



**MEDIA
MONTHLY**

REPORT SUMMARIZING
SELECT MEDIA, EVENT TECH AND
RETAIL TECH ACTIVITY

MARCH 2019

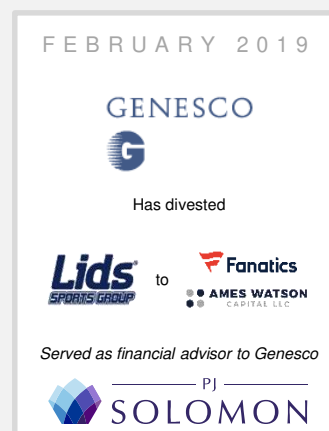


— PJ —
SOLOMON
unrivaled wisdom

SPECIAL HIGHLIGHTS IN THIS ISSUE

- CES 2019 – KEY DEVELOPMENTS AND OBSERVATIONS
- 2019 PREDICTIONS FOR PRO AV
- INCREASED COMMUTER TRAFFIC PRESENTS A GOLD MINE FOR SCREENS OUTSIDE OF THE HOME
- STREAMING UPDATE
- ROKU'S ADVERTISING MODEL CONTINUES TO TRANSFORM
- THE HOTTEST ADVERTISING TREND OF 2018? BILLBOARDS.
- OOH EXPERIENCES STRONG Q4 GROWTH
- THE EDISON RESEARCH DIGITAL OUT-OF-HOME STUDY

RECENT PJ SOLOMON TRANSACTIONS



MEDIA & TECH SERVICES

MARK A. BOIDMAN

Managing Director
212.508.1661 (w)
917.526.1092 (m)
mboidman@pjsolomon.com
Twitter: @MBoidman

BEN ZINDER

Director
212.508.1621 (w)
646.522.8353 (m)
bzinder@pjsolomon.com

JONATHAN BERGER

Senior Associate
646.378.4062 (w)
973.464.8979 (m)
jberger@pjsolomon.com

CHRISTIAN BERMEL

Senior Analyst
646.708.8478 (w)
860.371.5882 (m)
cbermel@pjsolomon.com

CAPITAL MARKETS

JOE STEIN

Managing Director
212.508.1662 (w)
203.550.2184 (m)
jstein@pjsolomon.com

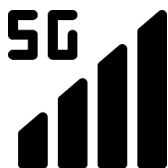
CES 2019 – KEY DEVELOPMENTS AND OBSERVATIONS

Throughout a week in Vegas that featured 4,500 exhibiting companies and 188,000 industry professionals, several trends dominated the conversation



Source: CES Website.

1



5G

- 5G will drastically improve the mobile experience for consumers, enabling the delivery of an increased volume of high-quality content that will revolutionize multiple industries

2



CONNECTED
DEVICES

- Devices, such as cars and home assistants, will increasingly be designed to facilitate instant access to entertainment, productivity, ecommerce, payment and service tools

3



VOICE
TECHNOLOGY

- In addition to home assistants, voice is finding its way into TVs, cars and other home appliances
- Voice technology has the potential to completely upend the consumer purchase and replenishment cycle

4



AUTONOMOUS
VEHICLES

- Companies are fiercely competing to bring autonomous vehicles to market
- In addition, most major companies touted products that could make their way into autonomous vehicles

2019 PREDICTIONS FOR PRO AV

Original article by Megan Dutta and available on AV Network



Software designed for remote monitoring and control will continue to stake its claim in the AV industry. Convention centers, conference rooms, city councils and government buildings are increasingly filled with complex equipment and gear. Intelligent software solutions will allow IT managers to assist with remotely monitoring the hardware.

*Kevin Smith
Director of Integrated Systems Sales
Shure*



Consumers in all walks of life expect an interactive experience no matter where they are – from retail stores and restaurants to corporate headquarters and schools. The AV industry will continue moving towards personalization and self-service, making it easier to interact and achieve personalized results.

*Kristin Roubie
Senior Channel Sales Manager
Elo*



2019 might be the year that AV integrators start focusing on acquiring IT, life safety and security firms, or build up skill sets in those areas so they can do so in the future. Finding, retaining and training talent will remain our number one barrier to growth in this area.

*Chuck Wilson
Executive Director
NSCA*



2019 will be the year that networking becomes the norm for the AV industry. Breakthroughs on the product side will make networked audio and video more pervasive across many new applications. 2019 will also be the year that IT departments finally embrace networked AV products.

*Josh Rush
SVP of Marketing and Products
Audinate*



We will see AV continue to transition to a more IT-centric platform for the delivery of video and unified communications services. This new IT-centric world provides significant opportunities for AV/UC as-a-service.

*Frank Pellkofer
Co-Founder and CEO
Uteology*



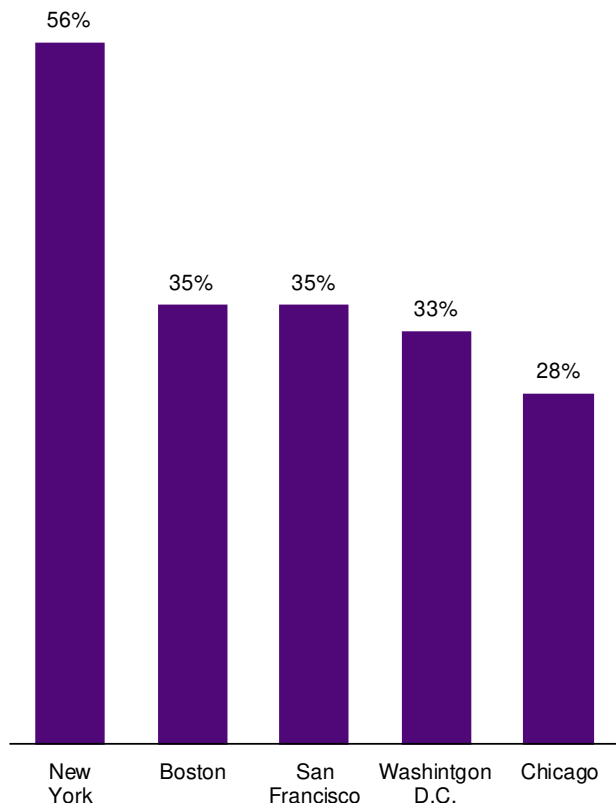
We anticipate continued growth in huddle and team rooms – creating easy-to-use meeting rooms that facilitate collaboration. Room schedulers that help facility planners with analytics on room usage is also very popular.

*Laura Moorhead
VP of Sales
Neurilink*

Source: AVNetwork.

INCREASED COMMUTER TRAFFIC PRESENTS A GOLD MINE FOR SCREENS OUTSIDE OF THE HOME

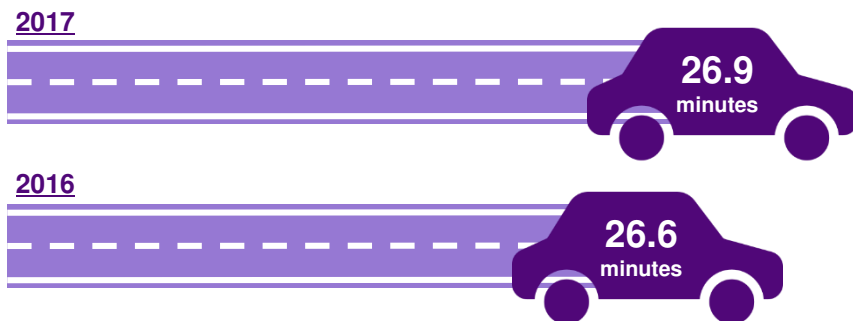
% OF COMMUTERS USING PUBLIC TRANSPORTATION



“We love a good traffic jam... we are all about eyeballs on billboards, and the increased amount of traffic is helping us.” – John Miller, Lamar Advertising, VP Sales and Sales Operations

“The longer the commute and the more time they’re in the car, the more they’re looking to enjoy the experience in the car or to make it at least more tolerable...” – Robert Pittman, iHeart Media, Chairman and CEO

AVERAGE ONE-WAY TRIP FOR COMMUTERS IN THE U.S.



Added 2.5 hours round trip

to the average time each person spent commuting over the course of the year

Source: *The New York Times*.

STREAMING UPDATE

Established companies continue to strengthen their position as new competitors and trends emerge

CONTENT WARS CONTINUE



In 2018, **Netflix** spent \$12 billion on content, which analysts expect to grow ~25% to \$15 billion in 2019

- As a result of increased content offerings, Netflix raised the price of all membership tiers by \$2.00 in January 2019 (the stock surged over 6% on the day of the announcement)



In 2019, **Amazon** is projected to spend \$7.5 billion on video content, with plans to release 10 movies and 20 direct-to-service titles annually along with other original content



Hulu added 8 million U.S. subscribers in 2018, bringing its total subscriber base to 25 million as it plans to accelerate its content spending



CBS announced that its CBS All Access and Showtime platforms currently have more than 8 million combined subscribers, which they expect to reach 25 million by 2022

NEW COMPETITORS EMERGE...



Disney launched ESPN+ in 2018, which has grown to 2 million subscribers and is currently planning to launch Disney+ in late 2019



Apple is reportedly targeting April 2019 to launch its new video streaming service, which will feature free and subscription based-original content, with Apple investing \$2 billion in content production



In January 2019, **Viacom** acquired PlutoTV, an ad-supported platform that runs shows from Discovery, Viacom's AwesomenessTV, and news content broadcast networks like CBS and NBC

- PlutoTV currently has about 12 million active monthly viewers



Charter is set to launch Spectrum TV Essentials, an OTT video service that will cost customers \$14.99 a month and feature programming from Viacom, Discovery, A&E and AMC Networks, among others



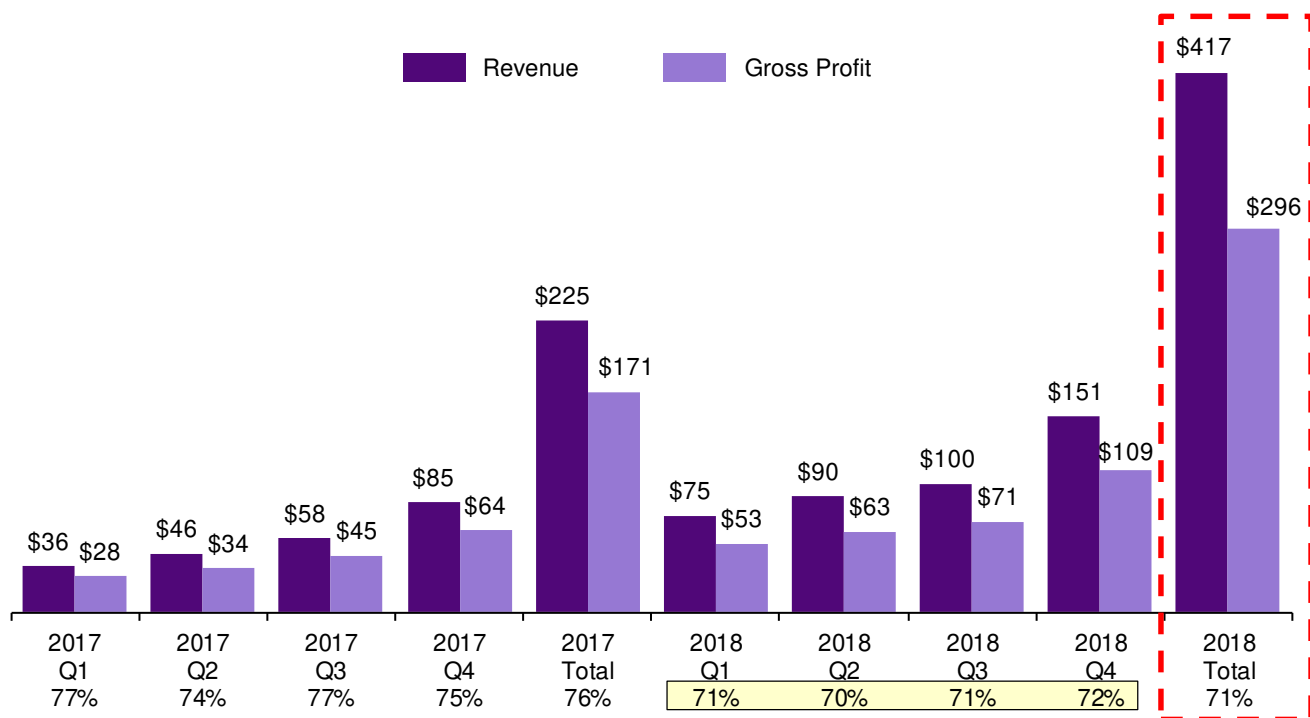
BBC and **ITV** announced plans for a UK streaming service called BritBox, which will feature existing content as well as new premium content for a "competitive" subscription fee

ROKU'S ADVERTISING MODEL CONTINUES TO TRANSFORM

In Q1 2018, platform revenue exceeded player revenue for the first time, and Roku expects that trend to continue going forward

PLATFORM SEGMENT

- Revenue generated through advertising, audience development, content distribution and licensing
 - **Video ads:** Sell premium 15 and 30 seconds spots that are targeted, interactive and measurable, with ad inventory consisting of a combination of first-party and third-party inventory (Roku Channel, Roku Direct Publisher channels, and inventory accessed as part of content distribution deals)
 - **Audience development:** Leverage robust set of tools for content publishers to build audiences with a variety of ad placements on the Roku home screen and screen saver, to promote content publishers and their services to users
 - **Content distribution:** Negotiate distribution deals with content publishers that include revenue sharing arrangements with providers of SVOD and TVOD services, access to inventory on AVOD channels, etc.



2018 GM decline as a result of ASC 606 (revenue recognition from customer contracts) reporting standards change

Source: Publicly available information.

THE HOTTEST ADVERTISING TREND OF 2018? BILLBOARDS.

As other traditional advertising mediums flounder in the digital age, billboards have managed to thrive by adapting to the times

Original article written by Zachary Crockett on November 30, 2018. Full article available at The Hustle.

TODAY, THE DEMAND FOR BILLBOARDS IS REAL

- In advertising parlance, billboards fall under the larger category of “out of home” (OOH) ads
 - Billboards make up 66% of the OOH market
- Across the US, some 370k billboards are in active operation, with ~15k new ones added each year, owned by more than 1,200 vendors
- This type of advertising only makes up about 7% of the total ad spending pie, but while radio, print and television ads have declined in prominence, **OOH ads have maintained steady growth**

31

Consecutive Quarters of Growth

\$8B

2018 OOH Market Size (a)

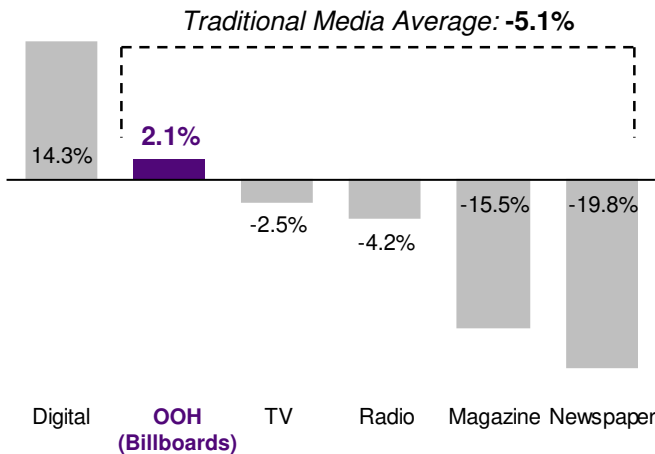
4.5%

2018 OOH Market CAGR (a)

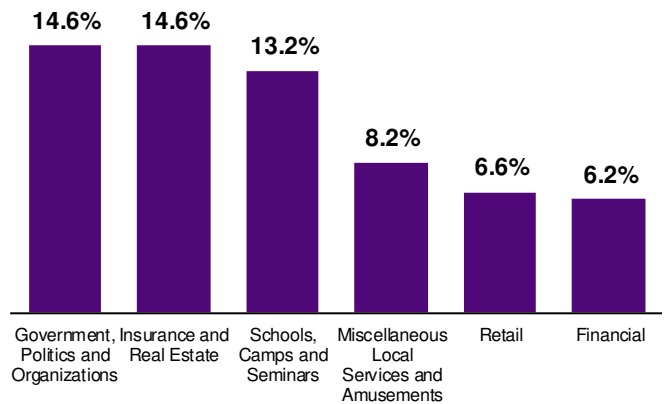
THE CASE FOR BILLBOARDS

- By working with digital instead of fighting against it, the age-old billboard industry has managed to stay relevant, desirable — and, most importantly, effective
 - A recent Nielsen study found that combining billboards and digital ads can lead to a 4x increase in online activation
 - Other studies have shown billboards can lead to lifts of 54% in search traffic, 38% in Facebook interaction, 25% in Instagram engagement and 47% in sales activation

PROJECTED GROWTH (2018) BY ADVERTISING SECTOR (b)



2018 REVENUE GROWTH BY CATEGORY (a)








(a) Source: OAAA, Kantar Media.

(b) Source: MAGNA projections (March 2018).

OOH EXPERIENCES STRONG Q4 GROWTH

- In February and March, Clear Channel Outdoor, JCDecaux, Lamar, National Cinemedia and OUTFRONT Media all released Q4 2018 earnings
- Revenue growth was very strong for pure OOH operators, with OUTFRONT posting double digit sales growth of 12.7% following a second consecutive strong quarter

Q4 REVENUE GROWTH

	 Clear Channel	 JCDecaux	 LAMAR	 NCM NATIONAL CINEMEDIA	 OUTFRONT
Reported	+2.6%	+8.1%	+7.4%	(2.3%)	+12.7%
Adjusted^(a)	+5.0%	+5.4%	+5.6%	N/A	+12.6%

- OUTFRONT and Lamar both topped consensus EBITDA estimates, with OUTFRONT's Q4 adjusted OIBDA up 18.7% over last year and 6.1% over Street estimates
- In addition, 2019 guidance was generally strong for operators
 - JCDecaux expects adjusted organic revenue growth to be up above 5% in Q1
 - Lamar expects 3% pro forma top-line growth for the year, with full year currently pacing stronger than 3% but Q1 pacing at 2%
 - NCM projecting 2019 revenue growth between 1.9% and 5.3%
 - OUTFRONT expects high-single-digit revenue growth in Q1

Source: Company filings and earnings call transcripts.

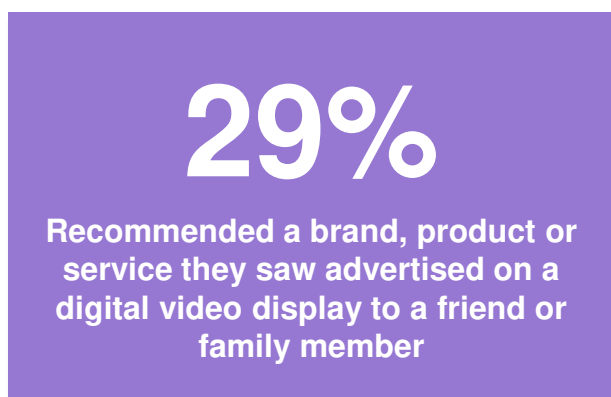
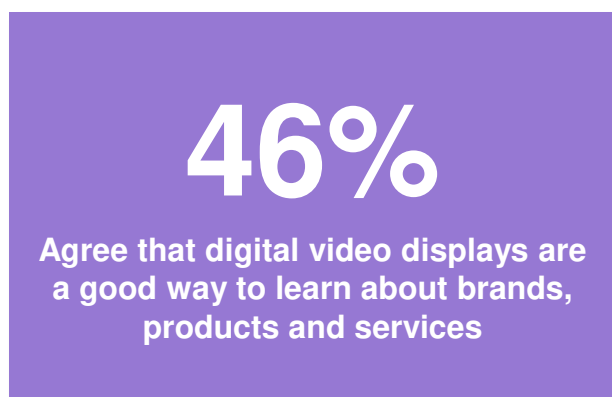
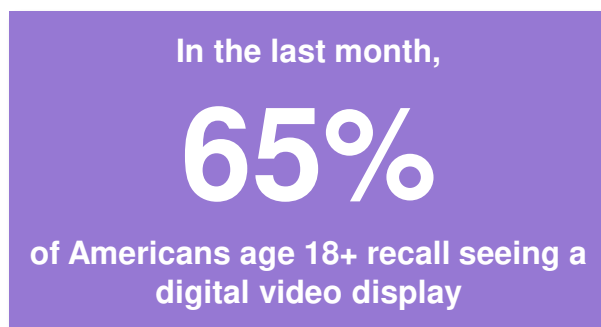
(a) Adjusted for acquisitions, divestitures and foreign exchange effects.

THE EDISON RESEARCH DIGITAL OUT-OF-HOME STUDY

Research report published by Edison research.

DIGITAL OUT-OF-HOME PROVES EFFECTIVE

- Growing number of Americans are subscribing to ad-free content and blocking online advertising, limiting their exposure to digital ads
 - Brands are finding it increasingly difficult to reach consumers
- **Digital Out-of-Home (DOOH) advertising is one of the few channels that remains strong**
- A study conducted by Edison Research found that the highest recall for screens were those located in where they could **immediately influence a transaction**
 - Gas stations, convenience stores, malls and retail stores
- Another critical factor for recall is locations which have a **captive audience**
 - Airports, sporting events and movie theaters
- **Consumers consider DOOH displays to be highly effective** in conveying information and messages about products



Source: National survey of 1,013 Americans ages 18+ conducted by Edison Research.

SECTOR NEWS

Broadcasting / Telecommunications

- **3/11: Apple** confirmed that it will hold an event on March 25th, where it is expected to announce its TV streaming and Apple News subscription services
- **2/27: Sunrise Communications**, a Switzerland-based provider of mobile telephony, fixed network and internet services, acquired **UPC Switzerland**, a Switzerland-based company engaged in providing analog and digital radio and television, broadband internet and business application services, from **Liberty Global** for **\$6.3B**
- **2/25: KKR** acquired **Universum Film GmbH**, a Germany-based film distributor, from **Mediengruppe RTL Deutschland** for an undisclosed amount
- **2/22: TVA Groupe**, a Canada-based media company involved in television production and distribution, acquired **Incendo Media**, a Canada-based company producing and distributing television programs, for **\$15M**
- **2/21: KKR** acquired **Tele Muenchen Gruppe**, a Germany-based company engaged in television production, distribution and broadcast from private investor **Herbert Kloiber** for an undisclosed amount
- **2/8: Gray Television**, a US-based television broadcast company that operates television stations and digital assets, acquired three television stations from **United Communications Corp**, a US-based newspaper publisher, for **\$45M**
- **1/31: MJH Associates**, a US-based healthcare communications company that offers education, research and medical media, acquired **the Life Sciences Media Brand Portfolio of Informa PLC**, the US-based media assets of UBM Life Sciences Group which provides event information and marketing services, for **\$100M**
- **1/30: Hargray Communications Group**, a US-based provider of telephone, cable and internet services, acquired **Dark Fiber Systems**, a US-based fiber leasing construction and installation company from private investor **Charles Nichols** for an undisclosed amount
- **1/28: GateHouse Media**, a US-based company engaged in publications of print and online media, acquired the publishing division of **Shurz Communications**, a US-based diversified communication company which consists of six segments, for **\$30M**
- **1/24: America Movil SAB de CV**, a Mexico-based provider of wireless communication services, acquired **Telecomifca Moviles El Salvador**, an El Salvador-based company providing mobile and fixed telecommunications services, for **\$315M**
- **1/22: Viacom**, a US-based television company, acquired **Pluto TV**, a US-based provider of online television service broadcasting TV shows, movies and internet videos, for **\$340M**
- **1/21: Telrite Holdings**, a US-based provider of telecommunication services, acquired **Locus Telecommunications**, a US-based provider of long distance, wireless, point-of-sale and carrier services from **KDDI America** for an undisclosed amount
- **1/15: Bluebird Network**, a US-based provider of high bandwidth network solutions to enterprise and carrier customers, acquired the Midwestern fiber business of **Uniti Group**, a US-based company engaged in acquiring and constructing fiber optic broadband networks and data centers, for **\$37M**
- **1/11: SDC Capital Partners**, a US-based private equity firm, acquired and undisclosed majority stake in **Summit Infrastructure Group**, a US-based provider of custom network and bandwidth infrastructure services from **Columbia Capital** for an undisclosed amount
- **1/7: CBPE Capital**, a UK-based private equity firm, acquired **Ideal Networks**, a UK-based company engaged in providing network cabling & devices product and services from **Ideal Industries** for an undisclosed amount
- **12/21: M7 Group**, a Luxembourg-based satellite television service provider, acquired **UPC DTH**, a Luxembourg-based direct-to-home satellite TV service provider, from **Liberty Global** for **\$205M**
- **12/19: Black Ridge Acquisition**, a US-based holding company, acquired **WTP Enterprises**, a US-based media and entertainment company, and **Allied Esports International**, a US-based esports entertainment company, from **Ourgame International** for **\$151M**
- **12/7: NEP Group**, a US-based company engaged in outsourcing tele production services, acquired **Broadcast Sports International**, a US-based provider of wireless technology and communication systems services for sports television broadcasting, from **Slate Capital** for an undisclosed amount

Source: Company press releases and Wall Street Research.

SECTOR NEWS

OOH Media

- **2/28: The EYE Reporter** conducted an interview with **EMC's Betsy McLarney** who shared her insight on the OOH industry, saying "OOH is projected to grow 3% in 2019... [and] most of this growth will be a direct result of digital asset conversion and advertising that occurs in real life where there is no ad blocking"
- **2/21: Branded Cities Network**, a Canada-based digital signage media company, acquired an additional billboard in Lincoln Park, Chicago from **Red Star Outdoor**, a Chicago-based out of home signage operator, in an all-cash deal for an undisclosed amount, bringing BC's **total Chicago billboard faces to 22**
- **1/23: Lamar Advertising Company**, a US-based company engaged in outdoor advertising, issued a private offering of an additional **\$250M of 5.75% Senior Notes** due in 2026
- **12/21: Lamar Advertising Company**, a US-based company engaged in outdoor advertising, acquired the billboard operations of **Fairway Outdoor Billboard**, which includes more than 8,500 billboard faces including 135 digital displays, for **\$419M**
- **12/19: Pacific Outdoor**, a US-based provider of outdoor advertising services, acquired the Seattle advertising portfolio of **Total Outdoor Corp**, a US-based outdoor advertising provider, for an undisclosed amount.
- **12/17: Prismaflex International**, a France-based outdoor advertising company that provides printing, assembly and transportation of faces for scrolling signs or traditional billboards, acquired a **51% stake** in **FPI Affiches**, a France-based company that specializes in preparation and finishing for scroll panels and glue boards, for an undisclosed amount
- **12/13: M3 Effect**, a US-based marketing and communications agency, acquired **The Partnership**, a US-based advertising company providing a wide variety of advertising services including outdoor advertising, for an undisclosed amount
- **12/3: JCDecaux SA**, a France-based outdoor advertising company, acquired a majority stake in **Publiroute (Dewez)**, a Belgium-based billboard company that operates 15,000 displays across Belgium, for an undisclosed amount

Radio / Music

- **2/15: Apollo Global Management** acquired the radio, print and 13 broadcast TV stations of **Cox Media Group**, a US-based provider of communications, media and automotive services for an undisclosed amount
- **2/13: Educational Media Foundation**, a US-based radio broadcasting service provider, acquired six radio station assets from **Cumulus Media**, a US-based operator of radio stations, for **\$104M**
- **2/6: Spotify**, a Sweden-based provider of digital music streaming services, acquired **Anchor FM**, a US-based provider of podcast creation, publishing and monetization services for **\$100M**
- **2/6: Spotify** acquired **Gimlet Media**, a US-based podcasting and digital media company for **\$200M**
- **1/30: TPG Capital**, a US-based private equity firm, acquired an undisclosed stake in **Mavin Records**, a Nigeria-based record label, for an undisclosed amount
- **1/25: Lyric Capital Group**, a US-based publishing company, acquired **Spirit Music Group**, a US-based music publishing group, from **Pegasus Capital Advisors** for an undisclosed amount
- **1/8: Peermusic.com**, a US-based online independent music publisher, acquired **Music Cube**, a South Korea-based independent music publisher, for an undisclosed amount
- **12/20: HT Media**, an India-based print media company, acquired a 25% stake in **Next Mediaworks**, an India-based radio broadcaster, for **\$6.4M**
- **12/7: Apple** acquired **Platoon**, a UK-based platform that allows musicians to create and distribute music, for an undisclosed amount
- **12/5: Srdjan Milovanovic**, a Greece-based private individual having interest in companies engaged in radio and TV broadcasting, acquired **the Serbia and Montenegro Media Operations of Antenna Group SA**, a Greece-based media company engaged in radio and TV broadcasting, for **\$204M**
- **12/5: Stratton Radio Broadcasting**, a US-based radio broadcasting company, acquired the **WYLF AM 850 Radio Station** from **MB Communications**, a US-based radio station operator, for **\$285K**

Source: Company press releases and Wall Street Research.

SECTOR NEWS

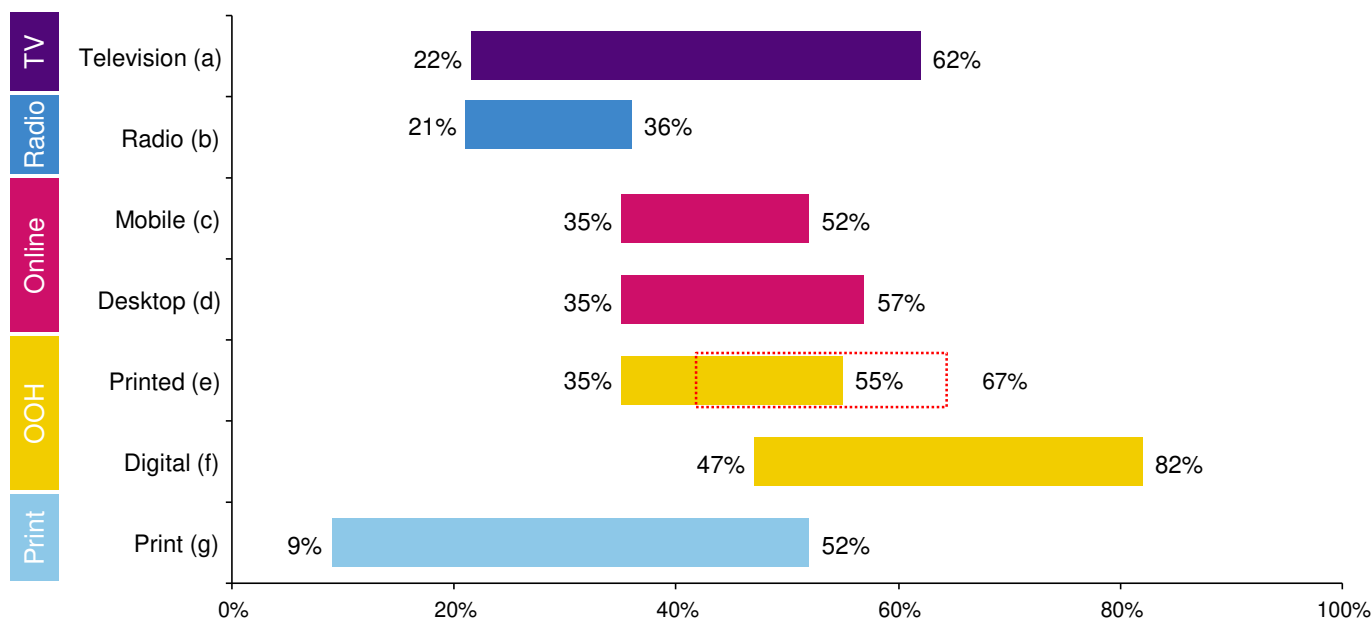
Other Key Digital Media and Tech Headlines

- **2/26: Outbrain**, a US-based company engaged in content discovery, acquired **Ligatus GmbH**, a Germany-based company engaged in performance marketing services, from **Gruner + Jahr GmbH** for an undisclosed amount
- **2/25: Ideanomics**, a US-based next generation artificial-intelligent & blockchain-powered fintech company, acquired **SolidOpinion**, a US-based commenting platform that enables members to earn points for being engaged in the discussion, for **\$9M**
- **2/15: Hellman & Friedman / Blackstone Consortium** acquired **Scout24 Holding AG**, a Germany-based operator of digital marketplaces in the real estate and automotive sectors, for **\$6.4B**
- **2/6: Main Street Capital**, a US-based private equity firm, acquired **CompareNetworks**, a US-based provider of media, marketing, and technology tools for health product manufacturers, for an undisclosed amount
- **2/4: Insignia Capital Group**, a US-based private equity firm, acquired an undisclosed minority stake in **MediaAlpha**, a US-based marketing technology company which operates exchange platforms that facilitate transactions between advertisers and publishers of performance media, from **White Mountains Insurance** for an undisclosed amount
- **2/1: Pensare Acquisition**, a US-based blank check company, acquired **U.S. TelePacific Corp**, a US-based provider of local and long distance voice, dedicated internet access and private networking, from **Investcorp** and **Clarity Partners** for **\$965M**
- **1/30: BV Investment Partners**, a US-based private equity firm, acquired an undisclosed minority stake in **RKD Group**, a US-based company that provides omnichannel fundraising and marketing services to the nonprofit sector for an undisclosed amount
- **1/30: CACI International**, a US-based international information systems, high technology services and professional services company, acquired **LGS Innovations**, a US-based company engaged in providing network solutions to government and commercial organizations, from **Madison Dearborn Partners** and **CoVant** for **\$750M**
- **1/23: Cision**, a US-based provider of software, services and tools to the public relations industry, acquired **Trendkite**, a US-based provider of PR and media monitoring software to agencies and corporate brands, from **Noro-Moseley Partners, Mercury Fund, Silverton Partners, Capital Factory** and **Dreamit Ventures** for **\$225M**
- **1/22: Perforce Software**, a US-based provider of enterprise scale software solutions, acquired **Rogue Wave Software**, a US-based provider of software development tools and components for computing applications, from **Audax Private Equity** for an undisclosed amount
- **1/18: Huntington Ingalls Industries**, a US-based company that designs and repairs a variety of ships, acquired **Fulcrum IT Services**, a US-based IT solutions provider for government customers, from **Boyne Capital** for an undisclosed amount
- **1/18: Globant SA**, an Argentina-based technologies services provider, acquired **Avanxo**, a Columbia-based provider of customer management services, for **\$49M**
- **1/17: Dentsu**, a Japan-based company engaged in providing communication-related services with a focus on advertising, acquired **Filter**, a US-based digital marketing services company, for an undisclosed amount
- **1/16: Golden Gate Capital**, a US-based private equity firm, acquired **Infor**, a US-based provider of enterprise business solutions and software, for **\$1.5B**
- **1/16: Fiserv**, a US-based provider of information management systems, acquired a majority stake in **First Data**, a US-based provider of e-commerce and payment solutions, from **KKR** for **\$22B**
- **12/19: Dentsu**, a Japan-based provider of communication services focusing in the advertising and marketing industries, acquired **Digital Evolution Group**, a US-based company engaged in digital marketing agency services, for **\$150M**
- **12/6: Boku**, a US-based provider of direct carrier billing-based mobile payment services, acquired **Danal**, a US-based provider of software for mobile identity and authentication solutions, for **\$101M**

Source: Company press releases and Wall Street Research.

ADVERTISING EFFECTIVENESS – PJ SOLOMON STUDY AND RECALL COMPARISON ANALYSIS

- Based on PJ SOLOMON independent study of the five primary advertising channels
- Advertising recall defined as advertising effectiveness in which respondents were exposed to an advertisement and then at a later point in time, respondents were asked if they remembered the advertisement on an aided or unaided basis

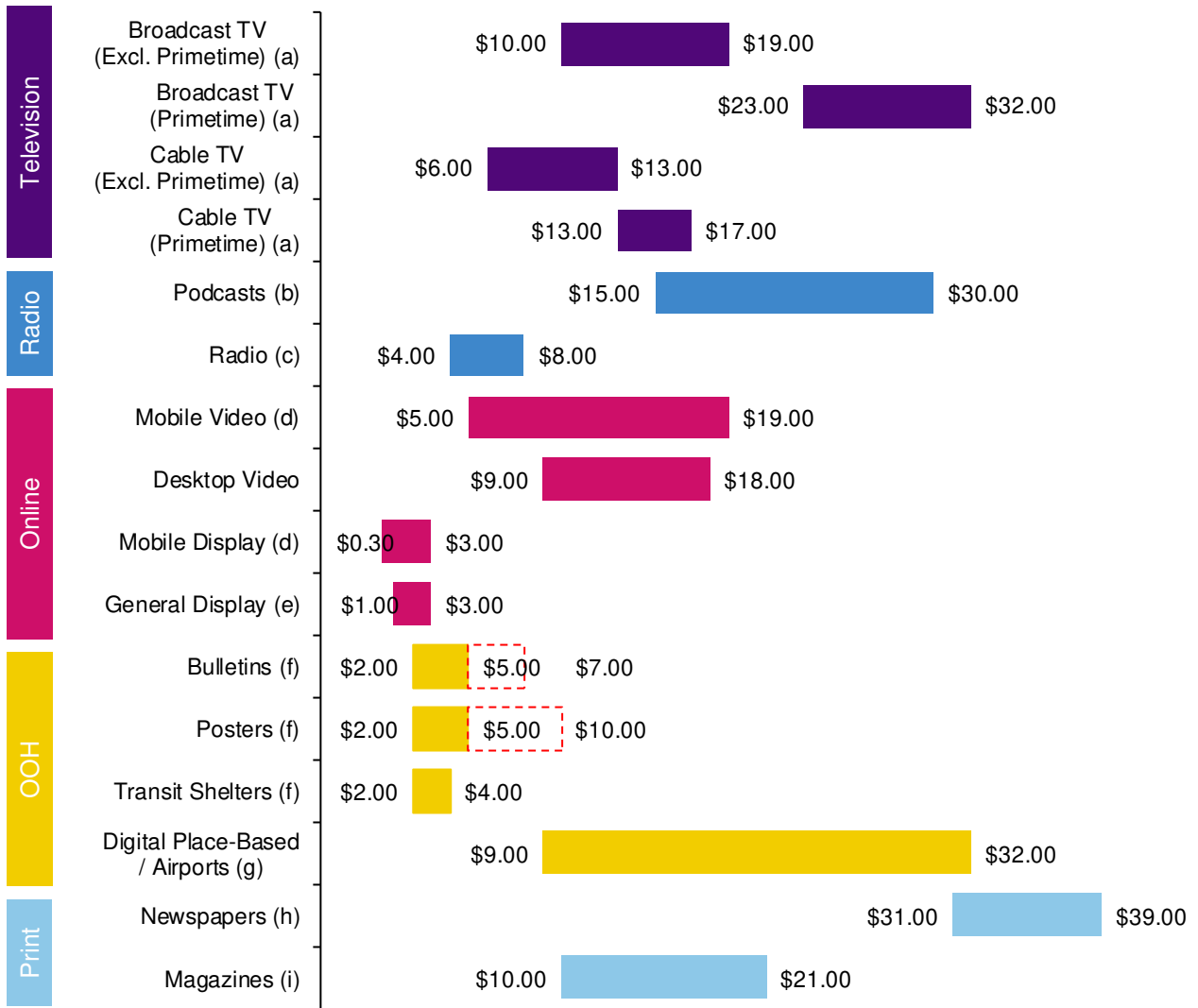


Source: PJ SOLOMON Study as of March 2017 and Wall Street Research.

Note: Ranges shift depending on aided vs. unaided recall basis, length of time for recall and sample size / nature and scope.

- Includes linear and non-linear television.
- Includes terrestrial and non-terrestrial / streaming radio, including either analog radio or digital audio over a variety of radio formats (broadcast, simulcast, satellite radio, internet radio, via streaming, media on the internet).
- Includes interactive and non-interactive banner ads that appear embedded in mobile websites, downloaded apps or in mobile games on smartphones and tablets. Does not include text ads via short message service (SMS).
- Includes all forms of desktop display advertising on websites, including text, image, flash, video and audio.
- Includes all forms of outdoor advertising, including billboards, posters, wallscapes, rotary programs, transit, airport advertising and in retail venues. Dotted box indicates revenue-weighted composite of printed and OOH channels.
- Includes digital media used for marketing outside of the home and includes digital billboards, digital placed based networks and digital signage.
- Includes advertising in newspapers, magazines, directories and circulars.

PJ SOLOMON US MAJOR MEDIA CPM COMPARISON



CPM (Cost Per Mille or Cost Per Thousand) is a commonly used measurement in advertising. Radio, television, newspaper, magazine, OOH advertising and online advertising can be purchased on the basis of showing the ad to one thousand viewers. It is used in marketing as a benchmarking metric to calculate the relative cost of an advertising campaign or an ad message in a given medium. The cost per thousand advertising impressions metric (CPM) is calculated by dividing the cost of an advertising placement by the number of impressions (expressed in thousands) that it generates. CPM is useful for comparing the relative efficiency of various advertising opportunities or media and in evaluating the overall costs of advertising campaigns.

Source: PJ SOLOMON Estimates as of November 2018 based on SEC filings, news, research and other industry sources.

- (a) 30-second advertisement.
- (b) 10- to 60-second advertisements. Includes both pre-roll and mid-roll advertising.
- (c) 30-second advertisement. Includes both spot and network.
- (d) Dataset includes mobile web, phone and tablet for both Android and iPhone.
- (e) 300x250 banner ads.
- (f) Calculated using SQUAD reporting from OOH media companies.
- (g) Represents data from 2014.
- (h) 1/2 page ad pre-discount. Calculated using estimated readership.
- (i) Full-page color ad. Calculated using estimated readership.

MARKET INDICATORS

	3/6/19	Performance			Bloomberg Economic Forecast				
		% off 52	1-Month	YTD	1Q19E	2Q19E	3Q19E	4Q19E	1Q20E
		Week	%	%		%	%	%	%
Nasdaq Composite	7,506	(7.4%)	3.3%	13.1%	3.00	2.60	2.30	2.20	2.10
Dow Jones Industrial	25,673	(4.3%)	2.4%	10.1%	1.70	1.70	1.80	2.00	2.10
S&P 500	2,771	(5.4%)	2.4%	10.6%	2.50	2.60	2.70	2.80	2.80
					2.72	2.81	2.89	2.95	2.99
					3 Mo. LIBOR	2.82	2.91	2.99	3.03
					10 Yr Treasury	3.80	3.70	3.60	3.60
					Unemployment				

Share Price Performance

	Stock Price	1-Week %	1 - Month %	YTD%
	3/6/19	Change	Change	Change
Out of Home Media				
APG SGA	\$314.26	(6%)	(8%)	(6%)
Boston Omaha	24.96	1%	(0%)	7%
Clear Channel Outdoor	5.02	(8%)	(8%)	(3%)
Clear Media	0.89	4%	(7%)	14%
Focus Media	1.03	(0%)	23%	35%
JCDecaux	30.08	(2%)	(4%)	7%
Lamar	78.81	3%	6%	14%
National CineMedia	7.49	(4%)	10%	16%
OUTFRONT Media	22.83	3%	9%	26%
Standard Diversified	15.88	9%	9%	7%
Ströer	59.64	2%	6%	22%

Out of Home Median		1%	6%	14%
Out of Home Mean		0%	3%	13%

Broadcasting	Stock Price	1-Week %	1 - Month %	YTD%
Entravision	\$3.84	(1%)	(2%)	32%
Gray Television	22.47	19%	36%	52%
Nexstar Broadcasting	103.21	8%	23%	31%
Sinclair Broadcast Group	38.20	10%	23%	45%
TEGNA	14.75	16%	31%	36%

Broadcasting Median		10%	23%	36%
Broadcasting Mean		10%	22%	39%

Diversified Media	Stock Price	1-Week %	1 - Month %	YTD%
CBS	\$50.02	1%	1%	14%
Discovery	28.81	1%	1%	16%
Disney	114.85	2%	3%	5%
Hemisphere Media Group	13.43	(4%)	2%	11%
News Corp.	13.12	1%	3%	16%
Viacom	29.76	3%	1%	16%

Diversified Media Median		1%	1%	15%
Diversified Media Mean		0%	2%	13%

Advertising Technology	Stock Price	1-Week %	1 - Month %	YTD%
Criteo	\$27.49	0%	8%	21%
HubSpot	161.24	(5%)	1%	28%
Telaria	5.18	(9%)	63%	90%
The Trade Desk	186.35	(4%)	28%	61%

Advertising Technology Median		(5%)	18%	44%
Advertising Technology Mean		(5%)	25%	50%

	Stock Price	1-Week %	1 - Month %	YTD%
	3/6/19	Change	Change	Change
Radio				
Beasley Broadcast Group	\$4.28	0%	(3%)	14%
Emmis Communications	3.54	(7%)	(7%)	11%
Entercom Communications	6.10	(4%)	(16%)	7%
Saga Communications	34.13	0%	2%	3%
Salem Communications	2.96	7%	5%	42%
Sirius XM Radio	6.00	1%	0%	5%

Radio Median		0%	(1%)	9%
Radio Mean		(0%)	(3%)	14%

Advertising/Marketing	Stock Price	1-Week %	1 - Month %	YTD%
BlueFocus Communication	\$0.80	12%	36%	27%
Cheil Worldwide	21.37	(4%)	1%	6%
Dentsu Inc.	41.27	(3%)	(14%)	(8%)
Huntsworth	1.16	(12%)	(17%)	(16%)
M&C Saatchi	4.66	(8%)	10%	27%
MDC Partners	2.85	(15%)	(4%)	9%
Next Fifteen Communications	7.23	(4%)	10%	16%
Omnicom Group	75.22	(0%)	(3%)	3%
Publicis Groupe	56.99	5%	(9%)	(1%)
The Interpublic Group	22.85	(1%)	1%	11%
Viad	55.38	(5%)	4%	11%
WPP	11.51	4%	0%	7%

Advertising/Marketing Median		(3%)	0%	8%
Advertising/Marketing Mean		(3%)	1%	8%

New Media	Stock Price	1-Week %	1 - Month %	YTD%
Alphabet	\$1,164.94	4%	4%	11%
Amazon	1,668.95	2%	3%	11%
eBay	36.81	(2%)	7%	31%
Facebook	172.51	6%	4%	32%
Netflix	359.61	(1%)	6%	34%
PayPal	96.46	(1%)	7%	15%
Snap	9.87	1%	43%	79%
Twitter	30.80	1%	(7%)	7%

New Media Median		1%	5%	23%
New Media Mean		1%	8%	28%

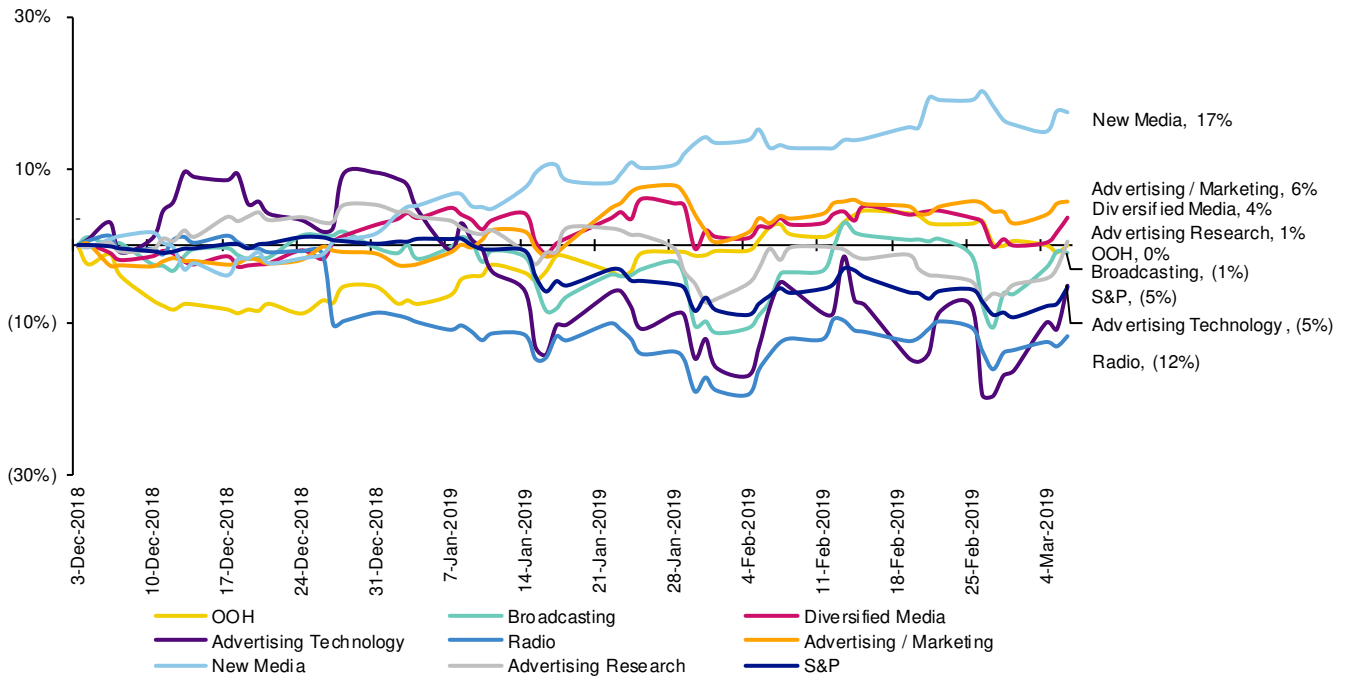
Advertising Research	Stock Price	1-Week %	1 - Month %	YTD%
comScore	\$23.09	3%	15%	60%
Nielson	26.25	4%	3%	13%
Ipsos	27.05	9%	16%	15%

Advertising Research Median		4%	15%	15%
Advertising Research Mean		5%	11%	29%

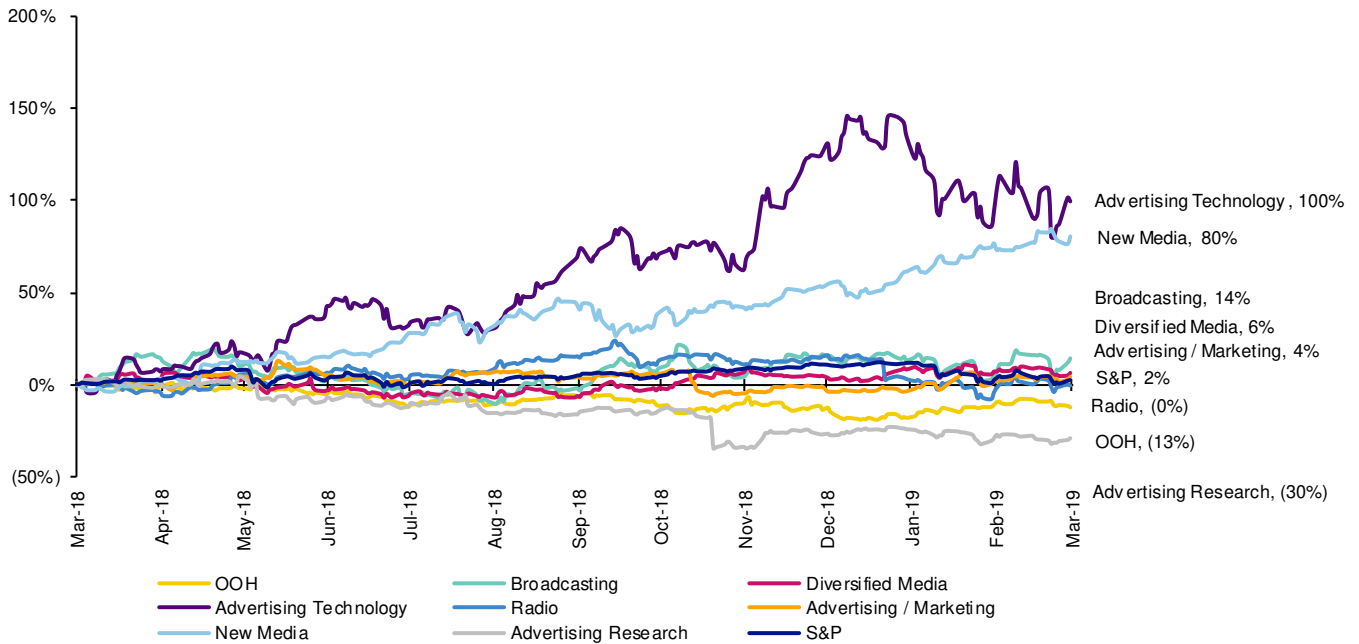
Source: Capital IQ as of March 6, 2019, Bloomberg and Wall Street Research.

INDUSTRY SHARE PRICE PERFORMANCE

Last Three Months



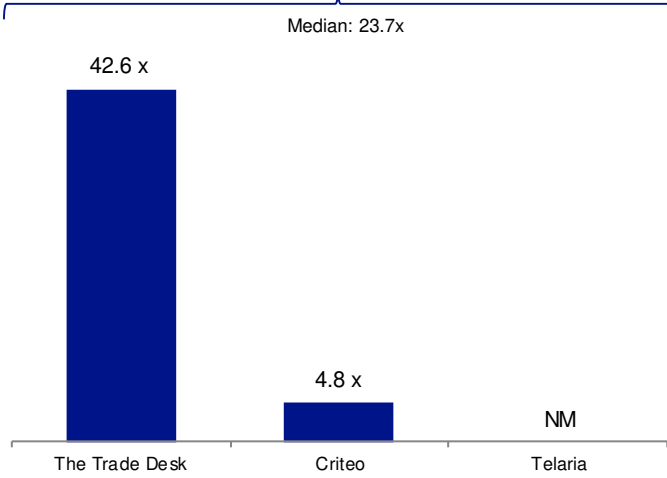
Last Twelve Months (LTM)



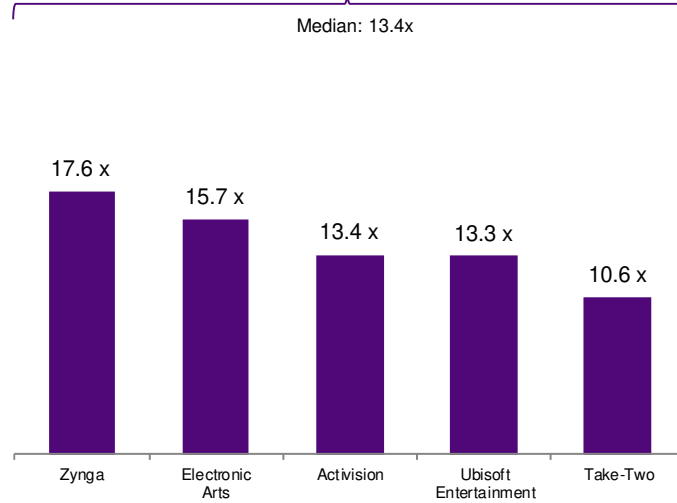
Source: Capital IQ as of March 6, 2019 and Wall Street Research.

EV / 2019E EBITDA

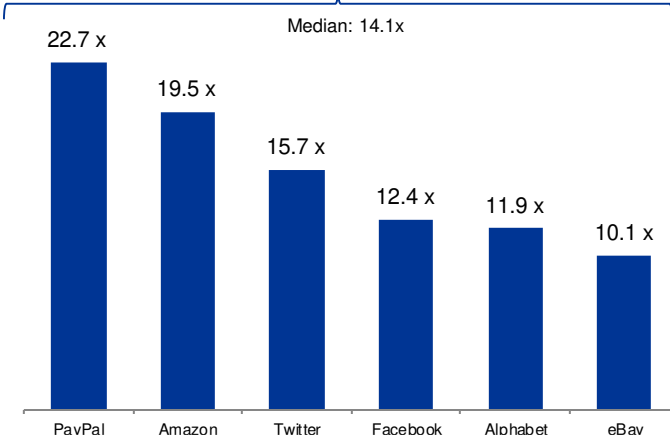
Advertising Tech



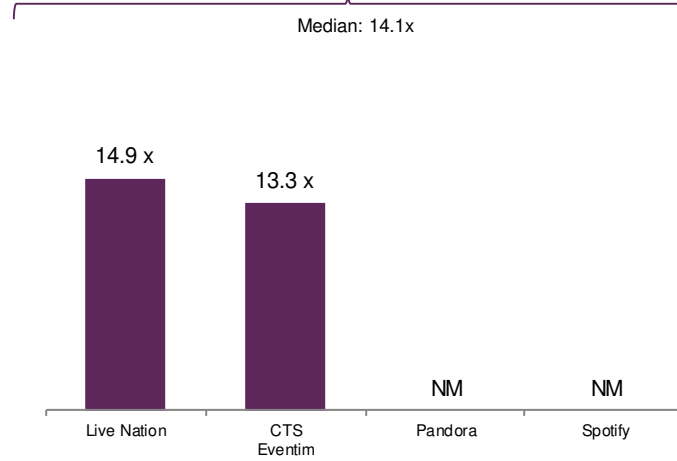
Video Games



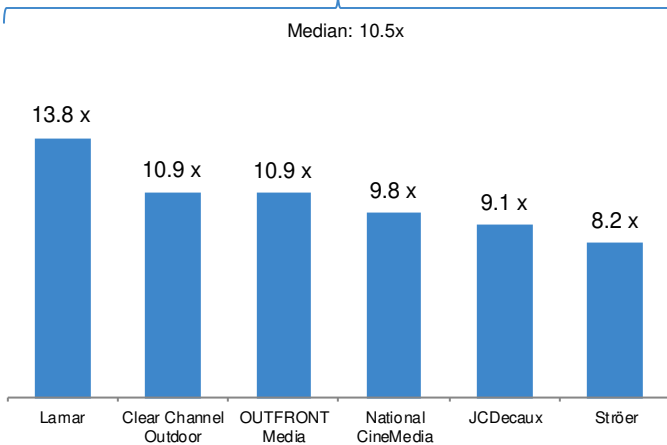
New Media



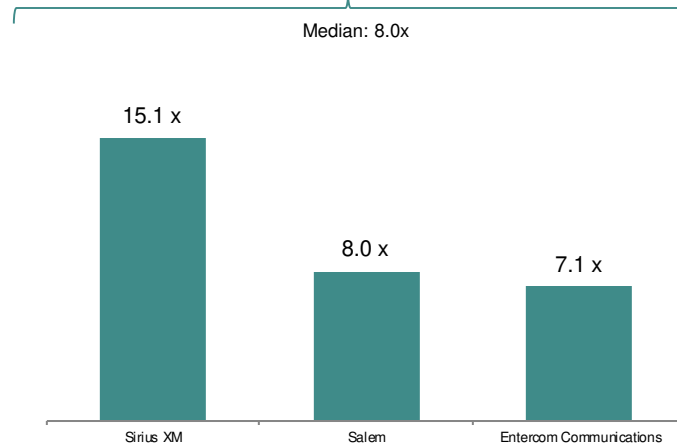
Music / Events



Out-of-Home Advertising



Radio

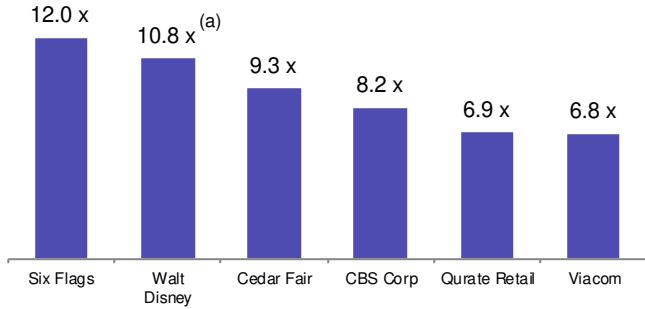


Source: Capital IQ as of March 6, 2019 and Wall Street Research.

EV / 2019E EBITDA

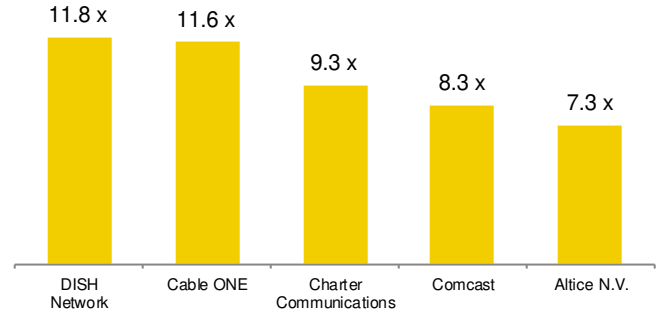
Cable / Content

Median: 8.8x



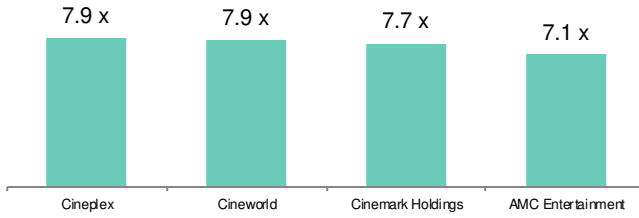
Cable

Median: 9.3x



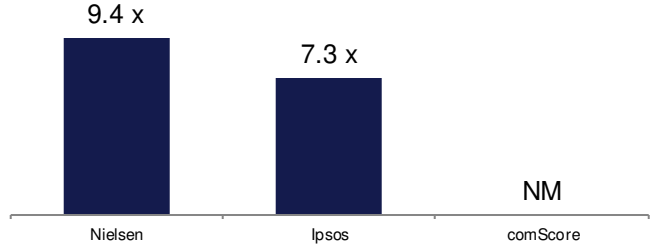
Theaters

Median 7.8x



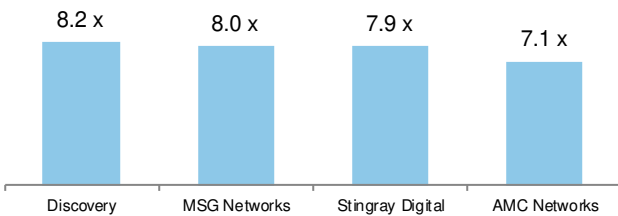
Advertising Research

Median: 8.4x



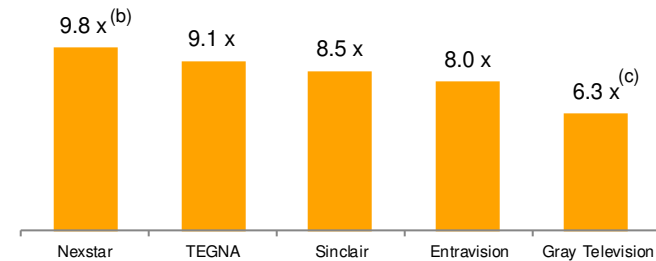
Cable Content

Median: 8.0x



Broadcasting

Median: 8.5x



Source: Capital IQ as of March 6, 2019 and Wall Street Research.
 (a) Not pro forma for acquisition of 21st Century Fox.

(b) Not pro forma for acquisition of Tribune.
 (c) Not pro forma for acquisition of Raycom.

VALUATION METRICS

	Stock Price 3/6/19	52-Week Low	52-Week High	Equity Value	Enterprise Value	Valuation Multiples		Growth	
						EV / Revenue 2019E	EV / EBITDA 2019E	'17A - '19E CAGR Revenue	EBITDA
Out of Home Media									
Boston Omaha	\$24.96	\$19.90	\$30.53	\$551	\$443	NM	NM	NM	NM
Clear Channel Outdoor	5.02	4.30	6.25	1,835	7,090	2.6 x	10.9 x	3%	NM
JCDecaux	30.08	27.15	38.31	6,402	7,034	1.6 x	9.1 x	11%	11%
Lamar	78.81	62.10	80.47	7,848	10,715	6.1 x	13.8 x	6%	8%
National CineMedia	7.49	5.19	10.69	1,181	2,063	4.5 x	9.8 x	4%	6%
OUTFRONT Media	22.83	16.82	22.87	3,213	5,515	3.3 x	10.9 x	6%	15%
Standard Diversified	15.88	9.50	18.53	262	498	NA	NA	NA	NA
Global / U.S. Median						3.3 x	10.9 x	6%	10%
Global / U.S. Mean						3.6 x	10.9 x	6%	10%
APG SGA	\$314.26	\$310.30	\$441.06	\$941	\$881	2.8 x	13.3 x	2%	(5%)
Ströer ^(a)	59.64	46.95	76.11	3,337	5,329	2.8 x	8.2 x	10%	47%
Europe Median						2.8 x	10.8 x	6%	21%
Europe Mean						2.8 x	10.8 x	6%	21%
Clear Media	\$0.89	\$0.61	\$0.96	\$482	\$411	NA	NA	NA	NA
Focus Media Information Technology Cc	1.03	0.73	2.00	15,133	14,752	6.2 x	14.7 x	14%	6%
China Median						6.2 x	14.7 x	14%	6%
China Mean						6.2 x	14.7 x	14%	6%
Total Out of Home Advertising Median						3.0 x	10.9 x	6%	8%
Total Out of Home Advertising Mean						3.7 x	11.3 x	7%	13%
Radio									
Beasley Broadcast Group	\$4.28	\$3.25	\$12.15	\$118	\$348	1.3 x	7.6 x	6%	7%
Emmis Communications	3.54	3.19	5.83	46	152	NA	NA	NA	NA
Entercom Communications	6.10	5.42	10.60	843	2,593	1.7 x	7.1 x	59%	90%
Salem Media Group	2.96	2.09	6.05	78	328	1.3 x	8.0 x	(1%)	1%
Sirius XM Holdings	6.00	5.51	7.64	28,426	35,259	4.5 x	15.1 x	20%	9%
Radio Median						1.5 x	7.8 x	13%	8%
Radio Mean						2.2 x	9.4 x	21%	27%
Broadcasting									
Entravision Communications	\$3.84	\$2.60	\$6.45	\$341	\$401	1.3 x	8.0 x	(25%)	(60%)
Gray Television	22.47	10.75	22.59	2,221	4,103	2.0 x	6.3 x	54%	49%
Nexstar Broadcasting Group	103.21	61.20	103.21	4,721	8,574	3.2 x	9.8 x	5%	5%
Sinclair Broadcast Group	38.20	25.22	38.20	3,491	6,285	2.1 x	8.5 x	7%	(1%)
TEGNA	14.75	10.09	14.95	3,183	5,992	2.8 x	9.1 x	7%	3%
Broadcasting Median						2.1 x	8.5 x	7%	3%
Broadcasting Mean						2.3 x	8.3 x	10%	(1%)
Advertising/Marketing									
BlueFocus	\$0.80	\$0.56	\$1.31	\$1,749	\$2,095	0.6 x	12.2 x	26%	44%
Cheil Worldwide	21.37	16.61	22.92	2,165	1,771	0.5 x	8.5 x	3%	7%
Dentsu	41.27	41.13	50.17	11,633	13,292	1.4 x	8.2 x	7%	0%
Huntsworth	1.16	1.16	1.83	399	519	1.5 x	8.5 x	13%	27%
M&C Saatchi	4.66	3.39	5.83	415	418	1.1 x	8.7 x	4%	45%
MDC Partners	2.85	2.27	8.20	164	1,340	0.9 x	6.3 x	1%	10%
Next Fifteen Communications Group	7.23	5.97	7.76	604	636	1.9 x	9.7 x	9%	20%
The Interpublic Group	22.85	19.75	24.65	8,795	12,063	1.4 x	8.1 x	7%	17%
Omnicom Group	75.22	67.31	78.36	16,826	18,917	1.2 x	7.9 x	(0%)	1%
Publicis Groupe	56.99	53.19	74.86	13,145	15,079	1.5 x	6.5 x	(6%)	5%
WPP	11.51	10.09	18.26	14,520	20,355	1.0 x	7.0 x	(0%)	(5%)
Advertising/Marketing Median						1.2 x	8.2 x	4%	10%
Advertising/Marketing Mean						1.2 x	8.3 x	6%	16%
Advertising Technology / New Media									
Alphabet	\$1,164.94	\$984.67	\$1,285.50	\$807,377	\$702,249	4.3 x	11.9 x	21%	29%
Amazon	1,668.95	1,343.96	2,039.51	819,793	827,832	3.0 x	19.5 x	24%	65%
Criteo	27.49	19.99	36.27	1,766	1,430	1.4 x	4.8 x	(34%)	20%
Facebook	172.51	124.06	217.50	492,342	451,728	6.6 x	12.4 x	30%	25%
HubSpot	161.24	105.30	172.00	6,639	6,365	9.8 x	NM	32%	NM
Netflix	359.61	233.88	418.97	157,005	163,571	8.1 x	NM	32%	85%
PayPal	96.46	71.73	98.80	113,168	106,057	5.9 x	22.7 x	17%	39%
Telaria	5.18	2.26	5.70	220	173	2.7 x	NM	22%	NM
The Trade Desk	186.35	47.46	197.73	8,213	8,006	12.5 x	42.6 x	44%	59%
Twitter	30.80	26.45	46.76	23,549	20,061	5.8 x	15.7 x	19%	93%
Advertising Technology / New Media Median						5.8 x	15.7 x	23%	49%
Advertising Technology / New Media Mean						6.0 x	18.5 x	21%	52%
Advertising Research									
comScore	\$23.09	\$13.19	\$26.80	\$1,373	\$1,533	3.5 x	NM	4%	NM
Ipsos	27.05	22.05	40.72	1,178	1,850	0.8 x	7.3 x	2%	1%
Nielsen	26.25	21.75	34.70	9,330	17,389	2.7 x	9.4 x	(1%)	5%
Advertising Research Median						2.7 x	8.3 x	2%	3%
Advertising Research Mean						2.3 x	8.3 x	2%	3%

Source: Capital IQ as of March 6, 2019 and Wall Street Research.

(a) EBITDA reflects growth related to new IFRS accounting rules.

UPCOMING EVENTS

DATES	NAME	LOCATION	DESCRIPTION
March 25, 2019	Advanced Advertising 2019	New York, NY	<ul style="list-style-type: none"> Explores the advertising world's hot-button issues through one-on-one networking with tech leaders, brands, agencies and other C-suite leaders Learn the latest trends in data automation, television, big data, measurement, new technology and more
March 26-28, 2019	Adobe Summit	Las Vegas, NV	<ul style="list-style-type: none"> The event annually convenes the advisory solutions industry's most senior marketing and sales executives for an exclusive, closed-door session devoted to strategies to build stronger relationships and grow assets
March 26-29, 2019	Digital Signage Expo 2019	Las Vegas, NV	<ul style="list-style-type: none"> World's largest and longest running conference and trade show exclusively dedicated to showcasing innovative digital communications and interactive technology solutions for customer and employee-facing organizations PJ SOLOMON's Mark Boidman and Christian Bermel to attend
May 1-3, 2019	FEPE Annual Congress	Dubai, U.A.E.	<ul style="list-style-type: none"> Annual global outdoor advertising conference that explores the broader and fast changing media and technological environment PJ SOLOMON's Mark Boidman to attend and present
May 13-17, 2019	London Digital Signage Week	London, United Kingdom	<ul style="list-style-type: none"> Like its counterpart in NY, the week includes events for retail, employee communications, digital out of home and digital signage
May 20-22, 2019	OAAA/Geopath OOH Media Conference	Las Vegas, NV	<ul style="list-style-type: none"> Attracts the best and brightest in the industry who gather each year to discuss the challenges & opportunities in the industry PJ SOLOMON's Mark Boidman, Ben Zinder and Christian Bermel to attend
June 8-14, 2019	InfoComm 2019	Orlando, FL	<ul style="list-style-type: none"> Largest professional audiovisual trade show in the US, with thousands of products for audio, unified communications and collaboration, display, video, control, digital signage, home automation, security, VR, and live events PJ SOLOMON's Mark Boidman and Ben Zinder to attend
June 10-12, 2019	Code Conference	Scottsdale, AZ	<ul style="list-style-type: none"> Code Conference is the world's premier technology conference PJ SOLOMON's Mark Boidman to attend
June 17-21, 2019	Cannes Lions	Cannes, France	<ul style="list-style-type: none"> Annual festival that brings the creative communications industry together at its one-of-a-kind event in Cannes to learn, network and celebrate PJ SOLOMON's Mark Boidman to attend
July 24-26, 2019	2019 ANA Digital & Social Media Conference	San Diego, CA	<ul style="list-style-type: none"> The ANA Digital & Social Media Conference will feature CMOs and leaders who will cover important topics such as AI, augmented reality, influencer marketing, voice, virtual reality, social media, chatbots, content marketing, measurement and more

PJ SOLOMON, an investment banking advisory firm, provides strategic advice to owners, chief executives, senior management and board of directors of companies and institutions worldwide.

PJ SOLOMON advises clients on mergers and acquisitions, divestitures, financings, recapitalizations, restructurings, and activism defense. To date, the firm has successfully completed more than 500 strategic and financial advisory assignments.

In June 2016, PJ SOLOMON sold a 51% stake in the firm to Natixis, a French financial services firm owned by Groupe BPCE, France's second largest financial institution. The remaining 49% of PJ SOLOMON's ownership continues to be held by existing partners, resulting in an entrepreneurially-spirited company with a global M&A and financing platform and an increased breadth of product offerings.

Throughout our nearly thirty-year history, PJ SOLOMON has served as a trusted advisor to our corporate clients. With this latest development, our tradition of providing unbiased advice, grounded in intellectual integrity, will continue. Our goal is to bring the collective experience and knowledge of our senior bankers and the capabilities of Natixis to each assignment, advising our clients on how to achieve the optimum value and outcome for each transaction.



———— PJ ————
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