ARE FULLY DIGITAL WORKFLOWS A PIPE DREAM?

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ABSTRACT

Players in the media business (such as broadcasters, program producers/distributors, ad agencies and commercial producers) don't believe that technologists can integrate all of their systems. Sure, they have all seen point-to-point integrations succeed, but many remain skeptical when it comes to fully integrated workflows from start to finish. In addition, many technologists don't believe that these players know, or care, enough about metadata. Both are mistaken, of course. This leads to a bit of a chicken-and-egg situation in the realization of fully digital workflows, and the efficiencies they promise. A classic example of this is the slow adoption of new means of content identification, such as ISAN and Ad-ID, with the improved metadata flows that these standards facilitate. This paper will explore the stumbling blocks, enablers, and milestones that users encounter along the way to their ultimate goal of fully digital workflows, and will attempt to show users the path of least resistance, with a focus on the workflows associated with advertising content.

WHAT IS WORKFLOW?

The concept of digital workflow using a Service Oriented Architecture (SOA) approach in the world of media and communications can be divided into two categories: asset-related workflow and transactional workflow. For purposes of this paper, workflow begins early in the process, from the time of content approval, and includes parties on the marketing- and advertising-end of the transaction as well.

Service Oriented Architecture (SOA) is a relatively broad practice. Wikipedia defined SOA as "methods for systems development and integration where systems group functionality around business processes, and package these as interoperable services. SOA also describes IT infrastructure, which allows different applications to exchange data with one another as they participate in business processes." In a nutshell, this really means loosely coupling systems and processes, making it simpler to achieve true integration.

In a recent survey by the American Association of Advertising Agencies (4A's), 64 percent of respondents said their systems suppliers were not doing all they can in the area of Service Oriented Architecture, even though 88 percent of respondents felt that they were articulating their support of SOA.
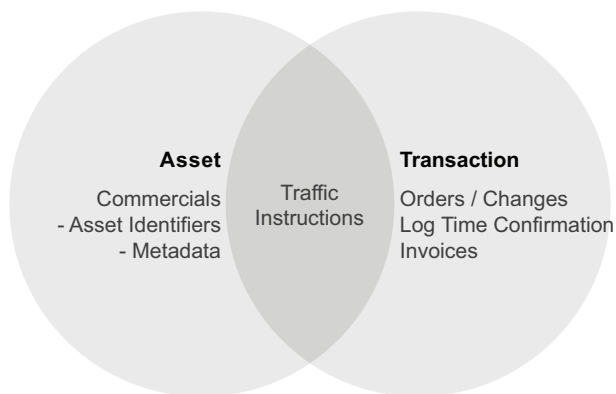
Types of Workflow

Figure -1

Asset-Related Workflow

Asset-related workflow is defined as anything that relates to the physical asset, its identification, or description. This begins at the creative development stage and ends at the airplay, and includes all the stages in between—from production, to edit, to distribution, and the various archival stages at the advertiser, agency, and media outlet. Standards that relate to asset workflow include MXF, BXF, and identification schema like Ad-ID and ISAN.

Transactional Workflow

Transactional workflow is defined as the movement of documentation related to the playout of an asset to the consumer, and the logging and tracking of that activity. Standards that apply here are XML schemas that are developed by entities such as Television Bureau of Advertising (TVB), Cable Television Advertising Bureau (CAB), and SMPTE's 2021 (BXF). Relating to this

area, the American Association of Advertising Agencies (4A's) has developed a registry of trading partners that enables the seamless addressing of transactions, and the discovery of schema versions supported by trading partners.

Where these workflows intersect—in the case of commercials—is at the traffic instructions that describe the manner in which commercials are to be aired, including rotation patterns and other necessary parameters. It's important to note that industry standards relate to all of these conversations today, with the exception of traffic instructions.
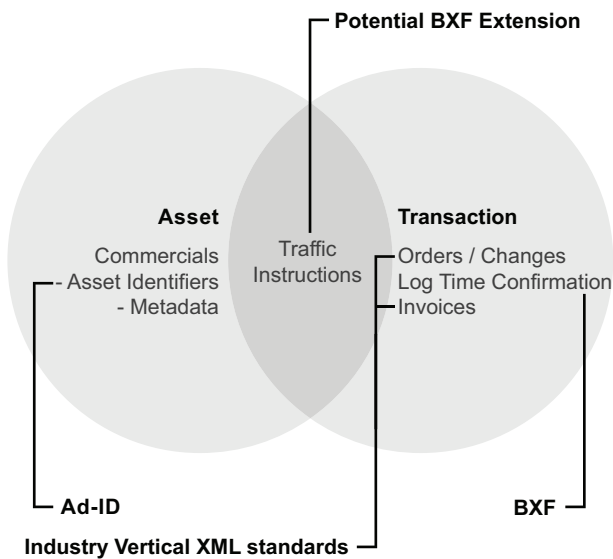

Potential BXF Extension

Asset
Commercials
- Asset Identifiers
- Metadata

Traffic Instructions

Transaction
Orders / Changes
Log Time Confirmation
Invoices

Ad-ID
Industry Vertical XML standards

BXF

Figure - 2

LEVELS OF METADATA ABSTRACTION

One other concept that's important to grasp in all of this is that the level of abstraction of metadata gradually shifts from high-level at the beginning of the process, gradually becoming more granular and lower-level as you move toward the actual playout of an ad for consumers. As metadata progresses through its lifecycle, additional elements are progressively added to those already present, resulting in a richer, more complete set of metadata as time goes by. At first glance, it's fairly straight-forward. However, as you progress to each progressive layer, you find additional detail and complexity you never would have dreamed of initially.

Below is a real-world illustration of this:

Advertiser

- Wants to promote a new product in hopes of achieving a successful launch.
- Metadata perhaps only consists of advertiser name and product name at this point.

Creative/Media Ad Agency

- Designs a campaign for this new product across multiple media, including television.
- Designs and produces commercials.
- Determines target audience, and places buys with major media outlets.
- Metadata added at this level includes: length of each spot, commercial title, days of week/channels/dayparts to air in, cost per spot, product category, etc. Media Outlet
- This is where the metadata must be complete.
- Each instance of each commercial airing must have frame accurate timings, content ID, allowable airing parameters, etc.

Media Outlet

- This is where the metadata must be at its richest.
- Each instance of each commercial airing must have frame accurate timings, content ID, allowable airing parameters, etc.
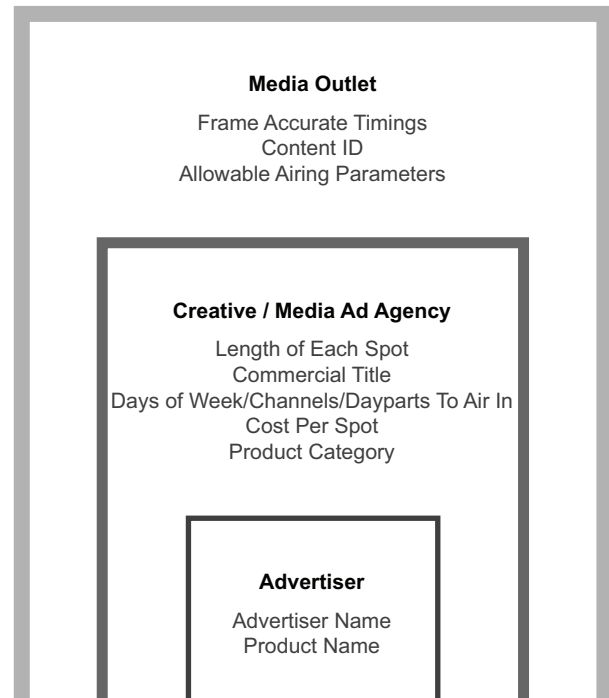

Media Outlet

Frame Accurate Timings
Content ID
Allowable Airing Parameters

Creative / Media Ad Agency

Length of Each Spot
Commercial Title
Days of Week/Channels/Dayparts To Air In
Cost Per Spot
Product Category

Advertiser

Advertiser Name
Product Name

Figure - 3

THE PLAYERS AND THEIR ROLES

Each of these players interacts with asset and transactional workflows. Current usage interaction varies; however, there are limitations, opportunities, and work that must be leveraged toward a mutual benefit.

Trade Associations and Standards Development Organizations

This is often where the need is first identified for standardization and seamless workflows that it enables. These types of organizations provide a means for representatives of various interests to come together and create something for the benefit of all.

Advertisers

Money is the single biggest motivator when it comes to business, so it should be no surprise that when it comes to commercial advertising, advertisers are at the top of the food chain.

Ad Agencies

Ad agencies generally take the advertiser's sometimes nebulous desire to increase product awareness and formulate a media campaign (often across multiple media), lead the creative process, and ensure that the advertiser's goals are met.

Production Companies

The advertising content must be taken from the agency's creative vision to a finished distribution-ready product. This is where production companies come in. From a script, storyboards, and communication with the agency, a final commercial is produced.

Content Distribution

Once the commercial is ready for air, it must be distributed to the appropriate media outlets. Commercial content is distributed via satellite, fiber, Internet, and yes, even sometimes physical tapes.

Media Outlets

These include all of the major media conduits to the consumer, including television and cable networks, local stations, and local cable MSOs, as well as satellite providers.

Traffic/Scheduling

At the media outlet, which will be providing the commercial content to viewers, many things need to happen in advance of the actual airing of the commercial. Metadata about the commercial must be captured, the commercial must be scheduled according to the ad agency's wishes, and all this must be balanced with the wishes of those responsible for the other ads playing on any particular day and channel (normally in the hundreds).

Playout/Automation

In order for the commercial to be provided to the viewer, it must be ingested into a playout server at the media outlet, checked for quality, and then played out at the appropriate time(s) and on the appropriate channel(s). Managing this is all the job of the automation system.

Billing

Finally, once the commercial has been shown to viewers, the agency (and ultimately the advertiser) must pay for it. The media outlet(s) who showed the commercial will track when it was played, reference back to the contractual terms agreed to with the agency, and then generate invoices requesting payment.

WHAT'S TO BE GAINED BY ADVOCATING FULLY DIGITAL WORKFLOWS?

For over 20 years in the media business, we have lived in a world where SOA-related initiatives have taken a back seat to strategic initiatives (such as ROI metrics, audience measurement, and proprietary client initiatives, etc.) instead of moving forward with it in tandem.

Irwin Gotlieb, chief executive officer of GroupM (the parent company to WPP media agencies), recently said, "Reinventing business practices is now about our survival."

Advertisers

Advertisers want to ensure that their message is seen by the right eyeballs for the right price. Anything that can help to ensure both the accurate playout of commercials to viewers, and a reduction in the infrastructure to support this gets the attention of advertisers.

Ad Agencies

Ad agencies are not in the business of managing metadata. Often dominated by staff that is more creative than technical, the less they have to worry about metadata, the better. For this reason, increased automation by way of more seamless digital workflow is quite attractive to ad agencies.

Media Outlets

Ensuring that the correct content is aired is key to those who actually have the responsibility for getting that content out to consumers. Doing so using the most efficient (and least costly) means possible is not just desirable, it's critical at this level. Media outlets operate today with staffing levels far below those seen in the past. Manual processes when dealing with content and its metadata are simply no longer an option.

Vendors

Vendors of media-related systems and equipment are focused on building the best products they can. Time and effort spent on non-standard interfaces and workaround solutions is an unwanted distraction. It is key for vendors that standardized solutions be used when appropriate to enable a smooth, automated flow of data and content between products. Fundamental to all of this is content identification, with standards such as Ad-ID and ISAN providing a foundation on top of which better workflows can be developed.

IPTV and VOD

In order to make these addressable, targeted media viable and profitable, they must allow creativity, while enforcing the necessary standardization; they must be driven by fully digital workflows. Many traditional media owners are also in these same spaces, leveraging these as increasingly important revenue streams.

INDUSTRY VERTICAL IMPLEMENTATIONS

National Cable—CableTelevision Advertising Bureau

In fourth the quarter of 2004, the CableTelevision Advertising Bureau (CAB) formed the CAB E-Business Solutions Commission, which is made up of the heads of systems for all of the CAB member cable networks.

Solution Commission Mission:

- Work toward an end-to-end e-business solution for all cable networks.

- what exactly is an end-to-end e-business solution.

- The 100 percent elimination of paper from the buy process, no more manual inputs.

- All steps will be handled through the electronic transmission of data.

CAB E-Business Solution Commission Update

In first quarter of 2006, Donovan Data Systems (DDS), a leading systems and software provider to advertising agencies, approached the CAB E-Business Solutions Commission about executing a change management test. The first phase of the change management test began in September 2006. Full adoption by DDS and MediaBank agencies, including a move from flat file to XML transfers, is expected by Q4 2009.

Local Spot Television

Negotiating and buying television time is a detailed and complex process. In its simplest form, a typical broadcast purchase is conducted among three trading partners: agency buyer, sales rep, and station. Once the process has moved from the dynamic negotiation stage to the order and stewardship stage, the trading partners can be burdened with painstaking, repetitive actions.

In the current landscape of local spot television transactions, there is a combination of methodologies, both proprietary, Donovan Data Systems (DDS) DARE— direct agency-seller exchange, and portal-based (TVB ePort). The ideal evolution of these solutions is to move to an open communications model, i.e. direct system-to-system communications, using XML standards, and a common central registry, which will require parties on all sides to compel their vendors to comply.

For the time being, these efforts can exist and move the industry SOA efforts forward. There are, however, limitations to the DARE platform, such as the support of multiplatform transactions, and the flexibility to adopt new industry practices, and transaction rules.

Direct Agency-Seller Exchange (DARE)

In 1993, DDS collaborated with other industry vendors to develop the direct agency-seller exchange (DARE) protocol. DARE is used by media buyers and media sellers to electronically transact and manage orders, offers, revisions, and confirmations.

DARE is an open flat-file standard, available for use by anyone in the industry. It was originally designed for communication between agencies and rep firms, but is now available to all rep firms and broadcasters.

DDS manages the DARE directory and communications infrastructure on behalf of all DARE participants—for DDS and non-DDS clients.
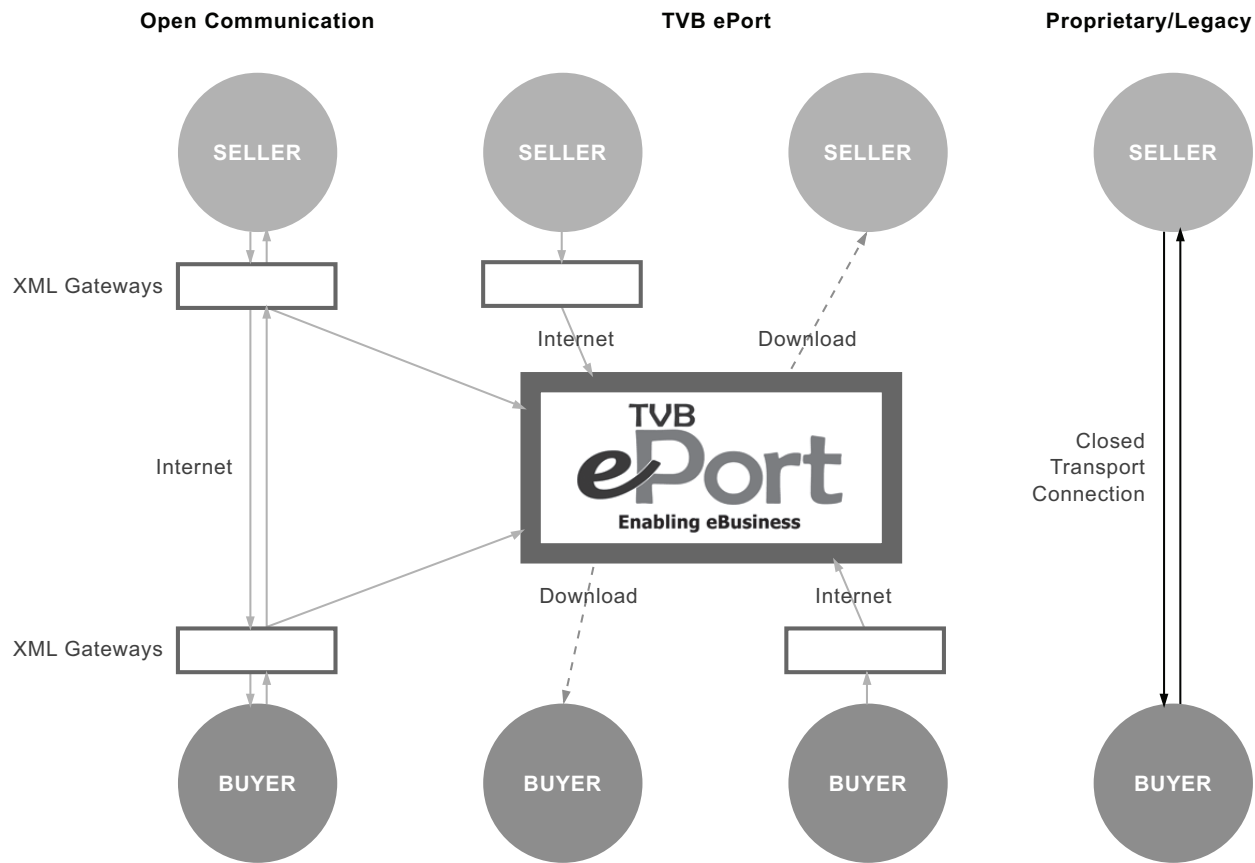
Open Communication　　　**TVB ePort**　　　**Proprietary/Legacy**

SELLER　SELLER　SELLER　SELLER

XML Gateways

Internet　　Download

Internet

Closed
Transport
Connection

Download　　Internet

XML Gateways

BUYER　BUYER　BUYER　BUYER

Figure - 4

TVB ePort

TVB ePort launched in November 2007, and is a portal to which any trading partner (buyer, station, rep) can send any transaction (airtime orders, revisions, log times, Web orders, proposals, avail requests, makegoods) and from which any trading partner can receive any transaction, whether national or local.

Here are some features of ePort:

- All transactions sent to platform in open standard XML.
- All transactions downloaded in desired format (Excel, PDF or XML).
- Accommodates business rules.
- Enables multiplatform transactions.

There are currently more than 700 stations, and 30 agencies using ePort to send orders.

SOME EXISTING STANDARDS

Ad-ID

Ad-ID is a cross media Web-based complete code system, and metadata repository, which replaced the Industry Standard Commercial Identifier (ISCI), the manual advertising asset-coding system in place since 1969. ISCI was withdrawn from the marketplace in October 2007.

Ad-ID has 11 categories of metadata, plus a "digital slate," which include a total of 70 data fields.

There are currently more than 700 advertisers signed up for Ad-ID, including 74 of the top 100 in the United States.

BXF

The Broadcast eXchange Format (SMPTE 2021-2008) is a wide-ranging standard that helps in the automation of many media-related workflows. In the context of this paper, BXF touches on the following areas:

Content Metadata (i.e., a commercial is 30-seconds long, is advertising Tide, placed on behalf of P&G, etc)

Content Transfer Instructions (i.e., move that Tide spot from a central distribution server in Atlanta to a playout server at a TV station in Des Moines)

Schedule and As Run Information (i.e., run that Tide spot on Tuesday on Channel 11 at 7:31 pm and again at 7:58 pm)

THE CURRENT ECONOMIC CLIMATE

A recent Booz&Co report stated: "In an industry [media and entertainment] in which sourcing influences as much as 40 percent to 50 percent of the cost base (a number that is growing), they will closely review their procurement practices and pursue aggressive vendor-restructuring efforts." The report went on to state: "New approaches are required for media sales management."

A recent Forrester report stated: "When investing in agility, companies should focus on flexibility. For IT, that means applying SOA and creating flexible external interfaces to data and systems so that companies can more easily shift or change contractors, suppliers or partners."

One agency executive commented on one of Mr. Geller's recent blog postings (theebizbuzz.blogspot.com): "No agency gets their name in the press for developing an internal system that improves workflow. And no agency gets fired for faxing in their orders to the radio station in Charlotte. Where would your priorities be?"

So, challenging economic conditions don't preclude the implementation of the types of technologies, systems, and workflows that are discussed in this paper; they actually make the deployment of these things even more critical and urgent.

A CROSS-INDUSTRY DIALOGUE

There must be agreement amongst all parties to adopt common standards, by industry vertical markets. Many of the vertical market trade associations have devoted time and effort to developing standards. There is no room in our industry for squabbling over whose standards are more open. We must recognize the business needs, along with vendor capabilities, and allow for varying degrees of use of standards, not different versions.

SOA isn't about standards. It's about system-to-system conductivity supporting business practices. Standards are the means of supporting this conductivity. We have to do things in a simple, transparent, and universal manner.

Agency system vendors (i.e., Donovan Data Systems, Harris, MediaBank, Strada, and Arbitron) will do what their customers ask them to do. However, it is also important for media vendors to teach agencies the benefits of an SOA standards-based approach, and the work that they have done in this area. It's only by getting on the same page that fully digital workflows will move from a pipe dream to reality.

Advertising and marketing are a highly manual ecosystem, which needs to become a well-oiled integrated workflow machine. Ecosystems respond and adapt to new conditions or they fail. So too must the media-buying ecosystem. The consequences for complacency are dire.

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