

The Digital TV Transition: Production Implications for Advertisers

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Overview

Television broadcasting is entering a new era, and advertisers need to be prepared *now*.

- By law, on February 17, 2009, full-power television stations in the United States must stop transmitting analog signals and begin broadcasting exclusively in a digital format.
- Networks likely will accept commercials in only one format. Advertisers will have to choose to ship either a high-definition (HD) 16:9 or standard-definition (SD) 4:3 format. Some networks already have this requirement.
- The choice of formats will have financial and creative implications for advertisers.

The digital transition could be the biggest change in the industry since the transition from black-and-white to color television.

The following is intended to provide background and guidance to help advertisers make decisions that are necessary *now*.

The Basics

What's the Difference Between Analog and Digital?

Analog is the original standard for TV transmission. Think of analog as a fluctuating wave, much like a radio signal. The signal is subject to interference and takes up a lot of room within its assigned channel space, thereby restricting picture and audio quality.

Digital television (DTV) is data transmission using computer code (digital technology) which takes up less space within its assigned channel. The benefits to advertisers and broadcasters are higher-quality images, better audio, and additional signal capacity supporting multiple formats (audio, video, and text).

Are Digital TV and High Definition the Same Thing?

No. DTV is a mode of transmission. High definition is just one format that can be transmitted via DTV. In other words, digital transmission simply makes it possible for broadcasters to send out HD programming and run HD commercials.

It is important to note that the transition to digital does not require programs to be produced or broadcast in high definition. Stations can, and some will, continue to send out SD digital programming, although HD will be much more prevalent.

What's the Difference Between SD and HD?

Fundamentally, standard-definition television sets have 480 lines of video resolution and a screen size or aspect ratio of 4:3 (4 units wide by 3 units high). High-definition television sets have either 720 or 1080 lines of resolution within a wide screen aspect ratio of 16:9. The higher resolution of HD gives approximately six times more picture detail than an SD image.



Why Are We Switching to Digital Transmission?

The primary benefit cited by federal regulators is that digital transmission will free up frequency space for public safety purposes, such as police and fire communications. It will also free up space for more advanced consumer wireless services, such as wireless broadband, which the government made available via auction.

Broadcasters will be able to improve their services to consumers by offering HD and/or several channels of programming at once, called multicasting, and enhanced data services, such as current weather and emergency information.

What's the Penetration of HD Televisions?

Forrester Research estimates that 46 million U.S. households will have HD televisions at year-end 2008, increasing to 55 million at year-end 2009. However, Forrester estimates that only about 55 percent of people with HD televisions have upgraded their cable or satellite service to receive HD signals. There are currently about 113 million U.S. television households.

Does the Digital Transition Require Commercials to be Shot With an HD Camera?

No. A common misconception is that in order to finish a commercial in HD, it needs to be shot with an HD video camera. In fact, according to a study by AICP (Association of Independent Commercial Producers), 53 percent of all spots finished in HD originate on film. This is a creative decision that should be discussed with your creative agency and the production company.

Impact on Advertisers

Commercial Distribution

Currently most networks accept both HD and SD commercials. After the transition, most networks will accept just one version. In fact, some are already accepting just one version, and others are expected to follow by the start of the fall season or even sooner. The advertiser must choose to submit either HD or SD.

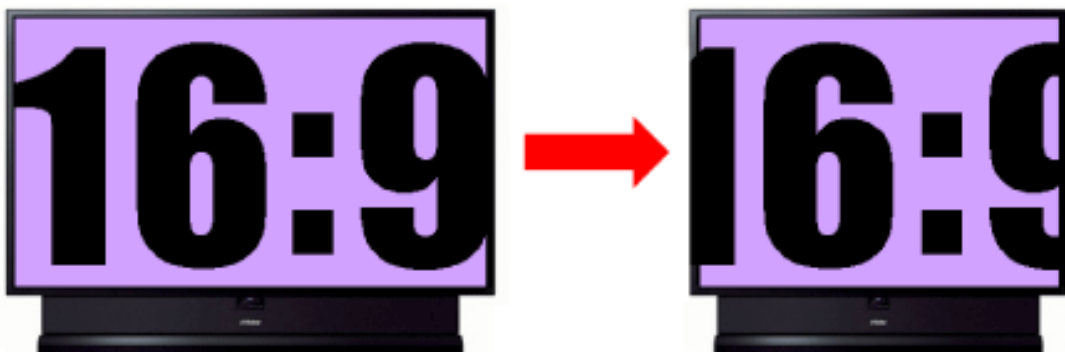
Best Practice: *Confirm with your media partners the specific requirements each has for commercial submissions.*

What Will HD Commercials Look Like on SDTVs?

HD programming, including commercials, is transmitted in the 16:9 wide-screen format. If a viewer has a 16:9 television, HD programming will fill the entire screen. Meanwhile, standard-definition television sets are 4:3, a narrower screen size than HD.



The SD screen isn't wide enough to display full HD content (i.e., programming as well as commercials). So when HD content is viewed on SD televisions, it usually will be cropped on the left and right sides in order to fit the 4:3 screen. This means SD viewers will see information contained only in the center portion of the HD content. The illustration below shows what happens when a 16:9 HD image is viewed on a 4:3 SD television.



Some ANA members have reported to the association that the left and right sides of their HD commercials have been cropped off, in some instances, on 4:3 televisions. CBS did a survey of 800 HD spots and found that 6 percent of them lost vital information on the left and right sides of the commercials. While 94 percent initially may appear to be a high success rate, in this case almost 50 commercials were negatively impacted. Below is an example.



This is why advertisers producing in HD should ensure that all essential information—including character action, logos, titles, and legal disclaimers—resides in the center portion of the frame. This is called *center-cut protection*. By placing important information in the center part of the frame, you will ensure that nothing vital is lost when your HD commercials are viewed on SD sets, as in the example below.



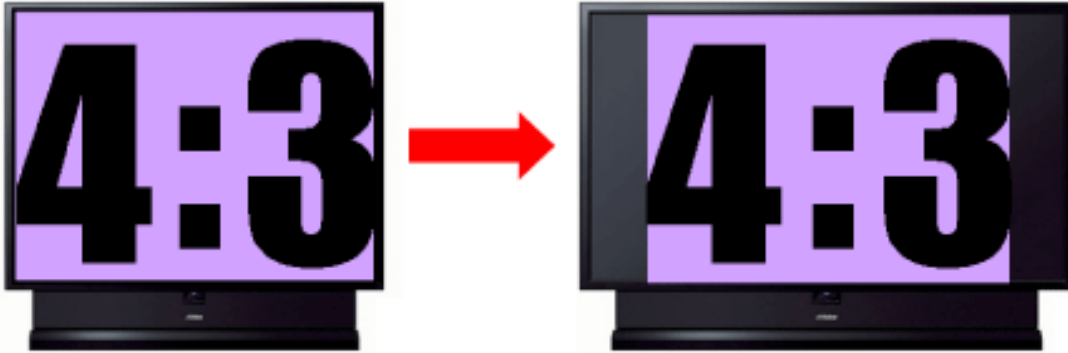
A trade-off of center-cut protection, of course, is the fact that it limits full creative use of the 16:9 screen size. For this reason, AAAA (American Association of Advertising Agencies) is encouraging the development of a technological solution which would not limit the ability of advertisers and agencies to take full advantage of the wider HD format. AAAA has requested that appropriate stakeholders meet to discuss this—including the television networks, ANA, NAB (National Association of Broadcasters) and TVB (Television Bureau of Advertising).

While HD penetration is expected to increase rapidly, many of those HD households will continue to watch television on secondary SD 4:3 sets—in bedrooms, guest rooms, kitchens, etc.—and such sets are likely to be around for years. This is all the more reason to consider center-cut protection.

Best Practice: *Be sure to discuss center-cut protection with your agency early in the creative process. The need for center-cut protection will impact all aspects of production, from concepts and storyboards to camera framing, graphics, titles, and special effects.*

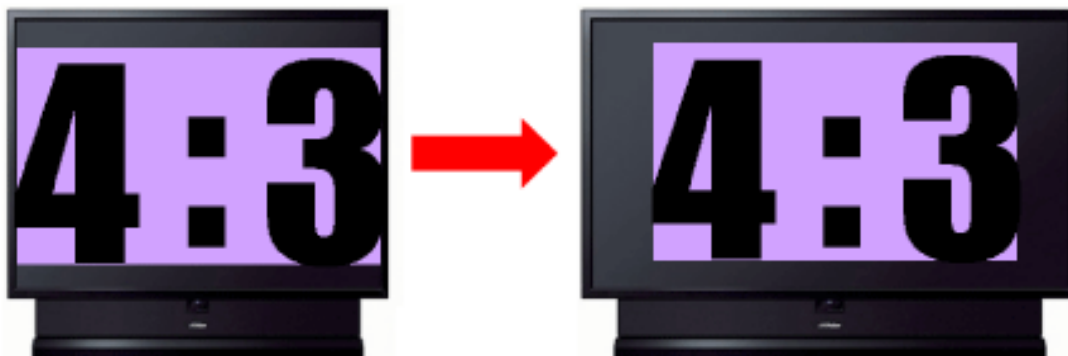
How Will SD Commercials Look on Wide-Screen Televisions?

In order to fit 4:3 SD images into 16:9 wide-screen televisions, the network will place the image in the center of 16:9 sets. No information will be lost, but “pillars” will be placed on the sides. See below.



In some cases networks may even place their own logos or other information within the pillars. Further, instead of pillars, some networks may stretch 4:3 images to fill 16:9 screens. Depending upon the image, this stretching may impact the look of the picture.

Some advertisers also may create their 4:3 SD commercials in a letterbox format (black bars on top and bottom) in order to use a wider screen image. When viewed on 16:9 sets, the image also would have pillars on the sides (essentially, a box within a box).



Considerations For Finishing in HD

1. The cost for editing and finishing in HD is higher than SD, regardless of the medium used to shoot the commercial. According to the AICE (Association of Independent Creative Editors), the cost of editing and finishing in HD (rather than SD) is approximately 10-15 percent higher—or about \$5,000-7,500 for an average 30-second commercial.
2. Spots with CGI (computer-generated imagery) and digital effects may cost substantially more to create and finish in HD, due to longer rendering times.
3. The cost for dubbing and shipping HD spots is also higher than SD—approximately three to ten times higher, according to one major distributor, depending upon the media plan.
4. Advertisers are increasingly finishing commercials in HD, and more consumers are capable of viewing HDTV. As HD expands, SD spots run on HD broadcasts may appear inferior because of:
 - lower resolution
 - the fact that they won't fill 16:9 screens and may be subject to pillars or stretching
5. The cost for turning existing SD spots to HD could be substantial, due to factors like retransferring film and redoing graphics.
6. Rough-cut presentations for advertisers and agencies are an important consideration. Therefore, 16:9 rough cuts viewed on 4:3 screens should be in the letterbox format to see the full picture. Note, however, that this would not provide an HD viewing experience.
7. Ad-ID has been upgraded to include a new high-definition code capability. The code for a high-definition commercial will contain an H in the 12th character while all standard-definition commercial codes will be 11 characters. (Ad-ID is the Web-based system that generates a unique identifying code for each advertising asset.)

Best Practice: Consider making an HD master the universal master from which other versions can be created. These may include an SD master, international versions, and materials for media on the Web, mobile, cinema, etc.

Considerations For Finishing in SD

Reasons an advertiser might choose to finish in SD rather than HD include:

1. If an advertiser chooses not to incur the increased costs for HD editing/finishing and dubbing/shipping noted above.
2. The media buy does not include HD channels or programming.

Best Practice Summary

- Confirm with your media partners the specific requirements each has for commercial submissions.
 - Be sure to discuss center-cut protection with your agency early in the creative process. The need for center-cut protection will impact all aspects of production, from concepts and storyboards to camera framing, graphics, titles, and special effects.
 - Consider making an HD master the universal master from which other versions can be created. These may include an SD master, international versions, and materials for media on the Web, mobile, cinema, etc.
 - Budget accordingly when considering the HD format.
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Acknowledgements

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AAAA (American Association of Advertising Agencies), ABC/ESPN, AICE (Association of Independent Creative Editors), AICP (Association of Independent Commercial Producers), APR (Advertising Production Resources), Bird Bonette Stauderman, CBS, DG FastChannel, Level 3 Vyvx Service, MRA Advertising/Production Support Services, NAB (National Association of Broadcasters), and NBC Universal.