Automated Distribution for New-age Content Supply Chains

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I head Product Management at Prime Focus Technologies and have been closely involved in product development and customer implementations for various Media & Entertainment organizations. Over the last 6 years, I have worked closely with tier 1 M&E enterprises to deploy hybrid cloud-enabled solutions that required enterprise integrations with customer/vendor applications.

Prior to PFT, I have led Engineering teams that delivered a diverse range of product and product-driven solutions to Telecom service providers. The products were instrumental in driving automation in the service provisioning and device provisioning operations of these service providers. I am an Engineering graduate and have close to 20 years of product development experience in building enterprise grade software for large Telecom and M&E organizations.
About Prime Focus Technologies

- PFT offers **Cloud-based enterprise software and services** for the Media & Entertainment (M&E) industry. It is the technology subsidiary of Prime Focus, the global leader in M&E industry services.

- PFT’s flagship product CLEAR Media ERP automates the content supply chain, enhances efficiencies, reduces Total Cost of Operations (TCOP) and helps customers realize new monetization opportunities.

- CLEAR is **natively cloud** and has been in operation for the last 10 years.

- Some of the world’s biggest broadcasters and studios run on CLEAR.

- CLEAR, not just MAM. **Media ERP.**
Current Market State & Our Endeavor

Transition from Islands of Automation...

- Campaign Management
  - Reach, Ratings
  - MARKETING & PUBLICITY

- Collaborative Edits
  - Rushes, Edits, Versions
  - PROMO

- Review & Approve
  - Dailies, Cuts, Scripts
  - CREATIVE

- Content Supply Chain
  - Acquisition, Delivery
  - PARTNERS & VENDORS

- Digital Asset Management
  - Store, Retrieve, Search
  - REPOSITORY

- Media Asset Management
  - Media Aware, Metadata
  - WORKFLOW

- Business & Operations
  - Screen, Rights/Content
  - DISTRIBUTION

- Playout
  - Schedules, FPC
  - TRANSMISSION

- Context, Optimize, Monetize
  - Package, Tags, CAD
  - DIGITAL

- Media Aware, Metadata
  - WORKFLOW

..to Centralization –
ONE software across the Enterprise: Media ERP

- Technical Ops
- Creative

- Legal
- Senior Leadership

- Digital
- Business Analytics

- OTT
- Marketing

- Digital Media Supply Chain
  - Vendor and Partners

- Distribution
- International

- Transmission

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CLEAR Media ERP includes four transformational modules

PFT’s flagship product, CLEAR is the world’s first and most proven Hybrid Cloud-enabled Media ERP Suite that automates the content supply chain. CLEAR is natively Cloud and has four patents for media content collaboration systems across the production process. It helps M&E companies drive creative enablement, enhance efficiencies, realize new monetization opportunities and reduce TCOP like no other.

With Work Order Management embedded with Media Asset Management (MAM), CLEAR is now more powerful than ever.
Cloud Media Services

As a Cloud solutions provider with a global delivery model and the world’s largest digital media services Cloud infrastructure at its disposal, we deliver a range of technical, creative and new media services on Cloud with defined SLAs. Our best-of-breed talent pool, spread across the globe with an average experience of 20 years in the media industry, is key to exceptional client service. Here’s what we offer:

**Digital Media Services**
- QC Services, Digital Packaging & Delivery, Mastering Services, Compliance Services, Digitization Services, Restoration and Upconversion Services, Audio Services, Live Services (Streaming, Live to VoD)

**Content Localization Services**
- Subtitling, Dubbing, Access Services, Text to Text Localization

**Creative Services**
- On Air Promos, Post-Production, Brand Services

**Data & Analytics Services**
- Metadata Services (Consulting, Automatic Creation, Manual Creation, Localization)
Changing Dynamics

- **Shift in Viewing Patterns (TV-Only Viewers → On Demand Viewers)**
  - Specialized Content creations – Posters, Localized Subtitles, Dubs
  - Content Deliveries to multiple platforms (like Hulu, Netflix, proprietary VOD platforms)
  - Localized Metadata

- **Standards Adoption to handle scale**
  - IMF, Cable Labs, DPP, DCP

- **Security Needs**
  - DRM packaging – for the specific platforms
  - Forensic Watermarking for Syndication led distributions
  - Near Zero human intervention to access content
Key Challenges

- **Need for Speed**
  - Integrations with higher level systems to raise fulfilment orders
  - Collaboration across the supply chain to CREATE missing elements
  - Reliable packaging and deliveries to multiple destinations
  - Transparency in distribution operations via Real-Time Dashboards

- **Need for Scale**
  - Cloud Ready – leverage elastic nature of the cloud infrastructure
  - Leverage global talent (vendors & freelancers) for the CREATE processes

- **One Solution for the Enterprise**
  - Marketing led Distribution (Promos, Trailers)
  - Sales let Distributions (Finished Content)
  - Screening/playout led distributions (Finished Content)
Current Distribution Process Recap

**Content Preparation**
- Media Restores
- CREATE missing media (Artwork, Subs/Dubs etc)
- Transform Media – Video Transcodes, watermarks, audio track changes etc.

**Content Packaging**
- Standards based packaging - IMF, DPP, DCP
- Platform specific packaging - Netflix, YouTube etc.
- DRM Protection

**Content Delivery**
- Different delivery methods – Aspera, Signiant, FTP etc.
- Incremental Deliveries
- Redeliveries
## Executional Challenges

### PACKAGING
- Manual determination of missing inventory
- Supply Chain collaborations to develop the missing inventory
- Deep Knowledge of all packaging standards like IMF, AS-02, CableLabs
- Different platforms requiring different DRM packaging strategies
- Bulk Packaging for multi-platform deliveries e.g. promo deliveries

### DELIVERY
- Multiple delivery methods – FTP, Signiant, Aspera
- **Schedule Challenges**
  - Scheduled package deliveries – before or just after a TX Air.
  - Incremental deliveries – as and when captions and dubs are ready.
  - Redeliver Packages – yes, there are many real world challenges.
- **References to Content in VOD platforms.**
  - Deliver metadata or language updates in future to the same content
  - Deliver additional subs/dubs in future.
Next Gen Solution: Automation led Distribution

Key Differentiators:
- Flow through Automation
- Connected Supply Chain
- Automated Missing Inventory Assessment
- Library of BOTs
- Smart Deliveries
- Real Time Process Monitoring
Solution Benefits

- One Stop Solution – For Marketing, Sales and Screening led content.

- Handles Scale
  - Built on Hybrid Cloud - hence able to leverage public cloud infrastructures for their elasticity
  - Unified Platform to collaborate and access global talent for CREATE processes. Translators, VO Artists etc.

- Operational Efficiencies
  - Flow through automation from higher level order management systems.
  - Automation led process with BOTs for the various platforms and technologies (IMF/DPP/DCP, YT/Hulu/Hotstar)
  - Automation led “Determination of Missing Inventory”
  - Transparency in operations through real time monitoring and better collaboration among teams

- Enhanced Security
  - Automation Led. Hence limited human interventions when processing content
  - Workflow driven integration with Rights Management and DRM Packaging systems