Sizing Growth Opportunities for NextGen TV in Local Markets

Rick Ducey, Managing Director
Mark Fratrik, SVP/Chief Economist
BIA Advisory Services
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Peter Wharton Happy Robotz

WITHOUT THEIR VOLUNTEER EFFORTS THIS SUMMIT WOULD NOT BE POSSIBLE
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
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</thead>
<tbody>
<tr>
<td>8:00 AM -</td>
<td>Registration and continental breakfast</td>
<td></td>
</tr>
<tr>
<td>9:00 AM</td>
<td>8:55 AM - 9:00 AM Welcome from SMPTE, SBE and AES</td>
<td>Kishore Persaud, SBE Baltimore, Fred Willard, SBE Washington</td>
</tr>
<tr>
<td>9:00 AM -</td>
<td>9:05 AM - 9:35 AM Peter Wharton, SMPTE Membership VP</td>
<td>Chris Lane, Chief Engineer, WETA</td>
</tr>
<tr>
<td>9:35 AM -</td>
<td>10:00 AM - 10:35 AM Creating New Opportunities with NextGen TV</td>
<td>Joonyoung Park, VP and Fellow, DigiCAP</td>
</tr>
<tr>
<td>10:35 AM -</td>
<td>11:15 AM - 11:30 AM Improved Television Reception for Consumers</td>
<td>Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors</td>
</tr>
<tr>
<td>11:30 AM -</td>
<td>12:00 PM - 12:15 PM Benefits of a Converged Broadcast and IP Platform</td>
<td>Madeleine Noland, President, ATSC</td>
</tr>
<tr>
<td>12:15 PM -</td>
<td>1:00 PM - 1:15 PM Content Reception Enhancements</td>
<td>Richard Lhermitte, VP Solutions and Market Dev, ENENSYS TeamCast</td>
</tr>
<tr>
<td>1:00 PM -</td>
<td>1:15 PM - 1:30 PM Morning Break</td>
<td></td>
</tr>
<tr>
<td>1:15 PM -</td>
<td>2:00 PM - 2:15 PM Consumer Applications for Combined 5G &amp; NextGen TV Networks</td>
<td>Josh Arensberg, M&amp;E Business Development, Verizon Media</td>
</tr>
<tr>
<td>2:15 PM -</td>
<td>3:00 PM - 3:15 PM Case Study: Hybrid Services at &quot;Chicago 3.0&quot;</td>
<td>Jean Macher, Harmonic</td>
</tr>
<tr>
<td>3:15 PM -</td>
<td>4:00 PM - 4:15 PM Buffet Lunch</td>
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</table>

**Afternoon Program**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
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</thead>
<tbody>
<tr>
<td>1:25 PM -</td>
<td>2:00 PM - 2:15 PM Protecting the NextGen TV Consumer</td>
<td>John McCoskey, SpectraRep</td>
</tr>
<tr>
<td>2:00 PM -</td>
<td>3:15 PM - 3:30 PM Monetizing the NextGen TV Consumer</td>
<td>Rick Ducey &amp; Mark Franrik, BIA</td>
</tr>
<tr>
<td>2:15 PM -</td>
<td>3:30 PM - 3:45 PM Personalizing the Consumer Experience</td>
<td>Greg Jarvis, Fincons, So Vang, NAB, Pete Van Peenan, Pearl TV</td>
</tr>
<tr>
<td>3:45 PM -</td>
<td>4:00 PM - 4:15 PM The Consumer Out-of-Home Experience</td>
<td>Mark Cori, Triveni Digital, Thomas Janner, Product Management &amp; R&amp;D Director, Rhode &amp; Schwarz</td>
</tr>
<tr>
<td>4:00 PM -</td>
<td>5:15 PM - 5:30 PM Personalizing the Consumer Experience</td>
<td>Thomas Janner, Product Management &amp; R&amp;D Director, Rhode &amp; Schwarz</td>
</tr>
<tr>
<td>4:15 PM -</td>
<td>5:30 PM - 5:45 PM The ATSC 3.0 Roadmap</td>
<td>Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors</td>
</tr>
<tr>
<td>5:15 PM -</td>
<td>6:30 PM - 6:45 PM The Consumer Technology Roadmap</td>
<td>Madeleine Noland, President, ATSC</td>
</tr>
<tr>
<td>5:30 PM -</td>
<td>6:45 PM - 7:00 PM The Consumer Technology Roadmap</td>
<td>Brian Markwalter, SVP Research and Standards, The Consumer Technology Association</td>
</tr>
<tr>
<td>6:00 PM -</td>
<td>7:15 PM - 7:30 PM Station Group and Industry Deployment Plans</td>
<td>Skip Pizzi, VP Technology Education &amp; Outreach, NAB (Moderator), Michael Bouchard, VP Technology Strategy, ONE Media / Sinclair Stacey Decker, CTO, Public Media Group, Sasha Javid, COO, The Spectrum Co</td>
</tr>
<tr>
<td>7:15 PM -</td>
<td>8:00 PM - 8:15 PM Cocktail Reception</td>
<td>Michael Bouchard, VP Technology Strategy, ONE Media / Sinclair, Stacey Decker, CTO, Public Media Group, Sasha Javid, COO, The Spectrum Co</td>
</tr>
</tbody>
</table>

**Other Details**

- Registration and continental breakfast from 8:00 AM to 9:00 AM
- Welcome from SMPTE, SBE and AES at 8:55 AM
- NextGen TV: Transforming the Consumer Experience from 9:05 AM to 9:35 AM
- Improved Television Reception for Consumers from 10:00 AM to 10:35 AM
- Benefits of a Converged Broadcast and IP Platform from 10:35 AM to 11:15 AM
- Content Reception Enhancements from 11:15 AM to 11:30 AM
- Consumer Applications for Combined 5G & NextGen TV Networks from 11:30 AM to 11:50 AM
- Case Study: Hybrid Services at "Chicago 3.0" from 11:50 AM to 12:15 PM
- Buffet Lunch from 12:15 PM to 1:00 PM
- Welcome from SMPTE, SBE and AES at 6:00 PM
- Cocktail Reception from 6:00 PM to 8:00 PM
Examining Core and Adjacent Markets

Advanced advertising
Connected car
Wireless broadband data
Hybrid networks
Cutting to the chase, NextGen TV has Clear Upsides for Local TV

NextGen TV has 8.0% CAGR Revenue Growth Scenario, versus 3.8% CAGR baseline

BIA Observation

Even with a slow down in OTA revenue growth, the future for television stations and groups is bright, especially for those that pursue multiple revenue streams.

Potential Growth Rates

Existing TV CAGR: 3.8%

With Advanced TV\(^1\): 5.5%

With Non-Broadcasting\(^2\): 8.0%

1/Advanced TV: Incremental to OTA offers: DAI, Addressability, Attribution, Cross Platform Targeting

2/ Non-Broadcasting: Data Distribution, IoT, Autonomous Cars,…
Advanced TV Ecosystem in the Local Video Market. Continued M&A Reshapes this Market.

Platforms 2-sided market aggregators
Devices OTA, STB, Internet, Mobile
Content Networks, Stations, Flixes
Distribution MVPD, Internet, 5G, NextGen
NextGen TV is an Exciting New Local Advanced TV Platform!

With our ear to the ground in the local marketplace, here’s what we’re hearing.

- What expectations should agencies and marketers have for NextGen TV and local TV advertising in terms of services, data and other opportunities will be available to them, and when?
- Will there be OTA addressable advertising via NextGen TV?
- What are the major local TV groups doing about NextGen TV?
- What market penetration level must NextGen TV reach before it becomes a viable advertising platform?
- How does NextGen TV compare to OTT/CTV from consumer and buyer POVs?
- Will broadcasters incorporate workflow automation into NextGen TV deployments?
- What NextGen TV advertising inventory and units will be available to buyers?
- With 5G, why do we need NextGen TV?
- What 1st party data will local TV broadcasters have from NextGen TV services?
- What are the compelling NextGen TV use cases for audiences?
- What are broadcasters’ NextGen TV business models?
- How will local TV broadcasters manage cross-platform NextGen TV, OTT/CTV and other integrated campaign buying in terms of inventory and pricing transparency?
- How will local TV broadcasters develop cross-platform yield management, revenue optimization solutions?
- How will local TV package ATSC 1.0 and NextGen TV offerings for buyers?
- Will NextGen TV be an “audience extension” product until it reaches scale to be a stand-alone platform?
Let’s back up a step and look at the video and the local ad market

2020-2024 Ad Forecast
Local Advertising: Five-Year Forecast

Total U.S. Spending in Local Markets

Note: Numbers are rounded.

Source: 2020 BIA’s U.S. Ad Forecast
Shift Toward Digital Media Continuing – Ad Revenue

Source: 2020 BIA's U.S. Ad Forecast

Note: Numbers are rounded.

2020-2024 CAGRs:

Total Media CAGR 3.9%

Digital Media CAGR 9.2%

Traditional Media CAGR -1.0%

Source: 2020 BIA's U.S. Ad Forecast
Total Local U.S. Ad Revenue to Reach $161.1B in 2020

Looking Ahead: Local Online/Interactive/Digital Approaches 50%

Total Local U.S. Ad Revenue to Reach $161.1B in 2020

Source: 2020 BIA’s U.S. Ad Forecast
Share of Wallet

Top Five Media in 2020

Total Ad Spend $161.1B
Dollar Spend and Percentage Share by Media

1. Direct Mail
   - $37.0B
   - 23.0%

2. Mobile
   - $29.5B
   - 18.3%

3. Online/Interactive
   - $22.2B
   - 13.8%

4. Local Television
   - $18.5B
   - 11.5%

5. Local Radio
   - $14.3B
   - 8.9%

Source: 2020 BIA's U.S. Ad Forecast

Note: Local radio includes over-the-air and digital advertising.
Total Local U.S. Ad Revenue to Reach $187.6B in 2024

Looking Ahead: Local Online/Interactive/Digital Becomes Dominant Media

Local Online/Interactive/Digital Ad Revenue: $100.9 Billion (53.8%)

Traditional Media Revenue: $86.6 Billion (46.2%)

Source: 2020 BIA’s U.S. Ad Forecast
Local Mobile Ad Spend, Limited Video Upside

Local TV operators looking to Mobile Video as high growth for NextGen TV revenue. But video is a small component of mobile ad spend. Where will growth come from?

*Note: Numbers are rounded.*

<table>
<thead>
<tr>
<th>2020</th>
<th>2024</th>
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<tbody>
<tr>
<td>Search</td>
<td>42.7%</td>
</tr>
<tr>
<td>Native/Social</td>
<td>39.7%</td>
</tr>
<tr>
<td>Traditional Video</td>
<td>0.8%</td>
</tr>
<tr>
<td>Messaging</td>
<td>4.6%</td>
</tr>
<tr>
<td>Traditional Display</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

*Note: traditional video includes such things as in-stream pre-roll ads on YouTube. It does not include natively produced and placed in-feed video in social media, such as Facebook news feed ads. Videos in the latter category are measured separately under native/social.*

Source: BIA’s 2020 BIA’s U.S. Ad Forecast
Local Video Marketplace

Linear TV (OTA, Cable) get lion’s share of spending, Digital video continues to eat away

![Pie chart for 2020]

- Local Television: 62.7%
- Local Cable: 19.9%
- Local Online Video: 7.6%
- OOH - Video: 5.1%
- Local Mobile Video: 4.8%

![Pie chart for 2024]

- Local Television: 58.8%
- Local Cable: 17.9%
- Local Online Video: 12.6%
- OOH - Video: 5.2%
- Local Mobile Video: 5.5%
Local Video Advertising Revenue

Source: 2020 BIA's U.S. Ad Forecast

Note: Numbers are rounded.
NextGen TV and Advanced Advertising

Addressability

Attribution
### Relative Strengths of Different Local Video Ad Platforms (at maturity)

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>LOCAL TV</th>
<th>NEXTGEN TV</th>
<th>OTT/CTV/VMVPD</th>
<th>MVPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Market Reach</td>
<td>√</td>
<td>√</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Premium Video</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>Interactive</td>
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<td>√</td>
<td>√</td>
<td>x</td>
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<tr>
<td>Addressable</td>
<td>x</td>
<td>√</td>
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<td>√</td>
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<tr>
<td>Dynamic Ad Insertion</td>
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<tr>
<td>Mobile</td>
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<td>√</td>
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<tr>
<td>Attribution</td>
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<td>First-Party Data</td>
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<td>√</td>
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<td>Privacy</td>
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<td>Brand Safe</td>
<td>√</td>
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<tr>
<td>Fraud</td>
<td>√</td>
<td>√</td>
<td>x</td>
<td>√</td>
</tr>
</tbody>
</table>

Source: BIA Advisory Services, January 2020
Platforms and devices drive the business models more than the content.

- **Competition**: setting the bar – MVPD, vMVPD, OTT/CTV, duopoly
- **Geotargeting OTA**: SFNs and geo zones
- **Audience targeting**: Internet connected devices with OTA interface, data-matching
- **Ad cache**: equipped devices with shared storage
- **Decisioning engines**: Dynamic Ad Insertion, which ads get served to whom
- **Inventory management**: allocating addressable inventory, pricing to maximize revenue
- **Audience measurement** and reporting for OTA only and connected viewing

NextGen TV and Offering Addressable TV at Household Level

https://tvrev.com/reports/challenge-universal-addressability/
NextGen TV and Attribution

Match **content** to **audience** to **performance**, allocated to specific media channels

**Content** (Program and Ad IDs)

- Nielsen: Watermarks and metering
- Verance: Watermark for ATSC 3.0 and cross-platform content distribution.

**Performance**

- Correlational: Matching offline campaigns to
  - Digital KPIs: site traffic, search traffic, app downloads, form fills
  - Physical KPIs: foot traffic, phone calls
  - POS: matching sales to campaign periods
  - Testimonials: still work!
- Closed-Loop: Much harder to accomplish actual causal links
  - Amazon, Google, Facebook have the data for e-commerce
  - Data matching rates an issue
  - GDPR and CCPA change the game

**Audience**

- Comscore, Nielsen
Other Opportunities: Data-Driven Business Models and ATSC 3.0

Opportunity assessments for local TV use cases

- 1st party data
- Analytics and insights
- Addressability
- Attribution
- Content Distribution Network
- Alerts and warnings

Final Thoughts

Putting the Puzzle Together

- NextGen TV has clear paths to revenue growth across different business models
- Through our forecast period, linear TV (TV OTA and MVPD) retain most of the local video ad dollars.
- Online video (including OTT) and mobile video continue to eat away at linear TV dollars
- NextGen TV presents opportunities for local TV to participate in more of the traditional value chain.
- If Data is the New Oil, local TV operators might be forgiven for mistaking their towers for oil rigs.
- NextGen TV + Data = high value/high impact business model marrying premium video to targeted audiences.
THANK YOU

FROM THE SMPTE WASHINGTON DC SECTION