

# A PIPE DREAM NO MORE

## ADVERTISING WORKFLOWS HAVE COME OF AGE

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**Abstract.** *The past year has been, quite possibly, the most eventful ever in the development of efficient advertising workflows. We can now embed a digital version of the infamous advertising slate into delivered commercials, using the Advanced Media Workflow Association’s AS-12. BXF can be used to exchange not only the schedule of commercials, but instructions to move them from point A to B, as well as the full complement of their metadata. BXF is also developing the ability to move copy rotation instructions from agency to broadcaster, filling the biggest gap existing today in the workflow. Ad-ID bridges all of this, making unique commercial identification simple.*

*With an ever-expanding array of delivery platforms as well as targeted advertising, maximum efficiency for advertising workflows has gone from a nice idea to a must-have. The good news is that the majority of tools are in place to make it all work.*

*We’ll show how the whole thing fits together today, using industry-standard approaches, making the pipe dream of automated advertising workflows a reality.*

**Keywords:** Ad-ID, Workflow, Advertising, BXF, MXF, Agency, Traffic.

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# ADVERTISING WORKFLOWS HAVE COME OF AGE

## Introduction

In the world of video advertising, smooth and automated workflows have been one of the most neglected areas in our business for years. Practices that have been in place for decades have stubbornly remained. Manual re-entry of data has been accepted as “the way it’s always been,” and something that simply couldn’t be avoided. Efforts have sprouted up over the years and then died quiet deaths, with the tipping point for workable solutions never quite being reached.

In 2009, a paper was presented at the NAB Broadcast Engineering Conference called “Are Fully Digital Workflows a Pipe Dream?” It began with the statement that players in the media business (such as broadcasters, program producers/distributors, ad agencies, and commercial producers) don’t believe that technologists can integrate all their systems.

Fast-forward to today, and we have arrived at a place where the dots are being connected to give renewed hope to the industry.

There has been consensus throughout our business that this is an area desperately in need of solutions. One of the main problems has been that a few key elements of the solution have always been missing.

We have finally reached the point where things are falling into place, allowing complete solutions to be implemented. Could it be that the pipe dream is about to come true?

## Motivation for a Solution

In order to enable change, particularly something as dramatic as the replacement of manual advertising-related workflows with automated ones, the proper motivation is needed. This doesn’t come from vendors, or a few people with a good idea. Motivation must come from those who feel the pain the most: the users.

When more must be done with fewer resources, it’s necessary to examine automating processes. The economic situation of the past several years has led to resources being reduced, with those that remain being stretched to their limits.

In addition, there has been pressure for broadcasters to employ their assets more profitably than ever before. Advances in alternative methods of delivery to consumers, such as Mobile DTV and Over the Top Television, have opened up new avenues for broadcasters to do this. However, advertising is a key element in monetizing these new channels.

So the flow of advertising from creation to consumption to billing is actually increasing significantly in volume, but has fewer resources to manage it. To some, this may sound like a looming disaster, but to others, it has meant an opportunity.

Most importantly, it meant that the proper motivation was now in place to push through alternatives to the manual, inefficient workflows that have long plagued the industry.

Bob Liodice, President of the Association of National Advertisers (ANA), encapsulates the situation perfectly: “Workflows are critically important. The simpler we make the workflow, the more efficient we’re going to be, the more capable we’re going to be, the more productive we’re going to be, and that’s what frees up dollars to be reinvesting in the plethora of new and emerging media.”

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## Executive Summary

There are several announcements that have occurred recently, centered around the adoption of Ad-ID, which are designed to make the marketing supply chain more efficient and productive, and thereby enabling the marketing ecosystem — including agencies, media and suppliers — to become increasingly capable.

- Commercials negotiations between the Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) and the ANA-4A's Joint Policy Committee (JPC), representing the advertising industry, have resulted in a requirement by the JPC of universal adoption of Ad-ID.
- The Advanced Media Workflow Association (AMWA) has included a “Digital Commercial Slate,” based on the information in Ad-ID in its work. This will result in operational efficiencies that stem from the elimination of rekeying of information about ads, which has been documented to be between 20 and 30 times per ad.
- The Coalition for Innovative Media Measurement (CIMM) released the final report of its Trackable Asset Cross-Platform Identification (TAXI) initiative which stated that widespread adoption of Ad-ID will enable increased speed, transparency, and accountability in media measurement, resulting in efficient markets and higher overall spend.
- The Society of Motion Picture and Television Engineers (SMPTE) has introduced an enhancement to its Broadcast Exchange Format (BXF) which establishes a standard electronic commercial instructions format to replace instructions that are being sent via fax or email today, which includes references to how critical it is that advertising spots be uniquely identified using Ad-ID.
- SMPTE and CIMM have established an “Open Media ID Binding” Study Group, with a mission to study the feasibility of an open standard for binding common media identifiers, such as Ad-ID, so that they survive myriad distribution platforms, compression methods, and other technologies. This effort, dedicated to improving advertising monetization, will result in the streamlining of this key business workflow.
- There are active conversations at the Interactive Advertising Bureau (IAB) among multiple communities about Ad-ID and the ad serving process for online video and display banner ads.
- CableLabs has included Ad-ID in cable TV video-on-demand. CableLabs’ VOD Interoperability demonstration showed that unique identification enables more accurate measurement and operation in the area of cable VOD.
- Major supply chain vendors have integrated with Ad-ID, or announced plans to eliminate the rekeying of information about ads, to improve the accuracy of reporting.
- The 4A's and ANA boards unanimously support Ad-ID as the industry standard for commercial ad coding no later January 2014.
- Ad-ID was awarded the Media Magazine 2012 Vendor of the Year Award for “creating innovation in the industry.”
- The following media trade associations support Ad-ID: Cabletelevision Advertising Bureau, CIMM, Digital Place-Based Advertising Association, IAB, Mobile Marketing Association, and the Television Bureau of Advertising.

All these developments make a case that use of Ad-ID in the identification of ads is no longer optional, but a cost of doing business, as it is foundational to enabling these technologies that come together to enable more automated workflows for advertising content.

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## Background

### Ad-ID

Just as the UPC code and its associated descriptive metadata is essential for the efficient delivery of physical goods, Advertising Digital Identification (Ad-ID) and its metadata are the foundation for improving the digital delivery of ads across platforms, and managing and measuring cross-platform advertising.

Ad-ID is a joint venture of the American Association of Advertising Agencies (4A's) and the Association of National Advertisers (ANA). Used by more than 900 advertisers, Ad-ID is a web-based system that generates a unique identifying code for each advertising asset, and stores over 70 fields of metadata. Along with its centralized information system and web services designed for access to metadata, Ad-ID is critical to managing advertising workflow, improving systems and processes, measuring performance, and generating cost savings.

Clyde Smith of Fox puts it best: "If you can't identify it, you can't operationalize it or measure it; if you can't measure it, you can't monetize it. Identity is a key enabler for operational orchestration and measurement as well as management."

Our industry has traditionally lived with workarounds, short-term fixes, and stop-gap solutions. Labor is thrown at our problems, and with that comes excessive checking and balancing, and fixing errors.

In today's ad ecosystem, an ad is created, and throughout its useful economic life, it will typically be identified in approximately 100 different ways, between house coding systems, identification used in audience measurement, rekeying errors, and the fact that some video platforms do not require unique identification.

In the world of packaged goods, an analogy would be if each manufacturer decided to invent their own way to identify their products. One might use an eight-digit code. Another might use a variety of emoticons plus numbers, and yet another might choose to use letters and numbers and special symbols.

This is what our ecosystem has done by "accepting whatever is given to them" in terms of advertising asset identification. ISCI and other random codes are not guaranteed to be unique, and have no associated metadata.

### Categories of Advertising Workflow

Advertising workflows can be categorized into four areas: Operations, Administration, Residuals, and Measurement.

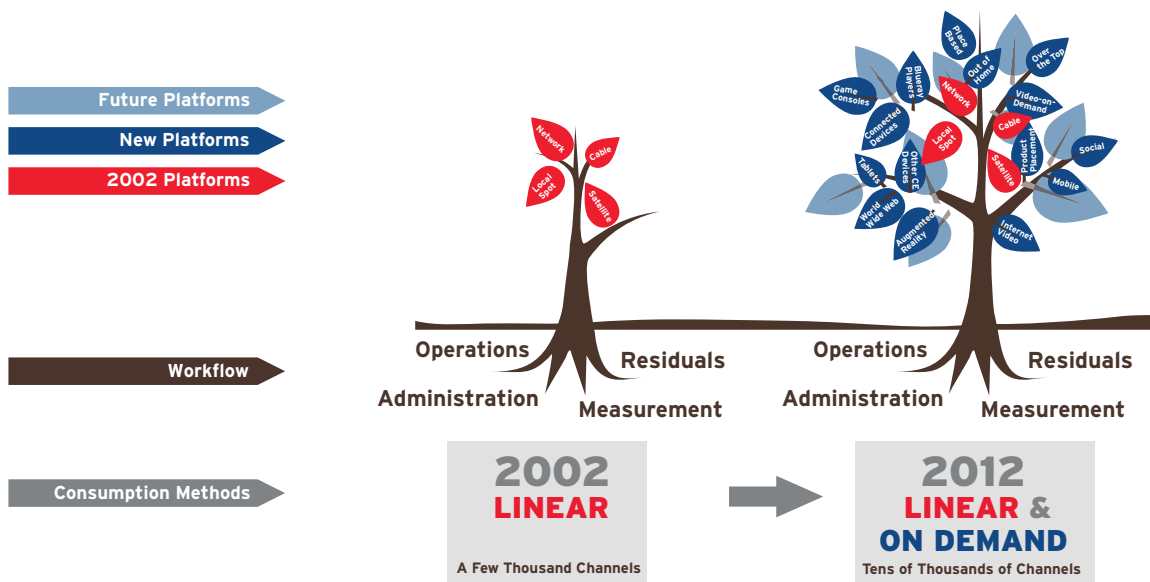


Figure 1. The four categories of advertising workflow

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When just a few media platforms were available, there were a few hundred channel choices, and nearly all media was consumed on a linear basis. Now, media is also consumed on an on-demand basis, through a multitude of media platforms and tens of thousands of channel choices. This explosive growth in the number of channels will create a vastly more complex ecosystem unless we listen to Mr. Liodice and simplify our workflows.

We are at a historic juncture in our supply chain's history. The entire advertising supply chain sees the need to increase speed and efficiency in the production process, enable multi-platform campaigns, and reduce cost. We must also enable interactivity and addressability, and improve cross-platform measurement.

We must work together to develop the commercial models for multi-platform content delivery so broadcasters and content owners can make real money from it, as opposed to subscription OTT services like Netflix/iTunes. There are several excellent examples of ad-supported or hybrid (ad-supported and subscription) OTT, and online services like Hulu, Hulu Plus, Crackle, and Break.com, not to mention the broadcasters' own online sites, which are gaining popularity. Our supply chain efforts feed directly into and enable these trends.

## Recent Industry Initiatives That Reference the Need for Ad-ID Adoption

### **SAG-AFTRA Commercials Contract Requirement**

The new commercials agreement between the Screen Actors Guild-American Federation of TV & Radio Artists (SAG-AFTRA) and the ANA-4A's Joint Policy Committee (JPC), representing the advertising industry, have required universal adoption of Ad-ID.

Under the new agreement, all commercials produced for television, radio, and digital platforms featuring SAG-AFTRA union members must use Ad-ID as the sole standard commercial identifier.

This requirement came as the result of a pilot project of an audience-based alternative to the current residual payment model.

Among other things, the pilot project showed there are certain challenges when it comes to obtaining the data necessary to complete the audience calculations, and rendering that data consistent and usable for that purpose. Commercial identifiers are not used consistently, network names are not used consistently, and program names are not used consistently. These challenges resulted in the need to estimate a significant percentage of the use fees calculated as part of the alternative to the current residual payment model.

The adoption of a uniform system for labeling programs and broadcast outlets to work in conjunction with Ad-ID is a major step toward adoption of the audience-based alternative for determining compensation for actors performing in commercials. Using uniform digital identifiers for all silos in the ecosystem will be a major breakthrough and will ensure more accurate tracking and accounting than today's system of varied identifiers and manual calculations.

### **AMWA MXF "Commercial Delivery Format" (AS-12)**

The Material eXchange Format (MXF) is one of the more important file-based workflow technologies to emerge in recent years. Its standardized wrapping of audio/video essence and related metadata enables interoperability among a large variety of systems that touch content from production to distribution.

Application Specifications (AS) from the Advanced Media Workflow Association (AMWA) have enabled MXF to be deployed with a great deal of success. Several different Application Specifications have been developed over the past few years, which constrain MXF to particular applications in our business. AS-12 is one of the most recent specifications to be released by AMWA. Based on the program exchange specification AS-03, it is specifically targeted at standardizing the exchange of advertising content.

At the center of AS-12 is the digital commercial slate, which standardizes the information that had been included in the old analog commercial slate. The analog slate caused an inordinate amount of error-prone human intervention. In addition, much of the current digital or IP-delivered media has no commercial slate, and therefore no standardized metadata.

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The current release of AS-12 supports Ad-ID for the United States market. AS-12 can also allow definition of other recognized advertising identification schema through use of a “shim.” Shims are computer code that may address the specialized requirements of a particular content type, e.g., advertising.

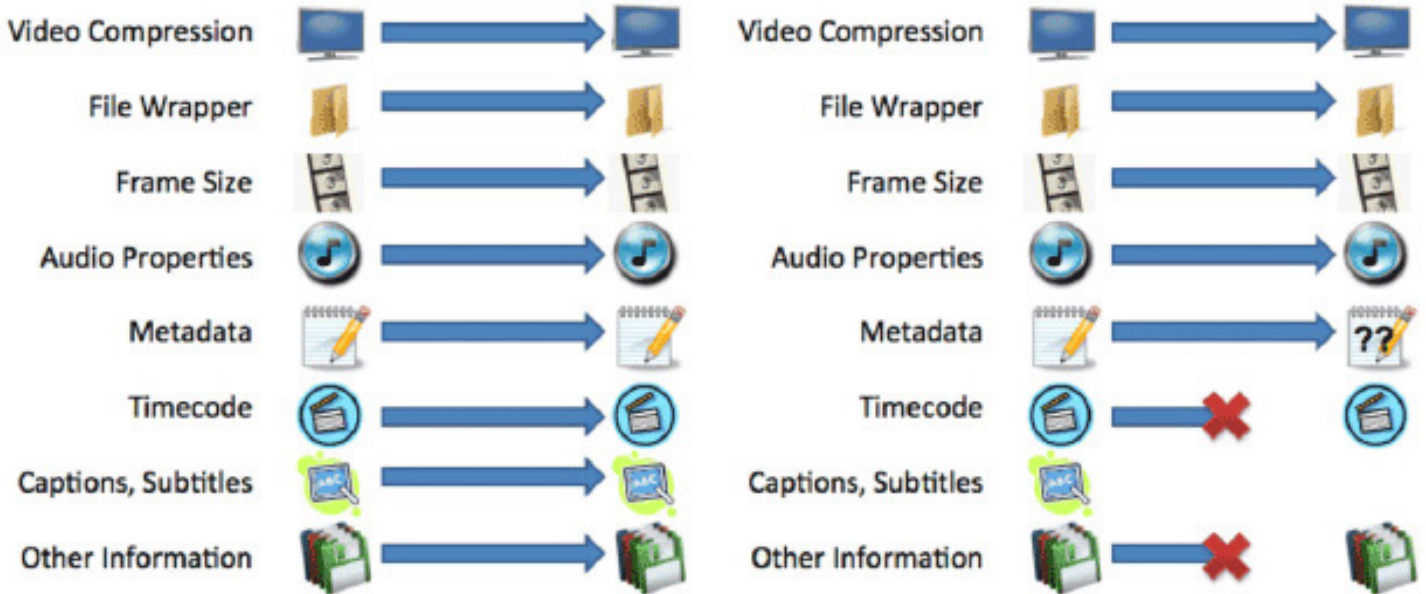


Figure 2. Transcoding the Components of an AS-12 file

Transcoding ideally results in the destination fully representing the source (left), but file format incompatibilities mean that some aspects of the source may be left behind (right).

By establishing AS-12 and MXF as the mezzanine format for commercials, we begin to reap the benefits of fully digital file-based commercial workflows. Over 95 percent of video advertising that appears across all distribution platforms begins as television ads. This represents an opportunity to make smart transcoding decisions as media outlets strive to develop cross-platform digital asset management systems.



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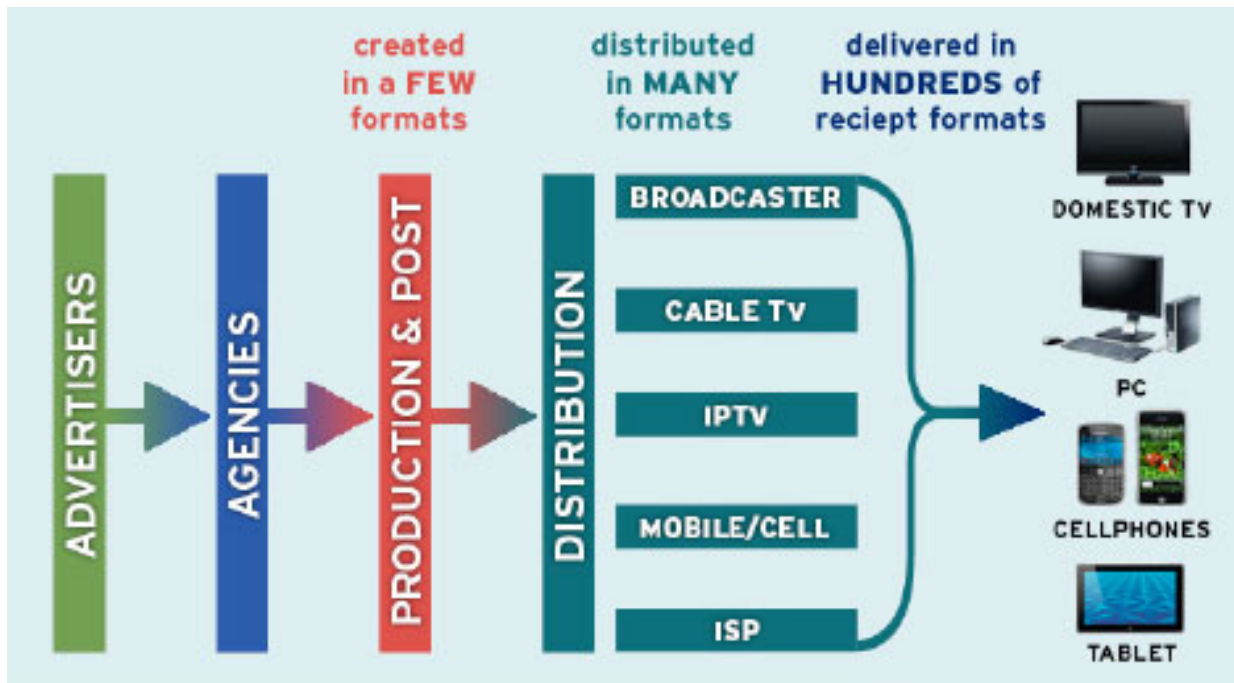


Figure 3. Creation, Distribution, and Delivery Formats

The supply chain can make transcoding decisions across platforms to deliver the highest technical quality possible. It's an opportunity to create content once and deliver it everywhere. Broadcast automation and online ad server platforms can now work together.

## The Broadcast eXchange Format

The Broadcast eXchange Format (BXF) was first published by the Society of Motion Picture and Television Engineers (SMPTE) in 2008. Since then, it has become one of SMPTE's success stories. Developed with the help of hundreds of participants, representing dozens of organizations, BXF has been adopted by virtually all the major suppliers of sales, traffic, billing, asset management, and automation systems.

BXF standardizes exchanges of schedule, as-run, and content-related metadata among systems, touching advertising workflows at many points in the chain. Following this success in automating advertising workflows, the SMPTE Working Group responsible for BXF has decided to take the next logical step and tackle the communication of advertising copy instructions from advertising agencies to media outlets.

This part of the advertising workflow is currently accomplished using faxes and emails. Instructions are sent to media outlets, typically printed out, then re-typed into the systems that manage the business side of the placement of advertising on schedules. This not only takes time and money which broadcasters really don't have, but also inevitably introduces errors into the process. This can be a really big deal, both in the volume of advertising we're dealing with and the very high value of many of these ads.

The ability to send traffic instructions from ad agencies to media organizations has been added to BXF within the "BXF 3.0" release, expected to publish by the end of 2013. This will ensure that the proper spots are played as specified by the agency — and again, standardized identification of commercials is a critical component of this.

For this reason, it is recommended that Ad-ID be used to identify non-program material within BXF messages.

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## CIMM-TAXI

The Coalition for Innovative Media Measurement (CIMM) released the final report of its Trackable Asset Cross-Platform Identification (TAXI) initiative, which stated that widespread adoption of Ad-ID for ads, and the Entertainment Identifier Registry Association (EIDR) for long form and entertainment content, enable increased speed, transparency, and accountability in media measurement, resulting in efficient markets and higher overall spend.

The report stresses the importance of registering both advertising and entertainment assets, puts all the steps necessary to achieve marketing and communications interoperability in one location, and forms the framework for the standard-setting activities and process improvement conversations that must now take place. When fully deployed, these activities will not only deliver the measurement improvements CIMM initially set out to achieve, but will improve cross-platform supply chain efficiency and productivity.

Participation in TAXI included unprecedented involvement of 28 M&E entities from media agencies, advertisers, measurement companies, media outlets, and other vendors. The conversations were enlightening, and illuminated the urgency of the foundational steps toward more timely and relevant measurement and management of cross-platform media campaigns.

The participants in TAXI also identified additional potential benefits of Ad-ID and EIDR adoption, including:

- Fewer barriers to deploying cross-platform dynamic ad insertion
- Improved measurement of the performance of ads
- More granular media ratings
- Improved automated content recognition
- Less complex second-screen integration
- Enablement of new anti-piracy tools and methods
- Reduced asset storage and transmission costs

The TAXI report articulates the three steps necessary to enable a projected \$2 billion in annual M&E sector revenue and more than \$500 million in M&E cost savings, and to take unnecessary and duplicative work out of the industry's workflow.

**Step 1:** Register all video assets with Ad-ID and EIDR. There must be renewed attention to gain universal adoption.

The registration task for ads is generally the responsibility of the creative agency, and sometimes the advertiser. The combined advocacy of the media agencies and supply chain vendors (commercial distributors, production companies, and editing facilities), in addition to research vendors and the media, must be brought to bear to articulate the importance of this requirement and the standardized process it affords.

It is important that the adoption of these standards take place no later than January 1, 2014, in line with previous calls from the boards of both the ANA and 4A's.

**Step 2:** Operationalize asset and ID flow-through. Detail functional requirements and budgets for implementing ID flow-through within media asset management, delivery, and distribution infrastructures.

This work will be led by Ad-ID, EIDR, and CIMM as part of the SMPTE's "Open Media ID Binding Technology for Persistent Content Identification in Audio-Visual Essence" Study Group, with broad cross-disciplinary involvement.

**Step 3:** Embed TAXI in all media measurement and reporting. At the same time as the work in step 2 is taking place, media agencies and the media must make it a requirement that all internal and third-party measurement use Ad-ID and/or EIDR as a primary key. The ecosystem must drive ad delivery and content monetization business model transformation in ways not previously enabled before using unique identification.

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## **SMPTE’s “Open Media ID” Study Group**

SMPTE and CIMM have established a Study Group, with a mission to study the feasibility of an open standard for binding common media identifiers, such as Ad-ID, so that they survive myriad distribution platforms, compression methods, and other technologies. This effort, dedicated to improving advertising monetization, will result in the streamlining of this key business workflow.

Content creators and distributors need an effective way of reliably binding content identifiers to audio/video content that will robustly and reliably travel from one end of the media ecosystem to the other. Existing identifiers, such as EIDR and Ad-ID, rely on binding an identifier to a file container, data streams within a file container, or structural metadata of the file itself, any of which can be destroyed during processing or delivery. Research suggests that the only reliable approach is to bind the identifier within the audio/visual essence, so that it can survive throughout the lifecycle.

Binding technologies exist — watermarks, fingerprints, and wrappers — but today these are either proprietary, are not capable of surviving transit through the ecosystem, or both. An open standard for ID-to-asset binding can enable a wide array of capabilities that were articulated above in the CIMM-TAXI final report.

This Study Group’s mission is to study applicable use cases and technologies, and generate a report, making recommendations for standardization in this area.

## **CableLabs VOD Interoperability Demonstration**

This event demonstrated the current capabilities in the high-level system integration of EIDR and Ad-ID in cable advertising environments, and to encourage further integration of these technologies.

During the project, which included participation from NBC, BlackArrow, Canoe Ventures, Vubiquity (formerly Avail TVN), EIDR, and Ad-ID, third-party confirmation of accuracy and timeliness of the Dynamic Ad Insertion transactions was provided for Video on Demand platforms.

The event was an opportunity for vendors to display their capabilities with respect to EIDR and Ad-ID in as complete an end-to-end environment as possible, representing content owners or aggregators and ad agencies working with MSOs for placing ads in entertainment assets.

Accurate program and ad asset metadata is an important ingredient in efficiently executing dynamic ad insertion, and tracking and reporting on the results. By leveraging metadata from EIDR and Ad-ID, participants were able to demonstrate streamlined interoperability and improved workflows.

The event showed that by uniquely tagging each advertising asset with Ad-ID, the most appropriate ad can be selected from available inventory, and the Ad-ID metadata ensures shared identification of the right advertising asset, matched to the right piece of content, across multiple cable operators.

This event proved the value of incorporating industry-standard coding mechanisms so that the buyers, sellers, and facilitators of electronic media can speak and trade in a common language.

## **IAB’s Digital Video Ad Serving Template (VAST)**

The IAB’s Video Ad Serving Template (VAST) specification is a universal XML schema for serving ads to digital video players, and describes expected video player behavior when executing VAST-formatted ad responses. VAST provides a common protocol that enables ad servers to use a single ad response format across multiple publishers/video players.

VAST version 3.0 specifies an identifier for the creative, which accepts Ad-ID as a valid value. Work needs to be done to reinforce this area and provide the underpinnings for cross-platform video ad identification, and the reference to Ad-ID and the associated descriptive metadata.

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The IAB and Ad-ID have also established the “Digital Advertising Workflow Best Practices Working Group” to identify inefficiencies in the digital supply chain and offer solutions that will reduce operational friction to increase efficiency.

## The Life of a Commercial

The life of a commercial asset has nine stages: Pre-Production, Production, Post-Production, Deliver, Ingest, Transcode, Automation, Play Out, and Measurement. The ID, and associated metadata for a commercial, should be available unchanged throughout the advertising workflow. That way, the commercial will be correctly identified for all necessary purposes, and our ecosystem derives the benefit.

The illustration that follows shows how all the transactions in this section fit together to form a workflow, where Ad-ID is utilized to ensure that the correct spot is referenced at all points.

## Steps in the Life of a Commercial

**B1: Spot Creation.** When a spot is first created and shot, it is registered with Ad-ID to ensure it is identified properly throughout its lifetime.

**B2: Order.** An order is placed for an advertising campaign with particular media outlets. This often flows from the ad agency to the media outlet by way of a schema, such as that defined as part of ePort (an industry e-business initiative). BXF also has a sales contract structure that allows for exchange of basic sales contract data.

**B3: Agency traffic instructions.** When the agency decides when and where to schedule the spot, those “traffic instructions” are sent to each media outlet via BXF, with each spot identified with its Ad-ID number.

**B4: Delivery of spot to media outlet along with metadata.** When the actual spot essence is sent to each media outlet, AS-12 can be used, which provides a full digital slate, including the Ad-ID number.

**B5: Management of spot within media facility.** Once at the media facility, the spot itself must be moved from offline storage to online storage for playback. BXF’s Content Transfer capability can identify the spot with its Ad-ID number, along with the spot’s source and destination, ensuring the correct spot is moved to the correct playback equipment at the correct time.

**B6: Scheduling of spot.** When the spot is actually scheduled to be played out at a particular time and channel, Traffic utilizes BXF’s schedule capability to communicate this information, including the spot’s Ad-ID number, to playout automation.

**B7: Reconciliation and billing of spot.** Finally, when the spot has played out, BXF’s as-run capability is used to communicate that fact from playout automation back to the traffic and billing system, which in turn can invoice the ad agency.

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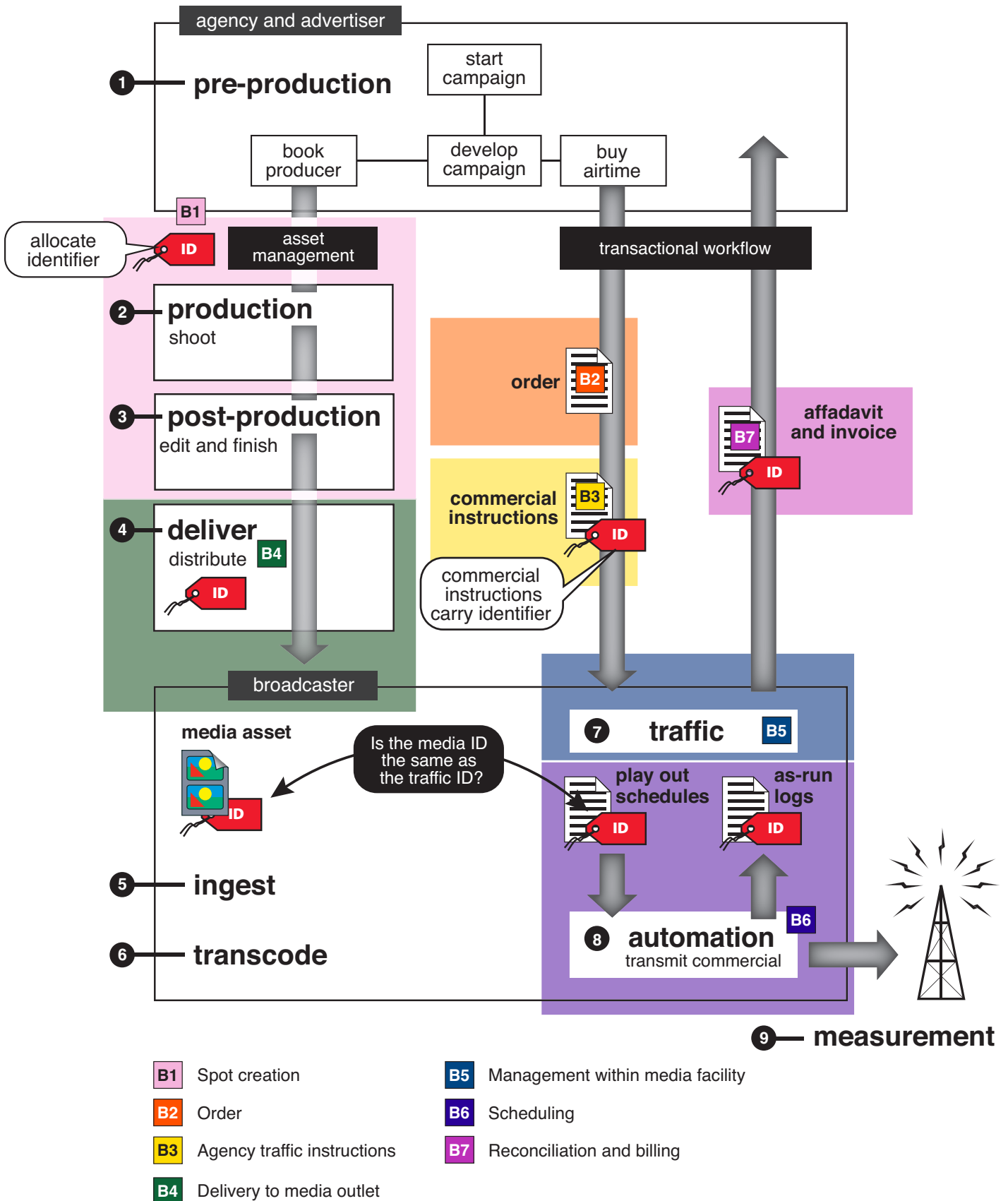


Figure 4. Lifecycle of an Ad

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## Conclusion

It would seem that we finally have the “perfect storm” to realize the dream of fully automated advertising workflows. An increasing volume of ads, coupled with limited resources, provides motivation, while new key technical components have emerged.

We now have a toolkit in BXF 3.0 that meets the needs of the file-based media workflow of a commercial in AMWA AS-12, and of the transactional workflow for the movement of associated documentation (logging and tracking of orders/changes, commercial instructions, log time confirmation, invoices). CIMM-TAXI and SMPTE’s new Study Group provide a framework for measurement.

The contract requirement from SAG-AFTRA provides a rationale for requiring the use of Ad-ID, and allows the entire supply chain to reap the benefits.

We now have a way to fully automate these workflows, eliminating the costly and time-consuming manual re-entry of advertising-related data. We can manage the plethora of new distribution media, and are well-positioned to utilize their ability to enhance advertising revenue while reducing costs.

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## Biographies of Authors

**Harold S Geller** is Chief Growth Officer of Advertising Digital Identification LLC (Ad-ID), a U.S.-based advertising-metadata system, which is a joint venture of American Association of Advertising Agencies (4A's) and the Association of National Advertisers (ANA). Mr. Geller speaks and writes extensively regarding interoperability, digital workflow, and metadata in advertising, and is the co-author of four white papers on the subject.

His advertising career spans nearly 30 years in the United States and Canada. He has worked in media buying/planning, account management, financial, and technology roles at MindShare, Ogilvy & Mather, McCann Erickson, and Ted Bates and Foster Advertising. Mr. Geller is a graduate of Seneca College (Toronto, Ontario, Canada) where he studied radio and television broadcasting.



**Chris Lennon** is President and CEO of MediAnswers, specialists in media technology workflow. He has over 30 years of experience in the media business, and has led large projects on every continent except Antarctica. He is known as the father of the widely-used Broadcast eXchange Format standard, and has led this effort since its inception in 2004. He also serves as Standards Director for the Society of Motion Picture and Television Engineers. He has been active in a wide array of other industry organizations, including SCTE, ATSC, and AMWA.

