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*50 Years of Growth, Innovation and Leadership*

**Media Workflow and Resource Management:**  
The Roadmap to Revenue Growth and Reduced Complexity

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## SUMMARY: VIDEO PROGRAMMING IN THE NEW WORLD

Video has changed dramatically over the last decade. From what was once a closeted in-home, by-appointment living room experience, it has transformed into an on-demand anywhere-anytime-anything application that occupies considerable real estate in our lives- through our smart TVs, computers, mobile phones, and innumerable portable gadgets. This has had wide-arching implications for the media industry in terms of technology as well as commerce.

With linear TV, broadcasting companies knew their consumers well. But today, their reach transcends boundaries of time, locations, genre, and media networks. They are yet to find the pulse of the new-age customers- on what they want, how, and where they want it, and how they will pay for it.

For years, alternative media was just that- an alternative. Hence programmers created completely different processes and departments to distribute bits and pieces of content of their choice through the Internet or mobile networks. Today, the consumer demands a TV-like experience on every device and network she/he uses.

Broadcast content companies today are ready to step out of their incumbent comfort zone of linear programming and are busy trying to carve out a digital strategy that empowers them to pursue strategic growth by marrying business, process and asset efficiencies with technology for success.

But to achieve these goals, the industry seeks solutions that can automate and integrate across technical as well as operational functions through the entire lifecycle of any piece of content – making it truly an asset.

This paper analyses the key challenges faced by media companies, especially television programmers, to not only manage their growing content bank but also the business processes and ecosystems tied to the same. This paper will also, using illustrative examples, explore feasible solutions that can enable content companies to alleviate enterprise-scale workflow concerns, while reaching the widest audience possible and reap profits.

## BETWEEN A ROCK AND A HARD PLACE...

An average broadcaster today has to balance two contrasting realities to make its business work profitably. One is transitioning to digital, tapeless, file-based and IP workflows – simultaneously or in lock-step with each other – and the other is to manage the business side and make content available for a variety of screens, device types, and networks, on-demand and anywhere. These two imperatives are seemingly disparate, yet highly intertwined.

*“Broadcast content companies today are ready to step out of their incumbent comfort zone of linear programming and are busy trying to carve out a digital strategy that empowers them to pursue strategic growth by marrying business, process and asset efficiencies with technology for success.”*

*“Most often, restrained by limited budget and resources, companies focus on specific point solutions...However, in doing so, these companies, though taking care of a tactical challenge, actually add more complexity and miss the strategic business imperative.”*

Most often, restrained by limited budget and resources, companies focus on specific point solutions that help them take care of immediate needs, forcing them to scramble to build and/or buy components sub-optimally just to keep their heads above water.

However, in doing so, these companies, though taking care of a tactical challenge, actually add more complexity and miss the strategic business imperative. Such siloed deployments aimed more on certain aspects of the underlying production workflow, are often isolated from the larger organizational perspective, inevitably hampering collaboration and interoperability between different functions, systems, and knowledge workers. This leads to longer cycle times, resource redundancy and effort duplication around the workflow, and sub-optimal investments in unviable products as well as processes – something that a media company can ill-afford.

### **BUILDING A BETTER MOUSETRAP: MEDIA WORKFLOW AND RESOURCE MANAGEMENT (MWRM)**

News Corporation which owns Star TV India, one of India’s leading TV networks with 51 channels reaching 500 million viewers globally, was ready to implement its home-grown digital asset management solution in 2011, but changed its mind to invest in a larger media workflow and resource management solution for its entire enterprise ecosystem. The company has overarching objectives- to reach the widest audience possible across national and international geographies, enhance the agility of its business, explore new business avenues, reduce cycle time in production and playout, and conserve cash.

Using a MWRM solution such as CLEAR by Prime Focus Technologies, the network links 40 external production houses to its facilities; manages 17,500 hours of programming content a year for playout in 17 different formats, processes more than 1300 files for new media platforms per day, and syndicates 12000 hours of content annually.

Star TV India uses MWRM to manage, ingest, archive, produce, manage and deliver content across its entire pipeline, and even execute outsourced functions such as subtitling with limited resources and minimal delays, within the stringent SLAs. It also uses the solution to manage and deliver 100,000 hours of content over the YouTube portal as well as its own website. Since this cross-network implementation, Star TV India admits to have achieved 30% cost savings as 60% of its content is managed and transmitted within 8 hours of acquisition.

*“For Star TV India, the spotlight is on captivating the end-consumer and enhancing our internal business value while at it. Integrating a large-scale network like ours is highly complex, but the benefits of such a unified, automated set-up have been immense. We are able to scale up our operations and reach targets easily, and focus on new ways to capture higher mind and market-share across geographies, genres and networks, whether television, mobile or IP.”*

**- Balu R, Executive Vice President, Broadcast Technology, STAR TV India**

Many broadcasting companies have implemented media asset management (MAM) to manage the content assets within a highly collaborative production workflow, and facilitate content discovery, production and repurposing, and, in so doing have experienced tangible benefits. MAM can eliminate redundancies as well as ensure higher level of quality check (QC) at every step of the process. Importantly, it can help achieve cost savings and efficiencies by empowering collaboration, cycle time acceleration, intelligent discovery while reducing redundancies, and the cost of lost or misplaced work among others.

Yet the benefits of MAM are limited if chosen and applied to a few selected instances. Its value proposition, while pertinent, is much more magnified, extended and holistic when it is part of a more encompassing solution- such as a media workflow and resource management (MWRM) platform.

A MWRM platform not only includes the critical MAM component, but extends its capabilities far beyond to integrate a wider ecosystem of internal and external stakeholders and multiple business processes for a broadcast enterprise. The next part of this paper explores some of the unique advantages MWRM brings to the table.

### **Deeper Integration and Collaboration**

While content repository is the nerve center of the programming ecosystem, it is important to architect role-based access to all the critical stakeholders and processes that require using it. In a typical broadcast programming scenario, a well-executed asset management solution needs to tie in all the functions of the creative department, the integrated broadcast management system (IBMS) and the rights management system while also tying in with various legal and accounting systems such as contract management and billing systems, to name a few.

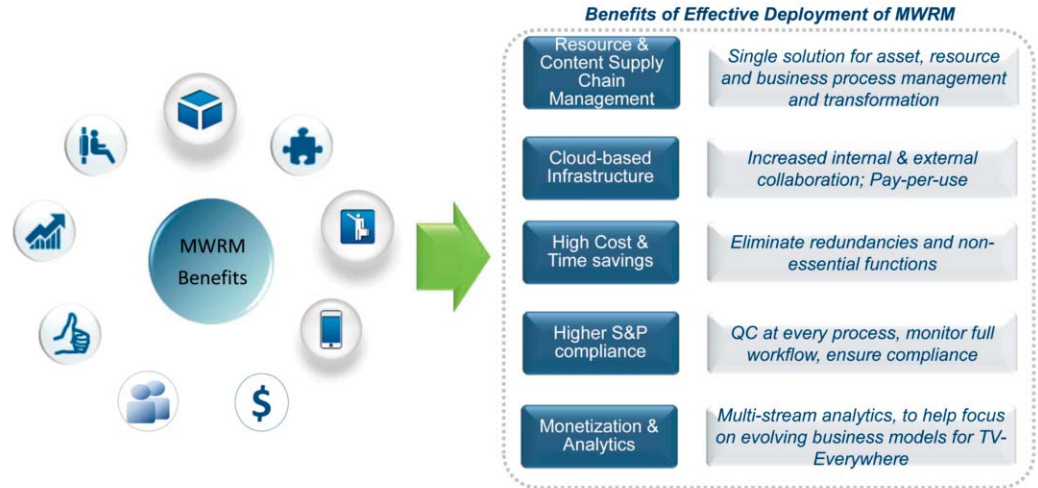
The system should also provide a dashboard interface where role based insight into content, processes, as well as tracking and measurement analytics can be accessed. Many organizations find it challenging to do so, to say the least.

Using a hybrid-cloud ecosystem, MWRM can promote collaboration among internal creative departments that execute production of the content and its playout, as well as facilitate integration with external content suppliers. Internally it can extend towards billing and contract management systems while bringing into a widget based customizable dashboard that would also provide visibility to programming analytics. Such an end-to-end platform mitigates the risk of common and rampant operational inefficiencies, redundancies in process, duplication of effort, slip-ups in QC and lack of information in the value chain.

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**Benefits of Media Workflow & Resource Management (MWRM):**  
Driving multiple business processes for a broadcast enterprise

*MWRM promotes collaboration; accelerates production with its streamlined workflow; and provides a content company full control of end-to-end asset transformation- from creation to distribution to monetization.*



Source: Frost & Sullivan analysis

In one of the use cases we studied for this paper, the broadcast programmer succeeded in trimming down delays in sourcing content from its external content suppliers, and accelerated production across the value chain with MWRM. Before its implementation, the programmer was dependent on the delivery of the content from the production house, which could take anywhere from two to six hours per episode for content, before the process of ingest itself, implying a significant time spent in anticipation. This is usually followed by quality control (QC), post-production and packaging by the programmer, and ensuring legal standards and practices (S&P) compliance. In a negative scenario, the content would require modifications thereby triggering a replay of events until the final packaging. This would typically imply 2-4 days of effort in collaboration and mind-exchange before playout of the content.

However after adopting MWRW, the broadcast programmer was able to reduce total time and effort by over 60%. The broadcast programmer enabled the external producer to upload the content proxy and enabled real time QC, edits and packaging through the value chain, even before the content was actually uploaded into the programmer's repository. MWRW further accelerated production by enabling the external producer to upload content directly over IP, thereby bringing down content contribution for playout to a day's work.

Frost & Sullivan did an analysis of the time and cost savings for just content acquisition from external suppliers for one program series per week. Needless to say, such tasks and similar ones, repeat through the workflow. Hence, if applied, MWRW multiplies the benefits several times over, especially for a programmer who collates and distributes numerous programs.

Time and Cost Savings Analysis with MWRM - Sourcing content from external supplier			
	Before MWRM	After MWRM	Savings
No. of man-hours spent on physical delivery of content/ week	270	0	100%
No. of man-hours spent on ingest & QC / week	270	68	75%
Average cost of human resources/ week	US\$2,700	US\$ 340	87%
Total annual cost for the company in man-hours in acquisition of external content	US\$1,40,400	US\$ 17,680	US\$1,22,720

Source: Frost & Sullivan analysis

### Resource Optimization

Resource optimization is one of the critical needs of content companies today in order to save on their operational expenditure, strengthen their balance sheet, and build functional efficiencies. MWRM allows media companies to completely focus on critical functions and automate several processes such as ingest, meta-tagging, contribution, and distribution to multiple platforms. More importantly, MWRM can help mine through available programming and present analytics intelligence in an easy-to-view interface, thereby reducing resources spent on mundane repetitive tasks.

One of the general entertainment broadcasting companies that we spoke to owns tens of thousands of hours of content, some of which is on tape. Before deploying MWRM, the company ended up using several man-hours in discovery, search, retrieval and transport of content, apart from managing and maintaining it. The company has two facilities 5 miles apart in the same city, where one served as the production hub, while the other was used to distribute the content for television and other media formats. Every time an episode was packaged ready for on-air transmission, the producer would export the content to hard drives and physically transport it to the central headquarters for playout, where the content would need to be ingested once again, resulting in considerable redundant man-hours.

With MWRM, the company swiftly rationalized the non-creative processes. It now requires only a one-time ingest of the content, which multiple personnel across facilities can access through the cloud-based digital content management system. Playout and production is instantly synced up eliminating the need for physical transport and repeated ingest. This process alone saves the company US\$50,000 a year- about 6% of its annual CAPEX budget.

The beauty of such a system is that instead of waiting for content to land on one's desk, multiple individuals in the workflow can access content instantly and concurrently as the others and work in parallel, thereby multiplying productivity by the dozen. With automated alerts, all required resources can review each other's updates and based on the role, make changes in real time.

## Operational Efficiencies

Maa TV India, a leading regional general entertainment network operating four channels was looking for a solution that could enable its objective of digitization and efficient content management. It had already digitized 10000 hours of content in a Front Porch's DIVA HSM system, but required a system to tie together the various parts of its workflow as well increase efficiencies through its ecosystem, and monitor quality at every step from acquisition to delivery. Along with television programming, the network distributes content online and requires extensive transcoding in order to enable multiscreen viewing.

Using cloud-based CLEAR from Prime Focus Technologies, it has adopted a unified platform that ties its end-to-end ecosystem together, where there is higher priority for content management across vendors, its internal creative departments, and external distributors. Within two months of implementation, Maa TV admits that it has seen tangible benefits, with content procurement, exchange, and distribution taking one-fourth the time as it would earlier. This digital supply chain has ensured both a top-down and bottom-up quality control and a highly accelerated production cycle. Automation has been particularly useful for activities such as multi-screen delivery that requires video in various formats.

*"For a regional broadcasting network, our requirements were very specific. Going digital required us to streamline our network, reduce manual intervention, enhance collaboration through various departments in the workflow and enhance overall quality and productivity. Within a short time of implementation, we witnessed substantial benefits in all aspects."*

**- P Masthanaiah, Senior General Manager, Technology, Maa TV**

*"MWRM can alleviate the day-to-day pain of departmental disconnect, resource delays, and avoid duplication of effort through the system...Further, the ability now to tie-in the business level processes further empowers media companies to increase their potential for market success."*

Apart from productivity and resource optimization that we discussed above, broadcast programmers can utilize MWRM to emphasize and implement operational efficiencies in various ways.

Many programming companies find it hard to streamline their workflows with their legacy IT systems, equipment, and compartmentalized way of functioning. The process and business of production is broken out by singular specific functions that transform content- such as uploading content, editing, graphics, transcoding, rights management, among others - sometimes with automated logging/scheduling software to tie some of the disparate components together. On the business side, there are project management schedules, contract management, billing, and order management among a multitude of other disparate functions to tie together as well. However, production vagaries often make it hard to stick to the script.



MWRM can alleviate the day-to-day pain of departmental disconnect, resource delays, and avoid duplication of effort through the system. MWRM can help ensure QC of the content at every step through the production before playout, while reducing resource and time redundancies. The producer can empower key executives in each department to sign off for quality and standards before it is finalized, thereby ensuring role based approval as required. Every comment and approval is recorded making it useful for governance. Further, the ability now to tie-in the business level processes further empowers media companies to increase their potential for market success.

As discussed in this paper, emerging 'TV-everywhere' video delivery paradigms are growing in prominence and content companies have to necessarily engineer their businesses around these, while continuing with their traditional TV related efforts. Several broadcasters deploy some form of content on their Web portals or through YouTube. TV programming content is typically of very high-resolution and cannot be delivered as it is to these channels.

Having to contend with innumerable device types, networks, websites, and clients, they require transcoding the content into various formats and resolutions at either fixed bit rates for a particular delivery mechanism or with adaptive bit rate streaming. Every distribution use case could require a different transcode-recipe thereby requiring them to repeat the steps, over and over again. With MWRM, that process can be automated with simple commands that save time for the technocrats.

Further, the platform can enable one to create widgets within its dashboard to gain greater visibility into content analytics for the varied distribution channels and in turn enable business line managers to make more informed business decisions around any piece of content.

#### **SOLUTION BRIEF: PRIME FOCUS TECHNOLOGIES' CLEAR**

Prime Focus Technologies (PFT) offers CLEAR, a hybrid cloud multi-screen content management and operations platform- a perfect example of an MWRM solution. The objective of CLEAR is to help programmers create a single ecosystem around their assets with one interface across the value chain.

Many organizations are still in the stage of internal exploration, and not ready to absorb large-scale multi-location, multi-departmental changes to their infrastructure. Yet as they need a solution in place for content management, they are forced to go for siloed structural changes, which ends up duplicating efforts and costs through the company. To avoid this and in order to enable content organizations scale up their deployment as per their needs, PFT offers a wide range of SLA driven services comprising:

*“MWRM can alleviate the day-to-day pain of departmental disconnect, resource delays, and avoid duplication of effort through the system. MWRM can help ensure QC of the content at every step through the production before playout, while reducing resource and time redundancies.”*

CLEAR is based on a global hybrid cloud platform and works on a multi-tenanted shared infrastructure service model that allows customers to pay quarterly or a transaction based fees based on their usage.

## CLEAR™ - World Class Technology

### World Class Technology

#### Asset Management

Ingest

Outgest

Meta-Data Management

Content Repurposing

Workflow Management

Archive Management

Mult-Language audio and subtitling player

Interactive Dashboards

#### Content Processing

Transcode

Auto QC

Watermark

DRM

Publish

Rough Cut

#### 3rd Party Intergration

IPR Management

Order Management

Broadcast Management

#### Common Services

Project Management

iPAD Application

Cloud Archive

Adaptive Streaming

Content Delivery

“MWRM can alleviate the day-to-day pain of departmental disconnect, resource delays, and avoid duplication of effort through the system. MWRM can help ensure QC of the content at every step through the production before playout, while reducing resource and time redundancies.”

CLEAR Services include:

- Cloud Based Infrastructure and Application Services
- Digitization
- Meta Data Services
- Content Preparation
- Content Delivery
- Content Packaging and Editorial Services

CLEAR comprises a Digital Media Supply Chain linking producers, post houses, broadcasters, distributors, aggregators, and exhibitors across platforms. The solution offers workflow adaptation and flexibility, by allowing high resolution content to reside on-premise of the content company.

The platform can be tailored to specific needs to deploy transcoding, storage, File QC, ingest, export, and other processes. It provides integrated, multi-layered, enterprise-level security provisions such as digital watermarking and encryption, bar codes for all incoming and outgoing assets, and monitoring of all assets.

Users of PFT's solutions say that the stronghold of the vendor is its technical team that can customize the architecture of CLEAR for extremely varying scenarios, types of customers, and requirements. The needs of a Tier 3 and Tier 1 broadcast programmer are far apart and each customer has certain specific objectives. PFT scores in its ability to tailor the platform in a highly flexible manner. A typical first time deployment could take between 2 and 6 months depending on the scale, including planning, installation, and training, thus requiring a short duration for companies to go ahead for their operational implementation. It offers a full set of pre-integrated technology components such as a SOA engine, best-in-class DAM, and best-of-breed tools for storage and processing. Its open-standards driven framework allows integration with third-party tools and custom pre-existing technology investments.

## THE LAST WORD

Many media companies today realize the benefits of content management solutions, yet are shy of investing in these. User confusion, home-grown legacy solutions and a fragmented market make it difficult and challenging for companies to switch solutions, making it highly unviable in the long run.

What the industry needs is an enterprise-scale integration and collaboration platform that is highly flexible, scalable, reliable and secure, with broad network access, encompassing multiple user interfaces and, importantly, which can be measured as a service. MWRM promises to be all of the above.

MWRM solutions today offer the option to scale-as-you-go and pay-as-you-use, allowing one to choose the most vital modules without committing to significant up-front costs. It integrates the creative and organizational departments and helps bring together internal and external content stakeholders, thereby truly encompassing the content lifecycle.

Across all broadcast programmers, there is an urgent emphasis on asset recycling for higher gains across multiple platforms from a TV Everywhere perspective. Apart from operational cost savings, MWRM allows them to channelize their efforts towards creating new business models around applications such as video-on-demand, multi-screen delivery and TV Everywhere distribution. This opens new avenues for revenue such as targeted advertising, pay-per-use, or subscriptions. It also enables them to engage in partnerships with content aggregators or portals.

*"Media companies now have fewer hurdles with MWRM than before as it helps to think around 'What do I do with my video library,' to the thought process 'How can I make more money from my video assets.'"*

Media companies now have fewer hurdles with MWRM than before as it helps to think around “What do I do with my video library,” to the thought process “How can I make more money from my video assets.” Having implemented MWRM in part or full, a programmer can chart a roadmap of requirements for many new engagements, facilitate plug-ins with third-party application vendors if needed, evaluate the technical timeline and costs, and seamlessly weave in collaboration with multiple stakeholders across varied organizational functions.

MWRM can be a powerful and effective tool for small, medium or large content organizations alike and help them better manage and future proof from a constantly changing market and consumer demands. Being highly flexible it assuages the challenges of conforming to multiple standards across multiple media networks. Internally at an organizational level, it goes beyond MAM to connect the creative, legal, operations, marketing, and distribution functions, putting content at the center of the enterprise.

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**The Integrated Value Proposition provides** support to our clients throughout all phases of their journey to visionary innovation including: research, analysis, strategy, vision, innovation and implementation.

**The Partnership Infrastructure** is entirely unique as it provides the foundation from which visionary innovation becomes possible. This includes our 360 degree research, comprehensive industry coverage, career best practices and our global footprint of more than 40 offices.

For more than 50 years, we have been developing growth strategies for the global 1000, emerging businesses, the public sector and the investment community.

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