

Chapter 82

Media Convergence and Cloud Technologies: Smart Storage, Better Workflows

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ABSTRACT

Why do media organizations look out for cloud storage? In short, the media industry as a whole is facing various challenges. Due to digital convergence there is more material, less time, and multiple channels to fill, while budgets get smaller. TV, video on demand, and mobile content have become big drivers in pushing a search for innovative storage solutions. In addition to that, the opportunity to work with raw data, which can be used for deeper analysis, mapping, visualization, and personalized services is another aspect of why there is a need for novel storage solutions, preferably in the cloud. The media industry could lower production costs and increase speed to market of time critical reporting. This book chapter provides an overview of how far VISION Cloud can provide novel concepts for these demands.

INTRODUCTION

Media companies from all domains are in the midst of a complex convergence process, including the now irreversible transition from analogue to digital content. At the same time, current business models are becoming increasingly obsolete in the face

of recent structural changes in the media market. Furthermore, new competitors are on the rise (e.g. search engines as new journalistic curators, social networks providing news streams, etc.) and user generated content becomes more important. On the technical side, IP traffic is going up, a higher variety of end-user devices calls for an increase

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in various technical formats (e.g. video codecs) and changing user demands (interactivity and participation). An addition to that, the emergence of new platforms (e.g. social networks) is presenting an added challenge to existing media companies. In order to stay relevant, media companies need to understand the most important changes, figure out both business and technology models to adapt to multi-channel production. These changes combined call for a restructuring from the ground up. Cloud storage solutions could create a new foundation in this space.

BACKGROUND

Leading European broadcasters have to manage growing content archives. For instance, estimates of the available amount of content in RAI archives count more than 500.000 hours of previously published programs, ranging in a fifty-year span of broadcasting activity. A rough count exemplifies that a complete digitization of such repository would need 15 petabytes of online storage. This is obviously something currently unmanageable with ad-hoc solutions based on incremental (“evolutionary”) engineering of existing storage technologies: there is a need for a revolutionary step. A similar situation can be observed elsewhere. Deutsche Welle, as an international broadcaster, has to multiply content not only across all channels (Internet, TV, radio) but also in 30 different languages. Content in general has an important role in new productions as well as in new media channels, where the “long tail effect” (Anderson, 2006) is considered a key driver for the restoration and digitization of archived assets. Furthermore, HD video production creates an entirely different set-up in terms of storage needs for raw material, handling of workflows, broadcasting, and distribution of such content across all channels.

A second, equally relevant trend in the media space is the rise of data journalism. From a technological perspective, the trend can be

understood as a move from what is today known as “business intelligence” and data warehousing for commercial companies, to an extended use of data as a basis for analysis and reporting – potentially to be called “public intelligence” in the future. Media companies anticipate that by being able to work with large amounts of data sets, the journalists are provided with new options to find relevant content, provide context and deep analysis. This sub-form of journalism is not news, it is a variation of what has been described as “Computer-Assisted Reporting” (CAR) and data visualization. However, since 2010, there is an increasing interest in what is now called “data-driven journalism”. This concept extends the range and scope of CAR, because data is not only used in the story development internally. Instead, small and large data sets becoming available in different countries of the world are offered as open data (Manocha, 2011). The open data movement is in some ways related to creative commons licensing of software on platforms such as Twitter, Flickr, Facebook, and YouTube. As a pre-requisite, large data repositories are mandatory for daily access to content (video, data, and more).

The current media market is even more critical if we consider the efficiency of current media production workflows, measured as the ratio between the length of a published content and the cumulative length of rough acquired material for its production (video, audio, pictures, data, etc.).

To sum up: Online video combined with big data, multi-channel strategies and the pressure to find efficient media production workflows are drivers pushing a search for innovative storage solutions, preferably supported by cloud computing. Finding new architectures could contribute to the media market as a whole. What can be expected is a fast development spiral towards much higher storage sizes and specifically “active archives” which could support faster digital workflows in content acquisition, content production, and digital distribution.

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