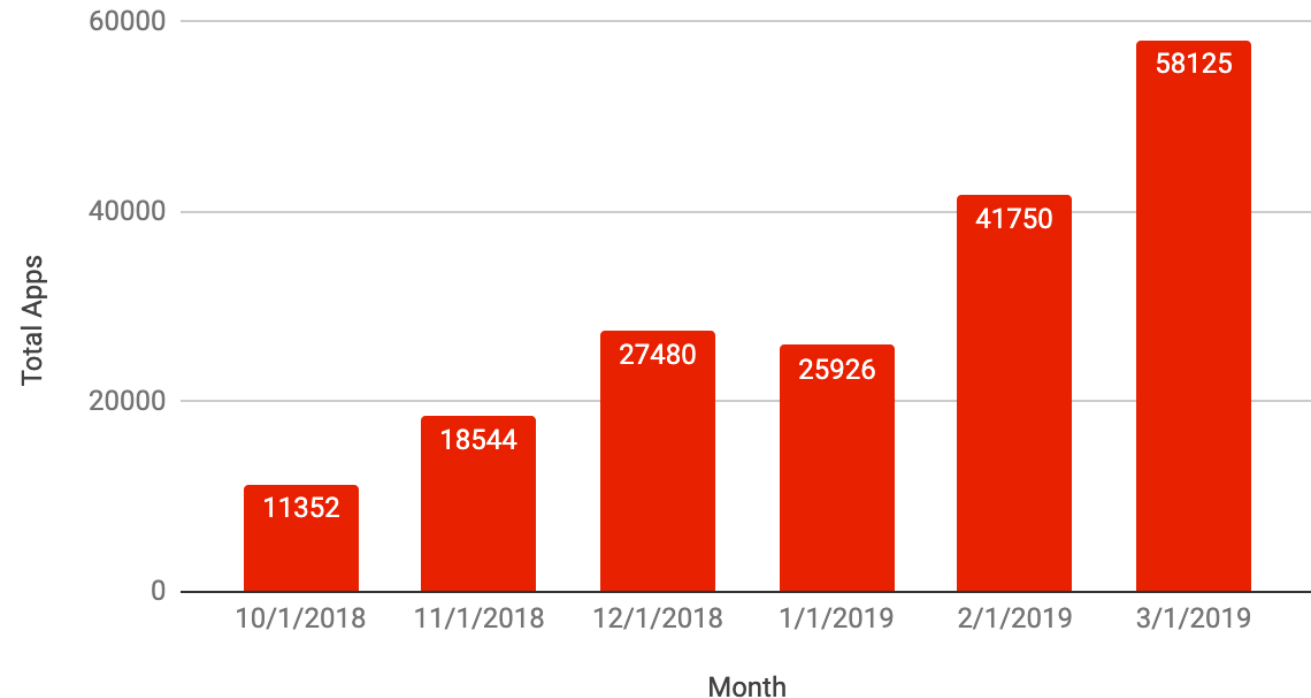
WAKE_LOCK permission apps

| category | major apps |
|-------------------|------------|
| Games | 3269 |
| Music & Audio | 1470 |
| Entertainment | 1385 |
| Tools | 1139 |
| Education | 1134 |
| Books & Reference | 913 |
| Personalization | 805 |
| Lifestyle | 656 |

IN-APP CHALLENGE: RISE OF APP SPOOFING

- Across categories, in-app IVT rates average around **20%** and have not decreased over 2018-2019
- Increased number of apps involved in spoofing indicates **distribution of volume** of across apps, makes harder to detect
- We see over **34K apps** in the Android store registered to a private domain

App Spoofing: Number of Apps Being Spoofed by Month



RECOMMENDATIONS

1. Profile proxy activity in order to start modeling legitimate behavior
2. Catalogue more ad signals to better identify app spoofing across OTT and In-App
3. Collect IPv6 addresses from dual-stack supported interfaces to identify fraud more accurately
4. Swift adoption of app-ads.txt and wider implementation of VAST 4.1 to reduce spoofing
5. Work to develop a User Agent & Bundle ID naming standard in OTT that is as consistent as possible

Work towards
shared
standards
collectively
while vetting
partners
carefully

THANK YOU

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MAYANK MISHRA

SR DIRECTOR, ENGINEERING
IAB TECH LAB

| | | |
|--|--|--|
| OMWG Video Recording Checkout recorded meetings of Open Measurement Working Group. Go to Recordings | Open Measurement SDK Open Measurement SDK files. Click to get JS, iOS, or Android omsdk files. Access SDK Files | ads.txt aggregator Aggregation of ads.txt file from different domains. Click to get files Access File |
|--|--|--|

General Tools

| | | |
|--|--|--|
| VAST Tag Validator VAST Validator to validate tag against IAB VAST version 2,3 and 4. Provide tag url or xml. Link to Tool | DigiTrust For Publishers Access the DigiTrust ID javascript to implement on your website. More Information | DigiTrust for Platforms Creates anonymous user token, designed to be propagated by and between its members. More Information |
| PrivacyChain Blockchain-based single ledger distributed solution for companies to track user's privacy consents across complex data supply chains. Go to PrivacyChain | ads.txt Crawler An example crawler for ads.txt files. Written in python; Given the list of domains, saves records to a database. More Information | GDPR T&C Framework Technical specifications for the GDPR Transparency and Consent Framework released by IAB Europe and IAB Tech Lab. More Information |
| AdBlock Detection Script A script developed to detect if the browser has active ad blocker. Click to learn more. More Information | Open RTB Find here detailed specification, supporting materials and tools for ORTB. More Information | ORTB Validator Validates bid request and response against different versions of Open RTB Standards. Link to Tool |
| MRAID SDK Tester This is an iOS and Adroid app to test your ads. Check out below link to learn more. More Information | Tech Lab Code Bank List of Open source tools and materials on IAB Specifications. More Information | |

What is ads.txt?

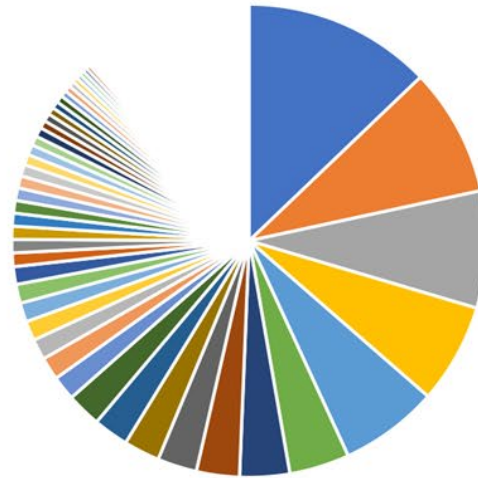
A txt file of comma separated values that sits on publisher's website on /ads.txt path.

Publishers drop a text file on their web servers that lists all of the companies that are authorized to sell the publishers' inventory.

Similarly, programmatic platforms also integrate ads.txt files to confirm which publishers' inventory they are authorized to sell. This allows buyers to check the validity of the inventory they purchase.

Stats

Top Advertising Systems



- freewheel.tv
- appnexus.com
- openx.com
- contextweb.com
- spotxchange.com
- smartadserver.com
- adtech.com
- adform.com
- lkqd.net
- taboola.com
- districtm.io
- lijit.com
- lkqd.com
- fyber.com
- gumgum.com

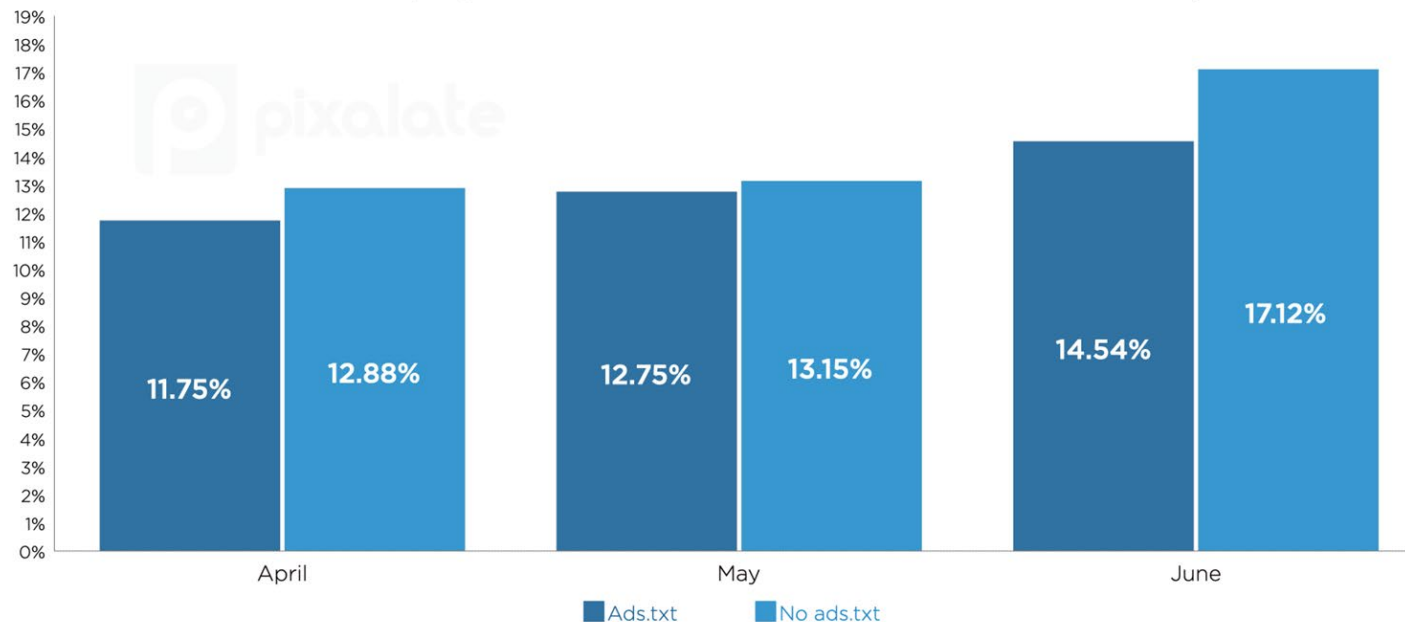
- google.com
- pubmatic.com
- rubiconproject.com
- indexexchange.com
- advertising.com
- spotx.tv
- sovrn.com
- improvedigital.com
- tremorhub.com
- rhythmone.com
- aolcloud.net
- nsightvideo.com
- triplelift.com
- coxmt.com
- beachfront.com

- Total Domains with valid ads.txt - ~1.8 million
- ~19% of relationships Direct and ~81% - Reseller
- Max number of rows in a single adstxt file. 24959 - express10.hubpages.com, 24,896 - hubpages.com

Impact

Ad Fraud (ITV): Sites with ads.txt vs. sites without ads.txt

Measures invalid traffic on sites with ads.txt vs without ads.txt Q2 2018. As measured by Picalate.



- **April:** 12.9% ad fraud on sites without ads.txt vs. 11.8% on sites with ads.txt (8.8% decrease)
- **May:** 13.2% vs. 12.8% (3% decrease)
- **June:** 17.1% vs. 14.5% (15% decrease)
- **Q2 2018 total:** 14.53% vs. 13.08% (10% decrease)

App-ads.txt

- It's the version of ads.txt for mobile in-app and OTT advertising
- Currently 167 iOS App Store apps & 299 Google Play Store apps

ads.txt aggregator



AdsTxt

Explorer [Aggregate Files](#) [My Aggregates](#) [Submit Domains](#) [API](#) [FAQ](#)

DATA: Ads Txt ▾ FILTERED BY: Add filters to narrow your answer + VIEW: Raw data GROUPED BY: Add a grouping +

VISUALIZATION
 Table ▾ ⚙

Refresh

| Advertising System | Domain Name | Relationship | Seller Account ID | Tag ID | Update Date Time |
|--------------------|-------------------|--------------|----------------------|------------------|----------------------------------|
| google.com | geekdashboard.com | DIRECT | pub-5666174117179532 | f08c47fec0942fa0 | Thursday, April 11, 2019 8:13 PM |
| taboola.com | geekdashboard.com | DIRECT | 1119764 | c228e6794e811952 | Thursday, April 11, 2019 8:13 PM |
| spotx.tv | geekdashboard.com | RESELLER | 71451 | | Thursday, April 11, 2019 8:13 PM |
| spotxchange.com | geekdashboard.com | RESELLER | 71451 | | Thursday, April 11, 2019 8:13 PM |
| advertising.com | geekdashboard.com | RESELLER | 8603 | | Thursday, April 11, 2019 8:13 PM |
| pubmatic.com | geekdashboard.com | RESELLER | 156307 | 5d62403b186f2ace | Thursday, April 11, 2019 8:13 PM |
| appnexus.com | geekdashboard.com | RESELLER | 3364 | | Thursday, April 11, 2019 8:13 PM |
| indexexchange.com | geekdashboard.com | RESELLER | 183756 | | Thursday, April 11, 2019 8:13 PM |
| contextweb.com | geekdashboard.com | RESELLER | 560382 | | Thursday, April 11, 2019 8:13 PM |
| openx.com | geekdashboard.com | RESELLER | 539154393 | | Thursday, April 11, 2019 8:13 PM |
| tremorhub.com | geekdashboard.com | RESELLER | z87wm | 1a4e959a1b50034a | Thursday, April 11, 2019 8:13 PM |
| rubiconproject.com | geekdashboard.com | RESELLER | 16698 | 0bfd66d529a55807 | Thursday, April 11, 2019 8:13 PM |
| freewheel.tv | geekdashboard.com | RESELLER | 799841 | | Thursday, April 11, 2019 8:13 PM |
| freewheel.tv | geekdashboard.com | RESELLER | 799921 | | Thursday, April 11, 2019 8:13 PM |

ads.txt aggregator Features

1. We aggregate ~1.8 mil domains ads.txt files.
2. We crawl some 500k domains (which are important to customers) on daily basis.
3. The aggregate file can be downloaded from the portal. You can download last 30 days aggregate file.
4. We also have an Explorer, where you can visualize today's aggregate file. For example - you can check if a particular domain's ads.txt file is there or not. Get all direct relationships for this domain. It's really intuitive.
5. We recently introduced app-ads.txt aggregation file along with ads.txt aggregation file. You can select either ads.txt or app-ads.txt option in the explorer to analyze data that interests you.
6. Customers can submit their own domains to us. We add them to our daily crawl list if they are not already there.
7. We also generate a customer specific aggregate file of the domains submitted by the customer. We call it "myaggregates".
8. All of the above can be done via portal or public APIs. The API documentation as well as FAQs can be read from the ads.txt dashboard on the portal.

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What should I do about all this!?

What should I do about all this!?

- ads.txt, app-ads.txt
- sellers.json
- SupplyChain object
- OpenRTB 3.0
- Ads.cert
- AdCOM 1.0
- AdManagement API 1.0
- Content Taxonomy
- Ad Product Taxonomy
- OpenMeasurement
- OTT User Agent & Bundle ID
-!!!

Working Group Anti-Fraud Roadmap

| Initiative | Problem Addressed | Status |
|---|---|-------------------------------------|
| ads.txt for display | Misrepresented website ad inventory | First Released May 2017 |
| Open Measurement SDK | Inefficient software integration for verification and IVT detection | Released April 2018 |
| app-ads.txt for mobile & OTT | Misrepresented mobile app and OTT ad inventory | Released March 2019 |
| sellers.json, SupplyChain Object | Non-secure supply path transparency & business validation, identifying unknown resellers | Public Comment Release April 2019 |
| ads.cert: signed bid requests | Secure/Authenticated supply path transparency; lack of publisher trust of of SSPs on inventory representation | Released for Beta Adoption May 2018 |
| OTT Bundle ID & User Agent Technical Guidelines | Inefficient and inconsistent tracking in OTT | Expected Q3 2019 |
| Working Group Proposals | Continuing the fight! Get engaged! | ...2019... |

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CURT LARSON

CHIEF PRODUCT OFFICER
SHARETHROUGH



NAMIT MERCHANT

COO
MEDIA.NET



NEAL RICHTER

CHIEF ARCHITECT, GLOBAL AD PLATFORM
RAKUTEN MARKETING



JON WHITTICOM

EVP, PRODUCT
GROUPM

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CURTIS LIGHT

STAFF SOFTWARE ENGINEER
GOOGLE



NEAL RICHTER

CHIEF ARCHITECT, GLOBAL AD PLATFORM
RAKUTEN MARKETING

Long Term Security Projects in the OpenRTB Working Group

Curtis Light, Staff Software Engineer, Google

Dr. Neal Richter, Chief Architect, Rakuten Ad Platform



ADS.TXT Refresher

<http://mysite.com/ads.txt>

blueadexchange.com, 4536, DIRECT
greenadexchange.com, 12345, DIRECT, AEC242

Advertising
System
Domain

Seller Account ID
OpenRTB
Publisher.ID

Relationship Type
DIRECT vs
RESELLER

Certification
Authority ID

“TAG ID”

ADS.TXT Best Practices

- Only place entries in the file that you as a publisher can trace revenue from.
- Adding an entry to ads.txt that is giving permission to that entry to use your trade-name in inventory sales.
- Ask your partners to disallow your trade-name to be used by other account holders.
- Resist the social engineering of vendors you don't know asking for entries in your file.

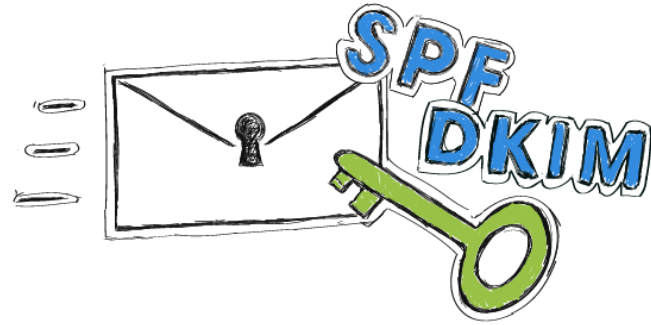
Authorization Vs Authentication

- *Authentication*
- Proof that who you say you are

- *Authorization*
- You are what you are allowed to do



Other Security Systems



Publisher

Buyer

Bid Request

Auction/Decision

Creative Fetch

Impression Notification

Message Generation

```
"id": "80ce30c53c16e6ede735",
"imp": [ {
  "id": "1",
  "banner": { "w": 300, "h": 250}
} ],
"site": {
  "domain": "www.example.com",
  "page": "https://www.example.com/",
  "publisher": {
    "id": "8953",
  }
},
"device": {
  "ua": "Mozilla/5.0 Chrome/69.0.3497.95",
  "ip": "216.3.128.255",
  "geo": { ... }
},
"user": {
  "id": "55816b39711f9"
  "ext": {
    "consent": "BOEFEAYOEFAY..."
  }
}
```

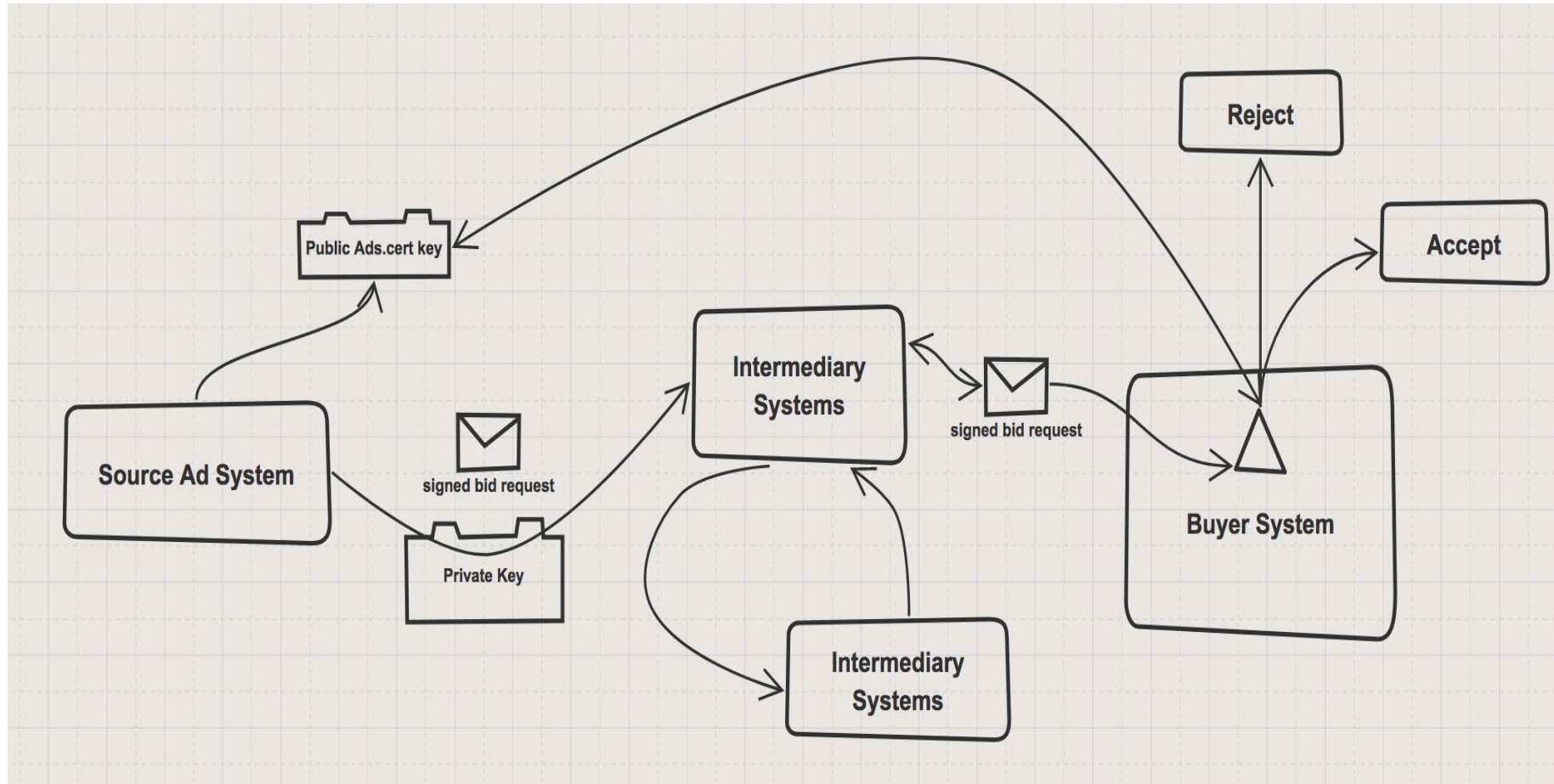
Summarize

```
bidder=4483
&exchange=greenadexchange.com
&ts=20181014T173023Z
&signer=goldpublisheradserver.com
&id=80ce30c53c16e6ede735
&imp.id=1
&imp.banner.w=300
&imp.banner.h=250
&site.domain=example.com
&site.page=https://www.example.com/
&site.publisher.id=83948
&device.ua=Mozilla/5.0%20Chrome/69...
&device.ip=216.3.128.255
&device.geo.country=USA
&device.geo.region=CA
&device.geo.city=los%20angeles
&user.ext.consent=BOEFEAYOEFAY...
```

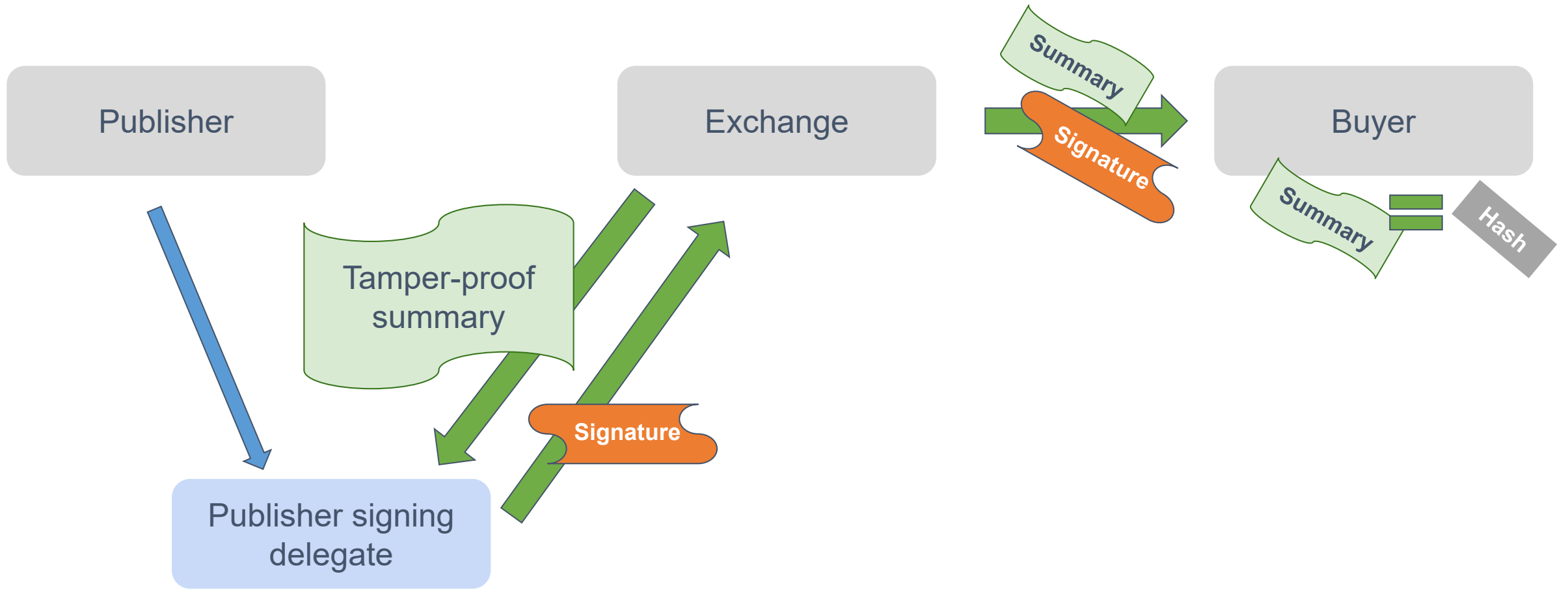
Hash

myMXws1BoXkTDQ0olhq1QsiHRWWL4yj1V0IuoK+PYOg=

Signed Bid Requests Proposal



Signed Impressions Proposal



Pros & Cons

- What is secured?
- For who?
- What is the benefit?
- How complex?

Get involved!

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MIKE MCNEELEY

VICE PRESIDENT,
PRODUCT MANAGEMENT
INDEX EXCHANGE



ALLISON SCHULTE

SVP, PRODUCT
AMNET GROUP



BENJAMIN DICK

PRODUCT DIRECTOR, DATA
IAB TECH LAB

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SHELLEY PINSONNEAULT

VP, PARTNERSHIP & STANDARDS
PUBLICIS MEDIA



BISMIT BORUAH

HEAD OF CLIENT SERVICES
INMOBI



MICHAEL ZACHARSKI

CEO
EMX DIGITAL



AMY KING

VICE PRESIDENT, PRODUCT MARKETING
PIXALATE

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Upcoming Innovation Days

SAVE THE DATE!

IAB Tech Lab Innovation Day: Data & Ad Tech
September 19 @ 9:00 am - 5:00 pm, San Francisco

IAB Tech Lab Innovation Day: Experience & Measurement
November 12 @ 9:00 am - 5:00 pm, New York City

Sponsorship opportunities available
email: *TechLab@iabtechlab.com*

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