



Advertising Integrity: Malvertising, etc.

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Today's Discussion

- OTA – Background & Ad Integrity concerns
- Anatomy of Malvertising
 - Rising complexity in digital ad ecosystem
 - No. of players, more M2M, layers of hand-offs
 - Advertising increasingly a threat vector of choice
- Costs to business and users huge
 - Attention beginning, but industry not yet focused
- Solutions different vs Email
 - Increasing target precision and reach
- Damage to online brands, trusted sites and integrity of advertising
- What OTA is doing

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Who is OTA?

Mission to enhance online trust and empowering users, while promoting innovation and the vitality of the internet.

- Goal to help educate businesses, policy makers and stakeholders while developing and advancing best practices and tools to enhance the protection of users' security, privacy and identity.
- Collaborative public-private partnerships, benchmark reporting, meaningful self-regulation and data stewardship.
- U.S. based 501(c)(3) tax-exempt charitable organization.
- Global focus & charter.
- Supported by over 100 organizations including retailers, commerce sites, interactive marketers, members of the advertising ecosystem and technology providers.



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Global Collaboration



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OTA and Ad Integrity (our concerns)

- Digital Malvertising increasing
 - Cyphort: +325% during 2014; RiskIQ +260% first half 2015 vs YA
 - Public reports getting frequent & louder (MalwareBytes, Symantec)
- Evolving threat with ability to be pervasive and damage legitimate brands, users and business
- Non-Participatory, highly dynamic and scalable
 - 1 email = 1 user, one set of credentials
 - 1 ad on a Top 100 legitimate site = *millions* of users
- Ad/Publishers taking steps against malware, but not yet focused on user risk side
- Consumer privacy risks & lack of consumer control of data
- Rise of ad blocking a two-edge sword

Undermines trust and integrity in all advertising

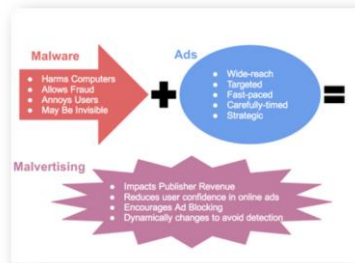


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What Is Malvertising?



- Malware + Advertising
 - Malicious computer code with seemingly harmless ads.
 - Draw a user to harmful or deceptive content through 'click-baiting' or forged/stolen/misleading content
- OR
- May directly infect a device with malware damaging data, steal PII and/or take control of the device.

Source: Anti-Malvertising.com

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What's the big deal?

- Digital ad spend will approach \$60Bil this year¹
- Next year, digital spend will outpace TV spend²



- As much as half of non-mobile display now programmatic¹

¹ eMarketer – May 19, 2015

² Wall Street Journal – Oct 15, 2015

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What's the big deal?

- Trust in ads on a rapid decline
- Use of ad blockers sky rocketing
- Publishers revenue being marginalize by the supply chain

Contributing Factors -

- Privacy – the ad industry has failed to provide a mechanism to opt out of data collection and reluctance of the industry to embrace DNT
- Security- Malvertising; real measurable harm is occurring
- Performance
- Invasiveness – pop ups / video which auto play
- Blurring the line – native content

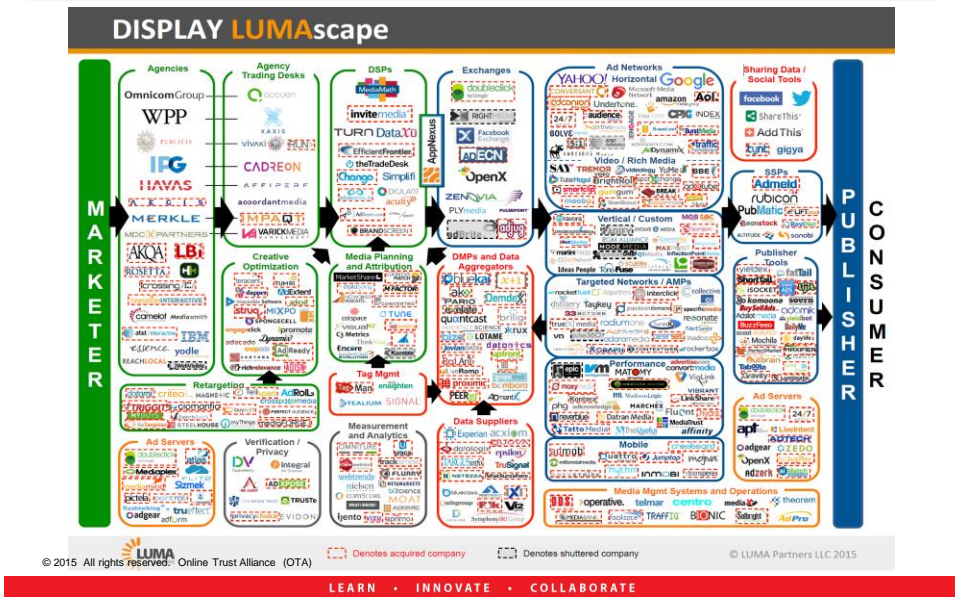
Industry starting to recognize issues

- Ad industry and publishers starting to address problems in the digital ad ecosystem
- Formation of key groups like iab's Trustworthy Accountability Group (TAG) – internally focused
- Internal efforts to scan ads, servers and networks for malicious activities
- Specialty companies working to provide security and response services

**But this ocean is vast
Threats and costs keep rising**

Complexity 2015

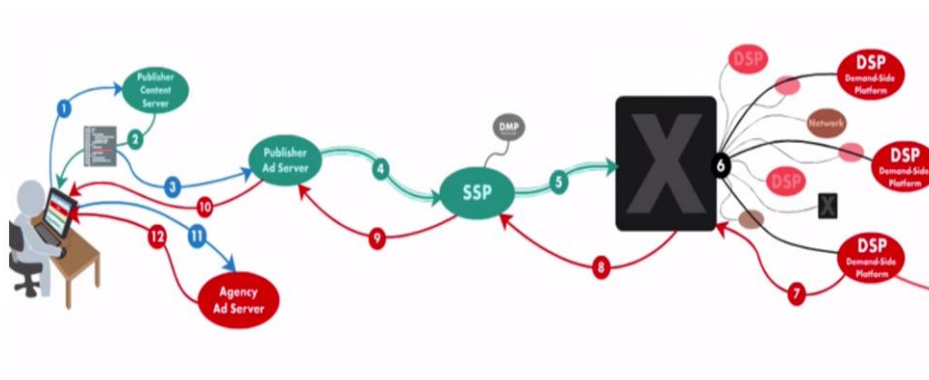
More w/each new LUMAscape



Rise of Programmatic

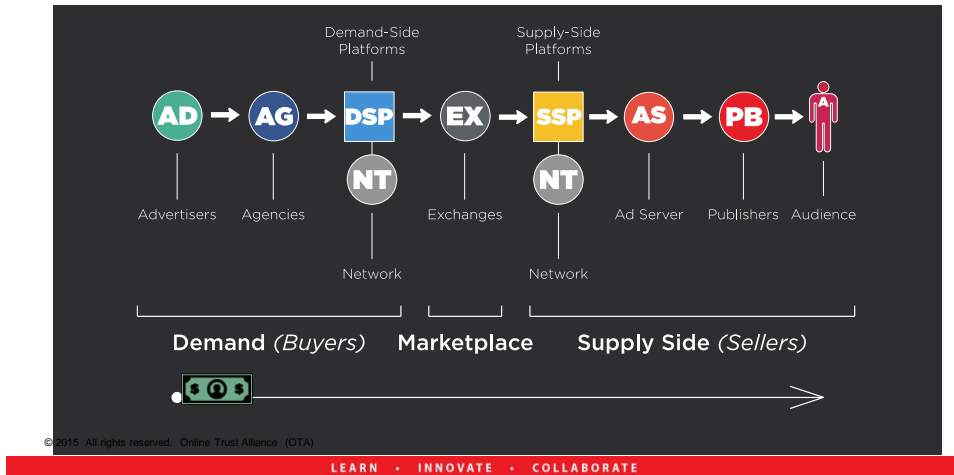
Layer upon layer of handoff in <10 milliseconds

- A really good 5min YouTube video explanation of Real Time Bidding ad flow from **iab**: <https://www.youtube.com/watch?v=-GlgI9RRuJs>



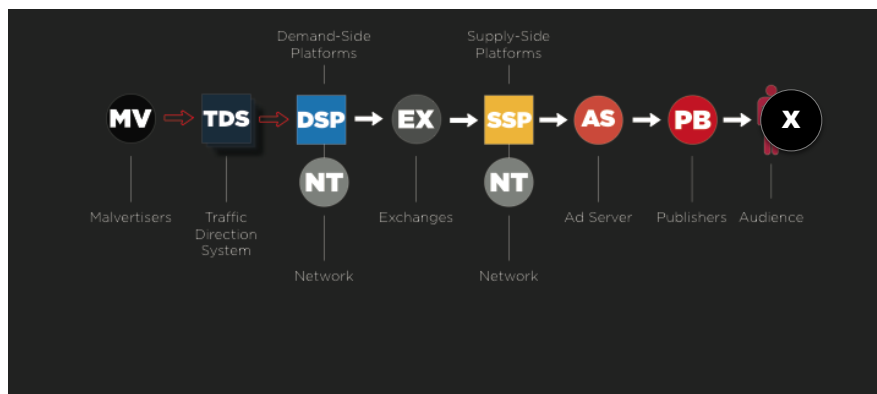
Malvertising infiltration

- Highly simplified flow of ad to user and payment to publisher



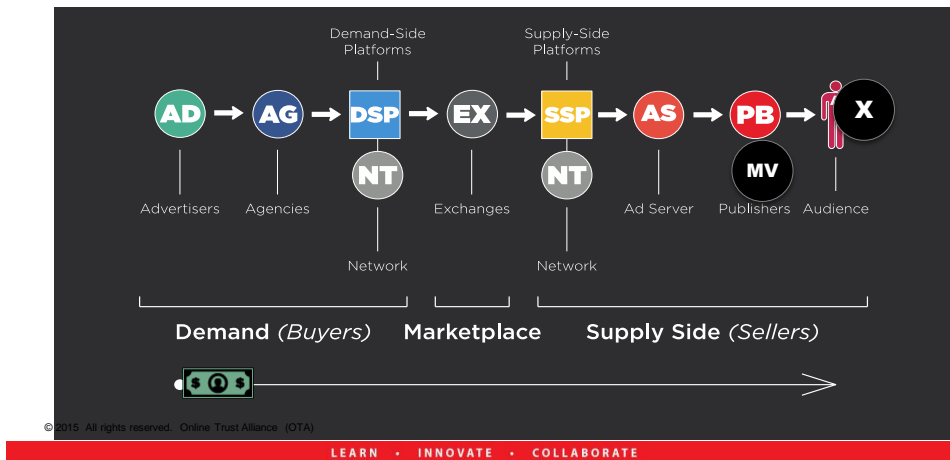
Malvertising infiltration

- Malicious actor inserts into system
- Can attack user directly – steal data, ransomware, etc.



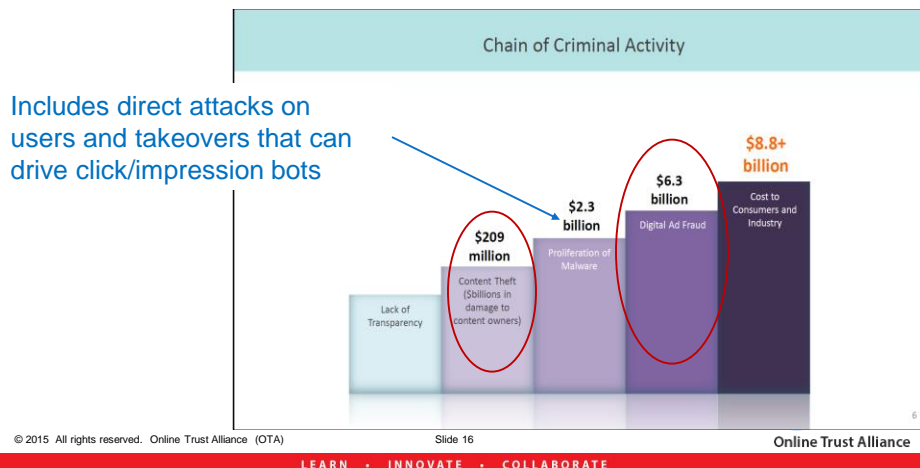
Malvertising infiltration

- Malicious actor can utilize unknowing users as part of process to syphon advertiser's \$ away from legitimate publishers



Financial damage in the \$Billions

- Industry has understandable emphasis on large \$ ad fraud
- OTA focusing on User issues



Looking at Digital Ad issues vs Email

Email

- Sender can be known
- Established methods to authenticate, block, etc.
- Industry mature in recognizing risk and taking action toward solutions
- Improved recognition and handling of spam
- Improving user education

Digital Ads

- 'Sender' unknown (and nearly impossible to trace today)
- Few/no established methods to combat effectively
 - Few/no industry standards, best practices
- Complexity & speed limit interception methods
- Industry 'young' in recognizing risk and taking action
- *User not necessarily involved*
- Hyper-targeting provides selective, profitable attack while making it harder to fight
 - (think spearphishing vs spam)

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Precision combined with reach

- Today, any segment that can be targeted for advertising can be targeted for malvertising
- Explosion of consumer behavior data adds to malvertising risk and the need for privacy consideration
- Hyper-targeting can focus on specific types of people, specific online behaviors, locations, IP addresses, etc.
- Allows ever more customized fraud which puts users and companies at ever greater privacy risk

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OTA's Past Malvertising Work

- 2010 formation of Malvertising Working Group.
 - Focused on educating and empowering ad supply chain
 - Rallying for: partner vetting, campaign monitoring, 3rd party monitoring, white-listing/certification, data sharing, transparency
- 2013 OTA Risk Evaluation Framework
 - Utilized by various platforms/networks (Twitter, Vivaki, Zedo, etc.) to check partners and assess risk
- 2014 OTA Malvertising Remediation Guide
 - Practical action steps to address infiltration
- 2014 OTA Senate Hearing on Malvertising
 - Provided Testimony and written response



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Progress on Obstacles & Hurdles

Last Year's List

- Perceived as not a significant issue by some trade groups
- Complexity of the ecosystem and supply chain
- Cybercriminals can remain hidden and anonymous
- Like spam, a very low cost and amplified effort
- Consumer education has little impact
- Inability of the site (publisher) to have a line of sight
- Perceived anti-trust and competitive roadblocks to share threat intelligence and work together

Today

- Industry and trade group attention rising, but focused on fraud
- Complexity -- more than ever and continues to expand
- Beginning of discussions on identifying trusted partners
- Low cost with high ROI for bad actors continues
- User education still of limited help; technology often invisible to users
- Line of site still a challenge exacerbated by growing complexity
- Increased precision & micro targeting a growing concern

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OTA 2015 Malvertising Work

- Revised and re-launched working group as:
 - Advertising & Content Integrity Working Group**
- Facilitate multi-stakeholder commitment to develop meaningful guidance to prevent, detect & mitigate ad based threats.
- Initiatives
 1. Responsible Malicious Ad Disclosure process
 2. Risk Framework Update
 3. Privacy & Security in “acceptable ads” definitions
- Support/facilitate sharing of threat intelligence data and collaboration with industry and law enforcement

OTA Advertising & Content Integrity WG

Additional 2015/16 topics:

- Rise and impact of ad blocking
 - White-listing and ‘acceptable ads’
- Hyper-targeting and privacy
- Continued work on consumer choice in tracking and targeting (e.g., Do Not Track, Opt-out, etc.)
- Blurring of “Native” ads and Content

Resources

- OTA Advertising & Content Integrity Working Group
<https://otalliance.org/resources/advertising-integrity-fraud>
- Join OTA and participate in the working group
<https://otalliance.org/membership/membership-sponsorship-levels>
- *Annual Meeting, Congressional Dinner, IoT Trust Summit & Hill staff lunch **November 16-19**. Contact if interested*

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