Digital Media 4x Transformation, The Tesla of Broadcasting
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Digital Media 4x Transformation, The Tesla of Broadcasting

This discussion will include an overview of the following:

- Market Trends & Metrics
- Overview of the Digital Media Ecosystem and Business Cycle Challenges
- The 4x Digital Media Workflows Defined
- Social Media’s Impact on the Workflows and Viewer Engagement
- Conclusion: Placing Broadcaster’s in the Tesla “Leadership” Driver’s Seat
Tesla’s Impact on the Automotive Industry

Tesla was the “rebirth” of the electric car which was a game changing event re-directing automakers enough that there are now many electric vehicles on the market, in mass production by major automakers, on sale around the world.
So What’s My Point?

❖ My Point?
❖ For many years the digital media ecosystem was an afterthought for broadcasters and with many, it was just about having a “presence”
❖ A website was nothing more than a site to drive consumer’s to their TV programming or for brand “exposure” to local online consumers
❖ Almost always it was a “money loosing” necessity that broadcasters felt they must invest in for the sake of being Internet “relevant”

❖ What About Now?
❖ With the onslaught of NEW key “major” competitors such as Google’s YouTube, consumer demand and growth of “Mobile” and the success of “non-traditional media” OTT entities like Netflix, Hulu, Amazon, NOW TV and others…….
❖ Broadcasters must truly “transform” themselves to “multi-platform” programming providers and NOT look at “multi-platform” as a secondary option!
So What’s Trending?

- Original programming and live events on “Internet OVPs and Portals” such as YouTube, Livestream, AOL, Yahoo and USTREAM
- Facebook is aiming for TV advertising budgets with its recent acquisition of LiveRail. Facebook data augmenting LiveRail’s real-time bidding platform enables “improved targeting” of video ads.
- AOL and Publicis Groupe announced an expansion of their multi-faceted six-year relationship into “programmatic” video and linear TV
  - Tim Armstrong, Chairman and CEO, AOL states: “AOL is transforming as a company and as a partner into a programmatic advertising platform, …Publicis is a global leader in digital advertising and we are excited to advance our global partnership into video and linear TV on the ONE by AOL platform.”
So What’s Trending?

What is programmatic ad buying?
- “Programmatic” ad buying refers to the use of software to purchase digital advertising, as opposed to the traditional process that involves RFPs, human negotiations and manual insertion orders. It’s using machines to buy ads, basically.

Why does programmatic advertising matter?
- Efficiency. Before programmatic ad buying, digital ads were bought and sold by human ad buyers and salespeople, which are expensive and unreliable. Programmatic advertising technology promises to make the ad buying system more efficient, and therefore less expensive.

Is programmatic “the future of ad buying”?
- At the moment, it’s mainly online ads that are traded programatically, but increasingly media companies and agencies are exploring ways to sell “traditional” media this way, including TV spots.
What’s Trending?

- HBO plans to launch a stand-alone over-the-top service in the U.S. next year - CEO Richard Plepler said “This will be transformative for our company,” noting that there are now about 10 million households in the U.S. that are broadband-only, and declared: “It is time to remove all barriers to those who want HBO.”
- CBS’s announcement called, "CBS All Access" will offer thousands of episodes from current and previous seasons of CBS shows, as well as "classic shows," all on-demand. It will also live stream local CBS stations in 14 of the largest US markets.
U.S. Digital Video Ad Spending

US Digital Video Ad Spending, 2013-2018

Note: includes advertising that appears on desktop and laptop computers as well as mobile phones and tablets; includes in-banner, in-stream and in-text
Source: eMarketer, Sep 2014

US Digital Display Ad Spending Share, by Format, 2013-2018

% of total and billions

2013 total spending=$17.68
2014 total spending=$22.36
2015 total spending=$27.05
2016 total spending=$32.39
2017 total spending=$37.36
2018 total spending=$42.64

Note: includes advertising that appears on desktop and laptop computers as well as mobile phones and tablets; * includes ads such as Facebook's News Feed Ads and Twitter's Promoted Tweets
Source: eMarketer, Sep 2014
U.S. TV vs. Digital Video Ad Spending

### US TV* vs. Digital Video** Ad Spending, 2012-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>TV*</th>
<th>Digital video**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$64.54</td>
<td>$2.89</td>
</tr>
<tr>
<td>2013</td>
<td>$66.35</td>
<td>$4.20</td>
</tr>
<tr>
<td>2014</td>
<td>$68.54</td>
<td>$5.96</td>
</tr>
<tr>
<td>2015</td>
<td>$70.59</td>
<td>$7.77</td>
</tr>
<tr>
<td>2016</td>
<td>$73.77</td>
<td>$9.45</td>
</tr>
<tr>
<td>2017</td>
<td>$75.98</td>
<td>$11.12</td>
</tr>
<tr>
<td>2018</td>
<td>$78.64</td>
<td>$12.71</td>
</tr>
</tbody>
</table>

** Change:
- TV*: 6.4% in 2012, 2.8% in 2013, 3.3% in 2014, 3.0% in 2015, 4.5% in 2016, 3.0% in 2017, 3.5% in 2018.
- Digital video**: 44.5% in 2012, 45.3% in 2013, 41.9% in 2014, 30.4% in 2015, 21.7% in 2016, 17.6% in 2017, 14.3% in 2018.

*Note:* Includes broadcast TV (network, syndication & spot) & cable TV; data through 2013 is derived from IAB/PWC data; includes advertising that appears on desktop and laptop computers as well as mobile phones and tablets; includes in-banner, in-stream such as pre-roll and overlays; and in-text (ads delivered when users mouse over relevant words).

### US Connected TV Users, 2012-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Connected TV users (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>54.7</td>
</tr>
<tr>
<td>2013</td>
<td>83.6</td>
</tr>
<tr>
<td>2014</td>
<td>113.2</td>
</tr>
<tr>
<td>2015</td>
<td>138.8</td>
</tr>
<tr>
<td>2016</td>
<td>160.9</td>
</tr>
<tr>
<td>2017</td>
<td>177.2</td>
</tr>
<tr>
<td>2018</td>
<td>191.4</td>
</tr>
</tbody>
</table>

- % of population: 2012: 17.4%, 2013: 26.4%, 2014: 35.5%, 2015: 43.2%, 2016: 49.7%, 2017: 54.3%, 2018: 58.2%.
- % of internet users: 2012: 23.0%, 2013: 34.0%, 2014: 45.0%, 2015: 54.1%, 2016: 61.7%, 2017: 67.0%, 2018: 71.4%.
- % of digital video viewers: 2012: 31.8%, 2013: 44.9%, 2014: 58.2%, 2015: 69.3%, 2016: 78.5%, 2017: 84.8%, 2018: 90.0%.

*Note:* Individuals of any age who use the Internet through a Connected TV at least once per month.

Source: eMarketer, June 2014
### FIGURE 2.3: BANNERS AND VIDEO ARE 82% OF SALES FOR TV SITES (IN $ MILLIONS)

<table>
<thead>
<tr>
<th>Media Choice</th>
<th>Display - ROS</th>
<th>Display - Targeted</th>
<th>Paid Search</th>
<th>E-mail</th>
<th>Streaming Video</th>
<th>Streaming Audio</th>
<th>Market Totals</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>$2,270.23</td>
<td>$1,933.56</td>
<td>$3.61</td>
<td>$151.33</td>
<td>$403.76</td>
<td>$15.91</td>
<td>$4,778.41</td>
<td>19.3%</td>
</tr>
<tr>
<td>Broadcast TV</td>
<td>$378.67</td>
<td>$1,242.97</td>
<td>$32.74</td>
<td>$277.17</td>
<td>$617.09</td>
<td>$0.00</td>
<td>$2,548.64</td>
<td>10.3%</td>
</tr>
<tr>
<td>Cable/Satellite</td>
<td>$175.09</td>
<td>$14.58</td>
<td>$1.53</td>
<td>$11.92</td>
<td>$15.27</td>
<td>$1.09</td>
<td>$219.48</td>
<td>0.9%</td>
</tr>
<tr>
<td>Radio</td>
<td>$119.29</td>
<td>$72.42</td>
<td>$12.78</td>
<td>$89.46</td>
<td>$38.34</td>
<td>$94.03</td>
<td>$426.32</td>
<td>1.7%</td>
</tr>
<tr>
<td>Directories</td>
<td>$653.11</td>
<td>$498.52</td>
<td>$414.41</td>
<td>$90.80</td>
<td>$98.85</td>
<td>$0.00</td>
<td>$2,205.69</td>
<td>8.9%</td>
</tr>
<tr>
<td>Magazines/Other Print</td>
<td>$100.43</td>
<td>$483.06</td>
<td>$1.02</td>
<td>$40.37</td>
<td>$82.66</td>
<td>$2.52</td>
<td>$710.07</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pure Play</td>
<td>$1,594.87</td>
<td>$2,966.81</td>
<td>$6,195.02</td>
<td>$55.57</td>
<td>$2,862.60</td>
<td>$132.79</td>
<td>$13,807.66</td>
<td>55.9%</td>
</tr>
<tr>
<td><strong>Market Totals</strong></td>
<td><strong>$5,291.68</strong></td>
<td><strong>$7,661.93</strong></td>
<td><strong>$6,661.12</strong></td>
<td><strong>$716.63</strong></td>
<td><strong>$4,118.57</strong></td>
<td><strong>$246.34</strong></td>
<td><strong>$24,962.27</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>( ) Share</td>
<td>21.4%</td>
<td>31.0%</td>
<td>27.0%</td>
<td>2.9%</td>
<td>16.7%</td>
<td>1.0%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>( TV's ) Share by Ad Format</td>
<td>14.9%</td>
<td>48.8%</td>
<td>1.3%</td>
<td>10.9%</td>
<td>24.2%</td>
<td>0%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>( TV's ) Share of Total Ad Format</td>
<td>7.2%</td>
<td>16.2%</td>
<td>0.5%</td>
<td>38.7%</td>
<td>15.0%</td>
<td>0.0%</td>
<td>10.3%</td>
<td></td>
</tr>
</tbody>
</table>
Local Online Advertising – Borrell Report 2014

Local TV broadcasters have shifted into high gear with digital advertising efforts, driving an estimated all-time high of nearly $3 billion in new ad revenue for stations this year, according to new research commissioned by the Television Bureau of Advertising. The Borrell study encompassed 815 stations and reports that broadcasters grew their digital revenue 15% last year.

<table>
<thead>
<tr>
<th>TV Market Rank</th>
<th>Sample Size</th>
<th>Avg.</th>
<th>Median</th>
<th>Highest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 20</td>
<td>164</td>
<td>$1,976,000</td>
<td>$1,434,000</td>
<td>$10,912,000</td>
</tr>
<tr>
<td>21 to 50</td>
<td>148</td>
<td>$1,709,000</td>
<td>$995,000</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>51 to 100</td>
<td>169</td>
<td>$876,000</td>
<td>$619,000</td>
<td>$6,758,000</td>
</tr>
<tr>
<td>101 to 210</td>
<td>240</td>
<td>$515,000</td>
<td>$415,000</td>
<td>$4,990,000</td>
</tr>
<tr>
<td>ALL</td>
<td>721</td>
<td>$974,000</td>
<td>$702,000</td>
<td>$10,912,000</td>
</tr>
</tbody>
</table>
Social Media

News has a place in social media

- Half of Facebook and Twitter users get news on those sites
- Overall, three in ten adults get at least some news while on Facebook.

Percent of U.S. adults who use each social networking site and percent of U.S. adults who get news from each social networking site

<table>
<thead>
<tr>
<th>Social Networking Site</th>
<th>Use the Social Networking Site</th>
<th>Get News from the Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>30%</td>
<td>64%</td>
</tr>
<tr>
<td>YouTube</td>
<td>10%</td>
<td>61%</td>
</tr>
<tr>
<td>Twitter</td>
<td>8%</td>
<td>16%</td>
</tr>
<tr>
<td>Google Plus</td>
<td>4%</td>
<td>14%</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>3%</td>
<td>19%</td>
</tr>
<tr>
<td>Reddit</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Instagram</td>
<td>1%</td>
<td>12%</td>
</tr>
<tr>
<td>Myspace</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>Tumblr</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Pinterest</td>
<td>1%</td>
<td>15%</td>
</tr>
<tr>
<td>Vine</td>
<td>1%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Note: The percent of U.S. adults who get news on Pinterest and Vine each account to less than one percent.

Facebook News Survey, Aug. 21-Sept. 2, 2013 (N=5,172)

PEW RESEARCH CENTER

Of the 50% of U.S. adults who consume news on Facebook...

- 22% think of Facebook as a useful way to get news
- 78% mostly see news when on Facebook for other reasons

34% of Facebook News Consumers “like” a news organization or individual journalist or commentator

Based on Facebook News Consumers (N=1,429)
Facebook News Survey, Aug. 21-Sept. 2, 2013

PEW RESEARCH CENTER
Facebook engages consumers in a variety of “news” topics.

Half of Facebook news consumers see news about six or more topics on the site.

Percent of Facebook news consumers who regularly see news on Facebook about...

- Entertainment: 73%
- People & events in my community: 65%
- Sports: 57%
- National govt & politics: 55%
- Crime: 51%
- Health & medicine: 46%
- Local govt & politics: 44%
- Local weather & traffic: 42%
- International news: 39%
- Science & technology: 37%
- Business: 31%

Based on Facebook News Consumers (N=1,429)
Facebook News Survey, Aug. 21-Sept. 2, 2013

PEW RESEARCH CENTER
Social Media

Level of Engagement

Note the level of “news sharing” and the types of media used.

- Shared or reposted news stories, images or videos: 50%
- Discussed a news issue or event: 46%
- Posted photos they took of a news event: 14%
- Posted videos they took of a news event: 12%

Note: This question was asked of social networking site users who also get news online. Source: Pew Research Center, phone survey Feb. 27-Mar. 2, 2014.

Campaigns can be executed revolving around a specific topic.
### Audiences for News on each Social Media Platform

**Percent of news consumers for each site**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Google+</th>
<th>LinkedIn</th>
<th>YouTube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42%</td>
<td>50%</td>
<td>48%</td>
<td>67%</td>
<td>57%</td>
</tr>
<tr>
<td>Female</td>
<td>58%</td>
<td>50%</td>
<td>52%</td>
<td>33%</td>
<td>43%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Google+</th>
<th>LinkedIn</th>
<th>YouTube</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>34%</td>
<td>45%</td>
<td>26%</td>
<td>18%</td>
<td>39%</td>
</tr>
<tr>
<td>30-49</td>
<td>39%</td>
<td>38%</td>
<td>37%</td>
<td>50%</td>
<td>34%</td>
</tr>
<tr>
<td>50-64</td>
<td>20%</td>
<td>14%</td>
<td>26%</td>
<td>27%</td>
<td>17%</td>
</tr>
<tr>
<td>65+</td>
<td>7%</td>
<td>2%</td>
<td>12%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Google+</th>
<th>LinkedIn</th>
<th>YouTube</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school or less</td>
<td>39%</td>
<td>31%</td>
<td>46%</td>
<td>12%</td>
<td>48%</td>
</tr>
<tr>
<td>Some college</td>
<td>31%</td>
<td>29%</td>
<td>28%</td>
<td>24%</td>
<td>29%</td>
</tr>
<tr>
<td>Bachelor’s or more</td>
<td>30%</td>
<td>40%</td>
<td>26%</td>
<td>64%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Note: Based on Facebook news consumers (N=1,429); Twitter news consumers (N=359); Google Plus news consumers (N=194); LinkedIn news consumers (N=144); YouTube news consumers (N=456). Aug. 21-Sept. 2, 2013.
Digital Media Workflows Overview

Objectives:

- Provide Digital Product Offerings that address the market driven workflows for multi-distribution production and publishing including:
  1. Pre-production VOD
  2. Post-production VOD
  3. Live Streaming with Content Replacement
  4. Scheduled 24/7 Playout Channels for Web & Mobile
Digital Media Workflows Overview

Objectives (Continued):

- Integrate with **Software-as-a-Service (SaaS)** offerings that address “market driver” issues and requirements for broadcasters including:

  1. Encoding/Transcoding - Addressing Key Market Driven Formats
  2. Closed-Captioning - Addressing Government Mandates
  3. Ad Platform – Addressing Client-Based Targeted Advertising
  4. OVP Platform - Addressing Multi-Platform Video Delivery
  5. Social Media Platform – Addressing Consumer Engagement
  6. Content Management System – Addressing Web & Mobile Apps
Workflow & Process

**Major Challenges:**
- Workflow Management
- Rights Management
- Maximizing Efficiencies
- Maximizing Throughput
- Closed Captioning
- Social Media Engagement
- Targeted Advertising
- Business Cycle Completion

**Legend:**
- Data Files
- Streams
- Files
- Streams

**Workflows & Process Diagram:**
- Content Creation
- Traffic & Billing
- Online Video Platform
- Online Ad Platform
- Encoding & Transcoding
- Peak Load Cloud Services
- Traffic & Billing
- Online Video Platform
- Content Delivery Network
- Online Ad Platform
- Web Content Management & Social Media Platforms
- Online Ad Platform
- Traffic & Billing

**TV Station or Network Perimeter:**
- Live Production
- Playout
- Workflow Platform

**Consumer:**
- Smart TV
- Computer
- Laptop
- Tablet
- Smart Phone

**Social Media Platforms:**
- Facebook
- YouTube
- Google+
Workflow & Process

Major Challenges:
- Workflow Management
- Rights Management
- Maximizing Efficiencies
- Maximizing Throughput
- Closed Captioning
- Social Media Engagement
- Targeted Advertising
- Business Cycle Completion

Legend
- Data Files
- Streams

Consumer
- Smart TV
- Computer
- Laptop
- Tablet
- Smart Phone

TV Station or Network Perimeter

Online Video Platform
- Web Content Management
- Social Media Platforms

Online Ad Platform
- Online Ad Services

Production, Encoding & Transcoding
- Analytics, Reporting, Reconciliation & Decisioning
- Ad Sales
- Ad & Content Replacement
- Traffic & Billing
- Encoding & Transcoding
- Peak Load Cloud Services

Content Delivery Network
- Content Playout

Analytics, Reporting, Reconciliation & Decisioning
- Online Video Platform
- Web Content Management & Social Media Platforms

Online Ad Services
- Online Ad Platform

Playout
- Content Creation
- Production

Content Creation
- Ad Sales
- Analytics, Reporting, Reconciliation & Decisioning
- Online Ad Services
- Online Video Platform
- Web Content Management & Social Media Platforms
- Content Delivery Network
- Production, Encoding & Transcoding
- Ad & Content Replacement
- Traffic & Billing
- Encoding & Transcoding
- Peak Load Cloud Services

Consumer
- Smart TV
- Computer
- Laptop
- Tablet
- Smart Phone
Production SOA Workflow Platform

The Framework allows continuous addition of new functional modules:

Channel Panel  Scheduler  Navigator  Asset Display

User PC

Application Framework

RESTful API

Core Services

Physical Infrastructure
Workflow management – Ingest videos and files – Pre-production metadata tagging - Auto-segmentation with INTRO and TAG branding – Review and approval – Xcode control - Publication control – Asset management – Archive management
Today, pre-production VOD is published by most major production platform vendors without too much manual labor leveraging automated preset profiles. That said, more advanced workflows are required to fully realize “efficiencies” and “throughput” in addition to opening up new applications:

- Post-Production VOD with Auto-Segmentation
- Live Streaming with Content Replacement
- 24/7 Web & Mobile Channel Management
The TV Station Branding of VOD Content

<table>
<thead>
<tr>
<th>SLUG</th>
<th>TME</th>
<th>TIME-CODE</th>
<th>Still Store</th>
<th>CAM SHOT</th>
<th>FORMAT</th>
<th>GRAPHICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGNITE DMP DEMO</td>
<td></td>
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<td></td>
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<tr>
<td>2014-07-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IGNITE SETUP</td>
<td>CUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START DMP ENCODING</td>
<td>ENCODE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5PM OPEN</td>
<td>OPENV2</td>
<td>SHOW OPEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLD OPEN</td>
<td>SOTV2,EW,LC</td>
<td>SOTVO COLD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUNN</td>
<td>CAMV3o,EST</td>
<td>Ppush 2SHOT</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>OTS</td>
<td>OTSV4,0TSL</td>
<td>DUNN OTS</td>
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<tr>
<td>SPLIT JIM</td>
<td>SPLIT</td>
<td>DUNN SPLIT</td>
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</tr>
<tr>
<td>PKG</td>
<td>SOTV1,LCG</td>
<td>PKG DUNN T</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LIVE TAG</td>
<td>REM1V3</td>
<td>DUNN LIVE T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPLIT BYE</td>
<td>SPLIT</td>
<td>DUNN SPLIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPOWER</td>
<td>OTSV3,OTS</td>
<td>POWDER OT</td>
<td></td>
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</tr>
<tr>
<td>WALLREAD</td>
<td>CAMV4</td>
<td>POWDER WA</td>
<td></td>
<td></td>
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<tr>
<td>VO</td>
<td>VOV1,LCG</td>
<td>POWDER VO</td>
<td></td>
<td></td>
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<tr>
<td>SOT</td>
<td>SOTV2,EW,LC</td>
<td>POWDER SO</td>
<td></td>
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</tr>
<tr>
<td>WALLTAG</td>
<td>CAMV3</td>
<td>POWDER WA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This is the prerecorded package
But this tells the whole story
Production SOA Platform Segmentation Template

The template is a <MOS> drop of properties:

- Segment type:
  - Splice
  - Embargo, Regional & Mobile ONLY Designation
  - Replacement/insertion
- Script data (text)
- DRM information
- Metadata to be consumed by Web CMS like position of the clip in a web page (top stories, sports, news, etc..)
- Scripts (as in code snippet)
- Link to URLs, Extended Play, Stills, etc…

TV stations can create their own templates based on their “digital media” objectives
Automatic Segmentation - Production

Production Automation drives “record” on Server and “start” of live encoding.

The Production Automation system marks segment in Server.

Segments are auto-generated in “Production SOA Platform” and published automatically.

SDI Stream is live encoded with HLS marks for downstream insertions, and replacement.
File Delivery

- Production SOA Platform automatically segments live newscast
  - Based on "Production Automation" marks on "Production SOA Platform" template data:
    - Splice
    - Targeted Ad Insert
    - Embargo
    - Regional
    - Mobile ONLY

Production Automation output to Production SOA Platform input

1 2 3 4 5 6

Transcoded & Published

Embargoed Segment
No transcoding

Replaced segment

1 3 5 6
Live Streaming

- Live newscast streamed to OVP
- Production Automation inserts segment marks based on Production Templates:
  - Splice
  - Targeted Ad Insert
  - Embargo, Mobile ONLY & Regional
- The live newscast may be longer due to ad insertions
NRCS Plug-in Segment Markup

- Markup the 3 story rows to be published as 1 Segment good for live and VOD distribution, added © information and descriptive text limited to xx characters per web site guidelines.
- Markup the 3 story rows to be replaced by content ID xxxx for "mobile" only shot profiles published as 1 Segment good for live and VOD distribution, added © information and descriptive text limited to xx characters per web site guidelines.
- Markup segment as "ad break" no VOD; Live stream will carry data for replacement if available.
- Markup the 2 story as one "embargoed" segment. Not VOD, replaced by a slate on Live.
- Markup the 3 rows as 1 segment to be replaced by content ID xxxx for "regional" Weather; OK for VOD and Live with accompanying metadata.

Process:

- Intro
- Story 1
- Tag
- Intro
- Story SOT
- Story Live ITW
- Ad break
- Intro
- Sport story
- Intro
- Weather
- Tag
Digital Media Workflows

Production Platform

News Production:
Ingest, logging, editing, media management, archive, etc.

Digital Media:
• Live streaming with content replacement
  • Embargoed Content
  • Mobile Only Content
  • Regional Content
  • Hyper-client Based Targeted Advertising
• Auto-segmentation for VOD content with INTRO and TAG branding
• Social Media engagement
Digital Media Workflows

Production Platform

NRCS

Control Room Automation

OVP CMS
Digital Media Workflows

Production Platform

MOS Gateway

NRCS

Control Room Automation

OVP CMS
Digital Media Workflows

Production Platform

MOS Gateway

NRCS

Control Room Automation

Switcher

Video Server

Robotic Cam

Graphics

Audio Mixer

OVP

CMS
Digital Media Workflows

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Control Room Automation

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Video Server

Robotic Cam

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Audio Mixer

NRCS

OVP CMS
Digital Media Workflows

Production Platform

MQS Gateway

NRCS

Control Room Automation

Switcher
Video Server
Robotic Cam
Graphics
Audio Mixer

Video Server

OVP CMS
Digital Media Workflows

- Production Platform
- MOS Gateway
- NRCS
- Control Room Automation
- Switcher
- Video Server
- Robotic Cam
- Graphics
- Audio Mixer
- Video Server
- Live Streaming encoder
- Live Stream
- SDI w/ SCTE 104
- HLS stream w/marks

OVP CMS
Digital Media Workflows

Production Platform

NRCS

Control Room Automation

Switcher
- Video Server
- Robotic Cam
- Graphics
- Audio Mixer

Video Server

Live Streaming encoder

File Transcoder

VOD segments

Live Stream

OVP
CMS

Live Streaming encoder
SDI w/ SCTE 104

HLS stream w/marks

File Transcoder

grass valley

A Belden Brand

Live Stream
Digital Media Workflow: Social Media

Social Media feedback goes through editorial process within SOA production workflow platform prior to “on-air” presentation within graphic or “pushed” to television station website and/or mobile app. Clips are published to Social Media outlets such as Facebook, Twitter, GOOGLE + as defined by the Producer.

1 – Production platform uploads clips to OVP and uses Social Media platform Q&A or polling templates to engage audience in interactive discussion.

2 – Social Media Platform manages social media publishing redirecting responses from polling/voting app back to it’s platform.

3 – Social Media Platform voting data goes back to Production SOA Platform original assets for review & approval.

4 – Voting results are triggered and displayed “on-air” by control room automation using graphics system.
Delivered to Facebook as a picture with a “Play” button overlay. This allows the broadcaster to capture the consumer’s attention while directing the traffic to the station’s Facebook page or website.
Digital Media Workflow: Social Media

Experience Highlights with Social Media Platforms

- All of the different mediums supported have an important role in overall engagement experiences:
  - **Interactive Voice Response** (IVR Calling-in) to participate has been most popular medium across majority of customers
  - **IVR usually accounts for about 35% of the entire engagement** (In some cases, seen as high as 80%)
  - **Short Message Service** (SMS – “Texting”) is also a very popular medium, **seeing about 20% of the total engagement coming from SMS**. Platforms have the capability of building out database lists for reminders about campaigns, games and shows (via outbound SMS)
Digital Media Workflow : Social Media

Experience Highlights with Social Media Platforms

Continued….

– **Facebook** is second most popular medium. *Currently about 25% of engagement comes from Facebook.* Engagement from Facebook is about 5X higher than Twitter

– **Web** (Websites) is heavily dependent on the location of the widget. In some cases we have seen as high as 50% of the engagement coming from web but on **average it is about 15%**

– **Twitter** *is about 5-10% of the total engagement*

– About 50% of traffic are returning voters on mobile/web. And about 35% across all mediums
Business Case

Leveraging Production Automation & Production SOA Workflows together maximizes both “efficiency” and “productivity” to generate a fast payback ROI and increased audience reach and revenue @ higher $$/CPM
Production Staff user generates metadata for segments

Production system generated segment metadata are added to NRCS script

Rundowns is used by Production Automation to drive newscast

Newscast is recorded in video server under automation system control

Newscast is segmented in real time based on Production metadata by Automation System

HLS live stream goes out with segment marks

VOD segments are published with Metadata

Business Case

Production & Editing SOA Platform

NRCS

Control Room Automation

Automatic Process

Optional review and approval process
Business Case

- OpEx based staffing reduction impact + increased revenue provides payback models anywhere from less than 1 – 3 Years depending on DMA

- As technology and workflow platforms advance with tightly coupled encoding, transcoding, online video platform, ad insertion & decisioning with advanced multi-platform traffic systems mature, Broadcasters will be in the best position to take advantage of the “Digital Media Ecosystem”
Conclusion

- Broadcasters need to embrace and lead in multi-platform production and distribution
- Broadcasters need to make it just as important as the “traditional” over-the-air programming
- Broadcasters need to think in terms of “Media” rather than just “Video”
- Broadcasters need to adopt “SOA workflow platforms” that provide efficiencies, scalability and higher throughput with Restful API’s allowing for customer specific differentiation and tools to produce competitive quality programming taking the next step in the “transformation” of our industry.
THANKS FOR YOUR TIME
QUESTIONS