AMWA
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The Agile Media Blueprint
- An Overview -

This short overview provides an introduction to the 30 page Discussion Paper, available via the link on the home page of www.AMWA.tv

What is the Agile Media Blueprint?

There is currently a large scale move to IP based systems, with substantial support by media companies and their suppliers. For the last two years, exhibitors at trade shows have shown an increasing range of products based on SMPTE ST 2110 and AMWA IS-04 and IS-05.

This step change is based on the work of the Joint Task Force on Networked Media (JT-NM), comprising the AMWA, EBU, SMPTE and VSF, which produced a Reference Architecture and subsequent technology roadmap.
See www.jt-nm.org

With the current transition well under way, the JT-NM seeks to define a route to agile systems, looking beyond the present box-for-box replacements to something quicker to adopt and more flexible in use. An Architecture Summit, called by the AMWA on behalf of the JT-NM, comprising media companies and their suppliers, addressed many of the issues currently causing concern and led to a blueprint for the adoption of new technologies appropriate for our industry, the Agile Media Blueprint (AMB).

Why is it relevant to my organization?

Agile Media Blueprint

Dr Richard Cartwright
Streampunk Media Ltd, Feb 2018

For the last ten years the electronic media industry has been continuously changing around us, with new devices to consume content and the arrival of online-only delivery channels.

The relevance of traditional business models is in steady decline, while the need to explore and satisfy new consumer requirements increases. Current implementations of media technology rely largely on specialist broadcast hardware and the investment in capital plant. While this methodology has worked in the past, it is not sufficiently flexible to adapt to new demands or to exploit a closer two-way relationship between content creators and consumers, for example using automation and AI to generate new revenue streams from personalized content.

The requirement for business agility drives the move to new technologies and the AMB provides a plan that allows media companies to create and monetize content more effectively than if they were using conventional facilities.

It provides technical agility, allowing services to be tested quickly and efficiently so that successful trials can be expanded and unsuccessful ones can be switched off - all with minimum financial risk.
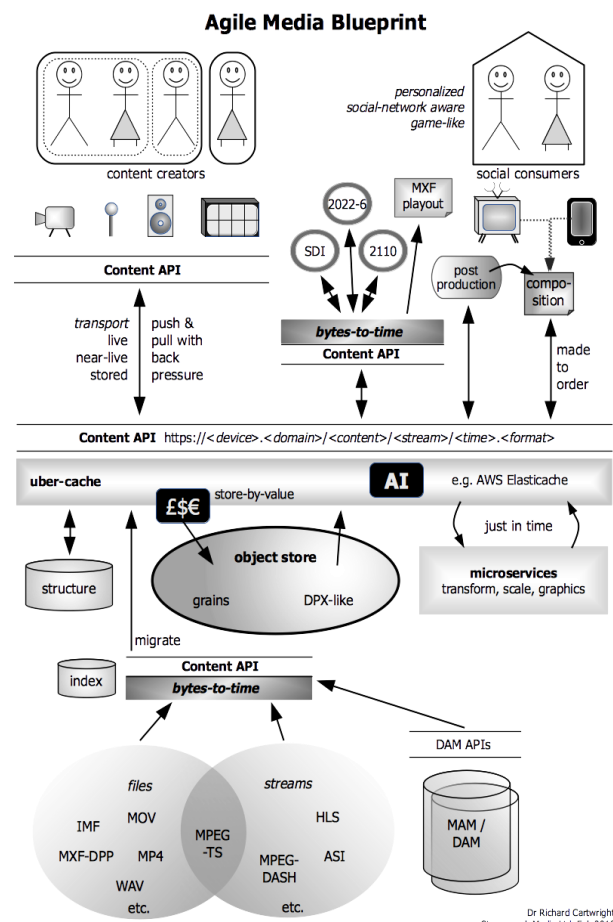
What is the basis of this technology?

The AMB is a plan that enables media companies and suppliers to build highly flexible and scalable systems that run on the same platform as the Internet. It makes use of all of the hardware, software, networking and associated components used to run world-wide, huge-scale systems such as Twitter and Facebook.

How does it handle my content?

The principal change from current practice is in how content is stored and processed.
Note - See the illustration on page 1.

The Agile Media Blueprint is based upon an architecture that captures, manipulates and transports essence streams in the form of data "grains"; small units of video, audio, and data essence such as teletext or closed captioning. Cameras, microphones and other sources emit flows of grains onto a network. Each grain is stamped with a Precision Time Protocol (PTP) timestamp, recording the time at which the visual image or sound wave was captured. Each grain is also given a unique and persistent identity which is permanently tied to, and associated with that grain. Monitors, speakers and other receivers can reproduce flows of grains as images, sound or data.

Workflows are accomplished by "Functions". These Functions are small bits of software that take in essence data, perform a transformation, and emit the transformed data. Functions are reusable and may be chained together into workflows as needed. Each function is given an identifier which allows it to be unambiguously referred to and reused. Functions are the key to scalability in the AMB.

At the core of the AMB, is the Content Application Programming Interface ("Content API"). The Content API provides a uniform way to store, search, and retrieve grains from the object store, and provides an enabling layer of interoperability. Suppliers are free to do their best work, implementing functions and systems on top of the Content API.

Does it affect purchasing decisions that I need to make today?

No. Systems built using the AMB will draw on standards and specifications that are in use and are being developed today, to enable a smooth transition to dematerialized facilities.

What happens next?

The purpose of this discussion paper is to introduce the Agile Media Blueprint and the context within which it exists. As next steps, the Content API will be introduced into the AMWA technical process for discussion and further development / improvement. We are at a point where a deployment of these concepts in a media company is not only possible, but where it would significantly accelerate the work presented here.

Readers should note that a number of media companies are already deploying facilities in the cloud, although the authors are not aware of any that are using this grain-based approach with an open API. This indicates that the time is right for moving forward with this work in an open and collaborative environment, such as the Advanced Media Workflow Association.

Join us to see how the AMB can fulfil your business needs and to be part of this exciting new development.

To join or for further information

www.AMWA.tv

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