



**MEDIA
MONTHLY**

REPORT SUMMARIZING
SELECT MEDIA, EVENT TECH AND
RETAIL TECH ACTIVITY

SEPTEMBER 2018















— PJ —
SOLOMON
unrivaled wisdom

SPECIAL HIGHLIGHTS IN THIS ISSUE

- Is Streaming the Savior of the Music Industry?
- Machine Learning Leverages IoT to Deliver Personalized Impressions
- Growing Impact of Digital Signage
- Future of Commercial AV
- Exhibits, Tradeshow and B2B Marketing Services Update

RECENT PJ SOLOMON TRANSACTIONS

| | | | |
|---|---|--|--|
| <p>PENDING</p> <p>€3,250,000,000</p>  <p>Has sold select real estate assets to and formed a joint venture with</p> <p>SIGNA to operate</p> <p>KAUFHOF KARSTADT</p> <p>Serving as financial advisor to Hudson's Bay Company</p> <p>PJ</p>  | <p>PENDING</p>  <p>Has agreed to sell 185 stores' pharmacy prescription files to</p> <p>Walgreens</p> <p>Serving as exclusive financial advisor to Fred's</p> <p>PJ</p>  | <p>PENDING</p> <p>\$437,000,000</p> <p>PERRY ELLIS</p> <p>Has agreed to be sold to newly formed entity controlled by George Feldenkreis</p> <p>Serving as financial advisor to the Special Committee of Perry Ellis</p> <p>PJ</p>  | <p>PENDING</p> <p>GENESCO</p>  <p>On its sale of</p> <p>Lids SPORTS GROUP</p> <p>Serving as financial advisor to Genesco</p> <p>PJ</p>  |
| <p>SEPTEMBER 2018</p> <p>\$275,000,000</p>  <p>Senior Secured Credit Facility</p> <p>Served as financial advisor to Stein Mart</p> <p>PJ</p>  | <p>AUGUST 2018</p> <p>Varsity BRANDS</p> <p>Has agreed to be sold to</p> <p>BainCapital</p> <p>Served as co-financial advisor to Charlesbank Capital Partners and Partners Group</p> <p>PJ</p>  | <p>AUGUST 2018</p> <p>Charlesbank</p> <p>Has acquired the assets of</p> <p>THE ROCKPORT GROUP</p> <p>Served as financial advisor to Charlesbank</p> <p>PJ</p>  | <p>AUGUST 2018</p> <p>NETFLIX</p> <p>Has acquired LA market spectacular out of home media assets of</p> <p>REGENCY</p> <p>Served as exclusive strategic and financial advisor to Netflix</p> <p>PJ</p>  |

MEDIA 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

BRANDON YOSHIMURA

Senior Associate
212.508.1654 (w)
610.952.0447 (m)
byoshimura@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

IS STREAMING THE SAVIOR OF THE MUSIC INDUSTRY?

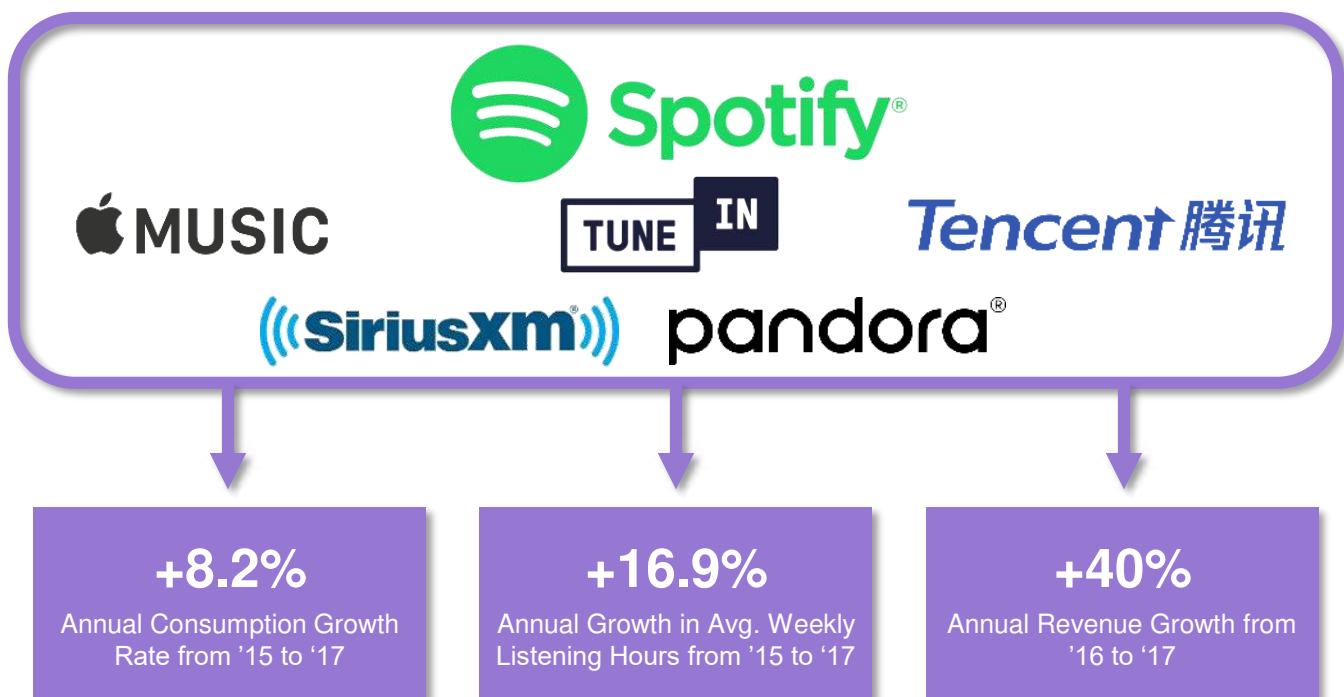
By PJ SOLOMON's Mark Boidman, Managing Director

Full article was published on September 6, 2018 and is available on streamingmedia.com

“Spotify, Apple Music, and hundreds of smaller music streaming services are fueling growth in music industry revenue, despite high licensing costs demanded by major labels Universal, Sony, and Warner.”

INCREASED CONSUMPTION GROWTH

- Over the last 20 years, the overall revenue of the music industry in the United States has significantly declined
 - According to the RIAA, from a high of almost \$15 billion in total revenues in 1999, the music industry's revenues decreased to approximately \$7 billion in 2010
- This is largely attributed to the digital revolution and the increased accessibility of cheap / free music over the course of the decline
 - The industry has an attractive business model, because there is no physical product or distribution network required and there are recurring subscription revenues instead of one-time purchases
- The industry has stabilized since 2010, however, as industry revenues reached approximately \$9 billion in 2017 (+16.5% from 2016)
- Spotify continues to lead the way with twice as many as many paid subscribers as the next largest provider



MACHINE LEARNING LEVERAGES IoT TECHNOLOGY TO DELIVER PERSONALIZED IMPRESSIONS

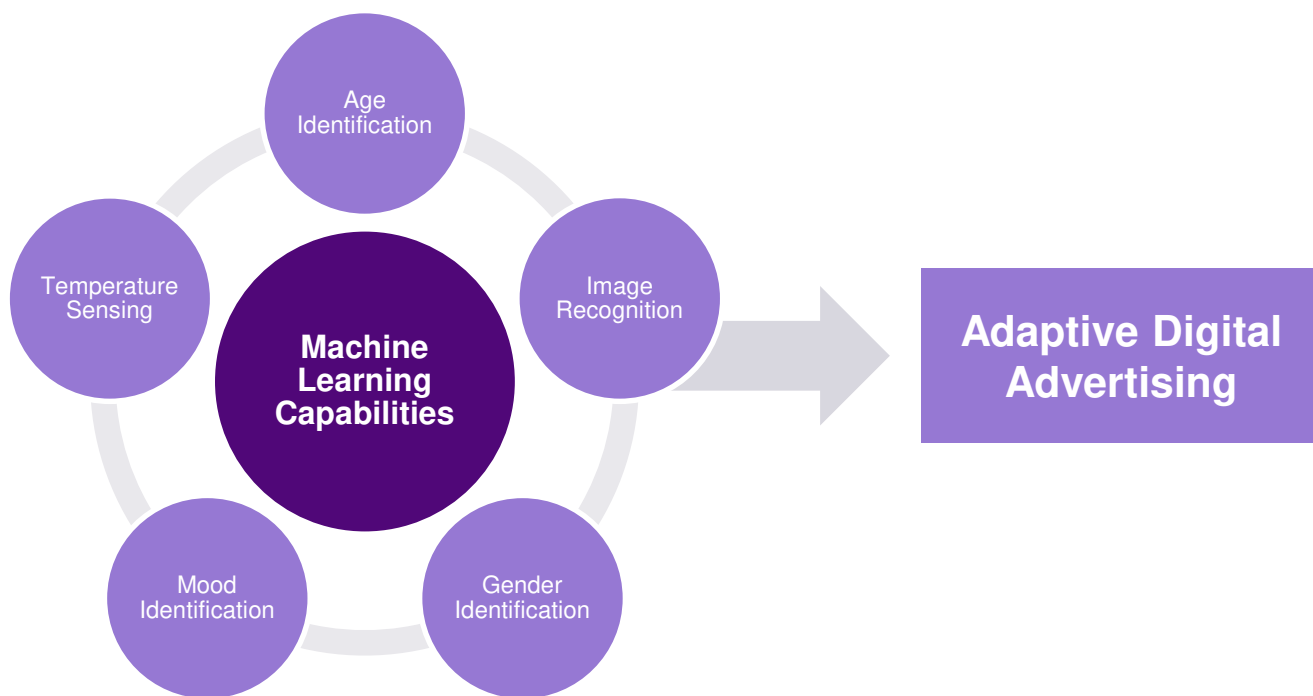
By PJ SOLOMON's Mark Boidman, Managing Director

Full article was published on May 17, 2018 and is available on CIOReview

“Greater interoperability of software and hardware will allow operators to make incremental updates to their digital infrastructures, ‘future-proofing’ their investments and increasing overall media spend.”

SELECTED MACHINE LEARNING APPLICATIONS

- Machine learning powers image recognition software that takes this adaptability to the next level
 - For example, advertisers have conducted campaigns in which machine learning software identifies the make and model of cars on a highway and subsequently displays ads for applicable vehicles on nearby digital billboards



FRAGMENTATION IS A BARRIER TO WIDER ADOPTION OF DIGITAL SIGNAGE

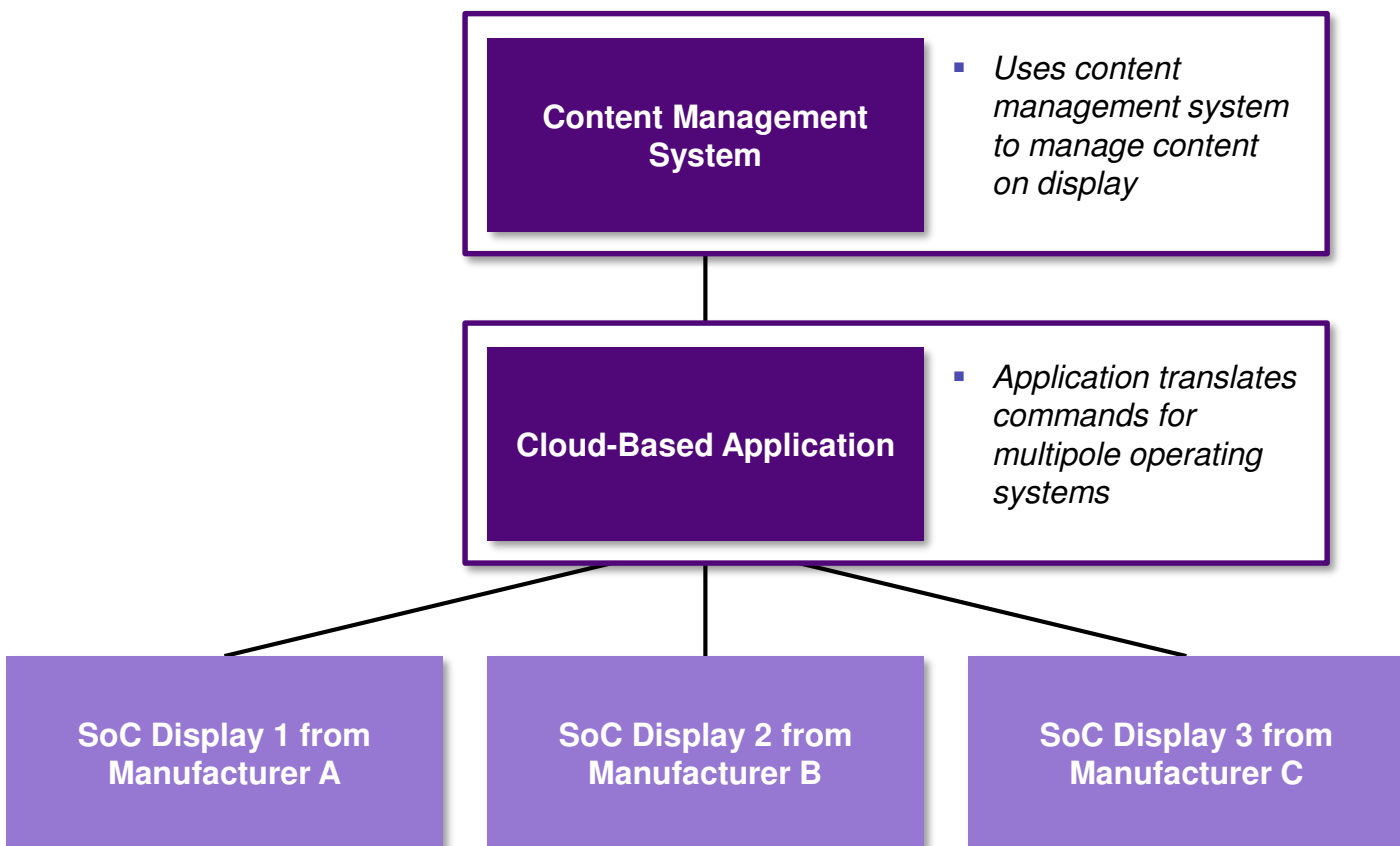
- Despite these advances in the capability of digital signage to deliver dynamic and personalized impressions, overall adoption rate remains relatively low for innovative solutions, including computer vision and machine learning technologies
 - As costs to deploy these technologies decrease and solutions become more flexible, we expect rapid acceleration in digital signage and related technology penetration

MACHINE LEARNING LEVERAGES IoT TECHNOLOGY TO DELIVER PERSONALIZED IMPRESSIONS (CONT.)

INTRODUCING STANDARD APIS AND ARCHITECTURE WILL IMPROVE INTEROPERABILITY

- Hardware manufacturers in the industry have undertaken initiatives aimed at standardizing the system architecture between displays and pluggable media players
 - These initiatives take the form of hardware specifications that define standards for docking boards between media players and digital display panels
- Another approach the industry has taken is the development of a standard Application Program Interface (API) to facilitate communication between content management systems and System on Chip (SoC) displays
- SoC displays embed the hardware necessary to play media on a digital display within the display itself – this includes a processor and memory
 - Approximately 80 percent of digital signage displays already implement SoC technology; however, most manufacturers combine their SoC with a proprietary operating system

INTEROPERABILITY FOR MEDIA OWNERS



A standard API between content management systems and SoC displays could be implanted as a cloud-based application that translates commands from the content management system for each unique SoC operating system

GROWING IMPACT OF DIGITAL SIGNAGE

Expanding reach and impacting customer behavior

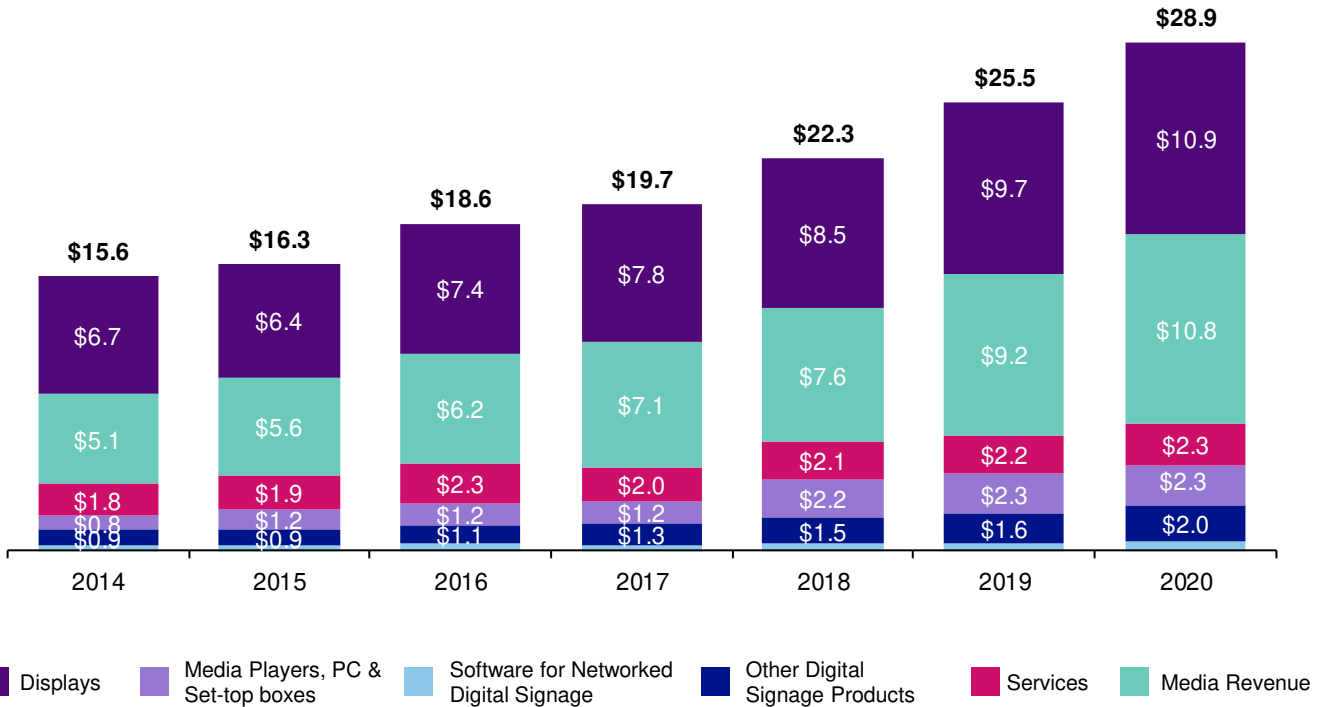
10%
Annual Decrease in Costs

8 Out of 10
Surveyed Customers Influenced by Digital Signage

\$25B
Projected 2019 Market Size

- Digital signage is continuing to make a powerful statement in retail as digital displays become more popular
 - Eight out of ten customers entered a store for the first time due to a digital sign drawing their attention, according to a recent FedEx Office survey
- Strong expanding reach accompanied by falling costs
 - Today videos on public digital screens have a broader reach than videos on the internet
 - The use of digital signage has expanded beyond just advertisement to in-store menu boards

DIGITAL SIGNAGE MARKET SIZE BY SEGMENT



Source: IHS.

FUTURE OF COMMERCIAL AV

Key points from industry leaders observed at InfoComm 2018



- **Julian Phillips (Chairman of AVIXA):**
 - *“We’re moving from the days of us just being functional designers...to being experience designers and solution providers for our customers”*
 - *“I think generally the whole concept of integrated life is not just about what we do in the workplace, but what happens in our homes...to figure out how to integrate consumer technology into those spaces as well.”*
- **Hope Roth (Riordan Brothers Integration):**
 - *“Integrated building systems [are the biggest area for AV industry growth]. These include digital signage, lights, HVAC and more, all controlled by a facility manger from a central location.”*
- **Nick Pemberton (Global Business Development, Sennheiser):**
 - *“Sennheiser has worked with Crestron for several years and we are excited to develop mutual integration possibilities even further...By optimizing our joint solutions for the enterprise market, we stand to increase operational efficiencies and performance for both integrators and end-users”*
- **Paul Harris (CEO, Aurora Multimedia):**
 - *“[Aurora’s non-proprietary AV platform] ReAX is all about opening up and freeing control—breaking the chains. Today, I make the tools for it, but maybe tomorrow my competitors will make something better but it still works with my equipment”*

InfoComm 2018 hosted a record 43,000 attendees and featured 964 exhibitors

EXHIBITS, TRADESHOWS AND B2B MARKETING SERVICES UPDATE

Continued shift away from non-core print assets to focus on growing events, digital, mobile, data and marketing businesses

\$14.8B

2017 U.S.
Industry
Revenue

2.7%

'12 – '17 U.S.
Revenue CAGR

\$1.5B

2017 U.S.
Industry
Operating Profit

4,850

U.S. Firms in
Industry

- Operating results depend largely on number of exhibitions held and on size of exhibitors' marketing expenditures
 - Number and size of exhibitions decrease when economy weakens
- Strong growth in key exhibits metrics YOY
 - In 2017, industry revenues increased 3.0% due to digital fatigue and desire to convene in person
- Exhibitors are incorporating technology into their events (e.g., mobile applications, social media integrations, video invitations, etc.)
- Decreased emphasis on print assets
 - The digital elements of total directory advertising revenue, total trade magazine revenue and total professional books revenue will almost reach parity with their print equivalents in 2019, a rise of more than 17% from 2014
 - Mobile represents fastest-growing digital B2B segment with 25% YOY growth
 - Digital versions offer wider coverage at a lower cost

Source: Center for Exhibition Industry Research, IBIS World and Outsell's Annual Advertising and Marketing Study 2016.

SECTOR NEWS

Broadcasting / Telecommunications

- **8/31: Combilent A/S**, a Denmark-based company engaged in development and manufacturing components for wireless communications, acquired **TX RX Systems**, a US-based manufacturer of products and technical solutions for professional mobile radio, from **Bird Technologies** for an undisclosed amount
- **8/29: Mega Broad Investments**, a US-based investment company, acquired **Northland Communications Corporation**, a US-based cable television, telephone and internet service provider, for an undisclosed amount
- **8/28: SpeedCast International**, the Australia-based provider of network and satellite communications services, acquired **Globecomm Systems**, a US-provider of network and satellite communications, from **Tennenbaum Capital** for \$135M
- **8/28: BiscayneAmericas Advisers**, the US-based investment advisor and private equity firm, acquired **Stratto**, a UK-based provider of wireless telecommunications, for an undisclosed amount
- **8/24: Sangoma Technologies**, the Canada-based provider of software and hardware components for communications, acquired **Digium**, US-based provider of software and hardware related to communications technologies, for \$28M
- **8/20: TEGNA Inc**, the US-based media and marketing company, acquired two television stations from **Raycom Media**, a US-based television broadcasting company, for \$105M
- **8/20: EW Scripps**, a broadcasting company based in the US, acquired two television stations from **Raycom Media**, a US-based television broadcasting company, for \$55M
- **8/7: HKBN**, the Hong Kong-based HKEx-listed broadband company, acquired **WTT HK Ltd**, a Hong Kong-based operator of fixed line telecommunication and ICT service provider, from **TPG Capital** for \$1.34B
- **8/6: PPC Broadband**, a US-based manufacturer of designer and precision products, acquired **Net-Tech Technology**, a US-based fiber optic solutions provider, for \$9M
- **8/6: DataOnline**, a US-based solution provider for monitoring of fixed and mobile remote industrial assets, acquired **Independent Technologies**, a US-based provider of hardware, software, and services to the telecommunications industry, for an undisclosed amount
- **8/1: Boingo Wireless**, a US-based wireless internet provider, acquired **Elauwit Networks**, a US-based company engaged in providing telecommunication networks, for \$28M
- **8/1: Perez Companc SA**, the Argentina-based energy company, acquired **TEL3**, a US-based provider of international long distance prepaid solutions, from the Romero Oneto Family for \$33M
- **7/31: Solbright Group**, a US-based company operating in sustainability and IoT technology, acquired **M2M Spectrum Networks**, a US-based provider of communications management solutions and IoT technology, from **Spectrum Networks Group** for \$54M
- **7/30: AMC Networks**, an American entertainment and television broadcasting company, acquired **RLJ Entertainment**, a US-based premium digital channel company, for \$274M
- **7/27: Amancio Ortega**, a Spain-based private investor having interest in real estate, acquired a 9.99% stake in **Telxius Telecom**, a Spain-based telecommunication owner and operator, from **Telefonica** for \$441M
- **7/23: Infinera Corp**, a US-based developer of semiconductors, acquired **Coriant**, a US-based developer and manufacturer of networking products, from **Oaktree Capital** for \$430M
- **7/9: BEK Communications Operative**, a US-based communication service company, acquired **ICTC Group**, a US-based telecommunications company, for \$22M
- **6/28: PurseSnax International**, a US-based company providing telecommunication services, acquired **Etelix.com USA**, a US-based telecom carrier that provides telecom and technology solutions, from **Metrospaces** for \$6M
- **6/25: Gray TV**, a US-based television station operator, acquired **Raycom Media**, a US-based television broadcasting company, for \$3.7B

Source: Company press releases and Wall Street Research.

SECTOR NEWS

OOH Media

- **8/31: Link Media**, a US-based company engaged in providing billboard advertisement services, acquired **Waitt Outdoor**, a US-based billboard advertising company, for \$82M
- **8/23: Lamar Advertising**, the US-based outdoor advertising company, acquired **Land Displays**, the US-based billboard company, for ~\$12 million
- **8/22: Boston Omaha Corporation**, the Nebraska-based billboard and insurance firm, acquired all operating assets of **Key Outdoor**, an Illinois-based billboard company, for \$38M
- **7/31: iHeart Media**, the US-based radio and OOH media company, announced in its quarterly earnings report that its bankruptcy filing is moving along as anticipated, with US Bankruptcy Court approval expected in October or November of 2018
- **7/31: JCDecaux**, the France-based global outdoor advertising company, purchased a minority interest in **Corameq**, a holding company of **Eumex**, a Latin American street furniture group, which JCDecaux had previously acquired in 2014
- **7/18: Alibaba**, the Chinese e-commerce giant, acquired a 6.62% minority stake in **Focus Media Information Technology**, a China-based digital marketing company for \$1.43B, as well as invested \$511M in an entity controlled by Focus Media's chairman Jason Jiang by subscribing newly issued shares
- **7/11: The Riverside Company**, a US-based private equity firm, acquired an undisclosed minority stake in **Screenvision Cinema Network**, a US-based company engaged in providing cinema advertising, marketing and media solutions, for an undisclosed amount
- **6/28: JCDecaux**, the France-based global outdoor advertising company, acquired **APN Outdoor Group**, a leading out-of-home media company based in Australia for \$899M
- **6/25: oOh! Media**, the Australia-based Out-of-Home media advertiser, acquired **Adshel**, a leading Australian Out-of-Home media company, for \$570M
- **6/1: Ocean Outdoor Advertising**, a leading UK-based Out-of-Home advertising company, acquired **Forrest Media**, a Scotland-based leading provider of large format outdoor media solutions for £32M

Radio / Music

- **8/15: SummitMedia**, an Alabama-based radio broadcasting company, agreed to acquire all remaining 19 radio stations from **EW Scripps**, a broadcasting company based in the US, for \$47M
- **8/9: Tribune Media**, a US-based television and broadcasting company, terminated its initial \$3.9B bid to acquire **Sinclair Broadcast Group**, an American telecommunications conglomerate
- **8/7: Lotus Communications**, a California-based radio company, acquired eight radio stations in Arizona and Idaho from **EW Scripps**, a broadcasting company based in the US, for \$8M
- **8/3: Stingray Digital Group**, a Canadian music and video content provider, announced its unsolicited offer to acquire **Music Choice**, a US-based music programming company, for \$120M
- **8/2: Warner Music Groups**, a US-based music publishing company, acquired **Uproxx Media Group**, a US-based digital media company, for an undisclosed amount
- **7/31: Sony Corporation of America**, the US-based audio and video technology manufacturer, acquired a 9.98% stake in **EMI Music Publishing**, a UK-based music publishing company, from **The Estate of Michael Jackson** for \$288M
- **7/27: Good Karma Brands**, a Wisconsin-based conglomerate with interests in radio, sports marketing, retail and real estate, acquired two radio stations from **EW Scripps**, a broadcasting company based in the US, for \$16M
- **7/19: Beasley Broadcast**, a large US-based broadcasting company, acquired WXTU-FM in Philadelphia, PA from **Entercom Communications**, a publicly traded US-based broadcasting company, for \$38M
- **7/2: Mood Media**, the US-based music aggregation and distribution company, acquired **Focus Four**, a US-based provider of traditional Mood Media music products and services, from **Driehaus Private Equity** for an undisclosed amount
- **6/25: Griffin Communications**, an Oklahoma-based media company, acquired five radio stations from **EW Scripps**, a broadcasting company based in the US, for \$12.5M

Source: Company press releases and Wall Street Research.

SECTOR NEWS

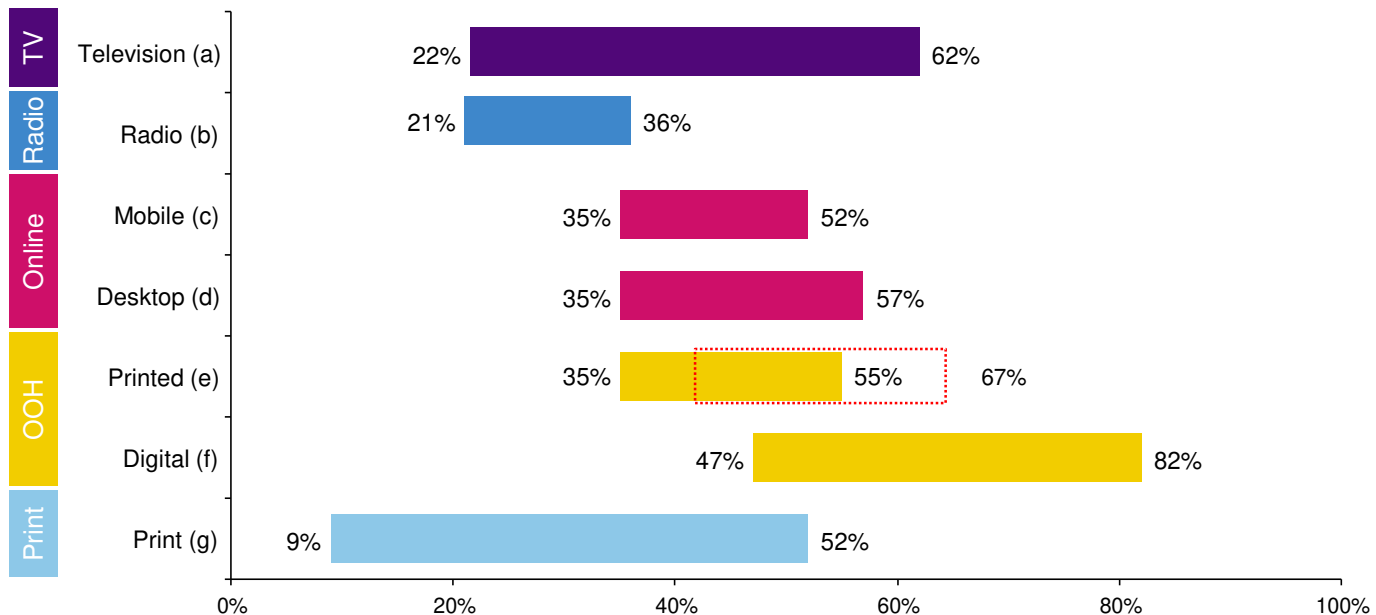
Other Key Digital Media and Tech Headlines

- **8/30: TECHNEDs Investment**, a UK-based private equity firm specializing in tech investments, acquired **Retell Ltd**, a UK-based provider of call recording solutions
- **8/15: Best Buy**, the US-based international retailer of consumer electronics, acquired **GreatCall**, a US-based provider of mobile health and safety solutions, from **GTCR** for \$800M
- **8/15: 1029 Holding**, the US-based marketing solutions provider, acquired **WhiteDelivery**, a US-based company that provides digital and email marketing solutions, from **Matomy Media Groups** for \$9M
- **8/14: Burson Marsteller**, a US-based global public relations and communications firm, acquired **Hirshorn-Zuckerman Design Group**, a US-based integrated creative branding agency, for an undisclosed amount
- **8/13: Veritone One**, a US-based advertising agency, acquired **S Media Ltd**, a US-based marketing and podcasting services company, for \$11M
- **8/7: AT&T**, the US-based telecommunications holding company, acquired an undisclosed controlling stake in **Otter Media Holding**, from **The Chernin Group** for an undisclosed amount
- **8/2: RealPage Inc**, a US-based provider of on-demand property management software, acquired **LeaseLabs**, a US-based provider of digital marketing services, solutions and software, for \$103M
- **8/2: GroupM Worldwide**, a US-based media investment managing firm, acquired a 50% stake in **Madhouse**, the India-based mobile media and advertising firm, from **Madhouse Inc.** for an undisclosed amount
- **7/27: Zensar Technologies**, the India-based provider of software solutions and IT services, acquired **Indigo Slate**, a US-based digital marketing agency, for \$18M
- **7/26: Deluxe Entertainment Services**, a US-based provider of media and entertainment services, acquired **Atomic Fiction**, a US-based company engaged in creating visual effects for streaming and theatrical content, for an undisclosed amount
- **7/25: Ziff Davis**, a US-based digital media company, acquired **DemandShore**, a US-based provider of marketing and content programs, for \$10M
- **7/17: KKR** acquired an undisclosed minority stake in **AppLovin**, a US-based mobile advertising company, for \$400M
- **7/16: Weber Shadwick**, a US-based firm engaged in providing public relations communications services, acquired **That Lot Creative**, a UK-based social creative agency, for an undisclosed amount
- **7/16: KKR** acquired **RBMedia**, a US-based company engaged in providing spoken audio content and digital media distribution technology, from **Shamrock Capital** for an undisclosed amount
- **7/13: Southfield Capital**, a US-based private equity firm, acquired **Match Marketing**, a Canada-based company engaged in offering shopper marketing solutions, for an undisclosed amount
- **7/12: IZEA**, a US-based company engaged in operating a marketplace that connects bloggers and advertisers, acquired **TapInfluence**, a US-based company providing cloud-based marketing platform software, for \$7M
- **7/10: Searchlight Capital**, the US-based private equity firm, acquired an undisclosed stake in **MediaMath**, the US-based developer of digital marketing technology and provider of related services, for \$225M
- **7/9: Sonic Pace Global**, the China-based BVI-incorporated media and advertising agency, acquired **Star Prestige Investments**, a Hong Kong-based company engaged in operating digital advertising media, from **KK Culture Holdings** for \$22M
- **7/3: UDG Healthcare**, the Ireland-based company providing services to healthcare and pharmaceutical companies, acquired **Create Group NYC**, a US-based advertising and marketing company specializing in pharmaceutical retailers, for \$17M
- **6/6: ABRY Partners**, a US-based private equity firm, acquired an undisclosed majority of **Screenvision Cinema Network**, the US-based cinema advertising and marketing company, from **AMC Entertainment** for \$380M

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

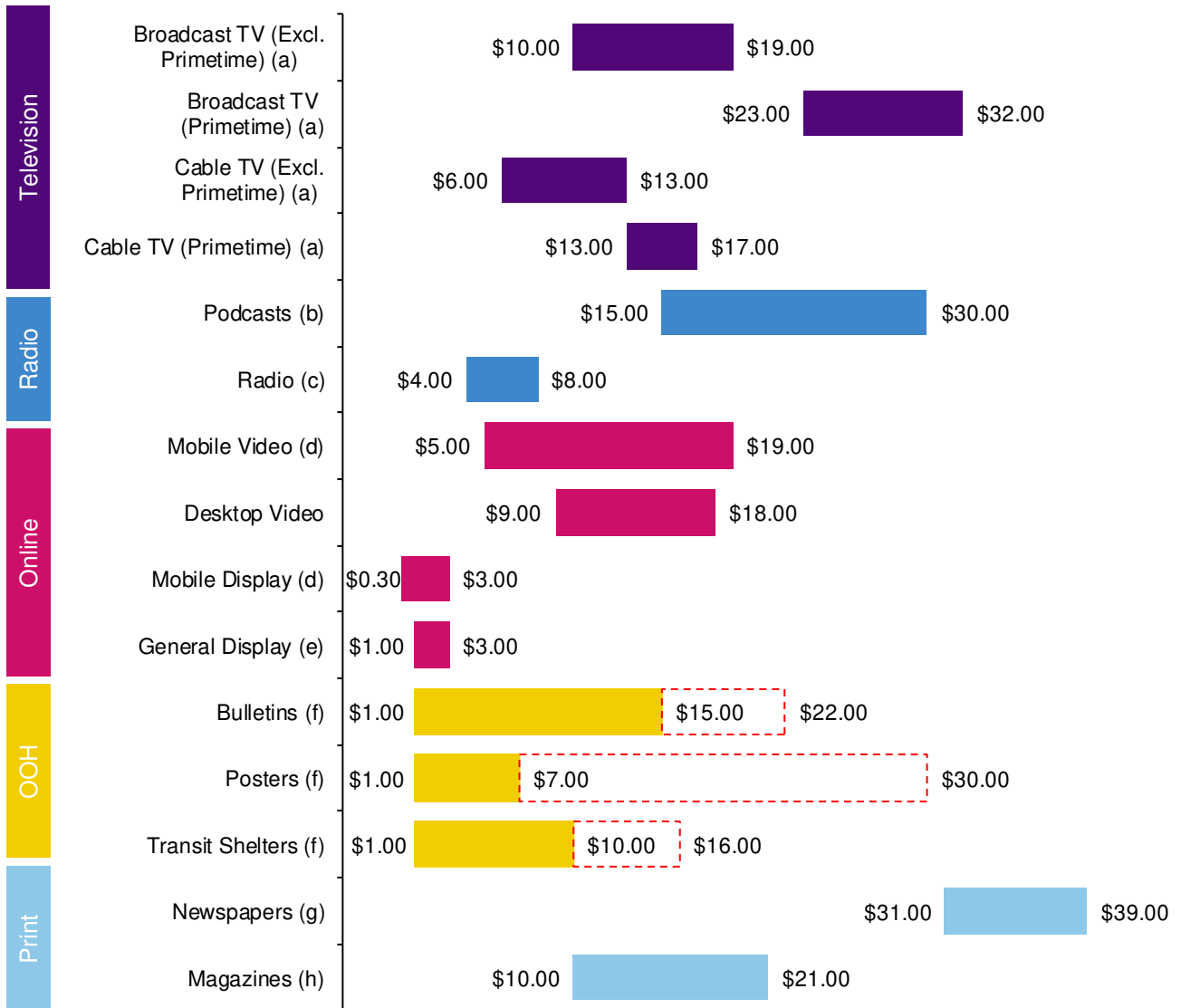


Source: PJ SOLOMON Study as of March 2017 and Wall Street Research.

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, wallscape, rotary programs, transit, airport advertising and in retail venues. Dotted box indicates revenue-weighted composite of printed and DOOH 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 September 2018 based on SEC filings, news, research and other industry sources.

MARKET INDICATORS

| Performance | | | | | Bloomberg Economic Forecast | | | | | |
|----------------------|---------|--------------------|------------------|--------------|-----------------------------|--------|--------|--------|--------|--------|
| | 9/13/18 | % off 52 Week High | 1-Month % Change | YTD % Change | 3Q18E | 4Q18E | 1Q19E | 2Q19E | 3Q19E | |
| Nasdaq Composite | 8,014 | (1.2%) | 2.5% | 16.1% | Real GDP | 2.90 % | 3.00 % | 3.10 % | 2.70 % | 2.50 % |
| Dow Jones Industrial | 26,146 | (1.8%) | 3.8% | 5.8% | Core CPI | 2.60 | 2.40 | 2.20 | 2.30 | 2.30 |
| S&P 500 | 2,904 | (0.3%) | 2.9% | 8.6% | Fed Funds | 2.25 | 2.50 | 2.70 | 2.90 | 3.05 |
| | | | | | 3 Mo. LIBOR | 2.38 | 2.60 | 2.79 | 2.96 | 3.08 |
| | | | | | 10 Yr Treasury | 2.98 | 3.09 | 3.20 | 3.26 | 3.30 |
| | | | | | Unemployment | 3.80 | 3.70 | 3.70 | 3.60 | 3.60 |

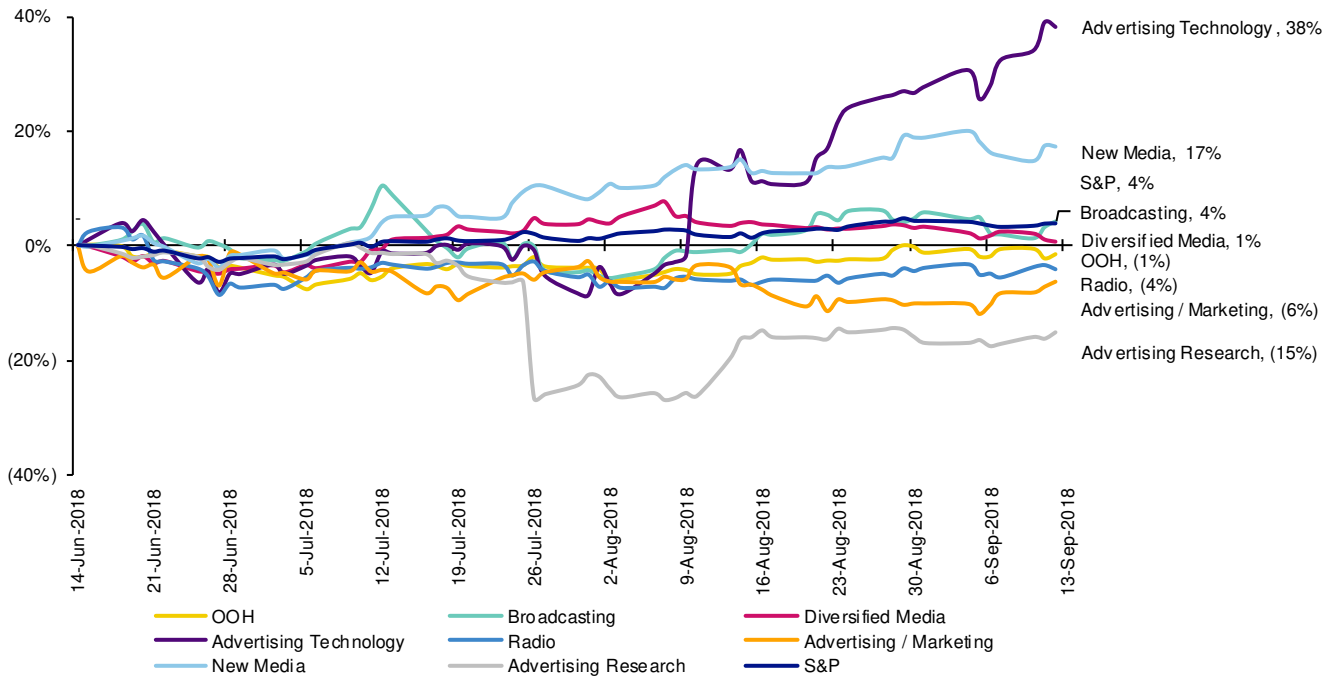
Share Price Performance

| Out of Home Media | | | | | Radio | | | | |
|--------------------------------------|---------|-----------------|--------------------|--------------|-------------------------------------|------------|-----------------|--------------------|--------------|
| | 9/13/18 | 1-Week % Change | 1 - Month % Change | YTD % Change | | 9/13/18 | 1-Week % Change | 1 - Month % Change | YTD % Change |
| AirMedia Group | \$0.44 | 6% | (6%) | (62%) | Beasley Broadcast Group | \$6.90 | (9%) | 1% | (49%) |
| APG SGA | 365.81 | 0% | 3% | (22%) | Emmis Communications | 5.30 | 1% | 4% | 51% |
| Boston Omaha | 29.60 | 8% | 44% | (9%) | Entercom Communications | 7.70 | (1%) | 2% | (29%) |
| Clear Channel Outdoor | 5.35 | 19% | 22% | 16% | Saga Communications | 35.70 | (5%) | (1%) | (12%) |
| JCDecaux | 34.47 | 1% | 10% | (12%) | Salem Communications | 3.90 | 1% | (3%) | (13%) |
| Lamar | 77.96 | 1% | 6% | 5% | Sirius XM Radio | 7.19 | 2% | 3% | 34% |
| National CineMedia | 9.15 | 3% | 7% | 33% | | | | | |
| OUTFRONT Media | 20.13 | 1% | 8% | (13%) | | | | | |
| Ströer | 60.82 | 6% | 6% | (15%) | | | | | |
| Out of Home Median | | 3% | 7% | (12%) | Radio Median | | (0%) | 2% | (13%) |
| Out of Home Mean | | 5% | 11% | (9%) | Radio Mean | | (2%) | 1% | (3%) |
| Broadcasting | | | | | Advertising/Marketing | | | | |
| Entravision | \$5.10 | 2% | (2%) | (29%) | BlueFocus Communication | \$0.70 | (8%) | (13%) | (13%) |
| Gray Television | 17.10 | 4% | 5% | 2% | Cheil Worldwide | 17.65 | 3% | (2%) | (7%) |
| Nexstar Broadcasting | 81.20 | 2% | 6% | 4% | Dentsu Inc. | 45.92 | 2% | 5% | 8% |
| Sinclair Broadcast Group | 27.90 | 2% | -- | (26%) | Huntsworth | 1.49 | -- | (5%) | 40% |
| TEGNA | 11.80 | 3% | 12% | (16%) | M&C Saatchi | 4.64 | (8%) | (3%) | (4%) |
| | | | | | MDC Partners | 4.18 | (8%) | (17%) | (57%) |
| | | | | | Next Fifteen Communications | 7.33 | (6%) | 1% | 27% |
| | | | | | Omnicom Group | 69.31 | 0% | 3% | (5%) |
| | | | | | Publicis Groupe | 58.61 | (1%) | (9%) | (11%) |
| | | | | | The Interpublic Group | 22.69 | 0% | 4% | 13% |
| | | | | | Viad | 61.10 | 0% | 3% | 10% |
| | | | | | WPP | 14.72 | (2%) | (9%) | (16%) |
| Broadcasting Median | | 2% | 5% | (16%) | Advertising/Marketing Median | | (1%) | (2%) | (5%) |
| Broadcasting Mean | | 3% | 4% | (13%) | Advertising/Marketing Mean | | (2%) | (3%) | (1%) |
| Diversified Media | | | | | New Media | | | | |
| CBS | \$56.21 | 3% | 8% | (5%) | Alphabet | \$1,182.14 | (0%) | (5%) | 12% |
| Discovery | 31.84 | 15% | 23% | 42% | Amazon | 1,989.87 | 2% | 5% | 70% |
| Disney | 110.67 | 0% | (1%) | 3% | eBay | 34.44 | 2% | 2% | (9%) |
| Hemisphere Media Group | 13.85 | 3% | 9% | 20% | Facebook | 161.36 | (1%) | (10%) | (9%) |
| News Corp. | 12.50 | (2%) | (8%) | (23%) | Netflix | 368.15 | 6% | 8% | 92% |
| Viacom | 30.08 | 3% | (1%) | (2%) | PayPal | 92.19 | 4% | 6% | 25% |
| | | | | | Snap | 9.35 | (5%) | (26%) | (36%) |
| | | | | | Twitter | 30.39 | (1%) | (7%) | 27% |
| Diversified Media Median | | 3% | 3% | 0% | New Media Median | | 1% | (2%) | 19% |
| Diversified Media Mean | | 4% | 5% | 6% | New Media Mean | | 1% | (4%) | 22% |
| Advertising Technology | | | | | Advertising Research | | | | |
| Criteo | \$23.86 | (6%) | (11%) | (8%) | comScore | \$19.77 | 9% | 3% | (31%) |
| HubSpot | 159.60 | 8% | 22% | 81% | Nielson | 26.54 | 2% | 8% | (27%) |
| Telaria | 4.36 | 6% | 21% | 8% | Ipsos | 30.32 | (2%) | (11%) | (15%) |
| The Trade Desk | 145.62 | 5% | 16% | 218% | | | | | |
| Advertising Technology Median | | 5% | 18% | 44% | Advertising Research Median | | 2% | 3% | (27%) |
| Advertising Technology Mean | | 3% | 12% | 75% | Advertising Research Mean | | 3% | (0%) | (24%) |

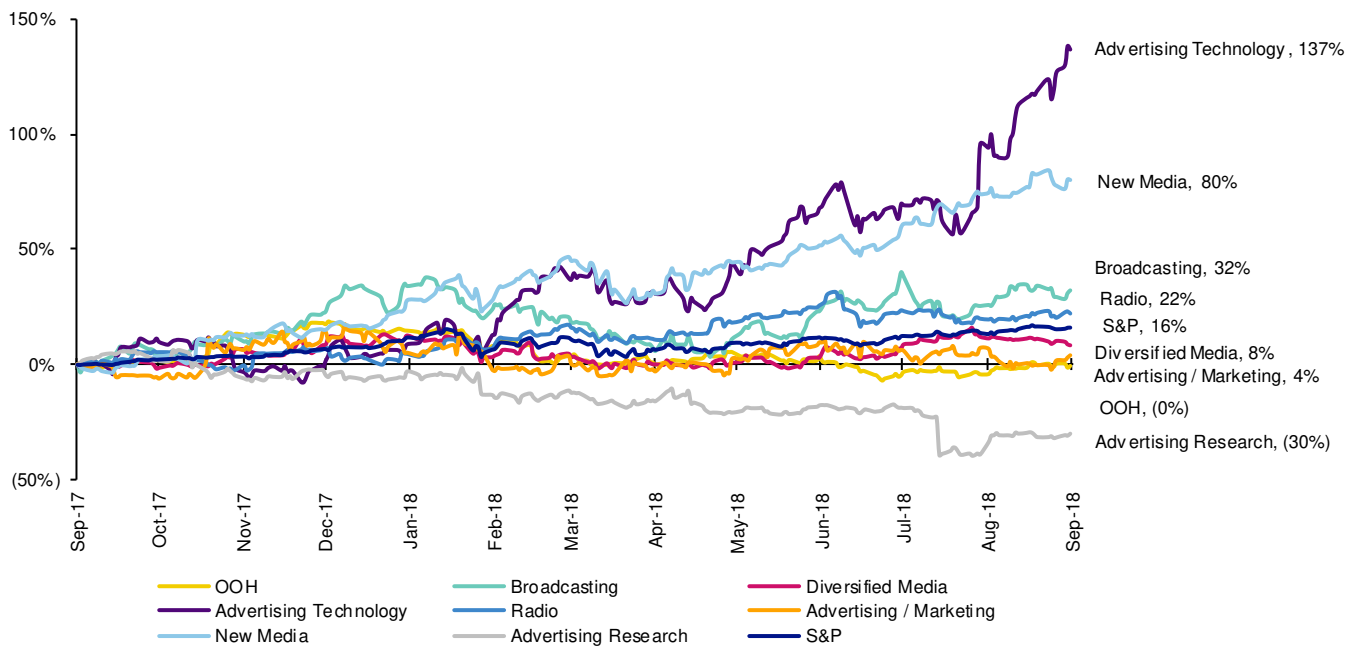
Source: Capital IQ as of September 13, 2018, Bloomberg and Wall Street Research.

INDUSTRY SHARE PRICE PERFORMANCE

Last Three Months



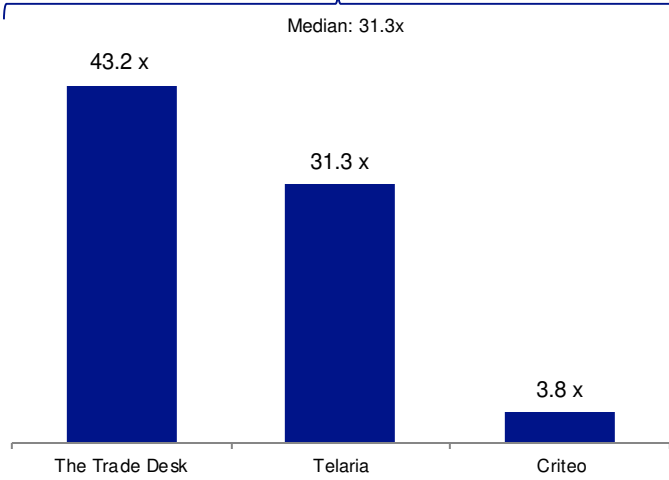
Last Twelve Months (LTM)



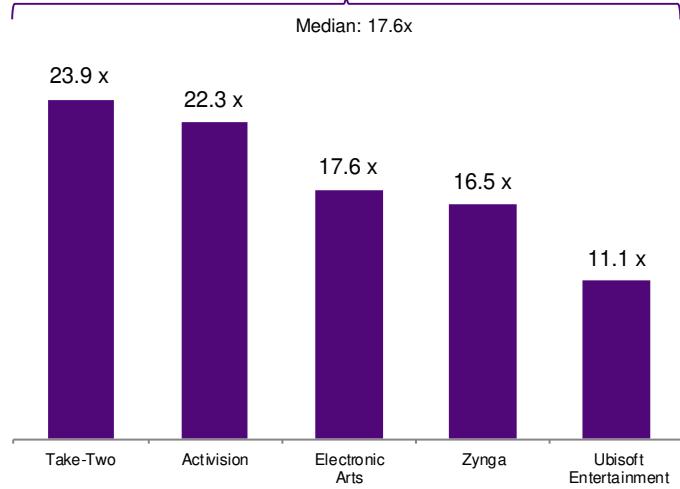
Source: Capital IQ as of September 13, 2018 and Wall Street Research.

EV / 2018E EBITDA

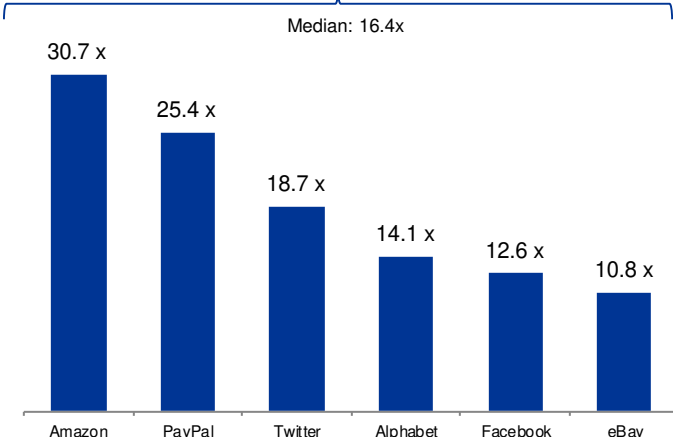
Advertising Tech



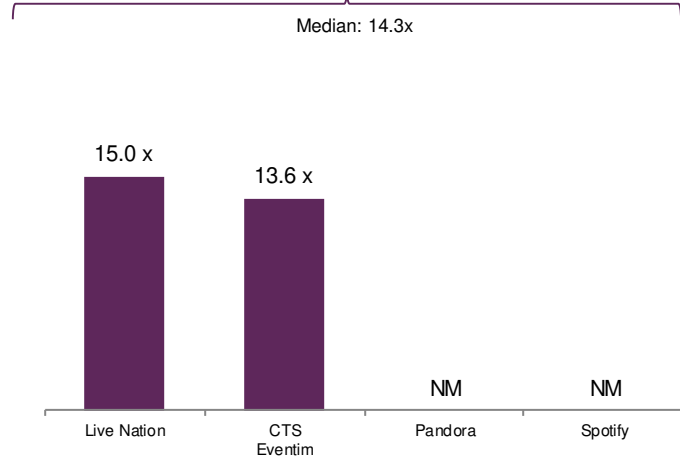
Video Games



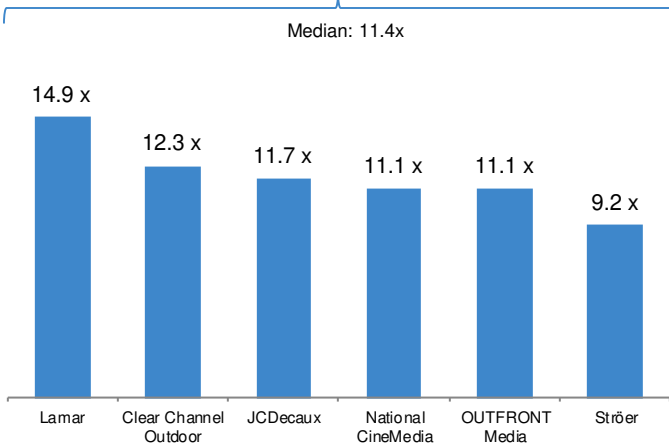
New Media



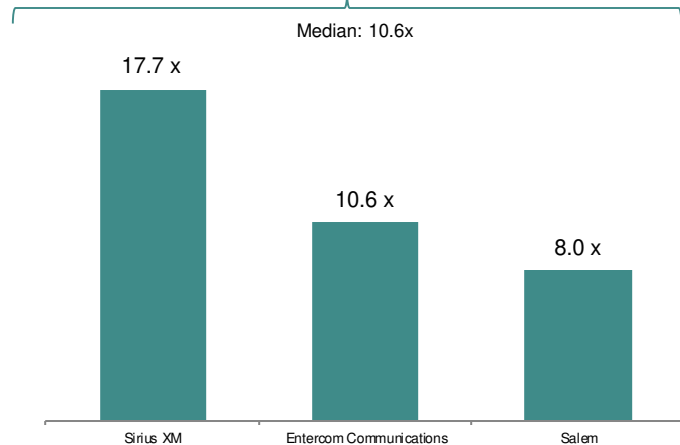
Music / Events



Out-of-Home Advertising



Radio

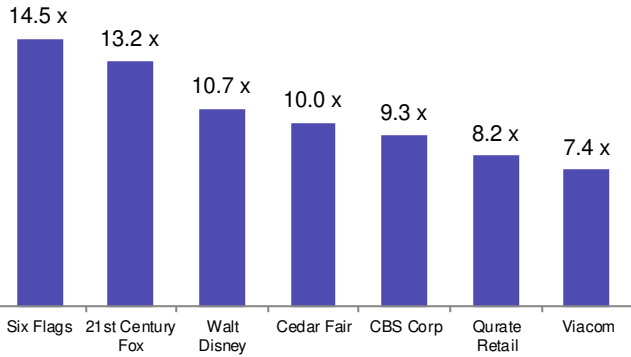


Source: Capital IQ as of September 13, 2018 and Wall Street Research.

EV / 2018E EBITDA

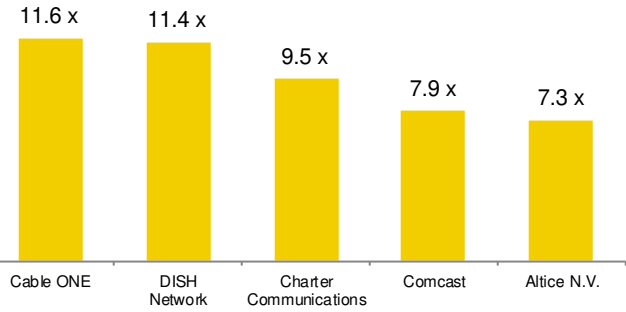
Cable / Content

Median: 10.0x



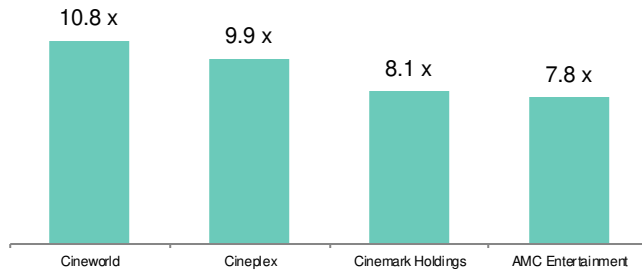
Cable

Median: 9.5x



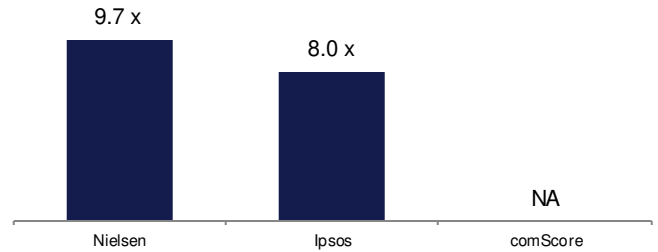
Theaters

Median 9.0x



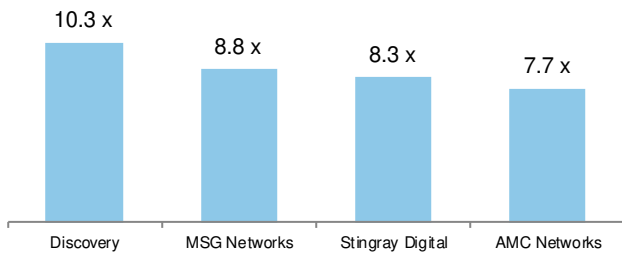
Advertising Research

Median: 8.8x



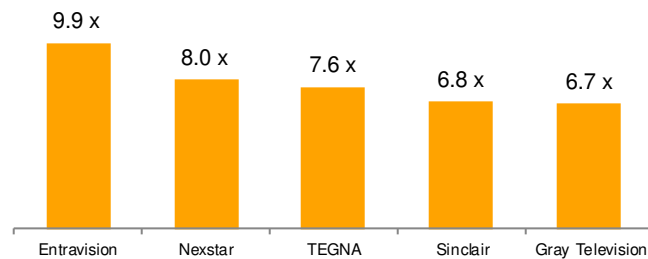
Cable Content

Median: 8.5x



Broadcasting

Median: 7.6x



Source: Capital IQ as of September 13, 2018 and Wall Street Research.

VALUATION METRICS

| | Stock Price 9/13/18 | 52-Week Low | 52-Week High | Equity Value | Enterprise Value | Valuation Multiples | | Growth | |
|--|------------------------|----------------|-----------------|-----------------|---------------------|-----------------------|----------------------|-----------------------------|----------------------------|
| | | | | | | EV / Revenue 2018E | EV / EBITDA 2018E | '16A - '18E CAGR Revenue | '16A - '18E CAGR EBITDA |
| Out of Home Media | | | | | | | | | |
| Boston Omaha | \$29.60 | \$15.34 | \$33.75 | \$653 | \$411 | NA | NA | NA | NA |
| Clear Channel Outdoor | \$5.35 | \$3.80 | \$5.35 | \$1,934 | \$7,186 | 2.7 x | 12.3 x | 0% | (5%) |
| JCDecaux | 34.54 | 30.38 | 42.66 | 7,350 | 8,003 | 1.9 x | 11.7 x | 9% | 4% |
| Lamar | 77.96 | 62.10 | 78.39 | 7,705 | 10,250 | 6.3 x | 14.9 x | 4% | 2% |
| National CineMedia | 9.15 | 5.19 | 9.16 | 1,442 | 2,349 | 5.3 x | 11.1 x | (0%) | 1% |
| OUTFRONT Media | 20.13 | 18.00 | 25.18 | 2,804 | 5,124 | 3.3 x | 11.1 x | 2% | 1% |
| Global / U.S. Median | | | | | | 3.3 x | 11.7 x | 2% | 1% |
| Global / U.S. Mean | | | | | | 3.9 x | 12.2 x | 3% | 1% |
| APG/SGA | \$367.26 | \$354.79 | \$481.02 | \$1,100 | \$1,078 | 3.4 x | 14.2 x | (2%) | (3%) |
| Ströer | 60.94 | 57.17 | 77.13 | 3,410 | 5,502 | 2.9 x | 9.2 x | 20% | 35% |
| Europe Median | | | | | | 3.2 x | 11.7 x | 9% | 16% |
| Europe Mean | | | | | | 3.2 x | 11.7 x | 9% | 16% |
| AirMedia Group | \$0.44 | \$0.39 | \$2.72 | \$27 | NM | NA | NA | NA | NA |
| Clear Media | 0.76 | 0.76 | 1.19 | 414 | 380 | NA | NA | NA | NA |
| China Median | | | | | | NA | NA | NA | NA |
| China Mean | | | | | | NA | NA | NA | NA |
| Total Out of Home Advertising Median | | | | | | 3.3 x | 11.7 x | 2% | 1% |
| Total Out of Home Advertising Mean | | | | | | 3.7 x | 12.1 x | 5% | 5% |
| Radio | | | | | | | | | |
| Beasley Broadcast Group | \$6.90 | \$6.25 | \$14.05 | \$190 | \$386 | 1.5 x | 7.6 x | 35% | 31% |
| Emmis Communications | 5.30 | 2.83 | 5.83 | 69 | 176 | NA | NA | NA | NA |
| Entercom Communications | 7.70 | 6.40 | 12.30 | 1,097 | 2,986 | 2.0 x | 10.6 x | 77% | 62% |
| Salem Media Group | 3.90 | 3.15 | 6.70 | 102 | 354 | 1.3 x | 8.0 x | (2%) | (5%) |
| Sirius XM Holdings | 7.19 | 5.21 | 7.64 | 32,269 | 38,654 | 6.7 x | 17.7 x | 7% | 12% |
| Radio Median | | | | | | 1.8 x | 9.3 x | 21% | 22% |
| Radio Mean | | | | | | 2.9 x | 11.0 x | 29% | 25% |
| Broadcasting | | | | | | | | | |
| Entravision Communications | \$5.10 | \$4.00 | \$7.75 | \$453 | \$506 | 1.7 x | 9.9 x | 8% | (11%) |
| Gray Television | 17.10 | 10.75 | 17.80 | 1,491 | 2,817 | 2.7 x | 6.7 x | 14% | 18% |
| Nexstar Broadcasting Group | 81.20 | 57.05 | 84.00 | 3,699 | 7,848 | 2.9 x | 8.0 x | 57% | 54% |
| Sinclair Broadcast Group | 27.90 | 25.40 | 39.90 | 2,854 | 5,711 | 1.9 x | 6.8 x | 4% | (2%) |
| TEGNA | 11.80 | 10.09 | 15.59 | 2,540 | 5,647 | 2.6 x | 7.6 x | 4% | (5%) |
| Broadcasting Median | | | | | | 2.6 x | 7.6 x | 8% | (2%) |
| Broadcasting Mean | | | | | | 2.4 x | 7.8 x | 17% | 11% |
| Advertising/Marketing | | | | | | | | | |
| BlueFocus Communication Group | \$0.70 | \$0.69 | \$1.21 | \$1,528 | \$2,018 | 0.7 x | 12.1 x | 30% | 27% |
| Cheil Worldwide | 17.55 | 15.95 | 19.38 | 1,778 | 1,378 | 0.4 x | 7.2 x | 6% | 7% |
| Dentsu | 58.74 | 58.74 | 73.41 | 13,546 | 17,156 | 1.6 x | 8.8 x | (3%) | (2%) |
| Huntsworth | 1.50 | 0.96 | 1.83 | 492 | 544 | 1.9 x | 11.5 x | 11% | 29% |
| M&C Saatchi | 4.66 | 3.87 | 5.41 | 401 | 400 | 1.1 x | 9.1 x | 9% | 39% |
| MDC Partners | 4.18 | 4.08 | 12.10 | 240 | 1,438 | 1.0 x | 7.2 x | 4% | 16% |
| Next Fifteen Communications Group | 7.36 | 4.86 | 7.87 | 578 | 593 | 2.0 x | 10.9 x | 14% | 23% |
| Omnicom Group | 22.69 | 18.45 | 25.33 | 8,708 | 10,451 | 1.3 x | 8.4 x | (0%) | 6% |
| Publicis | 69.31 | 65.22 | 82.78 | 15,551 | 19,314 | 1.3 x | 8.2 x | (0%) | 1% |
| The Interpublic Group | 14.78 | 14.37 | 19.32 | 18,436 | 25,066 | 1.2 x | 7.8 x | 3% | (1%) |
| WPP | 45.98 | 39.33 | 47.86 | 12,962 | 15,202 | 1.7 x | 9.4 x | 10% | 2% |
| Advertising/Marketing Median | | | | | | 1.3 x | 8.8 x | 6% | 7% |
| Advertising/Marketing Mean | | | | | | 1.3 x | 9.1 x | 7% | 13% |
| Advertising Technology / New Media | | | | | | | | | |
| Alphabet | \$1,182.14 | \$929.75 | \$1,285.50 | \$820,006 | \$721,733 | 5.3 x | 14.1 x | 23% | 31% |
| Amazon | 1,989.87 | 938.60 | 2,039.51 | 970,542 | 989,281 | 4.2 x | 30.7 x | 31% | 66% |
| Criteo | 23.86 | 22.12 | 47.20 | 1,599 | 1,140 | 1.2 x | 3.8 x | (27%) | 30% |
| Facebook | 161.36 | 152.22 | 217.50 | 465,882 | 423,694 | 7.6 x | 12.6 x | 42% | 51% |
| HubSpot | 159.60 | 72.15 | 159.60 | 6,191 | 5,950 | 11.9 x | NM | 36% | NM |
| Netflix | 368.15 | 177.01 | 418.97 | 160,314 | 164,749 | 10.4 x | NM | 34% | 117% |
| PayPal | 92.19 | 62.24 | 93.07 | 109,123 | 100,736 | 6.5 x | 25.4 x | 19% | 37% |
| Telaria | 4.36 | 3.51 | 5.27 | 231 | 166 | 2.8 x | 31.3 x | 43% | NM |
| The Trade Desk | 145.62 | 42.80 | 147.72 | 6,250 | 6,108 | 13.4 x | 43.2 x | 50% | 54% |
| Twitter | 30.39 | 16.59 | 46.76 | 22,943 | 19,978 | 6.9 x | 18.7 x | 7% | 317% |
| Advertising Technology / New Media Median | | | | | | 6.7 x | 22.0 x | 33% | 53% |
| Advertising Technology / New Media Mean | | | | | | 7.0 x | 22.5 x | 26% | 88% |
| Advertising Research | | | | | | | | | |
| Ipsos | \$30.38 | \$30.27 | \$40.32 | \$1,323 | \$1,887 | 0.9 x | 8.0 x | (1%) | 1% |
| Nielsen | 26.54 | 21.75 | 41.76 | 9,427 | 17,888 | 2.7 x | 9.7 x | 2% | 7% |
| comScore | 19.77 | 18.06 | 30.14 | 1,145 | 1,283 | 3.1 x | NM | 2% | NM |
| Advertising Research | | | | | | 2.7 x | 8.8 x | 2% | 4% |
| Advertising Research | | | | | | 2.2 x | 8.8 x | 1% | 4% |

Source: Capital IQ as of September 13, 2018 and Wall Street Research.

UPCOMING EVENTS

| DATES | NAME | LOCATION | DESCRIPTION |
|---------------------------------|--|------------------|---|
| October 1-4, 2018 | NYC Advertising Week | New York, NY | <ul style="list-style-type: none"> Advertising Week at Samsung's Experience Center to highlight the state of the digital out of home media industry Mark Boidman to present |
| October 2-4, 2018 | Smart Cities Week | Washington, DC | <ul style="list-style-type: none"> Showcases demonstrations of the next wave of innovative, integrated technologies that are helping cities save money, build more robust economies and enhance citizens' lives |
| October 16, 2018 | VR 20/20 Summit | New York, NY | <ul style="list-style-type: none"> VR/AR media executives, technology pioneers, investors and creative minds will converge to share inner secrets of the industry |
| October 24-27, 2018 | ANA Masters of Marketing | Orlando, FL | <ul style="list-style-type: none"> Engage with the nation's chief marketing officers and leaders from the agency and media worlds at the industry's signature event, attracting upward of 3,000 attendees |
| October 24-25, 2018 | SMX East Summit | New York, NY | <ul style="list-style-type: none"> Conference addresses strategies and tactics from some of the savviest brands and digital marketing agencies managing earned, owned and paid social media marketing campaigns across multiple platforms |
| October 29- November 2, 2018 | NYC Television & Video Week | New York, NY | <ul style="list-style-type: none"> Will bring the industry's leaders together to discuss the full breadth of trends and topics that are vital to today's television businesses Will draw more than 2,400 television industry executives and feature 200 industry leaders as keynotes and presenters |
| October 29- November 2, 2018 | New York Digital Signage Week | New York, NY | <ul style="list-style-type: none"> Will include events for retail, employee communications, digital OOH and digital signage Includes the DailyDOOH Investor Conference on October 31 |
| November 1, 2018 | Next TV Summit | New York, NY | <ul style="list-style-type: none"> Next TV Summit is a high-level, future-focused conference providing insights into the impact of new video devices, technologies, viewing experiences, business models and consumer expectations in the OTT and On Demand era. |
| November 14-16, 2018 | OOH Latin American Forum | Bogota, Colombia | <ul style="list-style-type: none"> Event hosted and operated by the Latin American Out of Home Association, with over 10 countries represented |
| January 8-11, 2019 | International Consumers Electronics Show (CES) | Las Vegas, NV | <ul style="list-style-type: none"> CES is the world's gathering place for all those who thrive on the business of consumer technologies Owned and produced by the Consumer Technology Association (CTA) |



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